Hitachi Virtual Storage Platform 5000 Series

SVOS RF 9.8.6

Hitachi Audit Log User Guide

The Audit Log feature enables you to track user operations, which helps you investigate problems on your storage systems.

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Contents

Preface

The Audit Log feature enables you to track users' operations, whitch helps you investigate problems on your storage systems.

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

Intended audience

This document is intended for system administrators, Hitachi Vantara representatives, and authorized service providers who install, configure, and operate the storage systems.

Readers of this document should be familiar with the following:

- Data processing and RAID storage system and their basic functions.
- The Hitachi Device Manager - Storage Navigator software.
- You should be familiar with the operating system and web browser software on the system hosting the Hitachi Device Manager - Storage Navigator software.

Product version

This document revision applies to the following product versions:

- VSP 5000 series: firmware 90-09-01 or later
- SVOS RF 9.8.6 or later

Release notes

Read the release notes before installing and using this product. They may contain requirements or restrictions that are not fully described in this document or updates or corrections to this document. Release notes are available on the Hitachi Vantara Support Website: https://knowledge.hitachivantara.com/Documents.

Changes in this revision

- Corrected displayed items regarding local replica options.

Document conventions

This document uses the following typographic conventions:

Convention	Description
Bold	▪ Indicates text in a window, including window titles, menus, menu options, buttons, fields, and labels. Example: Click **OK**. ▪ Indicates emphasized words in list items.
Italic	▪ Indicates a document title or emphasized words in text. ▪ Indicates a variable, which is a placeholder for actual text provided by the user or for output by the system. Example: `pairdisplay -g group` (For exceptions to this convention for variables, see the entry for angle brackets.)
`Monospace`	Indicates text that is displayed on screen or entered by the user. Example: `pairdisplay -g oradb`
< > angle brackets	Indicates variables in the following scenarios: ▪ Variables are not clearly separated from the surrounding text or from other variables. Example: `Status-<report-name><file-version>.csv` ▪ Variables in headings.
[ ] 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	Label	Description
	Note	Calls attention to additional information.

Icon	Label	Description
	Tip	Provides helpful information, guidelines, or suggestions for performing tasks more effectively.
	Important	Highlights information that is essential to the completion of a task.
	Caution	Warns the user of adverse conditions and/or consequences (for example, disruptive operations, data loss, or a system crash).
	CAUTION	Warns the user of a hazardous situation that, if not avoided, could result in major or minor injury.
	WARNING	Warns the user of a hazardous situation which, if not avoided, could result in death or serious injury.

Conventions for storage capacity values

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

Physical capacity unit	Value
1 kilobyte (KB)	1,000 (10^3) bytes
1 megabyte (MB)	1,000 KB or $1{,}000^2$ bytes
1 gigabyte (GB)	1,000 MB or $1{,}000^3$ bytes
1 terabyte (TB)	1,000 GB or $1{,}000^4$ bytes
1 petabyte (PB)	1,000 TB or $1{,}000^5$ bytes
1 exabyte (EB)	1,000 PB or $1{,}000^6$ bytes

Logical capacity values (for example, logical device capacity, cache memory capacity) are calculated based on the following values:

Logical capacity unit	Value
1 block	512 bytes
1 cylinder	Mainframe: 870 KB

Logical capacity unit	Value
	Open-systems: ▪ OPEN-V: 960 KB ▪ Others: 720 KB
1 KB	1,024 (2^{10}) 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

Accessing product documentation

Product user documentation is available on the Hitachi Vantara Support Website: https://knowledge.hitachivantara.com/Documents. 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 Vantara Support Website is the destination for technical support of products and solutions sold by Hitachi Vantara. To contact technical support, log on to the Hitachi Vantara Support Website for contact information: https://support.hitachivantara.com/en_us/contact-us.html.

Hitachi Vantara Community is a global online community for Hitachi Vantara customers, partners, independent software vendors, employees, and prospects. It is the destination to get answers, discover insights, and make connections. **Join the conversation today!** Go to community.hitachivantara.com, register, and complete your profile.

Comments

Please send comments to doc.comments@hitachivantara.com. Include the document title and number, including the revision level (for example, -07), and refer to specific sections and paragraphs whenever possible. All comments become the property of Hitachi Vantara LLC.

Thank you!

Chapter 1: 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

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 Device Manager - Storage Navigator computer or an SVP.
- Commands that the storage system received from a host, a computer using CCI, or a host using Business Continuity Manager.
- Operations and events about encryption keys for data encryption.
- Operations for Maintenance Utility

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 Device Manager - Storage Navigator computer or SVP, operations about encryption keys, and operations for Mainteance Utility.
  - Auditlog information file 2 contains commands sent from a host, a computer using CCI, or a host using Business Continuity Manager, and events about encryption keys.

  You can download them to your Device Manager - 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 Device Manager - Storage Navigator computer or transfer it to a primary or secondary syslog server.

  The syslog file has two types of formats: RFC3164-compliant and RFC5424-compliant. You can select either of the formats when downloading syslog files and transferring syslog files to syslog servers.

Features

The audit log feature stores a history of all operations performed on a computer using the Device Manager - 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:

Component	Audit Log File	Syslog File
File Type	Text format. Auditlog information file 1 Auditlog information file 2 Files are compressed in tgz format.	Text format. syslogYYYYMMDD.tgz stores syslog-svp.log (audit log file for SVP) and syslog-dkc.log (audit log file for DKC).
Downloaded File Name	AuditYYYYMMDD.tgz where YYYY = year MM = month DD = day	syslogYYYYMMDD.tgz where YYYY = year MM = month DD = day

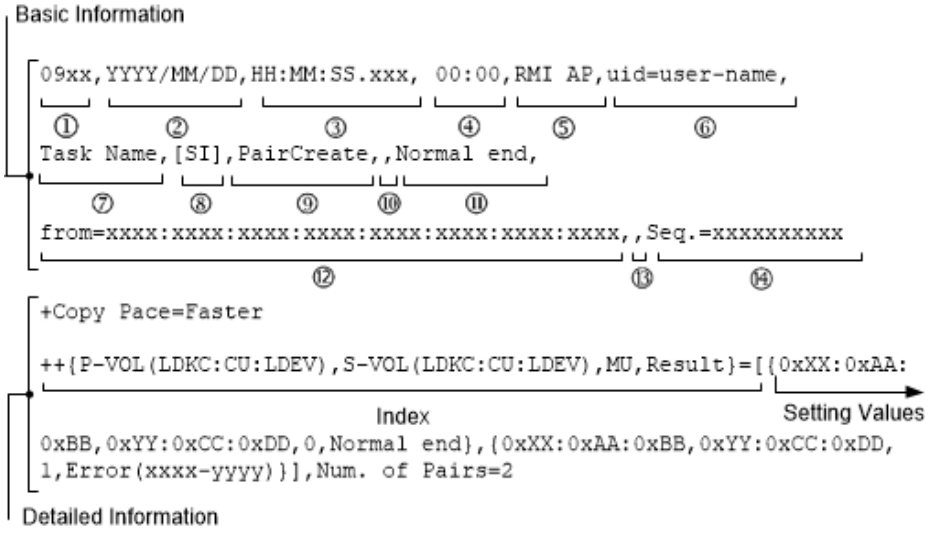
Component	Audit Log File	Syslog File
	The file name can be changed when downloading.	The file name can be changed when downloading.
File Name Transferred to the FTP Server	When the file is automatically transferred: Audit-SVPSSSSSYYYYMMDDHHMMSS.tgz or Audit-DKCSSSSSYYYYMMDDHHMMSS.tgz When the file is manually transferred: AuditSSSSSYYYYMMDDHHMMSS.tgz where SSSSS = 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 FTP tab on the Edit Audit log Settings window.	N/A
Linefeed Codes	CR + LF The standard linefeed codes for Windows. Some text editors cannot display these codes correctly.	LF The standard linefeed code for UNIX. Some text editors cannot display this code correctly.
File Output	Contains login and logout information as well as basic and detailed information about settings made for each option. ▪ 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 the same information as released to the audit log file. However the output format differs between the audit log file and syslog file. (some items are output to the syslog file only.)
Maximum Line Size	1,024 bytes	1,024 bytes

Component	Audit Log File	Syslog File
Maximum Number of Lines	250,000 lines	250,000 lines
Maximum Size of Files	122.5 MB	488.2 MB
When Reaching the Maximum Number of Lines	The newest data overwrites the oldest data (wrap around).  is shown on the Device Manager - Storage Navigator main window.	The newest data overwrites the oldest data (wrap around). Also, the following log is output in the syslog file. ▪ [AuditLog], Over MaxLine
Threshold of the Maximum Number of Lines and When Reaching Threshold	The threshold value is 70% (175,000 lines) of the maximum number of lines. ▪ If the audit log information reaches the threshold, a warning message urging you to download the audit log file appears when you log in Device Manager - Storage Navigator. Also,  is shown on the Device Manager - Storage Navigator main window. ▪ If you set to transfer files to an FTP server, the audit log file will be automatically transferred to the FTP server when the information stored in the audit log file reaches the threshold. ▪ After you download or transfer the audit log file, the counter is reset and monitoring will start from 0% again.	The threshold value is 70% (175,000 lines) of the maximum number of lines. When the audit log information reaches the threshold, the following log is output in the syslog file. ▪ [AuditLog], Over Threshold If this log is output, download the file as necessary before old information is overwritten. After you download the file, the counter is reset and monitoring will start from 0% again.

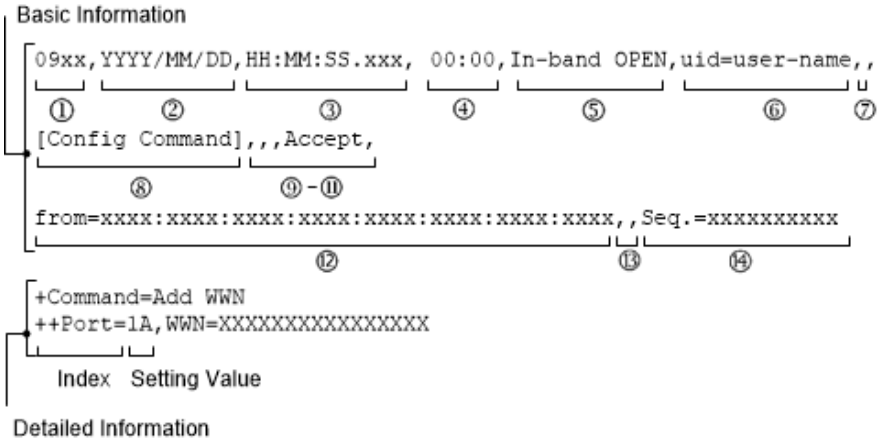
Audit log file format

The following figures show sample audit log files:

Audit Log File 1 (SVP)



Audit Log File 2 (DKC)



Basic Information

Each item output in the audit log information file is delimited by commas (,).

No.	Item	File 1 (SVP)	File 2 (DKC)
①	Version	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. See Log output formats for different versions (on page 35) for the changed contents of XXYY.	Same as File 1.

No.	Item	File 1 (SVP)	File 2 (DKC)
②	Date	YYYYMMDD indicates the year, month, and day the audit log was created. 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.	YYYYMMDD indicates the year, month, and day the audit log was created. A date and a time that were received from the storage system are output as log data.
③	Time	HH:MM:SS.*xxx* indicates the hour, minute, second, and millisecond the audit log was created.	Same as File 1.
④	Time zone	The time difference between Coordinated Universal Time (UTC) and the local time is displayed as "±HH:MM" (HH: hour, MM: minute). For example: "+09:00", "-08:00", "00:00"	Same as File 1.
⑤	Interface	▪ RMI AP indicates the log for Device Manager - Storage Navigator and Remote Method Invocation Applications such as Hitachi Command Suite (HCS). ▪ SVP indicates the log for the SVP. ▪ RM AP indicates the log for Remote Maintenance Application. ▪ GUM indicates the log for Maintenance Utility	▪ In-band OPEN: Logs for commands received from open-system hosts, or FC-SP authentication logs ▪ In-band MF: Logs for commands received from mainframe-system hosts ▪ Out-of-band: Logs for commands received from computers using CCI ▪ No output for the event logs about encryption keys.

No.	Item	File 1 (SVP)	File 2 (DKC)
⑥	Login user Name	▪ A user name is output for Device Manager - Storage Navigator, RMI AP or SVP operations. ▪ <System> is output when the SVP detects the failure. ▪ No output for RM AP operations.	▪ A user name is output for commands received by a command device for authentication. ▪ <Host> is output for other commands. ▪ <system> is output for the event about encryption keys.
⑦	Task name	Task name specified when a task is registered. No task name is output when a user performs operations using the Device Manager - Storage Navigator secondary window.	No output.
⑧	Function name	The abbreviation indicating the function that performed the operation. ▪ Maintenance window name is output for SVP operations.	▪ 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.
⑨	Operation or event name	The operation or event name.	The following items are output only when Function name is User Auth. No output for other operations. ▪ Login indicates that a log-in command is received. ▪ Logout indicates that a log-out command is received. The event name is output when the function name is [ENC].
⑩	Parameters	Parameters for certain functions.	No output.

No.	Item	File 1 (SVP)	File 2 (DKC)
⑪	Result	The result of your operation. ▪ 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. *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 *Hitachi Device Manager - Storage Navigator Messages*. Note that error codes "*xxxx-yyyyy*" appear only for Device Manager - Storage Navigator operations.	The result of the received commands. ▪ Normal end. The authentication has ended normally, or the event about encryption keys occurs. ▪ Error. The authentication has ended abnormally. ▪ Accept. Received the commands from the host. ▪ Reject. Rejected the commands from the host.
⑫	Host Identification	An IP address (IPv4 or IPv6) is output for Device Manager - 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. No output for RM AP operations. No output when the login user name is <System>. If both IPv4 and IPv6 are available for communication between the Device Manager - Storage Navigator computer and the SVP, the Device Manager - Storage Navigator secondary window uses IPv4 communication. In this case, IPv4 addresses are output to audit logs.	▪ A WWN is output for unauthenticated open-system host. When a command is received from a different storage system, a WWN for the storage system sending the command is output. ▪ A host name is output for authenticated open-system hosts. ▪ A serial number is output for main-frame system hosts. When a command is received from a different storage system, a serial number for the storage system sending the command is output. ▪ A host name is output for computers using CCI.

No.	Item	File 1 (SVP)	File 2 (DKC)
			▪ A WWN is output for the FC-SP authentication. ▪ No output for the event about encryption keys. ▪ If an operation is performed through the REST API, an IP address used in the storage system might be displayed.
⑬	Application Identification	No output.	▪ An internal-use ID is output for open-system hosts. ▪ An LPR number is output for mainframe system hosts. ▪ 0x0000 is output if a command comes from other storage system. ▪ No output for other commands. No output for the FC-SP authentication, computers using CCI, hosts using Business Continuity Manager or the event about encryption keys.
⑭	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

The indexes that indicate the set items and the setting values are output to the detailed information. There are two types of the detailed information format.

Detailed information format 1

Example:

```
+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,,SnapshotSet2,Error(xxxx-yyyy)}],
Num. of Pairs=2
```

Symbol	Definition
+ and -	'+' or '-' is displayed 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 (,). Example: CU:LDEV=[0x00:0x00,0x00:0x01,0x00:0x02]
{ }	Details are enclosed by {}. Example: {Port,Fabric,Connection}=[{1E,ON,FC-AL},{3E,OFF,P-to-P}]
( )	Supplementary and additional information for setting values are enclosed by ( ). Example: {VOL(CU:LDEV),Result}={0x00:0x01,Error(*xxxx-yyyy*)}

Note:

- If there is an item that is not specified when entering commands or performing operations, a hyphen (-) is output for its setting value, no setting value is output, or the index itself is not output.
- For audit logs generated by commands sent from hosts, computers using CCI, or hosts using Business Continuity Manager, if an invalid value is specified when entering commands, numerical characters might be output in the index for character strings and vice versa.
- For audit logs generated by events related to encryption keys, if an audit log to be output contains invalid values, numerical characters might be output in the index for character strings or nothing is output for detailed information.
- For audit logs output in Audit log information file 2 (DKC), values different from the specified ones might be output because optimal values might be automatically assigned in DKC.

Detailed information format 2

Example:

```
+{Alus[0]{
  Id="60-06-0E-81-30-76-D9-30-76-D9-00-00-00-00-00-49",
  Result=Normal end,LdevId=0x00:0x00:0x49}}
```

Note: Line feeds are added to make the example easy to see, while no line feed is added to the actual logs.

Symbol	Definition
+ and -	'+' or '-' is displayed 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 one.
{ }	The tiering relation is indicated by the following format. *Parent setting item*{*Child setting item 1*, *Child setting item 2*{*Grandchild setting item 2-1*, *Grand child setting item 2-2*,...},...}
=	Connects an index and a setting value.
[*x*]	For the log output by the command or operation in which multiple resources or items of the same type can be set at one time, the resource or item of the same type is indicated as follows. *Setting item*[*x*] (where *x* is a number: 0, 1, 2,...)

Note: If there is an item that is not specified when entering commands or performing operations, "null" is output for its setting value, or the index itself is not output.

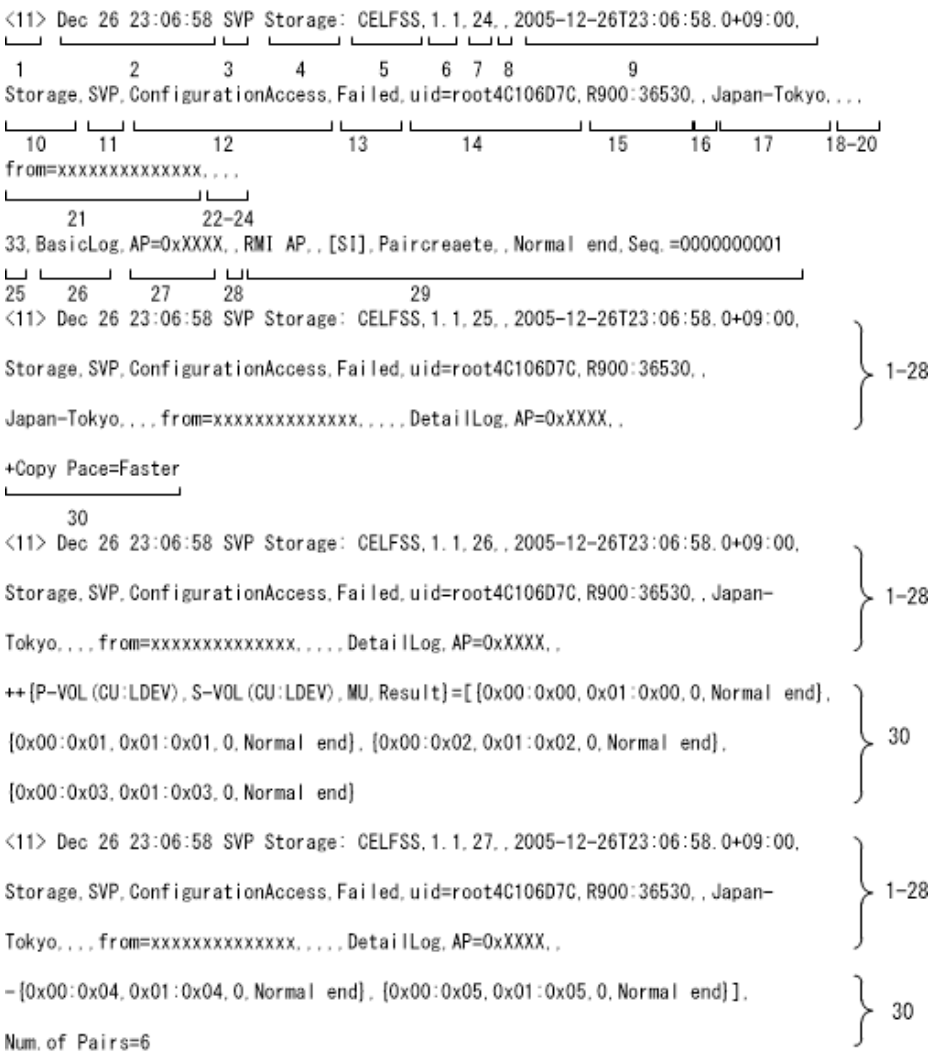
Log output formats for different versions

Version number	Changes
0901	The log output format for DKCMAIN program version 90-00-0*x*-*xx*/*xx* (*xx* is a two-digit number.) or later.

