

Hitachi Unified Storage VM Block Module Hitachi Audit Log User Guide

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Preface

This document provides instructions for using the Audit Log function on the Hitachi Unified Storage VM (HUS VM) storage system.

Read this document carefully to understand how to use this product, and maintain a copy for reference purposes.

- [Intended audience](#)
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Intended audience

This document is intended for system administrators, HDS representatives, and authorized service providers who are involved in installing, configuring, and operating the HUS VM system.

This document is for users who:

- Have a background in data processing and RAID storage systems.
- Are familiar with the Storage Navigator software for the HUS VM and have read the *Hitachi Storage Navigator User Guide*.
- Are familiar with the operating system and web browser software on the system hosting the Storage Navigator software.

Product version

This document revision applies to HUS VM microcode 73-03-0x and later.

Note for the supported function

For details about the 3DC configuraion, contact Hitachi Data Systems Support Center.

Document revision level

Revision	Date	Description
MK-92HM7009-00	July 2012	Initial release.
MK-92HM7009-01	November 2012	Supersedes and replaces MK-92HM7009-00
MK-92HM7009-02	April 2013	Supersedes and replaces MK-92HM7009-01
MK-92HM7009-03	October 2013	Supersedes and replaces MK-92HM7009-02
MK-92HM7009-04	April 2014	Supersedes and replaces MK-92HM7009-03

Changes in this revision

- The following sections have changed:
 - [Log output formats for different versions on page 1-9](#)
 - [\[UR\] Journal-Vol on page 4-152](#)

Referenced documents

- *Hitachi Unified Storage VM Block Module Hardware User Guide*, MK-92HM7005
- *Hitachi Unified Storage VM Block Module Provisioning Guide*, MK-92HM7012
- *Hitachi Storage Navigator User Guide*, MK-92HM7016

Document organization

The following table provides an overview of the contents and organization of this document. Click the chapter title in the left column to go to that chapter. The first page of each chapter provides links to the sections in that chapter.

Chapter	Description
Chapter 1, Introduction	Introduces the audit logs created by Storage Navigator or the SVP (Service Processor) on the storage system. Users can access the audit logs that are output by the SVP, but the SVP itself is accessible only by HDS personnel.
Chapter 2, Using audit logs	Describes the two types of audit log files and the items included in the files.
Chapter 3, Quick reference	Describes the relationship (in a table) between the audit log functions, operations, and option names in the audit log file. Functions are listed in alphabetical order.
Chapter 4, Audit log examples	Includes sample audit logs for each function and operation that can be performed with the Storage Navigator. The logs are listed alphabetically by function name and operation name.
Chapter 5, Audit log examples for encryption key operations	Provides sample audit log for the operation of the key used for data encryption.
Chapter 6, Audit log examples of commands sent from the host	Provides sample audit logs for the commands issued from the host
Chapter 7, Audit log examples for PIN Deletion Tool operation	Provides sample audit log for the operation of the PIN deletion tool.
Appendix A, Audit log user operations	Describes user operations and the operation name that is output to the audit log file.
Appendix B, Audit log SVP operations	Describes SVP operations and the operation name that is output to the audit log file.
Appendix C, Audit log GUI reference	Describes the audit log features in the Storage Navigator GUI.

Document conventions





The terms "HUS VM" refer to all models of the HUS VM, unless otherwise noted.

This document uses the following typographic conventions:

Convention	Description
Bold	Indicates text on a window, other than the window title, including menus, menu options, buttons, fields, and labels. Example: Click OK .
<i>Italic</i>	Indicates a variable, which is a placeholder for actual text provided by the user or system. Example: copy <i>source-file target-file</i> Note: Angled brackets (< >) are also used to indicate variables.

Convention	Description
screen/code	Indicates text that is displayed on screen or entered by the user. Example: # <code>pairdisplay -g oradb</code>
< > angled brackets	Indicates a variable, which is a placeholder for actual text provided by the user or system. Example: # <code>pairdisplay -g <group></code> Note: Italic font is also used to indicate variables.
[] square brackets	Indicates optional values. Example: [a b] indicates that you can choose a, b, or nothing.
{ } braces	Indicates required or expected values. Example: { a b } indicates that you must choose either a or b.
vertical bar	Indicates that you have a choice between two or more options or arguments. Examples: [a b] indicates that you can choose a, b, or nothing. { a b } indicates that you must choose either a or b.

This document uses the following icons to draw attention to information:

Icon	Meaning	Description
	Tip	Tips provide helpful information, guidelines, or suggestions for performing tasks more effectively.
	Note	Notes emphasize or supplement important points of the main text.
	Caution	Cautions indicate that failure to take a specified action could result in damage to the software or hardware.
	WARNING	Warnings indicate that failure to take a specified action could result in loss of data or serious damage to hardware.

Convention for storage capacity values

Physical storage capacity values (disk drive capacity) are calculated based on the following values:

Physical capacity unit	Value
1 KB	1,000 bytes
1 MB	1,000 ² bytes
1 GB	1,000 ³ bytes
1 TB	1,000 ⁴ bytes
1 PB	1,000 ⁵ bytes
1 EB	1,000 ⁶ bytes

Logical storage capacity values (logical device capacity) are calculated based on the following values:

Logical capacity unit	Value
1 KB	1,024 bytes
1 MB	1,024 KB or 1,024 ² bytes
1 GB	1,024 MB or 1,024 ³ bytes
1 TB	1,024 GB or 1,024 ⁴ bytes
1 PB	1,024 TB or 1,024 ⁵ bytes
1 EB	1,024 PB or 1,024 ⁶ bytes
1 block	512 bytes

Accessing product documentation

The HUS VM user documentation is available on the Hitachi Data Systems Support Portal: <https://hdssupport.hds.com>. Check this site for the most current documentation, including important updates that may have been made after the release of the product.

Getting help

The Hitachi Data Systems customer support staff is available 24 hours a day, seven days a week. If you need technical support, log on to the Hitachi Data Systems Support Portal for contact information: <https://hdssupport.hds.com>

Comments

Send us your comments on this document: doc.comments@hds.com. Include the document title, number, and revision. Please refer to specific sections and paragraphs whenever possible. All comments become the property of HDS.

Thank you!

Introduction

Audit logs are created on the Service Processor (SVP) computer in the storage system. You can access the audit logs that are output by the SVP, but the SVP is accessible only by support personnel.

- [Overview](#)
- [Audit Log file description](#)
- [Audit log file format](#)
- [Log output formats for different versions](#)
- [Syslog file format](#)

Overview

The audit log is an important tool that you can use to keep track of operations, to monitor security, to investigate the cause of errors, and to avoid potential errors.

Audit logs are created on the SVP computer in the storage system. You can access the audit logs that are output by the SVP, but the SVP is accessible only by support personnel.

Audit logs store the following histories:

- Operations performed from a Storage Navigator computer or an SVP
- Commands that the storage system received from a host or computer using CCI
- Operations and events about encryption keys for data encryption

The history may not be output in chronological order. This history includes the user, the time of the operation, the name of the operation, any parameters set, and the end result (normal completion or error message). Each audit log file ends with a serial number, from 0,000,000,000 to 4,294,967,295. When the number reaches 4,294,967,295, it resets and starts over at 0,000,000,000.

There are two types of audit log files:

- Audit log file, which consists of two files:
 - Auditlog information file 1 contains operations performed from the Storage Navigator computer or SVP.
 - Auditlog information file 2 contains operations of a host and a computer using CCI, and events about encryption keys. You can download them to your Storage Navigator computer or transfer to a primary or secondary FTP server.
- **Syslog file.** This file contains the audit log. You can download it to your Storage Navigator computer or transfer it to a primary or secondary syslog server.

Features


The audit log feature stores a history of all operations performed on a computer using the Storage Navigator feature. This history includes the user, the time of the operation, the name of the operation, any parameter set, and the end result (normal completion or error message). The audit log file records until full and then starts over, rerecording from the beginning of the file.

Audit Log file description

The following table describes the audit log file components:

Table 1-1 Audit Log File Components

Component	Audit Log File	Syslog File
File Type	Auditlog information file 1 Auditlog information file 2	syslog.log
Downloaded File Name	audit-SVPYYYYMMDD.tgz or audit-DKCYYYYYMMDD.tgz where YYYY = year MM = month DD = day	syslogYYYYMMDD.tgz where YYYY = year MM = month DD = day In syslogYYYYMMDD.tgz, there are syslog-SVP.log (audit log file for SVP) and syslog-dkc.log (audit log file for DKC).
File Name Transferred to the FTP Server	Audit-SVPSSSSSYYYYMMDDHHMMSS.tgz or Audit-DKCSSSSSYYYYMMDDHHMMSS.tgz z where SSSSSS = serial number YYYYMMDD = date of the transfer HHMMSS = hour (HH), minute (MM) and second (SS) of the transfer The output folder must be specified in the Audit Log Transfer window.	N/A
Linefeed Codes	CR + LF (Some text editors cannot display these codes correctly)	LF
File Output	Contains login and logout information as well as basic and detailed information about settings made for each option. <ul style="list-style-type: none"> • Basic information consists of information common to each audit log. • Detailed information consists of information about the operations of each executed option. This includes an index representing each item and its values. 	Contains information released to both the syslog and audit log file, and information released only to the syslog file.
Maximum Line Size	1,024 bytes	1,024 bytes
Maximum Number of Lines	250,000	250,000
Maximum Size of Files	122.5 MB	488.2 MB

Component	Audit Log File	Syslog File
When Reaching the Maximum Number of Lines	The newest data overwrites the oldest data (wrap around).	The newest data overwrites the oldest data (wrap around).
Threshold	<p>When the audit log file reaches 70% of maximum capacity,  appears in the Storage Navigator main window.</p> <ul style="list-style-type: none"> If an FTP server is specified, the audit log file will be automatically transferred to the FTP server when the information stored in the audit log file reaches the 70% threshold. Once you download or transfer the audit log file, the counter is reset. 	<p>Check the following events that are logged only once in the syslog file.</p> <ul style="list-style-type: none"> [AuditLog], Over Threshold (File has exceeded 70% of the maximum number of lines.) [AuditLog], Over MaxLine (Size of file has reached its maximum number of lines and data is being overwritten.) <p>Since the old information is erased, you should download the syslog file as needed.</p>

Audit log file format

The following figures show sample audit log files:

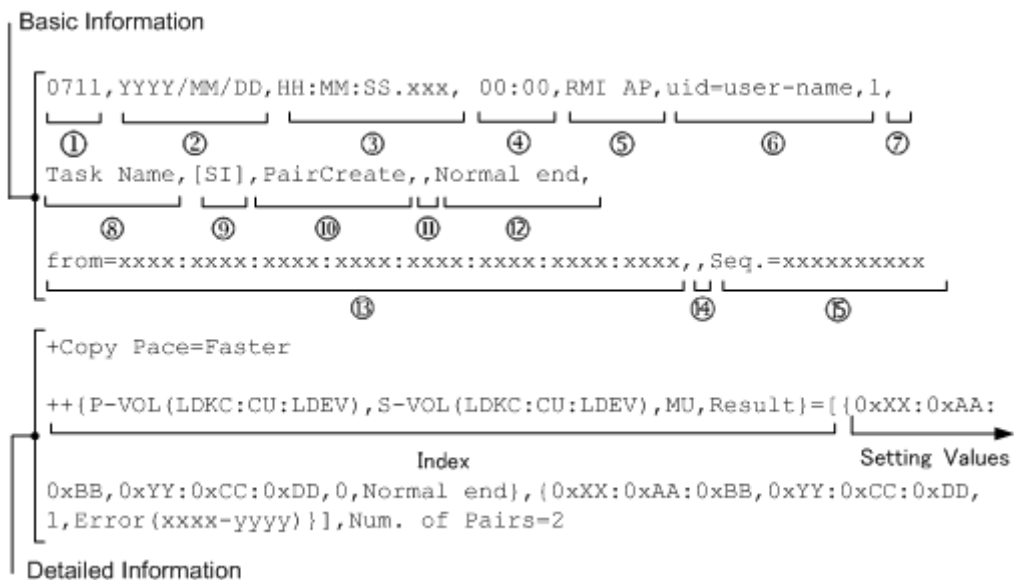


Figure 1-1 Audit Log File 1 (SVP)

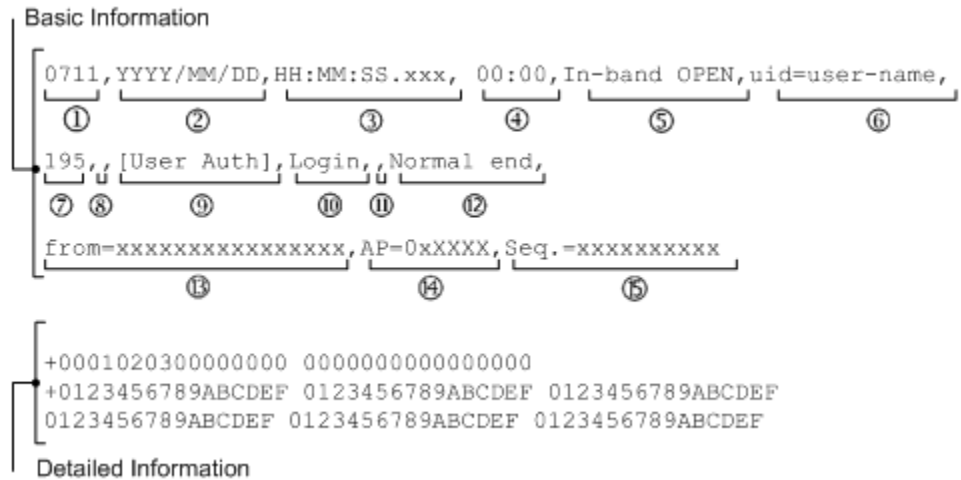


Figure 1-2 Audit Log File 2 (DKC)

Basic Information

Table 1-2 Basic Information in Audit Log File

No.	Item	File 1 (SVP)	File 2 (DKC)
①	Version	<p>XXYY indicates the model name (XX) and the version number in audit log output format (YY). When the output format is changed, the value of YY is updated.</p> <p>See Table 1-4 Changed contents of a format in each version number on page 1-9 for the changed contents of XXYY.</p>	Same as File 1
②	Date	<p>YYYYMMDD indicates the year, month, and day the audit log was created.</p> <p>A date and a time being set on the SVP are output as log data. If a failure, such as an SVP failure and a LAN failure, occurs in the storage system, the data and the time may be output of the accumulated date and time since January 01, 1970.</p>	Same as File 1
③	Time	<p>HH:MM:SS.xxx indicates the hour, minute, second, and millisecond the audit log was created.</p>	Same as File 1
④	Time zone	<p>The time difference between Universal Time (UT) and the local time displays as "±HH:MM" (HH: hour, MM: minute).</p> <p>For example; "+01:00", "-02:00", "00:00"</p>	Same as File 1

No.	Item	File 1 (SVP)	File 2 (DKC)
⑤	Interface	<ul style="list-style-type: none"> RMI AP indicates the log for Storage Navigator and Remote Method Invocation Applications such as HCS. SVP indicates the log for the SVP. RM AP indicates the log for Remote Maintenance Application. 	<ul style="list-style-type: none"> In-band OPEN indicates open-system hosts. Out-of-band indicates hosts through the SVP. No output for the event about encryption keys.
⑥	Login user Name	<ul style="list-style-type: none"> A user name is output for Storage Navigator, RMI AP or SVP operations. <System> is output when the storage system detects the failure. No output for RM AP operations. 	<ul style="list-style-type: none"> A user name is output for commands received by a command device for authentication. <Host> is output for other operations. <system> is output for the event about encryption keys.
⑦	Connection number	<ul style="list-style-type: none"> 0 - 161 indicate Storage Navigator or SVP connection ID. 162 - 193 indicate Hitachi Command Suite and RMI AP connection ID. 194 indicates SMI-S(RMI) connection ID. No output for RM AP operations. No output when the login user name is <System>. 	<ul style="list-style-type: none"> 195 - 706 indicate a connection number assigned when a command device for authentication received the command. No output for other operations
⑧	Task name	Task name specified when a task is registered. No task name is output when a user performs operations using the Storage Navigator secondary window.	No output
⑨	Function name	<p>The abbreviation indicating the function that performed the operation.</p> <ul style="list-style-type: none"> Maintenance window name is output for SVP operations. 	<ul style="list-style-type: none"> User Auth indicates an user authentication command. FC-SP indicates a device authentication command. Config Command indicates a configuration changing command. [ENC] is output for the event about encryption keys.

No.	Item	File 1 (SVP)	File 2 (DKC)
⑩	Operation or event name	The operation or event name.	<p>The following items are output only when Function name is User Auth. No output for other operations.</p> <ul style="list-style-type: none"> • Login indicates that a log-in command is received. • Logout indicates that a log-out command is received. <p>The event name is output when the function name is [ENC].</p>
⑪	Parameters	Parameters for certain functions	No output
⑫	Result	<p>The result of your operation.</p> <ul style="list-style-type: none"> • Normal end. The operation has ended normally. • Error(xxxx-yyyyy). The operation has ended abnormally. • Warning(xxxx-yyyyy). The operation has partly ended abnormally or was canceled during the operation. <p>xxxxx-yyyyyy is an error code. xxxxx is a part code of four or five digits showing where the error occurs. yyyyyy is a message ID of four, five, or six digits. For more information about error codes, see <i>Hitachi Storage Navigator Messages</i>. Note that error codes "xxxx-yyyyy" appear only for Storage Navigator operations.</p>	<p>The result of the received commands.</p> <ul style="list-style-type: none"> • Normal end. The user authentication or FC-SP authentication is complete normally, or the event about encryption keys occurs. • Error. The user authentication or FC-SP authentication is complete abnormally. • Accept. A command from the host is accepted. • Reject. A command from the host is rejected.

No.	Item	File 1 (SVP)	File 2 (DKC)
13	Host Identification	<p>An IP address (IPv4 or IPv6) is output for Storage Navigator, RMI AP and SVP operations. The IP address may be that of the proxy server or the router depending on the configuration of the connected network.</p> <p>No output for RM AP operations. No output when the user name is <System>.</p> <p>If both IPv4 and IPv6 are available for communication between the Storage Navigator computer and the SVP, you can specify the IPv6 address of the SVP in the Web browser, but the Storage Navigator secondary window uses IPv4 communication. In this case, IPv4 addresses are output to audit logs.</p> <p>For details about configuring only IPv6 communication, see the section describing IPv6 communication in <i>Hitachi Storage Navigator User Guide</i>.</p>	<ul style="list-style-type: none"> • A host name is output for commands from hosts through the SVP. • A WWN is output for the FC-SP authentication. • A WWN is output for commands from open-system hosts. • No output for the event about encryption keys.
14	Application Identification	No output	<ul style="list-style-type: none"> • An internal-use ID is output for open-system hosts. • 0x0000 is output if a command comes from other storage system. • No output for other commands. <p>No output for the event about encryption keys.</p>
15	Serial number	The serial number of the saved log information (0000000000 to 4294967295). When the number reaches 4,294,967,295, it is reset to 0000000000.	Same as File 1

Detailed Information

Detailed information in the audit log file 1 (SVP) contains index and setting values. Detail information in the audit log file 2 (DKC) contains command names and parameters received from a host or a computer using CCI, or encryption key numbers.

The following shows the symbols used in the detailed information.

Table 1-3 Symbols Used in Detailed Parameter in Audit Log (SVP)

Symbol	Definition
+ and -	'+' or '-' displays at the beginning of a line. '+' means the beginning of the index. The number of occurrences of '+' represents the number of indents. '-' means that the line continues from the previous line.
=	Connects an index and a setting value.
[]	When there is more than one setting value for an index, the setting values are enclosed by [], and separated by a comma (,). <i>Example:</i> CU:LDEV=[0x00:0x00,0x00:0x01,0x00:0x02]
{ }	Details are enclosed by { }. <i>Example:</i> {Port,Fabric,Connection}={ {1E,ON,FC-AL}, {3E,OFF,P-to-P} }
()	Supplementary and additional information for setting values are enclosed by (). <i>Example:</i> {VOL(CU:LDEV),Result}={0x00:0x01,Error(xxxx-yyyy)}

Log output formats for different versions

Table 1-4 Changed contents of a format in each version number

Version number	Changed contents
0708	The log output format for DKCMAIN program version 73-01-0x-xx/xx (xx is a two-digit number).
0709	The output format for DKCMAIN program version 73-01-3x-xx/xx or later, where xx is a two-digit number. The following formats are changed from version number 0708. There are no changes to other log formats. <ul style="list-style-type: none"> • Output format of the detailed information for [Local Replication] Create pairs • Output format of the detailed information for [Local Replication] Delete pairs • Output format of the detailed information for [Local Replication] Resync pairs • Output format of the detailed information for [Local Replication] Split pairs • Changed the function name from [PROV] Initialize DP Pools to [PROV] Initialize Pools

Version number	Changed contents
0710	<p>The output format for DKCMAIN program version 73-02-0x-xx/xx or later, where xx is a two-digit number. The following formats are changed from version number 0709. There are no changes to other log formats.</p> <ul style="list-style-type: none"> • Output format of the detailed information for [Information] ORM Value • Output format of the detailed information for [Install] Install • Output format of the detailed information for [Install] System Option • Output format of the detailed information for [PROV] Create/Expand Pools • Output format of the detailed information for [PROV] Edit V-VOL Option • Output format of the detailed information for [UVM] Add External Volumes
0711	<p>The output format for DKCMAIN program version 73-03-0x-xx/xx or later, where xx is a two-digit number. The following formats are changed from version number 0710. There are no changes to other log formats.</p> <ul style="list-style-type: none"> • Output format of the detailed information for [Install] Install • Output format of the detailed information for [Maintenance] Type Change • Output format of the detailed information for [TC] Pairresync • Output format of the detailed information for [UR] Journal-Vol

Syslog file format

The following figure shows a sample syslog file.

```

<11> Dec 26 23:06:58 SVP Storage: CELFSS, 1. 1, 24, , 2005-12-26T23:06:58. 0+09:00,
 1      2      3      4      5      6 7 8      9
Storage, SVP, ConfigurationAccess, Failed, uid=root4C106D7C, HM700:265307, , Japan-Tokyo, , ,
 10     11     12     13     14     15     16     17     18-20
from=xxxxxxxxxxxxxxxx, , ,
 21     22-24
33, BasicLog, AP=0xXXXX, , 0, [S1], Paircreate, , Normal end, Seq=000001
 25     26     27     28     29
<11> Dec 26 23:06:58 SVP Storage: CELFSS, 1. 1, 25, , 2005-12-26T23:06:58. 0+09:00,
Storage, SVP, ConfigurationAccess, Failed, uid=root4C106D7C, HM700:265307, ,
Japan-Tokyo, , , from=xxxxxxxxxxxxxxxx, , , 33, DetailLog, AP=0xXXXX, ,
+Copy Pace=Faster
 30
<11> Dec 26 23:06:58 SVP Storage: CELFSS, 1. 1, 26, , 2005-12-26T23:06:58. 0+09:00,
Storage, SVP, ConfigurationAccess, Failed, uid=root4C106D7C, HM700:265307, , Japan-
Tokyo, , , from=xxxxxxxxxxxxxxxx, , , 33, DetailLog, AP=0xXXXX, ,
++[P-VOL (CU:LDEV), S-VOL (CU:LDEV), MU, Result]=[0x00:0x00, 0x01:0x00, 0, Normal end],
[0x00:0x01, 0x01:0x01, 0, Normal end], [0x00:0x02, 0x01:0x02, 0, Normal end],
[0x00:0x03, 0x01:0x03, 0, Normal end]
<11> Dec 26 23:06:58 SVP Storage: CELFSS, 1. 1, 27, , 2005-12-26T23:06:58. 0+09:00,
Storage, SVP, ConfigurationAccess, Failed, uid=root4C106D7C, HM700:265307, , Japan-
Tokyo, , , from=xxxxxxxxxxxxxxxx, , , 33, DetailLog, AP=0xXXXX, ,
-[0x00:0x04, 0x01:0x04, 0, Normal end], [0x00:0x05, 0x01:0x05, 0, Normal end]],
Num. of Pairs=6

```

} 1-28
 } 1-28
 } 30
 } 1-28
 } 30

Figure 1-3 Syslog File

Table 1-5 Items in the Syslog File

No.	Item	Description
①	Priority	<p>The priority of an item in the syslog file is determined according to the following formula, enclosed by brackets (< >):</p> $\text{Priority} = 8 \times \text{Facility} + \text{Severity}$ <p>Facility is 1 (fixed).</p> <p>Severity depends on the type of log information:</p> <ul style="list-style-type: none"> • 4: Error or Warning. Error means the operation has ended abnormally. Warning means the operation has partly ended abnormally or was canceled during the operation. • 6: Informational. The operation has ended normally. <p>For example, <12> indicates the priority when the severity is error.</p>
②	Date, time*	<p>The date and time in the format of "MMM DD HH:mm:ss" (MMM: month such as Jan or Dec, DD: day, HH: hour, mm: minute and SS: second).</p> <p>If the "DD" is a single digit (for example, 1), it is displayed as " 1" (with a blank space before "1") and not as "01".</p>
③	Detected location	The host name (SVP).
④	Program name	The detection entity identification character (Storage).
⑤	Unified specification identification	The Unified specification identification character (CELFSS).
⑥		The revision number of the Unified specification document (1.1).
⑦	Message identification	The serial number of the syslog header information.
⑧		No output
⑨	Date, time#2*	<p>The date, time and the time difference between UTC in the format of "YYYY-MM-DD-Thh:mm:ss.s ± hh:mm".</p> <ul style="list-style-type: none"> • YYYY: year, MM: month, DD: day • hh: hour, mm: minute, ss.s: second in one decimal place. • ± hh:mm: hours and minute of the time difference. "Z" is displayed instead of "± hh:mm" when there is no time difference between UTC, such as "2005-12-26T:23:06:58.0Z".
⑩	Detection entity	The detection entity identification character (Storage).
⑪	Detected location	The host name (SVP).

No.	Item	Description
⑫	Type of audit event	<p>The category name of the event.</p> <ul style="list-style-type: none"> StartStop indicates the start or stop of the operating system on the SVP or the storage system. It also indicates the start or stop of hardware and software. Failure indicates failures in hardware and software. LinkStatus indicates link-up or link-down of ports. ExternalCommunication indicates communications with other external services. Authentication of RMI, FC-SP, or Storage Navigator. AccessControl indicates success or failure in accessing resources by Data Retention Utility. ContentAccess indicates success or failure in accessing files. ConfigurationAccess indicates setting from Storage Navigator, SVP, host, or computer using CCI. AnomalyEvent indicates reached the maximum of the Audit Log, etc. Maintenance indicates SVP operations. ExternalService indicates remote maintenance operations via SVP.
⑬	Result of audit event	<ul style="list-style-type: none"> Success: Normal end. The operation has ended normally. Failed: Error(xxxx-yyyy). The operation has ended abnormally. Failed: Warning (xxxx-yyyy). The operation has partly ended abnormally or was canceled during the operation. <p>"xxxx-yyyy" indicates error codes and it is output only for Storage Navigator operations.</p>
⑭	Subject identification	<p>The user name in the format of "uid=user name".</p> <ul style="list-style-type: none"> <system> is output when the category name is "AnomalyEvent". <DKCMaintenance> is output for SVP operations. <Host> is output for commands from host.
⑮	Hardware identification	<p>The ID (HM700) to identify the model name of the product and the serial number (6-digit number: 200000 - 299999) divided by a colon.</p> <p>For example, if the serial number is 265307, HM700:265307 is output.</p>
⑯	Generated location	No output
⑰	Related information	The location identification name set by the user in the Syslog window.
⑱		No output.
⑲		No output.

No.	Item	Description
20	Agent information	No output.
21	Detailed information	Identification of the host sending the request.
22		No output.
23		No output.
24		No output.
25		Collective operation identification number. This is a serial number that identifies that multiple lines displayed by one operation are the same operation. No output when the category name is "AnomalyEvent".
26		Log type information: <ul style="list-style-type: none"> BasicLog: basic information DetailLog: detailed information No output when the category name is "AnomalyEvent".
27		Identification of the application is output. This information is output when commands are sent from the host.
28		No output.
29		The same information contained in the basic information of the audit log file, such as interface, connection number, task name, function name, operation name, parameter, result, and serial number. No serial number is output when the category name is "AnomalyEvent". Task name is output only when a task is registered using Storage Navigator. No parameter is output if the operation has no parameters.
30		The same information contained in the detailed information of the audit log file.

*A date and time being set on SVP are output as log data. If a failure, such as a SVP failure and a LAN failure, occurs in the storage system, the data and time may be output of the accumulated date and time since January 01, 1970.

Using audit logs

You can download audit log files and syslog files to Storage Navigator computer or transfer audit log files to FTP servers or syslog servers.

- [Downloading audit log files](#)
- [Downloading syslog files](#)
- [Transferring audit log files to FTP servers](#)
- [Transferring audit log files to syslog servers](#)
- [Storing audit logs](#)

Downloading audit log files

Download the audit log files to Storage Navigator computer to prevent the old data from being overwritten.




Prerequisites

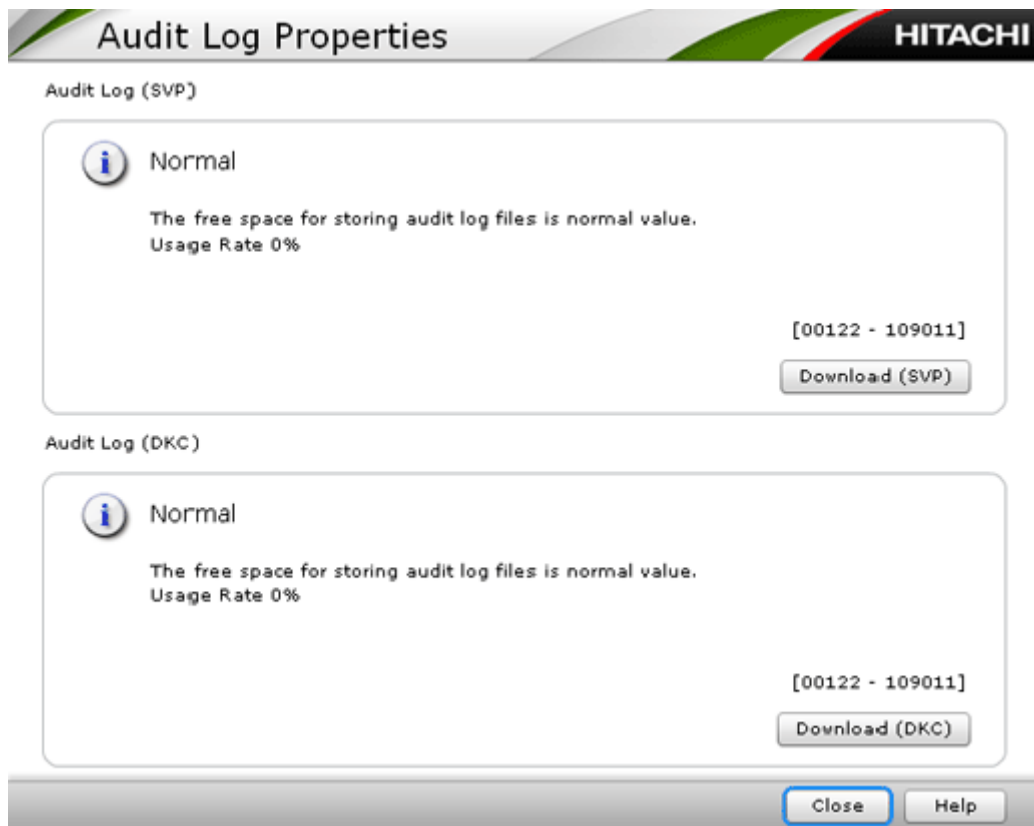


WARNING: Do not download the audit log file to the Storage Navigator computer if the audit log is set to be transferred to an FTP server. Some information may not be transferred to the FTP server because the line counter resets once the audit log file is manually downloaded. Download the file only when the FTP server has failed and cannot receive the audit log file

- You must have Audit Log Administrator (View Only) or Audit Log Administrator (View & Modify) role to download audit log files.

To download the audit log file:

1. Click **Audit Log** on the upper right of the Storage Navigator main window. The Audit Log Properties dialog box opens.
 -  indicates the number of saved lines is below the threshold.
 -  indicates the number of saved lines is above the threshold, but the data is still being saved.
 -  indicates the number of saved lines has exceeded the maximum, and data is being lost.



2. Click **Download(SVP)** or **Download(DKC)** to open the Save As dialog box.
3. Select a destination for the file and click **Save**. It takes from one to five minutes to download the audit log file.
4. Click **Close** to close the Audit Log Properties dialog box.



Note: Audit Log (DKC) is first accumulated in the system disk before it is transferred to SVP. Therefore, it might take time to transfer it to SVP. When there it appears that no logs have been received from a host or a computer using CCI, wait for a while, then retry the download.

Downloading syslog files

Download syslog files to Storage Navigator computer to prevent the old data from being overwritten.

Prerequisites

You must have Audit Log Administrator (View Only) or Audit Log Administrator (View & Modify) role to download syslog files.

To download the syslog file from SVP:

1. Click **Settings > Security > Syslog**. The Syslog window appears.
2. Click **Download**. The Specify the Destination window appears.
3. Enter the destination and the file name and click **Save**.

Transferring audit log files to FTP servers

If you configure FTP server settings, the audit log will be automatically transferred to the FTP server when the number of lines in the file reaches the threshold.


Prerequisites

- You must have Audit Log Administrator (View & Modify) role to configure FTP server settings.
- Keep a list of the items you entered in the window, such as the IP address. You may need to enter them again when an SVP is replaced.

To transfer the audit log file to the FTP server:

1. Ensure that SVP is connected to the FTP server on a LAN.
2. Open the Storage Navigator main window.
3. Click **Settings > Security > Audit log Transfer**. The Audit Log Transfer window appears.

Audit Log Transfer	
FTP Server Setting	
Output to Primary Server	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Primary Server Setting	<input checked="" type="radio"/> IPv4 <input type="radio"/> IPv6 IP <input type="text" value="192 . 168 . 0 . 1"/>
Primary Server Login User	User ID <input type="text"/> Password <input type="text"/>
Primary Server Output Folder	<input type="text"/>
Transfer to Primary Server	<input type="button" value="Transfer"/>
Output to Secondary Server	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Secondary Server Setting	<input checked="" type="radio"/> IPv4 <input type="radio"/> IPv6 IP <input type="text" value="192 . 168 . 0 . 2"/>
Secondary Server Login User	User ID <input type="text"/> Password <input type="text"/>
Secondary Server Output Folder	<input type="text"/>
Transfer to Secondary Server	<input type="button" value="Transfer"/>
SIM Complete	<input type="button" value="Request"/>

4. Click  to change to Modify mode.
5. Perform the following if using a primary FTP server.
 - a. Select **Enable** in **Output to Primary Server**.
 - b. Enter the IP Address in the **Primary Server Setting**. Do not enter the periods.
 - c. Enter the User ID and the Password you use to login the primary FTP server.
 - d. Enter the output folder to which the audit log file will be sent. Specify a relative directory from the home directory as that folder.
6. Perform the following if using a secondary FTP server.
 - a. Click **Enable** in **Output to Secondary Server**.
 - b. Enter the IP Address in the **Secondary Server Setting**. Do not enter the periods.
 - c. Enter the User ID and the Password you use to login the secondary FTP server.
 - d. Enter the output folder to which the audit log file will be sent. Specify a relative directory from the home directory as that folder.
7. Click **Apply**.
8. Confirm that the FTP server setting is correct, then click **Transfer** and manually transfer the audit log file. A message displays indicating that the transfer has completed.

Troubleshooting


A SIM notifies a storage administrator that an FTP transfer has failed. This can occur when the audit log file is not transferred to an FTP server because either the FTP server or LAN has failed. You can view the SIM in the **Alerts** Window. The reference code for a failed FTP transfer is *7C0300*. If a SIM occurs, do the following:

- Resolve the error on the FTP server or LAN, and then manually transfer the audit log file by clicking **Transfer** in the Audit Log Transfer window. Then complete the instructions in the SIM in the Audit Log Transfer window.
- If the error condition cannot be resolved, download the audit log file to the Storage Navigator computer.

If you change the configuration in the Audit Log Transfer window (when the items set in the window appear in blue italic letters), click **Apply** and apply the configuration in the window to the storage system, and then click **Transfer**.

Manual Transfer

To transfer the audit log file manually from the SVP to the FTP server:

1. Click **Settings** > **Security** > **Audit log Transfer**. The Audit Log Transfer window appears.
2. Click  to change to Modify mode.
3. Click **Transfer**. A message appears indicating that the transfer has completed.

Transferring audit log files to syslog servers

If you configure syslog server settings, the audit log will always be transferred to the syslog server.


Prerequisites

- User Datagram Protocol (UDP) is required for transferring the audit log to syslog servers. Consider the characteristics of UDP in the network setting when audit logs are transferred to the syslog server. See [RFC3164](#) (Request For Comment) issued by IETF (Internet Engineering Task Force) for details of syslog.
- You must have Audit Log Administrator (View & Modify) role to configure syslog server settings.
- Keep a list of the items you entered in the window, such as the IP address. You may need to enter them again when an SVP is replaced.

To transfer audit log files:

1. Make sure the storage system is connected to syslog servers on a LAN. Configure the setting of the syslog server and connect to the SVP before applying the setting to transfer audit logs to the syslog server. See the user's manual of the syslog server for the details of the syslog server setting.
2. Open the Storage Navigator main window.
3. Click **Settings > Security > Syslog**. The Syslog window appears.

Syslog	
Syslog Server Setting	
Output to Primary Server	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Primary Server Setting	<input checked="" type="radio"/> IPv4 <input type="radio"/> IPv6 IP: <input type="text" value="192 . 168 . 0 . 1"/> Port: <input type="text" value="514"/>
Output to Secondary Server	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Secondary Server Setting	<input checked="" type="radio"/> IPv4 <input type="radio"/> IPv6 IP: <input type="text" value="192 . 168 . 0 . 2"/> Port: <input type="text" value="514"/>
Location Identification Name	<input type="text"/>
Output Detailed Information	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Download Syslog	<input type="button" value="Download"/>

4. Click  to change to Modify mode.
5. Perform the following if using a primary syslog server.
 - a. Select **Enable** in **Output to Primary Server**.
 - b. Enter the IP Address in **Primary Server Setting**. Do not enter the periods.
 - c. Enter the Port Number in **Primary Server Setting**. You can enter a number from 1 to 65,535.
6. Perform the following if using a secondary syslog server.
 - a. Select **Enable** in **Output to Secondary Server**.
 - b. Enter the IP Address in **Secondary Server Setting**. Do not enter the periods.
 - c. Enter the Port Number in **Secondary Server Setting**. You can enter a number from 1 to 65,535.
7. Enter the name of the storage system from which you are transferring the audit log file in **Location Identification Name**. The name can contain up to 32 one-byte characters, including:
 - o Letters (A-Z and a-z)
 - o Numbers (0-9)
 - o Symbols (including ! " # \$ % & ' () = - ~ ^ | \ { } [] @ ` : ; * + _ ? / < > .)
 - o You cannot use a comma (,) or a space.
8. Click **Enable** for **Output Detailed Information**.

9. Click **Apply**.
10. Confirm that the syslog server is receiving the log of syslog server setting when the setting operation has completed. The function name of the log is *AuditLog* and the operation name is "Set Syslog Server".

If the log is not received by the syslog server, check whether the IP address and the port number set matches with the IP address and the port number of the syslog server. If the IP address and the port number match, check the syslog server setting. See the user's manual of the syslog server for the details of the syslog server setting.

Storing audit logs

When storing audit logs, you can temporarily store them on a system disk before storing the logs in the SVP, or store audit logs directly in the SVP. To prevent possible loss of the audit logs if the SVP fails, Hitachi Data Systems recommends that you temporarily store audit logs on a system disk before storing the logs in the SVP.

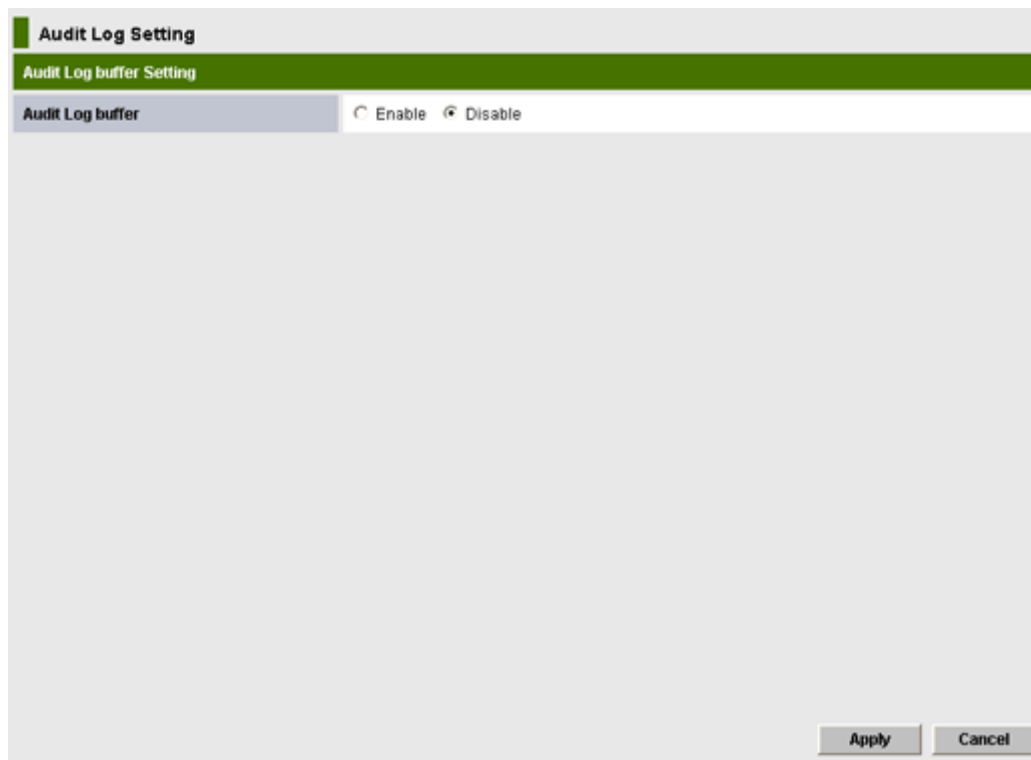
If you transfer audit logs directly to an SVP and the SVP has failed, the audit logs might be lost because the SVP cannot receive the transferred audit logs. Temporarily storing audit logs to a system disk can reduce the risk of losing them. The audit logs stored to the system disk will be eventually stored to the SVP.


Prerequisites

- You must have Audit Log Administrator (View & Modify) role to store audit logs.
- You must create a system disk before you can temporarily store an audit log to the SVP via the system disk.

To configure how to store audit logs:

1. Open the Storage Navigator main window.
2. Click **Settings > Security > Audit Log Setting**. The Audit Log Setting window appears.



3. Click  to change to Modify mode.
4. Select one of the following to set the audit log storage method.
 - **Enable** to temporarily store audit logs in a system disk before storing the logs in the SVP.
 - **Disable** to store audit logs directly in the SVP.
5. Click **Apply**.
6. Click **OK**.

Quick reference

This topic provides a quick reference to what each log indicates.

- [Audit Log Functions](#)
- [Storage Navigator and SVP operation](#)
- [Command sent from the host](#)
- [Encryption Key operation](#)
- [PIN Deletion Tool operation](#)
- [Audit log reproduced output](#)
- [Audit log lost output](#)

Audit Log Functions

The following table lists the functions used in audit logging and provides their meanings.

Table 3-1 Function Names

Function name	Description
ACM	Audit log functions used for account management
AuditLog	Audit log functions used during audit logging
BASE	Audit log functions used during initial setup
HAM	Audit log functions used during High Availability Manager operations
Install	Audit log functions used during software or firmware installation
Maintenance	Audit log functions used during general maintenance
Monitor	Audit log functions used to monitor process
PFM	Audit log functions used to monitor performance
PP KEY	Audit log functions used to install or enable a licence key
PROV	Audit log functions used to provision the system
RCU	Audit log functions used to configure remote control unit for remote copy
SI	Audit log functions used during ShadowImage operations
SNMP	Audit log functions used during SNMP Agent operations
Spreadsheet	Audit log functions used during spreadsheet operations
TC	Audit log functions used during TrueCopy operations
UR	Audit log functions used during Universal Replicator operations
UVM	Audit log functions used during Universal Volume Manager operations
VM	Audit log functions used during Volume Migration operations
VPM	Audit log functions used during Virtual Partition Manager operations
VS	Audit log functions used during volume shredding operations

Storage Navigator and SVP operation

The storage system logs operations performed from Storage Navigator computer or SVP. The following table lists the function/operation names as well as GUI operations that trigger logging. Functions are listed in alphabetical order.

Table 3-2 Audit Log and Storage Navigator/SVP Operations

Function Name	Operation Name	Corresponding GUI Operation
AuditLog	Audit Log buffer	Changing settings in the Audit Log Setting window
AuditLog	Set FTP Server	Changing settings in the Audit Log Transfer window
AuditLog	Set Syslog Server	Changing settings in the Syslog window

Function Name	Operation Name	Corresponding GUI Operation
AuditLog	SIM Complete	SIM complete in the Audit Log Transfer window
ACM	Add Users	Adding a user account to a user group
ACM	Assign Resource Grps	Changing the resource group allocation of a user group
ACM	Assign Roles	Changing the role allocation of a user group
ACM	Change Password	Changing a password
ACM	Create User	Creating a new user account
ACM	Create User Grp	Creating a new user group
ACM	Delete User Grps	Deleting a user group
ACM	Delete Users	Deleting a user account
ACM	Edit User	Changing settings of a user account
ACM	Edit User Grp	Changing the name of a user group
ACM	Remove Users	Removing a user from a user group
ACM	Set Login Message	Changing settings in the Login Message window
ACM	Setup Server	Setting a server for the View External Authentication Server Properties
BASE	Certificate Update	Changing settings in the Update Certificate Files window
BASE	Control Panel Backup	Backing up the configuration files using Control Panel
BASE	Control Panel Restore	Restoring the configuration files using Control Panel
BASE	Create Conf Report	Creating a configuration report
BASE	Delete CVAE Info	Changing information from Command Suite
BASE	Delete Reports	Deleting a configuration report
BASE	Delete Tasks	Deleting a task
BASE	Disable Auto Delete	Disabling Task Auto Delete function
BASE	Edit SIM Syslog Serv	Settings of SIM Syslog notification
BASE	Edit Storage System	Editing storage system information
BASE	Enable Auto Delete	Enabling Task Auto Delete function
BASE	Entry Tasks	Applying a task to the storage system.
BASE	Environment Setting	Changing parameters on Control Panel
BASE	HCSSO Authentication	Launching Storage Navigator from Hitachi Command Suite
BASE	HCSSO SetOneTimeKey	Issuing OneTimeKey from Hitachi Command Suite
BASE	Login	Log in to Storage Navigator or SVP
BASE	Logout	Log out from Storage Navigator or SVP
BASE	Release HTTP Block	Changing settings on the Release HTTP Blocking window
BASE	Resume Tasks	Resuming a task
BASE	Set CVAE Info	Changing information from Command Suite
BASE	Set Up HTTP Block	Changing settings on the Set Up HTTP Blocking window
BASE	Suspend Tasks	Suspending a task

Function Name	Operation Name	Corresponding GUI Operation
BASE	Unlock Forcibly	Cancelling lock forcibly
BASE	Update SMIS CrtFiles	Updating a digital certificate for SMI-S
BASE	Upload SMIS ConfFile	Uploading a configuration file for SMI-S
E-Mail	MailAddress Write Valid Flag Update	Settings of E-Mail notification
HAM	Add Quorum Disk ID Del Quorum Disk ID Paircreate Pairresync Pairsplit-r Pairsplit-S	Hitachi High Availability Manager software
Information	Delete Log ORM Value SIM Complete SIM Reporting Option Threshold Value	Log-related operation on Service Processor (SVP)
Install	Add Host Group	Maintenance on SVP
Install	Add LU Path	Maintenance on SVP
Install	Add WWN	Maintenance on SVP
Install	All Config	Maintenance on SVP
Install	Backup Config	Maintenance on SVP
Install	Change Host Group	Maintenance on SVP
Install	Change WWN	Maintenance on SVP
Install	DCR Prestaging	Maintenance on SVP
Install	Define Config.	Maintenance on SVP
Install	Delete DKC WWN	Maintenance on SVP
Install	Delete Host Group	Maintenance on SVP
Install	Delete LU Path	Maintenance on SVP
Install	Delete WWN	Maintenance on SVP
Install	FlashDrive ORM Value	Maintenance on SVP
Install	Force Reset	Maintenance on SVP
Install	Format	Maintenance on SVP
Install	Format Stop	Maintenance on SVP
Install	Initialize ORM Value	Maintenance on SVP
Install	Install	Maintenance on SVP
Install	Install CV	Maintenance on SVP
Install	Machine Install Date	Maintenance on SVP
Install	Make LUSE	Maintenance on SVP
Install	Make Volume	Maintenance on SVP
Install	Micro Program	Maintenance on SVP

Function Name	Operation Name	Corresponding GUI Operation
Install	MP Install	Maintenance on SVP
Install	Open DCR	Maintenance on SVP
Install	Release LUSE	Maintenance on SVP
Install	Remove	Maintenance on SVP
Install	Restore Config.	Maintenance on SVP
Install	Set Battery Life	Maintenance on SVP
Install	Set Channel Speed	Maintenance on SVP
Install	Set CommandDev	Maintenance on SVP
Install	Set CommandDevSec	Maintenance on SVP
Install	Set DevGrpDef	Maintenance on SVP
Install	Set Fibre Address	Maintenance on SVP
Install	Set Fibre Topology	Maintenance on SVP
Install	Set Host Mode	Maintenance on SVP
Install	Set IP Address	Maintenance on SVP
Install	Set Security Switch	Maintenance on SVP
Install	Set Subsystem Time	Maintenance on SVP
Install	Set UserAuth	Maintenance on SVP
Install	System Option	Maintenance on SVP
Install	System Tuning	Maintenance on SVP
Install	Update Config	Maintenance on SVP
Install	Volume to Space	Maintenance on SVP
Local Replication	Add Reserve VOLS	Reserving volumes for ShadowImage
Local Replication	Create Pairs	Creating pairs for ShadowImage or Thin Image
Local Replication	Delete Pairs	Deleting pairs for ShadowImage or Thin Image
Local Replication	Edit Options	Editing options for ShadowImage
Local Replication	Remove Reserve VOLS	Removing reserve attributes from volumes for ShadowImage
Local Replication	Resync Pairs	Resynchronizing pairs for ShadowImage or Thin Image
Local Replication	Split Pairs	Splitting pairs for ShadowImage or Thin Image
Local Replication	Suspend Pairs	Suspending pairs for ShadowImage
Maintenance	Blockade	Maintenance on SVP
Maintenance	Correction Copy	Maintenance on SVP
Maintenance	DMA Restore	Maintenance on SVP
Maintenance	Drive Interrupt	Maintenance on SVP
Maintenance	DRR Restore	Maintenance on SVP

Function Name	Operation Name	Corresponding GUI Operation
Maintenance	Format	Maintenance on SVP
Maintenance	Format Stop	Maintenance on SVP
Maintenance	MAINBlade Restore	Maintenance on SVP
Maintenance	MP Restore	Maintenance on SVP
Maintenance	Pre QuickFormat Stop	Maintenance on SVP
Maintenance	Quick Format	Maintenance on SVP
Maintenance	Replace	Maintenance on SVP
Maintenance	Restore	Maintenance on SVP
Maintenance	Restore Data	Maintenance on SVP
Maintenance	Set Battery Life	Maintenance on SVP
Maintenance	Spare Disk	Maintenance on SVP
Maintenance	Type Change	Maintenance on SVP
Maintenance	Verify	Maintenance on SVP
Maintenance	Verify Stop	Maintenance on SVP
Monitor	Threshold	Maintenance on SVP
PFM	DCR Prestaging	Cache Residency Manager
PFM	Delete Open DCR	Cache Residency Manager
PFM	Delete Unused WWNs	Performance Monitor
PFM	Edit CU Monitor Mode	Performance Monitor
PFM	Edit Monitoring SW	Performance Monitor
PFM	Edit WWN	Performance Monitor
PFM	Edit WWN MonitorMode	Performance Monitor
PFM	Set Open DCR	Cache Residency Manager
PP KEY	PP Apply	License Key
PP KEY	PP Available Install	License Key
PP KEY	PP Disable chk	License Key
PP KEY	PP Enable chk	License Key
PP KEY	PP Install chk	License Key
PP KEY	PP Install File chk	License Key
PP KEY	PP Removal chk	License Key
PROV	Add Host Group	LUN Manager operation using Configuration File Loader
PROV	Add Hosts	<ul style="list-style-type: none"> Adding the specified host to a host group Adding a host to the specified host group
PROV	Add LU Path	LUN Manager operation using Configuration File Loader
PROV	Add LUN Paths	<ul style="list-style-type: none"> Mapping an LU path Creating an alternate LUN path Copying the selected LUN path
PROV	Add WWN	LUN Manager operation using Configuration File Loader
PROV	Assign MP Unit	Assigning a MP unit

Function Name	Operation Name	Corresponding GUI Operation
PROV	Block LDEVs	Blocking LDEVs
PROV	Change Host Group	LUN Manager operation using Configuration File Loader
PROV	Complete SIMs	Completing SIMs related to a pool
PROV	Create Host Groups	Creating a host group
PROV	Create LDEVs	<ul style="list-style-type: none"> Creating a basic volume Creating an external volume Creating a virtual volume for Dynamic Provisioning
PROV	Create Resource Grps	Creating a resource group
PROV	Create/Expand Pools	Creating a pool Increasing pool capacity
PROV	Delete Host Group	LUN Manager operation using Configuration File Loader
PROV	Delete Host Groups	Deleting a host group
PROV	Delete LDEVs	<ul style="list-style-type: none"> Deleting a basic volume Deleting an external volume Deleting a virtual volume for Dynamic Provisioning
PROV	Delete Login WWNs	Deleting an unnecessary WWN
PROV	Delete LU Path	LUN Manager operation using Configuration File Loader
PROV	Delete LUN Paths	Removing a LUN path from an LDEV
PROV	Delete Resource Grps	Deleting a resource group
PROV	Delete WWN	LUN Manager operation using Configuration File Loader
PROV	DRU Expiration Lock	Data Retention Utility
PROV	Edit Cmd Dev(Auth)	Editing the user authentication setting for a command device
PROV	Edit Cmd Dev(DevGrp)	Editing the device group setting for a command device
PROV	Edit Cmd Dev(Sec)	Editing the command device security setting
PROV	Edit Command Devices	Enabling or disabling the command device setting
PROV	Edit DRU Attribute	Data Retention Utility
PROV	Edit Host	Editing host settings
PROV	Edit Host Grps(Mode)	Editing host group settings
PROV	Edit Host Grps(Name)	Editing host group settings
PROV	Edit LDEVs(tier)	Relocating tier
PROV	Edit LDEV Tier Rank	Editing the external LDEV tier ranks of pool volumes assigned to a pool
PROV	Edit MP Units	Editing the MP unit setting
PROV	Edit Ports(Address)	Editing a port address
PROV	Edit Ports(Attr)	Changing a port attribute with TrueCopy, Universal Replicator, Universal Volume Manager
PROV	Edit Ports(Security)	Editing LUN security setting for a port
PROV	Edit Ports(Speed)	Editing the data transfer speed of a port
PROV	Edit Ports(Topology)	Editing the topology setting of a port

Function Name	Operation Name	Corresponding GUI Operation
PROV	Edit Resource Grp	Editing a resource group
PROV	Edit Tiering Policy	Editing the tiering policy
PROV	Edit V-VOL Option	Creating an LDEV Changing information of an LDEV
PROV	Edit/Delete Pools	Deleting a pool Editing pool settings
PROV	Edit/Delete UUIDs	Editing an UUID Deleting an UUID
PROV	Expand V-VOLs	Increasing virtual volume capacity
PROV	Format LDEVs	Formatting an LDEV Creating an LDEV
PROV	Format LDEVs(Q)	Quick formatting an LDEV
PROV	Initialize Pools	Initializing a pool
PROV	LDEV Name	Setting an LDEV name Editing an LDEV
PROV	Make LUSE	Concatenating LDEVs (creating an LUSE volume)
PROV	Monitor Pools	Starting the performance monitoring of a pool
PROV	Move Resources	Adding a resource to a resource group Removing a resource from a resource group
PROV	Pool Name	Setting a pool name Deleting a pool name
PROV	Reclaim Zero Pages	Releasing pages in a virtual volume
PROV	Release HostReserved	Releasing Host-Reserved LUNs
PROV	Release LUSE	Releasing an LUSE volume
PROV	Relocate Pool	Starting the tier relocation of a pool
PROV	Remove Hosts	Removing a host from a host group
PROV	Restore LDEVs	Restoring an LDEV
PROV	Restore Pools	Restoring a pool
PROV	Set Channel Speed	LUN Manager operation using Configuration File Loader
PROV	Set CommandDev	LUN Manager operation using Configuration File Loader
PROV	Set CommandDevSec	LUN Manager operation using Configuration File Loader
PROV	Set DevGrpDef	LUN Manager operation using Configuration File Loader
PROV	Set FCSP Host	Creating, changing, or deleting the host authentication information
PROV	Set FCSP Port Info	Setting port information Setting default such as user name and secret
PROV	Set FCSP Port Switch	Registering authentication information Authentication Mode: bi-directional -> unidirectional or unidirectional -> bi-directional Authentication (Port) : Enable -> Disable or Disable -> Enable

Function Name	Operation Name	Corresponding GUI Operation
PROV	Set FCSP Target	Registering or deleting authentication information Authentication (Host Group) : Disable -> Enable or Enable -> Disable
PROV	Set Fibre Address	LUN Manager operation using Configuration File Loader
PROV	Set Fibre Topology	LUN Manager operation using Configuration File Loader
PROV	Set Host Mode	LUN Manager operation using Configuration File Loader
PROV	Set Security Switch	LUN Manager operation using Configuration File Loader
PROV	Set UserAuth	LUN Manager operation using Configuration File Loader
PROV	Shrink Pool	Decreasing pool capacity
PROV	Stop Monitoring	Stopping the performance monitoring of a pool
PROV	Stop Reclm ZeroPages	Stop releasing pages in a virtual volume
PROV	Stop Relocating	Stopping the tier relocation of a pool
PROV	Stop Shrinking Pool	Stop decreasing pool capacity
RCU	Add Path Add RCU Change RCU Option Delete Path Delete RCU	RCU settings for TrueCopy or Universal Replicator
Remote Maintenance	PS Control Reboot MP Reboot Port Reboot SVP Switch SVP Transfer Config	Hi-track
SI	Change Reserve Initialize Option Paircreate Pairresync Pairsplit Pairsplit-E Pairsplit-S	ShadowImage
SNMP	Set SNMP Agent	SNMP Information

Function Name	Operation Name	Corresponding GUI Operation
SPM	Change SPMGrp Clear SPM Info Default Set Set All Prio Port Set All Prio WWN Set Ctrl Kind Set Prio Port Set Prio WWN SPMGrp Del/Chg Update Port WWN Update SPMGrp Update WWN	Server Priority Manager
Spreadsheet	CflSet End	Executing the CFLSET command using Storage Navigator CLI
	CflSet Start	
	LUNM Operation	Configuration File Loader
TC	Change Option Change Pair Option Clear SIM Function Switch Paircreate Pairresync Pairsplit-r Pairsplit-S	TrueCopy
UR	Change-JNL-Option Change-Mirror-Option Clear-SIM Journal-Vol Journal-Vol Pair-Option Paircreate Pairresync Pairsplit-r Pairsplit-S System-Option	Universal Replicator
UVM	Add External Volumes	Mapping an external volume
UVM	Assign MP Unit	Assigning a MP unit to an external volume
UVM	Delete ES VOLs	Releasing external volume mapping
UVM	Disconnect ES Paths	Disconnecting an external path
UVM	Disconnect ES VOLs	Disconnecting an external storage system or an external volume

Function Name	Operation Name	Corresponding GUI Operation
UVM	Edit ES Path Config	Adding a path to an external path group Deleting a path from an external path group Changing priority among external paths
UVM	Edit ES VOLs	Editing external volume settings
UVM	Edit External WWNs	Editing external WWN parameters
UVM	Merge ES Path Grps	Storage Navigator CLI
UVM	ProfileUpgrade	Operable by tool only
UVM	Reconnect ES Paths	Reconnecting an external path
UVM	Reconnect ES VOLs	Reconnecting an external storage system or external volume
UVM	Split ES Path Grp	Storage Navigator CLI
VM	Create Auto Plan Del Auto Plan Log Del Migration Log Delete Auto Plan Set Auto Plan Param Set Class Threshold Set Fixed PG Set Migration Vol Set Plan Condition Set Reserved Vol	Volume Migration
VPM	Edit CLPR	Editing CLPR settings
VS	Abort Shredding	Aborting shredding an LDEV
VS	End Shredding	Ending shredding an LDEV
VS	Shred LDEVs	Shredding an LDEV

Command sent from the host

The following table describes the function name output to the audit log file when receiving commands from the host.

Table 3-3 Audit Log and Command Sent from Host

Function Name	Description
Config Command	Indicates that a configuration command was received.
FC-SP	Indicates that the FC-SP authentication is completed.
User Auth	Indicates that a user authentication command was received.

Encryption Key operation

The following tables show the function names, operation names and event names of encryption keys for data encryption and each item is listed in alphabetical order. The logs for the operation names listed in the first table are output to Auditlog information file 1, while the logs for the event names listed in the second table are output to Auditlog information file 2.

Table 3-4 Function Name and Operation Name Output to Auditlog information file 1

Function Name	Operation Name	Corresponding GUI Operation
ENC	Add keys to DKC	Creating encryption keys Configuring encryption environment settings
	Backup Keys	Backing up encryption keys on the key management server or backing up encryption keys as a file on the Storage Navigator PC
	Backup Keys to File	Backing up encryption keys as a file on the Storage Navigator PC
	Backup Keys to Serv	Backing up encryption keys on the key management server
	Create KEK Dynamic	Configuring encryption environment settings Updating key encryption keys
	Create Keys	Creating encryption keys Configuring encryption environment settings
	Create Keys On Serv	Creating encryption keys Backing up encryption keys on the key management server Configuring encryption environment settings
	Delete KEK Dynamic	Configuring encryption environment settings Updating key encryption keys
	Delete Keys	Deleting encryption keys
	Delete Keys on Serv	Deleting encryption keys backed up on the key management server
	DEK assign SpareDisk	Configuring encryption environment settings
	DEK delete	Configuring encryption environment settings
	Edit Encryption	Enabling/disabling the encryption in a parity group level
	Edit ENC Settings	Configuring encryption environment settings
	Edit Password Policy	Editing password policies
	Register KEK Dynamic	Configuring encryption environment settings Updating key encryption keys
	Rekey CEK	Configuring encryption environment settings Updating certificate encryption keys
	Rekey KEK Dynamic	Updating key encryption keys
	Restore Keys	Restoring encryption keys from back up copies on the key management server or the Storage Navigator PC
	Restore Keys fr File	Restoring encryption keys from back up copies on the Storage Navigator PC
	Restore Keys fr Serv	Restoring encryption keys from back up copies on the key management server
	Retry KEK Dynamic	Reacquisition of key encryption keys
	Set Up Key Mng Serv	Configuring encryption environment settings
KEK Acquisition	Acquisition Key	Reacquisition of key encryption keys
	Set Key	

Table 3-5 Function Name and Event Name Output to Auditlog information file 2

Function Name	Event Name	Output Trigger
ENC	Change CEK Status	<ul style="list-style-type: none"> When the encryption environment setting is configured from the initial setting. When the certificate encryption key is updated. When the encryption disk adapter is deleted or replaced.
	Change DEK Status	<ul style="list-style-type: none"> When the encryption environment setting is configured from the initial setting. When the encryption environment setting is initialized. When the data encryption is enabled/disabled. When Dynamic sparing, Correction copy or Copy back is performed. When the HDD is added, deleted or replaced after the encryption environment setting is configured.
	Clear Keys	When the encryption environment setting is initialized.
	Create Keys	When the encryption key is created.
	Delete Keys	When the encryption key is deleted.
	Use Keys for CEK/KEK	<ul style="list-style-type: none"> When the encryption environment setting is configured from the initial setting. When the certificate encryption key is updated. When the encryption disk adapter is added or replaced.

PIN Deletion Tool operation

The following table shows the function name and the operation name concerning the PIN Deletion Tool.

Table 3-6 Audit Log and PIN Deletion Tool Operation

Function Name	Operation Name	Corresponding GUI Operation
PINDeletion	Delete	PIN deletion operation by PIN deletion tool

Audit log reproduced output

The following table describes the operation name, event name, and triggering events that are output when the audit log file is reproduced. The "create file" event name will be automatically output only once.

Table 3-7 Audit Log File Output

Function Name	Event Name	Output Trigger
AuditLog	Create File	Output when abnormal files in the audit log are reproduced automatically.

Audit log lost output

The following shows the function name and the event name that are output when the audit log by the commands that the storage system accepted from the host has been lost. The "DKCAuditLog was lost" event name will be automatically output only once for each output trigger.

Table 3-8 Audit Log Lost Output

Function Name	Event Name	Output Trigger
AuditLog	DKCAuditLog was lost	Output when the audit log by the commands that the storage system accepted from the host has been lost.

Audit log examples

This topic provides examples and descriptions of the audit logs produced by each function and operation that can be performed with Storage Navigator and SVP. The descriptions are listed alphabetically by function name and operation name. For detailed information on the version numbers in log output examples, see [Table 1-4 Changed contents of a format in each version number on page 1-9](#).

- [Audit Log Descriptions](#)
- [ACM Descriptions](#)
- [BASE Descriptions](#)
- [E-Mail Descriptions](#)
- [HAM Descriptions](#)
- [Information Descriptions](#)
- [Install Descriptions](#)
- [Local Replication Descriptions](#)
- [Maintenance Descriptions](#)
- [Monitor Descriptions](#)
- [Performance Monitor Descriptions](#)
- [Program Product Key \(PP KEY\) Descriptions](#)
- [Provisioning Descriptions](#)

- [RCU Descriptions](#)
- [Remote Maintenance Descriptions](#)
- [ShadowImage Descriptions](#)
- [SNMP Descriptions](#)
- [Server Priority Manager Descriptions](#)
- [Spreadsheet Descriptions](#)
- [TrueCopy Descriptions](#)
- [Universal Replicator Descriptions](#)
- [Universal Volume Manager Descriptions](#)
- [Volume Migration Descriptions](#)
- [Virtual Partition Manager Descriptions](#)
- [Volume Shredder Descriptions](#)

Audit Log Descriptions

[AuditLog] Audit Log buffer

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,  
[AuditLog],Audit Log buffer,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx  
+{Option,Set,Result}  
=[{Audit Log buffer,Enable,Normal}],Num. of Modes=1
```

Detailed Information

Item	Description
Option	The operation name (Audit Log buffer)
Set	The setting status. Disable or Enable will appear
Result	The result of the setting Normal: Normal end. Error: Abnormal end
Num. of Modes	The number of options configured

[AuditLog] Create File

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,<system>,,,  
[AuditLog],Create File,SVP,Warning,, ,Seq.=xxxxxxxxxxx
```

Basic Information

Parameter	Description
SVP	Indicates that the audit log file 1 has been reproduced
DKC	Indicates that the audit log file 2 has been reproduced

[AuditLog] DKCAuditLog was lost

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,<system>,,,  
[AuditLog],DKCAuditLog was lost,,Error,, ,Seq.=xxxxxxxxxxx
```

[AuditLog] Over MaxLine

This information appears in the syslog file only.

Example

```
<14> Jan 4 06:25:18 SVP Storage: CELFSS,1.1,250001,,
2006-01-04T06:25:18.3Z,
Storage,SVP,AnomalyEvent,Success,<system>,HM700:265307,,
Japan-Tokyo,,,,,,,,,,,,SVP,,, [AuditLog],Over MaxLine,SVP,
Normal end
```

Basic Information

Parameter	Description
SVP	Indicates that the capacity of audit log file 1 has reached the maximum
DKC	Indicates that the capacity of audit log file 2 has reached the maximum

[AuditLog] Over Threshold

This information appears in the syslog file only.

Example

```
<14> Jan 4 06:25:18 SVP Storage: CELFSS,1.1,250001,,
2006-01-04T06:25:18.3Z,
Storage,SVP,AnomalyEvent,Success,<system>,HM700:265307,,
Japan-Tokyo,,,,,,,,,,,,SVP,,, [AuditLog],Over Threshold,
SVP,Normal end
```

Basic Information

Parameter	Description
SVP	Indicates that the capacity of audit log file 1 has exceeded the threshold value
DKC	Indicates that the capacity of audit log file 2 has exceeded the threshold value

[AuditLog] Set FTP Server

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[AuditLog],Set FTP Server,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{ServerType,IPAddrVer,OutFlg,SrvAddr,UserName,OutputDir}
=[{Primary,IPv4,Disable,192.168.0.1,root,/Data/AuditLog},
{Secondary,IPv6,Enable,3ffe:0501:4819:2000:5254:00ff:fedc:50d2,
-,-}]
```

Detailed Information

No detailed information is output when no setting is changed.

Item	Description
ServerType	The server type of the FTP server to be set. If the setting is not changed, a hyphen (-) is displayed. Primary: Primary FTP server. Secondary: Secondary FTP server.
IPAddrVer	The version number of the internet protocol. If the setting is not changed, a hyphen (-) is displayed. IPv6: Internet Protocol Version 6, IPv4: Internet Protocol Version 4
OutFlg	Whether to transfer the audit log file (audit.log) to the FTP server. Enable: Transfer audit log file. Disable: Do not transfer audit log file.
SrvAddr	The IP address to which the audit log file is sent. If the setting has not changed, a hyphen (-) is displayed.
UserName	The user name to login to the FTP server. If the setting has not changed, a hyphen (-) is displayed.
OutputDir	The directory in the FTP server that the transferred audit log files are stored. If the setting is not changed, a hyphen (-) is displayed.

[AuditLog] Set Syslog Server

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[AuditLog],Set Syslog Server,DetailFlg=Enable,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+DetailFlg=Enable
+LocationInfo=LOCATION-01
+{ServerType,IPAddrVer,OutFlg,SrvAddr,SrvPortNum}
=[{Primary,IPv4,Disable,192.168.0.1,514},
{Secondary,IPv6,Enable,
3ffe:0501:4819:2000:5254:00ff:fedc:50d2,-}]
```

Basic Information

Parameter	Description
Detail Flag=Enable	Detailed information is output to the syslog server
Detail Flag=Disable	Detailed information is not output to the syslog server

Detailed Information

No detailed information is output when no setting is changed.

Item	Description
DetailFlg	Indicates whether to output detailed information to the syslog server. Enable: Output detailed information. Disable: Do not output detailed information.
LocationInfo	The location identification information of the storage system Not output when the setting is not changed

Item	Description
ServerType	The syslog server to which information is output. Not output when the setting is not changed Primary: Primary syslog server. Secondary: Secondary syslog server.
IPAddrVer	The version number of the internet protocol. If the setting is not changed, a hyphen (-) is displayed. IPv6: Internet Protocol Version 6. IPv4: Internet Protocol Version 4
OutFlg	Whether to transfer the syslog information to the syslog server. Enable: Transfer syslog information. Disable: Do not transfer syslog information.
SrvAddr	The IP address to which the syslog information is sent. If the setting is not changed, a hyphen (-) is displayed.
SrvPortNum	The port number of the LAN when sending the syslog information. If the setting is not changed, a hyphen (-) is displayed.

[AuditLog] SIM Complete

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[AuditLog],SIM Complete,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Reference Code=[0x7C0300],Num. of Reference Codes=1
```

Detailed Information

Item	Description
Reference Code	The SIM reference code which error and service request is solved
Num. of Reference Codes	The number of SIM reference code which error and service request is solved

ACM Descriptions

[ACM] Add Users

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx,+00:00,RMI AP,uid=user-name,1,
Task Name,[ACM],Add Users,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{User Name,User Group Name,Result}
=[{User01,Group01,Normal end},{User02,Group01,Normal end}],
Num. of Users=2
```

Detailed Information

Item	Description
User Name	The user name that was added to a user group

Item	Description
User Group Name	The name of the user group to which the user ID was added
Result	Result of the operation Normal end: normal end, Error(xxxxx-yyyyyy): Abnormal end xxxxx: part code, yyyyyy: error code
Num. of Users	The number of users that were added

[ACM] Assign Resource Grps

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[ACM],Assign Resource Grps,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{User Group Name,Result}={Group01,Normal end},
Num. of User Groups=1
++{Resource Group ID,Result}=[{1,Normal end},{2,Normal end}],
Num. of Resource Groups=2
```

Detailed Information

Item	Description
User Group Name	The name of a user group
Result	Result of the operation Normal end: Normal end, Error(xxxxx-yyyyyy): Abnormal end xxxxx: Part code, yyyyyy: Error code
Num. of User Groups	The number of user groups
Resource Group ID	The resource group ID allocated to the user group Not the difference but all the resource group numbers are output, which are allocated to the target user group after the operation.
Num. of Resource Groups	The number of resource groups

As a result of the operations, when all the allocation of resource groups are released from the target user group, "++{Resource Group ID,Result}" and later in the detailed information are not output.

[ACM] Assign Roles

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[ACM],Assign Roles,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{User Group Name,All Resource Groups Assigned,Result}
={Group01,Yes,Normal end},Num. of User Groups=1
++{Role Name,Result}=[{Role01,Normal end},{Role02,Normal end}],
Num. of Roles=2
```

Detailed Information

Item	Description
User Group Name	The name of a user group
All Resource Groups Assigned	Indicates whether there is All Resource Groups Assigned setting in the user group
Result	Result of the operation Normal end: Normal end, Error(xxxxx-yyyyyy): Abnormal end xxxxx: Part code, yyyyyy: Error code
Num. of User Groups	The number of user groups
Role Name	The role name allocated to the user group Not the difference but all the role names are output, which are allocated to the target user group after the operation.
Num. of Roles	The number of roles

[ACM] Change Password

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx,+00:00,RMI AP,uid=user-name,1,
Task Name,[ACM],Change Password,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{User Name,Result}=[{User01,Normal end}],Num. of Users=1
```

Detailed Information

Item	Description
User Name	The name of the user whose password was changed.
Result	Result of the operation Normal end: normal end, Error(xxxxx-yyyyyy): Abnormal end xxxxx: part code, yyyyyy: error code
Num. of Users	The number of users whose passwords were changed.

[ACM] Create User

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx,+00:00,RMI AP,uid=user-name,1,
Task Name,[ACM],Create User,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{User Name,Account Status,Authentication,User Group Name,Result}
=[{User01,Enabled,Local,Group01,Normal end}],Num. of Users=1
```

Detailed Information

Item	Description
User Name	The user name that was created

Item	Description
Account Status	Indicates whether the user account is enabled or disabled. Enabled: the account is enabled, Disabled: the account is disabled
Authentication	The authentication server that the user uses Local: SVP authentication, External: External authentication
User Group Name	The name of the user group to which the user ID was added
Result	Result of the operation Normal end: normal end, Error(xxxxx-yyyyyy): Abnormal end xxxxx: part code, yyyyyy: error code
Num. of Users	The number of users that were created

[ACM] Create User Grp

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[ACM],Create User Grp,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{User Group Name,All Resource Groups Assigned,Result}
={Group01,Yes,Normal end},Num. of User Groups=1
```

Detailed Information

Item	Description
User Group Name	The name of a user group name that was created
All Resource Groups Assigned	Indicates whether there is All Resource Groups Assigned setting in the created user group
Result	Result of the operation Normal end: Normal end, Error(xxxxx-yyyyyy): Abnormal end xxxxx: Part code, yyyyyy: Error code
Num. of User Groups	The number of created user groups

[ACM] Delete User Grps

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[ACM],Delete User Grps,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{User Group Name,Result}=[{Group01,Normal end},
{Group02,Normal end}],Num. of User Groups=2
```

Detailed Information

Item	Description
User Group Name	The user group name

Item	Description
Result	Result of the operation Normal end: Normal end, Error(xxxxx-yyyyyy): Abnormal end xxxxx: Part code, yyyyyy: Error code
Num. of User Groups	The number of user groups

[ACM] Delete Users

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx,+00:00,RMI AP,uid=user-name,1,
Task Name,[ACM],Delete Users,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{User Name,Result}=[{User01,Normal end},{User02,Normal end}],
Num. of Users=2
```

Detailed Information

Item	Description
User Name	The user name that was deleted
Result	Result of the operation Normal end: normal end, Error(xxxxx-yyyyyy): Abnormal end xxxxx: part code, yyyyyy: error code
Num. of Users	The number of users that were deleted

[ACM] Edit User

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx,+00:00,RMI AP,uid=user-name,1,
Task Name,[ACM],Edit User,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{User Name,Account Status,Authentication,Result}
=[{User01,Enabled,Local,Normal end}],Num. of Users=1
```

Detailed Information

Index	Description
User Name	The user name that was edited
Account Status	Indicates whether the user account is enabled or disabled. A hyphen (-) appears if the setting is not changed. Enabled: the account is enabled, Disabled: the account is disabled.
Authentication	The authentication server that the user uses A hyphen (-) appears if the setting is not changed. Local: SVP authentication, External: External authentication

Index	Description
Result	Result of the operation Normal end: normal end, Error(xxxxx-yyyyyy): Abnormal end xxxxx: part code, yyyyyy: error code
Num. of Users	The number of users that were edited

[ACM] Edit User Grp

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[ACM],Edit User Grp,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{User Group Name,New User Group Name,Result}
={Group01,New Group01,Normal end},Num. of User Groups=1
```

Detailed Information

Index	Description
User Group Name	The user group name
New User Group Name	The user group name that was newly set
Result	Result of the operation Normal end: Normal end, Error(xxxxx-yyyyyy): Abnormal end xxxxx: Part code, yyyyyy: Error code
Num. of User Groups	The number of user groups

[ACM] Remove Users

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx,+00:00,RMI AP,uid=user-name,1,
Task Name,[ACM],Remove Users,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{User Name,User Group Name,Result}
=[{User01,Group01,Normal end},{User02,Group01,Normal end}],
Num. of Users=2
```

Detailed Information

Item	Description
User Name	The user name that was removed from a user group
User Group Name	The name of the user group from which the user was removed
Result	Result of the operation Normal end: normal end, Error(xxxxx-yyyyyy): Abnormal end xxxxx: part code, yyyyyy: error code
Num. of Users	The number of users that were removed

[ACM] Set Login Message

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[ACM],Set Login Message,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+LoginMessageSentence=Login Message
```

Detailed Information

Item	Description
LoginMessageSentence	Indicates the sentence displayed on the login window of Storage Navigator

[ACM] Setup Server

Example 1

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[ACM],Setup Server,Disable,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
```

Basic Information for Example 1

Parameter	Description
Disable	Indicates that the External Authentication server is not used

Example 2

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[ACM],Setup Server,LDAP,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Certification File Name,DNS Lookup,Authentication Protocol,
External User Group Mapping,Primary Host Name,
Primary Port Number,Domain Name,User Name Attribute,Base DN,
Search User's DN,Timeout,Retry Interval,Number of Retries}=
-{CFFILE,Disable,STARTTLS,Enable,
-examplehost,389,example1.com,sAMAccountName,
-dc=example2 dc=com,example3.com,10,1,3}
++{Secondary Server,Secondary Host Name,Secondary Port Number}=
{Enable,example4.com,389}
+Num. of Servers=1
```

Basic Information for Example 2

Parameter	Description
LDAP	Indicates that the LDAP server is used as the External Authentication server

Detailed Information for Example 2

Item	Description
Certification File Name	Indicates the name of certification file
DNS Lookup	Indicates whether to search the LDAP server using the information registered in the SRV records in the DNS server Enable: Performs the search using information registered in the SRV records in the DNS server Disable: Performs the search using the host name and the port number
Authentication Protocol	Indicates the LDAP protocol (LDAP over SSL/TLS or STARTTLS) to use
External User Group Mapping	Indicates whether to connect an authentication server to an authorization server Enable: Connects an authentication server to an authorization server Disable: Does not connect an authentication server to an authorization server
Primary Host Name	Indicates the host name of the LDAP server
Primary Port Number	Indicates the port number of the LDAP server
Domain Name	Indicates the domain name that the LDAP server manages
User Name Attribute	Indicates the attribute name to identify a user
Base DN	Indicates the Base DN (Distinguished Name) for searching for users to authenticate Commas that are input by user are indicated with spaces
Search User's DN	Indicates the DN of the user for searching
Timeout	Indicates the number of seconds before connection to the LDAP server times out
Retry Interval	Indicates the retry interval in seconds when the connection to the LDAP server fails
Number of Retries	Indicates the retry times when the connection to the LDAP server fails
Secondary Server	Indicates whether to use a secondary LDAP server Enable: Use the secondary server Disable: Do not use the secondary server
Secondary Host Name	Indicates the host name of the secondary LDAP server
Secondary Port Number	Indicates the port number of the secondary LDAP server
Num. of Servers	The number of external authentication servers that are set

Example 3

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name, [ACM], Setup Server,RADIUS,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, ,Seq.=xxxxxxxxxxx
+{Authentication Protocol,Primary Host Name,NAS Address,
Primary Port Number,Timeout,Number of Retries,Secondary Server,
Secondary Host Name,Secondary Port Number}=
-{PAP,example1.com,
-10.213.74.20,1812,10,3,Enable,example2.com,1812}
++{External User Group Mapping,Certification File Name,
Authentication Protocol,DNS Lookup,Host Name,Port Number,
Domain Name,Base DN,Search User's DN,Timeout,Retry Interval,
Number of Retries}=
-{Enable,CFFILE,STARTTLS,Disable,
-example.com,389,example1.com,
-dc=example2 dc=com,example3.com,10,1,3}
+Num. of Servers=1
```

Basic Information for Example 3

Parameter	Description
RADIUS	Indicates that the RADIUS server is used as the External Authentication server.

Detailed Information for Example 3

Item	Description
Authentication Protocol	Indicates the RADIUS protocol to use PAP: password authentication protocol that transmits plaintext user ID and password CHAP: challenge-handshake authentication protocol that transmits encrypted password
Primary Host Name	Indicates the host name of the RADIUS server
NAS Address	Indicates the identifier for the RADIUS server to find SVP
Primary Port Number	Indicates the port number of the RADIUS server
Timeout	Indicates the number of seconds before connection to the RADIUS server times out
Number of Retries	Indicates the number of times that the system tries to reconnect to the server when the connection to the RADIUS server fails
Secondary Server	Indicates whether to use a secondary RADIUS server or a secondary LDAP server Enable: Use the secondary server Disable: Do not use the secondary server
Secondary Host Name	Indicates the host name of the secondary RADIUS server
Secondary Port Number	Indicates the port number of the secondary RADIUS server

Item	Description
External User Group Mapping	Indicates whether to connect an authentication server to an authorization server Enable: Connects an authentication server to an authorization server Disable: Does not connect an authentication server to an authorization server
Certification File Name	Indicates the name of certification file
Authentication Protocol	Indicates the LDAP protocol to use
DNS Lookup	Indicates whether to search for the LDAP server using the information registered in the SRV records in the DNS server Enable: Performs the search using information registered in the SRV records in the DNS server Disable: Performs the search using the host name and the port number
Host Name	Indicates the host name of the LDAP server
Port Number	Indicates the port number of the LDAP server
Domain Name	Indicates the domain name that the LDAP server manages
Base DN	Indicates the Base DN for searching for users to authenticate Commas that are input by user are indicated with spaces
Search User's DN	Indicates the DN of the user for searching
Timeout	Indicates the number of seconds before the connection to the LDAP server times out
Retry Interval	Indicates the retry interval in seconds when the connection to the LDAP server fails
Number of Retries	Indicates the retry times when the connection to the LDAP server fails
Num. of Servers	The number of external authentication servers that are set

Example 4

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name, [ACM], Setup Server, Kerberos, Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, , Seq.=xxxxxxxxxx
+{DNS Lookup, Realm Name, Primary Host Name, Primary Port Number,
Clock Skew, Timeout, Secondary Server, Secondary Host Name,
Secondary Port Number}=
- {Disable, example1.com, example2.com, 88, 300, 10, Enable, example3.com,
88}
++{External User Group Mapping, Certification File Name,
Authentication Protocol, Primary Port Number, Base DN,
Search User's DN, Timeout, Retry Interval, Number of Retries,
Secondary Server, Secondary Port Number}=
- {Enable, CFFILE, STARTTLS, 389,
-dc=example4 dc=com, example5.com, 10, 1, 20, Enable, 389}
+Num. of Servers=1
```

Basic Information for Example 4

Parameter	Description
Kerberos	Indicates that the Kerberos server is used as the External Authentication server.

Detailed Information for Example 4

Item	Description
DNS Lookup	Displays whether to search for the Kerberos server using the information registered in the SRV records in the DNS server Enable: Performs the search using information registered in the SRV records in the DNS server Disable: Performs the search using the host name and the port number
Realm Name	Indicates the default realm name
Primary Host Name	Indicates the host name of the Kerberos server
Primary Port Number	Indicates the port number of the Kerberos server
Clock Skew	Indicates the acceptable range of time difference between the SVP and the Kerberos server
Timeout	Indicates the number of seconds before connection to the Kerberos server times out
Secondary Server	Indicates whether to use a secondary Kerberos server Enable: Use the secondary server Disable: Do not use the secondary server
Secondary Host Name	Indicates the host name of the secondary Kerberos server
Secondary Port Number	Indicates the port number of the secondary Kerberos server
External User Group Mapping	Indicates whether to connect an authentication server to an authorization server Enable: Connects an authentication server to an authorization server Disable: Does not connect an authentication server to an authorization server
Certification File Name	Indicates the name of certification file
Authentication Protocol	Indicates the LDAP protocol to use
Primary Port Number	Indicates the port number of the LDAP server
Base DN	Indicates the Base DN for searching for users to authenticate Commas that are input by user are indicated with spaces
Search User's DN	Indicates the DN of the user for searching

Item	Description
Timeout	Indicates the number of seconds before connection to the LDAP server times out
Retry Interval	Indicates the retry interval in seconds when the connection to the LDAP server fails
Number of Retries	Indicates the retry times when the connection to the LDAP server fails
Secondary Server	Indicates whether to use a secondary LDAP server Enable: Use the secondary server Disable: Do not use the secondary server
Secondary Port Number	Indicates the port number of the secondary LDAP server
Num. of Servers	The number of external authentication servers that are set

BASE Descriptions

[BASE] Certificate Update

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,0,,
[BASE],Certificate Update,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{File Name,Result}=[{server.crt,Normal end},
{server.key,Error(xxxx-yyyy)}]
```

Detailed Information

Item	Description
File Name	Name of the uploaded file
Result	Result of the upload operation Normal end: normal end, Error(xxxx-yyyy): Abnormal end xxxx: part code, yyyy: error code

[BASE] ControlPanel Backup

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,0,,
[BASE],ControlPanel Backup,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{File Name,Result}
=[{User Account Information,Normal end},
{Environment Parameter List,Normal end},
{Log Transfer Information,Normal end},
{External Authentication,-},
{External Application Link,-},{HiCommand Setting,-},
{Key Management Server,Normal end},{Password Policy,Normal end}]
```

Detailed Information

Item	Description
File Name	Name of the backup file
Result	Result of the backup operation Normal end: normal end, Error(xxxx-yyyy): Abnormal end, -: not selected xxxx: part code, yyyy: error code

[BASE] ControlPanel Restore

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,0,,
[BASE],ControlPanel Restore,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{File Name,Result}
={User Account Information,Normal end},
{Environment Parameter List,Normal end},
{Log Transfer Information,Normal end},
{External Authentication,-},
{External Application Link,-},{HiCommand Setting,-},
{Key Management Server,Normal end},{Password Policy,Normal end}}
```

Detailed Information

Item	Description
File Name	Name of the restore file
Result	Result of the restore operation Normal end: normal end, Error(xxxx-yyyy): Abnormal end, -: not selected xxxx: part code, yyyy: error code

[BASE] Create Conf Report

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[BASE],Create Conf Report,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
++{ReportName,UserName,FolderName,StartTime}
={XXXXXXX,manager,YYYYYYYYYY,YYYYMMDDHHMMSS}
```

Detailed Information

Item	Description
ReportName	Name of the created configuration report
UserName	Name of the user who created the configuration report
FolderName	Folder name where the configuration report is output
StartTime	Starting date and time of the configuration report creation

[BASE] Delete CVAE Info

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[BASE],Delete CVAE Info,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{ID}={0,1,2,3},Num. of IDs=4
```

Detailed Information

Item	Description
ID	ID (unique ID row by row) of the version information that was deleted
Num. of IDs	The number of IDs

[BASE] Delete Reports

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[BASE],Delete Reports,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{FolderName,Result}=[{XXXXXXXXXX,Normal end},
{XXXXXXXXXX,Normal end},{XXXXXXXXXX,Normal end},
-{XXXXXXXXXX,Normal end}],Num. of Reports=4
```

Detailed Information

Item	Description
FolderName	Folder name of the deleted configuration report.
Result	Result of the operation Normal end: normal end, Error(xxxx-yyyyy): Abnormal end xxxx: part code, yyyy: error code
Num. of Reports	The number of deleted configuration reports

[BASE] Delete Tasks

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[BASE],Delete Tasks,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Task Name,Type,User Name,Submission Time,Result}
=[{20100101-EditStorageSystem,Edit Storage System,User01,
YYYY/MM/DD HH:MM:SS,Normal end},{20100101-CreateLdev,
Create LDEV,User02,YYYY/MM/DD HH:MM:SS,Normal end}],
Num. of Tasks=2
```

Detailed Information

Item	Description
Task Name	Name of the deleted task
Type	Type of the task
User Name	The user ID who deleted the task
Submission Time	Time when the task was registered
Result	Result of the operation Normal end: normal end, Error(xxxx-yyyyy): Abnormal end xxxx: part code, yyyy: error code
Num. of Tasks	The number of the deleted tasks

[BASE] Disable Auto Delete

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[BASE],Disable Auto Delete,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{Task Name,Type,User Name,Submission Time,Result}
=[{20100101-EditStorageSystem,Edit Storage System,User01,
YYYY/MM/DD HH:MM:SS,Normal end},{20100101-CreateLdev,
Create LDEV,User02,YYYY/MM/DD HH:MM:SS,Normal end}],
Num. of Tasks=2
```

Detailed Information

Item	Description
Task Name	The task name that the disable auto delete operation was performed
Type	Type of the task
User Name	ID of the user who performed the operation
Submission Time	Time when the task was registered
Result	Result of the operation Normal end: normal end, Error(xxxx-yyyyy): Abnormal end : xxxx: part code, yyyy: error code
Num. of Tasks	Number of the target tasks.