Syslog file format

Syslog file format (RFC3164-compliant)

The following figure shows a sample syslog file.



Either item 29 or item 30 is output in one syslog information.

No.	Item	Description
1	Priority	The priority of an item in the syslog file is determined according to the following formula, enclosed by brackets (< >): *Priority* = 8 × *Facility* + *Severity* *Facility* is 1 (fixed). *Severity* depends on the type of log information: ▪ 4: Error or Warning. Error means that the operation has ended abnormally. Warning means that the operation has partly ended abnormally or was canceled during the operation. ▪ 6: Informational. The operation has ended normally.

No.	Item	Description
		For example, if *Severity* is 4 (Error), <12> is output as the priority value.
2	Date, time*	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). If *DD* is a single digit (for example, 1), it is displayed as " 1" (with a blank space before "1") and not as "01".
3	Detected location	The host name (SVP)
4	Program name	The detection entity identifier (Storage)
5	Unified specification identification	The Unified specification identifier (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*	The date, time and the time difference between UTC and the local time in the format of "*YYYY-MM-DD*T*hh*:*mm*:*ss*.*s*±*hh*:*mm*" ▪ *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 and the local time, such as "2005-12-26T23:06:58.0Z".
10	Detection entity	The detection entity identifier (Storage)
11	Detected location	The host name (SVP)
12	Type of audit event	The category name of the event ▪ Authentication: Authentication, for example, for RMI ▪ ConfigurationAccess: Setting from Device Manager - Storage Navigator, SVP, host, CCI, or Business Continuity Manager ▪ Maintenance: SVP operations ▪ AnomalyEvent: The Audit Log reached the maximum, and so on. ▪ ExternalService: Remote maintenance operations through SVP

No.	Item	Description
13	Result of audit event	▪ 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. "*xxxx-yyyyy*" indicates error codes and it is output only for Device Manager - Storage Navigator operations.
14	Subject identification	The user name in the format of "uid=user name" ▪ <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	The ID (R900) to identify the model name of the product and the serial number (five-digit number: 00001 to 99999) divided by a colon (for example, "R900:312334")
16	Generated location	No output
17	Related information	The location identification name set by the user in the Syslog tab on the **Edit Audit Log Settings** window
18		No output
19		No output
20	Agent information	No output
21	Detailed information	Identification of the host sending the request This information is output when a command is received from the host unless it is FC-SP authentication.
22		No output
23		No output
24		No output
25		Collective operation identifier. This is a serial number that identifies those multiple lines displayed by one operation are the same operation. This information is output only if the log type information is "BasicLog" and the category name is other than "AnomalyEvent".

No.	Item	Description
26		Log type information: ▪ BasicLog: basic information ▪ DetailLog: detailed information No output when the category name is "AnomalyEvent".
27		Identification of the application. 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 ▪ External interface name ▪ Task name ▪ Function name ▪ Operation name or event name ▪ Parameter ▪ Result of operation or command receipt ▪ Serial number of log information Task name is output only when a task is registered using Device Manager - Storage Navigator. No parameter is output if the operation has no parameters. No serial number is output when the category name is "AnomalyEvent".
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 date and time may be output of the accumulated date and time since January 01, 1970.		

Syslog file format (RFC5424-compliant)

```
<14>1 2005-12-26T23:06:58.0+09:00 SVP Storage - - - CELFSS,1.1,24,ConfigrationAccess,
  1  2            3                4    5     6 7 8   9    10  11      12

Failed,uid=root4C106D7C,R900:36530,Japan-Tokyo,from=XXXXXXXXXXXXXX,33,BasicLog,
   13        14              15          16             17         18   19

AP=0xXXXX,SVP,xx,xx,[SI],Paircreate,,Normal end,Seq.=0000000001
    20                   21
```

```
<14>1 2005-12-26T23:06:58.0+09:00 SVP Storage - - - CELFSS,1.1,24,ConfigrationAccess,
Failed,uid=root4C106D7C,R900:36530,JapanTokyo,from=XXXXXXXXXXXXXX,,DetailLog,
AP=0xXXXX,
                                    1-20
```

```
+Copy Pace=Faster
      22
```

Either item 21 or item 22 is output in one syslog information.

No.	Item	Description
1	Priority	The priority of an item in the syslog file is determined according to the following formula, enclosed by brackets (< >): *Priority* = 8 × *Facility* + *Severity* *Facility* is 1 (fixed). *Severity* depends on the type of log information: ▪ 4: Error or Warning. Error means that the operation has ended abnormally. Warning means that the operation has partly ended abnormally or was canceled during the operation. ▪ 6: Informational. The operation has ended normally. For example, if *Severity* is 4 (Error), <12> is output as the priority value.
2	Version	The version (1)

No.	Item	Description
3	Date, time*	The date, time and the time difference between UTC and the local time in the format of "*YYYY-MM-DD*T*hh*:*mm*:*ss*.*s*±*hh*:*mm*" ▪ *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 and the local time, such as "2005-12-26T23:06:58.0Z".
4	Detected location	The host name (SVP)
5	Program name	The detection entity identifier (Storage)
6	Process name	The process name (-)
7	Message ID	The message ID (-)
8	Structured data	The structured data (-)
9	Unified specification identification	The unified specification identifier (CELFSS)
10		The revision number of the unified specification document (1.1)
11	Message identification	The serial number of the syslog header information
12	Type of audit event	The category name of the event ▪ Authentication: Authentication, for example, for RMI ▪ ConfigurationAccess: Setting from Device Manager - Storage Navigator, SVP, host, CCI, or Business Continuity Manager ▪ Maintenance: SVP operations ▪ AnomalyEvent: The Audit Log reached the maximum, and so on. ▪ ExternalService: Remote maintenance operations through SVP
13	Result of audit event	▪ 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. "*xxxx-yyyyy*" indicates error codes and it is output only for Device Manager - Storage Navigator operations.

No.	Item	Description
14	Account identification	The user name in the format of "uid=user name" ▪ <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	The ID (R900) to identify the model name of the product and the serial number (five-digit number: 00001 to 99999) divided by a colon (for example, "R900:312334")
16	Related information	The location identification name set by the user in the Syslog tab of the **Edit Audit Log Settings** window
17	Detailed information	Identification of the host sending the request This information is output when a command is received from the host unless it is FC-SP authentication.
18		Collective operation identifier. This is a serial number that identifies those multiple lines displayed by one operation are the same operation. This information is output only if the log type information is "BasicLog" and the category name is other than "AnomalyEvent".
19		Log type information: ▪ BasicLog: basic information ▪ DetailLog: detailed information No output when the category name is "AnomalyEvent".
20		Identification of the application. This information is output when commands are sent from the host.
21	Detailed information	The same information contained in the basic information of the audit log file ▪ External interface name ▪ Task name ▪ Function name ▪ Operation name or event name ▪ Parameter ▪ Result of operation or command receipt ▪ Serial number of log information

No.	Item	Description
		Task name is output only when a task is registered using Device Manager - Storage Navigator. No parameter is output if the operation has no parameters. No serial number is output when the category name is "AnomalyEvent".
22		The same information contained in the detailed information of the audit log file No serial number is output when the category name is "AnomalyEvent".
*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 date and time may be output of the accumulated date and time since January 01, 1970.		

Chapter 2: Using audit logs

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

Downloading audit log files

Download the audit log files to Device Manager - Storage Navigator computer to prevent the old data from being overwritten. It takes from one to five minutes to download the audit log file.

Caution: Do not download the audit log file to the Device Manager - 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 when the audit log file is manually downloaded. Download the file only when the FTP server has failed and cannot receive the audit log file. If you want to transfer the audit log to the FTP server after downloading the log, transfer it manually. See Manually transferring audit log files to FTP servers (on page 47) for more information.

Before you begin

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

Procedure

1. Click **Audit Log** on the menu bar of the Device Manager - Storage Navigator main window. The **Audit Log Properties** window opens. Each icon displayed on the menu bar indicates the accumulated status of the audit log information.
   -  indicates that the number of saved lines is below the threshold.
   -  indicates that the number of saved lines is above the threshold, but the data is still being saved.
   -  indicates that the number of saved lines has exceeded the maximum, and data is partly lost because the newest lines overwrote the oldest lines.
2. Click **Download** to open the Save As dialog box. This operation downloads both the auditlog information file 1 and the auditlog information file 2.
3. Select a destination for the file and click **Save**.
4. Click **Close** to close the Audit Log Properties window.

Downloading syslog files

Syslog files stored in the storage system can be downloaded to the Device Manager - Storage Navigator computer as necessary. It takes from one to five minutes to download the syslog file.

Note: If you download syslog files of a storage system whose controller model was upgraded, the storage system name in the Hardware identification item becomes the storage system name after upgrade.

Before you begin

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

Procedure

1. Click **Settings** > **Security** > **Edit Audit Log Settings**. Click the **Syslog** tab on the **Edit Audit Log Settings** window.
2. Select **Transfer Protocol**. The output file format is different by the selected protocol.
3. Click **Download Syslog**. The **Specify the Destination** dialog box appears.
4. Enter the destination and the file name and click **Save**.

Automatically 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.

Note: Keep a list of the items such as the IP address you entered in the FTP tab on Edit Audit Log Settings window. You may need to enter them again when an SVP is replaced.

Before you begin

- You must have Audit Log Administrator (View & Modify) role to configure FTP server settings.
- Ensure that SVP is connected to the FTP server on a LAN.

Procedure

1. Click **Settings** > **Security** > **Edit Audit log Settings**. Click the **FTP** tab on the **Edit Audit Log Settings** window.
2. Perform the following if using a primary FTP server.
   a. Select **Enable** for the Primary Server.
   b. Select **IPv4** or **IPv6** on **IP Address** setting and enter the IP address.
   c. Enter the user name and the password you use to log in to the primary FTP server.

d. Enter the output folder to which the audit log file is sent with the relative path from the home directory.

3. Perform the following if using a secondary FTP server.
   a. Select **Enable** for the Secondary Server.
   b. Select **IPv4** or **IPv6** on **IP Address** setting and enter the IP address.
   c. Enter the user name and the password you use to log in to the secondary FTP server.
   d. Enter the output folder to which the audit log file is sent with the relative path from the home directory.
4. Click **Finish**.
5. Confirm the settings from the setting confirmation window, and then enter the task name on **Task Name**.
6. Click **Apply**. The task is registered. If you select the **Go to tasks window for status** check box, the **Task** window opens.
7. Manually transfer the audit log file to confirm that the FTP server setting is correct.
   a. Check that the transfer setting task to the FTP server is complete on the **Task** window. If the task has not completed, wait until it is complete.
   b. Transfer the audit log file to the FTP server manually to confirm that the FTP server setting is correct. For details of manual transfer, see Manually transferring audit log files to FTP servers (on page 47).

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 is reported, do the following:

- Resolve the error on the FTP server or LAN, and then manually transfer the audit log file. And then complete the SIM referring to Completing SIM generated when FTP transfer of audit log files failed (on page 47).

  If the instructions in SIM is not complete, SIM will not be generated on next transfer failure.

- If the error condition cannot be resolved, download the audit log file to the Device Manager - Storage Navigator computer by clicking Audit Log on the upper right of the Device Manager - Storage Navigator main window.

Completing SIM generated when FTP transfer of audit log files failed

Before you begin

- You must have Audit Log Administrator (View & Modify) and Storage Administrator (System Resource Management) role to complete SIM.

Procedure

1. Click **Settings** > **Security** > **Edit Audit log Settings**. Click the **FTP** tab on the **Edit Audit Log Settings** window.
2. Select **Complete SIMs** check box.
3. Click **Finish**.
4. Confirm the settings from the setting confirmation window, and then enter the task name on **Task Name**.
5. Click **Apply**. The task is registered. If you select the **Go to tasks window for status** check box, the **Task** window opens.

Manually transferring audit log files to FTP servers

You can transfer the audit log file manually from the SVP to the FTP server.

Before you begin

- You must have Audit Log Administrator (View Only) or Audit Log Administrator (View & Modify) role.
- Ensure that SVP is connected to the FTP server on a LAN.
- Transfer setting to the FTP server must be finished. For how to set, see Automatically transferring audit log files to FTP servers (on page 45).

Procedure

1. Click **Settings** > **Security** > **Edit Audit log Settings**. Click the **FTP** tab on the **Edit Audit Log Settings** window.
2. Click **Transfer to Primary Server** or **Transfer to Secondary Server**. A message appears indicating that the transfer has completed.

Transferring audit log to syslog servers

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

You can select either of the following protocols to transfer the audit log to the syslog server. The output file format is different by the selected protocol.

- TLS1.2/RFC5424
- UDP/RFC3164

Note: When you use UDP/RFC3164, consider the characteristics of UDP (User Datagram Protocol) when designing a network. See http://www.ietf.org./rfc/rfc3164.txt (Request for Comments) issued by IETF (Internet Engineering Task Force) for more details.

Note: Keep a list of the items such as the IP address you entered in the Syslog tab on Edit Audit Log Settings window. You may need to enter them again when an SVP is replaced.

Before you begin

- You must have Audit Log Administrator (View & Modify) role to configure syslog server settings.
- Make sure that the storage system is connected to syslog servers on a LAN.
- Make sure that the syslog servers are configured so as to transfer audit logs to the syslog servers.
- The syslog server certificate and the client certificate are required to use TLS1.2/RFC5424.
- If you use the new syslog protocol (TLS1.2/RFC5424), you must specify, for subjectAltName or CommonName in the syslog server certificate, the host name or IP address of the syslog server.
- If you specify the host name of the syslog server as the transfer destination, you must register the host name and domain name of the syslog server in the DNS server.

Caution: If audit logs are transferred before configuring the setting of a syslog server to which the audit logs are transferred, the logs are not saved on the syslog server and lost. See the user manual of the syslog server for the details of the syslog server setting.

Procedure

1. Click **Settings** > **Security** > **Edit Audit Log Settings**. Click the **Syslog** tab on the **Edit Audit Log Settings** window.
2. Select **New Syslog Protocol (TLS1.2/RFC5424)** or **Old Syslog Protocol (UDP/RFC3164)**.
3. Select **Enable** for the Primary Server.
   a. Specify the IPv4 address, IPv6 address, or host name of the syslog server to which you want to send syslog data. To specify the host name, select **Identifier** and then enter up to 255 characters of alphabets, numerals, and symbols (! $ % - . @ _ ` ~).
   b. Enter the Port Number in the primary server setting.

c. Enter client certificate file name, password, and root certificate file name (only when you choose **New Syslog Protocol (TLS1.2/RFC5424)** at **Transfer Protocol**).

4. Perform the following if using a secondary syslog server.
   a. Select **Enable** for the Secondary Server.
   b. Specify the IPv4 address, IPv6 address, or host name .
   c. Enter the Port Number in the secondary server setting.
   d. Enter client certificate file name, password, and root certificate file name (only when you chose **New Syslog Protocol (TLS1.2/RFC5424)** at **Transfer Protocol**).
5. Enter the name of the storage system from which you are transferring the audit log file in **Location Identification Name**.
6. If **New Syslog Protocol (TLS1.2/RFC5424)** is selected for **Transfer Protocol**, specify **Timeout**, **Retry Interval**, and **Number of Retries**.
7. If you want to transfer the detailed information of audit log to the syslog server, select **Enable** for **Output Detailed Information**.
8. Click **Send Test Message to Syslog Server** to test the settings.
9. Check that the test log (function name AuditLog, operation name Send Test Message) has been sent to the syslog server.
10. Click **Finish**.
11. Confirm the settings from the setting confirmation window, and then enter the task name on **Task Name**.
12. Click **Apply**. The task is registered. If you select the **Go to tasks window for status** check box, the **Task** window opens.
13. Confirm that the syslog server is receiving the log of syslog server setting when the task has completed. The function name of the log is "AuditLog" and the operation name is "Set Syslog Server".

    If the audit log is not received by the syslog server, check whether the set IP address or host name, and port number matches the IP address or host name, and port number of the syslog server, and make sure that the setting of the client certificate, password, and the Root Certificate File Name are correct. If the settings in Device Manager - Storage Navigator are correct, make sure that the settings on the syslog server are correct. If you specify the host name of the syslog server as the transfer destination, make sure that the host name and domain name of the syslog server are registered in the DNS server. See the user manual of the syslog server for the details of the syslog server setting.

Chapter 3: Audit Log Quick reference

You can use the audit log quick reference to indicate what each log function represents.

Audit Log Functions

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

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
CPAV	Audit log functions used during Compatible PAV operations
E-MAIL	Audit log functions used during E-Mail notification operations
Information	Audit log functions used during log related operations on SVP
Install	Audit log functions used during software or firmware installation
Local Replications	Audit Log functions used during local replication operations
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 license key
PROV	Audit log functions used to provision the system
Remote Maintenance	Audit log functions used for Remote Maintenance application
Remote Replications	Audit log functions used during remote replication operations
SNMP	Audit log functions used during SNMP Agent operations
SPM	Audit log functions used during Server Priority Manager operations
Spreadsheet	Audit log functions used during External API operations

Function name	Description
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

Device Manager - Storage Navigator and SVP operation

The storage system logs operations performed from Device Manager - 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.

Function Name	Operation Name	Corresponding GUI Operation
AuditLog	Send Test Message	Sending the test log to the syslog server in the Edit Audit Log Settings window
AuditLog	Set FTP Server	Changing settings in the Edit Audit Log Settings window
AuditLog	Set Syslog Server	Changing settings in the Edit Audit Log Settings window
AuditLog	SIM Complete	SIM complete in the Edit Audit Log Settings window
ACM	AddUsersToUserGroup	Adding a user account to a user group
ACM	UpdateUserGroupAllResourceGrp	Changing the setting of all resource groups assignment for a user group
ACM	UpdateUserGroupResourceGrpBmp	Changing the resource group allocation of a user group
ACM	UpdateUserGroupRole	Changing the role allocation of a user group
ACM	UpdatePassword	Changing a password
ACM	CreateUser	Creating a new user account
ACM	CreateUserGroup	Creating a new user group
ACM	DeleteUserGroups	Deleting a user group

Function Name	Operation Name	Corresponding GUI Operation
ACM	DeleteUsers	Deleting a user account
ACM	DisableUsers	Disabling a user account
ACM	UpdateUserAuthentication	Changing settings of a user account
ACM	UpdateUserGroupName	Changing the name of a user group
ACM	EnableUsers	Enabling a user account
ACM	Release Lockout	Releasing a user account from lockout
ACM	RemoveUsersFromUserGroup	Removing a user from a user group
ACM	Set Login Message	Setting login message
ACM	Setup Server	Setting a server for the View External Authentication Server Properties
BASE	Advanced Settings	Editing advanced system settings
BASE	Automatic LDAP Password change	Changing, through the REST API, the user ID and password that are used for search or the password only
BASE	Certificate Setting	Creating a private key Creating a CSR Creating a self-signed certificate
BASE	Certificate Update	Changing settings in the Update Certificate Files window
BASE	Communication Settings	Changing the TLS communication settings
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 Hitachi Command Suite
BASE	Delete Reports	Deleting a configuration report
BASE	Delete Tasks	Deleting a task
BASE	Disable Auto Delete	Disabling Task Auto Delete function

Function Name	Operation Name	Corresponding GUI Operation
BASE	Edit Alert Setting	Setting a destination of the alert
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	Flash Disable/Enable	Disabling or enabling the function of displaying Device Manager - Storage Navigator windows by using Adobe Flash Player
BASE	Forcibly Disable SVP	Blocking the SVP forcibly
BASE	Forcibly Fail Over SVP	Failing over the SVP forcibly
BASE	HCSSO Authentication	Launching Device Manager - Storage Navigator from Hitachi Command Suite
BASE	HCSSO SetOneTimeKey	Issuing OneTimeKey from Hitachi Command Suite
BASE	Login	Log in to Device Manager - Storage Navigator or SVP
BASE	Logout	Log out from Device Manager - 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 Hitachi Command Suite
BASE	Set Up HTTP Block	Changing settings on the Set Up HTTP Blocking window
BASE	Suspend Tasks	Suspending a task
BASE	Unlock Forcibly	Cancelling lock forcibly
BASE	Update HCS Crt	Registering or deleting a certificate for Hitachi Command Suite
BASE	Update SMIS CrtFiles	Updating a digital certificate for SMI-S
BASE	Upload SMIS ConfFile	Uploading a configuration file for SMI-S

Function Name	Operation Name	Corresponding GUI Operation
BASE	WSUS Settings	Enabling and disabling Windows Server Update Services (WSUS), and setting the URL of the WSUS server, and the active hours
BASE	WindowsServerUpdateServices	Applying Security Updates to the SVP by using WSUS
CPAV	Add Alias Delete Alias	Compatible PAV
E-Mail	MailAddress Write Valid Flag Update	Settings of E-Mail notification
Information	Delete Log ORM Value SIM Complete SIM Reporting Option Threshold Value	Log-related operation on Service Processor (SVP)
Install	All Config	Maintenance on SVP
Install	Backup Config	Maintenance on SVP
Install	Dku Emulation	Maintenance on SVP
Install	FlashDrive ORM Value	Maintenance on SVP
Install	Initialize ORM Value	Maintenance on SVP
Install	Machine Install Date	Maintenance on SVP
Install	Micro Program	Maintenance on SVP
Install	NEW Installation	Maintenance on SVP
Install	Restore Config	Maintenance on SVP
Install	Set Battery Life	Maintenance on SVP
Install	Set IP Address	Maintenance on SVP
Install	Set Subsystem Time	Maintenance on SVP
Install	System Option	Maintenance on SVP
Install	System Tuning	Maintenance on SVP
Local Replication	Assign S-VOLs	Assigning secondary volumes of Thin Image pairs

Function Name	Operation Name	Corresponding GUI Operation
Local Replication	Create Pairs	Creating pairs for ShadowImage, ShadowImage for Mainframe, or Thin Image (HTI only)
Local Replication	Delete Pairs	Deleting pairs for ShadowImage, ShadowImage for Mainframe, or Thin Image
Local Replication	Edit Options	Editing options for ShadowImage or ShadowImage for Mainframe
Local Replication	Initialize	Initializing pairs for ShadowImage and ShadowImage for Mainframe
Local Replication	Release Reserved CTG	Releasing reserved consistency groups for ShadowImage for Mainframe
Local Replication	Remove S-VOLs	Removing secondary volumes of Thin Image pairs
Local Replication	Reserve CTG	Reserving consistency groups for ShadowImage for Mainframe
Local Replication	Resync Pairs	Resynchronizing pairs for ShadowImage, ShadowImage for Mainframe, or Thin Image
Local Replication	Split Pairs	Splitting pairs for ShadowImage, ShadowImage for Mainframe, or Thin Image
Local Replication	Suspend Pairs	Suspending pairs for ShadowImage or ShadowImage for Mainframe
Maintenance	Block	Maintenance from the Maintenance Utility menu
Maintenance	Block(Remove)	Maintenance from the Maintenance Utility menu
Maintenance	Block(Type Change)	Maintenance from the Maintenance Utility menu
Maintenance	Boot System SafeMode	Maintenance from the Maintenance Utility menu
Maintenance	Change SFP Type	Maintenance from the Maintenance Utility menu
Maintenance	Check Remove	Maintenance from the Maintenance Utility menu
Maintenance	DMA Restore	Maintenance on SVP

Function Name	Operation Name	Corresponding GUI Operation
Maintenance	Drive Interrupt	Maintenance on SVP
Maintenance	DRR Restore	Maintenance on SVP
Maintenance	Edit System Param	Maintenance from the Maintenance Utility menu
Maintenance	Force Rls SysLock	Maintenance from the Maintenance Utility menu
Maintenance	Install	Maintenance from the Maintenance Utility menu
Maintenance	MP Restore	Maintenance on SVP
Maintenance	Reboot GUM	Maintenance from the Maintenance Utility menu
Maintenance	Remove	Maintenance from the Maintenance Utility menu
Maintenance	Replace	Maintenance on SVP
Maintenance	Rest HUB	Maintenance from the Maintenance Utility menu
Maintenance	Restore	Maintenance from the Maintenance Utility menu and maintenance on SVP
Maintenance	Restore(Remove)	Maintenance from the Maintenance Utility menu
Maintenance	Restore(Type Change)	Maintenance from the Maintenance Utility menu
Maintenance	Set Battery Life	Maintenance on SVP
Maintenance	Size Change	Maintenance on SVP
Maintenance	Stop Copy	Maintenance from the Maintenance Utility menu
Maintenance	Switch SVP	Maintenance on SVP

Function Name	Operation Name	Corresponding GUI Operation
Maintenance	Transfer Config	Maintenance on SVP
Maintenance	Turn Off Locate LEDs	Maintenance from the Maintenance Utility menu
Maintenance	Turn On Locate LEDs	Maintenance from the Maintenance Utility menu
Monitor	Threshold	Maintenance on SVP
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
PP KEY	Enable Licenses Install Licenses Remove Licenses Update License Status	License Key
PROV	Add Hosts	▪ Adding the specified host to a host group ▪ Adding a host to the specified host group
PROV	Add LUN Paths	▪ Mapping an LU path ▪ Creating an alternate LUN path ▪ Copying the selected LUN path
PROV	Assign MP Unit	Assigning an MP unit
PROV	Block LDEVs	Blocking LDEVs
PROV	CalculateTieringMonitorData	Recalculating tier monitoring data from Hitachi Command Suite
PROV	Complete SIMs	Completing SIMs related to a pool
PROV	Create Host Groups	Creating a host group

Function Name	Operation Name	Corresponding GUI Operation
PROV	Create LDEVs	▪ 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 VDKC-Box	Creating a VDKC-Box from Hitachi Command Suite
PROV	Create/Expand Pools	▪ Creating a pool ▪ Increasing pool capacity
PROV	CreateAlus	Creating an LDEV with the ALU attribute
PROV	CreateiScsiName	Adding hosts to selected iSCSI targets
PROV	CreateiScsiPath	▪ Adding iSCSI paths to external storage systems ▪ Adding connections to remote storage systems
PROV	CreateiScsiTarget	Creating iSCSI targets
PROV	CreateParityGroups	Creating parity groups
PROV	CreateRemoteChapUser	Adding CHAP users to selected iSCSI targets
PROV	CreateSlus	Creating an LDEV with the SLU attribute from Hitachi Command Suite
PROV	CreateTiPairsWithSlu	Creating Thin Image pairs using LDEVs with the SLU attribute from Hitachi Command Suite
PROV	CreateThinProvisioningVolumes	Creating a Dynamic Provisioning virtual volume from Hitachi Command Suite
PROV	CreateTiVolumes	Creating a secondary volume for Thin Image from Hitachi Command Suite
PROV	Delete Host Groups	Deleting a host group
PROV	Delete LDEVs	▪ Deleting a basic volume ▪ Deleting an external volume ▪ Deleting a virtual volume for Dynamic Provisioning
PROV	Delete Login WWNs	Deleting an unnecessary WWN

Function Name	Operation Name	Corresponding GUI Operation
PROV	Delete LUN Paths	Removing a LUN path from an LDEV
PROV	Delete Resource Grps	Deleting a resource group
PROV	Delete VDKC-Box	Deleting a VDKC-Box from Hitachi Command Suite
PROV	DeleteAlus	Deleting an LDEV with the ALU attribute
PROV	DeleteiScsiInitiatorUser	Deleting the setting information of users with CHAP authentication on ports
PROV	DeleteiScsiName	Removing hosts from selected iSCSI targets
PROV	DeleteiScsiPath	▪ Deleting iSCSI paths to external storage systems ▪ Deleting iSCSI paths when connections cannot be added to remote storage systems
PROV	DeleteiScsiTarget	Deleting iSCSI targets
PROV	DeleteLoginiScsiName	Deleting unnecessary iSCSI names
PROV	DeleteParityGroups	Deleting parity groups
PROV	DeleteRemoteChapUser	Removing CHAP users from selected iSCSI targets
PROV	DeleteSlus	Deleting an LDEV with the SLU attribute from Hitachi Command Suite
PROV	DeleteTargetChapUser	Removing CHAP users assigned to iSCSI targets
PROV	DeleteTiVolumes	Deleting a secondary volume for Thin Image from Hitachi Command Suite
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

Function Name	Operation Name	Corresponding GUI Operation
PROV	Edit Full Allocation	Enabling or disabling the Full Allocation setting
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 External 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, TrueCopy for Mainframe, Universal Replicator, Universal Replicator for Mainframe, 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
PROV	Edit Resource Grp	Editing a resource group
PROV	Edit SCP Time	Setting a SCP (State Change Pending) time to the mainframe host
PROV	Edit Tiering Policy	Editing the tiering policy
PROV	Edit VR Attribute	Volume Retention Manager
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	EditiScsiInitiatorUser	Editing the setting information of users with CHAP authentication on ports
PROV	EditiScsiName	Editing host settings

Function Name	Operation Name	Corresponding GUI Operation
PROV	EditiScsiNickName	Editing host settings
PROV	EditiScsiTarget	Editing iSCSI target settings
PROV	EditiSNS	Editing port settings
PROV	EditPortInfo	Editing port settings
PROV	EditRemoteChapUser	Editing CHAP user settings
PROV	EditRemoteTargetUser	Editing iSCSI targets
PROV	EditT10piMode	Editing T10 PI mode settings on ports
PROV	EditTargetChapUser	Editing settings of CHAP users assigned to iSCSI targets
PROV	ExecBindingOperation	Binding or unbinding an LDEV with the SLU attribute to or from the LDEV with the ALU attribute
PROV	Expand V-VOLs	Increasing virtual volume capacity
PROV	ExpandSlus	Increasing capacity of an LDEV with the SLU attribute from Hitachi Command Suite
PROV	Force Del MF V-VOLs	Forcibly deleting a V-Vol for Dynamic Provisioning for Mainframe, Dynamic Tiering for Mainframe, or active flash for mainframe
PROV	Format LDEVs	Formatting an LDEV
PROV	Format LDEVs(H)	Formatting a LDEV using the Write to Control Blocks function
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	LdevsFenceForceRelease	Releasing the Mainframe Soft Fence/SPID Fence status forcibly
PROV	MapSecondaryVolumeWithSlu	Mapping LDEVs with the SLU attribute to the secondary volumes of Thin Image pairs from Hitachi Command Suite
PROV	Monitor Pools	Starting the performance monitoring of a pool

Function Name	Operation Name	Corresponding GUI Operation
PROV	Move Resources	▪ Adding a resource to a resource group ▪ Removing a resource from a resource group
PROV	OperateSiPairsWithSlu	Operating ShadowImage pairs using LDEVs with the SLU attribute from Hitachi Command Suite
PROV	OperateTiPairsWithSlu	Operating Thin Image pairs using LDEVs with the SLU attribute from Hitachi Command Suite
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	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	RevertTiPairsWithSlu	Reverting Thin Image pairs using LDEVs with the SLU attribute from Hitachi Command Suite
PROV	Set PageTieringLevel	Setting a tiering policy in pages
PROV	Set SSID	▪ Creating an LDEV ▪ Setting an SSID
PROV	Set Virtual LDEV	▪ Editing virtualization management settings ▪ Setting or releasing the GAD reserve attribute on a volume for the secondary volume of a global-active device pair
PROV	Shrink Pool	Decreasing pool capacity
PROV	StartParityGroupsFormat	Formatting a parity group
PROV	StopFormat	Interrupting the format task for a parity group
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

Function Name	Operation Name	Corresponding GUI Operation
PROV	Stop Shrinking Pool	Stop decreasing pool capacity
PROV	UnmapSecondaryVolume WithSlu	Unmapping the secondary volumes of Thin Image pairs using LDEVs with the SLU attribute from Hitachi Command Suite
PROV	UpdateAluaMode	▪ Editing an LDEV ▪ Creating pairs for global-active device ▪ Resynchronizing pairs for TrueCopy, TrueCopy for Mainframe, Universal Replicator, Universal Replicator for Mainframe, and global-active device ▪ Resynchronizing pairs for global-active device by the consistency group
PROV	UpdateAsymmetricAccess StatePerHG	Editing Asymmetric Access States settings
PROV	UpdateEseAttribute	Editing the ESE attribute of a DP-VOL
PROV	UpdateMFSystemFunction s	Changing settings of the Mainframe System Function
PROV	UpdateParityGroupSetting s	Enabling or disabling accelerated compression
PROV	UpdateSpareDrives	Assigning or releasing the assignment of a spare drive
PROV	VTOC	Volume Retention Manager
Remote Maintenanc e	Micro Program PS Control Reboot MP Reboot Port Reboot SVP StartVerify StopVerify Switch SVP Transfer Config	Hitachi Remote Ops

Function Name	Operation Name	Corresponding GUI Operation
Remote Replication	Add Path	Adding paths for TrueCopy, TrueCopy for Mainframe, Universal Replicator, and Universal Replicator for Mainframe on the remote storage system.
Remote Replication	Add Quorum Disk ID	Adding quorum disk IDs used by global-active device.
Remote Replication	Add RCU	Adding remote storage system settings for TrueCopy, TrueCopy for Mainframe, Universal Replicator, and Universal Replicator for Mainframe.
Remote Replication	Change JNL Option	Changing the journal option for Universal Replicator and Universal Replicator for Mainframe.
Remote Replication	Change Mirror Option	Changing the mirror option for Universal Replicator and Universal Replicator for Mainframe.
Remote Replication	Change RCU Option	Changing the remote storage system option for TrueCopy, TrueCopy for Mainframe, Universal Replicator, and Universal Replicator for Mainframe.
Remote Replication	Clear SIM	Clearing SIMs for TrueCopy for Mainframe, Universal Replicator for Mainframe, and global-active device.
Remote Replication	Create Pairs	Creating pairs for TrueCopy, TrueCopy for Mainframe, Universal Replicator, Universal Replicator for Mainframe, and global-active device.
Remote Replication	Delete Cmd.Dev	Deleting a command device for TrueCopy for Mainframe.
Remote Replication	Delete Pairs	Deleting pairs for TrueCopy, TrueCopy for Mainframe, Universal Replicator, Universal Replicator for Mainframe, and global-active device.
Remote Replication	Delete Path	Deleting paths for TrueCopy, TrueCopy for Mainframe, Universal Replicator, and Universal Replicator for Mainframe on the remote storage system.

Function Name	Operation Name	Corresponding GUI Operation
Remote Replication	Del Quorum Disk ID	Deleting quorum disk IDs used by global-active device.
Remote Replication	Delete RCU	Deleting the remote storage system setting for TrueCopy, TrueCopy for Mainframe, Universal Replicator, and Universal Replicator for Mainframe.
Remote Replication	Edit EXCTG	Creating and deleting journals on expanded consistency groups for Universal Replicator for Mainframe
Remote Replication	Edit Options	Setting the remote replica options for TrueCopy, TrueCopy for Mainframe, Universal Replicator, Universal Replicator for Mainframe, and global-active device.
Remote Replication	Edit Pair Options	Setting pair options for TrueCopy, TrueCopy for Mainframe, Universal Replicator, and Universal Replicator for Mainframe.
Remote Replication	I/O Mode Switch	Forcibly changing the I/O mode of a global-active device pair.
Remote Replication	Journal Owner	Setting the journal ownership for Universal Replicator and Universal Replicator for Mainframe.
Remote Replication	Journal Vol	Creating or deleting of journal or assigning journal volumes for Universal Replicator and Universal Replicator for Mainframe. Forcibly removing journals from expanded consistency groups for Universal Replicator for Mainframe
Remote Replication	R-Cmd.Dev.	Setting a remote command device for Universal Replicator and Universal Replicator for Mainframe.
Remote Replication	Resync Pairs	Resynchronizing pairs for TrueCopy, TrueCopy for Mainframe, Universal Replicator, Universal Replicator for Mainframe, and global-active device.
Remote Replication	Split Pairs	Split pairs for TrueCopy, TrueCopy for Mainframe, Universal Replicator, and Universal Replicator for Mainframe.

Function Name	Operation Name	Corresponding GUI Operation
Remote Replication	Suspend Pairs	Suspending pairs for global-active device.
Remote Replication	UpdateQuorumDisks	Editing the value of Read Response Guaranteed Time When Quorum monitoring has stopped for global-active device.
SNMP	UpdateSnmpSetting	Setting information related to SNMP
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 CflSet Start	Performing the CFLSET command using External API
UVM	Add External Volumes	Mapping an external volume
UVM	Assign MP Blade	Assigning an MP blade for 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
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

Function Name	Operation Name	Corresponding GUI Operation
UVM	Edit External WWNs / iSCSI Targets	▪ Editing external WWN parameters ▪ Editing external iSCSI target parameters
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
VM	Delete All Histories Del Migration Plans Migrate Volumes	Volume Migration
VPM	Edit CLPR	Creating, adding, deleting, or editing CLPR Migrating parity groups to a different CLPR
VS	Abort Shredding	Aborting shredding an LDEV
VS	End Shredding	Ending shredding an LDEV
VS	Shred LDEVs	Shredding an LDEV
XRC	Set XRC Option	Compatible XRC

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.