[BASE] Edit SIM Syslog Serv

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[BASE],Edit SIM Syslog Serv,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+Location Identification Name=ABCDEFGHIJK,Send a test message=Yes
+{Server,SIM Transfer,IP Version,IPAdress,Port Number}
=[{Primary Server,Enable,IPv4,xxx.xxx.xxx.xxx,xxx},
{Secondary Server,Disable,-,-,-}]
```

Detailed Information

Item	Description
Location Identification Name	The location identification information of the storage system. When the SIM Transfer is set to Disable for the both primary and secondary syslog servers, a hyphen (-) is displayed.
Send a test message	After the setting, this indicates whether a test message has been sent to the syslog server or not. When the SIM Transfer is set to Disable for the both primary and secondary syslog servers, a hyphen (-) is displayed. Yes: Sent a test message No: Did not send a test message
Server	The syslog server to which the SIM syslog is notified Primary Server: Primary syslog server Secondary Server: Secondary syslog server
SIM Transfer	Whether to notify the SIM syslog or not Enable: Notify the SIM syslog Disable: Do not notify the SIM syslog
IP Version	The version number of the internet protocol. When the SIM Transfer is set to Disable, a hyphen (-) is displayed. IPv6: Internet Protocol Version 6 IPv4: Internet protocol Version 4
IP Address	The IP address to which the SIM syslog is notified. When the SIM Transfer is set to Disable, a hyphen (-) is displayed.
Port Number	The port number of the LAN when notifying a syslog. When the SIM Transfer is set to Disable, a hyphen (-) is displayed.

[BASE] Edit Storage System

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name, [BASE], Edit Storage System, ,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, , Seq.=xxxxxxxxxxx
+{Name, Contact, Location}=[{XXXXX, XXXXX, XXXXX}],
Num. of SystemInfos=1
```

Detailed Information

Item	Description
Name	Name of the storage system
Contact	Administrator of the storage system
Location	Location of the storage system
Num. of SystemInfos	Number of the edited storage systems

[BASE] Enable Auto Delete

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[BASE],Enable Auto Delete,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Task Name,Type,User Name,Submission Time,Result}
=[{20100101-EditStorageSystem,Edit Storage System,User01,
YYYY/MM/DD HH:MM:SS,Normal end},{20100101-CreateLdev,
Create LDEV,User02,YYYY/MM/DD HH:MM:SS,Normal end}],
Num. of Tasks=2
```

Detailed Information

Item	Description
Task Name	The task name that the enable auto delete operation was performed.
Type	The type of task
User Name	ID of the user who performed the operation
Submission Time	Time when the task was registered
Result	Result of the operation Normal end: normal end, Error(xxxx-yyyyy): Abnormal end xxxx: part code, yyyy: error code
Num. of Tasks	Number of the target tasks

[BASE] Entry Tasks

This log is output when each task on the Storage Navigator menu is performed.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[BASE],Entry Tasks,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Action Name}=[{xxxxxxx},{xxxxxxx},{xxxxxxx},{xxxxxxx},
{xxxxxxx}],Num. of Actions=5
```

Detailed Information

Item	Description
Action Name	The name of the performed action
Num. of Actions	The number of performed actions

[BASE] Environment Setting

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,0,,
[BASE],Environment Setting,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
```

+{RMI time-out period,RMI time-out period for Modify,
 Polling period for checking exclusive lock,
 Polling period for checking obstacles,
 Option to hide Alerts Window}
 ={1,10,5,5,Enable}

Detailed Information

Item	Description
RMI time-out period	RMI time-out period
RMI time-out period for Modify	RMI time-out period for Modify
Polling period for checking exclusive lock	The polling period for checking exclusive lock
Polling period for checking obstacles	The polling period for checking obstacle statuses
Option to hide Alerts Window	The status of the option to hide Alerts window Enable: Enabled, Disable: Disabled

[BASE] HCSSO Authentication

Example 1: When SSO authentication is succeeded

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,0,,
[BASE],HCSSO Authentication,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
```

* "0" is always output in the connection number.

Example 2: When SSO authentication failed

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=,0,,
[BASE],HCSSO Authentication,,Error(xxxxx-yyyyy),
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
```

* "0" is always output in the connection number.

[BASE] HCSSO SetOneTimeKey

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,0,,
[BASE],HCSSO SetOneTimeKey EntryOver,Error(xxxxx-yyyyy),
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
```

* "0" is always output in the connection number.

Detailed Information

Item	Description
Parameter	OneTimeKey EntryOver The number of one-time keys exceeded the maximum.

[BASE] Login

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,  
[BASE],Login,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
```

[BASE] Logout

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,  
[BASE],Logout,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
```

[BASE] Release HTTP Block

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,0,,  
[BASE],Release HTTP Block,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx  
+{HTTP Block,Result}={-,Normal end}
```

Detailed Information

Item	Description
HTTP Block	Status of the HTTP Block. -: disabled, Blocked: enabled
Result	Result of the HTTP Block setting Normal end: normal end, Error(xxxx-yyyy) Abnormal end xxx: part code, yyyy: error code

[BASE] Resume Tasks

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,  
[BASE],Resume Tasks,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx  
+{Task Name,Type,User Name,Submission Time,Result}  
=[{20100101-EditStorageSystem,Edit Storage System,User01,  
YYYY/MM/DD HH:MM:SS,Normal end},{20100101-CreateLdev,  
Create LDEV,User02,YYYY/MM/DD HH:MM:SS,Normal end}],  
Num. of Tasks=2
```

Detailed Information

Item	Description
Task Name	Name of the resumed task
Type	The type of task
User Name	The ID of the user who resumed the task
Submission Time	Time when the task was registered
Result	Result of the operation Normal end: normal end, Error(xxxx-yyyyy): Abnormal end xxxx: part code, yyyy: error code
Num. of Tasks	The number of target tasks

[BASE] Set CVAE Info

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[BASE],Set CVAE Info,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{ID,ProductName,VersionInfo,IPAddress,RegistryDate,
LastAccessDate,MemoRandom}
={1,DevMgr,6.0.0.-00,10.213.38.210,
01/23/2008 12:34:56,01/24/2008 16:54:02,MEMO SPACE},
Num. of CVAEInfos=1
+{LicenseInfo}={Core license,Full licence,Expired},
Num. of LicenseInfos=3
```

Detailed Information

Item	Description
ID	ID (unique ID row by row) of the version information that was deleted
ProductName	Product name (Command Suite)
VersionInfo	Version Information
IPAddress	Network address information (IPv4, IPv6, and network name)
RegistryDate	Time stamp of initial registration
LastAccessDate	Time stamp of the final access
MemoRandom	Memo space information
Num. of CVAEInfos	The number of Command Suite messages
LicenseInfo	License information
Num. of LicenseInfos	The number of license messages

[BASE] Set Up HTTP Block

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,0,,
[BASE],Set Up HTTP Block,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{HTTP Block,Result}={Blocked,Normal end}
```

Detailed Information

item	Description
HTTP Block	Status of the HTTP Block -: disabled, Blocked: enabled
Result	Result of the HTTP Block setting Normal end: normal end, Error(xxxx-yyyy): Abnormal end xxxx: part code, yyyy: error code

[BASE] Suspend Tasks

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[BASE],Suspend Tasks,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{Task Name,Type,User Name,Submission Time,Result}
=[{20100101-EditStorageSystem,Edit Storage System,User01,
YYYY/MM/DD HH:MM:SS,Normal end},{20100101-CreateLdev,
Create LDEV,User02,YYYY/MM/DD HH:MM:SS,Normal end}],
Num. of Tasks=2
```

Detailed Information

Item	Description
Task Name	Name of the suspended task
Type	The type of task
User Name	Name of the user who suspended the task
Submission Time	Time when the task was registered.
Result	Result of the operation Normal end: normal end, Error(xxxx-yyyyy): Abnormal end xxxx: part code, yyyy: error code
Num. of Tasks	Number of the target tasks

[BASE] Unlock Forcibly

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[BASE],Unlock Forcibly,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
```

[BASE] Update SMIS CrtFiles

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,0,,
[BASE],Update SMIS CrtFiles,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{File Name,Result}=[{server.crt,Normal end},
{server.key,Normal end}]
```

Detailed Information

Item	Description
File Name	Name of a digital certificate file for SMI-S to be modified
Result	Result of the operation Normal end: normal end, Error(xxxx-yyyy): Abnormal end xxxx: part code, yyyy: error code

[BASE] Upload SMIS ConfFile

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,0,,
[BASE],Upload SMIS ConfFile,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{File Name,Result}=[{user-defined.properties,Normal end}]
```

Detailed Information

Item	Description
File Name	Name of the uploaded file
Result	Result of the upload operation Normal end: normal end, Error(xxxx-yyyy): Abnormal end xxxx: part code, yyyy: error code

E-Mail Descriptions

[E-Mail] MailAddress Write

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[E-Mail],MailAddress Write,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{MailServerSetting,MailServer}={HostName,smtp.test.co.jp}
+{SMTP AUTH,Account}={Enable,Account}
+{FromAddress,ReturnAddress}={TransAddr@co.jp,ReplyAddr@co.jp}
+UsedCount=32
++{ToAddressList,Attribute}=[{usr1@co.jp,TO},{usr2@co.jp,TO},
{usr3@co.jp,TO},{usr4@co.jp,CC}, [snip] {usr25@co.jp,CC},
{usr26@co.jp,BCC},{usr27@co.jp,BCC},{-,-},{-,-},
{usr31@co.jp,BCC}],Num. of Accounts=32
```

Detailed Information

Item	Description
MailServerSetting	The specification type of the server HostName: Host name, IP Address: IP address (IPv4 or IPv6)
MailServer	The SMTP server domain name or IP address. If IP address is specified, the address divided by periods means IPv4 address and the address divided by colons means IPv6 address.
SMTP AUTH	Indicates whether the SMTP authentication is enabled or disabled. Disable or Enable will appear.
Account	SMTP server account
FromAddress	Mail source address
ReturnAddress	Return mail address. If you want to receive the reply to another mail address, you can specify the desired address by using ReturnAddress.
UsedCount	The number of the mail addresses that have been registered as a destination
ToAddressList	Mail addresses of a destination. Thirty-two addresses are always displayed. If a mail address is not specified, {-,-} is displayed instead of mail address and attribute.
Attribute	Attributes (TO, CC, or BCC) of the destination mail addresses
Num. of Accounts	The number of the displayed destination mail addresses. The displayed mail addresses may not have an account setting.

[E-Mail] Valid Flag Update

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[E-Mail],Valid Flag Update,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+MailNoticeSetting=Enable
```

Detailed Information

Item	Description
MailNoticeSetting	Indicates whether the mail notice is enabled or disabled. Disable or Enable will appear.

HAM Descriptions

[HAM] Add Quorum Disk ID

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[HAM],Add Quorum Disk ID,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Quorum Disk ID,Paired S/N,Controller ID,
Quorum Disk(LDKC:CU:LDEV),Result}
=[{0x01,264024,19,0x00:0xFE:0x01,Normal end},
{0x02,264024,19,0x00:0xFE:0x02,Normal end},(snip),
{0x7F,264024,19,0x00:0xFE:0x7F,Error(xxxx-yyyyy)}]
-,Num. of IDs=xx
```

Detailed Information

Item	Description
Quorum Disk ID	The Quorum Disk ID that added.
Paired S/N	The serial number of the device
Controller ID	The controller ID
Quorum Disk (LDKC:CU:LDEV)	The LDKC number, the CU number and the LDEV number
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end xxxx: Part code, yyyy: Error code
Num. of IDs	The number of Quorum Disk IDs that added

[HAM] Del Quorum Disk ID

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[HAM],Del Quorum Disk ID,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Quorum Disk ID,Paired S/N,Controller ID,
Quorum Disk(LDKC:CU:LDEV),Result}
=[{0x01,264024,19,0x00:0xFE:0x01,Normal end},
{0x02,264024,19,0x00:0xFE:0x02,Normal end},(snip),
{0x7F,264024,19,0x00:0xFE:0x7F,Error(xxxx-yyyyy)}]
-,Num. of IDs=xx
```

Detailed Information

Item	Description
Quorum Disk ID	The Quorum Disk ID that was deleted.
Paired S/N	The serial number of the device
Controller ID	The controller ID
Quorum Disk (LDKC:CU:LDEV)	The LDKC number, the CU number and the LDEV number

Item	Description
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end xxxx: Part code, yyyy: Error code
Num. of IDs	The number of Quorum Disk IDs that deleted

[HAM] Paircreate

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[HAM],Paircreate,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),S/N,LDKC,ID,
Controller ID,Initial Copy,Fence Level,Copy Pace,Priority,Diff,
Quorum Disk ID,Result}
=[{1A-0x00-0,3A-0x00-0,264024,0x00,Default,19,Entire,Never,
15,032,Auto,0x7F,Normal end},(snip)-(snip)],Num. of Pairs=xx
```

Detailed Information

Item	Description
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the volume specified to the primary volume when the pair is created sequentially.
S-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the volume specified to the secondary volume when the pair is created sequentially
S/N	The serial number of the device
LDKC	The LDKC number of the paired LDKC
ID	The path group ID or SSID. When the path group ID is default setting, the output is "Default."
Controller ID	The controller ID
Initial Copy	The initial copy mode set Entire: Copy all, None: Do not copy
Fence Level	The fence level set (the condition that MCU rejects the write operation to the primary volume). Never: No condition
Copy Pace	The initial copy speed set (the number of tracks you can copy at one time).
Priority	The priority of the set initial copy operation (scheduling order)
Diff	The unit of the differential management set. Auto, Cylinder, Track
Quorum Disk ID	The quorum disk ID to be used for a pair.

Item	Description
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end <i>where</i> xxxx: Part code, yyyy: Error code
Num. of Pairs	The number of created pairs

[HAM] Pairresync

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[HAM],Pairresync,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),Fence Level,Copy Pace,
Priority,Result}
=[{1A-0x00-0,1B-0x00-0,Never,15,256,Normal end},
{1A-0x00-1,1B-0x00-1,Never,15,256,Normal end},
(snip)-(snip)],Num. of Pairs=xx
```

Detailed Information

Item	Description
P-VOL(Port-G-ID-LUN)	The port number, host group number and LUN of the primary volume in the restored pair sequentially
S-VOL(Port-G-ID-LUN)	The port number, host group number and LUN of the secondary volume in the restored pair sequentially
Fence Level	The fence level set (the condition that MCU rejects Write to the primary volume) Never: No condition
Copy Pace	The initial copy speed set (the number of tracks you can copy at a time)
Priority	The priority of restoring operation set (scheduling order)
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): <i>Abnormal end</i> xxxx: Part code, yyyy: Error code
Num. of Pairs	The number of restored pairs

[HAM] Pairsplit-r

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[HAM],Pairsplit-r,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),Type,S-VOL Write,Kind,
Result}
=[{1A-0x00-0,1B-0x00-0,P-VOL,Disable,S-VOL,Normal end},
{1A-0x00-1,1B-0x00-1,P-VOL,Disable,S-VOL,Normal end},
(snip)-(snip)],Num. of Pairs=xx
```

Detailed Information

Item	Description
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the primary volume in the split pair sequentially
S-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the secondary volume in the split pair sequentially
Type	The volume type of the volume on the primary site. P-VOL: Primary volume, S-VOL: Secondary volume
S-VOL Write	Indicates whether writing to the secondary volume is enabled Enable: Writing is enabled Disable: Writing is disabled
Kind	The suspend type setting P-VOL Failure: Writing to the P-VOL is disabled S-VOL: Writing to the P-VOL is enabled
Result	The result of the operation Normal end: Normal end, Error (xxxx-yyyyy): Abnormal end xxxx: Part code, yyyyy: Error code
Num. of Pairs	The number of split pairs.

[HAM] Pairsplit-S

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[HAM],Pairsplit-S,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),Type,Force,Result}
={1A-0x00-0,1B-0x00-,P-VOL,No,Normal end},
{1A-0x00-1,1B-0x00-1,P-VOL,No,Normal end},
{1A-0x00-2,1B-0x00-2,P-VOL,No,Normal end},
(snip)-(snip)],Num. of Pairs=xx
```

Detailed Information

Item	Description
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the primary volume in the deleted pair sequentially
S-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the secondary volume in the deleted pair sequentially
Type	The volume type of the volume on the primary site. P-VOL: Primary volume, S-VOL: Secondary volume
Force	The setting for forced pair deletion. Yes: The pair is deleted even when the MCU cannot communicate with the RCU. No: The pair is deleted when the MCU can change the pair status to SMPL only.

Item	Description
Result	The result of operation Normal end: Normal end, Error(XXXX-YYYY): <i>Abnormal end</i> XXXX: Part code, YYYY: Error code
Num. of Pairs	The number of deleted pairs

Information Descriptions

[Information] Delete Log

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Information],Delete Log,SIM,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
```

Basic Information

Parameter	Description
SIM	Record of a deleted SIM log
SSB	Record of a deleted SSB log
Reset	Record of a deleted Reset log
Power Event	Record of a deleted Power Event log
Detail	Record of a deleted Detail log
Diagnosis	Record of a deleted Diagnosis log
Copy History	Record of a deleted Copy History log

[Information] ORM Value

Example 1: changing the threshold of SAS

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Information],ORM Value,Alter,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Type=7days
+{Read Err.(Unrecovered),Read Err.(Recovered),
Seek Err.(Recovered),Seek Err.(Unrecovered),Not Ready,
Other Errors}={15,1.00e-008,100,10,10,10}
++PDEV=[HDD00-01,HDD00-02],Num. of PDEVs=2
```

Example 2: changing the threshold of the SSD

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Information],ORM Value,Alter,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Type=Total
+{Total Defect Count,Used Endurance Indicator}={160000,(99,90)}
++PDEV=[HDD00-03],Num. of PDEVs=1
```

Example 3: changing the threshold of the FMD

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Information],ORM Value,Alter,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+Type=Today
+{Total Defect Count,Reboot Error,DMA Error,Memory Error,
Uncorrected Error,Used Endurance Indicator,Battery Error,
FMD Battery Life Indicator}={0,2,10,500,512,(0,0),1,0}
++PDEV=[HDD00-03],Num. of PDEVs=1
```

Example 4: Error Reset

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Information],ORM Value,Error Reset,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+PDEV=HDD00-01
```

Basic Information

Parameter	Description
Alter	Change the threshold of ORM (Online Read Margin)
Error Reset	Indicates Error Reset

Detailed Information

Item	Description
Type	The period of time to acquire the result of threshold diagnosis using the read diagnosis function Today: Current day only, 7days: 7 days, Total: Every operating days
Read Err. (Unrecovered)	The threshold of the Read Error (Unrecovered)
Read Err. (Recovered)	The threshold of the Read Error (Recovered)
Seek Err. (Recovered)	The threshold of the Seek Error (Recovered)
Seek Err. (Unrecovered)	The threshold of the Seek Error (Unrecovered)
Not Ready	The threshold of the Not Ready status.
Other Errors	The threshold of Other Errors.
Total Defect Count	The threshold of the Total Defect Count
Used Endurance Indicator	The threshold of the Used Endurance Indicator
Reboot Error	The threshold of the Reboot Error
DMA Error	The threshold of the DMA Error
Memory Error	The threshold of the Memory Error
Uncorrected Error	The threshold of the Uncorrected Error
Battery Error	The threshold of the Battery Error

Item	Description
FMD Battery Life Indicator	The threshold of the FMD Battery Life Indicator
PDEV	The mounting location of the PDEV (physical device) that is the target of Alter or error reset
Num. of PDEVs	The number of PDEVs (physical devices)

[Information] SIM Complete

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Information],SIM Complete,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Reference Code=[XXXXXX,XXXXXX],Num. of Reference Codes=2
```

Detailed Information

Item	Description
Reference Code	The reference code of the SIM whose error and service request are resolved.
Num. of Reference Codes	The number of the SIM reference code whose error and service request are resolved.

[Information] SIM Reporting Option

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Information],SIM Reporting Option,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Type=DKC SIM
++{Acute,Serious,Moderate,Service}={ON,ON,ON,ON}
+Type=Cache SIM
++{Acute,Serious,Moderate,Service}={ON,ON,ON,ON}
+Type=Media SIM
++{Acute,Serious,Moderate,Service}={ON,ON,ON,ON}
+Type=Device SIM
++{Acute,Serious,Moderate,Service}={ON,ON,ON,ON}
+Num. of Types=4
```

Detailed Information

Item	Description
Type	The type of SIM. DKC SIM: SIM related to storage system, Cache SIM: SIM related to cache, Media SIM: SIM related to recording media Device SIM: SIM related to disk device
Acute	Report acute level information as a SIM. ON: Report, OFF: Do not report

Item	Description
Serious	Report serious level information as a SIM. ON: Report, OFF: Do not report
Moderate	Report moderate level information as a SIM. ON: Report, OFF: Do not report
Service	Report service level information as a SIM. ON: Report, OFF: Do not report
Num. of Types	The number of information levels to be reported as a SIM.

[Information] Threshold Value

Example 1

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Information],Threshold Value,Alter,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Type=7days
+{Mechanical error(Recovered,Unrecd.),Media error(Recovered,
Unrecd.),Read/Write error(Recovered,Unrecd.),
Drive I/F error(Recovered,Unrecd.),
Controller hardware error(Recovered,Unrecd.),
SAS I/F error Port 0(Unrecd.),
SAS I/F error Port 1(Unrecd.),Port 0 error(Unrecd.),
Port 1 error(Unrecd.)}
={ (150,60), (0,15), (150,30), (150,6), (150,6), 6,6,12,12}
++PDEV=[HDD00-01,HDD00-02],Num. of PDEVs=2
```

Example 2

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Information],Threshold Value>Error Reset,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+PDEV=HDD00-01
```

Basic Information

Parameter	Description
Alter	Change the threshold of failed PDEV (physical device).
Error Reset	Indicates Error Reset.

Detailed Information

Item	Description
Type	The period of time to acquire the result of threshold diagnosis using the read diagnosis function. 7days: 7 days, Total: Every operating days
Mechanical error (Recovered, Unrecd.)	The threshold of the Mechanical error

Item	Description
Media error (Recovered, Unrecd.)	The threshold of the Media error
Read/Write error (Recovered, Unrecd.)	The threshold of the Read/Write error
Drive I/F error (Recovered, Unrecd.)	The threshold of the Drive I/F error
Controller hardware error (Recovered, Unrecd.)	The threshold of the Controller hardware error
SAS I/F error Port 0 (Unrecd.)	The threshold of the SAS I/F error Port 0
SAS I/F error Port 1 (Unrecd.)	The threshold of the SAS I/F error Port 1
Port 0 error (Unrecd.)	The threshold of the Port 0 error
Port 1 error (Unrecd.)	The threshold of the Port 1 error
PDEV	The mounting location of PDEV (physical device) that is the target of Alter or error reset
Num. of PDEVs	The number of PDEVs (physical devices)

Install Descriptions

[Install] Add Host Group

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Add Host Group,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, ,Seq.=xxxxxxxxxxx
+{Port,HostGrpID,HostGrpName,Mode,Option[0:31],Option[32:63],
Option[64:95]}={XX,0xxx,XXXXXXXXXXXXXXXXXXXX,0xx,0XXXXXXXX,
0XXXXXXXX,0XXXXXXXX}
++{WWN,Nickname}=[{0XXXXXXXXXXXXXXXXXXXX,XXXXXXXXXXXXXXXXXXXX},
{0XXXXXXXXXXXXXXXXXXXX,XXXXXXXXXXXXXXXXXXXX}],Num. of WWNs=2
+{Port,HostGrpID,HostGrpName,Mode,Option[0:31],Option[32:63],
Option[64:95]}={XX,0xxx,XXXXXXXXXXXXXXXXXXXX,0xx,0XXXXXXXX,
0XXXXXXXX,0XXXXXXXX}
+Num. of Host Groups=2
```

Detailed Information

Item	Description
Port	The name of the port where the host group has been newly added.
HostGrpID	The newly added.host group number
HostGrpName	The name of the newly added host group.

Item	Description
Mode	The newly added host mode. Please see the <i>Hitachi Unified Storage VM Block Module Provisioning Guide</i> for the meaning of the host mode number.
Option[0:31] Option[32:63] Option[64:95]	The newly added host mode option. Hexadecimal values are output.
WWN	Indicates WWN of the host bus adapter for the host registered in the host group.
Nickname	The nickname of the host bus adapter for the host registered in the host group.
Num. of WWNs	The number of WWNs of the host registered in the host group.
Num. of Host Groups	The number of added host groups.

[Install] Add LU Path

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Add LU Path,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,HostGrpID,LUN,LDKC:CU:LDEV}=[{XX,0xXXX,0xXXX,
0xXX:0xXX:0xXX},{XX,0xXXX,0xXXX,0xXX:0xXX:0xXX},
{XX,0xXXX,0xXXX,0xXX:0xXX:0xXX}],Num. of Paths=3
```

Detailed Information

Item	Description
Port	The name of the port to which the host group belongs.
HostGrpID	The host group number linked to the logical volume.
LUN	Indicates the LUN of the logical volume linked to the host group.
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the logical volume linked to the host group.
Num. of Paths	The number of LU paths set.

[Install] Add WWN

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Add WWN,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,HostGrpID,WWN,Nickname}
=[{XX,0xXXX,0xxxxxxxxxxxxxxxxxxxx,xxxxxxxxxxxxxxxxxxxx},
{XX,0xXXX,0xxxxxxxxxxxxxxxxxxxx,xxxxxxxxxxxxxxxxxxxx}],
Num. of WWNs=2
```

Detailed Information

Item	Description
Port	The name of the port to which the host group belongs.
HostGrpID	The number of the host group where the host was registered.
WWN	Indicates WWN of the host bus adapter for the host registered in the host group. WWN is a 16-digit number in the hexadecimal format.
Nickname	The nickname of the host bus adapter for the host registered in the host group.
Num. of WWNs	The number of WWNs of the host registered in the host group.

[Install] All Config

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],All Config,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxxx
+{New Ver.,Old Ver.}={xx-xx-xx/xx,xx-xx-xx/xx}
```

Detailed Information

Item	Description
New Ver.	The new version number.
Old Ver.	The old version number.

[Install] Backup Config

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Backup Config,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxxx
+Ver.=xx-xx-xx/xx
```

Detailed Information

Item	Description
Ver.	The version number of the configuration information to be backed up.

[Install] Change Host Group

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Change Host Group,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxxx
+{Port,HostGrpID,HostGrpName}
=[{XX,0xXXX,XXXXXXXXXXXXXXXXXXXX},{XX,0xXXX,XXXXXXXXXXXXXXXXXXXX}],
Num. of Host Groups=2
```

Detailed Information

Item	Description
Port	The name of the port to which the host group belongs.
HostGrpID	The number of the host group where the host group name has been changed.
HostGrpName	The name of the host group. If the name is changed, the name after change is indicated.
Num. of Host Groups	The number of host groups where the settings have been changed.

[Install] Change WWN

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Change WWN,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Port,HostGrpID,WWN,Change WWN,Change NickName}
=[{XX,0xxx,0xxxxxxxxxxxxxxxxxxx,0xxxxxxxxxxxxxxxxxxx,
XXXXXXXXXXXXXXXXXXXX}],
Num. of WWNs=1
```

Detailed Information

Item	Description
Port	The name of the port where the host is connected.
HostGrpID	The host group number on which the host with WWN or nickname of the host bus adapter being changed is registered.
WWN	Indicates the WWN of the host bus adapter before the change.
Change WWN	Indicates the WWN of the host bus adapter after the change.
Change Nickname	The nickname of the host bus adapter after the change.
Num. of WWNs	The number of host bus adapters (WWN) where the settings have been changed.

[Install] DCR Prestaging

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],DCR Prestaging,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[Install] Define Config.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Define Config.,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[Install] Delete DKC WWN

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Delete DKC WWN,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,Delete WWN}
=[{XX,0xxxxxxxxxxxxxxxxxxxx}, {XX,0xxxxxxxxxxxxxxxxxxxx}],
Num. of WWNs=2
```

Detailed Information

Item	Description
Port	The port name where the host of deleted Login WWN was connected
Delete WWN	Indicates the deleted Login WWN. WWN is a 16-digit number in the hexadecimal format
Num. of WWNs	The number of deleted Login WWN

[Install] Delete Host Group

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Delete Host Group,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,HostGrpID}=[{XX,0xxx}, {XX,0xxx}],Num. of Host Groups=2
```

Detailed Information

Item	Description
Port	The name of the port to which the deleted or initialized host group belonged
HostGrpID	The host group number that was deleted or initialized
Num. of Host Groups	The number of host groups that was deleted or initialized

[Install] Delete LU Path

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Delete LU Path,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,HostGrpID,LUN,LKDC:CU:LDEV}
=[{XX,0xxx,0xxx,0xx:0xx:0xx},
{XX,0xxx,0xxx,0xx:0xx:0xx},
{XX,0xxx,0xxx,0xx:0xx:0xx}],
Num. of Paths=3
```

Detailed Information

Item	Description
Port	The name of the port to which the host group belongs
HostGrpID	The host group number where the LU path is deleted
LUN	Indicates LUN where the LU path assignment is cancelled
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the volume where the LU path assignment is cancelled
Num. of Paths	The number of LU paths deleted

[Install] Delete WWN

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Delete WWN,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,HostGrpID,WWN}
={ {XX,0xXXX,0XXXXXXXXXXXXXXXXXXXX},
{XX,0xXXX,0XXXXXXXXXXXXXXXXXXXX} ],Num. of WWNs=2
```

Detailed Information

Item	Description
Port	The name of the port where the host deleted from host group was connected
HostGrpID	The host group number where the host is deleted
WWN	Indicates WWN of the host deleted from the host group
Num. of WWNs	The number of hosts (WWN) deleted from the host group

[Install] FlashDrive ORM Value

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],FlashDrive ORM Value,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Flash Drive Collective setting,Dynamic Sparing,Warning SIM}
={ Valid,99,95}
+{FMD Battery Collective setting,Warning SIM}={Valid,95}
```

Detailed Information

Item	Description
Flash Drive Collective Setting	Indicates whether the flash drive collective setting information is valid or invalid Valid: Valid, Invalid: Invalid
Dynamic Sparing	The Dynamic Sparing threshold of flash drive
Warning SIM	The warning SIM threshold of flash drive

Item	Description
FMD Battery Collective setting	Indicates whether the FMD battery collective setting information is valid or invalid Valid: Valid, Invalid: Invalid
Warning SIM	The warning SIM threshold of FMD battery

[Install] Force Reset

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Force Reset,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,HostGrpID,LUN}
=[{3B,0x0FE,0x000},{3B,0x0FE,0x005},{3B,0x0FE,0x009}],
Num. of LUNs=3
```

Detailed Information

Item	Description
Port	The name of the port where the reserve attribute of the host is forcefully cancelled
HostGrpID	The host group number
LUN	Indicates the LUN of the volume linked to the host group
Num. of LUNs	The number of the LUNs where the reserve attribute of the host is forcefully cancelled

[Install] Format

The logged information indicates that the Format operation was only requested but not completed.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Format,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+PG=[1-1],Num. of PGs=1
```

Detailed Information

Item	Description
PG	The parity group number E1-1: In case of an external volume X1-1: In case of a Dynamic Provisioning volume
Num. of PGs	The number of parity groups
LDEV	The LDKC number, the CU number, and the LDEV number
Num. of LDEVs	The number of LDEVs

[Install] Format Stop

This log information is output when the format process is suspended.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Format Stop,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+PG=[1-1],num. of PGs=1
```

Detailed Information

Item	Description
PG	The parity group number E1-1: In case of an external volume X1-1: In case of a Dynamic Provisioning volume
Num. of PGs	The number of parity groups
LDEV	The LDKC number, the CU number, and the LDEV number
Num. of LDEVs	The number of LDEVs

[Install] Initialize ORM Value

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Initialize ORM Value,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
```

[Install] Install

Example 1: installing additional CHBs (channel blades)

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Install,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{CHB,Kind}={CHB-1B,HF8G (CHB)},
++{Port,Initiator/Target,Channel Speed,CU Number}
=[{1B,Target,Auto,0x00:0x00-0x00:0x3F},
{3B,Target,Auto,0x00:0x00-0x00:0x3F},
{5B,Target,Auto,0x00:0x00-0x00:0x3F},
{7B,Target,Auto,0x00:0x00-0x00:0x3F}],
Num. of Ports=4
+{CHB,Kind}={CHB-2B,HF8G (CHB)},
++{Port,Initiator/Target,Channel Speed,CU Number}
=[{2B,Target,Auto,0x00:0x00-0x00:0x3F},
{4B,Target,Auto,0x00:0x00-0x00:0x3F},
{6B,Target,Auto,0x00:0x00-0x00:0x3F},
{8B,Target,Auto,0x00:0x00-x00:0x3F}],
Num. of Ports=4
+Num. of CHBs=2
```

Detailed Information for Example 1

Item	Description
CHB	The CHB (channel blade) mounting location
Kind	The kind of PCB mounted.
Port	The mounting location of the port.
Initiator/Target	The type of Initiator or Target.
Channel Speed	The channel speed is indicated. 2: 2 Gbps, 4: 4 Gbps, 8: 8 Gbps, Auto: Auto mode.
CU Number	Indicates the range of the CU number that the port belongs.
Num. of Ports	The number of ports.
Num. of CHBs	The number of CHBs.

Example 2: installing additional DKBs (disk blades), ECC Groups or LDEVs

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Install,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{DKB,Kind}=[{DKB-1E,BS6G (DKB)},{DKB-1F,BS6G (DKB)},
{DKB-2E,BS6G (DKB)},{DKB-2F,BS6G (DKB)}],Num. of DKBs=4
+{DB,Kind}=[{DB-00,2.5" DB},{DB-01,3.5" DB},{DB-02,DBX(L)},
{DB-03,DBX(R)}],Num. of DBs=4
+{PG,RAID Level,Drive Type,Emulation,Concatenation,
Copy Back Mode,Encryption}
={1-1,RAID1 (2D+2D),DKR5C-J300SS,OPEN-V,-,Copy Back,Disable},
++{HDD}=[{00-01},{00-02},{00-03},{00-04}],Num. of HDDs=4
++{LDKC:CU:LDEV,Emulation,Size,Unit,System Disk,MPU}
=[{0x00:0x00:0x00,OPEN-V,1125761024,LBA,Disable,Auto}],
Num. of LDEVs=1
+{PG,RAID Level,Drive Type,Emulation,Concatenation,
Copy Back Mode,Encryption}
={1-2,RAID1 (2D+2D),DKR5C-J600SS,OPEN-V,-,Copy Back,Disable},
++{HDD}=[{00-05},{00-06},{00-07},{00-08}],Num. of HDDs=4
++{LDKC:CU:LDEV,Emulation,Size,Unit,System Disk,MPU}
=[{0x00:0x00:0x01,OPEN-V,2251526144,LBA,Disable,Auto}],
Num. of LDEVs=1
+Num. of PGs=2
+{SPARE,Drive Type,HDD}=[{spare1,DKR5C-J300SS,00-09}],
Num. of SPAREs=1
```

This logged information indicates that the formatting was only requested but not completed. If the operation does not require the formatting, this logged information indicates that the volume was created.

Basic Information for Example 2

Parameter	Description
Progress Close	The window that shows the progress of LDEV formatting has closed.
Quick Format	Quick Format is selected.
Quick Format Close	The window that shows the progress of preparing for Quick Format has closed.
Note: No parameter is output for any case other than those described in this table.	

Detailed Information for Example 2

Item	Description
DKB	The DKB (disk blade) mounting location.
Kind	The type of DKB
Num. of DKBs	The number of DKBs
DB	The mounting location of the DB (drive box)
Kind	The type of DB
Num. of DBs	The number of DBs
PG	The parity group number
RAID Level	The RAID Level
Drive Type	The type of the drive of a parity group
Emulation	The emulation type
Concatenation	The RAID concatenated parity group number. A hyphen (-) is indicated when the parity group is not RAID concatenated.
Copy Back Mode	The status of the copy back mode setting Copy Back: When a failed HDD recovered, the copy back will be performed. No Copy Back: When a failed HDD recovered, the copy back will be not performed.
Encryption	The status of the encryption setting Disable or Enable will appear.
HDD	The HDD number of HDD in the parity group
Num. of HDDs	The number of HDDs in the parity group
LDKC:CU:LDEV	The LDKC number, the CU number, and the LDEV number
Size	The capacity of CV
Unit	The unit of the capacity of CV
System Disk	The status of the system disk setting Disable or Enable will appear.
MPU	The ownership of the MPU
Num. of LDEVs	The number of LDEVs
Num. of PGs	The number of parity groups
SPARE	The spare drive number
Drive Type	The type of the spare drive
HDD	The HDD number of the spare drive
Num. of SPAREs	The number of spare drives



Note: Only the changed items will be output. The Detailed Information of the recovery process will not be output when the installation process executed before the process has completed. However, the setting of the recovery process will be output as the Detailed Information of the process when the installation process executed before the recovery process has not completed.

Example 3: installing additional cache memory

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Install,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{MAIN,CMG0,CMG1,Size,CFM}
=[{MAIN1/MAIN2,8GB x 8,4GB x 8,98304,BM160(160GB)}],
Num. of MAINs=1
+DCR available Size=3328
+{CLPR,Cache size,DCR size,ExtentNumber}
=[{CLPR0,117760,6656,16384}],Num. of CLPRs=1
+PP Flag=[(SI/VM/DP Extension1, TC/UR, TI),
(SI/VM/DP Extension2, TI Extension),(TC/UR Extension),(HDT)],
Num. of PP Flags=4
```

Detailed Information for Example 3

Item	Description
MAIN	The mounting location of the PCB for cache memory
CMG0	The capacity of CMG0
CMG1	The capacity of CMG1
Size	The capacity of cache memory
CFM	The size of CFM
Num. of MAINs	The number of cache memory
DCR available size	The capacity of Cache Residency
CLPR	The CLPR number
Cache size	The capacity of the cache memory allocated to CLPR
DCR size	The capacity of Cache Residency allocated to CLPR
Extent Number	The number of extents allocated to CLPR
Num. of CLPRs	The number of CLPR
PP Flag	The flag of the program product
Num. of PP Flags	The number of flags of the program product
Note: Only the changed items will be output.	

Example 4: Installing additional SM PP Flag

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Install,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+PP Flag=[(SI/VM/DP Extension1, TC/UR, TI),
(SI/VM/DP Extension2, TI Extension),(TC/UR Extension),(HDT)],
Num. of PP Flags=4
```

Detailed Information for Example 4

Item	Description
PP Flag	The flag of the program product
Num. of PP Flags	The number of flags of the program product

[Install] Install CV

This logged information indicates that the formatting was only requested but not completed. If the operation does not require the formatting, this logged information indicates that the volume was created.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Install CV,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{PG,LDKC:CU:LDEV,Slot,Emulation,Size,Unit,System Disk,MPU}
=[{1-1,0x00:0x00:0x00,-,OPEN-V,10000,LBA,Disable,Auto}],
Num. of LDEVs=1
```

Basic Information

Parameter	Description
Non Format	Unformatted Install CV.
Progress Close	The window that shows the progress of LDEV formatting has closed.
Quick Format	Quick Format is selected.
Quick Format Close	The window that shows the progress of preparing for Quick Format has closed.
Note: No parameter is output for any case other than those described in this table.	

Detailed Information

Item	Description
PG	The parity group number E1-1: In case of an external volume
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers
Slot	The slot number. A hyphen (-) is indicated for Install CV.
Emulation	The emulation type
Size	The CV capacity
Unit	The CV unit capacity
System Disk	The setting status of the system disk. Disable or Enable will appear.
MPU	The ownership of the MPU
Num. of LDEVs	The number of LDEVs

[Install] Machine Install Date

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Machine Install Date,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Date=YYYY/MM/DD HH:mm
```

Detailed Information

Item	Description
Date	Indicates the date and the time of the setting in "YYYY/MM/DD HH:mm" format (YYYY: year, MM: month, DD: day, HH: hour, mm: minute).

[Install] Make LUSE

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Make LUSE,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+LUSE(LDKC:CU:LDEV)=[{0x00:0x00:0x00,0x00:0x00:0x01,
0x00:0x00:0x02,0x00:0x00:0x03},{0x00:0x01:0x00,0x00:0x01:0x01,
0x00:0x01:0x02,0x00:0x01:0x03}],Num. of LUSEs=2
```

Detailed Information

Item	Description
LUSE(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of several LDEVs combined into an LUSE volume. The number indicated at the beginning represents the LDKC, CU, and LDEV numbers of the top LDEV.
Num. of LUSEs	The number of LUSE volumes configured

[Install] Make Volume

This logged information indicates that formatting the volume was requested but not completed. If the operation does not require formatting, this logged information indicates that the volume was created.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Make Volume,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{PG,LDKC:CU:LDEV,Slot,Emulation,Size,Unit,System Disk,MPU}
=[{1-1,0x00:0x14:0x00,-,OPEN-V,205440,LBA,Disable,Auto}],
Num. of LDEVs=1
```

Basic Information

Parameter	Description
Non Format	The Make Volume operation does not require the formatting.
Progress Close	The window that shows the progress of LDEV formatting has closed.
Quick Format	Quick Format is selected.
Quick Format Close	The window that shows the progress of preparing for Quick Format has closed.
Note: No parameters are selected for any case other than those described in this table	

Detailed Information

Item	Description
PG	The parity group number E1-1: In case of an external volume X1-1: In case of a Dynamic Provisioning volume
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers
Slot	The slot number. A hyphen (-) is indicated for Make Volume.
Emulation	The emulation type
Size	The CV capacity
Unit	The unit of the CV capacity
System Disk	The status of the system disk. Disable or Enable will appear.
MPU	The ownership of the MPU
Num. of LDEVs	The number of LDEVs

[Install] Micro Program

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Micro Program,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Micro Media=CD-ROM
+Exchange How=Online
+Reboot Grp.=By 1/2
+{Micro Kind, Old Ver, New Ver}
=[{DKCMAIN,7300000002,7300000003},
{SVP,7300000002,7300000003}],Num. of Kinds=2
```

Detailed Information

Item	Description
Micro Media	The media which the microcode to be exchanged is stored (CD-ROM:CD-ROM, HD: Hard Disk, HD Backup: HDD Backup (version down), or Remote: Remote transfer).
Exchange How	The method to exchange the microcode. Online: Exchanging the microcode online, Offline: Exchanging the microcode offline.
Reboot Grp.	The reboot group (By 1/2, By 1/4, By 1/8 or By One). However, it is not output when microcode is changed offline, or MP reboot is not executed.
Micro Kind	The kind of microcode
Old Ver	The old version number of the microcode
New Ver	The new version number of the microcode
Num. of Kinds	The number of types of microcodes

[Install] MP Install

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],MP Install,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Micro Program={RAMBOOT,DKCMAIN,DKB},Num. of Kinds=3
+Target MP={MP10-00,MP11-00,MP20-00},Num. of MPs=3
```

Detailed Information

Item	Description
Micro Program	The kind of microcode installed
Num. of Kinds	The number of types of installed microcodes
Target MP	The mounting location of the installed processor
Num. of MPs	The number of processors installed

[Install] Open DCR

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Open DCR,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+LDKC:CU:LDEV=0x00:0x00:0x00
++{Define,Mode,Prestaging,Start LBA,End LBA}
=[{Set,Bind,No,0,2015},{Set,Priority,Yes,3636,4175},
{Delete,-,-,3636,4175}],Num. of DCR Settings=3
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC number, the CU number, and the LDEV number of the logical volume where Cache Residency is set
Define	The setting status of Cache Residency. Set: set, Delete: cancel
Mode	The setting mode of Cache Residency. Indicates a dash (-) when Define is Delete. Bind: Bind mode, Priority: Priority mode
Prestaging	Indicates whether the Prestaging mode set is enabled or disabled. Indicates a dash (-) when Define is Delete. No: Prestaging mode is disabled, Yes: Prestaging mode is enabled
Start LBA	The starting LBA number of the data which Cache Residency was set or canceled
End LBA	The ending LBA number of the data which Cache Residency was set or canceled
Num. of DCR Settings	The number of Cache Residencies set or canceled

[Install] Release LUSE

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Release LUSE,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxxx
+LUSE(LDKC:CU:LDEV)=[0x00:0x00:0x00,0x00:0x01:0x00],
Num. of LUSEs=2
```

Detailed Information

Item	Description
LUSE(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the top LDEV where LUSE volumes are released
Num. of LUSEs	The number of released LUSE volumes

[Install] Remove

Example 1: removing a CHB (channel blade)

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Remove,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxxx
+{CHB,Kind}=[{CHB-1B,HF8G (CHB)},{CHB-2B,HF8G (CHB)}],
Num. of CHBs=2
```

Detailed Information for Example 1

Item	Description
CHB	The CHB (channel blade) mounting location
Kind	The kind of PCB mounted
Num. of CHBs	The number of CHBs

Example 2: removing a DKB (disk blade), an ECC Group or an LDEV

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Remove,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxxx
+{DKB,Kind}=[{DKB-1E,BS6G (DKB)},{DKB-1F,BS6G (DKB)},
{DKB-2E,BS6G (DKB)},{DKB-2F,BS6G (DKB)}],Num. of DKBs=4
+DB=[DB-00,DB-01,DB-02,DB-03],Num. of DBs=4
+PG=[1-6,1-7],Num. of PGs=2
+{SPARE}=[{spare1}],Num. of SPAREs=1
```

Detailed Information for Example 2

Item	Description
DKB	The DKB (disk blade) mounting location
Kind	The type of DKB
Num. of DKBs	The number of DKBs

Item	Description
DB	The DB (drive box) mounting location
Num. of DBs	The number of DBs
PG	The parity group number
Num. of PGs	The number of parity groups
SPARE	The spare drive number
Num. of SPAREs	The number of spare drives



Note: Only the changed items will be output. The Detailed Information of the recovery process will not be output when the removing process executed before the process has completed. However, the setting of the recovery process will be output as the Detailed Information of the process when the removing process executed before the recovery process has not completed.