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 Device Manager - Storage Navigator PC

Function Name	Operation Name	Corresponding GUI Operation
	Backup Keys to File	Backing up encryption keys as a file on the Device Manager - Storage Navigator PC
	Backup Keys to Serv	Backing up encryption keys on the key management server
	Backup Keys to Serv(Auto)	Automated 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
	Delete Keys on Serv(Auto)	Deleting encryption keys backed up automatically 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 for backing up encryption keys
	Register KEK Dynamic	Configuring encryption environment settings Updating key encryption keys
	Rekey CEK	Configuring encryption environment settings

Function Name	Operation Name	Corresponding GUI Operation
		Updating certificate encryption keys
	Rekey KEK Dynamic	Updating key encryption keys Configuring encryption environment settings
	Restore Keys	Restoring encryption keys from back up copies on the key management server or the Device Manager - Storage Navigator PC
	Restore Keys fr File	Restoring encryption keys from back up copies on the Device Manager - Storage Navigator PC
	Restore Keys fr File(Forcibly)	Restoring encryption keys forcibly from back up copies on the management client
	Restore Keys fr Serv	Restoring encryption keys from back up copies on the key management server
	Restore Keys fr Serv(Forcibly)	Restoring encryption keys forcibly 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
	Succeeded Backup to Serv	Setting of succeeded backup flag
KEK Acquisition	Acquisition Key	Reacquisition of key encryption keys
	Set Key	
Key Recovery	Restore Keys fr Serv(Boot)	Restoration of encryption keys
	Set Key Blob	

Function Name	Event Name	Output Trigger
ENC	Change CEK Status	▪ When the encryption environment setting is configured from the initial setting. ▪ When the certificate encryption key is updated. ▪ When the encryption disk board is deleted or replaced.

Function Name	Event Name	Output Trigger
	Change DEK Status	▪ 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 drive (Hard disk drive, SSD, SCM, or FMD) is added, deleted or replaced after the encryption environmental 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	▪ When the encryption environment setting is configured from the initial setting. ▪ When the certificate encryption key is updated. ▪ When the encryption disk board is added or replaced.

Command sent from the host

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

A CCI command does not always correspond to a command that is output by the audit logs.

Function Name	Description
Config Command	Indicates that a configuration command was received. Not indicate the completion of the operation.
FC-SP	Indicates that the FC-SP authentication is completed.
User Auth	Indicates that a user authentication command was received. Not indicate the completion of the operation.

Function Name	Description
User Directed Space Release	Indicates that an instruction of releasing DP-VOL pages (using User Directed Space Release) was received. Not indicate the completion of the operation.

PIN Deletion Tool operation

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

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 function 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.

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 table 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.

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.

Chapter 4: Audit log examples

This topic provides examples and descriptions of the audit logs produced by each function and operation that can be performed with Device Manager - 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 the table for format changes for each version number in Log output formats for different versions (on page 35).

Audit Log Descriptions

[AuditLog] Create File

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,<system>,, [AuditLog],Create
File,SVP,Warning,,,Seq.=xxxxxxxxxx
```

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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,<system>,,
[AuditLog],DKCAuditLog was lost,,Error,,,Seq.=xxxxxxxxxx
```

[AuditLog] Over MaxLine

This information appears in the syslog file only.

Example: RFC3164

```
<14> Jan 4 06:25:18 SVP Storage: CELFSS,1.1,250001,,
2006-01-04T06:25:18.3Z,Storage,SVP,AnomalyEvent,Success,<system>,
R900:65307,,Japan-Tokyo,,,,,,,,,,,SVP,,,[AuditLog],Over MaxLine,
SVP,Normal end
```

Example: RFC5424

```
<14>1 2006-01-04T06:25:18.3Z SVP Storage - - - CELFSS,1.1,250001,
AnomalyEvent,Success,<system>,R900:65307,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: RFC3164

```
<14> Jan 4 06:25:18 SVP Storage: CELFSS,1.1,250001,,
2006-01-04T06:25:18.3Z,Storage,SVP,AnomalyEvent,Success,<system>,
R900:65307,,Japan-Tokyo,,,,,,,,,,,SVP,,,[AuditLog],Over Threshold,
SVP,Normal end
```

Example: RFC5424

```
<14>1 2006-01-04T06:25:18.3Z SVP Storage - - - CELFSS,1.1,250001,
AnomalyEvent,Success,<system>,R900:65307,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] Send Test Message

This information appears in the syslog server only.

Example: RFC3164

```
<14> Jun 20 12:28:51 SVP Storage: CELFSS,1.1,,,
2013-06-20T12:28:51.2+09:00,Storage,SVP,ConfigurationAccess,Success,
uid=maintenance,R900:65307,,Japan-Tokyo,,,,,,,,,,SVP,108,,
[AuditLog],Send Test Message,,Normal end
```

Example: RFC5424

```
<14>1 2013-06-20T12:27:18.3+09:00 SVP Storage - - - CELFSS,1.1,,
ConfigurationAccess,Success,uid=maintenance,R900:65307,Japan-Tokyo,,,,,
SVP,108,,[AuditLog],Send Test Message,,Normal end
```

[AuditLog] Set FTP Server

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[AuditLog],Set FTP Server,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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.

Item	Description
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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[AuditLog],Set Syslog Server,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Transfer Protocol=TLS1.2
+Location Identification Name=ABCDEFG
+Output Detailed Information=Enable
+Timeout=10
+Retry Interval=1
+Number of Retries=3
+{Server Type,Output,IP Version,IP Address,Port Number,
Client Certificate File Name,Root Certificate File Name,Host Flg,Host Name}=
[{Primary,Enable,IPv4,xxx.xxx.xxx.xxx,yyy,FILE1,FILE2,,},
{Secondary,Disable,,,,,,,}],Num. of Servers=2
```

Detailed Information

No detailed information is output when no setting is changed.

Item	Description
Transfer Protocol	Indicates the syslog transfer protocol. It is not output if the setting is not changed. TLS1.2: New Syslog Protocol (TLS1.2/RFC5424) UDP: Old Syslog Protocol (UDP/RFC3164)
Location Identification Name	Indicates the location identification information of the storage system. It is not output if the setting is not changed.
Output Detailed Information	Indicates whether to output the detailed information of the audit log to the syslog server. It is not output if the setting is not changed. Enable: Detailed information is output Disable: Detailed information is not output

Item	Description
Timeout	Indicates the time to detect the timeout of communication with the syslog server. It is not output if the setting is not changed.
Retry Interval	Indicates the retry interval when the communication with the syslog server fails. It is not output if the setting is not changed.
Number of Retries	Indicates the number of retries when the communication with the syslog server fails. It is not output if the setting is not changed.
Server Type	Indicates the syslog server that transfers syslog information. It is not output if the setting is not changed. Primary: Primary syslog server Secondary: Secondary syslog server
Output	Indicates whether to transfer the syslog information to the syslog server. It is not output if the setting is not changed. Enable: Syslog information is transferred Disable: Syslog information is not transferred
IP Version	Indicates the internet protocol version. It is output only when the target syslog server is specified by the IP address. It is not output if the setting is not changed. IPv6: Internet Protocol Version 6 IPv4: Internet Protocol Version 4
IP Address	Indicate the IP address of the syslog server. It is output only when the target syslog server is specified by the IP address. It is not output if the setting is not changed.
Port Number	Indicates the port number of the LAN while transferring syslog information. It is not output if the setting is not changed.
Client Certificate File Name	Indicates the client certificate file name. It is not output if the file is not uploaded.
Root Certificate File Name	Indicates the CA certificate file name. It is not output if the file is not uploaded.
Host Flg	Indicates whether the target syslog server is specified by the host name. Enable: indicates that the syslog server is specified by the host name. It is not output if the setting is not changed.
Host Name	Indicates the host name of the target syslog server. It is output only when the target syslog server is specified by the host name. It is not output if the setting is not changed.

Item	Description
Num. of Servers	Indicates the number of the servers that are set. It is not output if there are no servers that are set.

[AuditLog] SIM Complete

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[AuditLog],SIM Complete,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Reference
Code=[0x7C0300],Num. of Reference Codes=1
```

Detailed Information

Item	Description
Reference Code	The reference code of the SIM whose errors are solved or the SIM that the causes of its generation are removed.
Num. of Reference Codes	The number of the reference codes of the SIM whose errors are solved or the SIM that the causes of its generation are removed.

ACM Descriptions

[ACM] AddUsersToUserGroup

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[ACM],AddUsersToUserGroup,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{UserGroup{
  Name="Group1"},
User[0]{
  Name="User1",Result=Normal end}}
```

Detailed Information

Item		Description
UserGroup		Information of the user group to which user accounts were added
	Name	The name of the user group
User[x]		Information of the user accounts that were added to the user group
	Name	The name of each user account
	Result	Result of the operation Normal end: normal end, Error(*xxxxx-yyyyyy*): abnormal end *xxxxx*: part code, *yyyyyy*: error code

[ACM] CreateUser

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[ACM],CreateUser,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{User{
  Name="User1",Authentication=Local,
  UserGroup[0]{
    Name="Group1"},
  AccountStatus=true}}
```

Detailed Information

Item			Description
User			Information of the user account that was created
	Name		The name of the user account
	Authentication		Authentication method Locall: local authentication, External: external authentication
	UserGroup[x]		Information of the user group that the relevant user account belongs to
		Name	The name of the user group

Item		Description
	AccountStatus	The status of the user account setting true: enabled, false: disabled

[ACM] CreateUserGroup

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[ACM],CreateUserGroup,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{UserGroup{
  Name="Group1",
  Role[0]{
    Name="Role1"},
  ResourceGroupBitmap={0},AllResourceGroup=true}}
```

Detailed Information

Item			Description
UserGroup			Information of the user group that was created
	Name		The name of the user group
	Role[x]		Information of the role that was allocated to the user group
		Name	The name of the role
	ResourceGroupBitmap		The resource group ID that was allocated to the user group
	AllResourceGroup		Indicates whether all resource groups were allocated to the user group true: allocated, false: not allocated

[ACM] DeleteUserGroups

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[ACM],DeleteUserGroups,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{UserGroup[0]{
  Name="Group1",Result=Normal end}}
```

Detailed Information

Item		Description
UserGroup[x]		Information of the user groups that were deleted
	Name	The name of each user group
	Result	Result of the operation Normal end: normal end, Error(*xxxxx-yyyyyy*): abnormal end *xxxxx*: part code, *yyyyyy*: error code

[ACM] DeleteUsers

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[ACM],DeleteUsers,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{User[0]{
  Name="User1",Result=Normal end}}
```

Detailed Information

Item		Description
User[x]		Information of the user accounts that were deleted
	Name	The name of each user account
	Result	Result of the operation Normal end: normal end, Error(*xxxxx-yyyyyy*): abnormal end *xxxxx*: part code, *yyyyyy*: error code

[ACM] DisableUsers

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[ACM],DisableUsers,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{User[0]{
  Name="User1",Result=Normal end}}
```

Detailed Information

Item		Description
User[x]		Information of the user accounts that were disabled
	Name	The name of each user account
	Result	Result of the operation Normal end: normal end, Error(*xxxxx-yyyyyy*): abnormal end *xxxxx*: part code, *yyyyyy*: error code

[ACM] EnableUsers

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[ACM],EnableUsers,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{User[0]{
  Name="User1",Result=Normal end}}
```

Detailed Information

Item		Description
User[x]		Information of the user account that was enabled
	Name	The name of the user account
	Result	Result of the operation Normal end: Normal end, Error(*xxxxx-yyyyyy*): Abnormal end *xxxxx*: Part code, *yyyyyy*: Error code

[ACM] Release Lockout

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[ACM],Release Lockout,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{User Name,Result}=[{User01,Normal end}],Num. of Users=1
```

Detailed Information

Item	Description
User Name	The user name that was released from lockout
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 released from lockout

[ACM] RemoveUsersFromUserGroup

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[ACM],RemoveUsersFromUserGroup,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{UserGroup{
  Name="Group1"},
User[0]{
  Name="User1",Result=Normal end}}
```

Detailed Information

Item		Description
UserGroup		Information of the user group for which user accounts were removed
	Name	The name of the user group
User[x]		Information of the user accounts
	Name	The name of each user account
	Result	Result of the operation Normal end: normal end, Error(*xxxxx-yyyyyy*): abnormal end *xxxxx*: part code, *yyyyyy*: error code

[ACM] Set Login Message

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[ACM],Set Login Message,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+LoginMessageSentence=Login Message
```

Detailed Information

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

[ACM] Setup Server

Example 1

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[ACM],Setup Server,Disable,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

Basic Information for Example 1

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

Example 2

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[ACM],Setup Server,LDAP,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{Certificate 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
Certificate File Name	Indicates the name of certificate 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

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 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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ACM],Setup Server,RADIUS,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{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,Certificate 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
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
Certificate File Name	Indicates the name of certificate 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

Item	Description
	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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,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,Certificate File Name, Authentication Protocol,Primary Port
Number,Base DN, Search User's DN,Timeout,Retry Interval,Number of Retries, Secondary
Sever,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
Certificate File Name	Indicates the name of certificate file
Authentication Protocol	Indicates the LDAP protocol to use
Primary Port Number	Indicates the port number of the LDAP server

Item	Description
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 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

[ACM] UpdatePassword

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[ACM],UpdatePassword,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{User{
  Name="User1"}}
```

Detailed Information

Item		Description
User		Information of the user account whose password was changed
	Name	The name of the user account

[ACM] UpdateUserAuthentication

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[ACM],UpdateUserAuthentication,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{User{
  Name="User1",Authentication=Local}}
```

Detailed Information

Item		Description
User		Information of the user account for which authentication method was changed
	Name	The name of the user account
	Authentication	Authentication method Local: local authentication, External: external authentication

[ACM] UpdateUserGroupAllResourceGrp

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[ACM],UpdateUserGroupAllResourceGrp,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{UserGroup{
  Name="Group1",AllResourceGroup=true}}
```

Detailed Information

Item		Description
UserGroup		Information of the user group for which all resource groups assignment was changed
	Name	The name of the user group
	AllResourceGroup	Indicates whether all resource groups were assigned to the user group true: allocated, false: not allocated

[ACM] UpdateUserGroupName

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[ACM],UpdateUserGroupName,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{UserGroup{
  Name="Group1",NewName="Group2"}}
```

Detailed Information

Item		Description
UserGroup		Information of the user group to be updated
	Name	The name of the user group before update
	NewName	The name of the user group after update

[ACM] UpdateUserGroupResourceGrpBmp

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[ACM],UpdateUserGroupResourceGrpBmp,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{UserGroup{
  Name="Group1",ResourceGroupBitmap={0}}}
```

Detailed Information

Item		Description
User Group		Information of the user group whose resource group allocation was changed
	Name	The name of the user group
	ResourceGroupBitmap	The ID of the resource group that was allocated to the user group

[ACM] UpdateUserGroupRole

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[ACM],UpdateUserGroupRole,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{UserGroup{
  Name="Group1",
  Role[0]{
    Name="Role1"}}}
```

Detailed Information

Item			Description
UserGroup			Information of the user group whose role allocation was changed
	Name		The name of the user group
	Role[x]		Information of the role
		Name	The name of the role

BASE Descriptions

[BASE] Advanced Settings

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,Task Name,[BASE],Advanced
Settings,,Normal end,Seq.=xxxxxxxxxx
+{Option, Option Bit}=
[{Advanced System Setting, F000000000000000000000000000000000000000000000
000000000000000000000000000000000000000000000000000000000000000000000000
000000000000000000000000000000000000000000000000000000000000000000000000
000000000000000000000000000000000000000000000000000000000000000000000000}],
Num. of Modes=1024
```

Detailed Information

Item	Description
Option	Indicates the specified option

Item	Description
	Advanced System Setting: Advanced system setting of Device Manager - Storage Navigator
Option Bit	Indicates the specified option in hexadecimal.
Num. of Modes	The number of modes

[BASE] Automatic LDAP Password change

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],Automatic LDAP Password change,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[BASE] Certificate Setting

This log is output when you select creating a CSR and self-signed certificate in the tool panel.

- If you choose to create a CSR and private key: The logs shown in Example 1 and Example 2 are output.
- If you choose to create a self-signed certificate file: The logs shown in Example 1, Example 2, and Example 3 are output.

Example 1: creating a private key

```
09xx,YYYY/MM/DD,HH::MM.SS.XXX,00:00,RMI AP,uid= user-name,,
[BASE],Certificate Setting,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Create PrivateKey}=[keyType=RSA,keyLength=3072 bits]
```

Detailed information for Example 1

Item	Description
Create PrivateKey	Information regarding creation of a private key keyType: The key type of the private key keyLength: The length of the private key

Example 2: creating a CSR

```
09xx,YYYY/MM/DD,HH::MM.SS.XXX,00:00,RMI AP,uid= user-name,,
[BASE],Certificate Setting,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Create CSR}=[Country Name=JP,State or Province Name=AAAA,
Locality Name=BBBB,Organization Name=CCCC,Organization Unit Name=DDDD,
Common Name=EEEE,E-mail Address=FFFF,Optional Company Name=GGGG]
```

Detailed information for Example 2

Item	Description
Create CSR	Indicates the following information regarding creation of a CSR. ▪ Country Name ▪ State or Province Name ▪ Locality Name: The name of a city, ward, town or village ▪ Organization Name ▪ Organization Unit Name ▪ Common Name: The host name or IP address of the server ▪ E-mail Address ▪ Optional Company Name: Another name of the organization

Example 3: creating a self-signed certificate

```
09xx,YYYY/MM/DD,HH::MM.SS.XXX,00:00,RMI AP,uid= user-name,,
[BASE],Certificate Setting,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Create Self-Signed Certificate}=[days=450,hashAlgorithm=SHA384]
```

Detailed information for Example 3

Item	Description
Create Self-Signed Certificate	Information regarding creation of a self-signed certificate file days: Number of effective days hashAlgorithm: The hash algorithm of the certificate

Example 4: when creation of an archive file failed

This log is output only when archiving a private key file, CSR file, or self-signed certificate file failed.

```
09xx,YYYY/MM/DD,HH::MM.SS.XXX,00:00,RMI AP,uid= user-name,,
[BASE],Certificate Setting,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
0901,1,0000001093,+{Archive File}=[Archive Failure,Directory Path=xxxxx]
```

Detailed information for Example 4

Item	Description
Archive File	The path to the archive target location

Example 5: when deletion of a file failed

This log is output only when deleting a private key file, CSR file, or self-signed certificate file failed.

```
09xx,YYYY/MM/DD,HH::MM.SS.XXX,00:00,RMI AP,uid= user-name,,
[BASE],Certificate Setting,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
0901,1,0000001093,+{Delete File}=[Delete Failure,Directory Path=xxxx]
```

Detailed information for Example 5

Item	Description
Delete File	The path to the file that you failed to delete

[BASE] Certificate Update

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],Certificate Update,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{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] Communication Settings

Example

```
09XX,20YY/MM/DD,HH:MM:SS.xxx,00:00, RMI AP,uid=user-name,,
[BASE],Communication Settings,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+[{Change TLS Version Setting TLS1.2=true, TLS1.3=true},
{Change CipherSuites Setting TLS1.2
TLS_RSA_WITH_AES_256_CBC_SHA256=true,
TLS_RSA_WITH_AES_256_GCM_SHA384=false},
{Change CipherSuites Setting TLS1.3 TLS_AES_128_GCM_SHA256=false},
{Change Minimum KeyExchange Key Length RSA=2048 bits, DHE=2048 bits,
ECDHE=256 bits(secp256r1)},
{Change Renegotiation Setting Renegotiation=false}]
```

Detailed Information

Item	Description
Change TLS Version Setting	Indicates whether the protocol (TLS1.2 or TLS1.3) is enabled. This item is not output when the setting has not been changed. true: Enabled, false: Disabled
Change CipherSuites Setting TLS1.2	Indicates whether each of the following TLS 1.2 cipher suites is enabled. This item is not output when the setting has not been changed. ▪ TLS_RSA_WITH_AES_128_CBC_SHA ▪ TLS_RSA_WITH_AES_128_CBC_SHA256 ▪ TLS_RSA_WITH_AES_256_CBC_SHA256 ▪ TLS_RSA_WITH_AES_256_GCM_SHA384 ▪ TLS_DHE_RSA_WITH_AES_128_GCM_SHA256 ▪ TLS_DHE_RSA_WITH_AES_256_GCM_SHA384

Item	Description
	▪ TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ▪ TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 ▪ TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ▪ TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384 Either of the following statuses is output. true: Enabled, false: Disabled
Change CipherSuites Setting TLS1.3	Indicates whether each of the following TLS 1.3 cipher suites is enabled. This item is not output when the setting has not been changed. ▪ TLS_AES_128_GCM_SHA256 ▪ TLS_AES_256_GCM_SHA384 Either of the following statuses is output. true: Enabled, false: Disabled
Change Minimum KeyExchange Key Length	The set value of the minimum key length allowed for each of the following key exchange algorithms that are used during communication. This item is not output when the setting has not been changed. ▪ RSA • 2048 bit • 3072 bit • 4096 bit ▪ DHE • 2048 bit ▪ ECDHE • 256 bit (secp256r1) • 384 bit (secp384r1) • 521 bit (secp521r1)
Change Renegotiation Setting	Indicates whether renegotiation is enabled. This item is output only when TLS 1.2 is enabled. This item is not output when the setting has not been changed. Renegotiation=true: Enabled, Renegotiation=false: Disabled

[BASE] ControlPanel Backup

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],ControlPanel Backup,,Normal end, from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+{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},,{REST API
Configurations,-},{TLS Security Settings,-},{Flash Disable/Enable,Normal end},{WSUS
Settings, 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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],ControlPanel Restore,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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},,{REST API Configurations,-},
{TLS Security Settings,-},{Flash Disable/Enable,Normal end},
{WSUS Settings, 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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[BASE],Create Conf Report,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI
AP,uid=user-name,,[BASE],Delete CVAE Info,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[BASE],Delete Reports,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{FolderName,Result}=[{XXXXXXXXX,Normal end},{XXXXXXXXX,Normal end},
{XXXXXXXXX,Normal end},
-{XXXXXXXXX,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, *yyyyy*: error code
Num. of Reports	The number of deleted configuration reports

[BASE] Delete Tasks

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],Delete Tasks,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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, *yyyyy*: error code
Num. of Tasks	The number of deleted tasks

[BASE] Disable Auto Delete

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],Disable Auto Delete,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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, *yyyyy*: error code
Num. of Tasks	Number of the target tasks.

[BASE] Edit Alert Setting

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[BASE],Edit Alert Setting,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Notification
Alert=Host Report
```

Detailed Information

Item	Description
Notification Alert	Indicates the type of notification Host Report: SIMs with host reports, all: All SIMs

[BASE] Edit SIM Syslog Serv

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
TaskName,[BASE],Edit SIM Syslog Serv,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Transfer Protocol=TLS1.2 +Location Identification Name=ABCDEFGHIJK
+Timeout=10 +Retry Interval=1 +Number of Retries=3
+{Server Type,SIM Transfer,IP Version,IP Address,Port Number,
Client Certificate File Name,Root Certificate File Name,Host Flg,Host Name}
=[{Primary,Enable,IPv4,xxx.xxx.xxx.xxx,yyy,FILE1,FILE2,,},
{Secondary,Disable,,,,,,,}],Num. of Servers=2
```

Detailed Information

Item	Description
Transfer Protocol	Indicates the syslog transfer protocol. TLS1.2: New Syslog Protocol (TLS1.2/RFC5424) UDP: Old Syslog Protocol (UDP/RFC3164)
Location Identification Name	Indicates the location identification information of the storage system.
Timeout	Indicates the time to detect the timeout of communication with the syslog server. It is not output if the syslog transfer protocol is UDP.

Item	Description
Retry Interval	Indicates the retry interval when the communication with the syslog server fails. It is not output if the syslog transfer protocol is UDP.
Number of Retries	Indicates the number of retries when the communication with the syslog server fails. It is not output if the syslog transfer protocol is UDP.
Server Type	Indicates the syslog server that notifies SIMs by syslog. Primary: Primary syslog server Secondary: Secondary syslog server
SIM Transfer	Whether to notify SIMs by syslog. Enable: SIMs are notified by syslog Disable: SIMs are not notified by syslog
IP Version	Indicates the internet protocol version. It is not output if SIMs are not notified by syslog. This item is displayed only when the IP address is specified for the destination syslog server. IPv6: Internet Protocol Version 6 IPv4: Internet Protocol Version 4
IP Address	Indicate the IP address of the syslog server. It is not output if SIMs are not notified by syslog. This item is displayed only when the IP address is specified for the destination syslog server.
Port Number	Indicates the port number of the LAN while notifying SIMs by syslog. It is not output if SIMs are not notified by syslog.
Client Certificate File Name	Indicates the client certificate file name. It is not output if the file is not uploaded.
Root Certificate File Name	Indicates the CA certificate file name. It is not output if the file is not uploaded.
Host Flg	Enable is output only when the host name is specified for the destination syslog server.
Host Name	Host name of the destination syslog server. This item is displayed only when the host name is specified for the destination syslog server.
Num. of Servers	Indicates the number of the servers that are set.

[BASE] Edit Storage System

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[BASE],Edit Storage System,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],Enable Auto Delete,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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

Item	Description
	xxxx: part code, *yyyyy*: error code
Num. of Tasks	Number of the target tasks

[BASE] Entry Tasks

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

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[BASE],Entry Tasks,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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] Flash Disable/Enable

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],Flash Disable/Enable,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Mode=Disable
```

Detailed Information

Item	Description
Mode	The setting status (disable or enable) of the function of displaying the Device Manager - Storage Navigator windows by using Adobe Flash Player

[BASE] Forcibly Disable SVP

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],Forcibly Disable SVP,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[BASE] Forcibly Fail Over SVP

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],Forcibly Fail Over SVP,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[BASE] HCSSO Authentication

Example 1: When SSO authentication is succeeded

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],HCSSO Authentication,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

Example 2: When SSO authentication failed

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],HCSSO Authentication,,Error(xxxxx-yyyyyy),
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[BASE] HCSSO SetOneTimeKey

Example 1: When authentication failed in issuance of OneTimeKey

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],HCSSO SetOneTimeKey,Authentication,Error(xxxxx-yyyyyy),
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

Example 2: When the number of registered OneTimeKeys exceeds the maximum

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],HCSSO SetOneTimeKey,OneTimeKey EntryOver,
Error(xxxxx-yyyyyy),from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
```

Basic Information

Parameter	Description
Authentication	The authentication failed in the issuance of OneTimeKey.
OneTimeKey EntryOver	The number of OneTimeKeys exceeded the maximum.

[BASE] Login

Example 1: When login succeeded

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],Login,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

Example 2: When login failed

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],Login,,Error(xxxxx-yyyyyy),
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Lockout=No
```

Detailed Information

Item	Description
Lockout	Indicates whether the user account is locked out or not Yes: Locked out, No: Not locked out

Example 3: When logged into an operation window on the Tool Panel

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],Login,,Error(xxxx-yyyy),
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Operation Name,Lockout}={Control Panel,Yes}
```

Detailed Information

Item	Description
Operation Name	Indicates which operation window that was logged in on the Tool Panel

Item	Description
Lockout	Indicates whether the user account is locked out or not Yes: Locked out, No: Not locked out When login succeeded, this item is not output.

[BASE] Logout

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],Logout,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[BASE] Release HTTP Block

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],Release HTTP Block,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{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 *xxxx*: part code, *yyyy*: error code

[BASE] Resume Tasks

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],Resume Tasks,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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, *yyyyy*: error code
Num. of Tasks	The number of target tasks

[BASE] Set CVAE Info

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],Set CVAE Info,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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 license,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 (Hitachi Command Suite)
VersionInfo	Version Information
IPAddress	Network address information (IPv4, IPv6, and network name)
RegistryDate	Time stamp of initial registration

Item	Description
LastAccessDate	Time stamp of the final access
MemoRandom	Memo space information
Num. of CVAEInfos	The number of Hitachi Command Suite messages
LicenseInfo	License information
Num. of LicenseInfos	The number of license messages

[BASE] Set Up HTTP Block

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],Set Up HTTP Block,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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

```
09xx,YYYY/MM/DD,HH:MM.SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],Suspend Tasks,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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, *yyyyy*: error code
Num. of Tasks	Number of the target tasks

[BASE] Unlock Forcibly

Example

```
09xx,YYYY/MM/DD,HH:MM.SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],Unlock Forcibly,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[BASE] Update HCS Crt

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],Update HCS Crt,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Mode=Set
```

Detailed Information

Item	Description
Mode	The type of the operation Delete: Deletion of the certificate for Hitachi Command Suite Set: Registration of the certificate for Hitachi Command Suite

[BASE] Update SMIS CrtFiles

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],Update SMIS CrtFiles,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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-yyyyy*): Abnormal end *xxxx*: part code, *yyyyy*: error code

[BASE] Upload SMIS ConfFile

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],Upload SMIS ConfFile,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{File Name,Result}=[{array-setting-01.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-yyyyy*): Abnormal end *xxxx*: part code, *yyyyy*: error code

[BASE] WindowsServerUpdateServices

This log is output when Windows Server Update Services (WSUS) installs Security Updates on the SVP.

Example 1: when installation is successful

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,<system>,,[BASE],WindowsServerUpdateServices,,
Normal end,,,Seq.=xxxxxxxxxx
+Result=Installation Successful: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

Example 2: when installation fails

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,<system>,,[BASE],WindowsServerUpdateServices,
, Error,,,Seq.=xxxxxxxxxx
+Result=Installation Failure: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

Detailed Information for Examples 1 and 2

Item	Description
Result	Result of installation of Security Updates

[BASE] WSUS Settings

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[BASE],WSUS Settings,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{WSUS Settings}=[WSUS=Enable,Server URL=http://wsus.example.com,Active Start=HH,
Active End=HH]
```

Detailed Information

Item	Description
WSUS	Whether the WSUS function is enabled Enable: Enabled, Disable: Disabled
Server URL	URL of the WSUS server If this item is not set, a blank is output.
Active Start	Start time of the active hours *HH*: Start time in hours (00 to 23)
Active End	End time of the active hours *HH*: End time in hours (00 to 23)

Compatible PAV Descriptions

[CPAV] Add Alias

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[CPAV],Add Alias,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +LDKC=0x00,CU=0x00
++{Alias LDEV,Base LDEV}=[{0xFD,0x00},{0xFE,0x00},{0xFF,0x01}], Num. of Alias
LDEVs=3 +LDKC=0x00,CU=0x01 ++{Alias LDEV,Base LDEV}=[{0xFF,0x00}],Num. of Alias
LDEVs=1 +Num. of Alias LDEVs=4
```

Detailed Information

Item	Description
LDKC	Indicates LDKC number containing the alias device and the base device
CU	Indicates CU number containing the alias device and the base device
Alias LDEV	The alias device number allocated to the CU number indicated in CU of the index
Base LDEV	The base device number allocated to the CU number indicated in CU of the index
Num. of Alias LDEVs	The number of alias devices allocated to the CU number indicated in CU of the index
Num. of Alias LDEVs	The number of alias devices allocated to all CU numbers indicated in CU of the index

[CPAV] Delete Alias

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMIAP,uid=user-name,,
[CPAV],Delete Alias,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +LDKC=0x00,CU=0x00
++{Alias LDEV,Base LDEV}=[{0xFD,0x00},{0xFE,0x00},{0xFF,0x01}], Num. of Alias
LDEVs=3 +LDKC=0x00,CU=0x01 ++{Alias LDEV,Base LDEV}=[{0xFF,0x00}],Num. of Alias
LDEVs=1 +Num. of Alias LDEVs=4
```

Detailed Information

Item	Description
LDKC	Indicates LDKC number containing the alias device and the base device
CU	Indicates CU number containing the alias device and the base device
Alias LDEV	The alias device number allocated to the CU number indicated in CU of the index
Base LDEV	The base device number allocated to the CU number indicated in CU of the index
Num. of Alias LDEVs	The number of alias devices allocated to the CU number indicated in CU of the index
Num. of Alias LDEVs	The number of alias devices allocated to all CU numbers indicated in CU of the index

E-Mail Descriptions

[E-Mail] MailAddress Write

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,RMI AP,uid=user-name,,
[E-Mail],MailAddress Write,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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.

Item	Description
	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 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 displayed destination mail addresses. The displayed mail addresses may not have an account setting.

[E-Mail] Valid Flag Update

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[E-Mail],Valid Flag Update,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+MailNoticeSetting=Enable
```

Detailed Information

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

Information Descriptions

[Information] Delete Log

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,SVP,uid=user-name,,
[Information],Delete Log,SIM,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

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
Incident	Record of a deleted Incident log
HTP	Record of a deleted HTP 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 the HDD

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,SVP,uid=user-name,,
[Information],ORM Value,Alter,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+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=[HDD000-01,HDD000-02],Num. of PDEVs=2
```

Example 2: changing the threshold of the SSD when drive type is SLxxx-MxxxSS/ SNxxx-RxxxNC/SPxxx-YxxxNC

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,SVP,uid=user-name,,[Information],ORM Value,Alter,
Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Type=Total
+{Total Defect Count,Used Endurance Indicator}={160000,(99,90)}
++PDEV=[HDD000-03],Num. of PDEVs=1
```

Example 3: changing the threshold of the SSD when drive type is other than the ones in Example 2

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,SVP,uid=user-name,,[Information],ORM Value,Alter,
Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Type=Total
+{Total Defect Count}={15}
++PDEV=[HDD000-01,HDD000-02],Num. of PDEVs=2
```

Example 4: changing the threshold of the FMD when drive type is NFHxx-Pxxxxx

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,,
[Information],ORMValue,Alter,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+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=[HDD000-03],Num. of PDEVs=1
```

Example 5: changing the threshold of the FMD when drive type is NFHxx-Qxxxxx

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,,[Information],ORM Value,Alter,
Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Type=Today
+{Total Defect Count,Reboot Error,DMA Error,Memory Error, Uncorrected Error,Used
Endurance
Indicator,Capacitor Error}= {0,2,10,500,512,(0,0),1}
++PDEV=[HDD000-03],Num. of PDEVs=1
```

Example 6: Error Reset

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,SVP,uid=user-name,,[Information],ORM Value,Error
Reset,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+PDEV=HDD000-01
```

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
FMD Battery Life Indicator	The threshold of the FMD Battery Life Indicator
Capacitor Error	The threshold of the Capacitor Error

Item	Description
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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,SVP,uid=user-name,,
[Information],SIM Complete,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+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 SIM reference codes whose error and service request are resolved.

[Information] SIM Reporting Option

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,,
[Information],SIM Reporting Option,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +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,

Item	Description
	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
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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,SVP,uid=user-name,,
[Information],Threshold Value,Alter,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+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.), Drive response late,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),0,6,6,12,12}
++PDEV=[HDD000-01,HDD000-02],Num. of PDEVs=2
```

Example 2

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,,
[Information],Threshold Value,Error Reset,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+PDEV=HDD000-01
```

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
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
Drive response late	The threshold of the Drive response late
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

Item	Description
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] All Config

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,SVP,uid=user-name,,[Install],All Config,,Normal
end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,,
[Install],Backup Config,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Ver.=xx-xx-xx/xx
```

Detailed Information

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

[Install] Dku Emulation

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,SVP,uid=user-name,,
[Install],Dku Emulation,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Type=3390-3A
++LDEV(LDKC:CU:LDEV)=[0x00:0x00:0x02,0x00:0x00:0x03], Num. of LDEVs=2
+Type=3390-3B
++LDEV(LDKC:CU:LDEV)=[0x00:0x00:0x04,0x00:0x00:0x05], Num. of LDEVs=2
+Num. of Emulation Types=2
```

Detailed Information

Item	Description
Type	The emulation type
LDEV(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers where the emulation type is changed
Num. of LDEVs	The number of logical volumes where the emulation type is changed
Num. of Emulation Types	The number of emulation types

[Install] FlashDrive ORM Value

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,,
[Install],FlashDrive ORM Value,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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

Item	Description
Warning SIM	The warning SIM threshold of flash drive
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] Initialize ORM Value

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,SVP,uid=user-name,,
[Install],Initialize ORM Value,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[Install] Machine Install Date

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,SVP,uid=user-name,,
[Install],Machine Install Date,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+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] Micro Program

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,,[Install],
Micro Program,,Normal end,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Micro Media=Media
+Exchange How=Online
+Reboot Grp.=By 1/4 per System
+{Micro Kind,Old Ver,New Ver}=[{DKCMAIN,9000000050,9000000060},
```

```
{SVP,90005005,90006005}],Num. of Kinds=2
+Forcibly update the micro-program regardless of the operating status of
processors=Disable
+Forcibly run without safety checks=Disable
+Forcibly upload the micro-program=Disable
+Forcibly update the micro-program even if the update results in version
downgrade=Disable
```

Detailed Information

Item	Description
Micro Media	The media which the microcode to be exchanged is stored (Media, SVP Local Drive, 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 per System, By 1/4 per System, By 1/8 per System, or By One per DKC). 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
Forcibly update the micro-program regardless of the operating status of processors	Indicates whether the option for ignoring the MP usage rate is enabled (Enable or Disable).
Forcibly run without safety checks	Indicates whether the option for forcibly avoiding the prior check is enabled (Enable or Disable).
Forcibly upload the micro-program	Indicates whether the option for forcibly transferring the microcode is enabled (Enable or Disable).
Forcibly update the micro-program even if the update results in version downgrade	Indicates whether the option for forcibly downgrading the microcode is enabled (Enable or Disable).

[Install] NEW Installation

The audit log files in Example 1 and Example 2 are output when a NEW Installation operation (which installs a new version of configuration information) is performed by using the SVP. However, the audit log file in Example 2 is not output if a NEW Installation operation is suspended before installation is performed.

Example 1

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,,[Install],
NEW Installation,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{New Ver.}={xx-xx-xx/xx}
```

Detailed Information for Example 1

Item	Description
New Ver.	The new version number for the configuration information

Example 2

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,,[Install],
NEW Installation,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Mode=Auto Define Configuration
+Object=All Microprograms,Configuration
```

Detailed Information for Example 2

Item	Description
Mode	The type of installation
Object	The type of the selected firmware

[Install] Restore Config.

The audit log files in Example 1 and Example 2 are output when the Restore Configuration operation is performed by using an SVP. However, the audit log file in Example 2 is not output if the Restore Configuration operation is suspended before the Define Configuration and Install operation is performed.

Example 1

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,[Install],
Restore Config,,Normal end,uid=maintenance,,
```

```
from=xxxx:xxxx:xxxx:xxxx,xxxxxxxxxx,,x,xxxxxxxxxx,xxxxxxxxxx,,
x,xxxxxxxxxx,
+{New Ver.,Old Ver.}={xx-xx-xx/xx,xx-xx-xx/xx}
```

Detailed Information for Example 1

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

Example 2

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,[Install],
Restore Config,,Normal
end,uid=maintenance,,from=xxxx:xxxx:xxxx:xxxx,xxxxxxxxxx,,x,xxxxxxxxxx,xx
xxxxxxxx,, x,
xxxxxxxxxx, +Mode=Restore Configuration
x,xxxxxxxxxx,+Object=Configuration
```

Detailed Information for Example 2

Item	Description
Mode	The type of installation
Object	The type of the selected firmware

[Install] Set Battery Life

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,,
[Install],Set Battery Life,,Normal end, from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Use Battery Life=Valid +{Battery,Date,Remained Life}=[{BATTERY-1BA,YYYY/MM/DD,990},
{BATTERY-2BA,YYYY/MM/DD,990}],Num. of Batteries=2
```

Detailed Information

Item	Description
Use Battery Life	The status of Battery life function set.