Example 3: removing a cache memory

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Remove,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{MAIN,CMG0,CMG1,Size,CFM}
=[{MAIN1/MAIN2,4GB x 8,Not installed,32768,BM160(160GB)}],
Num. of MAINs=1
+DCR available Size=512
+{CLPR,Cache size,DCR size,Extent Number}
=[{CLPR0,84992,1024,16384}],Num. of CLPRs=1
+PP Flag=[(SI/VM/DP Extension1, TC/UR, TI),
(SI/VM/DP Extension2, TI Extension),(TC/UR Extension),(HDT)],
Num. of PP Flags=4
```

Detailed Information for Example 3

Item	Description
MAIN	The mounting location of the PCB for cache memory
CMG0	The capacity of the CMG0
CMG1	The capacity of the CMG1
Size	The capacity of the cache memory
CFM	The size of the CFM
Num. of MAINs	The number of the cache memory
DCR available size	The capacity of the Cache Residency
CLPR	The CLPR number
Cache size	The capacity of the cache memory allocated to CLPR
DCR size	The capacity of the Cache Residency allocated to CLPR
Extent Number	The number of extents allocated to CLPR
Num. of CLPRs	The number of CLPRs.
PP Flag	The flag of the program product
Num. of PP Flags	The number of program product flags
Note: Only the changed items will be output.	

Example 4: removing SM PP Flag

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Remove,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+PP Flag=[(SI/VM/DP Extension1, TC/UR, TI),
(SI/VM/DP Extension2, TI Extension),(TC/UR Extension),(HDT)],
Num. of PP Flags=4
```

Detailed Information for Example 4

Item	Description
PP Flag	The flag of the program product
Num. of PP Flags	The number of program product flags

[Install] Restore Config.

Example 1

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Restore Config.,SVP and DKC,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
```

Basic Information for Example 1

The *SVP and DKC* parameter indicates the configuration of SVP and DKC has been restored.

Example 2

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Restore Config,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{New Ver.,Old Ver.}={xx-xx-xx/xx,xx-xx-xx/xx}
```

Detailed Information for Example 2

Item	Description
New Ver.	The new version number
Old Ver.	The old version number

[Install] Set Battery Life

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Set Battery Life,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Use Battery Life=Valid
+{Battery,Date,Remained Life}=[{MAIN1 BATT,YYYY/MM/DD,990},
{MAIN2 BATT,YYYY/MM/DD,990}],Num. of Batteries=2
```

Detailed Information

Item	Description
Use Battery Life	The status of Battery life function set. Valid: Valid, Invalid: Invalid
Battery	The mounting location of the battery
Date	Indicates the date of the setting in "YYYY/MM/DD" format (YYYY: year, MM: month, DD: day)
Remained Life	The remaining date of the battery shelf life
Num of Batteries	The number of batteries

[Install] Set Channel Speed

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Set Channel Speed,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,Speed(Gbps)}=[{XX,1},{XX,2},{XX,Auto}],
Num. of Ports=3
```

Detailed Information

Item	Description
Port	The name of the port on which the channel speed is set.
Speed(Gbps)	The channel speed set 1: 1 Gbps, 2: 2 Gbps, 4: 4 Gbps, 8: 8 Gbps, Auto: Auto mode.
Num. of Ports	The number of ports where the channel speed is set

[Install] Set CommandDev

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Set CommandDev,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{LDKC:CU:LDEV,CommandDev}=[{0x00:0xXX:0xXX,Disable},
{0x00:0xXX:0xXX,Enable}],Num. of LDEVs=2
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the logical volume where the command device is set
CommandDev	Indicates whether the command device setting is enabled or disabled. Disable or Enable will appear
Num. of LDEVs	The number of logical volumes where the command device is set.

[Install] Set CommandDevSec

Example

```
07xx, YYYY/MM/DD, HH:MM:SS.xxx, 00:00, SVP, uid=user-name, 1, ,  
[Install], Set CommandDevSec, , Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, , Seq.=xxxxxxxxxxxx  
+{LDKC:CU:LDEV, CommandDevSec}=[{0x00:0xXX:0xXX, Disable},  
{0x00:0xXX:0xXX, Enable}], Num. of LDEVs=2
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the logical volume where the command device is set
CommandDevSec	Indicates whether the command device security setting is enabled or disabled. Disable or Enable will appear
Num. of LDEVs	The number of logical volumes where the command device is set.

[Install] Set DevGrpDef

Example

```
07xx, YYYY/MM/DD, HH:MM:SS.xxx, 00:00, SVP, uid=user-name, 1, ,  
[Install], Set DevGrpDef, , Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, , Seq.=xxxxxxxxxxxx  
+{LDKC:CU:LDEV, DevGrpDef}=[{0xXX:0xXX:0xXX, Enable}],  
Num. of LDEVs=1
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the volume where the device group definition is specified.
UserAuth	Indicates whether the device group definition is enabled or disabled. Disable or Enable will appear.
Num. of LDEVs	The number of logical volumes where the device group definition is set.

[Install] Set Fibre Address

Example

```
07xx, YYYY/MM/DD, HH:MM:SS.xxx, 00:00, SVP, uid=user-name, 1, ,  
[Install], Set Fibre Address, , Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, , Seq.=xxxxxxxxxxxx  
+{Port, Fibre Addr.}=[{XX, 0xXX(xx)}, {XX, 0xXX(xx)}], Num. of Ports=2
```

Detailed Information

Item	Description
Port	The name of the port that the fibre address has been set
Fibre Addr.	The address of the Fibre Channel port after the setting is made The information outside the parentheses indicates AL-PA (arbitrated-loop physical address).The information inside the parentheses indicates the loop ID.
Num. of Ports	The number of ports where address has been set

[Install] Set Fibre Topology

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Set Fibre Topology,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Port,Fabric,Connection}
=[{XX,Enable,FC-AL},{XX,Disable,FC-AL},
{XX,Enable,P-to-P},{XX,Disable,P-to-P}],Num. of Ports=4
```

Detailed Information

Item	Description
Port	The name of the port where the topology of Fibre Channel is set
Fabric	Indicates whether the Fabric switch is enabled or disabled Enable: Enabled, Disable: Disabled
Connection	The connecting mode of the Fabric switch selected FC-AL: FC-AL is selected, P-to-P: P-to-P is selected
Num. of Ports	The number of ports where the topology of Fibre Channel is set

[Install] Set Host Mode

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Set Host Mode,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Port,HostGrpID,Mode,Option[0:31],Option[32:63],Option[64:95]}
=[{XX,0xXXX,0x00,0xFFFFFFFF,0xFFFFFFFF,0xFFFFFFFF},
{XX,0xXXX,0x4F,0xFFFFFFFF,0xFFFFFFFF,0xFFFFFFFF}],
Num. of Host Groups=2
```

Detailed Information

Item	Description
Port	The name of the port to which the host group belongs
HostGrpID	The host group number

Item	Description
Mode	The host mode set. Please see the <i>Hitachi Unified Storage VM Block Module Provisioning Guide</i> for the meaning of the host mode number
Option[0:31] Option[32:63] Option[64:95]	The specified host mode option. 96 host mode options from 0 to 95 are output in groups of 32 options. Please see Table 4-1 Host mode option 0 to 31 and output contents of Option[0:31] on page 4-101 to Table 4-3 Host mode option 64 to 95 and output contents of Option[64:95] on page 4-102 for the relation of output values and host mode option. Please see the <i>Hitachi Unified Storage VM Block Module Provisioning Guide</i> for the meaning of the host mode number.
Num. of Host Groups	The number of host groups that the host mode setting is changed

[Install] Set IP Address

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Set IP Address,SVP and DKC,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{IPAddress,Subnet Mask}={ (123.456.789.123) ,(255.255.255.255) }
```

Basic Information

Parameter	Description
SVP	The SVP IP address change
SVP and DKC	The IP address change of the SVP and DKC

Detailed Information

Item	Description
IPAddress	The SVP IP address
Subnet Mask	The subnet mask in SVP

[Install] Set Security Switch

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Set Security Switch,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{Port,Switch}=[{XX,Disable},{XX,Enable}],Num. of Ports=2
```

Detailed Information

Item	Description
Port	The name of the port where the LUN security setting is changed

Item	Description
Switch	Indicates whether the LUN security setting is enabled or disabled. Disable or Enable will appear.
Num. of Ports	The number of ports where the LUN security setting is changed

[Install] Set Subsystem Time

Example 1: The case of TOD Change

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Set Subsystem Time,TOD Change,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Time=YYYY/MM/DD HH:mm:SS
```

Example 2: The case of Synchro. Infor.

For IPv4

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Set Subsystem Time,Synchro. Infor.,Normal end,
from=xxx:xxx:xxx:xxx,,Seq.=xxxxxxxxxxx
+{Use Synchro.,SNTP IP,SNTP Port,Time Zone,Check Time,
Create SIM}
={Valid,(123.456.789.123),100,Tokyo Standard Time,23,ON}
```

For IPv6

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Set Subsystem Time,Synchro. Infor.,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Use Synchro.,SNTP IP,SNTP Port,Time Zone,Check Time,
Create SIM}
={Valid,(1111:2222:3333:4444:5555:6666:7777:8888),100,
Tokyo Standard Time,23,ON}
```

Basic Information

Parameter	Description
TOD Change	The date and the time
Synchro. Infor.	The setting of time correction function

Detailed Information

Item	Description
Time	Indicates the date and the time in the format of "YYYY/MM/DD HH:mm:SS".(YYYY: year, MM: month, DD: date, HH: hour, mm: minute, SS: second).
Use Synchro.	Indicates whether the time correction function is valid or invalid. Valid: Enable, Invalid: Disable
SNTP IP	The IP address (IPv4 or IPv6) of SNTP server.
SNTP Port	The port used by SNTP server.
Time Zone	The time zone.

Item	Description
Check Time	The time when the time correction function is executed. Only HH (Hour: 00 to 23) is indicated for the execution time.
Create SIM	Indicates whether the SIM was created or not when the setting of time correction failed. ON: Created, OFF: Not created.

[Install] Set UserAuth

Example

```
07xx, YYYY/MM/DD, HH:MM:SS.xxx, 00:00, SVP, uid=user-name, 1, ,
[Install], Set UserAuth, , Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, , Seq.=xxxxxxxxxxxx
+{LDKC:CU:LDEV, UserAuth}=[{0xXX:0xXX:0xXX, Enable}],
Num. of LDEVs=1
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the volume where the user authentication is specified.
UserAuth	Indicates whether the user authentication is enabled or disabled. Disable or Enable will appear.
Num. of LDEVs	The number of logical volumes where the user authentication is set.

[Install] System Option

Example

```
07xx, YYYY/MM/DD, HH:MM:SS.xxx, 00:00, SVP, uid=user-name, 1, ,
[Install], System Option, , Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, , Seq.=xxxxxxxxxxxx
+Spare Disk Recover=Full Speed
+Disk Copy Pace=Slower
+Copy Operation(Correction Copy)=OFF
+Copy Operation(Dynamic Sparing)=OFF
+Link Failure Threshold=10
+{LDKC:CU:LDEV, Destage}=[{0x00:0x00:0x00, OFF}],
Num. of LDEVs=1
+{LPR, Cache Tuning}=[{System, Level5}], Num. of LPRs=1
+{LPR, Command Control}=[{System, 10}], Num. of LPRs=1
+{LPR, Mode, Set}=[{System, 0, ON}], Num. of Modes=1
+Debug Mode=Set
+{PG, Copy Back Mode}=[{1-1, Copy Back}], Num. of PGs=1
```

Detailed Information

Item	Description
Spare Disk Recover	Indicates the setting status of Spare Disk Recover. Interleave: Give priority to the access from the host while executing copy process, Full speed: Give priority to the copy process.

Item	Description
Disk Copy Pace	Indicates the setting status of Disk Copy Pace. Slower: Low speed, Medium: Medium speed, Faster: High speed
Copy Operation (Correction Copy)	Indicates the setting status of Copy Operation (Correction Copy). ON: Execute Correction Copy, OFF: Do not execute Correction Copy
Copy Operation (Dynamic Sparing)	Indicates the setting status of Copy Operation (Dynamic Sparing). ON: Execute Dynamic Sparing, OFF: Do not execute Dynamic Sparing
Link Failure Threshold	The threshold to report link failure
LDKC:CU: LDEV	The LDKC number, the CU number, and the LDEV number
Destage	Indicates the setting status of Destage. ON: Execute write through operation (report the completion of the writing to the host after the writing to the disk drive has completed). OFF: Do not execute write through operation (report the completion of the writing to the host when the data is written in the cache memory).
Num. of LDEVs	The number of LDEVs
LPR	The LPR name
Cache Tuning	The level of Cache Tuning
Num. of LPRs	The number of LPRs
Command Control	Command Control
Mode	The local mode number
Set	The setting status. ON: Set, Off: Release
Num. of Modes	The number of local modes.
Debug Mode	Setting executed from the debug window (Set: fix)
PG	The parity group number
Copy Back Mode	The status of the copy back mode setting Copy Back: When a failed HDD recovered, the copy back will be performed. No Copy Back: When a failed HDD recovered, the copy back will be not performed.
Num. of PGs	The number of parity groups
Note: Only the changed items will be output.	

[Install] System Tuning

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],System Tuning,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Serial No.=264038
```

```
+IP Address Mode=Based on Serial Number
+IP Address=126.132.246.15
+Subnet Mask=255.0.0.0
```

Detailed Information

Item	Description
Serial No.	The serial number
IP Address Mode	The IP address mode set Based on Serial Number: Set the IP address from the serial number.Specified: Set the specified IP address.
IP Address	The IP address set
Subnet Mask	The subnet mask set

[Install] Update Config

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Update Config,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{New Ver.,Old Ver.}={xx-xx-xx/xx,xx-xx-xx/xx}
```

Detailed Information

Item	Description
New Ver.	The new version number
Old Ver.	The old version number

[Install] Volume to Space

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Install],Volume to Space,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{PG,LDKC:CU:LDEV}=[{1-1,0x00:0x00:0x01},{1-1-(1),
0x00:0x00:0x02}],Num. of LDEVs=2
```

Detailed Information

Item	Description
PG	The parity group number E1-1: In case of an external volume X1-1: In case of a Dynamic Provisioning volume
LDKC:CU:LDEV	The LDKC number, the CU number and the LDEV number
Num. of LDEVs	The number of LDEVs

Local Replication Descriptions

[Local Replication] Add Reserve VOLs

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[Local Raplication],Add Reserve VOLs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Copy Type=SI
++{VOL(LDKC:CU:LDEV),Result}=[{0xZZ:0xXX:0xYY,Normal end},
{0xZZ:0xXX:0xYY,Error(xxxx-yyyyy)}],Num. of Vols=2
```

Detailed Information

Item	Description
Copy Type	The program product name for this operation SI: ShadowImage
VOL(LDKC:CU:LDEV)	The LDKC number, the CU number and the LDEV number of the volume where a reserve attribute is set
Result	The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end xxxx: Part code, yyyy: Error code
Num. of Vols	The number of volumes where reserve attributes are set

[Local Replication] Create pairs

Example 1: when the copy type is SI

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[Local Raplication],Create Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Copy Type=SI,Copy Pace=Faster,Split Type=Non Split
++{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),MU,Result}
=[{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,0,Normal end},
{0xX:0xAA:0xBB,0xY:0xCC:0xDD,1,Error(xxxx-yyyyy)}],
Num. of Pairs=2
```

Example 2: when the copy type is TI

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[Local Raplication],Create Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Copy Type=TI
++{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),PoolID,MU,
Snapshot Group,Result}
=[{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,0,1,SnapshotSet1,Normal end},
{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,0,1,SnapshotSet2,
Error(xxxx-yyyyy)}],
Num. of Pairs=2
```

Detailed Information

Item	Description
Copy Type	The program product name for this operation SI: ShadowImage, TI: Thin Image
Copy Pace	The copy speed Faster: High speed, Medium; Medium speed, Slower: Low speed
Split Type	The split type Non Split: Does not split the pair, Quick Split: Pair split by background copy, Steady Split: Pair split by update copy
P-VOL (LDKC:CU:LDEV)	The LDKC number, the CU number and the LDEV number of the primary volume in the created pair
S-VOL (LDKC:CU:LDEV)	The LDKC number, the CU number and the LDEV number of the secondary volume in the created pair
PoolID	The pool ID of the secondary volume of the created pair This item is output only when the copy type is TI.
MU	The mirror unit number of the created pair
Snapshot Group	The snapshot group name This item is output only when the copy type is TI.
Result	The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end xxxx: Part code, yyyy: Error code
Num. of Pairs	The number of the created pairs

[Local Replication] Delete pairs

Example 1: when the copy type is SI

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[Local Raplication],Delete Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Copy Type=SI
++{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),Result}
=[{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,Normal end},
{0xX:0xAA:0xBB,0xY:0xCC:0xDD,Error(xxxx-yyyyy)}],
Num. of Pairs=2
```

Example 2: when the copy type is TI

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[Local Raplication],Delete Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Copy Type=TI
++{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),MU,Result}
=[{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,1,Normal end},
{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,1,Error(xxxx-yyyyy)}],
Num. of Pairs=2
```

Detailed Information

Item	Description
Copy Type	The program product name for this operation SI: ShadowImage, TI: Thin Image
P-VOL (LDKC:CU:LDEV)	The LDKC number, the CU number and the LDEV number of the primary volume in the deleted pair
S-VOL (LDKC:CU:LDEV)	The LDKC number, the CU number and the LDEV number of the secondary volume in the deleted pair
MU	The mirror unit number of the deleted pair This item is output only when Copy Type is TI.
Result	The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end xxxx: Part code, yyyy: Error code
Num. of Pairs	The number of the deleted pairs

[Local Replication] Edit Options

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[Local Raplication],Edit Options,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Copy Type=SI
++Swap & Freeze=Enable,
HOST I/O Performance=Enable,Reserve03=Enable,(snip),
Copy Pace Ext.Slower1=Disable,Copy Pace Ext.Slower2=Disable,
Copy Pace Ext.None=Disable,(snip),Reserve32=Disable
```

Detailed Information

Item	Description
Copy Type	The program product name for this operation SI: ShadowImage
Swap & Freeze	Indicates whether the Swap & Freeze option is enabled or disabled. Enable: Enabled, Disable: Disabled
Host I/O Performance	Indicates whether the Host I/O Performance option is enabled or disabled. Enable: Enabled, Disable: Disabled
Copy Pace Ext. Slower1	Indicates whether the Copy Pace Ext. Slower1 option is enabled or disabled. Enable: Enabled, Disable: Disabled
Copy Pace Ext. Slower2	Indicates whether the Copy Pace Ext. Slower2 option is enabled or disabled. Enable: Enabled, Disable: Disabled
Copy Pace Ext. None	Indicates whether the Copy Pace Ext. None option is enabled or disabled. Enable: Enabled, Disable: Disabled

Item	Description
Reserve X	Reserved item If Copy Type is SI, X is a number, 03 to 19 and 23 to 32.

[Local Replication] Remove Reserve VOLs

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[Local Raplication],Remove Reserve VOLs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Copy Type=SI
++{VOL(LDKC:CU:LDEV),Result}=[{0xZZ:0xXX:0xYY,Normal end},
{0xZZ:0xXX:0xYY,Error(xxxx-yyyyy)}],Num. of Vols=2
```

Detailed Information

Item	Description
Copy Type	The program product name for this operation SI: ShadowImage
VOL(LDKC:CU:LDEV)	The LDKC number, the CU number and the LDEV number of the volume where a reserve attribute is removed
Result	The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end xxxx: Part code, yyyy: Error code
Num. of Vols	The number of volumes where reserve attributes are removed

[Local Replication] Resync pairs

Example 1: when the copy type is SI

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[Local Raplication],Resync Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Copy Type=SI,Copy Pace=Medium,Resync Type=Normal Copy
++{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),Result}
=[{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,Normal end},
{0xX:0xAA:0xBB,0xY:0xCC:0xDD,Error(xxxx-yyyyy)}],
Num. of Pairs=2
```

Example 2: when the copy type is TI

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[Local Raplication],Resync Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Copy Type=TI,Resync Type=Reverse Copy
++{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),MU,Result}
=[{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,1,Normal end},
{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,1,Error(xxxx-yyyyy)}],
Num. of Pairs=2
```

Detailed Information

Item	Description
Copy Type	The program product name for this operation SI: ShadowImage, TI: Thin Image
Copy Pace	The copy speed Faster: High speed, Medium; Medium speed, Slower: Low speed
Resync Type	The resynchronization type Normal Copy: Normal resynchronization, Quick Resync: High speed resynchronization, Reverse Copy: Reverse resynchronization, Quick Restore: High speed restore
P-VOL (LDKC:CU:LDEV)	The LDKC number, the CU number and the LDEV number of the primary volume in the resynchronized pair
S-VOL (LDKC:CU:LDEV)	The LDKC number, the CU number and the LDEV number of the secondary volume in the resynchronized pair
MU	The mirror unit number of the resynchronized pair This item is output only when Copy Type is TI.
Result	The result of the operation Normal end: Normal end, Error(XXXX-YYYY): Abnormal end XXXX: Part code, YYYY: Error code
Num. of Pairs	The number of the resynchronized pairs

[Local Replication] Split pairs

Example 1: when the copy type is SI

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[Local Raplication],Split Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Copy Type=SI,Copy Pace=Faster,Split Type=Steady Split
++{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),Result}
=[{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,Normal end},
{0xX:0xAA:0xBB,0xY:0xCC:0xDD,Error(xxxx-yyyy)}],
Num. of Pairs=2
```

Example 2: when the copy type is TI

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[Local Raplication],Split Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Copy Type=TI
++{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),MU,Result}
=[{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,1,Normal end},
{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,1,Error(xxxx-yyyy)}],
Num. of Pairs=2
```

Detailed Information

Item	Description
Copy Type	The program product name for this operation SI: ShadowImage, TI: Thin Image

Item	Description
Copy Pace	The copy speed Faster: High speed, Medium; Medium speed, Slower: Low speed
Split Type	The split type Quick Split: Pair split by background copy, Steady Split: Pair split by update copy
P-VOL (LDKC:CU:LDEV)	The LDKC number, the CU number and the LDEV number of the primary volume in the split pair
S-VOL (LDKC:CU:LDEV)	The LDKC number, the CU number and the LDEV number of the secondary volume in the split pair
MU	The mirror unit number of the split pair This item is output only when Copy Type is TI.
Result	The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end xxxx: Part code, yyyy: Error code
Num. of Pairs	The number of the split pairs

[Local Replication] Suspend pairs

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[Local Raplication],Suspend Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Copy Type=SI
++{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),Result}
=[{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,Normal end},
{0xX:0xAA:0xBB,0xY:0xCC:0xDD,Error(xxxx-yyyyy)}],
Num. of Pairs=2
```

Detailed Information

Item	Description
Copy Type	The program product name for this operation SI: ShadowImage
P-VOL (LDKC:CU:LDEV)	The LDKC number, the CU number and the LDEV number of the primary volume in the suspended pair
S-VOL (LDKC:CU:LDEV)	The LDKC number, the CU number and the LDEV number of the secondary volume in the suspended pair
Result	The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end xxxx: Part code, yyyy: Error code
Num. of Pairs	The number of the suspended pairs

Maintenance Descriptions

[Maintenance] Blockade

Example 1: blocking a PCB

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,  
[Maintenance],Blockade,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+PCB=[CHB-1A],Num. of PCBs=1
```

Example 2: blocking an LDEV

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,  
[Maintenance],Blockade,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+PG=[1-1],Num. of PGs=1
```

Detailed Information

Item	Description
PCB	The mounting location of the PCB (CHB (channel blade), DKB (disk blade), MAIN, and MPB) to be blocked
Num. of PCBs	The number PCB to be blocked
PDEV	The mounting location of the PDEV (physical device) to be blocked
PG	The parity group number E1-1: In case of an external volume X1-1: In case of a Dynamic Provisioning volume
Num. of PGs	The number of parity groups
LDEV	The LDKC number, the CU number, and the LDEV number
Num. of LDEVs	The number of LDEVs

[Maintenance] Correction Copy

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,  
[Maintenance],Correction Copy,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+PDEV=HDD00-00
```

Detailed Information

Item	Description
PDEV	The mounting location of the PDEV (physical device)

[Maintenance] DMA Restore

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,  
[Maintenance],DMA Restore,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+DMA=[DMA-10],Num. of DMAs=1
```

Detailed Information

Item	Description
DMA	The specified DMA
Num. of DMAs	The number of specified DMAs

[Maintenance] Drive Interrupt

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,  
[Maintenance],Drive Interrupt,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+PDEV=HDD00-00
```

Detailed Information

Item	Description
PDEV	The mounting location of the PDEV (physical device)

[Maintenance] DRR Restore

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,  
[Maintenance],DRR Restore,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+DRR=[DRR-10],Num. of DRRs=1
```

Detailed Information

Item	Description
DRR	The specified DRR
Num. of DRRs	The number of specified DRRs

[Maintenance] Format

The logged information indicates that the Format operation was only requested but not completed.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Maintenance],Format,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+PG=[1-1],Num. of PGs=1
```

Detailed Information

Item	Description
PG	The parity group number E1-1: In case of an external volume X1-1: In case of a Dynamic Provisioning volume
Num. of PGs	The number of parity groups
LDEV	The LDKC number, the CU number, and the LDEV number
Num. of LDEVs	The number of LDEVs

[Maintenance] Format Stop

This log information is output when the format process is suspended.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Maintenance],Format Stop,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+PG=[1-1],Num. of PGs=1
```

Detailed Information

Item	Description
PG	The parity group number E1-1: In case of an external volume X1-1: In case of a Dynamic Provisioning volume
Num. of PGs	The number of parity groups
LDEV	The LDKC number, the CU number, and the LDEV number
Num. of LDEVs	The number of LDEVs

[Maintenance] MAINBlade Restore

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Maintenance],MAINBlade Restore,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+MAINblade=[MAIN1],Num. of MAINblades=1
```

Detailed Information

Item	Description
MAINBlade	The mounting location of the specified MAIN blade
Num. of MAINBlades	The number of specified MAIN blades

[Maintenance] MP Restore

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=maintenance,1,,  
[Maintenance],MP Restore,,Error,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx  
+MP=[MP10-00],Num. of MPs=1
```

Detailed Information

Item	Description
MP	The identity of the microprocessor
Num. of MPs	The number of microprocessors that were restored

[Maintenance] Pre QuickFormat Stop

This log information is output when the Quick Format process is suspended.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,  
[Maintenance],Pre QuickFormat Stop,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx  
+PG=[1-1],Num. of PGs=1
```

Detailed Information

Item	Description
PG	The parity group number E1-1: In case of an external volume X1-1: In case of a Dynamic Provisioning volume
Num. of PGs	The number of parity groups
LDEV	The LDKC number, the CU number, and the LDEV number
Num. of LDEVs	The number of LDEVs

[Maintenance] Quick Format

The logged information indicates that the Quick Format operation was only requested but not completed.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Maintenance],Quick Format,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+PG=[1-1],Num. of PGs=1
```

Detailed Information

Item	Description
PG	The parity group number E1-1: In case of an external volume X1-1: In case of a Dynamic Provisioning volume
Num. of PGs	The number of parity groups
LDEV	The LDKC number, the CU number, and the LDEV number
Num. of LDEVs	The number of LDEVs

[Maintenance] Replace

Example 1: replacing parts

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Maintenance], Replace,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+Parts name=DKCPS1
```

Example 2: replacing an SFP

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Maintenance], Replace,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+SFP=[1A,3A,5A,7A],Num. of SFPs=4
```

Example 3: replacing a CHB (channel blade), a DKB (disk blade), MAIN, and MPB

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Maintenance], Replace,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+PCB=[CHB-1A],Num. of PCBs=1
+Failed=[CHB-1A],Num. of PCBs=1
```

Example 4: replacing a PDEV (physical device)

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Maintenance], Replace,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+PDEV=HDD00-00
+Copy=Restore Data
```

Example 5: replacing a ENC

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Maintenance], Replace,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+ENC=[ENC00-1],Num. of ENCs=1
```

Example 6: replacing a CFM (cache flash memory)

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Maintenance], Replace,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+CFM=MAIN1 CFM,Num. of CFMs=1
```

Detailed Information

Item	Description
Parts name	The name of the parts (MAINx BATT, DKCFANxx, DKCPSx, SVP, DBPSxx-x) specified to be replaced
SFP	The port that Small Form-Factor Pluggables (SFPs) are inserted.
Num.of SFPs	The number of inserted Small Form-Factor Pluggables
PCB	The mounting location of the PCB (CHB, DKB, MAIN, or MPB) to be replaced.
Failed	When replacing multiple PCBs and some of the PCBs to be replaced had failures, the mounting locations of the failed PCBs are indicated. In such case, "Warning" is output as the result of the process. <i>Note:</i> This information is not output when there are no failed PCBs.
Num. of PCBs	The number of PCBs to be replaced
PDEV	The mounting location of the PDEVs (physical devices) to be replaced
Copy	The status of copy process when replacing physical devices (PDEV)s. This information is output only when replacing PDEVs. Restore Data: Data recovery from spare disk, Correction Copy: correction copy
Diagnosis	Diagnosis is output only when INLINE skip is selected when replacing PDEVs. This information is output only when replacing PDEVs.
Micro Program	Micro Program is output only when microcode update is skipped when replacing PDEVs. This information is output only when replacing PDEVs.
ENC	The mounting location of ENCs to be replaced
Num. of ENCs	The number of ENCs to be replaced
CFM	The mounting location of CFMs (cache flash memories)
Num. of CFMs	The number of CFMs to be replaced

[Maintenance] Restore

Example 1: restoring a PCB

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Maintenance], Restore,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+PCB=[CHB-1A],Num. of PCBs=1
```

Example 2: restoring an LDEV

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Maintenance],Restore,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+PG=[1-1],Num. of PGs=1
```

Detailed Information

Item	Description
PCB	The mounting location of the PCB (Channel Blade (CHB), Disk Blade (DKB), or MPB) to be restored
Num. of PCBs	The number of PCBs to be restored
PDEV	The location of the PDEV to be restored
PG	The parity group number E1-1: In case of an external volume X1-1: In case of a Dynamic Provisioning volume
Num. of PGs	The number of parity groups
LDEV	The LDKC number, the CU number, and the LDEV number
Num. of LDEVs	The number of LDEVs

[Maintenance] Restore Data

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Maintenance],Restore Data,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+PDEV=HDD00-00
```

Detailed Information

Item	Description
PDEV	The mounting location of the PDEV

[Maintenance] Set Battery Life

This log information is output when Battery Life Warning SIM is set at the time of replacing a MAIN or a battery.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Maintenance],Set Battery Life,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Battery,Date,Remained Life}=[{MAIN1 BATT,YYYY/MM/DD,990}],
Num. of Batteries=1
```

Detailed Information

Item	Description
Battery	The mounting location of the battery
Date	Indicates the date of the setting in "YYYY/MM/DD" format (YYYY: year, MM: month, DD: day)
Remained Life	The remaining date of the battery shelf life
Num of Batteries	The number of batteries

[Maintenance] Spare Disk

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Maintenance],Spare Disk,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+PDEV=HDD00-00
```

Detailed Information

Item	Description
PDEV	The mounting location of the PDEV

[Maintenance] Type Change

Example 1: changing type of SFPs

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Maintenance],Type Change,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{SFP,Type}=[{1A,Short Wave},{3A,Short Wave},
{5A,Short Wave},{7A,Long Wave}],Num. of SFPs=4
```

Detailed Information for Example 1

Item	Description
SFP	The port that Small Form-Factor Pluggables (SFPs) are inserted
Type	The type of the Small Form-Factor Pluggable (SFP) Short Wave: Short wave, Long Wave: Long wave
Num. of SFPs	The number of inserted Small Form-Factor Pluggable (SFP)s

Example 2: changing type of PCBs

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Maintenance],Type Change,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+PCB=[DKB-1E],Num. of PCBs=1
+Type=BS6G (DKB)
```

Detailed Information for Example 2

Item	Description
PCB	The mounting location of the PCB to be changed
Num. of PCBs	The number of the PCBs to be changed
Type	The type of the PCB BS6G (DKB): DKB, BS6GE (DKB): encrypted DKB

[Maintenance] Verify

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,  
[Maintenance],Verify,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+PG=[1-1],Num. of PGs=1
```

Detailed Information

Item	Description
PG	The parity group number E1-1: In case of an external volume X1-1: In case of a Dynamic Provisioning volume
Num. of PGs	The number of parity groups
LDEV	The LDKC number, the CU number, and the LDEV number
Num. of LDEVs	The number of LDEVs

[Maintenance] Verify Stop

This log information is output when the format process is suspended.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,  
[Maintenance],Verify Stop,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+PG=[1-1],Num. of PGs=1
```

Detailed Information

Item	Description
PG	The parity group number E1-1: In case of an external volume X1-1: In case of a Dynamic Provisioning volume
Num. of PGs	The number of parity groups
LDEV	The LDKC number, the CU number, and the LDEV number
Num. of LDEVs	The number of LDEVs

Monitor Descriptions

[Monitor] Threshold

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,
[Monitor],Threshold,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{Item,Threshold,Term}=[{Cache Use Rate,10,20},
{Cache Write Pending Rate,0,0},
{MP Processing Rate,70,30},
{Loss of Signal Count(Fibre),50,5},
{Bad Received Character Count(Fibre),0,0},
{Loss of Synchronization Count(Fibre),0,0},
{Link Failure Count(Fibre),80,10},
{Received EOFa Count(Fibre),0,0},
{Discarded Frame Count(Fibre),0,0},
{Bad CRC Count(Fibre),0,0},
{Protocol Error Count(Fibre),0,0},
{Expired Frame Count(Fibre),30,50},
{Read Hit Rate,0,0}],
Num. of Items=13
```

Detailed Information

Item	Description
Item	Process monitoring item
Threshold	Threshold for each process monitoring item
Term	Period in which the threshold continues to be exceeded
Num. of Items	Number of the process monitoring items

Performance Monitor Descriptions

[PFM] DCR Prestaging

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PFM],DCR Prestaging,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
```

[PFM] Delete Open DCR

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PFM],Delete Open DCR,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{LDKC:CU:LDEV,Start LBA,End LBA}
=[{0x00:0x00:0x00,XXXXXXXXXXXXXXXXXXXX,XXXXXXXXXXXXXXXXXXXX},
{0x00:0x00:0x00,XXXXXXXXXXXXXXXXXXXX,XXXXXXXXXXXXXXXXXXXX}],
Num. of LDEVs=2
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the logical volume where the setting information of Cache Residency cache is canceled.
Start LBA	The starting LBA number of the cancelled data.
End LBA	The ending LBA number of the cancelled data. This number is output when only the ending LBA is specified for the cancelled data.
Num. of LDEVs	The number of logical volumes where Cache Residency cache is canceled.

[PFM] Delete Unused WWNs

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,  
Task Name,[PFM],Delete Unused WWNs,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
```

[PFM] Edit CU Monitor Mode

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,  
Task Name,[PFM],Edit CU Monitor Mode,Enable,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx  
+[LDKC:CU] = [0x00:0x00,0x00:0x01,0x00:0x02],Num. of CUs = 3
```

Basic Information

Parameter	Description
Enable	The monitored CU is enabled

Detailed Information

Item	Description
LDKC:CU	The ID of the monitored CU The logical DKC number and the CU number are separated by colons and arranged in this order.

[PFM] Edit Monitoring SW

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,  
Task Name,[PFM],Edit Monitoring SW,Enable 60sec,  
Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
```

Basic Information

Parameter	Description
Enable XXsec	Monitoring is enabled and the gathering interval is set as XX sec
Disable	Monitoring is disabled

[PFM] Edit WWN

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PFM],Edit WWN,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Update Mode,HBA WWN,Change WWN Name,Change HBA WWN}
=[{Change HBA WWN,0xxxxxxxxxxxxxxxxxxx,,0xxxxxxxxxxxxxxxxxxx},
{Change WWN Name,0xxxxxxxxxxxxxxxxxxx,
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx,
}],Num. of WWNs=2
```

Detailed Information

Item	Description
Update Mode	The changing mode of WWN Change HBA WWN: Change of HBA WWN, Change WWN Name: Change of WWN name
HBA WWN	The name of HBA WWN
Change WWN Name	The new WWN name (if changed)
Change HBA WWN	The name of changed HBA WWN
Num. of WWNs	The number of changed WWNs

[PFM] Edit WWN MonitorMode

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PFM],Edit WWN MonitorMode,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Mode,HBA WWN,WWN Name}={Add WWN,0xxxxxxxxxxxxxxxxxxx,
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx},
++Port=[XX],Num. of Ports=1,
-Num. of WWNs=1
```

Detailed Information

Item	Description
Mode	The setting mode of WWN Add WWN: Addition of HBA WWN, Delete WWN: Deletion of HBA WWN
HBA WWN	The HBA WWN

Item	Description
WWN Name	The WWN name
Port	The name of a target port
Num. of Ports	The number of target ports for the added or deleted WWN
Num. of WWNs	The number of added or deleted WWNs

[PFM] Set Open DCR

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PFM],Set Open DCR,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{LDKC:CU:LDEV,Mode,Prestaging,Start LBA,End LBA}
=[{0x00:0x00:0x00,Bind,No,XXXXXXXXXXXXXXXXXX,XXXXXXXXXXXXXXXXXX}],
Num. of LDEVs=1
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the logical volume where the setting information of Cache Residency cache is added or changed.
Mode	The setting mode of Cache Residency cache Bind: Bind, Priority: Priority
Prestaging	The prestaging target. No: No (disables the prestaging mode) Yes: Yes enables the prestaging mode
Start LBA	The starting LBA number of the data resident in Cache Residency cache
End LBA	The ending LBA number of the data resident in Cache Residency cache
Num. of LDEVs	The number of the logical volume where the setting information of Cache Residency cache is added or changed

Program Product Key (PP KEY) Descriptions

[PP KEY] PP Apply

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PP KEY],PP Apply,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
```

[PP KEY] PP Available Install

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PP KEY],PP Available Install,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{P.P.Name,Result}=[{JAVA API,Normal end}],Num. of PPs=1
```

Detailed Information

Item	Description
P.P.Name	The name of the option installed in the Available mode
Result	The result of installation in the Available mode. Normal end: Normal end, Error(xxxxx-yyyyyy): Abnormal end xxxxx: Part code, yyyyyy: Error code
Num. of PPs	The number of the options installed in the Available mode

[PP KEY] PP Disable chk

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PP KEY],PP Disable chk,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{P.P.Name,Result}=[{JAVA API,Normal end}],Num. of PPs=1
```

Detailed Information

Item	Description
P.P.Name	The name of the disabled program product
Result	The result of checking the disabled program product. Normal end: Normal end, Error(xxxxx-yyyyyy): Abnormal end xxxxx: Part code, yyyyyy: Error code
Num. of PPs	The number of the disabled program products

[PP KEY] PP Enable chk

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PP KEY],PP Enable chk,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{P.P.Name,Result}=[{JAVA API,Normal end}],Num. of PPs=1
```

Detailed Information

Item	Description
P.P.Name	The name of the enabled program product

Item	Description
Result	The result of checking the enabled program product. Normal end: Normal end, Error(xxxxx-yyyyyy): Abnormal end xxxxx: Part code, yyyyyy: Error code
Num. of PPs	The number of the enabled program products

[PP KEY] PP Install chk

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PP KEY],PP Install chk,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Key Code
```

```
=XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXX
++{P.P.Name,Result}=[{JAVA API,Normal end}],Num. of PPs=1
```

Detailed Information

Item	Description
Key Code	The key code used for installation
P.P.Name	The name of the installed option
Result	The result of installation. Normal end: Normal end, Error(xxxxx-yyyyyy): Abnormal end xxxxx: Part code, yyyyyy: Error code
Num. of PPs	The number of the installed options

[PP KEY] PP Install File chk

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PP KEY],PP Install File chk,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+File Name=C:\Dkc200\Home\Sample.plk
++{P.P.Name,Result}=[{JAVA API,Normal end},
-{LUN Manager,Normal end}],Num. of PPs=2
```

Detailed Information

Item	Description
File Name	The name of the license key file used for installation
P.P.Name	The name of the installed program product
Result	The result of file check in the installation. Normal end: Normal end, Error(xxxxx-yyyyyy): Abnormal end xxxxx: Part code, yyyyyy: Error code
Num. of PPs	The number of the installed program products

[PP KEY] PP Removal chk

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,  
[PP KEY],PP Removal chk,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+{P.P.Name,Result}=[{JAVA API,Normal end}],Num. of PPs=1
```

Detailed Information

Item	Description
P.P.Name	The name of the uninstalled program product
Result	The result of file check in the uninstallation. Normal end: Normal end, Error(xxxxx-yyyyyy): Abnormal end xxxxx: Part code, yyyyyy: Error code
Num. of PPs	The number of the uninstalled program products

Provisioning Descriptions

[PROV] Add Host Group

This log is output when LUN Manager operation is performed using Configuration File Loader.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,  
[PROV],Add Host Group,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+{Port,HostGrpID,HostGrpName,Mode,Option[0:31],Option[32:63],  
Option[64:95]}={XX,0xXXX,XXXXXXXXXXXXXXXXXXXX,0xXX,0XXXXXXXXX,  
0XXXXXXXXX,0XXXXXXXXX}  
++{WWN,Nickname}=[{0XXXXXXXXXXXXXXXXXXXX,XXXXXXXXXXXXXXXXXXXX},  
{0XXXXXXXXXXXXXXXXXXXX,XXXXXXXXXXXXXXXXXXXX}],Num. of WWNs=2  
+{Port,HostGrpID,HostGrpName,Mode,Option[0:31],Option[32:63],  
Option[64:95]}={XX,0xXXX,XXXXXXXXXXXXXXXXXXXX,0xXX,0XXXXXXXXX,  
0XXXXXXXXX,0XXXXXXXXX}  
+Num. of Host Groups=2
```

Detailed Information

Item	Description
Port	The name of the port where the host group has been added
HostGrpID	The host group number that was newly added
HostGrpName	The name of the new host group
Mode	The new host mode. See <i>Hitachi Unified Storage VM Block Module Provisioning Guide</i> for the description of the host mode number.
Option[0:31] Option[32:63] Option[64:95]	The new host mode option. Hexadecimal values are output

Item	Description
WWN	Indicates WWN of the host bus adapter for the host registered in the host group
Nickname	The nickname of the host bus adapter for the host registered in the host group
Num. of WWNs	The number of WWNs of the host registered in the host group
Num. of Host Groups	The number of added host groups

[PROV] Add Hosts

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Add Hosts,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,HostGrpID,WWN,Nickname}
=[{XX,0xXXX,0XXXXXXXXXXXXXXXXXXXX,XXXXXXXXXXXXXXXXXXXX},
{XX,0xXXX,0XXXXXXXXXXXXXXXXXXXX,XXXXXXXXXXXXXXXXXXXX}],Num. of WWNs=2
```

Detailed Information

Item	Description
Port	The name of the port to which the host group belongs
HostGrpID	The host group number where the host is registered
WWN	Indicates WWN of the host bus adapter for the host registered in the host group. WWN is a 16-digit number in the hexadecimal format.
Nickname	The nickname of the host bus adapter for the host registered in the host group
Num. of WWNs	The number of registered hosts (WWN)

[PROV] Add LU Path

This log is output when LUN Manager operation is performed using Configuration File Loader.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,,uid=user-name,1,,
[PROV],Add LU Path,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,HostGrpID,LUN,LDKC:CU:LDEV}
=[{XX,0xXXX,0xXXX,0xXX:0xXX:0xXX},
{XX,0xXXX,0xXXX,0xXX:0xXX:0xXX},
{XX,0xXXX,0xXXX,0xXX:0xXX:0xXX}],Num. of Paths=3
```

Detailed Information

Item	Description
Port	The name of the port to which the host group belongs
HostGrpID	The host group number linked to the logical volume

Item	Description
LUN	Indicates LUN of the logical volume linked to the host group
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the logical volume linked to the host group
Num. of Paths	The number of LU paths set

[PROV] Add LUN Paths

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Add LUN Paths,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,HostGrpID,LUN,LDKC:CU:LDEV}
=[{XX,0xXXX,0xXXXX,0xXX:0xXX:0xXX},
{XX,0xXXX,0xXXXX,0xXX:0xXX:0xXX},
{XX,0xXXX,0xXXXX,0xXX:0xXX:0xXX}],Num. of Paths=3
```

Detailed Information

Item	Description
Port	The name of the port to which the host group belongs
HostGrpID	The host group number linked to the logical volume
LUN	Indicates LUN of the logical volume linked to the host group
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the logical volume linked to the host group
Num. of Paths	The number of LU paths set

[PROV] Add WWN

This log is output when LUN Manager operation is performed using Configuration File Loader.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,,uid=user-name,1,,
[PROV],Add WWN,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,HostGrpID,WWN,Nickname}
=[{XX,0xXXX,0XXXXXXXXXXXXXXXXXXXX,XXXXXXXXXXXXXXXXXXXX},
{XX,0xXXX,0XXXXXXXXXXXXXXXXXXXX,XXXXXXXXXXXXXXXXXXXX}],
Num. of WWNs=2
```

Detailed Information

Item	Description
Port	The name of the port to which the host group belongs
HostGrpID	The host group number where the host was registered
WWN	Indicates WWN of the host bus adapter for the host registered in the host group. WWN is a 16-digit number in the hexadecimal format

Item	Description
Nickname	The nickname of the host bus adapter for the host registered in the host group
Num. of WWNs	The number of host WWNs registered in the host group.

[PROV] Assign MP Unit

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Assign MP Unit,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{LDKC:CU:LDEV,MP Unit ID,Result}
=[{0xXX:0xXX:0xXX,X,Normal end},
{0xXX:0xXX:0xXX,X,Normal end}],Num. of LDEVs=2
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC number, the CU number, and the LDEV number
MP Unit ID	The MP unit ID of the migration target
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end xxxx: Part code, yyyy: Error code
Num. of LDEVs	The number of specified logical volumes

[PROV] Block LDEVs

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Block LDEVs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+LDKC:CU:LDEV=[0x00:0x00:0x01,0x00:0x00:0x02,0x00:0x00:0x03,
0x00:0x00:0x04,0x00:0x00:0x05,0x00:0x00:0x06,0x00:0x00:0x07,
0x00:0x00:0x08,0x00:0x00:0x09,0x00:0x00:0x0A],
Num. of LDEVs=10
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC number, the CU number, and the LDEV number
Num. of LDEVs	The number of LDEVs being blocked

[PROV] Change Host Group

This log is output when LUN Manager operation is performed using Configuration File Loader.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Change Host Group,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{Port,HostGrpID,HostGrpName}=[{XX,0xXXX,XXXXXXXXXXXXXXXXXXXX},
{XX,0xXXX,XXXXXXXXXXXXXXXXXXXX}],Num. of Host Groups=2
```

Detailed Information

Item	Description
Port	The name of the port to which the host group belongs
HostGrpID	The host group number where the host group name has been changed
HostGrpName	The name of the host group. If the name is changed, the name after change is indicated
Num. of Host Groups	The number of host groups where the settings have been changed

[PROV] Complete SIMs

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Complete SIMs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+SIM=[0x600000,0x600001,0x60000F],Num. of SIMs=3
```

Detailed Information

Item	Description
SIM	The reference code of the Service Information Message (SIM) generated in the storage system with resolved errors or service request status. No SIM reference code appears if the SIM cannot be completed due to the unsatisfied requirements. 0xXXXXXX: Reference code of the SIM
Num. of SIMs	The number of SIMs with resolved errors and service request status

[PROV] Create Host Groups

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Create Host Groups,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{Port,HostGrpID,HostGrpName}=[{XX,0xXXX,XXXXXXXXXXXXXXXXXXXX},
{XX,0xXXX,XXXXXXXXXXXXXXXXXXXX}],Num. of Host Groups=2
```

Detailed Information

Item	Description
Port	The name of the port where the host group has been added

Item	Description
HostGrpID	The host group number newly added
HostGrpName	The name of the host group newly added
Num. of Host Groups	The number of host groups added

[PROV] Create LDEVs

Example 1

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name, [PROV], Create LDEVs, Basic, Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, , Seq.=xxxxxxxxxxx
+{PG, LDKC:CU:LDEV, Start LBA, Emulation, Size, Unit, System Disk,
MP Unit ID}
= [{XX-XX, 0xXX:0xXX:0xXX, XXXXXXXX, , XXXXXXXX,
KB, Disable, Auto},
{XX-XX, 0xXX:0xXX:0xXX, XXXXXXXX, , XXXXXXXX, KB, Disable, 0}],
Num. of LDEVs=2
```

Basic Information for Example 1

Parameter	Description
Basic	Create LDEVs was done to basic volumes
External	Create LDEVs was done to external volumes
Basic/External	Create LDEVs was done to both basic volumes and external volumes

Detailed Information for Example 1

Item	Description
PG	The parity group number An E at the beginning of a parity group number designates an external volume is present in that parity group.
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers
Start LBA	The start LBA A hyphen (-) is output when not specified.
Emulation	Not output because this item is not used.
Size	The user-specified capacity
Unit	The unit of the CV capacity LBA is displayed. This capacity value can be converted into kilobytes by dividing by two because one block is 512 bytes.
System Disk	Indicates system disk status.Enable: Enabled, Disable: Disabled
MP Unit ID	The specified MP unit ID "Auto" indicates the processor blade number is set automatically.
Num. of LDEVs	The number of LDEVs

Example 2: Dynamic Provisioning

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name, [PROV],Create LDEVs,Thin Provisioning,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, ,Seq.=xxxxxxxxxxxx
+{Pool ID,LDKC:CU:LDEV,LDEVCapa(blocks),Emulation,CLPR,SSID,
MP Unit ID,Attribute,Result}
=[{1,0x00:0x00:0x00,96000,,0,,Auto,,Normal end},
{1,0x00:0x01:0x00,96000,,0,,Auto,,Normal end}],Num.of LDEVs=2
```

Basic Information for Example 2

Item	Description
Thin Provisioning	LDEVs were created for Dynamic Provisioning virtual volumes.

Detailed Information for Example 2

Item	Description
Pool ID	The pool ID of a related pool volume
LDKC:CU:LDEV	The logical DKC, CU, and LDEV numbers of the created V-Vols These numbers are separated by colons and arranged in this order.
LDEVCapa (blocks)	The capacity of the created V-Vols in blocks
Emulation	Not output because this item is not used.
CLPR	The CLPR number of the created V-Vol
SSID	Not output because this item is not used.
MP Unit ID	MP unit ID specified for the V-Vol. When a MP unit ID is specified automatically, "Auto" is output.
Attribute	Not output because this item is not used.
Result	The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end xxxx: Part code, yyyy: Error code
Num. of LDEVs	The number of created V-Vols

[PROV] Create Resource Grps

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name, [PROV],Create Resource Grps,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, ,Seq.=xxxxxxxxxxxx
+{Resource Group ID,Resource Group Name,Result}
=[{1,RSG1,Normal end},{2,RSG2,Normal end}],
Num. of Resource Groups=2
```

Detailed Information

Item	Description
Resource Group ID	The resource group ID of a created resource group. A hyphen (-) is output when the creating operation failed
Resource Group Name	The resource group name of the created resource group
Result	The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end xxxx: Part code, yyyyy: Error code
Num. of Resource Groups	The number of created resource groups

[PROV] Create/Expand Pools

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name, [PROV], Create/Expand Pools, , Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, , Seq.=xxxxxxxxxxx
+{Pool ID,Pool Type,Multi Tier Pool,Warning Threshold(%),
Depletion Threshold(%),Subscription Limit(%),Tier Management,
Cycle Time,Monitoring Period,Monitoring Mode,Pool Result}
=[{1,Dynamic Provisioning,Enable,20,70,100,Auto,24,00:00-23:59,
Continuous Mode,Normal end}],Num. of Pools=1
++{LDKC:CU:LDEV,External LDEV Tier Rank,LDEV Result}
=[{0x00:0x00:0x00,Middle/Internal,Normal end},
{0x00:0x00:0x01,Middle/Internal,Normal end},
{0x00:0x00:0x02,Middle/Internal,Normal end}],Num. of LDEVs=3
```

Detailed Information

Item	Description
Pool ID	The pool ID of the created or expanded pool
Pool Type	The pool type. Dynamic Provisioning: Dynamic Provisioning, Thin Image: Thin Image
Multi Tier Pool	Whether the multi-tier mode of the created or expanded pool is enabled or disabled Enable: Enabled, Disable: Disabled If Pool Type is Thin Image, a hyphen (-) is output.
Warning Threshold(%)	The warning threshold of the usage rate of the created or expanded pool. The unit is indicated as a percentage.
Depletion Threshold(%)	The depletion threshold of the usage rate of the created or expanded pool. The unit is indicated as a percentage. If Pool Type is Thin Image or if the depletion threshold is not specified, a hyphen (-) is output.

Item	Description
Subscription Limit(%)	The reserve amount of the created or expanded pool. The unit is percent (%). If the reserve amount is not specified, it outputs "Unlimited". If Pool Type is Thin Image, a hyphen (-) is output.
Tier Management	The auto control mode of the created or expanded pool Auto: Auto, Manual: Manual If Multi Tier Pool is anything other than Enable, a hyphen (-) is output.
Cycle Time	The cycle of performance monitoring for the created or expanded pool 0.5: every thirty minutes, 1: every one hour, 2: every two hours, 4: every four hours, 8: every eight hours, 24: every twenty-four hours If Tier Management is anything other than Auto, a hyphen (-) is output.
Monitoring Period	The monitoring period of the pool. Format: "H1:M1-H2:M2" H1: The time when the monitoring starts (hour) M1: The time when the monitoring starts (minute) H2: The time when the monitoring ends (hour) M2: The time when the monitoring ends (minute). If Cycle Time is anything other than 24, a hyphen (-) is output.
Monitoring Mode	The monitoring mode Continuous Mode: Continuous mode, Period Mode: Period mode If Multi Tier Pool is anything other than Enable, a hyphen (-) is output.
Pool Result	The result of pool creation or expansion Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end, Not Execute: Not Executed xxxx: Part code, yyyy: Error code
Num. of Pools	The number of the created or expanded pools
LDKC:CU:LDEV	The LDKC number, the CU number and the LDEV number of the pool volume assigned to the created or expanded pool
External LDEV Tier Rank	The external LDEV tier rank of the pool volume assigned to the created or expanded pool High: An external volume (High) Middle/Internal: An external volume (Middle) or an internal volume Low: An external volume (Low)
LDEV Result	The result of creating or expanding pools per pool volume Normal end: Normal end, Error(xxxx-yyyy): Abnormal end, Not Execute: Not Executed xxxx: Part code, yyyy: Error code
Num. of LDEVs	The number of the created or expanded pool volume

[PROV] Delete Host Group

This log is output when LUN Manager operation is performed using Configuration File Loader.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Delete Host Group,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, ,Seq.=xxxxxxxxxxx
+{Port,HostGrpID}=[{XX,0xXXX},{XX,0xXXX}],Num. of Host Groups=2
```

Detailed Information

Item	Description
Port	The name of the port to which the deleted or initialized host group belonged
HostGrpID	The host group number deleted or initialized
Num. of Host Groups	The number of host groups deleted or initialized

[PROV] Delete Host Groups

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Delete Host Groups,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, ,Seq.=xxxxxxxxxxx
+{Port,HostGrpID}
=[{XX,0xXXX},{XX,0xXXX}],Num. of Host Groups=2
```

Detailed Information

Item	Description
Port	The name of the port to which the deleted or initialized host group belonged
HostGrpID	The host group number deleted or initialized
Num. of Host Groups	The number of host groups deleted or initialized

[PROV] Delete LDEVs

Example 1

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Delete LDEVs,Basic,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, ,Seq.=xxxxxxxxxxx
+{PG,LDKC:CU:LDEV}
=[{XX-XX,0xXX:0xXX:0xXX},{XX-XX,0xXX:0xXX:0xXX}],
Num. of LDEVs=2
```

Basic Information for Example 1

Parameter	Description
Basic	Delete LDEVs was done to basic volumes
External	Delete LDEVs was done to external volumes
Basic/External	Delete LDEVs was done to both basic volumes and external volumes

Detailed Information for Example 1

Item	Description
PG	The parity group number. An E at the beginning of a parity group number designates an external volume is present in that parity group.
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers
Num. of LDEVs	The number of LDEVs

Example 2: Dynamic Provisioning

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Delete LDEVs,Dynamic Provisioning,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{LDKC:CU:LDEV,Result}=[{0x00:0x00:0x00,Normal end},
{0x00:0x01:0x00,Normal end},
{0x00:0x02:0x00,Normal end}],
Num. of LDEVs=3
```

Basic Information for Example 2

Item	Description
Thin Provisioning	LDEVs were created for Dynamic Provisioning virtual volumes.

Detailed Information for Example 2

Item	Description
LDKC:CU:LDEV	The logical DKC, CU, and LDEV numbers of the deleted V-Vols These numbers are separated by colons and arranged in this order.
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end <i>where xxxx: Part code, yyyy: Error code</i>
Num. of LDEVs	The number of deleted V-Vols

[PROV] Delete Login WWNs

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Delete Login WWNs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,Delete WWN}
=[{XX,0xxxxxxxxxxxxxxxx}, {XX,0xxxxxxxxxxxxxxxx}],
Num. of WWNs=2
```

Detailed Information

Item	Description
Port	The port name where the host of deleted WWN was connected
Delete WWN	The deleted WWN. WWN is a 16-digit number in the hexadecimal format.
Num. of WWNs	The number of WWNs deleted

[PROV] Delete LU Path

This log is output when LUN Manager operation is performed using Configuration File Loader.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Delete LU Path,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,HostGrpID,LUN,LDKC:CU:LDEV}
=[{XX,0xXXX,0xXXX,0xXX:0xXX:0xXX},
{XX,0xXXX,0xXXX,0xXX:0xXX:0xXX},
{XX,0xXXX,0xXXX,0xXX:0xXX:0xXX}],Num. of Paths=3
```

Detailed Information

Item	Description
Port	The name of the port to which the host group belongs
HostGrpID	The host group number where the LU path is deleted
LUN	Indicates LUN where the LU path assignment is cancelled
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the volume where the LU path assignment is cancelled
Num. of Paths	The number of LU paths deleted

[PROV] Delete LUN Paths

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Delete LUN Paths,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,HostGrpID,LUN}
=[{XX,0xXXX,0xXXXX},{XX,0xXXX,0xXXXX},{XX,0xXXX,0xXXXX}],
Num. of Paths=3
```

Detailed Information

Item	Description
Port	The name of the port to which the host group belongs
HostGrpID	The host group number where the LU path is deleted
LUN	Indicates LUN where the LU path assignment is cancelled

Item	Description
Num. of Paths	The number of LU paths deleted

[PROV] Delete Resource Grps

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Delete Resource Grps,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Resource Group ID,Result}=[{1,Normal end},{2,Normal end}],
Num. of Resource Groups=2
```

Detailed Information

Item	Description
Resource Group ID	The resource group ID of a deleted resource group
Result	The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end xxxx: Part code, yyyy: Error code
Num. of Resource Groups	The number of deleted resource groups

[PROV] Delete WWN

This log is output when LUN Manager operation is performed using Configuration File Loader.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Delete WWN,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,HostGrpID,WWN}
=[{XX,0xxx,0xxxxxxxxxxxxxxxxxxx},{XX,0xxx,0xxxxxxxxxxxxxxxxxxx}],
Num. of WWNs=2
```

Detailed Information

Item	Description
Port	The name of the port where the host deleted from host group was connected
HostGrpID	The host group number where the host is deleted
WWN	Indicates WWN of the host deleted from the host group
Num. of WWNs	The number of hosts (WWN) deleted from the host group

[PROV] DRU Expiration-Lock

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,  
[PROV],DRU Expiration-Lock,SYSTEM:Enable,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
```

Basic Information

Parameter	Description
SYSTEM:Enable	The expiration-lock setting is enabled in the storage system
SYSTEM:Disable	The expiration-lock setting is disabled in the storage system

[PROV] Edit Cmd Dev(Auth)

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,  
Task Name,[PROV],Edit Cmd Dev(Auth),,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+{LDKC:CU:LDEV,UserAuth}=[{0xXX:0xXX:0xXX,Disable},  
{0xXX:0xXX:0xXX,Enable}],Num. of LDEVs=2
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the logical volume where the command device authentication setting is changed
UserAuth	Indicates whether the command device authentication setting is enabled or disabled. Disable or Enable will appear.
Num. of LDEVs	The number of logical volumes where the command device authentication setting is changed

[PROV] Edit Cmd Dev(DevGrp)

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,  
Task Name,[PROV],Edit DevGrpDef,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+{LDKC:CU:LDEV,DevGrpDef}  
=[{0xXX:0xXX:0xXX,Disable},{0xXX:0xXX:0xXX,Enable}],  
Num. of LDEVs=2
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the logical volume where the device groups setting is changed

Item	Description
DevGrpDef	Indicates whether the device groups setting is enabled or disabled. Disable or Enable will appear
Num. of LDEVs	The number of logical volumes where the device groups setting is changed

[PROV] Edit Cmd Dev(Sec)

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Edit CommandDevSec,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{LDKC:CU:LDEV,CommandDevSec}
={0xXX:0xXX:0xXX,Disable},{0xXX:0xXX:0xXX,Enable}},
Num. of LDEVs=2
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the logical volume where the command device security setting is changed
CommandDevSec	Indicates whether the command device security setting is enabled or disabled. Disable or Enable will appear.
Num. of LDEVs	The number of logical volumes that the command device security setting is changed

[PROV] Edit Command Devices

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Edit Command Devices,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{LDKC:CU:LDEV,CommandDev}={0xXX:0xXX:0xXX,Disable},
{0xXX:0xXX:0xXX,Enable}},Num. of LDEVs=2
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the logical volume where the command device setting is changed
CommandDev	Indicates whether the command device setting is enabled or disabled. Disable or Enable will appear.
Num. of LDEVs	The number of logical volumes where the command device setting is changed

[PROV] Edit DRU Attribute

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Edit DRU Attribute,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{LDKC:CU:LDEV,Attribute,RT,Result}
=[{0x00:0x00:0x01,0x80,100,Normal end},
{0x00:0x00:0x02,0x82,Unlimited,Error(9605-8122)},
{0x00:0x00:0x03,0x81,200,Normal end},
{0x00:0x00:0x03,0x81,xxxx,Normal end}],
Num. of LDEVs=XXX
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the logical volume where the attribute is set
Attribute	<p>The set attribute in hexadecimal. Each bit (0–7) of 1 byte corresponds to the setting item. 1 is assigned to each bit when the setting is enabled and 0 (zero) is assigned to each bit when the setting is disabled. Each bit represents the following attributes:</p> <ul style="list-style-type: none"> • Bit 0: Mounting of LEDV (fixed to 1) • Bit 1: Setting of S-VOL Disable • Bit 2: Setting of Zero Read Cap mode • Bit 3: Setting of Invisible mode • Bit 4: Setting of reserve • Bit 5: Fixed to 0 (zero)* • Bit 6: Setting of Read Only attribute* • Bit 7: Setting of Protect attribute* <p>When 0x88 is output to the attribute, for example, Read/Write attribute is set to the logical volume to show that the reserve setting has been enabled.</p> <p>A hyphen (-) is output when a setting is not changed.</p>
RT	<p>The number of days set in Retention Term</p> <p>A hyphen (-) is output when setting is not changed.</p>
Result	<p>The result of operation</p> <p>Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end <i>where xxxx: Part code, yyyy: Error code</i></p>
Num. of LDEVs	The number of the logical volumes where the attribute has been set
*When bit 5, 6, and 7 are all 0 (zero), Read/Write has been set.	

[PROV] Edit Host

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name, [PROV],Edit Host,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,HostGrpID,WWN,Change WWN,Change Nickname}
=[{XX,0xXXX,0XXXXXXXXXXXXXXXXXXXX,0XXXXXXXXXXXXXXXXXXXX,
XXXXXXXXXXXXXXXXXXXX}],
Num. of WWNs=1
```

Detailed Information

Item	Description
Port	The name of the port where the host is connected
HostGrpID	The host group number on which the host with WWN or nickname of the host bus adapter being changed is registered
WWN	Indicates WWN of the host bus adapter before change. WWN is represented in hexadecimal
Change WWN	Indicates WWN of the host bus adapter after change
Change Nickname	The nickname of the host bus adapter after change
Num. of WWNs	The number of host bus adapters (WWN) where the settings have been changed

[PROV] Edit Host Grps(Mode)

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name, [PROV],Edit Host Grps(Mode),,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,HostGrpID,Mode,Option[0:31],Option[32:63],Option[64:95]}
=[{XX,0xXXX,0x00,0x20000000,0x00000000,0x00000000},
{XX,0xXXX,0x09,0x00080000,0x00000000,0x00000000}],
Num. of Host Groups=2
```

Item	Description
Port	The name of the port to which the host group belongs.
HostGrpID	The host group number where the host group names have been changed.
Mode	The specified host mode. See the <i>Hitachi Unified Storage VM Block Module Provisioning Guide</i> for the meaning of the host mode number.
Option[0:31] Option[32:63] Option[64:95]	The specified host mode option. 96 host mode options from 0 to 95 are output in groups of 32 options. The following tables show the output values corresponding to the host mode options. See the <i>Hitachi Unified Storage VM Block Module Provisioning Guide</i> for the meaning of the host mode options.
Num. of Host Groups	The number of host groups that the host mode setting is changed.

Table 4-1 Host mode option 0 to 31 and output contents of Option[0:31]

Host mode option	Value of Option[0:31]	Host mode option	Value of Option[0:31]
0	0x80000000	16	0x00008000
1	0x40000000	17	0x00004000
2	0x20000000	18	0x00002000
3	0x10000000	19	0x00001000
4	0x08000000	20	0x00000800
5	0x04000000	21	0x00000400
6	0x02000000	22	0x00000200
7	0x01000000	23	0x00000100
8	0x00800000	24	0x00000080
9	0x00400000	25	0x00000040
10	0x00200000	26	0x00000020
11	0x00100000	27	0x00000010
12	0x00080000	28	0x00000008
13	0x00040000	29	0x00000004
14	0x00020000	30	0x00000002
15	0x00010000	31	0x00000001

Table 4-2 Host mode option 32 to 63 and output contents of Option[32:63]

Host mode option	Value of Option[32:63]	Host mode option	Value of Option[32:63]
32	0x80000000	48	0x00008000
33	0x40000000	49	0x00004000
34	0x20000000	50	0x00002000
35	0x10000000	51	0x00001000
36	0x08000000	52	0x00000800
37	0x04000000	53	0x00000400
38	0x02000000	54	0x00000200
39	0x01000000	55	0x00000100
40	0x00800000	56	0x00000080
41	0x00400000	57	0x00000040
42	0x00200000	58	0x00000020
43	0x00100000	59	0x00000010
44	0x00080000	60	0x00000008
45	0x00040000	61	0x00000004
46	0x00020000	62	0x00000002
47	0x00010000	63	0x00000001

Table 4-3 Host mode option 64 to 95 and output contents of Option[64:95]

Host mode option	Value of Option[64:95]	Host mode option	Value of Option[64:95]
64	0x80000000	80	0x00008000
65	0x40000000	81	0x00004000
66	0x20000000	82	0x00002000
67	0x10000000	83	0x00001000
68	0x08000000	84	0x00000800
69	0x04000000	85	0x00000400
70	0x02000000	86	0x00000200
71	0x01000000	87	0x00000100
72	0x00800000	88	0x00000080
73	0x00400000	89	0x00000040
74	0x00200000	90	0x00000020
75	0x00100000	91	0x00000010
76	0x00080000	92	0x00000008
77	0x00040000	93	0x00000004
78	0x00020000	94	0x00000002
79	0x00010000	95	0x00000001



Note: When more than one option is set, a logical addition of their values is output. For example, 0x200C0000 is output to Option[0:31], it means the host mode options [2], [12], and [13] are set.

[PROV] Edit Host Grps(Name)

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Edit Host Grps(Name),,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,HostGrpID,HostGrpName}
={ {XX,0xXXX,XXXXXXXXXXXXXXXXXXXX},{XX,0xXXX,XXXXXXXXXXXXXXXXXXXX} },
Num. of Host Groups=2
```

Detailed Information

Item	Description
Port	The name of the port to which the host group belongs
HostGrpID	The host group number where the host group names have been changed
HostGrpName	The name of the host group. If the name is changed, the name after change is indicated
Num. of Host Groups	The number of host groups where the settings have been changed

[PROV] Edit LDEVs(tier)

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Edit LDEVs(tier),,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Pool ID,LDKC:CU:LDEV,Tier Relocation}
=[{1,0x00:0x01:0x0F,Disable}],Num. of LDEVs = 1
```

Detailed Information

Item	Description
Pool ID	The pool number of the edited LDEV
LDKC:CU:LDEV	The LDKC number, CU number and the LDEV number of the edited volume
Tier Relocation	Indicates whether the tier relocation is enabled or disabled. Enable: Enabled, Disable: Disabled
Num. of LDEVs	The number of the edited LDEVs

[PROV] Edit LDEV Tier Rank

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Edit LDEV Tier Rank,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Pool ID,Pool Result}=[{1,Normal end}],Num. of Pools=1
++{LDKC:CU:LDEV,External LDEV Tier Rank,LDEV Result}
=[{0x00:0x00:0x00,Middle/Internal,Normal end},
{0x00:0x00:0x01,Middle/Internal,Normal end},
{0x00:0x00:0x02,Middle/Internal,Normal end}],Num. of LDEVs=3
```

Detailed Information

Item	Description
Pool ID	The number of the pool where the edited pool volumes are assigned
Pool Result	The result of editing pool volumes per pool Normal end: Normal end Error(xxxx-yyyyy): Abnormal end Not Execute: Not executed where xxxx: Part code, yyyy: Error code
Num. of Pools	The number of pools whose pool volumes are edited
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the edited pool volume
External LDEV Tier Rank	The external LDEV tier rank of the edited pool volume High: An external volume (High) Middle/Internal: An external volume (Middle) or an internal volume Low: An external volume (Low)

Item	Description
LDEV Result	The result of editing pool volumes per pool volume Normal end: Normal end Error(XXXX-YYYY): Abnormal end Not Execute: Not executed where XXXX: Part code, YYYY: Error code
Num. of LDEVs	The number of edited pool volumes

[PROV] Edit MP Units

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Edit MP Units,,Normal end,
from=XXXX:XXXX:XXXX:XXXX:XXXX:XXXX:XXXX:XXXX,,Seq.=XXXXXXXXXXXX
+{DKC,MP Unit ID,Auto Assignment,Result}
=[{0,0,Enable,Normal end}],Num. of MP Units=1
```

Detailed Information

Item	Description
DKC	The DKC number
MP Unit ID	The MP unit number in the DKC module displayed in the window
Auto Assignment	Indicates whether the auto assignment setting is enabled or disabled. Enable or Disable will appear
Result	The result of operation Normal end: Normal end, Error(XXXX-YYYY): Abnormal end where XXXX: Part code, YYYY: Error code
Num. of MP Units	The number of specified MP Units

[PROV] Edit Ports(Address)

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Edit Ports(Address),,Normal end,
from=XXXX:XXXX:XXXX:XXXX:XXXX:XXXX:XXXX:XXXX,,Seq.=XXXXXXXXXXXX
+{Port,Fibre Addr.}=[{XX,1},{XX,126}],Num. of Ports=2
```

Detailed Information

Item	Description
Port	The name of the port that the address has been changed
Fibre Addr.	The address of Fibre Channel port after change using the number from 1 to 126. See the following table for relation of number and Fibre Channel port address.

Item	Description
Num. of Ports	The number of ports where address has been changed

Table 4-4 Addresses of Fibre Channel Port

Value	Address *	Value	Address*	Value	Address*	Value	Address*
1	EF (0)	33	B2 (32)	65	72 (64)	97	3A (96)
2	E8 (1)	34	B1 (33)	66	71 (65)	98	39 (97)
3	E4 (2)	35	AE (34)	67	6E (66)	99	36 (98)
4	E2 (3)	36	AD (35)	68	6D (67)	100	35 (99)
5	E1 (4)	37	AC (36)	69	6C (68)	101	34 (100)
6	E0 (5)	38	AB (37)	70	6B (69)	102	33 (101)
7	DC (6)	39	AA (38)	71	6A (70)	103	32 (102)
8	DA (7)	40	A9 (39)	72	69 (71)	104	31 (103)
9	D9 (8)	41	A7 (40)	73	67 (72)	105	2E (104)
10	D6 (9)	42	A6 (41)	74	66 (73)	106	2D (105)
11	D5 (10)	43	A5 (42)	75	65 (74)	107	2C (106)
12	D4 (11)	44	A3 (43)	76	63 (75)	108	2B (107)
13	D3 (12)	45	9F (44)	77	5C (76)	109	2A (108)
14	D2 (13)	46	9E (45)	78	5A (77)	110	29 (109)
15	D1 (14)	47	9D (46)	79	59 (78)	111	27 (110)
16	CE (15)	48	9B (47)	80	56 (79)	112	26 (111)
17	CD (16)	49	98 (48)	81	55 (80)	113	25 (112)
18	CC (17)	50	97 (49)	82	54 (81)	114	23 (113)
19	CB (18)	51	90 (50)	83	53 (82)	115	1F (114)
20	CA (19)	52	8F (51)	84	52 (83)	116	1E (115)
21	C9 (20)	53	88 (52)	85	51 (84)	117	1D (116)
22	C7 (21)	54	84 (53)	86	4E (85)	118	1B (117)
23	C6 (22)	55	82 (54)	87	4D (86)	119	18 (118)
24	C5 (23)	56	81 (55)	88	4C (87)	120	17 (119)
25	C3 (24)	57	80 (56)	89	4B (88)	121	10 (120)
26	BC (25)	58	7C (57)	90	4A (89)	122	0F (121)
27	BA (26)	59	7A (58)	91	49 (90)	123	08 (122)
28	B9 (27)	60	79 (59)	92	47 (91)	124	04 (123)
29	B6 (28)	61	76 (60)	93	46 (92)	125	02 (124)
30	B5 (29)	62	75 (61)	94	45 (93)	126	01 (125)
31	B4 (30)	63	74 (62)	95	43 (94)	-	-
32	B3 (31)	64	73 (63)	96	3C (95)	-	-

*Addresses outside parentheses indicate arbitrated-loop physical address (AL-PA).
Addresses in parentheses indicate loop IDs.

[PROV] Edit Ports(Attr)

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Edit Ports(Attr),,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+Attribute=RCU Target
++Port=[1E],Num. of Ports=1
```

Detailed Information

Item	Description
Attribute	The attribute of the port after change. Target: Target port, Initiator: Initiator port, RCU Target: RCU Target port, External: External port
Port	The name of the port where the setting is changed.
Num. of Ports	The number of ports where the setting is changed.

[PROV] Edit Ports(Security)

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Edit Ports(Security),,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{Port,Switch}=[{XX,Disable},{XX,Enable}],Num. of Ports=2
```

Detailed Information

Item	Description
Port	The name of the port where the LUN security setting is changed
Switch	Indicates whether the LUN security setting is enabled or disabled. Disable or Enable is output.
Num. of Ports	The number of ports where the LUN security setting is changed

[PROV] Edit Ports(Speed)

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Edit Ports(Speed),,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{Port,Speed(Gbps)}=[{XX,1},{XX,2},{XX,Auto},{XX,4}],
Num. of Ports=4
```

Detailed Information

Item	Description
Port	The name of the port that the channel speed is set

Item	Description
Speed(Gbps)	The channel speed set 1: 1 Gbps, 2: 2 Gbps, 4: 4 Gbps, 8: 8 Gbps, Auto: Auto mode
Num. of Ports	The number of ports where the channel speed is set

[PROV] Edit Ports(Topology)

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Edit Ports(Topology),,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,Fabric,Connection}=[{XX,Enable,FC-AL},{XX,Disable,FC-AL},
{XX,Enable,P-to-P},{XX,Disable,P-to-P}],Num. of Ports=4
```

Detailed Information

Item	Description
Port	The name of the port where the topology of Fibre Channel is changed.
Fabric	Indicates whether the Fabric switch is enabled or disabled. Disable or Enable is output.
Connection	The connecting mode of the Fabric switch selected. FC-AL: FC-AL is selected, P-to-P: P-to-P is selected
Num. of Ports	The number of ports where the topology of Fibre Channel is changed

[PROV] Edit Resource Grp

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Edit Resource Grp,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Resource Group ID,Resource Group Name,Result}
=[{1,RSG1,Normal end}],Num. of Resource Groups=1
```

Detailed Information

Item	Description
Resource Group ID	The resource group ID of a resource group that operated the setting
Resource Group Name	The contents of the setting for the changed resource group name
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end <i>where xxxx: Part code, yyyy: Error code</i>

Item	Description
Num. of Resource Groups	The number of resource groups that operated the setting

[PROV] Edit Tiering Policy

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Edit Tiering Policy,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{Tiering Policy ID,Tier1 Max(%) ,Tier1 Min(%) ,Tier3 Max(%) ,
Tier3 Min(%) ,Result}
=[{6,90,10,90,10,Normal end}],Num. of Policies=1
```

Detailed Information

Item	Description
Tiering Policy ID	The tiering policy ID
Tier1 Max(%)	The upper limit threshold value for the Tier1 The threshold value is displayed in the range 0 to 100. The unit is percent (%). This is output when the upper limit threshold value for the Tier1 is set.
Tier1 Min(%)	The lower limit threshold value for the Tier1 The threshold value is displayed in the range 0 to 100. The unit is percent (%). This is output when the lower limit threshold value for the Tier1 is set.
Tier3 Max(%)	The upper limit threshold value for the Tier3 The threshold value is displayed in the range 0 to 100. The unit is percent (%). This is output when the upper limit threshold value for the Tier3 is set.
Tier3 Min(%)	The lower limit threshold value for the Tier3 The threshold value is displayed in the range 0 to 100. The unit is percent (%). This is output when the lower limit threshold value for the Tier3 is set.
Result	The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end, Not Execute: Not Executed xxxx: Part code, yyyy: Error code
Num. of Policies	The number of tiering policy that was set

[PROV] Edit V-VOL Option

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name, [PROV],Edit V-VOL Option,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Pool ID,LDKC:CU:LDEV,Tiering Policy ID,New Page Assignment Tier,
Relocation Priority,Result}
=[{0,0x00:0x00:0x00,1,Middle,Default,Normal end}],
Num. of VOLs=1
```

Detailed Information

Item	Description
Pool ID	The pool ID of a pool associated with the DP-VOL where Tiering policy is set
LDKC:CU:LDEV	The LDKC number, CU number, and LDEV number of the DP-VOL
Tiering Policy ID	The Tiering Policy ID This is output when the tiering policy is set.
New Page Assignment Tier	The new page assignment tier Middle: A middle performance tier, High: A high performance tier, Low: A low performance tier This is output when the new page assignment tier is set.
Relocation Priority	The relocation priority information Default: Normal, Prioritize: Prioritized This is output when the relocation priority information is set.
Result	The result of the operation. Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end, Not Execute: Not Executed xxxx: Part code, yyyy: Error code
Num. of VOLs	The number of operated DP-VOLs

[PROV] Edit/Delete Pools

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name, [PROV],Edit/Delete Pools,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Command,Pool ID,Pool Type,Multi Tier Pool,Tier Management,
Cycle Time,Monitoring Period,Monitoring Mode,Result}
=[{Change Tier,1,Dynamic Provisioning,Enable,Auto,24,10:00-11:00,
Continuous Mode,Normal End}],Num. of Pool=1
++{Tier,Buffer Space for New page assignment(%),
Buffer Space for Tier relocation(%),Tier Result}
=[{1,10,10,Normal end},{2,20,20,Normal end}],Num. of Tiers=2
```

Detailed Information

Item	Description
Command	<p>The operation on the pool</p> <p>Change: Changing pool information about the threshold and the subscription limit</p> <p>Change Tier: Changing information about Dynamic Tiering</p> <p>Delete: Delete pool</p>
Pool ID	<p>The pool ID of the pool where the settings have been changed or the number of the pool that have been deleted</p>
Pool Type	<p>The pool type</p> <p>Dynamic Provisioning: Dynamic Provisioning, Thin Image: Thin Image</p>
Multi Tier Pool	<p>Indicates whether the multi-tier mode of the pool is enabled or disabled.</p> <p>Enable: Enabled, Disable: Disabled</p> <p>This item is output only when "Command" is "Change Tier".</p> <p>If Pool Type is Thin Image, a hyphen (-) is output.</p>
Warning Threshold(%)	<p>The warning threshold of the usage rate of the pool in percent (%).</p> <p>This item is output only when "Command" is "Change".</p>
Depletion Threshold(%)	<p>The depletion threshold of the usage rate of the pool in percent (%).</p> <p>This item is output only when "Command" is "Change".</p> <p>If the depletion threshold is not specified, a hyphen (-) is output.</p> <p>If Pool Type is Thin Image or if the depletion threshold is not specified, a hyphen (-) is output.</p>
Subscription Limit(%)	<p>The reserve amount of the pool where the setting was changed. The unit is percent (%).</p> <p>If the reserve amount is not specified, it outputs "Unlimited".</p> <p>This item is output only when "Command" is "Change".</p> <p>If Pool Type is Thin Image, a hyphen (-) is output.</p>
Tier Management	<p>The auto control mode of the created or expanded pool.</p> <p>Auto: Auto, Manual: Manual</p> <p>This item is output only when "Command" is "Change Tier".</p> <p>If Multi Tier Pool is anything other than Enable, a hyphen (-) is output.</p>
Cycle Time	<p>The cycle of performance monitoring for the pool.</p> <p>0.5: every thirty minutes, 1: every one hour, 2: every two hours, 4: every four hours, 8: every eight hours, 24: every twenty-four hours</p> <p>This item is output only when "Command" is "Change Tier".</p> <p>If Tier Management is anything other than Auto, a hyphen (-) is output.</p>

Item	Description
Monitoring Period	The monitoring period of the pool. Format: "H1:M1-H2:M2" H1: The time when the monitoring starts (hour) M1: The time when the monitoring starts (minute) H2: The time when the monitoring ends (hour) M2: The time when the monitoring ends (minute). This item is output only when "Command" is "Change Tier". If Cycle Time is anything other than 24, a hyphen (-) is output.
Monitoring Mode	The monitoring mode Continuous Mode: Continuous mode, Period Mode: Period mode This item is output only when "Command" is "Change Tier". If Multi Tier Pool is anything other than Enable, a hyphen (-) is output.
Result	The result of the operation Normal end: Normal end, Error(XXXX-YYYY): Abnormal end, Not Execute: Not Executed XXXX: Part code, YYYY: Error code
Num. of Pools	The number of the pools where the settings have been changed or the number of the pools that have been deleted
Tier	The tier number
Buffer Space for New page assignment(%)	The capacity rate of buffer space for new page assignment The unit is percent (%) This value is output only when the command is Change Tier
Buffer Space for Tier relocation(%)	The capacity rate of buffer space for Tier relocation The unit is percent (%) This value is output only when the command is Change Tier
Tier Result	The result of Tier operation Normal end: Normal end, Error(XXXX-YYYY): Abnormal end, Not Execute: Not Executed where XXXX: Part code, YYYY: Error code This value is output only when the command is Change Tier.
Num. of Tiers	The number of Tiers for the created pools This value is output only when the command is Change Tier.

[PROV] Edit/Delete UUIDs

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Edit/Delete UUIDs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{LDKC:CU:LDEV,UUID}
=[{0xXX:0xXX:0xXX,abcdefg},{0xXX:0xXX:0xXX,12345},
{0xXX:0xXX:0xXX,}],Num. of UUIDs=3
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC number, CU number, and LDEV number
UUID	The configured UUID. There is no output if the UUID was deleted.
Num. of UUIDs	The number of UUIDs configured

[PROV] Expand V-VOLs

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Expand V-VOLs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{LDKC:CU:LDEV,Pool ID,Capacity}
=[{0x00:0x00:0x00,0,80},{0x00:0x00:0x01,1,90},
{0x00:0x00:0x02,2,100}],Num. of VOLs = 3
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC number, the CU number, and the LDEV number of the V-VOL
Pool ID	The pool ID of the pool corresponding to the expanded V-VOL
Capacity	The capacity of the V-VOL after expanding in LBAs
Num. of VOLs	The number of the expanded V-VOLs

[PROV] Format LDEVs

The logged information indicates that the Format operation was only requested but not completed.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Format LDEVs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+LDKC:CU:LDEV=[0x00:0x00:0x01,0x00:0x00:0x02,0x00:0x00:0x03,
0x00:0x00:0x04,0x00:0x00:0x05,0x00:0x00:0x06,0x00:0x00:0x07,
0x00:0x00:0x08,0x00:0x00:0x09,0x00:0x00:0x0A],
Num. of LDEVs=10
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC number, the CU number, and the LDEV number
Num. of LDEVs	The number of LDEVs to be formatted

[PROV] Format LDEVs(Q)

The logged information indicates that the Quick Format operation was only requested but not completed.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Format LDEVs(Q),,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+LDKC:CU:LDEV=[0x00:0x00:0x01,0x00:0x00:0x02,
0x00:0x00:0x03,0x00:0x00:0x04,0x00:0x00:0x05,
0x00:0x00:0x06,0x00:0x00:0x07,0x00:0x00:0x08,
0x00:0x00:0x09,0x00:0x00:0x0A],Num. of LDEVs=10
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC number, the CU number, and the LDEV number
Num. of LDEVs	The number of LDEVs to be formatted

[PROV] Initialize Pools

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Initialize Pools,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
```

[PROV] LDEV Name

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],LDEV Name,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{LDKC:CU:LDEV,Name,Result}
=[{0x00:0x00:0x00,nickname_0000,Normal end},
{0x00:0x3F:0xFF,$%0x0080,Normal end}],Num. of LDEVs=2
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC number, the CU number, and the LDEV number
Name	The character string of a LDEV nickname
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end, Not Execute: Not Executed <i>where xxxx: Part code, yyyy: Error code</i>
Num. of LDEVs	The number of specified LDEVs

[PROV] Make LUSE

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Make LUSE,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+LUSE(LDKC:CU:LDEV)=[{0x00:0x00:0x00,0x00:0x00:0x01,
0x00:0x00:0x02,0x00:0x00:0x03},{0x00:0x01:0x00,0x00:0x01:0x01,
0x00:0x01:0x02,0x00:0x01:0x03}],Num. of LUSEs=2
```

Detailed Information

Item	Description
LUSE(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of several LDEVs combined into an LUSE volume. The number indicated at the beginning represents the LDKC, CU, and LDEV numbers of the top LDEV.
Num. of LUSEs	The number of LUSE volumes configured

[PROV] Monitor Pools

This log information does not indicate the completion of performance monitoring processing of pools but the completion of performance monitoring operation of pools.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Monitor Pools,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Pool ID,Result}=[{1,Normal end}],Num. of Pools = 1
```

Detailed Information

Item	Description
Pool ID	The pool ID of a pool where the performance monitoring started
Result	The result of starting the performance monitoring of pools Normal end: Normal end, Error(xxxx-yyyyy):Abnormal end, Not Execute: Not executed <i>where xxxx: Part code, yyyy: Error code</i>
Num. of Pools	The number of pools where the performance monitoring started

[PROV] Move Resources

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Move Resources,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Resource Group ID(From),Resource Group ID(To),Result}
={1,0,Normal end}
```

```

++{LDKC:CU:LDEV,LDEVResult}=[{0x00:0x00:0x00,Normal end},
{0x00:0x00:0x01,Normal end}],Num. of LDEVs=2
++{PG,PGResult}=[{E1-1,Normal end},{E1-2,Normal end}],
Num. of PGs=2
++{Port,PortResult}=[{1A,Normal end},{2A,Normal end}],
Num. of Ports=2
++{Port(HostGrp),HostGrpID,HostGrpResult}
=[{1A,0x01,Normal end},{1A,0x02,Normal end}],Num. of Host Groups=2
+Num. of Resource Groups=1

```

Detailed Information

Item	Description
Resource Group ID(From)	The source resource group ID to which the resource belongs
Resource Group ID(To)	The target resource group ID
Result	The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end, xxxx: Part code, yyyy: Error code
LDKC:CU:LDEV	The logical DKC, CU, and LDEV numbers of the moved LDEV.
LDEVResult	The result of the LDEV Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end, xxxx: Part code, yyyy: Error code
Num. of LDEVs	The number of moved LDEVs
PG	The number of a moved parity group and the reference number assigned to the volume. The number on the left of a hyphen (-) is the parity group number and the number on the right of the hyphen (-) is the reference number of the parity group.
PGResult	The result of the parity group Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end, where xxxx: Part code, yyyy: Error code
Num. of PGs	The number of moved parity groups
Port	The name of a moved port
PortResult	The result of the port Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end, where xxxx: Part code, yyyy: Error code
Num. of Ports	The number of moved ports
Port(HostGrp)	The port name of a moved host group
HostGrpID	The host group ID of the moved host group
HostGrpResult	The result of the host group Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end, where xxxx: Part code, yyyy: Error code
Num. of Host Groups	The number of moved host groups

Item	Description
Num. of Resource Groups	The number of resource groups that operated the setting

[PROV] Pool Name

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name, [PROV], Pool Name, ,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, ,Seq.=xxxxxxxxxxxx
+{Pool ID,Name,Result}
=[{0,poolname_0000,Normal end},{127,,Normal end}],
Num. of Pools=2
```

Detailed Information

Item	Description
Pool ID	The pool group number
Name	The character string of a pool name
Result	The result of the operation Normal end: Normal end, Error(xxxx-yyyyy):Abnormal end, <i>where xxxx: Part code, yyyy: Error code</i>
Num. of Pools	The number of specified pool groups

[PROV] Reclaim Zero Pages

This log information does not indicate the completion of zero pages reclaiming processing but the completion of zero pages reclaiming operation.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name, [PROV], Reclaim Zero Pages, ,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, ,Seq.=xxxxxxxxxxxx
+{LDKC:CU:LDEV}
=[{0x00:0x00:0x00},{0x00:0x00:0x01},{0x00:0x00:0x02}],
Num. of VOLs = 3
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC number, the CU number, and the LDEV number of the LDEV where zero pages are reclaimed
Num. of VOLs	The number of the LDEVs where zero pages are reclaimed

[PROV] Release HostReserved

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,  
Task Name,[PROV],Release HostReserved,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+{Port,HostGrpID,LUN,Result}=[{XXX,0xXXX,0xXXX,Normal end},  
{XXX,0xXXX,0xXXX,Error(xxxx-yyyy)}],Num. of LUNs=2
```

Detailed Information

Item	Description
Port	The name of the port where the host group belongs to
HostGrpID	The host group number
LUN	The LUN where release HostReserved is forcefully executed
Result	The result of the operation: Normal end: Normal end, Error(xxxx-yyyy): Abnormal end, Not Execute: Not Executed <i>where xxxx: Part code, yyyy: Error code</i>
Num. of LUNs	The number of LUNs where Release HostReserved is forcefully executed

[PROV] Release LUSE

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,  
[PROV],Release LUSE,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+LUSE(LDKC:CU:LDEV)=[0x00:0x00:0x00,0x00:0x01:0x00],  
Num. of LUSEs=2
```

Detailed Information

Item	Description
LUSE(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the top LDEV where LUSE volumes are released.
Num. of LUSEs	The number of LUSE volumes cancelled.