Item	Description
	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 IP Address

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,SVP,uid=user-name,,
[Install],Set IP Address,SVP and DKC,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{IPAddress,Subnet Mask}={(123.456.789.123),(255.255.255.255)} +Use Duplex=Valid +Svp
Kind=Master SVP
+IPv4=Valid +IPv6=Valid
+{M-SVP IPv4(IPAddress,Subnet Mask), IPv6(IPAddress,Subnet Prefix length)}
={((111.222.333.444),(255.255.255.255)),((1111:2222:3333:4444:5555:6666:7777:8888),
(64))}
+{S-SVP IPv4(IPAddress,Subnet Mask), IPv6(IPAddress,Subnet Prefix length)}
={((555.666.777.888),(255.255.255.255)),
((9999:AAAA:BBBB:CCCC:DDDD:EEEE:FFFF:0000),(64))}
```

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
Use Duplex	Indicates whether the Duplex setting in SVP is valid or invalid

Item	Description
	Valid: Valid, Invalid: Invalid
SVP Kind	The kind of duplicated SVP Master SVP: Master SVP, Standby SVP: Standby SVP.
IPv4	The status of IPv4 Valid: enabled, Invalid: disabled
IPv6	The status of IPv6 Valid: enabled, Invalid: disabled
M-SVP IPv4(IPAddress,Subnet Mask) IPv6(IPAddress,Subnet Prefix length)	Master SVP details are provided in the format described below IPv4 (IPAddress: IP address, Subnet Mask: Subnet mask) IPv6 (IPAddress: IP address, Subnet Prefix length: The value of subnet prefix)
S-SVP IPv4(IPAddress,Subnet Mask) IPv6(IPAddress,Subnet Prefix length)	Standby SVP details are provided in the format described below IPv4 (IPAddress: IP address, Subnet Mask: Subnet mask) IPv6 (IPAddress: IP address, Subnet Prefix length: The value of subnet prefix)

[Install] Set Subsystem Time

Example 1: The case of TOD Change

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,SVP,uid=user-name,,
[Install],Set Subsystem Time,TOD Change,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Time=YYYY/MM/DD
HH:mm:SS
```

Example 2: The case of Synchro. Infor.

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,,
[Install],Set Subsystem Time,Synchro. Infor.,Normal end, from=xxx:xxx:xxx:xxx,,
Seq.=xxxxxxxxxx
+Use Synchro.=Valid +{Server priority,SNTP IP/Host,SNTP Port,Time Zone}= [{Priority
one,(123.456.789.123),100,Tokyo Standard Time}], Num. of Servers=1 +Check Time=23
+Create SIM=ON
```

Example 3: The case of Change time zone

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,SVP,uid=user-name,,
[Install],Set Subsystem Time,Change time zone,Normal end,
from=xxx:xxx:xxx:xxx,,Seq.=xxxxxxxxxx
+{Time Zone,DST}={(UTC+09:00) Osaka Sapporo Tokyo,Invalid}
```

Basic Information

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

Detailed Information for Example 1

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).

Detailed Information for Example 2

Item	Description
Use Synchro.	Indicates whether the time correction function is valid or invalid Valid: Enable, Invalid: Disable
Server priority	The SNTP server priority
SNTP IP/Host	The IP address (IPv4 or IPv6) or host name of the SNTP server Commas that are input in the host name by a user are indicated with spaces.
SNTP Port	The port number used by the SNTP server
Time Zone	The specified time zone
Num. of Servers	The number of SNTP servers that are set
Check Time	The time when the time correction function is executed. Only HH (Hour: 00 to 23) is indicated for the execution time.

Item	Description
Create SIM	Indicates whether the SIM was created or not when the setting of time correction failed ON: Created, OFF: Not created

Detailed Information for Example 3

Item	Description
Time Zone	The specified time zone Commas included in the setting value are not indicated.
DST	Indicates whether the daylight saving time adjustment is valid or invalid Valid: Enable, Invalid: Disable

[Install] System Option

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,SVP,uid=user-name,,
[Install],System Option,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+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
```

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.
Disk Copy Pace	Indicates the setting status of Disk Copy Pace. Slower: Low speed, Medium: Medium speed, Faster: High speed

Item	Description
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).
Note: Only the changed items will be output.	

[Install] System Tuning

Example

```
09xx,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.=xxxxxxxxxx
+Serial No.=64040
+WDCP=ON
```

```
+DDUMP=ON
+{Port,CU Number,Emulation}=[{1E,-,I-2107},{3E,0x00:0x10-0x00:0x1F,
I-2107},{5E,-,I-2107},{7E,-,I-2107}],Num. of Ports=4
+{LDKC:CU,LDEV,SSID}=[{0x00:0x00,0x00-0xff,0x0005}],Num. of SSIDs=1
+{TPF Enable,Number of MPLs}={ON,4096}
```

Detailed Information

Item	Description
Serial No.	The serial number
WDCP	WDCP
DDUMP	DDUMP
Port	The mounting location of the port
CU Number	Indicates the range of the CU number that the port belongs If the CU Number setting is not changed, a hyphen (-) is output.
Emulation	The emulation type
Num. of Ports	The number of ports
LDKC:CU	The LDKC number and the CU number
LDEV	The LDEV number
SSID	The storage system ID
Num. of SSIDs	The number of storage system IDs
TPF Enable	The status of TPF Function settings ON: Enabled OFF: Disabled
Number of MPLs	The allocated number of MPLs A hyphen (-) is output if the TPF Enable is OFF.

Local Replication Descriptions

[Local Replication] Assign S-VOLs

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[Local Replication],Assign S-VOLs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+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},
{0xX:0xAA:0xBB,0xY:0xCC:0xDD,0,,SnapshotSet2,Error(xxxx-yyyyy)}], Num. of
Pairs=2
```

Detailed Information

Item	Description
Copy Type	The copy type of this operation TI: Thin Image
P-VOL (LDKC:CU:LDEV)	The LDKC number, the CU number and the LDEV number of the primary volume
S-VOL (LDKC:CU:LDEV)	The LDKC number, the CU number and the LDEV number of the assigned secondary volume No output if a secondary volume is not specified during the assigning operation.
PoolID	The pool ID of the assigned secondary volume
MU	The mirror unit number of the assigned secondary volume No output if a mirror unit number is not specified during the assigning operation.
Snapshot Group	The snapshot group name
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 pairs to which secondary volumes are assigned

[Local Replication] Create Pairs

Example 1: when the copy type is SI or SIMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[Local Replication],Create Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[Local Replication],Create Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Copy Type=TI
++{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),PoolID,MU, Snapshot Group,Cascade,Pair
Type,Result} =[{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,0,1,SnapshotSet1,Disable,
Snapshot,Normal end}, {0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,0,,SnapshotSet2,Enable,Clone,
Error(xxxx-yyyyy)}], Num. of Pairs=2
```

Detailed Information

Item	Description
Copy Type	The copy type of this operation SI: ShadowImage, SIMF: ShadowImage for Mainframe, TI: Thin Image (HTI only)
Copy Pace	The copy speed Faster: High speed, Medium; Medium speed, Slower: Low speed This item is output only when the copy type is SI or SIMF.
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 This item is output only when the copy type is SI or SIMF.
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 No output if Copy Type is TI, and a secondary volume is not specified during the pair creation operation.
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 When Copy Type is TI, the value of this item is not output if a mirror unit number is not specified while creating the pair.
Snapshot Group	The snapshot group name This item is output only when the copy type is TI.
Cascade	Indicates the cascade attribute of the created pair. Enable: Supported pair, Disable: Not supported pair

Item	Description
	This item is output only when the copy type is TI.
Pair Type	Indicates the clone attribute of the created pair. Clone: Cloned, Snapshot: Non-cloned 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, *yyyyy*: Error code
Num. of Pairs	The number of created pairs

[Local Replication] Delete Pairs

Example 1: when the copy type is SI or SIMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[Local Replication],Delete Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +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,0xYY:0xCC:0xDD,Error(xxxx-yyyyy)}], Num. of Pairs=2
```

Example 2: when the copy type is TI

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[Local Replication],Delete Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Copy Type=TI
++{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),MU,Result}
=[{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,,Normal end},
{0xX:0xAA:0xBB,0xYY:0xCC:0xDD,,Error(xxxx-yyyyy)}],Num. of Pairs=2
```

Detailed Information

Item	Description
Copy Type	The copy type of this operation SI: ShadowImage, SIMF: ShadowImage for Mainframe, 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

Item	Description
S-VOL (LDKC:CU:LDEV)	The LDKC number, the CU number and the LDEV number of the secondary volume in the deleted pair No output if Copy Type is TI, and a secondary volume is not specified during the pair creation operation.
MU	The mirror unit number of the deleted pair The index and value of this item are output only when Copy Type is TI. However, the value of this item is not output if a MU is not specified during the pair deletion operation.
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 deleted pairs

[Local Replication] Edit Options

Example 1: when the copy type is SI

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[Local Replication],Edit Options,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=SI
++Swap & Freeze=Enable,HOST I/O Performance=Enable, Reserve03=Enable,
(snip),HOST I/O priority mode1,HOST I/O priority mode2,
HOST I/O priority mode3,HOST I/O priority mode4,
HOST I/O priority mode5,(snip),
Nondisruptive Migration Data Consistency=Enable,
Display Progress Rate=Enable,(snip),
Copy Pace Ext.Slower1=Disable,Copy Pace Ext. Slower2=Disable,
Copy Pace Ext.None=Disable,Reserve23=Disable,
Quick/Steady Split Multiplexing (ShadowImage/ShadowImage for Mainframe)=Enable,
Reverse Copy Multiplexing (ShadowImage/ShadowImage for Mainframe)=Enable,(snip),
Normal Resync Multiplexing (ShadowImage/ShadowImage for Mainframe)=Enable,(snip),
Disable the alert notification of shared memory space warning=Enable,
Increase Background Copy Performance (ShadowImage/ShadowImage for Mainframe)=Enable,
Reserve32=Disable
```

Example 2: when the copy type is SIMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[Local Replication],Edit Options,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=SIMF
```

```
++Swap & Freeze=Enable,HOST I/O Performance=Enable,
FC Slower Copy1=Enable,FC
Slower Copy2=Enable,
Reserve05=Disable,(snip),HOST I/O priority mode1,
HOST I/O priority mode2, HOST I/O priority mode3,
HOST I/O priority mode4,HOST I/O priority mode5,(snip),
Nondisruptive Migration Data Consistency=Enable,
FC Ext. Slower Copy1=Enable,FC Ext. Slower Copy2=Enable,(snip),
Copy Pace Ext. Slower1=Disable,Copy Pace Ext. Slower2=Disable,
Copy Pace Ext. None=Disable,Reserve23=Disable,
Quick/Steady Split Multiplexing (ShadowImage/ShadowImage for Mainframe)=Enable,
Reverse Copy Multiplexing (ShadowImage/ShadowImage for Mainframe)=Enable,(snip),
Normal Resync Multiplexing (ShadowImage/ShadowImage for Mainframe)=Enable,(snip),
Increase Background Copy Performance (ShadowImage/ShadowImage for Mainframe)=Enable,
Reserve32=Disable
```

Detailed Information

Item	Description
Copy Type	Indicates whether this operation is for software for Open systems or Mainframe systems, which is specified by selecting a system type. SI: For software for Open systems (such as ShadowImage) SIMF: For software for Mainframe systems (such as ShadowImage for Mainframe)
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
FC Slower Copy1	Indicates whether the FC Slower Copy1 option is enabled or disabled. Enable: Enabled, Disable: Disabled This item is output only when Copy Type is SIMF.
FC Slower Copy2	Indicates whether the FC Slower Copy2 option is enabled or disabled. Enable: Enabled, Disable: Disabled This item is output only when Copy Type is SIMF.
HOST I/O priority mode1	Indicates whether the HOST I/O priority mode1 option is enabled or disabled. Enable: Enabled, Disable: Disabled

Item	Description
HOST I/O priority mode2	Indicates whether the HOST I/O priority mode2 option is enabled or disabled. Enable: Enabled, Disable: Disabled
HOST I/O priority mode3	Indicates whether the HOST I/O priority mode3 option is enabled or disabled. Enable: Enabled, Disable: Disabled
HOST I/O priority mode4	Indicates whether the HOST I/O priority mode4 option is enabled or disabled. Enable: Enabled, Disable: Disabled
HOST I/O priority mode5	Indicates whether the HOST I/O priority mode5 option is enabled or disabled. Enable: Enabled, Disable: Disabled
Nondisruptive Migration Data Consistency	Indicates whether the Nondisruptive Migration Data Consistency option is enabled or disabled. Enable: Enabled, Disable: Disabled
Display Progress Rate	Indicates whether the Display Progress Rate option is enabled or disabled. Enable: Enabled, Disable: Disabled This item is output only when Copy Type is SI.
FC Ext. Slower Copy1	Indicates whether the FC Ext. Slower Copy1 option is enabled or disabled. Enable: Enabled, Disable: Disabled This item is output only when Copy Type is SIMF.
FC Ext. Slower Copy2	Indicates whether the FC Ext. Slower Copy2 option is enabled or disabled. Enable: Enabled, Disable: Disabled This item is output only when Copy Type is SIMF.
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

Item	Description
Copy Pace Ext. None	Indicates whether the Copy Pace Ext. None option is enabled or disabled. Enable: Enabled, Disable: Disabled
Quick/Steady Split Multiplexing (ShadowImage/ ShadowImage for Mainframe)	Indicates whether the Quick/Steady Split Multiplexing (ShadowImage/ ShadowImage for Mainframe) option is enabled or disabled. Enable: Enabled, Disable: Disabled
Reverse Copy Multiplexing (ShadowImage/ ShadowImage for Mainframe)	Indicates whether the Reverse Copy Multiplexing (ShadowImage/ ShadowImage for Mainframe) option is enabled or disabled. Enable: Enabled, Disable: Disabled
Normal Resync Multiplexing (ShadowImage/ ShadowImage for Mainframe)	Indicates whether the Normal Resync Multiplexing (ShadowImage/ ShadowImage for Mainframe) option is enabled or disabled. Enable: Enabled, Disable: Disabled
Disable the alert notification of shared memory space warning	Indicates whether suppression of alert notification for SIM 603000 is enabled or disabled. Enable: Suppressed, Disable: Not suppressed This item is output only when Copy Type is SI.
Increase Background Copy Performance (ShadowImage/ ShadowImage for Mainframe)	Indicates whether the Increase Background Copy Performance (ShadowImage/ShadowImage for Mainframe) option is enabled or disabled. Enable: Enabled, Disable: Disabled
Reserve *X*	Reserved items *X* is an unused option number in the range from 1 to 32.

[Local Replication] Initialize

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[Local Replication],Initialize,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[Local Replication] Release Reserved CTG

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[Local Replication],Release Reserved CTG,,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Copy Type=SIMF
++{CTG,Result}=[{0x01,Normal end},{0x02,Normal end}, {0x03,Normal end}],Num. of
CTGs=3
```

Detailed Information

Item	Description
Copy Type	The copy type of this operation SIMF: ShadowImage for Mainframe
CTG	The CTG ID of a reserve-released consistency group
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code
Num. of CTGs	The number of consistency groups whose reserved attribute is released

[Local Replication] Remove S-VOLs

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMIAP,uid=user-name,
Task Name,[Local Replication],Remove S-VOLs,,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +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,,SnapshotSet2,Error(xxxx-yyyy)}], Num. of
Pairs=2
```

Detailed Information

Item	Description
Copy Type	The copy type of this operation TI: Thin Image

Item	Description
P-VOL (LDKC:CU:LDEV)	The LDKC number, the CU number and the LDEV number of the primary volume No output if a primary volume is not specified during the secondary volume removal operation.
S-VOL (LDKC:CU:LDEV)	The LDKC number, the CU number and the LDEV number of the removed secondary volume No output if a secondary volume is not specified during the removal operation.
PoolID	The pool ID of the removed secondary volume
MU	The mirror unit number of the removed secondary volume No output if a mirror MU is not specified during the secondary volume removal operation.
Snapshot Group	The snapshot group name
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 pairs whose secondary volumes are removed

[Local Replication] Reserve CTG

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMIAP,uid=user-name,
Task Name,[Local Replication],Reserve CTG,,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Copy Type=SIMF
++{CTG,Result}=[{0x01,Normal end},{0x02,Normal end}, {0x03,Normal end}],Num. of
CTGs=3
```

Detailed Information

Item	Description
Copy Type	The copy type of this operation SIMF: ShadowImage for Mainframe
CTG	The CTG ID of a reserved consistency group
Result	The result of the operation

Item	Description
	Normal end: Normal end, Error(*xxxx-yyyyyy*): Abnormal end *xxxx*: Part code, *yyyyyy*: Error code
Num. of CTGs	The number of reserved consistency groups

[Local Replication] Resync Pairs

Example 1: when the copy type is SI or SIMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[Local Replication],Resync Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMIAP,uid=user-name,
Task Name,[Local Replication],Resync Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +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,,Normal end},
{0xX:0xAA:0xBB,0xYY:0xCC:0xDD,,Error(xxxx-yyyyy)}],Num. of Pairs=2
```

Detailed Information

Item	Description
Copy Type	The copy type of this operation SI: ShadowImage, SIMF: ShadowImage for Mainframe, TI: Thin Image
Copy Pace	The copy speed Faster: High speed, Medium; Medium speed, Slower: Low speed This item is output only when the copy type is SI or SIMF.
Resync Type	The resynchronization type

Item	Description
	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 When Copy Type is TI, the values of the secondary volume are not output if the value of MU is output.
MU	The mirror unit number of the resynchronized pair The index and value of this item are output only when Copy Type is TI. However, the value of this item is not output if those of the secondary volume are output.
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 resynchronized pairs

[Local Replication] Split Pairs

Example 1: when the copy type is SI or SIMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMIAP,uid=user-name,
Task Name,[Local Replication],Split Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +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-yyyyy)}], Num. of Pairs=2
```

Example 2: when the copy type is TI

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
TaskName,[Local Replication],Split Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Copy Type=TI,Copy
Pace=Invalid
++{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),MU,Cascade,Pair Type, Copy Pace,Result}
=[{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,Enable,Clone,Low,Normal end},
{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,Disable,Snapshot,Error(xxxx-yyyyy)}], Num. of
Pairs=2
```

Detailed Information

Item	Description
Copy Type	The copy type of this operation SI: ShadowImage, SIMF: ShadowImage for Mainframe, TI: Thin Image
Copy Pace	The copy speed of the splited pair. Invalid: Disable, Slower: Low speed, Medium; Medium speed, Faster: High speed
Split Type	The split type Quick Split: Pair split by background copy, Steady Split: Pair split by update copy This item is output only when the copy type is SI or SIMF.
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 No output if Copy Type is TI, and a secondary volume is not specified during the pair splitting operation.
MU	The mirror unit number of the split pair The index and value of this item are output only when Copy Type is TI. However, the value of this item is not output if a MU is not specified during the pair splitting operation.
Cascade	Indicates the cascade attribute of the created pair. Enable: Supported pair, Disable: Not supported pair This item is output only when the copy type is TI and pair type is Clone.
Pair Type	Indicates the clone attribute of the created pair. Clone: Cloned, Snapshot: Non-cloned 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, *yyyyy*: Error code
Num. of Pairs	The number of split pairs

[Local Replication] Suspend Pairs

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[Local Replication],Suspend Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +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 copy type of this operation SI: ShadowImage, SIMF: ShadowImage for Mainframe
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, *yyyyy*: Error code
Num. of Pairs	The number of suspended pairs

Maintenance Descriptions

[Maintenance] Block

Example 1: blocking a CTL (including CTL L), ENC, or CFM during replacement

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Block,,Normal
end,Seq.=xxxxxxxxxx
+Location=xxx,Forcibly run without safety checks=Enable
```

Detailed Information for Example 1

Item	Description
Location	The mounting location of the CTL, ENC, or CFM to be blocked (CTLxx, ENCxxx-x, or CFM-xxx). When replacing a FAN or CM, the mounting location of the CTL to be blocked is output. (This is because the CTL on which the FAN or CM to be replaced is mounted is to be blocked.)
Forcibly run without safety checks	Indicates whether the function of forcible replacement (without running safety checks) is enabled.

Example 2: blocking a BKMF, ACLF, HIE, X-path cable, or HSNBX during replacement

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Block,,Normal
end,Seq.=xxxxxxxxxx
+Location=xxx,Forcibly run without safety checks=Enable
```

Detailed Information for Example 2

Item	Description
Location	The mounting location of the BKMF, ACLF, HIE, X-path cable, or HSNBX to be blocked (BKMF-xxx, HIE-xxx, ISWxx-x - HIE-xxx-x, or HSNBX-x)
Forcibly run without safety checks	Indicates whether the function of forcible replacement (without running safety checks) is enabled.

Example 3: blocking a CHB or DKB during replacement

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Block,,Normal
end,Seq.=xxxxxxxxxx
+Location=xxx,Forcibly block=Disable,Type=xxxxxx,
Forcibly run without safety checks=Enable
```

Detailed Information for Example 3

Item	Description
Location	The mount location of the CHB or DKB to be blocked (CHB-xxx or DKB-xxx)

Item	Description
Forcibly block	Indicates whethere the function for forcibly blocking a CHB or DKB is enabled.
Type	The unit type of the CHB or DKB to be blocked
Forcibly run without safety checks	Indicates whether the function of forcible replacement (without running safety checks) is enabled.

Example 4: blocking an HIE during replacement

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Block,,Normal
end,Seq.=xxxxxxxxxx
+Location=xxx,Forcibly block=Disable,
Forcibly run without safety checks=Enable
```

Detailed Information for Example 4

Item	Description
Location	The mount location of the HIE to be blocked
Forcibly block	Indicates whether the function for forcibly blocking an HIE is enabled.
Forcibly run without safety checks	Indicates whether the function of forcible replacement (without running safety checks) is enabled.

Example 5: blocking a drive during replacement

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Block,,Normal
end,Seq.=xxxxxxxxxx
+Location=xxx,Spare Copy=ON,Forcibly run without safety checks=Enable,
Forcibly restore the drive after replaced=Enable,
Skip DKU Inline=Enable,Skip firmware update of HDD=Disable
```

Detailed Information for Example 5

Item	Description
Location	The mount location of the drive to be blocked (HDDxxx-xx)
Spare Copy	Indicates whether data was saved to a spare drive when drives are replaced.

Item	Description
Forcibly run without safety checks	Indicates whether the function of forcible replacement (without running safety checks) is enabled.
Forcibly restore the drive after replaced	Indicates whether the function for forcibly restoring a drive when drives are replaced is enabled.
Skip DKU Inline	Indicates whether the function for skipping DKU Inline is enabled.
Skip firmware update of HDD	Indicates whether the function for skipping firmware update for a drive is enabled.

Example 6: blocking a CTL (including CTL L) for which chache memory is installed, during replacement

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Block,,Normal end,
Seq.=xxxxxxxxxx
+Cache Size=xxxxxxxx,Forcibly run without safety checks=Enable
```

Detailed Information for Example 6

Item	Description
Cache Size	The cache size of the blocked cache memory
Forcibly run without safety checks	Indicates whether the function of forcible replacement (without running safety check) is enabled.

Example 7: blocking an ISW

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Block,,Normal end,
Seq.=xxxxxxxxxx
+Location=xxx,Forcibly block=Disable,Forcibly run without safety checks=Enable
```

Detailed Information for Example 7

Item	Description
Location	The mount location of the ISW to be blocked (ISWxx)
Forcibly block	Indicates whether the function of forcibly blocking the ISW is enabled.

Item	Description
Forcibly run without safety checks	Indicates whether the function of forcible replacement (without running safety check) is enabled.

[Maintenance] Block(Remove)

Example

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,
[Maintenance],Block(Remove),,Normal end,Seq.=xxxxxxxxxx
+Cache Size=xxxxxxxx,Forcibly run without safety checks=Enable
```

Detailed Information

Item	Description
Cache Size	The cache size of the cache memory that was blocked
Forcibly run without safety checks	Indicates whether the function of forcible replacement (without running safety checks) is enabled.

[Maintenance] Block(Type Change)

Example 1: blocking a cache memory when the CM type is changed during replacement

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Block(Type
Change),,Normal end,Seq.=xxxxxxxxxx
+Cache Size=xxxxxxxx,Forcibly run without safety checks=Enable
```

Detailed Information for Example 1

Item	Description
Cache Size	The cache size of the cache memory that was blocked
Forcibly run without safety checks	Indicates whether the function of forcible replacement (without running safety checks) is enabled.

Example 2: blocking a CHB or DKB when the CHB type or DKB type is changed during replacement

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Block(Type
Change),,Normal end,Seq.=xxxxxxxxxx
+Location=xxx,Forcibly block=Disable,Type=xxxxxx,
Forcibly run without safety checks=Enable
```

Detailed Information for Example 2

Item	Description
Location	The mount location of the CHB or DKB to be blocked (CHB-xxx or DKB-xxx)
Forcibly block	Indicates whether the function for forcibly blocking a CHB or DKB is enabled.
Type	The unit type of the CHB or DKB to be blocked
Forcibly run without safety checks	Indicates whether the function of forcible replacement (without running safety checks) is enabled.

Example 3: blocking a ACLF or BKMF when the ACLF or BKMF type is changed during replacement

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Block(Type
Change),,Normal end,Seq.=xxxxxxxxxx
+Location=xxx,Type=xxxxxx,Forcibly run without safety checks=Disable
```

Detailed Information for Example 3

Item	Description
Location	The mount location of the ACLF or BKMF to be blocked (BKMF-xxx)
Type	The unit type of the ACLF or BKMF to be blocked
Forcibly run without safety checks	Indicates whether the function of forcible replacement (without running safety checks) is enabled.

Example 4: blocking a CTL when the CTL type is changed during replacement

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Block(Type
Change),,Normal end,Seq.=xxxxxxxxxx
+Location=xxx,Forcibly run without safety checks=Disable
```

Detailed Information for Example 4

Item	Description
Location	The mount location of the CTL to be blocked (CTLxx)
Forcibly run without safety checks	Indicates whether the function of forcible replacement (without running safety checks) is enabled.

[Maintenance] Boot System SafeMode

Example

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Boot System
SafeMode,,Normal end,Seq.=xxxxxxxxxx
```

[Maintenance] Change SFP Type

Example

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Change SFP
Type,System,Normal end,Seq.=xxxxxxxxxx
+Locations=[CHB-xxx,CHB-xxx,CHB-xxx],Num. of Locations=3
```

Detailed Information

Item	Description
Locations	The mount location of the CHB to be changed
Num. of Locations	The number of CHBs that was changed

[Maintenance] Check Remove

Example

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Check
Remove,,Normal end,Seq.=xxxxxxxxxx
+Drives=[HDDxxx-xx,HDDxxx-xx,HDDxxx-xx],Num of Drives=3
```

Detailed Information

Item	Description
Drives	The mount location of the drive whose removal was confirmed
Num of Drives	The number of drives whose removal was confirmed

[Maintenance] Edit System Param

Example

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Edit System Param,,Normal end,
Seq.=xxxxxxxxxx
+Auto Define Configuration Mode=Disable
```

Detailed Information

Item	Description
Auto Define Configuration Mode	The setting status of the ADC mode (Auto Define Cofiguration mode) Enable: Enabled, Disable: Disabled
A jumper used for initial installation (CEMD)	The setting status of the jumper used for initial installation Enable: Enabled, Disable: Disabled
A jumper used for a storage system boot for initial IP address settings (CEDT)	The setting status of the jumper used for a storage system boot for initial IP address settings Enable: Enabled, Disable: Disabled
A jumper used for cache memory volatilization (VOJP)	The setting status of the jumper used for cache memory volatilization Enable: Enabled, Disable: Disabled

[Maintenance] DMA Restore

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,SVP,uid=user-name,,
[Maintenance],DMA Restore,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,SVP,uid=user-name,,
[Maintenance],Drive Interrupt,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+PDEV=HDD000-00
```

Detailed Information

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

[Maintenance] DRR Restore

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,SVP,uid=user-name,,
[Maintenance],DRR Restore,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+DRR=[DRR-10],Num. of DRRs=1
```

Detailed Information

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

[Maintenance] Force Rls SysLock

Example

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Force Rls
SysLock,,Normal end,Seq.=xxxxxxxxxx
```

[Maintenance] Install

Example 1: installing a SM (shared memory)

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Install,,Normal
end,Seq.=xxxxxxxxxx
+Shared Memory Function=[xxxxxxxx,xxxxxxxx]
```

Detailed Information for Example 1

Item	Description
Shared Memory Function	The shared memory name (for all shared memories including the installed shared memories)

Example 2: installing a CHB or DKB

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Install,,Normal
end,Seq.=xxxxxxxxxx
+Location=[xxx,xxx],Type=xxxx,
Forcibly run without safety checks=Enable
```

Detailed Information for Example 2

Item	Description
Location	The mounting location of the CHB or DKB that was installed (CHB-xxx or DKB-xxx)
Type	The unit type of the CHB or DKB that was installed
Forcibly run without safety checks	Indicates whether the function of forcible replacement (without running safety checks) is enabled.

Example 3: installing a drive unit

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Install,,Normal
end,Seq.=xxxxxxxxxx
```

```
+{Location,Type}=[{DKU-xx,xxx},{DKU-xx,xxx},{DKU-xx,xxx}],
Num of Drive Units=3,Forcibly run without safety checks=Enable
```

Detailed Information for Example 3

Item	Description
Location	The mounting location of the drive unit that was installed (DKU-xx)
Type	The unit type of the drive unit that was installed
Num of Drive Units	The number of the drive units that were installed
Forcibly run without safety checks	Indicates whether the function of forcible replacement (without running safety checks) is enabled.

Example 4: installing a drive

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Install,,Normal
end,Seq.=xxxxxxxxxx
+Drives=[HDDxxx-xx,HDDxxx-xx,HDDxxx-xx],Num of Drives=3,
Forcibly run without safety checks=Enable
```

Detailed Information for Example 4

Item	Description
Drives	The mounting location of the drive that was installed
Num of Drives	The number of the drives that were installed
Forcibly run without safety checks	Indicates whether the function of forcible replacement (without running safety checks) is enabled.

Example 5: installing a DKC

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Install,,Normal
end,Seq.=xxxxxxxxxx
+DKCs=[xxx,xxx,xxx,xxx],Num. of DKCs=4
```

Detailed Information for Example 5

Item	Description
DKCs	The mounting location (DKCx) of the DKC that was installed
Num. of DKCs	The number of DKCs that were installed

Example 6: installing a CTL (including CTL L)

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Install,,Normal
end,Seq.=xxxxxxxxxx
+CTLs=[xxx,xxx]
```

Detailed Information for Example 6

Item	Description
CTLs	The mounting location (CTLxx) of the CTL that was installed

[Maintenance] MP Restore

Example

```
09xx,0,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,[Maintenance],
MP Restore,,Normal end,uid=maintenance,,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,xxxxxxxxxx,,x,xxxxxxxxxx,xxx
xxxxxxx,
+MP=[MP010-00],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] Reboot GUM

Example

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Reboot
GUM,,Normal end,Seq.=xxxxxxxxxx
+Forcibly run without safety checks=ON
```

Detailed Information

Item	Description
Forcibly run without safety checks	Indicates whether the forcible restart of a GUM was set without safegy checks.

[Maintenance] Remove

Example 1: removing a SM (shared memory)

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Remove,,Normal
end,Seq.=xxxxxxxxxx
+Shared Memory Function=[xxxxxxxx,xxxxxxxx]
```

Detailed Information for Example 1

Item	Description
Shared Memory Function	The shared memory name (all mounted shared memories including the removed shared memories)

Example 2: removing a CHB or DKB

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,GUM,,[Maintenance],Remove,,Normal
end,Seq.=xxxxxxxxxx
+Location=[xxx,xxx],Type=xxxx,
Forcibly run without safety checks=Enable,Forcibly block=Enable
```

Detailed Information for Example 2

Item	Description
Location	The mounting location of the CHB or DKB that was removed (CHB-xxx or DKB-xxx)

Item	Description
Type	The unit type of the CHB or DKB that was removed
Forcibly run without safety checks	Indicates whether the function of forcible removal (without running safety checks) is enabled.
Forcibly block	Indicates whether the function for forcibly blocking a CHB or DKB is enabled.

Example 3: removing a drive unit

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,GUM,,[Maintenance],Remove,,Normal
end,Seq.=xxxxxxxxxx
+{Location,Type}=[{DKU-xx,xxx},{DKU-xx,xxx},{DKU-xx,xxx}],
Num of Drive Units=3
```

Detailed Information for Example 3

Item	Description
Location	The mounting location of the drive unit that was removed (DKU-xx)
Type	The unit type of the drive unit that was removed
Num of Drive Units	The number of the drive units that were removed

Example 4: removing a drive

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,GUM,,[Maintenance],Remove,,Normal
end,Seq.=xxxxxxxxxx
+Drives=[HDDxxx-xx,HDDxxx-xx,HDDxxx-xx],Num of Drives=3,
Forcibly run without safety checks=Enable
```

Detailed Information for Example 4

Item	Description
Drives	The mounting location of the drive that was removed
Num of Drives	The number of drives that were removed

Item	Description
Forcibly run without safety checks	Indicates whether the function of forcible removal (without running safety checks) is enabled.

Example 5: removing a DKC

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Remove,,Normal
end,Seq.=xxxxxxxxxx
+ DKCs=[xxx,xxx,xxx,xxx],Num. of DKCs=4
+ Forcibly block=Disable
+ Forcibly run without safety checks=Enable
```

Detailed Information for Example 5

Item	Description
DKCs	The mounting location (DKCx) of the DKC that was removed
Num. of DKCs	The number of DKCs that were removed
Forcibly block	Indicates whether the function of forcibly removing DKCs is enabled.
Forcibly run without safety checks	Indicates whether the function of forcible removal (without running safety checks) is enabled.

Example 6: removing a CTL (including CTL L)

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Remove,,Normal
end,Seq.=xxxxxxxxxx
+CTLs=[xxx,xxx]
+Forcibly block=Disable
+Forcibly run without safety checks=Enable
```

Detailed Information for Example 6

Item	Description
CTLs	The mounting location (CTLxx) of the CTL that was removed
Forcibly block	Indicates whether the function of forcibly removing CTLs is enabled.

Item	Description
Forcibly run without safety checks	Indicates whether the function of forcible removal (without running safety checks) is enabled.

[Maintenance] Replace

Example 1: replacing parts

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,[Maintenance],
Replace,,Normal end,uid=maintenance,,
from==xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,xxxxxxxxxx,,x,xxxxxxxxxx,xx
xxxxxxxx,
+Parts name=SSVP0
```

Example 2: replacing PDEV (physical device)

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,,
[Maintenance], Replace,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+PDEV=HDD000-00
+Copy=Restore Data
```

Detailed Information

Item	Description
Parts name	The name of the parts (SSVPx, SVP-BASIC, SVP-OPTION, HSNPANELx, PCIADP, PCICON) specified to be replaced
Physical Device (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.

[Maintenance] Reset HUB

Example

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Reset
HUB,,Normal end,Seq.=xxxxxxxxxx
```

[Maintenance] Restore

Example 1: restoring LDEV

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,,[Maintenance],
Restore,,Normal end,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+PG=[1-1],Num. of PGs=1
```

Detailed Information

Item	Description
PDEV	The location of the PDEV to be restored
PG	The parity group number E1-1: In the case of an external volume V1-1: In the case of a virtual volume X1-1: In the 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

Example 2: restoring a CTL (including CTL L), ENC, CFM, HIE, X-path cable, HSNBX, or ISW during replacement

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Restore,,Normal
end,Seq.=xxxxxxxxxx
+Location=xxx
```

Detailed Information for Example 2

Item	Description
Location	The mounting location of the CTL, ENC, CFM, HIE, X-path cable, HSNBX, or ISW to be restored (CTLxx, ENCxxx-x, CFMxxx, HIE-xxx, ISWxx-x - HIE-xxx-x, HSNBX-x, or ISWxx). When replacing a FAN or cache memory, the mounting location of the CTL to be restored is output. (This is because the CTL on which the FAN or cache memory to be replace is mounted is restored.)

Example 3: restoring a cache memory during replacement

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Restore,,Normal
end,Seq.=xxxxxxxxxx
+Cache Size=xxxxxxxx,CFM Type for CFM010/020=xxx,CFM Type for
CFM011/021=xxx
```

Detailed Information for Example 3

Item	Description	
Cache Size	The cache size of the cache memory to be restored	
CFM Type for CFM010/020	The unit type of CFM010/020 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	Displayed when a CFM of Node0 is installed.
CFM Type for CFM011/021	The unit type of CFM011/021 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	
CFM Type for CFM110/120	The unit type of CFM110/120 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	Displayed when a CFM of Node1 is installed.
CFM Type for CFM111/121	The unit type of CFM111/121 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	
CFM Type for CFM210/220	The unit type of CFM210/220 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	Displayed when a CFM of Node2 is installed.
CFM Type for CFM211/221	The unit type of CFM211/221 that was installed	

Item	Description	
	A hyphen (-) is displayed if the unit is not changed or mounted.	
CFM Type for CFM310/320	The unit type of CFM310/320 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	Displayed when a CFM of Node3 is installed.
CFM Type for CFM311/321	The unit type of CFM311/321 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	
CFM Type for CFM410/420	The unit type of CFM410/420 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	Displayed when a CFM of Node4 is installed.
CFM Type for CFM411/021	The unit type of CFM411/021 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	
CFM Type for CFM510/520	The unit type of CFM510/520 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	Displayed when a CFM of Node5 is installed.
CFM Type for CFM511/521	The unit type of CFM511/521 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	

Example 4: restoring a CHB or DKB during replacement

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Restore,,Normal
end,Seq.=xxxxxxxxxx
+Location=xxx,Type=xxxxxx
```

Detailed Information for Example 4

Item	Description
Location	The mounting location of the CHB or DKB to be restored (CHB-xxx or DKB-xxx)
Type	The unit type of the CHB or DKB to be restored

Example 5: restoring a ACLF during replacement

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Restore,,Normal
end,Seq.=xxxxxxxxxx
+Location=xxx,Forcibly run without safety checks=Disable
```

Detailed Information for Example 5

Item	Description
Location	The mounting location of the ACLF to be restored (BKMF-xxx)
Forcibly run without safety checks	Indicates whether the function of forcible replacement (without running safety checks) is enabled.