[PROV] Relocate Pool

This log information does not indicate the completion of Tier relocation processing of pools but the completion of Tier relocation operation of pools.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Relocate Pool,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, ,Seq.=xxxxxxxxxxxx
+{Pool ID,Result}=[{1,Normal end}],Num. of Pools = 1
```

Detailed Information

Item	Description
Pool ID	The pool ID of a pool where the tier relocation was performed
Result	The result of relocating the tier of pools Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end, Not Execute: Not Executed <i>where xxxx: Part code, yyyy: Error code</i>
Num. of Pools	The number of the pools where the tier relocation was performed

[PROV] Remove Hosts

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Remove Hosts,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, ,Seq.=xxxxxxxxxxxx
+{Port,HostGrpID,WWN}=[{XX,0xXXX,0xxxxxxxxxxxxxxxxxxxx},
{XX,0xXXX,0xxxxxxxxxxxxxxxxxxxx}],Num. of WWNs=2
```

Detailed Information

Item	Description
Port	The name of the port where the host deleted from host group was connected
HostGrpID	The host group number where the host is deleted
WWN	Indicates WWN of the host deleted from the host group
Num. of WWNs	The number of hosts (WWN) deleted from the host group

[PROV] Restore LDEVs

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Restore LDEVs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, ,Seq.=xxxxxxxxxxxx
+LDKC:CU:LDEV=[0x00:0x00:0x01,0x00:0x00:0x02,0x00:0x00:0x03,
0x00:0x00:0x04,0x00:0x00:0x05,0x00:0x00:0x06,0x00:0x00:0x07,
0x00:0x00:0x08,0x00:0x00:0x09,0x00:0x00:0x0A],
Num. of LDEVs=10
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC number, the CU number, and the LDEV number
Num. of LDEVs	The number of LDEVs being restored

[PROV] Restore Pools

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,  
Task Name,[PROV],Restore Pools,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+{Pool ID,Result}  
=[{1,Normal end},{2,Normal end},{128,Normal end}],  
Num. of Pools=3
```

Detailed Information

Item	Description
Pool ID	The restored pool ID
Result	The result of the operation: Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end, Not Execute: Not Executed <i>where xxxx: Part code, yyyy: Error code</i>
Num. of Pools	The number of the restored pools

[PROV] Set Channel Speed

This log is output when LUN Manager operation is performed using Configuration File Loader.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,  
[PROV],Set Channel Speed,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+{Port,Speed (Gbps)}=[{XX,1},{XX,2},{XX,Auto}],Num. of Ports=3
```

Detailed Information

Item	Description
Port	The name of the port that the channel speed is set
Speed(Gbps)	The channel speed set. 1: 1 Gbps, 2: 2 Gbps, 4: 4 Gbps, 8: 8 Gbps, Auto: Auto mode
Num. of Ports	The number of ports where the channel speed is set.

[PROV] Set CommandDev

This log is output when LUN Manager operation is performed using Configuration File Loader.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Set CommandDev,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, ,Seq.=xxxxxxxxxxx
+{LDKC:CU:LDEV,CommandDev}
=[{0x00:0xXX:0xXX,Disable},{0x00:0xXX:0xXX,Enable}],
Num. of LDEVs=2
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the logical volume where the command device is set
CommandDev	Indicates whether the command device setting is enabled or disabled. Disable or Enable will appear
Num. of LDEVs	The number of logical volumes where the command device is set

[PROV] Set CommandDevSec

This log is output when LUN Manager operation is performed using Configuration File Loader.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Set CommandDevSec,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, ,Seq.=xxxxxxxxxxx
+{LDKC:CU:LDEV,CommandDevSec}
=[{0x00:0xXX:0xXX,Disable},
{0x00:0xXX:0xXX,Enable}],Num. of LDEVs=2
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the logical volume where the command device is set
CommandDevSec	Indicates whether the command device security setting is enabled or disabled. Disable or Enable will appear.
Num. of LDEVs	The number of logical volumes where the command device is set.

[PROV] Set DevGrpDef

This log is output when LUN Manager operation is performed using Configuration File Loader.

Example

```
07xx, YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Set DevGrpDef,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{LDKC:CU:LDEV,DevGrpDef}=[{0xXX:0xXX:0xXX,Enable}],
Num. of LDEVs=1
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the volume where the device group definition is specified
UserAuth	Indicates whether the device group definition is enabled or disabled. Disable or Enable will appear
Num. of LDEVs	The number of logical volumes where the device group definition is set

[PROV] Set FCSP Host

Example

```
07xx, YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Set FCSP Host,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{Port,HostGrpID,Kind,UserName,Change UserName}
=[{1E,0xXXX,Add,1111111111111111,-},
{3E,0xXXX,Change,2222222222222222,3333333333333333},
{5E,0xXXX,Delete,4444444444444444,-}],Num. of Info=3
```

Detailed Information

Item	Description
Port	The name of the port that includes the host group where user name has been set
HostGrpID	The number of the host group where user name has been set
Kind	The setting status of the user name that is registered to the host group. Add: Add user name, Change: Change user name, Delete: Delete user name.
UserName	The user name added or deleted when Kind is Add or Delete The user name before change when Kind is Change
Change UserName	The user name after change when Kind is Change Indicates a dash (-) when Kind is Add or Delete
Num. of Info	The number of added, changed or deleted user names

[PROV] Set FCSP Port Info

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Set FCSP Port Info,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,Auth_TOV,Reject Time,Reject Count}
=[{1E,45,3,3},{3E,60,1,10}],Num. of Ports=2
```

Detailed Information

Item	Description
Port	The name of the port where authentication parameter has been set
Auth_TOV	The time to execute authentication after the failure of port authentication. The unit is second.
Reject Time	The period of time to reject authentication when port authentication have failed. The unit is minute.
Reject Count	The number of authentication failures allowed before port authentication is rejected
Num. of Ports	The number of ports where authentication parameter has been set

[PROV] Set FCSP Port Switch

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Set FCSP Port Switch,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,Switch,DH Group,Auth,UserName}
=[{1E,Enable,0,bi-directional,1111111111111111},
{3E,Disable,0,unidirectional,2222222222222222}],
Num. of Ports=2
```

Detailed Information

Item	Description
Port	The name of the port where authentication parameter has been set
Switch	The setting status whether to execute authentication by port. Disable: Do not authenticate, Enable: Authenticate
DH Group	Not used (fixed to 0)
Auth	The setting status of authentication method: bi-directional: bi-directional authentication, unidirectional: unidirectional authentication
UserName	The user name of the port
Num. of Ports	The number of ports where authentication parameter has been set

[PROV] Set FCSP Target

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Set FCSP Target,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,HostGrpID,Switch,DH Group,UserName}
=[{1E,0xxx,Enable,0,1111111111111111},
{3E,0xxx,Disable,0,2222222222222222}],
Num. of Grps=2
```

Detailed Information

Item	Description
Port	The name of the port that includes the host group where authentication parameter has been set
HostGrpID	The number of the host group where authentication has been set
Switch	The setting status whether to execute authentication by host group. Disable: Do not authenticate, Enable: Authenticate
DH Group	Not used (fixed to 0)
UserName	The user name of the host group
Num. of Grps	The number of host groups where authentication parameter has been set

[PROV] Set Fibre Address

This log is output when LUN Manager operation is performed using Configuration File Loader.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Set Fibre Address,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,Fibre Addr.}=[{XX,0xx(xx)},{XX,0xx(xx)}],Num. of Ports=2
```

Detailed Information

Item	Description
Port	The name of the port that the fibre address has been set
Fibre Addr.	Fibre Addr. displays the address of Fibre Channel port after the setting. The outside of parentheses indicates AL-PA (arbitrated-loop physical address) and the inside of parenthesis indicates the loop ID.
Num. of Ports	The number of ports where address has been set.

[PROV] Set Fibre Topology

This log is output when LUN Manager operation is performed using Configuration File Loader.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Set Fibre Topology,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,Fabric,Connection}
={XX,Enable,FC-AL},{XX,Disable,FC-AL},
{XX,Enable,P-to-P},{XX,Disable,P-to-P}],Num. of Ports=4
```

Detailed Information

Item	Description
Port	The name of the port where the topology of Fibre Channel is set
Fabric	Indicates whether the Fabric switch is enabled or disabled Enable: Enabled, Disable: Disabled
Connection	The connecting mode of the Fabric switch selected. FC-AL: FC-AL is selected, P-to-P: P-to-P is selected
Num. of Ports	The number of ports where the topology of Fibre Channel is set

[PROV] Set Host Mode

This log is output when LUN Manager operation is performed using Configuration File Loader.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Set Host Mode,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,HostGrpID,Mode,Option[0:31],Option[32:63],Option[64:95]}
={XX,0xXXX,0x00,0xxxxxxxxx,0xxxxxxxxx,0xxxxxxxxx},{XX,0xXXX,
0x4F,0xxxxxxxxx,0xxxxxxxxx,0xxxxxxxxx}],Num. of Host Groups=2
```

Detailed Information

Item	Description
Port	The name of the port to which the host group belongs
HostGrpID	The host group number
Mode	The host mode set. See the <i>Hitachi Unified Storage VM Block Module Provisioning Guide</i> for the description of the host mode number.
Option[0:31] Option[32:63] Option[64:95]	The specified host mode option. The host mode options are configured with 96 units of 0 to 95, and are divided into 32 units to output. Please see Table 4-1. Host mode option 0 to 31 and output contents of Option[0:31] on page 4-101 to Table 4-3. Host mode option 64 to 95 and output contents of Option[64:95] on page 4-102 for the relation of output values and host mode option. See the <i>Hitachi Unified Storage VM Block Module Provisioning Guide</i> for the description of the host mode number.
Num. of Host Groups	The number of host groups that the host mode setting is changed

[PROV] Set Security Switch

This log is output when LUN Manager operation is performed using Configuration File Loader.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Set Security Switch,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,Switch}=[{XX,Disable},{XX,Enable}],Num. of Ports=2
```

Detailed Information

Item	Description
Port	The name of the port where the LUN security setting is changed
Switch	Indicates whether the LUN security setting is enabled or disabled. Disable or Enable will appear.
Num. of Ports	The number of ports where the LUN security setting is changed

[PROV] Set UserAuth

This log is output when LUN Manager operation is performed using Configuration File Loader.

Example

```
07xx, YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Set UserAuth,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{LDKC:CU:LDEV,UserAuth}
=[{0xXX:0xXX:0xXX,Enable}],Num. of LDEVs=1
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the volume where the user authentication is specified
UserAuth	Indicates whether the user authentication is enabled or disabled Disable or Enable will appear.
Num. of LDEVs	The number of logical volumes where the user authentication is set

[PROV] Shrink Pool

This log information does not indicate the completion of shrinking processing but the completion of shrinking operation.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Shrink Pool,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Pool ID,Result}=[{1,Normal end},{2,Normal end}],
```

```

Num. of Pools = 2
++{LDKC:CU:LDEV,LDEV Result}
={0x00:0x00:0x02,Normal end},
{0x00:0x00:0x03,Normal end},{0x00:0x02:0x01,Normal end}},
Num. of LDEVs = 3

```

Detailed Information

Item	Description
Pool ID	The pool ID of a shrinking pool
Result	The result of the shrinking operation Normal end: Normal end Not Execute: Not executed Error(xxxxx-xxxxxxx): Abnormal end where xxxxx-xxxxxxx indicates error codes.
Num. of Pools	The number of the shrinking pools
LDKC:CU:LDEV	The LDKC number, the CU number, and the LDEV number of the shrinking LDEV
LDEV Result	The result of shrinking individual LDEVs Normal end: Normal end Error(xxxx-yyyyy): Abnormal end Not Execute: Not executed where xxxx: Part Code, yyyy: Error Code
Num. of LDEVs	The number of the shrinking LDEVs

[PROV] Stop Monitoring

Example

```

07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Stop Monitoring,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{Pool ID,Result}={1,Normal end}],Num. of Pools = 1

```

Detailed Information

Item	Description
Pool ID	The pool ID of a pool where the performance monitoring stopped
Result	The result of stopping the tier relocating of pools Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end, Not Execute: Not Executed where xxxx:Part code, yyyy: Error code
Num. of Pools	The number of pools where the performance monitoring stopped

[PROV] Stop Reclm ZeroPages

Example

```

07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Stop Reclm ZeroPages,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx

```

```
+{LDKC:CU:LDEV}
=[{0x00:0x00:0x00},{0x00:0x00:0x01},{0x00:0x00:0x02}],
Num. of VOLs = 3
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC number, the CU number, and the LDEV number of the LDEV where reclaiming of zero pages is stopped
Num. of VOLs	The number of LDEVs where reclaiming of zero pages is stopped

[PROV] Stop Relocating

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PROV],Stop Relocating,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{Pool ID,Result}=[{1,Normal end}],Num. of Pools=1
```

Detailed Information

Item	Description
Pool ID	The pool ID of a pool where the tier relocation was stopped
Result	The result of stop relocating the tier of pools Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end, Not Execute: Not executed where xxxx: Part code, yyyy: Error code
Num. of Pools	The number of the pools where the tier relocation was stopped

[PROV] Stop Shrinking Pool

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[PROV],Stop Shrinking Pool,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{Pool ID,Result}=[{1,Normal end},{2,Normal end}],
Num. of Pools = 2
```

Detailed Information

Item	Description
Pool ID	The pool ID of the pool where shrinking is stopped
Result	The result of the stopping shrinking operation Normal end: Normal end Not Execute: Not executed Error(xxxxx-xxxxxxx): Abnormal end where xxxxx-xxxxxxx indicates error codes.

Item	Description
Num. of Pools	The number of pools where shrinking is stopped

RCU Descriptions

[RCU] Add Path

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[RCU],Add Path,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{S/N,MCU LDKC,RCU LDKC,Path Gr.ID,Controller ID}
={200001,0x00,0x00,Default,19}
++{MCU Port,RCU Port}
=[{1E,3E},{5E,7E},{1F,3F},{5F,7F}],Num. of Port Pairs=4
```

Detailed Information

Item	Description
S/N	Indicates a serial number of the device
MCU LDKC	The LDKC number of the connected LDKC
RCU LDKC	The LDKC number of the paired LDKC
Path Gr.ID	The path group ID. When the path group ID is default setting "Default" is output.
Controller ID	The controller ID
MCU Port	The port number of MCU
RCU Port	The port number of RCU
Num. of Port Pairs	The number of port pairs set

[RCU] Add RCU

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[RCU],Add RCU,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{S/N,MCU LDKC,RCU LDKC,Path Gr.ID,Controller ID,Min.Path,
MIH Time(s),Round Trip Time(ms),}
={200001,0x00,0x00,Default,19,08,015,001,}
++{MCU Port,RCU Port}
=[{1E,3E},{5E,7E},{1F,3F},{5F,7F}],Num. of Port Pairs=4
```

Detailed Information

Item	Description
S/N	Indicates a serial number of the registered RCU device
MCU LDKC	The LDKC number of the connected LDKC
RCU LDKC	The LDKC number of the paired LDKC

Item	Description
Path Gr.ID	The path group ID of the registered RCU. When the path group ID is default setting, Default is output.
Controller ID	The controller ID of the registered RCU device
Min.Path	The number of set minimum paths
MIH Time(s)	The value of set RIO MIH (Remote I/O Missing Interrupt Handler) timer (wait time until data copy from MCU to RCU is completed). The unit is second.
Round Trip Time(ms)	The round-trip response time set (delay time for round-trip remote I/O). The unit is millisecond. This value is output when TrueCopy is used.
MCU Port	The port number of MCU
RCU Port	The port number of the registered RCU
Num. of Port Pairs	The number of port pairs set

[RCU] Change RCU Option

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[RCU],Change RCU Option,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{S/N,MCU LDKC,RCU LDKC,Path Gr.ID,Controller ID,Min.Path,
MIH Time(s),Round Trip Time(ms),}
={200001,0x00,0x00,Default,19,08,015,001,}
```

Detailed Information

Item	Description
S/N	Indicates a serial number of the RCU device where the RCU option setting is changed
MCU LDKC	The LDKC number of the connected LDKC
RCU LDKC	The LDKC number of the paired LDKC
Path Gr.ID	The RCU path group ID where the RCU optional setting is changed. When the path group ID is default setting, "Default" is output.
Controller ID	The controller ID of the RCU where the optional setting is changed
Min.Path	The minimum number of paths after change
MIH Time(s)	The value of RIO MIH (Remote I/O Missing Interrupt Handler) timer (wait time until data copy from MCU to RCU is completed). The unit represents seconds.
Round Trip Time(ms)	The round-trip response time (delay time for round-trip remote I/O) after change. The unit is in milliseconds. This value is output when TrueCopy is used.

[RCU] Delete Path

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[RCU],Delete Path,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{S/N,MCU LDKC,RCU LDKC,Path Gr.ID,Controller ID}
={200001,0x00,0x00,Default,19}
++{MCU Port,RCU Port}=[{1E,3E},{5E,7E},{1F,3F},{5F,7F}],
Num. of Port Pairs=4
```

Detailed Information

Item	Description
S/N	The serial number of the device of RCU where the path has been deleted
MCU LDKC	The LDKC number of the connected LDKC
RCU LDKC	The LDKC number of the paired LDKC
Path Gr.ID	The path group ID of the path deleted. When the path group is a default setting, "Default" is output.
Controller ID	The controller ID of the RCU where the path has been deleted
MCU Port	The port number of MCU
RCU Port	The port number of RCU
Num. of Port Pairs	The number of path pairs deleted.

[RCU] Delete RCU

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[RCU],Delete RCU,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{S/N,MCU LDKC,RCU LDKC,Path Gr.ID,Controller ID}
={200001,0x00,0x00,Default,19}
```

Detailed Information

Item	Description
S/N	The serial number of the device of RCU deleted
MCU LDKC	The LDKC number of the connected LDKC
RCU LDKC	The LDKC number of the paired LDKC
Path Gr.ID	The path group ID of the RCU deleted. When the path group ID is a default setting, "Default" is output.
Controller ID	The controller ID of the RCU deleted

Remote Maintenance Descriptions

[Remote Maintenance] PS Control

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RM AP,,,,,  
[Remote Maintenance],PS Control,,Normal end,,,Seq.=xxxxxxxxxxx  
+PS Control=OFF
```

Detailed Information

Item	Description
PS Control	Indicates whether it is PSON or PSOFF operation. ON: PSON operation, OFF: PSOFF operation.

[Remote Maintenance] Reboot MP

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RM AP,,,,,  
[Remote maintenance],Reboot MP,,Normal end,,,Seq.=xxxxxxxxxxx  
+MP=MP00-10
```

Detailed Information

Item	Description
MP	Indicates the name of MP to be rebooted

[Remote Maintenance] Reboot Port

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RM AP,,,,,  
[Remote Maintenance],Reboot Port,,Normal end,,,Seq.=xxxxxxxxxxx  
+PORT=1E
```

Detailed Information

Item	Description
PORT	Indicates the port name to be rebooted

[Remote Maintenance] Reboot SVP

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RM AP,,,,,  
[Remote maintenance],Reboot SVP,,Normal end,,,Seq.=xxxxxxxxxxx
```

[Remote Maintenance] Switch SVP

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RM AP,,,,  
[Remote Maintenance],Switch SVP,,Normal end,,,Seq.=xxxxxxxxxxxx
```

[Remote Maintenance] Transfer Config

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RM AP,,,,  
[Remote Maintenance],Transfer Config,,Normal end,,,Seq.=xxxxxxxxxxxx
```

ShadowImage Descriptions

[SI] Change Reserve

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,  
[SI],Change Reserve,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+Attribute=Set  
++{VOL(LDKC:CU:LDEV),Result}=[{0x00:0x00:0x00,Normal end},  
{0x00:0x01:0x02,Error(xxxx-yyyy)}],Num. of Vols=2
```

Detailed Information

Item	Description
Attribute	Indicates whether the reserve attribute is set or cancelled. Set: Reserve attribute is set, Reset: Reserve attribute is cancelled
VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the volume where the reserve attribute is set or cancelled
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code
Num. of Vols	The number of volumes where the reserve attribute is set or cancelled

[SI] Initialize

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,  
[SI],Initialize,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
```

[SI] Option

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[SI],Option,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Swap & Freeze=Enable,HOST I/O Performance=Enable,
Reserve03=Enable,(snip),Copy Pace Ext. Slower1=Disable,
Copy Pace Ext. Slower2=Disable,Copy Pace Ext.None=Disable,(snip),
Reserve32=Disable
```

Detailed Information

Item	Description
Swap & Freeze	Indicates whether the Swap & Freeze option is enabled or disabled. Enable: Option is enabled, Disable: Option is disabled
HOST I/O Performance	Indicates whether the host I/O option is enabled or disabled. Enable: Option is enabled, Disable: Option is disabled
Reserve X	Reserved items. X is the number from 03 to 19, and from 23 to 32.
Copy Pace Ext. Slower1	Indicates whether the Copy Pace Ext. Slower1 option is enabled or disabled. Enable: Option is enabled, Disable: Option is disabled
Copy Pace Ext. Slower2	Indicates whether the Copy Pace Ext. Slower2 option is enabled or disabled. Enable: Option is enabled, Disable: Option is disabled
Copy Pace Ext. None	Indicates whether the Copy Pace Ext. None option is enabled or disabled. Enable: Option is enabled, Disable: Option is disabled

[SI] Paircreate

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[SI],Paircreate,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Copy Pace=Faster
++{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),MU,Result}
=[{0x00:0x00:0x00,0x00:0x01:0x02,0,Normal end},
{0x00:0x02:0x03,0x00:0x04:0x05,1,Error(xxxx-yyyy)}],
Num. of Pairs=2
```

Detailed Information

Item	Description
Copy Pace	The set copy speed Faster: High speed, Medium: Medium speed, Slower: Low speed
P-VOL(LDKC CU:LDEV)	The LDKC, CU, and LDEV numbers of the primary volume in the created pair

Item	Description
S-VOL(LDKC CU:LDEV)	The LDKC, CU, and LDEV numbers of the secondary volume in the created pair
MU	The MU number of the created pair
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end xxxx: Part code, yyyy: Error code
Num. of Pairs	The number of created pairs

[SI] Pairresync

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[SI],Pairresync,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, ,Seq.=xxxxxxxxxxxx
+Copy Pace=Faster,Resync Type=Normal Copy
++{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),Result}
=[{0x00:0x00:0x00,0x00:0x01:0x02,Normal end},
{0x00:0x03:0x04,0x00:0x05:0x06,Error(xxxx-yyyy)}],
Num. of Pairs=2
```

Detailed Information

Item	Description
Copy Pace	The set copy pace Faster: High speed, Medium: Medium speed, Slower: Low speed
Resync Type	The type of resynchronization Normal Copy: Normal resynchronization, Quick Resync: High speed resynchronization, Reverse Copy: Reverse resynchronization, Quick Restore: High speed restore
P-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the primary volume in the resynchronized pair
S-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the secondary volume in the resynchronized pair
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code
Num. of Pairs	The number of resynchronized pairs

[SI] Pairsplit

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[SI],Pairsplit,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, ,Seq.=xxxxxxxxxxxx
```

```
+Copy Pace=Faster, Split Type=Quick Split
++{ P-VOL(LDKC:CU:LDEV) , S-VOL(LDKC:CU:LDEV) , MU, Result }
=[ { 0x00:0x00:0x00, 0x00:0x01:0x02, 0, Normal end },
{ 0x00:0x03:0x04, 0x00:0x05:0x06, 1, Error(xxxx-yyyy) } ],
Num. of Pairs = 2
```

Detailed Information

Item	Description
Copy Pace	The set copy speed Faster: High speed, Medium: Medium speed, Slower: Low speed
Split Type	The split type Quick Split: Pair split by background copy Steady Split: Pair split by update copy
P-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the primary volume in the split pair
S-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the secondary volume in the split pair
MU	The MU number of the split pair
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end <i>where xxxx: Part code, yyyy: Error code</i>
Num. of Pairs	The number of split pairs

[SI] Pairsplit-E

Example

```
07xx, YYYY/MM/DD, HH:MM:SS.xxx, 00:00, RMI AP, uid=user-name, 1, ,
[SI], Pairsplit-E, , Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, , Seq.=xxxxxxxxxxxx
+{ P-VOL(LDKC:CU:LDEV) , S-VOL(LDKC:CU:LDEV) , Result }
=[ { 0x00:0x00:0x00, 0x00:0x01:0x02, Normal end },
{ 0x00:0x03:0x04, 0x00:0x05:0x06, Error(xxxx-yyyy) } ],
Num. of Pairs=2
```

Detailed Information

Item	Description
P-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the primary volume in the suspended pair
S-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the secondary volume in the suspended pair
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end <i>where xxxx: Part code, yyyy: Error code</i>

Item	Description
Num. of Pairs	The number of suspended pairs

[SI] Pairsplit-S

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[SI],Pairsplit-S,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),Result}
=[{0xAA:0xBB:0xCC,0xDD:0xEE:0xFF,Normal end},
{0xAA:0xBB:0xCC,0xDD:0xEE:0xFF,Error(xxxx-yyyy)}],
Num. of Pairs=2
```

Detailed Information

Item	Description
P-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the primary volume in the deleted pair
S-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the secondary volume in the deleted pair
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code
Num. of Pairs	The number of deleted pairs

SNMP Descriptions

[SNMP] Set SNMP Agent

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[SNMP],Set SNMP Agent,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Install=Disable
+Manager=[(158.214.133.1),(158.214.133.2),(158.214.133.3),
(1:0:0:0:0:0:1),(snip)
-(158.214.133.31),(158.214.133.32),(AAAA:0:0:0:0:0:0:FFFF)],
Num. of Managers=xx
+Community
=1234567891123456789212345678931234567894123456789512345678961234
56789712345678981234567899123456789012345678911234567892123456789
312345678941234567895
++Trap=[(158.214.133.1),(158.214.133.2),(158.214.133.3),
(1:0:0:0:0:0:1),(snip)
-(158.214.133.31),(158.214.133.32),(AAAA:0:0:0:0:0:0:FFFF)],
Num. of Traps=xx
(snip)
+Num. of Communities=xx
```

```
+System Group (Name, Contact, Location)
={12345678911234567892123456789312345678941234567895123456789612
3456789712345678981234567899123456789012345678911234567892123456
78,
-123456789112345678921234567893123456789412345678951234567896123
4567897123456789812345678991234567890123456789112345678921234567
89312345678941234567895123456789612345,
-123456789112345678921234567893123456789412345678951234567896123
4567897123456789812345678991234567890123456789112345678921234567
89312345678941234567895123456789612345}
```

Detailed Information

Item	Description
Install	The setting status of SNMP Agent: Enable, Disable
Manager	The IP address of the registered SNMP manager. The IP address divided by periods (.) is an Ipv4 address, and the IP address divided by colons (:) is an Ipv6 address.
Num. of Managers	The number of the registered SNMP managers
Community	The registered community name
Trap	The IP address where the trap of community is reported. The IP address divided by periods (.) is an Ipv4 address, and the IP address divided by colons (:) is an Ipv6 address.
Num. of Traps	The number of traps reported
Num. of Communities	The number of registered communities
System Group	The setting of system group information (Name, Contact, and Location).
Name	The nickname of the device set.
Contact	The setting name of the system administrator.
Location	The setting location of the device set

Server Priority Manager Descriptions

[SPM] Change SPMGrp

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[SPM],Change SPMGrp,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{SPM Group,Priority,UpperLimit,Mode}
=[{XXXXXXXXXXXXXXXXXX,Non-Prio,XXXXXXXX,IOPS}],Num. of SPM Groups=1
```

Detailed Information

Item	Description
SPM Group	An SPM group name

Item	Description
Priority	An attribute specified to an HBA (host bus adapter) in the SPM group after the change Prio: a prioritized WWN Non-Prio: a non-prioritized WWN
Upper Limit	An upper limit when you specify Non-Prio When you specify Prio, this information is not output.
Mode	The type of rate when you specify an upper limit. IOPS: the I/O rate KB/s: the transfer rate When you specify Prio, this information is not output.
Num. of SPM Groups	The number of SPM groups whose settings are changed



Note:

- When the attribute of the host bus adapter in the SPM group changes from a prioritized WWN to a non-prioritized WWN, "Non-Prio" is output to Priority and "0" is output to Upper limit respectively.
- If multiple changes in settings such as Priority and Upper limit are made in succession and then **Apply** is clicked at the end of the operation, these set values are output one by one in the order they were configured.

[SPM] Clear SPM Info

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[SPM],Clear SPM Info,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
```

[SPM] Default Set

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[SPM],Default Set,Kind=WWN,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
```

Basic Information

Parameter	Description
Kind=Port	Indicates that settings in the Port tab are initialized.
Kind=WWN	Indicates that settings in the WWN tab are initialized.

[SPM] Set All Prio Port

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,  
[SPM],Set All Prio Port,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+{AllPriority,Threshold,Mode}={Enable,XXXXXXXX,IOPS}
```

Detailed Information

Item	Description
AllPriority	Settings in the All Thresholds field in the Port tab Enable: All Thresholds is configured. Disable: Settings in the All Thresholds field are canceled.
Threshold	A configured value in the All Thresholds field. This information is output only when All Thresholds is configured.
Mode	The type of rate for All Thresholds IOPS: the I/O rate KB/s: the transfer rate This information is output only when All Thresholds is configured.

[SPM] Set All Prio WWN

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,  
[SPM],Set All Prio WWN,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+{AllPriority,Threshold,Mode}={Enable,XXXXXXXX,IOPS}
```

Detailed Information

Item	Description
AllPriority	Settings in the All Thresholds field in the WWN tab Enable: All Thresholds is configured. Disable: Settings in the All Thresholds field are canceled.
Threshold	A configured value in the All Thresholds field. This information is output only when All Thresholds is configured.
Mode	The type of rate for All Thresholds IOPS: the I/O rate KB/s: the transfer rate This information is output only when All Thresholds is configured.

[SPM] Set Ctrl Kind

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,  
[SPM],Set Ctrl Kind,Kind=WWN,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
```

Basic Information

Parameter	Description
Kind=Port	Indicates that you switched a definition of the server priority by a port without configuring All Thresholds.
Kind=All Port	Indicates that you switched a definition of the server priority by a port with configuring All Thresholds.
Kind=WWN	Indicates that you switched a definition of the server priority by a WWN. This information is output whichever All Thresholds is configured or not.

[SPM] Set Prio Port

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,  
[SPM],Set Prio Port,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx  
+{Port,Priority,Use,Threshold/Upper Limit,Mode}  
-[{1A,Non-Prio,Enable,XXXXXXXX,IOPS}],Num. of Ports=1
```

Detailed Information

Item	Description
Port	A name of the port
Priority	An attribute specified to the port Prio: a prioritized port Non-Prio: a non-prioritized port
Use	When the port is a prioritized port, this information indicates whether a threshold is specified or not. When the port is a non-prioritized port, this information indicates whether an upper limit is specified or not. Enable: specified Disable: not specified
Threshold/Upper Limit	When the port is a prioritized port, this information indicates the threshold. When the port is a non-prioritized port, this information indicates the upper limit. This information is output only when a threshold or an upper limit is specified.

Item	Description
Mode	The type of rate for the threshold or the upper limit IOPS: the I/O rate KB/s: the transfer rate This information is output only when a threshold or an upper limit is specified.
Num. of Ports	The number of ports whose settings are changed

[SPM] Set Prio WWN

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[SPM],Set Prio WWN,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{WWN,Priority,Upper Limit,Mode}
-[{0xxxxxxxxxxxxxxxxxxx,Non-Prio,xxxxxxx,IOPS}],Num. of WWNs=1
```

Detailed Information

Item	Description
WWN	A WWN of an HBA A WWN is a 16-digit number in the hexadecimal format.
Priority	An attribute specified to the HBA Prio: a prioritized WWN Non-Prio: a non-prioritized WWN
Upper Limit	When the WWN is a non-prioritized WWN, this information indicates the upper limit. When the WWN is a prioritized WWN, this information is not output.
Mode	The type of rate for the upper limit IOPS: the I/O rate KB/s: the transfer rate This information is not output when the WWN is a prioritized WWN.
Num. of WWNs	The number of WWNs of HBAs whose settings are changed



Note:

- When the attribute of the host bus adapter changes from a prioritized WWN to a non-prioritized WWN, "Non-Prio" is output to Priority and "0" is output to Upper limit respectively.
- If multiple changes in settings such as Priority and Upper limit are made in succession and then **Apply** is clicked at the end of the operation, these set values are output one by one in the order they were configured.

[SPM] SPMGrp Del/Chg

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[SPM],SPMGrp Del/Chg,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Mode,SPM Group,Change Name}
=[{Update,XXXXXXXXXXXXXXXXXX,XXXXXXXXXXXXXXXXXX}],
Num. of SPM Groups=1
```

Detailed Information

Item	Description
Mode	An executed operation Delete: Deleted an SPM group. Update: Changed an SPM name.
SPM Group	An SPM group name where the operation is executed
Change Name	An SPM group name after the change This information is output only when an SPM group name is changed.
Num. of SPM Groups	The number of SPM groups that are deleted or whose names are changed

[SPM] Update Port WWN

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[SPM],Update Port WWN,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Mode,WWN,SPM Name,Priority}
={Add WWN,0XXXXXXXXXXXXXXXXXX,XXXXXXXXXXXXXXXXXX,Non-Prio},
++Port=[1A,3A],Num. of Ports=2,
-Num. of WWNs=1
```

Detailed Information

Item	Description
Mode	An executed operation Add WWN: Added a WWN (an HBA is monitored). Delete WWN: Deleted a WWN (an HBA is not monitored).
WWN	An added or deleted WWN A WWN is a 16-digit number in the hexadecimal format.
SPM Name	An SPM name for an added or deleted HBA
Priority	An attribute specified to the HBA Prio: a prioritized WWN Non-Prio: a non-prioritized WWN This information is output only when a WWN (HBA) is added.
Port	A name of the port where the HBA is added

Item	Description
Num. of Ports	The number of ports where the HBA is added
Num. of WWNs	The number of added or deleted WWNs

[SPM] Update SPMGrp

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[SPM],Update SPMGrp,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{UpdateMode,SPM Group,Priority,Upper Limit,Mode}
=[{Add New Group,XXXXXXXXXXXXXXXXXX,Non-Prio,XXXXXXXXX,IOPS},
++WWN=[0XXXXXXXXXXXXXXXXXX,0XXXXXXXXXXXXXXXXXX],Num. of WWNs=2],
+Num. of SPM Group=1
```

Detailed Information

Item	Description
Update Mode	An executed operation Add New Group: Added a new SPM group. Add WWN: Added an HBA to the SPM group Delete WWN: Deleted an HBA from the SPM group
SPM Group	An SPM group name
Priority	An attribute specified to the HBA Prio: a prioritized WWN Non-Prio: a non-prioritized WWN This attribute is applied to all HBAs in the SPM group. This information is output only when you add a new SPM group.
Upper Limit	When an attribute specified to the SPM group is Non-Prio, this information indicates an upper limit of the HBAs in the SPM group. This information is output only when you add a new SPM group.
Mode	The type of rate when you specify an upper limit. IOPS: the I/O rate KB/s: the transfer rate This information is output only when you add a new SPM group.
WWN	WWNs of HBAs in the SPM group A WWN is a 16-digit number in the hexadecimal format. All WWNs are output for this item. You can add up to 32 WWNs to a SPM group.
Num. of WWNs	The number of WWNs of added or deleted HBAs
Num. of SPM Group	The number of SPM groups whose settings are changed

[SPM] Update WWN

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[SPM],Update WWN,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Update Mode,WWN,Change SPM Name,Change WWN}
={Change WWN,0xxxxxxxxxxxxxxxxxxxxx,,0xxxxxxxxxxxxxxxxxxxxx},
Num. of WWNs=1
```

Detailed Information

Item	Description
Update Mode	An executed operation Change WWN: Changed an HBA. Change Nickname: Changed an SPM name for a WWN
WWN	A WWN of the HBA A WWN is a 16-digit number in the hexadecimal format. When you changed an HBA, the WWN before the change is output.
Change SPM Name	An SPM name for the HBA When you changed an SPM name for the HBA, the SPM name after the change is output.
Change WWN	An WWN of the HBA after the change This information is output only when an HBA is changed.
Num. of WWNs	The number of HBAs whose settings are changed

Spreadsheet Descriptions

[Spreadsheet] CfISet End

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[Spreadsheet],CfISet End,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
```

[Spreadsheet] CfISet Start

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[Spreadsheet],CfISet Start,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Input,Output}={C:\Set_IN.spd,C:\Set_OUT.spd}
```

Detailed Information

Parameter	Description
Input	Indicates the name of the input file

Parameter	Description
Output	Indicates the name of the output file

[Spreadsheet] LUNM Operation

The Configuration File Loader log appears in the log file line. It is located between the line that contains "Start" and the line contains "End".

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[Spreadsheet],LUNM Operation,Start,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
```

Basic Information

Parameter	Description
Start	Start of the Configuration File Loader
End	End of the Configuration File Loader

TrueCopy Descriptions

[TC] Change Option

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[TC],Change Option,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{Max Initial Copy,CU Activity,Path Blockade Watch(s),
Path Blockade SIM Watch(s),Service SIM}={128,Enable,45,070,
Not Report}
+{LDKC,CU,Service SIM,,,Max Initial Copy}
=[{0x00,0x00,Not Report,,,04},{0x00,0x01,Not Report,,,04},
{0x00,0x02,Not Report,,,04},{0x00,0x03,Not Report,,,04},
{0x00,0x04,Not Report,,,04}),(snip)-(snip)],Num. of CUs=64
```

Detailed Information

Item	Description
Max Initial Copy	The maximum number of initial copy operations set. (1 to 512)
CU Activity	Indicates whether the parallel operation of initial copy by the control unit is enabled or not. Enable or Disable will appear.
Path Blockade Watch(s)	The path blockade watch period setting (in seconds).
Path Blockade SIM Watch(s)	The path blockade SIM watch period setting (in seconds).
Service SIM	Indicates whether the remote copy related SIM is reported or not. Report, Not Report

Item	Description
LDKC	The LDKC number
CU	The CU number of the connected CU
Service SIM	Indicates whether to report the remote copy-related SIM Report, Not Report
Max Initial Copy	The number of parallel operation of initial copy by CU. (1 to 16)
Num. of CUs	The number of CUs set

[TC] Change Pair Option

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[TC],Change Pair Option,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{P-VOL(Port-G-ID-LUN),Fence Level,Result}
={1A-0x00-0,Never,Normal end},{1A-0x00-1,Never,Normal end},
{1A-0x00-2,Never,Normal end},(snip)-(snip)],Num. of Pairs=xx
```

Detailed Information

Item	Description
P-VOL(Port-G-ID-LUN)	The port number, host group number and LUN of the primary volume where the pair option is changed sequentially
Fence Level	The changed fence level (the condition that MCU rejects Write to the primary volume) Never: No condition, Data: S-VOL data, Status: S-VOL status
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code
Num. of Pairs	The number of changed pairs

[TC] Clear SIM

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[TC],Clear SIM,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
```

[TC] Function Switch

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[TC],Function Switch,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Switch=0001 0100 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
0000 0000 0000 0000 0000
```

Detailed Information

Item	Description
Switch	Each bit position (on/off) of the function switch information assigned by 64 bits. The beginning of the string is bit 0 and the ending of it is bit 63. "0" indicates the bit is off, and "1" indicates the bit is on. In the example above, bit 3 and bit 5 are on and the other bits are off.

[TC] Paircreate

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[TC],Paircreate,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),S/N,LDKC,ID,
Controller ID,Type,Initial Copy,Fence Level,
Copy Pace,Priority,Diff,Result}
=[{1A-0x00-0,1B-0x00-1,200001,0x00,Default,19,Sync,Entire,
Never,15,032,Auto,Normal end}),(snip)
-(snip)],Num. of Pairs=xx
```

Detailed Information

Item	Description
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the volume specified to the primary volume when the pair is created sequentially
S-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the volume specified to the secondary volume when the pair is created sequentially
S/N	The serial number of the device
LDKC	The LDKC number of the paired LDKC
ID	The path group ID When the path group ID is default setting, the output is "Default."
Controller ID	The controller ID
Type	The update copy mode setting Sync: Synchronous mode
Initial Copy	The initial copy mode setting Entire: Copy all, None: Do not copy
Fence Level	The fence level setting (the condition that MCU rejects the write operation to the primary volume). Never: No condition, Data: S-VOL data, Status: S-VOL status
Copy Pace	The initial copy speed setting (the number of tracks you can copy at one time)
Priority	The priority of the set initial copy operation (scheduling order).
Diff	The unit of the differential management setting Auto, Cylinder, Track

Item	Description
Result	The result of operation Normal end: Normal end, Error(XXXX-YYYY): Abnormal end where XXXX: Part code, YYYY: Error code
Num. of Pairs	The number of created pairs

[TC] Pairresync

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[TC],Pairresync,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),Fence Level,
Copy Pace,Priority,Change HAM,Quorum Disk ID,Result}
=[{1A-0x00-0,1B-0x00-0,Never,15,256,Yes,5,Normal end},
{1A-0x00-1,1B-0x00-1,Never,15,256,No,-,Normal end},
(snip)-(snip)],Num. of Pairs=xx
```

Detailed Information

Item	Description
P-VOL(Port-G-ID-LUN)	The port number, host group number and LUN of the primary volume in the restored pair sequentially
S-VOL(Port-G-ID-LUN)	The port number, host group number and LUN of the secondary volume in the restored pair sequentially
Fence Level	The fence level set (the condition that MCU rejects Write to the primary volume) Never: No condition, Data: S-VOL data, Status: S-VOL status
Copy Pace	The initial copy speed set (the number of tracks you can copy at a time)
Priority	The priority of restoring operation set (scheduling order)
Change HAM	Indicates whether to change a TrueCopy pair to a HAM pair. Yes: Change to HAM pair No: Keep TrueCopy pair as it is
Quorum Disk ID	The Quorum Disk ID that the HAM pair uses. This value is output only when Change HAM is set to Yes.
Result	The result of operation Normal end: Normal end, Error(XXXX-YYYY): Abnormal end where XXXX: Part code, YYYY: Error code
Num. of Pairs	The number of restored pairs

[TC] Pairsplit-r

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[TC],Pairsplit-r,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),Type,S-VOL Write,
Kind,Result}
=[{1A-0x00-0,1B-0x00-0,P-VOL,Disable,S-VOL,Normal end},
{1A-0x00-1,1B-0x00-1,P-VOL,Disable,S-VOL,Normal end},
(snip)-(snip)],Num. of Pairs=xx
```

Detailed Information

Item	Description
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the primary volume in the split pair sequentially
S-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the secondary volume in the split pair sequentially
Type	The volume type of the volume on the primary site P-VOL: Primary volume, S-VOL: Secondary volume
S-VOL Write	Indicates whether writing to the secondary volume is enabled Enable: Writing is enabled Disable: Writing is disabled
Kind	The suspend type setting P-VOL Failure: Writing to the P-VOL is disabled S-VOL: Writing to the P-VOL is enabled
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code
Num. of Pairs	The number of split pairs

[TC] Pairsplit-S

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[TC],Pairsplit-S,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),Type,Force,Result}
=[{1A-0x00-0,1B-0x00-0,P-VOL,No,Normal end},
{1A-0x00-1,1B-0x00-1,P-VOL,No,Normal end},
{1A-0x00-2,1B-0x00-2,P-VOL,No,Normal end}),(snip)-(snip)],
Num. of Pairs=xx
```

Detailed Information

Item	Description
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the primary volume in the deleted pair sequentially
S-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the secondary volume in the deleted pair sequentially
Type	The volume type of the volume on the primary site P-VOL: Primary volume, S-VOL: Secondary volume
Force	The setting for forced pair deletion Yes: Pair is deleted even when MCU cannot communicate with RCU, No: Pair is deleted when MCU can change the pair status to SMPL only
Result	The result of operation Normal end: Normal end, Error(yyyyy-zzzzz): Abnormal end where yyyy: Part code, zzzzz: Error code
Num. of Pairs	The number of deleted pairs

Universal Replicator Descriptions

[UR] Change-JNL-Option

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[UR],Change-JNL-Option,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{LDKC,JNL,Data Overflow Watch(s),Inflow Control,
Use of Cache,Result}
=[{0x00,0x001,20,Yes,Not Use,Normal end},
{0x00,0x002,20,No,Use,Normal end}],Num. of JNLs=2
```

Detailed Information

Item	Description
LDKC	The LDKC number that the journal belongs
JNL	The journal number
Data Overflow Watch(s)	The overflow watch time of the meta data or journal data (in seconds)
Inflow Control	Indicates whether inflow control is executed or not Yes: Controlled, No: Not controlled
Use of Cache	Whether to store the journal data in the restore journal in cache. Use: Store the journal data in cache. Not Use: Store the journal data in journal volume

Item	Description
Result	The result of the operation Normal end: Normal end, Error(XXXX-YYYY): Abnormal end where XXXX: Part code, YYYY: Error code
Num. of JNLs	The number of journals

[UR] Change-Mirror-Option

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[UR],Change-Mirror-Option,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{LDKC,JNL,MirrorID,Copy Pace,Path Watch Time,
Forward Path Watch Time,Transfer Speed(Mbps),,Result}
=[{0x00,0x001,0x00,Medium,12(hour),Yes,100,,Normal end},
{0x00,0x002,0x00,Low,1(day),No,10,,Normal end}],
Num. of Mirrors=2
```

Detailed Information

Item	Description
LDKC	The LDKC number where the journal belongs
JNL	The journal number
MirrorID	The mirror ID
Copy Pace	The speed of initial copy Low: Low speed, Medium: Medium speed, High: High speed
Path Watch Time	The path blockade watch period setting. The units are minutes, hours or days.If it is set to 30 minutes, it will be 30(min.).
Forward Path Watch Time	Indicates whether to transfer the path blockade watch period of the master journal to the restore journal. Yes: Transfer, No: Do Not Transfer.
Transfer Speed(Mbps)	The transfer speed of the communication line. The unit is megabits per second (Mbps).
Result	The result of operation Normal end: Normal end, Error(XXXX-YYYY): Abnormal end where XXXX: Part code, YYYY: Error code
Num. of Mirrors	The number of mirrors

[UR] Clear-SIM

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[UR],Clear-SIM,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
```

[UR] Journal-Vol

Example 1: Adding journal volumes

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[UR],Journal-Vol,Add,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{LDKC,JNL,2DC Cascade}={0x00,0x001,Disable}
++{LDKC:CU:LDEV,Result}=[{0x00:0x00:0x01,Normal end},
{0x00:0x01:0x03,Normal end},{0x00:0x01:0x05,Normal end}],
Num. of LDEVs=3
+{LDKC,JNL,2DC Cascade}={0x00,0x002,Disable}
++{LDKC:CU:LDEV,Result}=[{0x00:0x02:0x21,Normal end},
{0x00:0x02:0x23,Normal end},{0x00:0x02:0x25,Normal end}],
Num. of LDEVs=3
+Num. of JNLs=2
```

Example 2: Deleting journal volumes

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[UR],Journal-Vol>Delete,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{LDKC,JNL}={0x00,0x001}
++{LDKC:CU:LDEV,Result}=[{0x00:0x01:0x01,Normal end},
{0x00:0x01:0x03,Normal end},{0x00:0x01:0x05,Normal end}],
Num. of LDEVs=3
+{LDKC,JNL}={0x00,0x002}
++{LDKC:CU:LDEV,Result}=[{0x00:0x02:0x21,Normal end},
{0x00:0x02:0x23,Normal end},{0x00:0x02:0x25,Normal end}],
Num. of LDEVs=3
+Num. of JNLs=2
```

Basic Information

Parameter	Description
Add	The journal volume is added.
Delete	The journal volume is deleted.

Detailed Information

Item	Description
LDKC	The LDKC number that the journal belongs
JNL	The journal number
2DC Cascade	Indicates if the journal supports 2DC cascade configuration. Disable: Not supporting 2DC cascade, Enable: Supporting 2DC cascade
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers.
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end xxxx: Part code, yyyy: Error code
Num. of LDEVs	The number of LDEVs set for journals
Num. of JNLs	The number of journals

[UR] Journal-Vol

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,  
[UR],Journal-Vol,Delete-JNL,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+{LDKC,JNL,Result}=[{0x00,0x001,Normal end},{0x00,0x003,  
Normal end},{0x00,0x005,Normal end}],Num. of JNLs=3
```

Basic Information

The parameter *Delete-JNL* indicates that the journal is deleted.

Detailed Information

Item	Description
LDKC	The LDKC number that the journal belongs
JNL	The journal number
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code
Num. of JNLs	The number of journals

[UR] Paircreate

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,  
[UR],Paircreate,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),  
MirrorID,S/N,CTRLID,Priority,CTG,Initial Copy,M-JNL,  
R-JNL,Path Gr. ID,Error Level,Result}  
=[{4C-0x00-0,4A-0x00-0,0x00,67676,6,32,0x000,Entire,0x001,0x001,  
Default,Mirror,Normal end},{4C-0x00-1,4A-0x00-1,0x00,67676,6,32,  
0x000,Entire,0x001,0x001,Default,Mirror,Normal end}],  
Num. of Pairs=2
```

Detailed Information

Item	Description
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the primary data volume
S-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the secondary data volume
MirrorID	The mirror ID
S/N	The serial number of the logical device (storage system).
CTRLID	The controller ID
Priority	The priority of copy

Item	Description
CTG	The consistency group ID
Initial Copy	Indicates whether initial copy is executed or not. Entire: execute initial copy, None: do not execute initial copy
M-JNL	The master journal number
R-JNL	The restore journal number
Path Gr. ID	The path group ID specified for the storage system When the path group ID is default setting, "Default" is output.
Error Level	The error level; Mirror: Mirror level, LU: LU level
Result	The result of operation Normal end: Normal end, Error(XXXX-YYYYY): Abnormal end where XXXX: Part code, YYYYY: Error code
Num. of Pairs	The number of pairs

[UR] Pairresync

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[UR],Pairresync,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),MirrorID,S/N,CTRLID,
Priority,CTG,Range,M-JNL,R-JNL,Error Level,Resync Mode,Result}
=[{4C-0x00-0,4A-0x00-0,0x00,67676,6,32,0x000,LU,0x001,
0x001,Mirror,Normal,Normal end},{4C-0x00-1,4A-0x00-1,0x00,
67676,6,32,0x000,LU,0x001,0x001,Mirror,Normal,Normal end}],
Num. of Pairs=2
```

Detailed Information

Item	Description
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the primary data volume
S-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the secondary data volume
MirrorID	The mirror ID
S/N	The serial number of the logical device (storage system)
CTRLID	The controller ID
Priority	The priority of copy
CTG	The consistency group ID
Range	The range to restore the pair Mirror: Mirror range. LU: LU range
M-JNL	The master journal number
R-JNL	The restore journal number

Item	Description
Error Level	The error level Mirror: Mirror level, LU: LU level
Resync Mode	Indicates the Resync Mode. Normal: normal resync
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code
Num. of Pairs	The number of pairs

[UR] Pairsplit-r

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[UR],Pairsplit-r,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),MirrorID,S/N,CTRLID,
Type,S-VOL Write,Range,Suspend Mode,Result}
=[{4C-0x00-0,4A-0x00-0,0x00,67676,6,P-VOL,
Disable,LU,Flush,Normal end},
{4C-0x00-1,4A-0x00-1,0x00,67676,6,P-VOL,Disable,LU,
Flush,Normal end}],Num. of Pairs=2
```

Detailed Information

Item	Description
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the primary data volume
S-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the secondary data volume
MirrorID	The mirror ID
S/N	The serial number of the logical device (storage system)
CTRLID	The controller ID
Type	Indicates whether the split data volume is a primary or secondary data volume P-VOL: Primary, S-VOL: Secondary
S-VOL Write	Indicates whether writing to the secondary volume is enabled Disable: Disabled, Enable: Enabled
Range	The split range LU: LU range, Mirror: Mirror range
Suspend Mode	The suspend mode: Purge: Purge mode, Flush: Flush mode
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code

Item	Description
Num. of Pairs	The number of pairs

[UR] Pairsplit-S

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[UR],Pairsplit-S,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),MirrorID,S/N,CTRLID,
Type,Range,Delete Mode,Result}
=[{4C-0x00-0,4A-0x00-0,0x00,67676,6,P-VOL,LU,Normal,Normal end},
{4C-0x00-1,4A-0x00-1,0x00,67676,6,P-VOL,LU,Normal,Normal end}],
Num. of Pairs=2
```

Detailed Information

Item	Description
P-VOL(Port-G-ID-LUN)	The port number, host group number and LUN of the primary data volume
S-VOL(Port-G-ID-LUN)	The port number, host group number and LUN of the secondary data volume
MirrorID	The mirror ID
S/N	The serial number of the logical device (storage system).
CTRLID	The controller ID
Type	Indicates whether the deleted data volume is a primary or secondary data volume P-VOL: Primary, S-VOL: Secondary
Range	The delete range LU: LU range, Mirror: Mirror range
Delete Mode	The delete mode Normal: Normal mode, Force: Force mode
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code
Num. of Pairs	The number of pairs

[UR] Pair-Option

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[UR],Pair-Option,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),MirrorID,M-JNL,R-JNL,
Error Level,Result}
```

```
= [{4C-0x00-0,4A-0x00-0,0x00,0x001,0x001,Mirror,Normal end},
{4C-0x00-1,4A-0x00-1,0x00,0x001,0x001,Mirror,Normal end}],
Num. of Pairs=2
```

Detailed Information

Item	Description
P-VOL(Port-G-ID-LUN)	The port number, host group number and LUN of the primary data volume
S-VOL(Port-G-ID-LUN)	The port number, host group number and LUN of the secondary data volume
MirrorID	The mirror ID
M-JNL	The master journal number
R-JNL	The restore journal number
Error Level	The error level LU: volume level, Mirror: mirror level
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code
Num. of Pairs	The number of changed pairs

[UR] System-Option

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[UR],System-Option,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+Max Initial Copy=64
```

Detailed Information

Index	Description
Max Initial Copy	Indicates the number of volumes copiable at a time by one initial copy.

Universal Volume Manager Descriptions

[UVM] Add External Volumes

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[UVM],Add External Volumes,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{Vendor,Product,Serial,VolumeID1,VolumeID2,Device,
Capa(blocks),ExGroup,PathGroup,CLPR,Emulation,Cache,Inflow,
MP Unit ID,LoadBalanceMode,Result}
={HITACHI,9500V,28528,0001,
```


Item	Description
MP Unit ID	MP unit ID specified for the external volume When a MP unit ID is specified automatically, "Auto" is output.
LoadBalanceMode	The load balance mode of the mapped external volume Normal Round-robin, Extended Round-robin, or Disable will appear. If the path mode is Single, a hyphen (-) displays.
Result	The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code
Port	The port name of the external port of the local storage system
WWN	The WWN of the Target port of the external storage system
LUN	The LUN of the external volume
Num. of Paths	The number of mapping path (Port-WWN-LUN) configured
PathResult	The result of attempting to create an external path. If the path is created normally, the audit log includes the following: PathResult: Normal end If the path is not created, the audit log includes this: PathResult: Error(xxxx-yyyyy): Abnormal end where xxxx is the Part code and yyyy is the Error code
LDKC:CU:LDEV	The LDKC number, CU, and LDEV number of the LDEVs in the mapped external volume. The number on the left of the colon is an LDKC number, the number between the colons is a CU number, and the number on the right of the colon is an LDEV number
LDEVCapa(blocks)	The capacity of LDEVs in the mapped external volumes indicated by blocks
SSID	Not output because this item is not used.
LDEV MP Unit ID	MP unit ID specified for the LDEV When a MP unit ID is specified automatically, "Auto" is output.
LDEVResult	The result of attempting to create an external path. If the LDEV is created normally, the audit log includes the following: LDEVResult: Normal end If the LDEV is not created, the audit log includes this: LDEVResult: Error(xxxx-yyyyy): Abnormal end where xxxx is the Part code and yyyy is the Error code
Num. of LDEVs	The number of LDEVs in the mapped external volumes
Num. of Volumes	The number of mapped external volumes

[UVM] Assign MP Unit

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[UVM],Assign MP Unit,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Group,MP Unit ID,Result}=[{E1-1,10,Normal end},{E1-2,10,
Normal end},{E1-3,10,Normal end}],Num. of Groups=3
```

Detailed Information

Item	Description
Group	The external volume number for the configured external volumes
MP Unit ID	The MP unit ID assigned to the external volume
Result	The result of operation Normal end: Normal end, Error(XXXX-YYYY): Abnormal end where XXXX: Part code, YYYY: Error code
Num. of Groups	The number of groups of configured external volumes

[UVM] Delete ES VOLs

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[UVM],Delete ES VOLs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{ExGroup,Mode,Result}=[{E1-1,Force,Normal end},{E1-2,Force,
Normal end},{E1-3,Normal,Normal end}],Num. of Volumes=3
```

Detailed Information

Item	Description
ExGroup	The number of the external volume group and the reference number assigned to the external volume of the external volume that the mapping has been released. The number on the left of a dash (-) is the external volume number and the number on the right of the dash (-) is the reference number of the group.
Mode	The mode of execution when mapping was released Normal: normal execution. Force: forcible execution
Result	The result of operation Normal end: Normal end, Error(XXXX-YYYY): Abnormal end where XXXX: Part code, YYYY: Error code
Num. of Volumes	The number of volumes in the external volumes that mapping has been released

[UVM] Disconnect ES Paths

This logged information indicates that this Disconnect External Paths operation was only requested but not completed.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[UVM],Disconnect ES Paths,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Port,WWN,Result}=[{1A,50560E8000C3E211,Normal end},
{1A,50560E8000C3E211,Normal end},{2A,50560E8000C3E212,
Normal end}],Num. of Paths=3
```

Detailed Information

Item	Description
Port	The port name of the external port of the local storage system
WWN	The WWN of the Target port of the external storage system
Result	The result of operation Normal end: Normal end, Error(XXXX-YYYY): Abnormal end where XXXX: Part code, YYYY: Error code
Num. of Paths	The number of mapping paths that has been disconnected.

[UVM] Disconnect ES VOLs

If this operation is performed from Storage Navigator, this logged information indicates that the Disconnect External Volumes operation was only requested but not completed. However, if this operation is performed from CLI (or if this logged information appears between the CfiSet Start operation and the CfiSet End operation), this logged information indicates that the Disconnect External Volumes operation was completed.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[UVM],Disconnect ES VOLs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,Seq.=xxxxxxxxxxx
+{Group,Result}=[{E1-1,Normal end},{E1-2,Normal end},
{E1-3,Normal end},{E1-4,Normal end}],Num. of Groups=4
```

Detailed Information

Item	Description
Group	The group number of the disconnected external volume
Result	The result of operation Normal end: Normal end, Error(XXXX-YYYY): Abnormal end XXXX: Part code, YYYY: Error code
Num. of Groups	The number of external volume groups that contain the disconnected external volume

[UVM] Edit ES Path Config

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[UVM],Edit ES Path Config,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{ExGroup,PathGroup,Result}={E1-1,1,Normal end}
++{Port,WWN,LUN,PathResult}
=[{1A,50560E8000C3E211,0x0001,Normal end},
{2A,50560E8000C3E212,0x0001,Normal end},
{3A,50560E8000C3E213,0x0001,Normal end},
{4A,50560E8000C3E214,0x0001,Normal end}],Num. of Paths=4
+{ExGroup,PathGroup,Result}={E1-2,1,Normal end}
```

```

++{Port,WWN,LUN,PathResult}
=[{1A,50560E8000C3E211,0x0002,Normal end},
{2A,50560E8000C3E212,0x0002,Normal end},
{3A,50560E8000C3E213,0x0002,Normal end},
{4A,50560E8000C3E214,0x0002,Normal end}],Num. of Paths=4
+Num. of Volumes=2

```

Detailed Information

Item	Description
ExGroup	The number of the external volume group and the reference number assigned to the external volume of the external volume that the mapping path configuration has been changed. The number on the left of a dash (-) is the external volume number and the number on the right of the dash (-) is the reference number of the group.
PathGroup	The path group number of the external volume that the mapping path configuration has been changed
Result	The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end xxxx: Part code, yyyy: Error code
Port	The port name of the external port of the local storage system
WWN	The WWN of the Target port of the external storage system
LUN	The LUN of the external volume
PathResult	The result of editing the path Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code
Num. of Paths	The number of mapping paths (Port-WWN-LUN) set
Num. of Volumes	The number of external volumes that the mapping path configuration has been changed

[UVM] Edit ES VOLs

Example 1: Change the cache mode

```

07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[UVM],Edit ES VOLs,CacheMode,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Group,Result}
=[{E1-1,Enable,Normal end},{E1-2,Enable,Normal end},
{E1-3,Enable,Normal end},{E1-4,Enable,Normal end}],
Num. of Groups=4

```

Example 2: Set the cache inflow control

```

07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[UVM],Edit ES VOLs,InflowControl,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Group,Mode,Result}=[{E1-1,Enable,Normal end},
{E1-2,Enable,Normal end},{E1-3,Enable,Normal end},
{E1-4,Enable,Normal end}],Num. of Groups=4

```

Basic Information

Parameter	Description
Cachemode	The cache mode is changed.
InflowControl	The cache inflow control is set.

Detailed Information

Item	Description
Group	External volume group number for the executed setting operation
Mode	Whether the setting is enabled or disabled Enable: Enabled, Disable: Disabled
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code
Num. of Groups	The number of external volumes groups configured

Example 3: Changing a load balance mode

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[UVM],Edit ES VOLs,LoadBalanceMode,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Group,Mode,Result}=[{E1-1,Normal Round-robin,Normal end},
{E1-2,Normal Round-robin,Normal end}],Num. of Groups=2
```

Basic Information for Example 3

Parameter	Description
LoadBalanceMode	The load balance mode is changed.

Detailed Information for Example 3

Item	Description
Group	External volume group number for the executed setting operation
Mode	The load balance mode after the change Normal Round-robin, Extended Round-robin, or Disable will appear.
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code
Num. of Groups	The number of external volumes groups configured

[UVM] Edit External WWNs

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name, [UVM],Edit External WWNs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{WWN,I/O-TOV,Quedepth,LinkDown,Result}
=[{50060E8000C3E214,15,8,180,Normal end},
{50060E8000C3E214,15,8,180,Normal end},
{50060E8000C3E214,15,8,180,Normal end},Num. of WWNs=3
```

Detailed Information

Item	Description
WWN	The WWN of the external storage system
I/O-TOV	The I/O time over value setting
Quedepth	The Quedepth value (the number of commands issuable)
LinkDown	The Path Blockade watch value
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code
Num. of WWNs	The number of WWNs setting of the external storage system

[UVM] Merge ES Path Grps

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name, [UVM],Merge ES Path Grps,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{PathGroup,TargetPathGroup,Result}
=[{1,2,Normal end},{1,3,Normal end},{11,12,Normal end}],
Num. of PathGroups=3
```

Detailed Information

Item	Description
PathGroup	The path group ID of the original path group
TargetPathGroup	The path group ID of the path group merged into the original path group
Result	The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end xxxx: Part code, yyyy: Error code
Num. of PathGroups	The number of PathGroups to be merged

[UVM] ProfileUpgrade

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,, [UVM] ,
ProfileUpgrade,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{Config No.,Mode,Result}=[{10,0x00,Normal end},
{20,0x00,Normal end}],Num. of Profiles=2
```

Detailed Information

Item	Description
Config No.	The configuration number of the profile operated setting
Mode	The parameter of the execution mode on the setting operation
Result	The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code
Num. of Profiles	The number of Profiles operated setting

[UVM] Reconnect ES Paths

This logged information indicates that this Reconnect External Paths operation was only requested but not completed.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name, [UVM],Reconnect ES Paths,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{Port,WWN,Result}=[{1A,50560E8000C3E211,Normal end},
{1A,50560E8000C3E211,Normal end},{2A,50560E8000C3E212,
Normal end}],Num. of Paths=3
```

Detailed Information

Item	Description
Port	The port name of the external port of the local storage system
WWN	The WWN of the Target port of the external storage system
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code
Num. of Paths	The number of mapping paths that path status has been checked.

[UVM] Reconnect ES VOLs

If this operation is performed from Storage Navigator, this logged information indicates that the Reconnect External Volumes operation was only requested but not completed. However, if this operation is performed from CLI (or if this logged information appears between the CflSet Start operation and the CflSet End operation), this logged information indicates that the Reconnect External Volumes operation was completed.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name, [UVM],Reconnect ES VOLs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Group,Result}
=[{E1-1,Normal end},{E1-2,Normal end},
{E1-3,Normal end},{E1-4,Normal end}],Num. of Groups=4
```

Detailed Information

Item	Description
Group	The group number of the external volume resumed
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end xxxx: Part code, yyyy: Error code
Num. of Groups	The number of external volumes resumed

[UVM] Split ES Path Grp

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name, [UVM],Split ES Path Grp,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{PathGroup,NewPathGroup,ExGroup,Result}
=[{1,11,E1-11,Normal end},{1,12,E1-21,Normal end},
{2,21,E2-11,Normal end}],Num. of Volumes=3
```

Detailed Information

Item	Description
PathGroup	The path group ID of the original path group
NewPathGroup	The path group ID of a newly created path group
ExGroup	The external volume group number of the external volumes moved to the new path group, and the sequential number of the external volume. The format is "external volume group number-sequential number of the group".
Result	The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code

Item	Description
Num. of Volumes	The number of the external volumes moved to the new path group

Volume Migration Descriptions

For information on using Volume Migration, contact the Hitachi Data Systems Support Center.

[VM] Create Auto Plan

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[VM],Create Auto Plan,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
```

[VM] Del Auto Plan Log

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[VM],Del Auto Plan Log,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
```

[VM] Delete Auto Plan

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[VM],Delete Auto Plan,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{PlanNo}={1}],Num. of Plan = 1
```

Detailed Information

Item	Description
PlanNo	The executed operation Number: is output when a part of the auto migration plans is deleted. The number indicates what number of lines from the top of the auto migration plan list and the subsequent lines were deleted. ALL: is output when all the auto migration plans are deleted.
Num. of Plan	The number of settings: 1 is always output.

[VM] Del Migration Log

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[VM],Del Migration Log,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
```

[VM] Set Auto Plan Param

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[VM],Set Auto Plan Param,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{SetType,PlanSwitch,PlanType,PlanDay,MonitorPeriod,SampleCount}
=[{Customize,Disable,Every day,,06:00-02:00,All}],Num. of Data = 1
```

Detailed Information

Item	Description
SetType	The executed operation Default: The default auto migration plan is applied (click Default , and then click Set). Customize: The customized auto migration plan is applied (click Set after changing the value of the auto migration plan parameter).
PlanSwitch	Indicates whether the auto migration plan settings are enabled or disabled Disable or Enable is output.
PlanType	The specified sampling term. One of these values is output: <ul style="list-style-type: none">• None• Every day• Once every X days (For the value of X, see PlanDay index in the next row in this table.)• Once a week• Once a month
PlanDay	The setting value for sampling term. The output value depends on the sampling term output to PlanType. <ul style="list-style-type: none">• If None is output to PlanType, nothing is output to PlanDay.• If Every day is output to PlanType, nothing is output to PlanDay.• If Once every X days is output to PlanType, the sampling interval is indicated.• If Once a week is output to PlanType, the specified day of the week is output to PlanDay.SUN, MON, TUE, WED, THE, FRI, or SAT is output.• If Once a month is output to PlanType, the specified day from 1 to 31 is output to PlanDay
MonitorPeriod	The target time zone for the sampling. The left side of the hyphen (-) indicates the start time of sampling, and the right side indicates the end time.
SampleCount	The target data for making plan (the range of the usage rate that is analyzed by the auto migration function) All: All sampling data XX: The sampling data from the first to 80th.
Num. of Data	The number of settings: 1 is always output.

[VM] Set Class Threshold

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[VM],Set Class Threshold,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{ClassName,AvailabilityMax(%)}
=[{A,100},{B,100},{C,100},{D,100},{E,100},{F,100}],
Num. of Classes = 6
```

Detailed Information

Item	Description
ClassName	The class name of the HDD whose threshold is changed. The class name is displayed in the alphabet from A to Z.
AvailabilityMax(%)	The threshold (the upper limit of the disk usage rate) after it changes. The threshold is displayed by the number from 1 to 100. The unit is percent (%).
Num. of Classes	The number of HDD classes whose threshold is changed.

[VM] Set Fixed PG

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[VM],Set Fixed PG,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Type,PG}=[{Release,1-1},{Release,1-2},{Release,1-3},
{Release,1-4},{Release,1-6},{Release,2-1},{Release,2-2},
{Release,2-3}],Num. of PGs = 8
```

Detailed Information

Item	Description
Type	The executed operation to the parity group. Set: Set to the fixed parity group, Release: Set to the normal parity group.
PG	ID of the parity group whose settings are changed
Num. of PGs	The number of parity groups whose settings are changed

[VM] Set Migration Vol

This logged information indicates that the migration was only requested but not completed.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[VM],Set Migration Vol,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
```

```
+{Instruction,SourceLDEV,TargetLDEV,OwnerID,Result}
=[{Create,0x00:0x00:0x00,0x00:0x00:0x01,0xFF,Normal end},
{Create,0x00:0x00:0x02,0x00:0x00:0x03,0xFF,Normal end},
{Create,0x00:0x00:0x04,0x00:0x00:0x05,0xFF,Normal end},
{Create,0x00:0x00:0x06,0x00:0x00:0x07,0xFF,Normal end}],
Num. of LDEVs =4
```

Detailed Information

Item	Description
Instruction	Indicates that the manual migration plan is set or deleted; Create: Set, Delete: Deleted
SourceLDEV	The logical volume ID of the migration source. The number on the left of the colon is an LDKC number, the number between the colons is a CU number, and the number on the right of the colon is an LDEV number.
TargetLDEV	The logical volume ID of the migration target. The number on the left of the colon is an LDKC number, the number between the colons is a CU number, and the number on the right of the colon is an LDEV number. This value is output only when the manual migration plan is set.
OwnerID	The application that sets this migration plan. When a migration plan is set from the Volume Migration window, "00" is output. For a migration plan set by another application, the ID of the application is output.
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end, Not Execute: Not executed <i>where xxxx: Part code, yyyyy: Error code</i>
Num. of LDEVs	The number of manual migration plans set and deleted.

[VM] Set Plan Condition

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[VM],Set Plan Condition,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{SetType,StartTime,TimeRequiredMax(min.),AvailablityMax(%),
VolumeMax}
=[{Customize,04:00,60,50,1}],Num. of Data = 1
```

Detailed Information

Item	Description
SetType	The executed operation. Default: The default auto migration plan is applied (click Default , and then click Set). Customize: The customized auto migration plan is applied (click Set after changing the value of the auto migration plan parameter).

Item	Description
StartTime	The specified start time of the auto migration, that is, the time when the auto migration plan execution starts
TimeRequiredMax (min.)	The specified upper limit of the migration time. The upper limit of the migration time is displayed by the number from 10 to 120. The unit is minute.
AvailabilityMax(%)	The specified upper limit of the disk usage rate. The upper limit of the disk usage rate is displayed by the number from 10 to 100. The unit is percent (%).
VolulmeMax	The specified maximum number of the volumes that are migrated in a same time. The maximum number of the volumes that are migrated in a same time is displayed by the number from 1 to 40.
Num. of Data	The number of settings. 1 is always output.

[VM] Set Reserved Vol

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[VM],Set Reserved Vol,,Normal end,
from-xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, ,Seq.=xxxxxxxxxxx
+{Set,LDKC:CU:LDEV,OwnerID,Result}
=[{Reserved,0x00:0x00:0x00,00,Normal end},
{Reserved,0x00:0x00:0x01,00,Normal end},
{Reserved,0x00:0x00:0x02,00,Normal end},
{Reserved,0x00:0x00:0x03,00,Normal end},
{Reserved,0x00:0x00:0x04,00,Normal end},
{Reserved,0x00:0x00:0x05,00,Normal end},
{Reserved,0x00:0x00:0x06,00,Normal end}] Num. of LDEVs = 7
```

Detailed Information

Item	Description
Set	The operation executed to the logical volume Normal: Set to the normal volume Reserved: Set to the reserved volume of Volume Migration
LDKC:CU:LDEV	The ID of the logical volume which the setting is changed. The number on the left of the colon is an LDKC number, the number between the colons is a CU number, and the number on the right of the colon is an LDEV number.
OwnerID	The application that sets this reserved volume of Volume Migration. When a reserved volume of Volume Migration is set from the Attribute window, "00" is output. For a reserved volume of Volume Migration set by another application, the ID of the application is output.
Result	The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end, Not Execute: Not executed where xxxx: Part code, yyyy: Error code

Item	Description
Num. of LDEVs	The number of logical volumes which the setting is changed

Virtual Partition Manager Descriptions

[VPM] Edit CLPR

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[VPM],Edit CLPR,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+Delete CLPR=[01],Num. of CLPRs=1
+CLPR=00:CLPR0,Cache(MB)=15360,Cache Residency(MB)=0,
Num. of Cache Residency Areas=16384
++PG=[1-1,1-2,1-3,1-4],Num. of PGs=4
+Num. of CLPRs=1
```

Detailed Information

Item	Description
Delete CLPR	The deleted CLPR number This is output only when CLPRs are removed.
Num. of CLPRs	The number of deleted CLPRs This is output only when CLPRs are removed.
CLPR	The CLPR number and the CLPR name
Cache(MB)	The cache capacity setting. The unit is megabyte (MB).
Cache Residency(MB)	The Cache Residency capacity setting. The unit is megabyte (MB).
Num. of Cache Residency Areas	The number of Cache Residency areas
PG	The parity group number assigned to CLPR An E at the beginning of a parity group number designates an external volume is present in that parity group.
Num. of PGs	The number of parity groups assigned to CLPR
Num. of CLPRs	The number of CLPRs configured

Volume Shredder Descriptions

[VS] Abort Shredding

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[VS],Abort Shredding,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+OwnerID=0
```

Detailed Information

Item	Description
OwnerID	The owner ID 0: Indicates Storage Navigator 0xXX: Owner ID is expressed in two hexadecimal digits.

[VS] End Shredding

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,<system>, , , [VS] ,
End Shredding, ,Normal end, ,Seq.=xxxxxxxxxxx
+{Times,Result}
=[{1,Normal},{2,Normal},{3,Normal}],Num. of Data=3
```

Detailed Information

Item	Description
Times	The order of the shredding processes. A number from 1 to 8 is displayed.
Result	The result of the shredding processes. Normal: Normal end. Failed: Abnormal end. Aborted: Operation aborted. Not executed: Not executed. Data transfer error: An error occurred while outputting the result to the file. Data verify error: The error occurred in verifying the data. No data assigned: No data.
Num. of Data	The number of the shredding processes

[VS] Shred LDEVs

This logged information indicates that the Shredding operation was only requested but not completed.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name, [VS] ,Shred LDEVs, ,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, ,Seq.=xxxxxxxxxxx
+OwnerID=0
+{Data, Output File}
=[{0xffff,Disable},{Random,Disable},{0x00,Enable}],
Num. of Data=3
+Output LDEV=[0x00:0x00:0x00,0x00:0x00:0x01,0x00:0x00:0x02],
Num. of LDEVs=3
+Shred LDEV=[0x00:0x00:0x00,0x00:0x00:0x01,0x00:0x00:0x02],
Num. of LDEVs=3
```

Detailed Information

Item	Description
OwnerID	The owner ID 0: Indicates Storage Navigator 0xXX: Owner ID is expressed in two digits of the hexadecimal format
Data	The shredding data pattern Random: Random, 0XXXXX: Define
Output File	Whether the result of shredding is output to the file Disable: No output, Enable: Output
Num. of Data	The number of shredding data patterns
Output LDEV	Indicates LDEVs whose shredding results are output to the file
Num. of LDEVs	The number of target LDEVs of Data Output
Shred LDEV	The LDEV to be shredded
Num. of LDEVs	The number of LDEVs to be shredded

Audit log examples for encryption key operations

This topic provides examples of the operation name and event name and descriptions of the audit logs produced by data encryption operations. The descriptions are listed alphabetically by function name and operation name. For detailed information on the version numbers in log output examples, see [Table 1-4 Changed contents of a format in each version number on page 1-9](#)

- [ENC Descriptions](#)
- [KEK Acquisition Descriptions](#)

ENC Descriptions

[ENC] Add keys to DKC

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,  
Task Name,[ENC],Add keys to DKC,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+{Num. of Keys}=[1]
```

Detailed Information

Item	Description
Num. of Keys	The number of created encryption keys

[ENC] Backup Keys

This logged information is output when back up information is created in the storage system in order to externally back up. It does not necessarily mean that the back up information is backed up normally on the file or the key management server even if Normal End is displayed.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,  
Task Name,[ENC],Backup Keys,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
```

[ENC] Backup Keys to File

This logged information is output when encryption key information created in the storage system is written to the file. It does not necessarily mean that the encryption key information is backed up on the file normally even if Normal End is displayed.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,  
Task Name,[ENC], Backup Keys to File,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
```

[ENC] Backup Keys to Serv

This logged information is output when encryption key information created in the storage system is backed up on the key management server. Even if Normal End is displayed, it merely means that the key management server received the request for backup and does not necessarily means that the encryption key information is backed up normally.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[ENC], Backup Keys to Serv,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, ,Seq.=xxxxxxxxxxx
+{UUID,Backup Date,Description,Result,Server_Reply}=
[{3E2332580B110E052D13C378866427A218EF1609881BC058FCBCF79FCD7727C7
,2013/07/06 09:20:37,BACK0706,Normal end,-}],Num. of Keys=1
```

Detailed Information

Item	Description
UUID	The UUID of the encryption key to be backed up on the key management server
Backup Date	The date and time entered into the backup information when an encryption key is backed up on the key management server
Description	The description set in the backup information when an encryption key is backed up on the key management server
Result	The result of the operation Normal end: Normal end, Error(yyyy-yy): Abnormal end
Server_Reply	The return value from the key management server A hyphen (-) is displayed unless an error occurred while processing. For details on return values, see the manuals for each key management server.
Num. of Keys	The number of encryption keys to be backed up

[ENC] Change CEK Status

This information is output to the audit log information file 2, and it is asynchronous with the Storage Navigator operations.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,,<system>,,, [ENC] ,
Change CEK Status,,Normal end,,,Seq.=xxxxxxxxxxx
+0000010200000000 0000000000000000
+0123456789ABCDEF 0123456789ABCDEF 0123456789ABCDEF,(snip)
```

Detailed Information

Item	Description
Command parameter	Indicates the 16 byte parameter added in the storage system and the number of the encryption key that is a target of the event in binary format

[ENC] Change DEK Status

This information is output to the audit log information file 2, and it is asynchronous with the Storage Navigator operations.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,,<system>, , , [ENC] ,  
Change DEK Status, ,Normal end, , ,Seq.=xxxxxxxxxxx  
+0000010200000000 0000000000000000  
+0123456789ABCDEF 0123456789ABCDEF 0123456789ABCDEF, (snip)
```

Detailed Information

Item	Description
Command parameter	Indicates the 16 byte parameter added in the storage system and the number of the encryption key that is a target of the event in binary format

[ENC] Clear Keys

This information is output to the audit log information file 2, and it is asynchronous with the Storage Navigator operations.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,,<system>, , , [ENC] ,  
Clear Keys, ,Normal end, , ,Seq.=xxxxxxxxxxx  
+0000010200000000 0000000000000000  
+0123456789ABCDEF 0123456789ABCDEF 0123456789ABCDEF, (snip)
```

Detailed Information

Item	Description
Command parameter	Indicates the 16 byte parameter added in the storage system and the number of the encryption key that is a target of the event in binary format

[ENC] Create KEK Dynamic

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,  
Task Name, [ENC], Create KEK Dynamic, ,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, ,Seq.=xxxxxxxxxxx  
+{UUID,Result,ServerReply}=  
[{C53F242C7DCC27CC9698A72413C1C4DC280A757FDF93CED8AEBDF8807A79A06D  
,Normal end,-}],Num. of Keys=1
```

Detailed Information

Item	Description
UUID	The UUID of the created encryption key
Result	The result of the operation Normal end: Normal end, Error(yyyy-yy): Abnormal end

Item	Description
Server_Reply	The return value from the key management server A hyphen (-) is displayed unless an error occurred while processing. For details on return values, see the manuals for each key management server.
Num. of Keys	The number of created encryption keys

[ENC] Create Keys

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[ENC],Create Keys,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Num. of Keys}=[1]
```

Detailed Information

Item	Description
Num. of Keys	The number of created encryption keys

[ENC] Create Keys

This information is output to the audit log information file 2, and it is asynchronous with the Storage Navigator operations.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,,<system>,,, [ENC],
Create Keys,,Normal end,,,Seq.=xxxxxxxxxxx
+0000010200000000 0000000000000000
+0123456789ABCDEF 0123456789ABCDEF 0123456789ABCDEF,(snip)
```

Detailed Information

Item	Description
Command parameter	Indicates the 16 byte parameter added in the storage system and the number of the encryption key that is a target of the event in binary format

[ENC] Create Keys On Serv

Example 1: Creating encryption keys

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[ENC], Create Keys On Serv,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{UUID,Tweak_UUID,Result,Server_Reply}=
[ {30708B5A94F5BE54DA84E0CB55BD2CFE5ABEBECBD8309B02EB1B71F17F805617
,94DA26FE13EF6196EF15A3CCCD333CD63D6867E57CF5BD5EB3CB9DF2CDE7CE1A,
Normal end,-} ],Num. of Keys=1
```

Detailed Information for Example 1

Item	Description
UUID	The UUID of the created encryption key on the key management server A hyphen (-) is displayed when an error occurred while processing.
Tweak_UUID	The UUID of the created encryption key for Tweak on the key management server A hyphen (-) is displayed when an error occurred while processing.
Result	The result of the operation Normal end: Normal end, Error(yyyy-xxxx): Abnormal end
Server_Reply	The return value from the key management server A hyphen (-) is displayed unless an error occurred while processing. For details on return values, see the manuals for each key management server.
Num. of Keys	The number of created encryption keys

Example 2: Creating key encryption keys

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[ENC], Create Keys On Serv,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Key Type,UUID,Result,Server_Reply}=[{KEK,
4365A0465C69FA96DF64C9BBB77122E9AB65D4D6A2E9BBDE5987EAB86A0FE94E,
Normal end,-}],Num. of Keys=1
```

Detailed Information for Example 2

Item	Description
Key Type	The purpose of the use of the created key KEK: key encryption keys (used as a key wrapping key)
UUID	The UUID of the created encryption key on the key management server A hyphen (-) is displayed when an error occurred while processing.
Result	The result of the operation Normal end: Normal end, Error(yyyy-xxxx): Abnormal end
Server_Reply	The return value from the key management server A hyphen (-) is displayed unless an error occurred while processing. For details on return values, see the manuals for each key management server.
Num. of Keys	The number of created keys

[ENC] DEK assign SpareDisk

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[ENC],DEK assign SpareDisk,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
```

[ENC] DEK delete

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,  
Task Name,[ENC],DEK delete,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
```

[ENC] Delete KEK Dynamic

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,  
Task Name,[ENC], Delete KEK Dynamic,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+{UUID,Result,Server_Reply}=  
[{C53F242C7DCC27CC9698A72413C1C4DC280A757FDF93CED8AEBDF8807A79A06D  
,Normal end,-}],Num. of Keys=1
```

Detailed Information

Item	Description
UUID	The UUID of the deleted encryption key
Result	The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end
Server_Reply	The return value from the key management server A hyphen (-) is displayed unless an error occurred while processing. For details on return values, see the manuals for each key management server.
Num. of Keys	The number of deleted encryption keys

[ENC] Delete Keys

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,  
Task Name,[ENC],Delete Keys,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+{Key ID}=[1,2],Num. of Keys=2
```

Detailed Information

Item	Description
Key ID	A deleted encryption key number
Num. of Keys	The number of deleted encryption keys

[ENC] Delete Keys

This information is output to the audit log information file 2, and it is asynchronous with the Storage Navigator operations.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,,<system>,,, [ENC] ,
Delete Keys,,Normal end,,,Seq.=xxxxxxxxxxx
+0000010200000000 0000000000000000
+0123456789ABCDEF 0123456789ABCDEF 0123456789ABCDEF,(snip)
```

Detailed Information

Item	Description
Command parameter	Indicates the 16 byte parameter added in the storage system and the number of the encryption key that is a target of the event in binary format

[ENC] Delete Keys on Serv

Even if Normal End is displayed, it merely means that the key management server received the request for deletion and does not necessarily means that encryption keys are deleted normally

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[ENC] , Delete Keys on Serv,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx, ,Seq.=xxxxxxxxxxx
+{UUID,Backup Date,Description,Result,Server_Reply}=
[ {FBC095D54493A45CAC4BE80EECD1BE51D7E0D4023D377D37B0BFDE72B887CED9
,2013/07/06 09:13:18,BACK0706,Normal end,-} ],Num. of Keys=1
```

Detailed Information

Item	Description
UUID	The UUID of the encryption key to be deleted
Backup Date	The date and time of the backup information for the encryption key to be deleted
Description	The description of the backup information for the encryption key to be deleted
Result	The result of the operation Normal end: Normal end, Error(yyyy-yy): Abnormal end
Server_Reply	The return value from the key management server A hyphen (-) is displayed unless an error occurred while processing. For details on return values, see the manuals for each key management server.
Num. of Keys	The number of encryption keys to be deleted

[ENC] Edit Encryption

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[ENC],Edit Encryption,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{PG,Encryption}
=[{XX-XX,Enable},{XX-XX,Disable}],Num. of PGs=2
```

Detailed Information

Item	Description
PG	A parity group number
Encryption	The status of encryption Enable: Encryption enabled Disable: Encryption disabled
Num. of PGs	The number of parity groups

[ENC] Edit ENC Settings

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[ENC],Edit ENC Settings,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{KMS,Generate ENC Keys on KMS,Protect the KEK at the KMS}
=[No Set, No, No],Num. of Settings=1
```

Detailed Information

Item	Description
KMS	Displays usage of the key management server No Set: Not set Enable: The key management server is used Disable: The key management server is not used
Generate ENC Keys on KMS	Displays where encryption keys are created Yes: Keys are created on the key management server No: Keys are created on the storage system
Protect the KEK at the KMS	Displays whether key encryption keys created on the key management server are to be stored on the storage system Yes: The keys are stored on the storage system Yes (Disable local key generation): The keys are stored but Local key generation is disabled No: The keys are not stored
Num. of Settings	The number of encryption environment settings

[ENC] Edit Password Policy

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[ENC], Edit Password Policy,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{Numeric Characters (0-9),Uppercase Characters (A-Z),
Lowercase Characters (a-z),Symbols,Total}={1,2,3,4,10},
Num. of Settings=1
```

Detailed Information

Item	Description
Numeric Characters (0-9)	Displays the minimum number of numeric characters used for the password
Uppercase Characters (A-Z)	Displays the minimum number of uppercase characters used for the password
Lowercase Characters (a-z)	Displays the minimum number of lowercase characters used for the password
Symbols	Displays the minimum number of symbols used for the password
Total	Displays the minimum number of characters used for the password
Num. of Settings	The number of password policies

[ENC] Register KEK Dynamic

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[ENC], Register KEK Dynamic,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx
+{UUID,Result,Server_Reply}=
[{B75E9D1699659C10B088E027798ACB082F1375AF2FF613229F15E9FE70D1EC4D
,Normal end,-}],Num. of Keys=1
```

Detailed Information

Item	Description
UUID	The UUID of the registered encryption key
Result	The result of the operation Normal end: Normal end, Error(yyyy-xxxx): Abnormal end
Server_Reply	The return value from the key management server A hyphen (-) is displayed unless an error occurred while processing. For details on return values, see the manuals for each key management server.
Num. of Keys	The number of registered encryption keys

[ENC] Rekey CEK

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,  
Task Name,[ENC],Rekey CEK,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
```

[ENC] Rekey KEK Dynamic

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,  
Task Name,[ENC],Rekey KEK Dynamic,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
```

[ENC] Restore Keys

This logged information is output when encryption key information in the storage system is restored with key information obtained externally.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,  
Task Name,[ENC],Restore Keys,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
```

[ENC] Restore Keys fr File

This logged information is output when encryption key information is obtained from the backup file.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,  
Task Name,[ENC], Restore Keys fr File,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
```

[ENC] Restore Keys fr Serv

This logged information is output when the backup of encryption key information is obtained from the key management server.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,  
Task Name,[ENC], Restore Keys fr Serv,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+{UUID,Backup Date,Description,Result,Server_Reply}=  
[{FBC095D54493A45CAC4BE80EECD1BE51D7E0D4023D377D37B0BFDE72B887CED9  
,2013/07/06 09:13:18,BACK0706,Normal end,-}],Num. of Keys=1
```

Detailed Information

Item	Description
UUID	The UUID of the encryption key that is used for restoring on the key management server
Backup Date	The date and time entered into the backup information for the encryption key that is used for restoring
Description	The contents of Description in the backup information for the encryption key that is used for restoring
Result	The result of the operation Normal end: Normal end, Error(yyyy-xxxx): Abnormal end
Server_Reply	The return value from the key management server A hyphen (-) is displayed unless an error occurred while processing. For details on return values, see the manuals for each key management server.
Num. of Keys	The number of encryption keys that are used for restoring

[ENC] Retry KEK Dynamic

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[ENC],Retry KEK Dynamic,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
```

[ENC] Set Up Key Mng Serv

Example 1: using a key management server

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[ENC], Set Up Key Mng Serv,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{Server Type,Key Management Server,Host Name,Port Number,
Timeout,Retry Interval,Number of Retries,
Client Certificate File Name,Root Certificate File Name}
=[{Primary,Enable,10.213.75.37,5696,10,1,3,,},
{Secondary,Enable,10.213.75.37,5696,10,1,3,,}],
Num. of Servers=2
```

Example 2: not using a key management server

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[ENC], Set Up Key Mng Serv,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{Server Type,Key Management Server}=
[{Primary,Disable},{Secondary,Disable}],Num. of Servers=2
```

Example 3: Initializing a encryption environmental settings

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,
Task Name,[ENC], Set Up Key Mng Serv,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
+{Server Type,Key Management Server}
=[{Primary,No Set},{Secondary,No Set}],Num. of Servers=2
```

Detailed Information

Item	Description
Server Type	The type of the key management server Primary: primary server, Secondary: secondary server
Key Management Server	Displays whether the key management server is used Enable: The server is used Disable: The server is not used No Set: The settings are to be initialized
Host Name	The address of the key management server
Port Number	The port number of the key management server
Timeout	The communication timeout time to the key management server
Retry Interval	The retry interval to communicate with the key management server
Number of Retries	The number of retries to communicate with the key management server
Client Certificate File Name	The file name of the client certificate
Root Certificate File Name	The file name of the root certificate
Num. of Servers	The number of the key management servers

[ENC] Use Keys for CEK/KEK

This information is output to the audit log information file 2, and it is asynchronous with the Storage Navigator operations.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,,<system>, , , [ENC] ,  
Use Keys for CEK/KEK, ,Normal end, , ,Seq.=xxxxxxxxxx  
+0000010200000000 0000000000000000  
+0123456789ABCDEF 0123456789ABCDEF 0123456789ABCDEF, (snip)
```

Detailed Information

Item	Description
Command parameter	Indicates the 16 byte parameter added in the storage system and the number of the encryption key that is a target of the event in binary format

KEK Acquisition Descriptions

[KEK Acquisition] Acquisition Key

This logged information is output when the storage system obtains KEK Dynamic from the key management server after power is turned on again while KMIP mode is on.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,  
Task Name,[KEK Acquisition],Acquisition Key,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
```

[KEK Acquisition] Set Key

This logged information is output when KEK Dynamic is configured for the storage system after power is turned on again while KMIP mode is on.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,  
Task Name,[KEK Acquisition],Set Key,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx
```

Audit log examples of commands sent from the host

This topic provides examples and descriptions of the audit logs produced by commands sent from hosts or computers using the Hitachi Command Control Interface software. The descriptions are listed alphabetically by function name and operation name. For detailed information on the version numbers in log output examples, see [Table 1-4 Changed contents of a format in each version number on page 1-9](#)

- [Config Command](#)
- [FC-SP](#)
- [User Auth](#)

Config Command

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,
196,, [Config Command],,,Accept,from=host-name,,Seq.=xxxxxxxxxx
+0001020300000000 0000000000000000
+0123456789ABCDEF 0123456789ABCDEF 0123456789ABCDEF
0123456789ABCDEF 0123456789ABCDEF 0123456789ABCDEF
```

- **Out-of-band**
The computer using CCI.
- *from*=host-name
The name of the host that sent the command.
- **Detailed Information**
The commands and the parameters that the storage system received from the host are output.

FC-SP

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band OPEN,<Host>,,,
[FC-SP],,,Normal end,from=xxxxxxxxxxxxxxxxxx,,Seq.=xxxxxxxxxx
```

- **In-band OPEN**
The host is an open-system host.
- *from*=xxxxxxxxxxxxxxxxxx
WWN of the host that sent the command.

User Auth

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band OPEN,uid=user-name,
195,, [User Auth],Login,,Normal end,from=xxxxxxxxxxxxxxxxxx,
AP=0xXXXX,Seq.=xxxxxxxxxx
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band OPEN,uid=user-name,
195,, [User Auth],Logout,,Normal end,from=xxxxxxxxxxxxxxxxxx,
AP=0xXXXX,Seq.=xxxxxxxxxx
```

- **In-band OPEN**
The host is an open-system host.
- *from*=xxxxxxxxxxxxxxxxxx
WWN of the host that sent the command.
- *AP*=0xXXXX
Internal ID used by the host and the storage system.

Audit log examples for PIN Deletion Tool operation

This topic provides examples and descriptions of the audit logs produced by the PIN Deletion Tool. For the detailed information of version numbers in log output examples, see [Table 1-4 Changed contents of a format in each version number on page 1-9](#)

- [\[PINDeletion\] Delete](#)

[PINDeletion] Delete

This log information indicates the completion of the PIN deletion operation, and does not indicate the completion of the PIN deletion processing.

Example

```
07xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,1,,  
[PINDeletion],Delete,,Normal end,  
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxxx  
+LDEV=[0x00:0x00:0x00,0x00:0x00:0x01],Num. of LDEVs=2
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers
Num. of LDEVs	The number of set LDEVs



Audit log user operations

This topic describes which user operations trigger logging. The same log is output when a user perform a operation using each Storage Navigator menu, clicking a button on the main window, or using **General Tasks**.

- [Logging in or out](#)
- [Using Actions menu](#)
- [Using Reports menu](#)
- [Using Maintenance menu](#)
- [Using Settings menu](#)
- [Using Resource Lock menu](#)
- [Using Storage Navigator CLI](#)
- [When executing single sign-on from Hitachi Command Suite](#)

Logging in or out

Table A-1 Logging in to or out from Storage Navigator

GUI operation	Audit Log Output		Notes
	Function Name	Operation Name	
Login	BASE	Login	--
Logout (Exit)		Logout	--
Session disconnected			Logout processing executed by server when session is disconnected
Tool Panel operation	BASE	Environment Setting	--
		Control Panel Backup	
		Control Panel Restore	
		Certificate Update	
		Release HTTP Block	
		Set Up HTTP Block	
		Update SMIS CrtFiles	
		Upload SMIS ConfFile	

Using Actions menu

Table A-2 Component

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Edit MP Units	Editing the MP unit setting	PROV	Edit MP Units

Table A-3 Logical Device

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Create LDEVs	Creating an LDEV	PROV	Create LDEVs Format LDEVs Format LDEVs(Q) LDEV Name Edit V-VOL Option
Delete LDEVs	Deleting an LDEV	PROV	Delete LDEVs
Edit LDEVs	Editing LDEV information	PROV	LDEV Name Edit LDEVs(tier) Edit V-VOL Option
Format LDEVs	Formatting an LDEV	PROV	Format LDEVs
	Quick formatting an LDEV	PROV	Format LDEVs(Q)
Block LDEVs	Blocking LDEVs	PROV	Block LDEVs
Restore LDEVs	Restoring an LDEV	PROV	Restore LDEVs
Shred LDEVs	Shredding an LDEV	VS	Shred LDEVs Abort Shredding ¹ End Shredding
Assign MP Unit	Assigning a MP unit	PROV	Assign MP Unit
Add LUN Paths	Mapping an LUN path	PROV	Add LUN Paths
Delete LUN Paths	Removing an LUN path from an LDEV	PROV	Delete LUN Paths
LUN Expansion	Creating an LUSE volume	PROV	Make LUSE ²
	Releasing an LUSE volume	PROV	Release LUSE ²
Edit Command Devices	Edit Command Device information	PROV	Edit Command Devices Edit Cmd Dev(Auth) Edit Cmd Dev(DevGrp) Edit Cmd Dev(Sec)
Edit UUIDs	Changing UUID	PROV	Edit/Delete UUIDs
Delete UUIDs	Deleting UUID		
Expand V-VOLs	Increasing virtual volume capacity	PROV	Expand V-VOLs
Reclaim Zero Pages	Releasing pages in a virtual volume	PROV	Reclaim Zero Pages
Stop Reclaiming Zero Pages	Stop releasing pages in a virtual volume	PROV	Stop Reclm ZeroPages
Edit Tiering Policy	Editing Tiering Policy	PROV	Edit Tiering Policy

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Notes:			
<ol style="list-style-type: none"> 1. Abort Shredding is output when a shredding operation is aborted from the Confirm window during a shredding operation by Shred LDEVs. 2. When you set two or more LUSE settings, the following conditions apply: <ul style="list-style-type: none"> -When you perform two or more operations for one target, the log information is output as one log file. For example, if you have created one LUSE volume and then created another LUSE volume using the previously-created LUSE volume, the log information is output as "Make LUSE". -The log information is output in the order of the operations performed. -If you perform the following operations at the same time, the following occurs: <ol style="list-style-type: none"> 1. If you create an LUSE volume and then delete the LUSE volume you just created, no log is output because the operations cancel each other. 2. If you create LUSE volumes a and b, then create LUSE volume c using the LUSE volumes a and b, and then delete the LUSE volume c, only two logs are output indicating LUSE volumes a and b are created. 			

Table A-4 Port/Host Group

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Create Host Groups	Creating a host group	PROV	Add Hosts Create Host Groups Edit Host Grps(Mode)
Delete Host Groups	Deleting a host group	PROV	Delete Host Groups
Edit Host Groups	Editing host group settings	PROV	Edit Host Grps(Name) Edit Host Grps(Mode)
Add Hosts	Adding a host to the selected host group	PROV	Add Hosts
Add to Host Groups	Adding the selected host to a host group		
Remove Hosts	Removing a host from a host group	PROV	Remove Hosts
Delete Login WWNs	Deleting an unnecessary WWN	PROV	Delete Login WWNs
Edit Host	Editing host settings	PROV	Edit Host
Create Alternate LUN Paths	Creating an alternate LUN path	PROV	Add Hosts Add LUN Paths Create Host Groups Edit Host Grps(Mode)
Copy LUN Paths	Copying the selected LUN path	PROV	Add LUN Paths

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Edit Ports	Editing port settings	PROV	Edit Ports(Address) Edit Ports(Attr) Edit Ports(Security) Edit Ports(Speed) Edit Ports(Topology)
Release Host-Reserved LUNs	Releasing Host-Reserved LUNs	PROV	Release HostReserved
Authentication	Setting port information Setting default such as user name and secret	PROV	Set FCSP Port Info ^{1, 2}
	Registering or deleting authentication information Authentication (Host Group): Disable -> Enable or Enable -> Disable	PROV	Set FCSP Target ^{1, 2}
	Creating, changing, or deleting the host authentication information	PROV	Set FCSP Host ^{1, 2}
	Registering authentication Information Authentication Mode: bi-directional -> unidirectional or unidirectional -> bi-directional Authentication (Port): Enable -> Disable or Disable -> Enable	PROV	Set FCSP Port Switch ^{1, 2}
Notes:			
1. When you apply two or more settings of the same type to the storage system at the same time, the log information is output as one entry.			
2. If one or more settings end abnormally when you have applied at one time, the output log information is <i>Error</i> , not <i>Warning</i> .			

Table A-5 Pool

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Create Pools	Creating a pool	PROV	Create/Expand Pools Edit/Delete Pools Pool Name
Expand Pool	Increasing pool capacity	PROV	Create/Expand Pools
Shrink Pool	Decreasing pool capacity	PROV	Shrink Pool
Stop Shrinking Pool	Stop decreasing pool capacity	PROV	Stop Shrinking Pool
Delete Pools	Deleting a pool	PROV	Edit/Delete Pools Pool Name
Edit Pools	Editing pool settings		
Monitor Pools	Starting the performance monitoring of a pool	PROV	Monitor Pools
Stop Monitoring Pools	Stopping the performance monitoring of a pool	PROV	Stop Monitoring
Start Tier Relocation	Starting the tier relocation of a pool	PROV	Relocate Pool
Stop Tier Relocation	Stopping the tier relocation of a pool	PROV	Stop Relocating
Restore Pools	Restoring a pool	PROV	Restore Pools
Edit External LDEV Tier Rank	Editing the external LDEV tier ranks of pool volumes that are assigned to a pool	PROV	Edit LDEV Tier Rank
Initialize Pools	Initializing a pool	PROV	Initialize Pools
Complete SIMs	Completing SIMs related to a pool	PROV	Complete SIMs

Table A-6 Parity Group

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Edit Encryption	Enabling/disabling data encryption	ENC	Edit Encryption

Table A-7 External Storage

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Add External Volumes	Mapping an external volume	UVM	Add External Volumes
Delete External Volumes	Releasing external volume mapping	UVM	Delete ES VOLs
Disconnect External Storage Systems	Disconnecting an external storage system	UVM	Disconnect ES VOLs
Reconnect External Storage Systems	Reconnecting an external storage system	UVM	Reconnect ES VOLs
Edit External Volumes	Editing external volume settings	UVM	Edit ES VOLs
Disconnect External Volumes	Disconnecting an external volume	UVM	Disconnect ES VOLs
Reconnect External Volumes	Reconnecting an external volume	UVM	Reconnect ES VOLs
Assign MP Unit	Assigning a MP unit for an external volume	UVM	Assign MP Unit
Disconnect External Paths	Disconnecting an external path	UVM	Disconnect ES Paths
Reconnect External Paths	Reconnecting an external path	UVM	Reconnect ES Paths
Edit External WWN Parameter	Editing external WWN parameters	UVM	Edit External WWNs
Edit External Path Configuration	Adding a path to an external path group Deleting a path from an external path group Changing priority among external paths	UVM	Edit ES Path Config

Table A-8 Local Replications

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Create Pairs	Creating pairs for ShadowImage or Thin Image	Local Replication	Create Pairs
Split Pairs	Splitting pairs for ShadowImage or Thin Image	Local Replication	Split Pairs

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Resync Pairs	Resynchronizing pairs for ShadowImage or Thin Image	Local Replication	Resync Pairs
Suspend Pairs	Suspending pairs for ShadowImage	Local Replication	Suspend Pairs
Delete Pairs	Deleting pairs for ShadowImage or Thin Image	Local Replication	Delete Pairs
Add Reserve Volumes	Reserving volumes for ShadowImage	Local Replication	Add Reserve VOLs
Remove Reserve Volumes	Removing reserve attributes from volumes for ShadowImage	Local Replication	Remove Reserve VOLs
Edit Local Replica Options	Editing options for ShadowImage	Local Replication	Edit Options

Table A-9 Local Replications > SI

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Pair Operation	Paircreate	SI	Paircreate*
	Pairsplit	SI	Pairsplit*
	Pairresync	SI	Pairresync*
	Pairsplit-E	SI	Pairsplit-E*
	Pairsplit-S	SI	Pairsplit-S*
	Change Reserve	SI	Change Reserve*
	Initialize	SI	Initialize
Option	Option	SI	Option*

*When you apply two or more settings of the same type to the storage system at the same time, the log information is output as one entry.

Table A-10 Remote Copy > TrueCopy

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Pair Operation	Paircreate(TC)	TC	Paircreate ¹
	Paircreate(HAM)	HAM	Paircreate ¹
	Pairsplit-S(TC)	TC	Pairsplit-S ¹
	Pairsplit-S(HAM)	HAM	Pairsplit-S ¹
	Pairsplit-r(TC)	TC	Pairsplit-r ¹
	Pairsplit-r(HAM)	HAM	Pairsplit-r ¹
	Pairresync(TC)	TC	Pairresync ¹
	Pairresync (HAM)	HAM	Pairresync ¹
	Change Pair Option	TC	Change Pair Option ¹
RCU Operation	Add RCU	RCU	Add RCU
	Change RCU Option		Change RCU Option
	Delete RCU		Delete RCU
	Add Path		Add Path ^{1, 2}
	Delete Path		Delete Path ^{1, 2}
	Changing port attribute (Target, Initiator, RCU Target)	PROV	Edit Ports(Attr)
System Option	Option	TC	Change Option
	Function Switch	TC	Function Switch
	Clear SIM	TC	Clear SIM
Quorum Disk Operation	Add Quorum Disk ID	HAM	Add Quorum Disk ID ¹
	Delete Quorum Disk ID	HAM	Del Quorum Disk ID ¹
Notes:			
1. When you apply two or more settings of the same type to the storage system at the same time, the log information is output as one entry.			
2. If one or more settings end abnormally when you have applied at one time, the output log information is <i>Error</i> , not <i>Warning</i> .			

Table A-11 Remote Copy > Universal Replicator

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Journal Operation	Edit JNL Volumes	UR	Journal-Vol ¹
	Change JNL Option	UR	Change-JNL-Option ¹
	Delete JNL Groups	UR	Journal-Vol ¹
	Change Mirror Option	UR	Change-Mirror-Option ¹
	Pairsplit-r	UR	Pairsplit-r ¹
	Pairresync	UR	Pairresync ¹
	Pairsplit-S	UR	Pairsplit-S ¹
Pair Operation	Paircreate	UR	Paircreate ¹
	Pairsplit-r	UR	Pairsplit-r ¹
	Pairresync	UR	Pairresync ¹
	Pairsplit-S	UR	Pairsplit-S ¹
	Change Pair Option	UR	Pair-Option ¹
DKC Operation	Add Disk Controller (DKC)	RCU	Add RCU
	Change Disk Controller (DKC) Option	RCU	Change RCU Option
	Delete Disk Controller (DKC)	RCU	Delete RCU
	Add Path	RCU	Add Path ^{1, 2}
	Delete Path	RCU	Delete Path ^{1, 2}
	Changing port attribute (Target, Initiator, RCU Target)	PROV	Edit Ports(Attr)
Optional Operation	Change System Option	UR	System-Option ¹
	Clear SIM	UR	Clear-SIM
Notes:			
1. When you apply two or more settings of the same type to the storage system at the same time, the log information is output as one entry.			
2. If one or more settings end abnormally when you have applied at one time, the output log information is <i>Error</i> , not <i>Warning</i> .			

Table A-12 Other function

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Volume Migration	Setting on the Manual Plan tab	VM	Set Migration Vol ^{1, 2}
Volume Migration	Deleting on the Manual Plan tab	VM	Set Migration Vol ^{1, 2}
Volume Migration	Creating a plan on the Auto Plan tab	VM	Create Auto Plan ¹
Volume Migration	Deleting a plan on the Auto Plan tab	VM	Delete Auto Plan
Volume Migration	Deleting all the plans on the Auto Plan tab	VM	Delete Auto Plan
Volume Migration	Setting on the Auto Plan tab	VM	Set Auto Plan Param
Volume Migration	Setting on the Auto Plan tab	VM	Set Plan Condition
Volume Migration	Reserving an LDEV on the Attribute tab	VM	Set Reserved Vol ^{1, 2}
Volume Migration	Setting an basic LDEV on the Attribute tab	VM	Set Reserved Vol ^{1, 2}
Volume Migration	Changing class threshold on the Attribute tab	VM	Set Class Threshold ¹
Volume Migration	Setting a normal parity group on the Attribute tab	VM	Set Fixed PG ^{1, 2}
Volume Migration	Setting a fixed parity group on the Attribute tab	VM	Set Fixed PG ^{1, 2}
Volume Migration	Erasing auto migration history on the History tab	VM	Del Auto Plan Log
Volume Migration	Erasing migration history on the History tab	VM	Del Migration Log
Data Retention	Attribute / S-VOL / Reserved/ Mode Clear / Retention term	PROV	Edit DRU Attribute ¹
	Expiration-Lock	PROV	DRU Expiration Lock ¹

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Cache Residency	Set Cache Residency	PFM	Set Open DCR ^{1, 2}
	Release Cache Residency	PFM	Delete Open DCR ^{1, 2}
	Prestaging ON	PFM	DCR Prestaging ¹ The log information is output at the end, no matter when you perform the Cache Residency Manager operation.
Configuration File Loader	Upload	Spreadsheet	LUNM Operation The log information is not output in case of the format violation and inconsistency of configuration.
Notes: <ol style="list-style-type: none"> 1. When you apply two or more settings of the same type to the storage system at the same time, the log information is output as one entry. 2. If one or more settings end abnormally when you have applied at one time, the output log information is <i>Error</i>, not <i>Warning</i>. 			

Using Reports menu

Table A-13 Task Management

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Delete Tasks	Deleting a task	BASE	Delete Tasks
Resume Tasks	Resuming a task	BASE	Resume Tasks
Suspend Tasks	Suspending a task	BASE	Suspend Tasks
Disable Auto Delete	Disabling Task Auto Delete function	BASE	Disable Auto Delete
Enable Auto Delete	Enabling Task Auto Delete function	BASE	Enable Auto Delete

Table A-14 Configuration Report

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Create Configuration Report	Creating a configuration report	BASE	Create Conf Report

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Delete Reports	Deleting a configuration report	BASE	Delete Reports

Table A-15 Performance Monitor

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Edit Monitoring Switch	Starting/stopping monitoring	PFM	Edit Monitoring SW
Edit CU Monitor Mode	Setting target CUs for monitoring	PFM	Edit CU Monitor Mode
Edit WWN Monitor Mode	Setting target WWNs for monitoring	PFM	Edit WWN MonitorMode
Add New Monitored WWNs	Adding new WWNs for monitoring	PFM	Edit WWN Monitor Mode
Edit WWN	Editing WWN	PFM	Edit WWN
Delete Unused WWNs	Deleting WWNs from monitoring targets	PFM	Delete Unused WWNs
Add to Ports	Adding monitored WWN to a port	PFM	Edit WWN MonitorMode

Table A-16 Server Priority Manager

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Server Priority Manager (Port)	All Thresholds	SPM	Set All Prio Port ^{1, 2} Set Ctrl Kind
	Setting priority for ports (Attribute / Threshold / Upper)	SPM	Set Prio Port ^{1, 2} Set All Prio Port
	Initializing	SPM	Default Set ^{1, 2}
	Current Control Status (Port Control)	SPM	Set Ctrl Kind
	Clearing port settings due to removing port controllers	SPM	Clear SPM Info ²

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Server Priority Manager (WWN)	All Thresholds	SPM	Set All Prio WWN
	Setting priority for WWNs (Attribute / Upper)	SPM	Set Prio WWN ^{1, 2} Set All Prio WWN
	Changing WWN and SPM name	SPM	Update WWN ^{1, 2} Set All Prio WWN
	Current Control Status (WWN Control)	SPM	Set Ctrl Kind ^{1, 2}
	Adding WWN	SPM	Update Port WWN ^{1, 2}
	Deleting WWN	SPM	Update Port WWN ^{1, 2}
	Initializing	SPM	Default Set ²
	Adding WWN (to SPM group)	SPM	Update SPMGrp ^{1, 2}
	Deleting WWN (from SPM group)	SPM	Update SPMGrp ^{1, 2}
	Adding SPM group and WWN	SPM	Update SPMGrp ^{1, 2} Set All Prio WWN
	Deleting SPM group	SPM	Update SPMGrp ^{1, 2} SPMGrp Del/Chg Set All Prio WWN
	Setting priority for SPM groups (Attribute / Upper)	SPM	Change SPMGrp ^{1, 2} Set All Prio WWN
	Changing SPM group name	SPM	SPMGrp Del/Chg ^{1, 2} Set All Prio WWN
	Clearing port settings due to removing port controllers	SPM	Clear SPM Info ²
Notes:			
1. When you apply two or more settings of the same type to the storage system at the same time, the log information is output as one entry.			
2. If one or more settings end abnormally when you have applied at one time, the output log information is <i>Error</i> , not <i>Warning</i> .			

Using Maintenance menu

Table A-17 Maintenance Components (General))

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Maintenance Components (General)	Operation on SVP	For details, see Audit log SVP operations on page B-1 .	
Reset Microprocessor	Resetting microprocessor	Maintenance	MP Restore PCB Restore

Using Settings menu

Table A-18 User Management

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Add Users	Adding a user account to a user group	ACM	Add Users
Delete Users	Deleting a user account	ACM	Delete Users
Create User	Creating a new user account	ACM	Create User
Edit User	Changing settings of a user account	ACM	Edit User
Remove Users	Removing a user from a user group	ACM	Remove Users
Change Password	Changing a password	ACM	Change Password
Create User Group	Creating a new user group	ACM	Create User Grp
Edit User Group	Changing the name of a user group	ACM	Edit User Grp
Delete User Groups	Deleting a user group	ACM	Delete User Grps
Edit Resource Group Assignment	Changing the resource group assignment of a user group	ACM	Assign Resource Grps
Edit Role Assignment	Changing the role assignment of a user group	ACM	Assign Roles

Table A-19 Resource Management

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Create Resource Groups	Creating a resource group	PROV	Create Resource Grps
	Adding a resource		Move Resources
Edit Resource Group	Changing a resource group name	PROV	Edit Resource Grp
Delete Resource Groups	Deleting a resource group	PROV	Delete Resource Grps
Add Resources	Adding a resource to a resource group	PROV	Move Resources
Remove Resources	Removing a resource from a resource group	PROV	Move Resources

Table A-20 Security

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Syslog	Changing settings on the Syslog window	AuditLog	Set Syslog Server
Audit Log Transfer	Changing settings on the Audit Log Transfer window	AuditLog	Set FTP Server
Audit Log Transfer	SIM complete on the Audit Log Transfer window	AuditLog	SIM Complete
Audit Log setting	Changing setting on the Audit Log buffer	AuditLog	Audit Log buffer
Login Message	Changing settings on the Login Message window	ACM	Set Login Message

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Encryption Keys	Create Keys	Creating encryption keys	ENC Add keys to DKC ¹ Create Keys ² Create Keys On Serv ^{1, 9}
	Delete Keys	Deleting encryption keys	ENC Delete Keys
	Rekey Certificate Encryption Keys	Updating certificate encryption keys	ENC Rekey CEK
	Rekey Key Encryption Key	Updating key encryption keys	ENC Create KEK Dynamic ⁹ Delete KEK Dynamic ⁹ Register KEK Dynamic ⁹ Rekey KEK Dynamic
	Retry Key Encryption Key Acquisition	Reacquisition of key encryption keys	ENC Retry KEK Dynamic
	Backup Keys to File	Backing up keys on the Storage Navigator PC	ENC Backup Keys Backup Keys to File
	Backup Keys to Server	Backing up encryption keys on the key management server	ENC Backup Keys Backup Keys to Serv ⁹ Create Keys On Serv ⁹
	Restore Keys from File	Restoring encryption keys with backup files on the Storage Navigator PC	ENC Restore Keys Restore Keys fr File
	Restore Keys from Server	Restoring encryption keys with backup keys on the key management server	ENC Restore Keys Restore Keys fr Serv ⁹
	View Backup Keys on Server	Deleting encryption keys backed up on the key management server	ENC Delete Keys on Server ⁹

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Encryption Keys	Edit Encryption Environmental Settings	ENC	Add keys to DKC ³ Create Keys ⁴ Create KEK Dynamic ^{5, 9} Create Keys On Serv ^{3, 9} DEK assign SpareDisk ⁶ DEK delete ⁷ Delete KEK Dynamic ^{8, 9} Edit ENC Settings Register KEK Dynamic ^{5, 9} Rekey CEK ^{6, 7} Set Up Key Mng Serv
	Edit Password Policy	ENC	Edit Password Policy

Notes:

1. Output when the encryption key is created on the key management server
2. Output when the encryption key is created on the storage system
3. Output when the key management server is changed to be enabled and the encryption environment setting is configured from the initial setting
4. Output when the key management server is changed to be disabled and the encryption environment settings is configured from the initial setting
5. Output when the status of the key management server is changed from Disable to Enable
6. Output when the encryption environment setting is configured from the initial setting
7. Output when the encryption environment setting is initialized
8. Output when the status of the key management server is changed from Enable to Disable
9. Output because access to the key management server is performed, following the GUI operation

Table A-21 Environmental Setting

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Edit Storage System	Editing storage system information	BASE	Edit Storage System
Edit SIM Syslog Server Setting	Edit of information on SIM Syslog server	BASE	Edit SIM Syslog Serv

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
View External Authentication Server Properties	Setup Server	ACM	Setup Server
License Key	Install	PP KEY	PP Install chk*
License Key	Uninstall	PP KEY	PP Removal chk*
License Key	File	PP KEY	PP Install File chk
License Key	Enable	PP KEY	PP Enable chk
License Key	Disable	PP KEY	PP Disable chk
License Key	Available Install	PP KEY	PP Available Install
License Key	Apply	PP KEY	PP Apply
SNMP Information	Set SNMP Agent	SNMP	Set SNMP Agent
Partition Definition	Editing CLPR settings	VPM	Edit CLPR
E-Mail Information	Updating E-mail address information	E-Mail	MailAddress Write
E-Mail Information	Enabling/disabling E-mail notification	E-Mail	Valid Flag Update

*When you apply more than one setting of the same type to the storage system at the same time, the log information is output as one entry.

Using Resource Lock menu

Table A-22 Resource Lock

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Resource Lock	Cancelling lock forcibly	BASE	Unlock Forcibly

Using Storage Navigator CLI

Table A-23 Using Storage Navigator CLI

Storage Navigator CLI operations		Audit Log Output		Note
Command		Function Name	Operation Name	
CFLSET	Starts Operation	Spreadsheet	CflSet Start	Logs of operations performed by CFLSET command are output between CflSet Start and CflSet End.
	Ends operation		CflSet End	

When executing single sign-on from Hitachi Command Suite

Table A-24 When executing single sign-on from Hitachi Command Suite

GUI operations	Audit Log Output	
	Function Name	Operation Name
Issuing OneTimeKey from Hitachi Command Suite	BASE	HCSSO SetOneTimeKey
Launching Storage Navigator from Hitachi Command Suite		HCSSO Authentication



Audit log SVP operations

This topic describes SVP operations as well as function names and operation names that is output to audit logs.

- [Logging in to or out from SVP](#)
- [Using Maintenance button](#)
- [Using Install button](#)
- [Using Information button](#)
- [Using Monitor button](#)

Logging in to or out from SVP

Table B-1 Logging in to or out from SVP

SVP Operations	Audit Log Output		Note
	Function Name	Operation Name	
Login using the remote desktop access	BASE	Login	No parameters or detailed information
Logout using the remote desktop access	BASE	Logout	No parameters or detailed information
Rebooting SVP during the remote desktop access	BASE	Logout	No parameters or detailed information
Powering SVP off during the remote desktop access	BASE	Logout	No parameters or detailed information

Using Maintenance button

Table B-2 Using Maintenance button on SVP

SVP Operations		Audit Log Output	
Function	Operation	Function Name	Operation Name
Maintenance	Replace	Maintenance	Replace
Maintenance	Replace	Maintenance	Set Battery Life
Maintenance	Blockade	Maintenance	Blockade
Maintenance	Correction Copy	Maintenance	Correction Copy
Maintenance	Drive Interrupt	Maintenance	Drive Interrupt
Maintenance	Restore	Maintenance	Restore
Maintenance	Restore	Maintenance	MP Restore
Maintenance	Restore	Maintenance	MAINBlade Restore
Maintenance	Restore	Maintenance	DMA Restore
Maintenance	Restore	Maintenance	DRR Restore
Maintenance	Restore Data	Maintenance	Restore Data
Maintenance	Format	Maintenance	Format
Maintenance	Format	Maintenance	Format Stop
Maintenance	Quick Format	Maintenance	Quick Format
Maintenance	Quick Format	Maintenance	Pre QuickFormat Stop
Maintenance	Verify	Maintenance	Verify
Maintenance	Verify	Maintenance	Verify Stop
Maintenance	Spare Disk	Maintenance	Spare Disk
Maintenance	SFP Maintenance	Maintenance	Type Change

Using Install button

Table B-3 Using Install button on SVP

SVP Operations		Audit Log Output	
Function	Operation	Function Name	Operation Name
Define Configuration and Install	Define Configuration and Install	Install	Define Config.
Logical Device Format	Logical Device Format	Install	Format
Logical Device Format	Logical Device Format	Install	Format Stop
Change Configuration	Installation	Install	Install
Change Configuration	Removal	Install	Remove
Change Configuration	System Option	Install	System Option
Change Configuration	System Tuning	Install	System Tuning
Change Configuration	LUN Configuration	Install	Set Fibre Address
Change Configuration	LUN Configuration	Install	Set Fibre Topology
Change Configuration	LUN Configuration	Install	Set Channel Speed
Change Configuration	LUN Configuration	Install	Set CommandDev
Change Configuration	LUN Configuration	Install	Set CommandDevSec
Change Configuration	LUN Configuration	Install	Add LU Path
Change Configuration	LUN Configuration	Install	Delete LU Path
Change Configuration	LUN Configuration	Install	Set DevGrpDef
Change Configuration	LUN Configuration	Install	Set Host Mode
Change Configuration	LUN Configuration	Install	Set Security Switch
Change Configuration	LUN Configuration	Install	Set UserAuth
Change Configuration	LUN Configuration	Install	Add WWN
Change Configuration	LUN Configuration	Install	Delete WWN

SVP Operations		Audit Log Output	
Function	Operation	Function Name	Operation Name
Change Configuration	LUN Configuration	Install	Change WWN
Change Configuration	LUN Configuration	Install	Add Host Group
Change Configuration	LUN Configuration	Install	Delete Host Group
Change Configuration	LUN Configuration	Install	Change Host Group
Change Configuration	LUN Configuration	Install	Delete DKC WWN
Change Configuration	LUN Configuration	Install	Force Reset
Change Configuration	LUN Configuration	Install	Make LUSE
Change Configuration	LUN Configuration	Install	Release LUSE
Change Configuration	DCR Configuration	Install	DCR Prestaging
Change Configuration	DCR Configuration	Install	Open DCR
Change Configuration	CVS Configuration	Install	Install CV
Change Configuration	CVS Configuration	Install	Volume to Space
Change Configuration	CVS Configuration	Install	Make Volume
Copy Config Files	Configuration Update	Install	Update Config
Copy Config Files	All Configuration Files	Install	All Config
Copy Config Files	Create Configuration Backup	Install	Backup Config
Copy Config Files	Restore Configuration	Install	Restore Config
Micro Program Install	Micro Program	Install	Micro Program
Micro Program Install	MP Install	Install	MP Install
Set Subsystem Time	TOD Change	Install	Set Subsystem Time
Set Subsystem Time	Synchronization Information	Install	Set Subsystem Time
Set IP Address	Set IP Address	Install	Set IP Address
Initialize ORM Value	Initialize ORM Value	Install	Initialize ORM Value
Setting Battery Life	Setting Battery Life	Install	Set Battery Life

SVP Operations		Audit Log Output	
Function	Operation	Function Name	Operation Name
Set Machine Install Date	Set Machine Install Date	Install	Machine Install Date
Set Flash Drive ORM Value	Set Flash Drive ORM Value	Install	FlashDrive ORM Value

Using Information button

Table B-4 Using Information button on SVP

SVP Operations		Audit Log Output	
Function	Operation	Function Name	Operation Name
Log	Complete	Information	SIM Complete
Log	Delete	Information	Delete Log
Log	SIM Reporting Options	Information	SIM Reporting Option
Threshold Value	Alter	Information	Threshold Value
Online Read Margin	Reset	Information	ORM Value

Using Monitor button

Table B-5 Using Monitor button on SVP

SVP Operations		Audit Log Output	
Function	Operation	Function Name	Operation Name
Threshold	Threshold	Monitor	Threshold



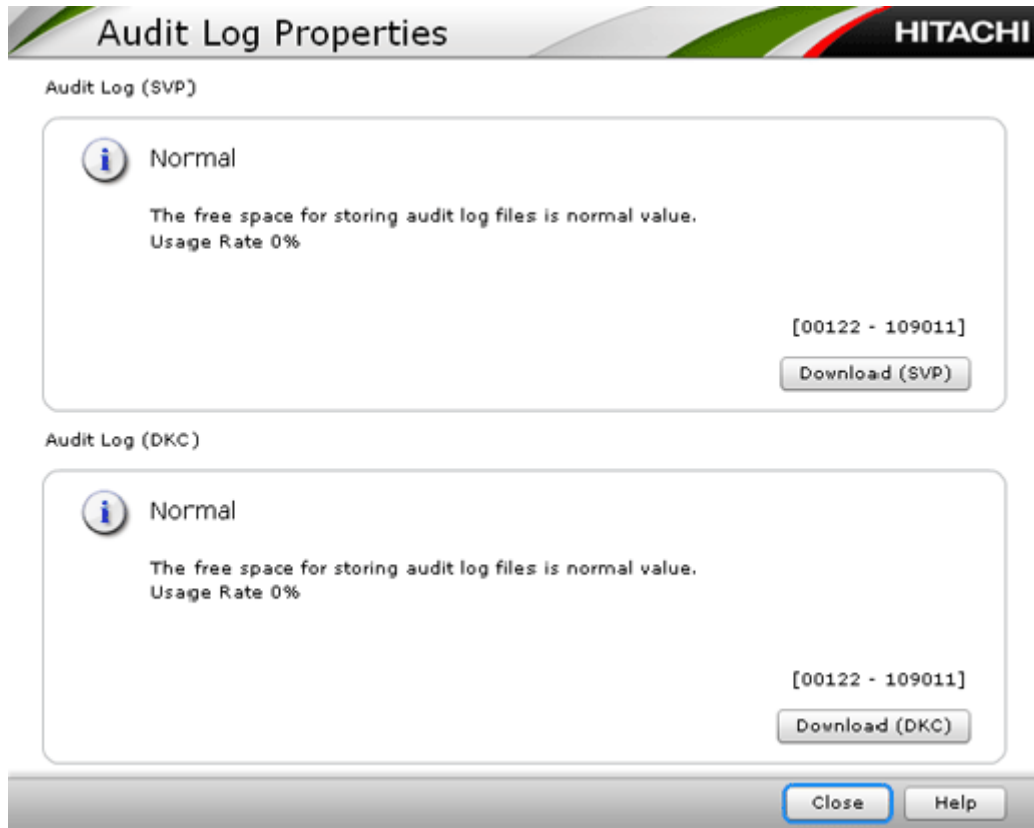
Audit log GUI reference

This topic describes the audit log screens in the Storage Navigator GUI. The GUI illustrations in this guide were created using a Windows computer with the Internet Explorer browser. Actual windows may differ depending on the operating system and browser used. GUI contents also vary with licensed program products, storage system models, and firmware versions.

- [Audit Log Properties dialog box](#)
- [Syslog window](#)
- [Audit Log Transfer window](#)
- [Audit Log Setting window](#)

Audit Log Properties dialog box

Use this dialog box to download audit log files to the Storage Navigator computer.



Item	Description
Download (SVP)	The Audit Log (SVP) includes operations from Storage Navigator and SVP. This option downloads audit log to Storage Navigator computer.
Download (DKC)	The Audit Log (DKC) includes commands sent from hosts or computers using CCI and events about encryption keys. This option downloads audit log to Storage Navigator computer.

Syslog window

Use the Syslog window to transfer the audit log or download a syslog file to the Storage Navigator computer.

Syslog	
Syslog Server Setting	
Output to Primary Server	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Primary Server Setting	<input checked="" type="radio"/> IPv4 <input type="radio"/> IPv6 IP <input type="text" value="192 . 168 . 0 . 1"/> Port <input type="text" value="514"/>
Output to Secondary Server	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Secondary Server Setting	<input checked="" type="radio"/> IPv4 <input type="radio"/> IPv6 IP <input type="text" value="192 . 168 . 0 . 2"/> Port <input type="text" value="514"/>
Location Identification Name	<input type="text"/>
Output Detailed Information	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Download Syslog	<input type="button" value="Download"/>

Table C-1 Syslog Window

Item	Description
Output to Primary Server	Specify whether to transfer the audit log to the primary syslog server. <ul style="list-style-type: none"> <i>Enable</i>: Transfers the audit log. <i>Disable</i>: Does not transfer the audit log.
Primary Server Setting	Set an IP address and a port number for the primary syslog server. Once you set <i>Output to Primary Server</i> to <i>Enable</i> , <i>IP</i> and <i>Port</i> become available. For both <i>IP</i> and <i>Port</i> , the defaults have been entered, so change them as needed. <p>You can set either IPv4 address or IPv6 address for IP address. However, only IPv4 address is available when the operating system of your SVP is Windows XP.</p> <ul style="list-style-type: none"> To set an IPv4 address, select <i>IPv4</i>. For <i>IP</i>, enter four integers in the range of 0 to 255 (for example, <i>nnn . nnn . nnn . nnn</i>, where n is a number). Only enter numbers. Do not enter the intervening periods. To set an IPv6 address, select <i>IPv6</i>. For <i>IP</i>, enter eight hexadecimal numbers in the range of 0 to FFFF (for example, <i>hhhh : hhhh : hhhh : hhhh : hhhh : hhhh : hhhh : hhhh</i>, where h is a hexadecimal digit). Only enter hexadecimal numbers. Do not enter the intervening colons. For <i>Port</i>, enter one integer in the range of 1 to 65,535.
Output to Secondary Server	Specify whether to transfer the audit log to the secondary syslog server. <ul style="list-style-type: none"> <i>Enable</i>: Transfer the audit log. <i>Disable</i>: Does not transfer the audit log.
Secondary Server Setting	Set an IP address and a port number for the secondary syslog server. Once you set <i>Output to Secondary Server</i> to <i>Enable</i> , <i>IP</i> and <i>Port</i> become available. For both <i>IP</i> and <i>Port</i> , the defaults have been entered, so change them as needed. The restriction for the available values is the same as that of <i>Primary Server Setting</i> .

Item	Description
Location Identification Name	Name, as you like, the storage system that transfers the audit log to syslog servers, so that you can identify the storage system. Enter 32 one-byte characters at the maximum. Available characters are alphabets (A-Z and a-z), numeric (0-9), and symbols (! " # \$ % & ' () = - ~ ^ \ { } [] @ ` : ; * + _ ? / < > .). However, a comma (,) and a space cannot be used.
Output Detailed Information	Set whether to transfer the detailed information of the audit log file to the syslog server. If you want to transfer the detailed information to the syslog server, select <i>Enable</i> . If you do not, select <i>Disable</i> . In the syslog file that is stored in the SVP, the detailed information is always stored regardless of this setting.
Download Syslog	Downloads the syslog file to the Storage Navigator computer.
Apply	Implements all the settings. This button is available only in Modify mode.
Cancel	Cancel all the settings. This button is available only in Modify mode.

Audit Log Transfer window

Use the Audit Log Transfer window to configure FTP servers and manually transfer the Audit Log file to the FTP servers.

The screenshot shows the 'Audit Log Transfer' window with the following sections:

- FTP Server Setting** (header)
- Output to Primary Server**: Enable Disable
- Primary Server Setting**: IPv4 IPv6; IP: 192 . 168 . 0 . 1
- Primary Server Login User**: User ID [] Password []
- Primary Server Output Folder**: []
- Transfer to Primary Server**: [] **Transfer** button
- Output to Secondary Server**: Enable Disable
- Secondary Server Setting**: IPv4 IPv6; IP: 192 . 168 . 0 . 2
- Secondary Server Login User**: User ID [] Password []
- Secondary Server Output Folder**: []
- Transfer to Secondary Server**: [] **Transfer** button
- SIM Complete**: [] **Request** button

Table C-2 Audit Log Transfer Window

Item	Description
Output to Primary Server	Specify whether to transfer the audit log file to the primary FTP server. <ul style="list-style-type: none"> <i>Enable</i>: Transfers the file. <i>Disable</i>: Does not transfer the file.

Item	Description
Primary Server Setting	<p>Set an IP address for the primary FTP server. Once you set <i>Output to Primary Server</i> to <i>Enable</i>, <i>IP</i> becomes available. The default IP address has been entered, so change it as needed.</p> <p>You can set either IPv4 address or IPv6 address for IP address. However, only IPv4 address is available when the operating system of your SVP is Windows XP.</p> <ul style="list-style-type: none"> To set an IPv4 address, select <i>IPv4</i>. For <i>IP</i>, enter four integers in the range of 0 to 255 (for example, <i>nnn.nnn.nnn.nnn</i>, where <i>n</i> is a number). Only enter numbers. Do not enter the intervening periods. To set an IPv6 address, select <i>IPv6</i>. For <i>IP</i>, enter eight hexadecimal numbers in the range of 0 to FFFF (for example, <i>hhhh:hhhh:hhhh:hhhh:hhhh:hhhh:hhhh:hhhh</i>, where <i>h</i> is a hexadecimal digit). Only enter hexadecimal numbers. Do not enter the intervening colons.
Primary Server Login User	<p>Set the <i>UserID</i> and <i>Password</i> to log in to the primary FTP server. Enter up to 256 alphanumeric characters and symbols (ASCII codes) for user ID and password.</p>
Primary Server Output Folder	<p>Set the folder location to save the audit log file. The folder location should be relative to a home directory of a FTP server user. The default setting (/) is the home directory. Enter up to 256 alphanumeric characters and symbols (ASCII codes) for the output folder.</p>
Transfer to Primary Server	<p>When you click Transfer, the audit log file is transferred to the primary FTP server according to the settings selected on the Audit Log Transfer window. You can transfer the current audit log file without waiting for the audit log file to reach the threshold size for automatic transfer.</p>
Output to Secondary Server	<p>Specify whether to transfer the audit log file to the secondary FTP server.</p> <ul style="list-style-type: none"> <i>Enable</i>: Transfers the file. <i>Disable</i>: Does not transfer the file.
Secondary Server Setting	<p>Set an IP address for the secondary FTP server. Once you set <i>Output to Secondary Server</i> to <i>Enable</i>, <i>IP</i> becomes available. The default IP address has been entered, so change it as needed. The restriction for the available values is the same as that of <i>Primary Server Setting</i>.</p>
Secondary Server Login User	<p>Set the <i>User ID</i> and <i>Password</i> to log in to the secondary FTP server. The restriction for the available values is the same as that of <i>Primary Server Login User</i>.</p>
Secondary Server Output Folder	<p>Set the folder location to save the audit log file. The folder location should be relative to a home directory of a FTP server user. The default setting and the restriction for the available values are the same as those of Primary Server Output Folder.</p>
Transfer to Secondary Server	<p>When you click Transfer, the audit log file is transferred to the secondary FTP server according to the settings selected on the audit log Transfer window. You can transfer the current audit log file without waiting for the audit log file to reach the threshold size for automatic transfer.</p>

Item	Description
SIM Complete	The Request button allows you to complete (resolve) the SIM that occurs when transfer of audit logs to any FTP servers fails. Resolve the error condition, manually transfer the audit log file by clicking Transfer , and then complete the SIM. The SIM status will change to Complete. <i>Important:</i> If you do not complete the SIM, the SIM will not occur the next time an FTP transfer fails.
Apply	Implements all the settings. This button is available only in Modify mode.
Cancel	Cancels all the settings. This button is available only in Modify mode.

Audit Log Setting window

Use the Audit Log Setting window to configure the audit log setting.

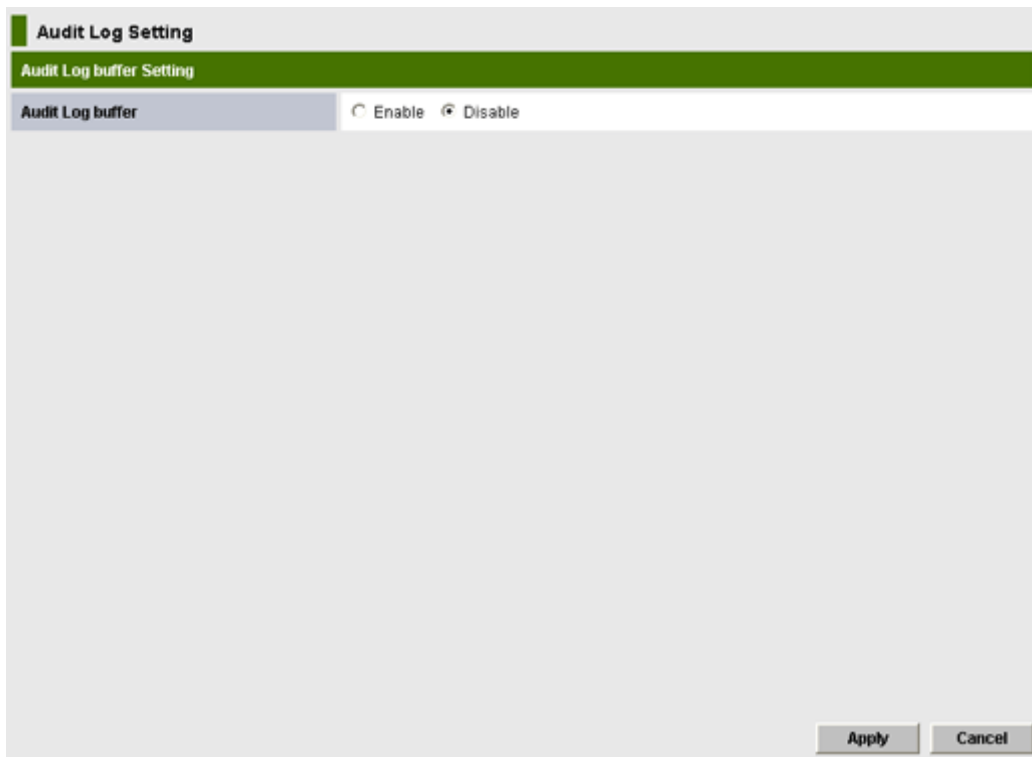


Table C-3 Audit Log Setting window

Item	Description
Audit Log buffer	Specify whether to temporarily store the audit log on a system disk so the information will not be lost. <ul style="list-style-type: none"> • Enable: Temporarily stores the audit log on a system disk. If you need to keep track of commands sent from the host, Enable is recommended. If you select Enable, make sure that a system disk is already created by a storage administrator. For how to create a system disk, see the <i>Hitachi Unified Storage VM Block Module Provisioning Guide</i>. • Disable: Does not store the log on a system disk.
Apply	Implements the setting. This button is available only in Modify mode.

Item	Description
Cancel	Cancels the setting. This button is available only in Modify mode.

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