[Maintenance] Restore(Remove)

Example

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,
[Maintenance],Restore(Remove),,Normal end,Seq.=xxxxxxxxxx
+Cache Size=xxxxxxxx,CFM Type for CFM010/020=xxx,CFM Type for
CFM011/021=xxx
```

Detailed Information

Item	Description	
Cache Size	The cache size of the cache memory to be restored	
CFM Type for CFM010/020	The unit type of CFM010/020 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	Displayed when a CFM of Node0 is installed.
CFM Type for CFM011/021	The unit type of CFM011/021 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	
CFM Type for CFM110/120	The unit type of CFM110/120 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	Displayed when a CFM of Node1 is installed.
CFM Type for CFM111/121	The unit type of CFM111/121 that was installed	

Item	Description	
	A hyphen (-) is displayed if the unit is not changed or mounted.	
CFM Type for CFM210/220	The unit type of CFM210/220 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	Displayed when a CFM of Node2 is installed.
CFM Type for CFM211/221	The unit type of CFM211/221 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	
CFM Type for CFM310/320	The unit type of CFM310/320 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	Displayed when a CFM of Node3 is installed.
CFM Type for CFM311/321	The unit type of CFM311/321 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	
CFM Type for CFM410/420	The unit type of CFM410/420 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	Displayed when a CFM of Node4 is installed.
CFM Type for CFM411/021	The unit type of CFM411/021 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	
CFM Type for CFM510/520	The unit type of CFM510/520 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	Displayed when a CFM of Node5 is installed.
CFM Type for CFM511/521	The unit type of CFM511/521 that was installed A hyphen (-) is displayed if the unit is not changed or mounted.	

[Maintenance] Restore(Type Change)

Example 1: restoring a cache memory when the CM type is changed during replacement

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Restore(Type
Change),,Normal end,Seq.=xxxxxxxxxx
+Cache Size=xxxxxxxx,CFM Type for CFM010/020=xxx,CFM Type for
CFM011/021=xxx
```

Detailed Information for Example 1

Item	Description
Cache Size	The cache size of the cache memory to be restored
CFM Type for CFM010/020	The unit type of CFM010/020 to be restored A hyphen (-) is displayed if the unit is not changed or mounted.
CFM Type for CFM110/120	The unit type of CFM110/120 to be restored A hyphen (-) is displayed if the unit is not changed or mounted.

Example 2: restoring a CHB or DKB when the CHB type or DKB type is changed during replacement

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Restore(Type
Change),,Normal end,Seq.=xxxxxxxxxx
+Location=xxx,Type=xxxxxx
```

Detailed Information for Example 2

Item	Description
Location	The mounting location of the CHB or DKB to be restored (CHB-xxx or DKB-xxx)
Type	The unit type of the CHB or DKB to be restored

Example 3: restoring a ACLF or BKMF when the ACLF or BKMF is changed during replacement

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Restore(Type
Change),,Normal end,Seq.=xxxxxxxxxx
+Location=xxx,Type=xxxxxx,Forcibly run without safety checks=Disable
```

Detailed Information for Example 3

Item	Description
Location	The mounting location of the ACLF to be restored (BKMF-xxx)
Type	The unit type of the ACLF to be restored
Forcibly run without safety checks	Indicates whether the function of forcible replacement (without running safety checks) is enabled.

Example 4: restoring a CTL when the CTL is changed during replacement

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Restore(Type
Change),,Normal end,Seq.=xxxxxxxxxx
+Location=xxx,Type=xxxxxx,BKMFType=Backup Module
```

Detailed Information for Example 4

Item	Description
Location	The mounting location of the CTL to be restored (CTLxx)
Type	The unit type of the CTL to be restored
BKMFType	The unit type of the BKMF or ACLF mounted on the CTL to be restored

[Maintenance] Set Battery Life

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

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,SVP,uid=user-name,,
[Maintenance],Set Battery Life,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Battery,Date,Remained Life}=[{BATTERY-1BA,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] Size Change

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,,
[Maintenance],Size Change,,Normal end, from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+PCB=[CACHE-1CA],Num. of PCBs=1
+SIZE=32768
```

Detailed Information

Item	Description
PCB	The mounting location of the PCB (Cache Memory (CM))
Num. of PCBs	The number of PCBs
SIZE	The cache capacity

[Maintenance] Stop Copy

Example

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Stop
Copy,,Normal end,Seq.=xxxxxxxxxx
+Location=HDDxxx-xx
```

Detailed Information

Item	Description
Location	The mounting location of the drive for which a copy operation was suspended

[Maintenance] Switch SVP

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,SVP,uid=user-name,,
[Maintenance],Switch SVP,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[Maintenance] Transfer Config

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,,
[Maintenance],Transfer Config,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[Maintenance] Turn Off Locate LEDs

Example

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Turn Off Locate
LEDs,,Normal end,
Seq.=xxxxxxxxxx
+Mode=OFF,HSNBX Locations=[HSNBX-0,HSNBX-1],Num of HSNBX Locations=2
,DKC Locations=[DKCx,DKCx,DKCx],Num of DKC Locations=3
,DB Locations=[DB-xxx,DB-xxx,DB-xxx],Num of DB Locations=3
```

Detailed Information

Item	Description
Mode	Indicates that the Locate LED is turned off.
HSNBX Locations	The mounting location of the HSN box for which the Locate LED is set to be turned off (HSNBX-x)
Num of HSNBX Locations	The number of HSN boxes for which the Locate LED is set to be turned off
DKC Locations	The mounting location of the DKC for which the Locate LED is set to be turned off (DKCx)
Num of DKC Locations	The number of DKCs for which the Locate LED is set to be turned off
DB Locations	The mounting location of the drive box for which the Locate LED is set to be turned off (DB-xxx or DB-xxx&DBxxx)
Num of DB Locations	The number of drive boxes for which the Locate LED is set to be turned off

[Maintenance] Turn On Locate LEDs

Example

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,,[Maintenance],Turn On Locate
LEDs,,Normal end,
```

```
Seq.=xxxxxxxxxx
+Mode=OFF,HSNBX Locations=[HSNBX-0,HSNBX-1],Num of HSNBX Locations=2
,DKC Locations=[DKCx,DKCx,DKCx],Num of DKC Locations=3
,DB Locations=[DB-xxx,DB-xxx,DB-xxx],Num of DB Locations=3
```

Detailed Information

Item	Description
Mode	Indicates that the Locate LED is turned on.
HSNBX Locations	The mounting location of the HSN box for which the Locate LED is set to be turned on (HSNBX-x)
Num of HSNBX Locations	The number of HSN boxes for which the Locate LED is set to be turned on
DKC Locations	The mounting location of the DKC for which the Locate LED is set to be turned on (DKCx)
Num of DKC Locations	The number of DKCs for which the Locate LED is set to be turned on
DB Locations	The mounting location of the drive box for which the Locate LED is set to be turned on (DB-xxx or DB-xxx&DBxxx)
Num of DB Locations	The number of drive boxes for which the Locate LED is set to be turned on

Monitor Descriptions

[Monitor] Threshold

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,,
[Monitor],Threshold,,Normal end,Seq.=0000000227
+{Item,Threshold,Term}=[{Cache Use Rate,50,5},
{Cache Write Pending Rate,30,10},{Cache MCU Side File Rate,70,20},
{MP Processing Rate,0,0},{Loss of Signal Count(Fibre),50,5},
{Bad Received Character Count(Fibre),30,10},
{Loss of Synchronization Count(Fibre),70,20},{Link Failure Count(Fibre),0,0},
{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),0,0},{FEC Un-correctable Count(Fibre),0,0},
{MAC CRC Error Count(iSCSI),50,5},{IP Error Packet Count(iSCSI),30,10},
{IPv6 Error Packet Count(iSCSI),0,0},
{TCP Retransmit Timer Expired Count(iSCSI),70,20},
```

```
{iSCSI Header Digest Error Count(iSCSI),80,10},
{iSCSI Data Digest Error Count(iSCSI),50,10},
{HTP/FNP Ex Multiple(FICON),0,0},{HTP/FNP Read Data Transfer Rate(FICON),0,0},
{HTP/FNP Write Data Transfer Rate(FICON),0,0},
{HTP/FNP Processing Rate(FICON),0,0},{Read Hit Rate,0,0}],
Num. of Items=25
```

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] Delete Unused WWNs

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PFM],Delete Unused WWNs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[PFM] Edit CU Monitor Mode

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PFM],Edit CU Monitor Mode,Enable,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+[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.
Num. of CUs	The number of CUs

[PFM] Edit Monitoring SW

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PFM],Edit Monitoring SW, Enable 60sec,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PFM],Edit WWN,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{Update Mode,HBA
WWN,Change WWN Name,Change HBA WWN} =[{Change HBA
WWN,0xXXXXXXXXXXXXXXXX,,0xXXXXXXXXXXXXXXXX}, {Change WWN Name,0xXXXXXXXXXXXXXXXX,
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX, }],Num. of
WWNs=2
```

Detailed Information

Item	Description
Update Mode	The changing mode of WWN.

Item	Description
	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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PFM],Edit WWN MonitorMode,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Mode,HBA WWN,WWN Name}={Add WWN,0xXXXXXXXXXXXXXXXX,
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX},
++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
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

Program Product Key (PP KEY) Descriptions

[PP KEY] Enable Licenses

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PP KEY],Enable Licenses,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{ProgramProduct[0]{P.P.Name="Compatible PAV",Result=Normal
end},Enabled=Disable}
```

Detailed Information

Item	Description
ProgramProduct[x]	The information of the program product to be enabled or disabled
P.P.Name	The name of the program product to be enabled or disabled
Result	The result of enabling or disabling the program product Normal end: Normal end, Error(*xxxxx-yyyyyy*): Abnormal end *xxxxx*: Part code, *yyyyyy*: Error code
Num. of PPs	The number of program products to be enabled
Enabled	The information of whether the program product is enabled Enable: Enabled, Disable: Disabled

[PP KEY] Install Licenses

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PP KEY],Install Licenses,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{KeyCode[0]{Key
Code="XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXX",ProgramProduct[0]{P.P.Name="Compatible FlashCopy(R)
V2",Enabled=Disable,Result=Normal end}}}
```

Detailed Information

Item	Description
KeyCode[x]	The information of the key code to be installed
Key Code	The key code used for installation
ProgramProduct[x]	The information of the program product to be installed
P.P.Name	The name of the program product to be installed
Enabled	The information of whether the program product is enabled (Enable or Disable)
Result	The check result of the installation Normal end: Normal end, Error(*xxxxx-yyyyyy*): Abnormal end *xxxxx*: Part code, *yyyyyy*: Error code

[PP KEY] Remove Licenses

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PP KEY],Remove Licenses,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{ProgramProduct[0]{P.P.Name="Compatible FlashCopy(R) V2",Result=Normal
end}
```

Detailed Information

Item	Description
ProgramProduct[x]	The information of the program product to be uninstalled
P.P.Name	The name of the program product to be uninstalled
Result	The result of uninstalling the program product Normal end: Normal end, Error(*xxxxx-yyyyyy*): Abnormal end *xxxxx*: Part code, *yyyyyy*: Error code

[PP KEY] Update License Status

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,,
[PP KEY],Update License Status,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{ProgramProduct[0]{P.P.Name="Compatible FlashCopy(R) V2"}
```

Detailed Information

Item	Description
ProgramProduct[x]	The information of the program product whose license status is to be updated
P.P.Name	The name of the program product whose license status is to be updated

Provisioning Descriptions

[PROV] Add Hosts

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],Add Hosts,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Port,HostGrpID,WWN,Nickname} =[{XX,0xXXX,0xXXXXXXXXXXXXXXXX,XXXXXXXXXXXXXXXX},
{XX,0xXXX,0xXXXXXXXXXXXXXXXX,XXXXXXXXXXXXXXXX}],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

Item	Description
Num. of WWNs	The number of registered hosts (WWN)

[PROV] Add LUN Paths

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],Add LUN Paths,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Port,HostGrpID,LUN,LDKC:CU:LDEV} =[{XX,0xXXX,XXXX,0xXX:0xXX:0xXX},
{XX,0xXXX,XXXX,0xXX:0xXX:0xXX}, {XX,0xXXX,XXXX,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] Assign MP Unit

Example

```
09xx,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.=xxxxxxxxxx
+{LDKC:CU:LDEV,MP Unit ID,Result}=[{0xXX:0xXX:0xXX,XXX,Normal end},
{0xXX:0xXX:0xXX,XXX,Normal end}],Num. of LDEVs=2
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC number, the CU number, and the LDEV number

Item	Description
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, *yyyyy*: Error code
Num. of LDEVs	The number of specified logical volumes

[PROV] Block LDEVs

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],Block LDEVs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+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] CalculateTieringMonitorData

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],CalculateTieringMonitorData,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{TieringMonitorDataOperation{ RelocationOption=Enable, Pool{ Id=2}}}
```

Detailed Information

Item	Description
TieringMonitorDataOperation	The setting information for recalculating the tier relocation using the monitoring data
RelocationOption	The setting information on the tier relocation option Disable: Tier relocation is not started. Enable: Tier relocation is immediately started. null: Tier relocation is not started.
Pool	The pool information
Id	The pool number

[PROV] Complete SIMs

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],Complete SIMs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],Create Host Groups,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

```
+{Port,HostGrpID,HostGrpName}=[{XX,0xXXX,XXXXXXXXXXXXXXXX},
{XX,0xXXX,XXXXXXXXXXXXXXXX}],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 newly added
HostGrpName	The name of the host group newly added
Num. of Host Groups	The number of host groups added

[PROV] Create LDEVs

This log information is output when you create a Thin Image (HTI only) volume or DP-VOL. When you create an internal or external volume, CreateLdev is output.

Example 1: Creating Thin Image volumes

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,Task Name,
[PROV],Create LDEVs,Snapshot,Normal end,from=xxxx:xxxx:xxxx:xxxx:xxxx:
xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Pool ID,LDKC:CU:LDEV,LDEVCapa(blocks),Emulation,CLPR,SSID,MP Blade ID,
T10 PI,Result}=
[{-,0x00:0x00:0x00,96000,OPEN-V,0,0x0004,Auto,Enable,Normal end},
{-,0x00:0x01:0x00,96000,OPEN-V,0,0x0005,Auto,Disable,Normal end}],
Num. of LDEVs=2
```

Example 2: Creating DP-VOLs

```
09xx,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.=xxxxxxxxxx
+{Pool ID,LDKC:CU:LDEV,LDEVCapa(blocks),Emulation,CLPR,SSID,MP Blade ID,
Attribute,Full Allocation,Data Direct Mapping,
Data Direct Mapped LDEV(LDKC:CU:LDEV),T10 PI,Capacity Saving,Compression Acceleration,
Result}=
[{1,0x00:0x00:0x00,96000,OPEN-V,0,0x0004,Auto,-,Enable,Enable,
0x00:0x10:0x00,Enable,Compression,Normal end},
{1,0x00:0x01:0x00,96000,OPEN-V,0,0x0005,Auto,-,Disable,Disable,
-,Disable,Disabled,Normal end}],Num. of LDEVs=2
```

Basic Information for Example 1 and 2

Item	Description
Snapshot	Operating for the Thin Image (HTI only) volumes.
Thin Provisioning	Operating for the Dynamic Provisioning virtual volumes.

Detailed Information for Example 1 and 2

Item	Description
Pool ID	The pool ID of a related pool volume For a Snapshot volume, a hyphen (-) is output, because you specify no setting about a related volume when you create V-Vols for Snapshot.
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	The emulation type of the created V-Vol
CLPR	The CLPR ID of the created V-Vol
SSID	The SSID
MP Blade ID	MP Blade ID specified for the V-Vol. When an MP Blade ID is specified automatically, "Auto" is output.
Attribute	Indicates the attribute of the created V-VOLs. TSE: TSE attribute, -: No attribute This item is output for Dynamic Provisioning volumes only.
Full Allocation	Indicates the setting status of the Full Allocation Enable: Full Allocation is enabled. Disable: Full Allocation is disabled. This item is output for Dynamic Provisioning volumes only.
Data Direct Mapping	Indicates the setting status of Data Direct Mapping for the created V-Vol Enable: Data Direct Mapping is enabled. Disable: Data Direct Mapping is disabled. This item is output for Dynamic Provisioning volumes only.

Item	Description
Data Direct Mapped LDEV(LDKC:CU:LDEV)	Indicates the LDEV ID of the pool volume with Data Direct Mapping enabled that composes a pool associated with the created V-Vol A hyphen (-) is output if Data Direct Mapping is disabled on the created V-Vol. This item is output for Dynamic Provisioning volumes only.
T10 PI	Indicates the setting status of the T10 PI attribute Enable: T10 PI is enabled. Disable: T10 PI is disabled.
Capacity Saving	Indicates the setting status of Capacity Saving Compression: Compression Deduplication and Compression: Deduplication and Compression Disabled: Capacity Saving is disabled.
Compression Acceleration (This item is output for DKCMAIN firmware version 90-08-01-00/00 or later.)	Indicates the setting status of compression accelerator Enable: Compression accelerator is enabled. Disable: Compression accelerator is disabled. Default: The setting status of compression accelerator is not specified. (This status is output when the Capacity Saving setting is Disabled.)
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code
Num. of LDEVs	The number of created V-Vols

[PROV] CreateLdev

This log information is output when you create an internal or external volume. When you create a Thin Image (HTI only) volume or DP-VOL, CreateLDEVs is output.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],CreateLdev,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{LogicalDevice[0]{
  ID=0x00:0x00:0x00,ParityGroupID=1-1,ExternalGroupID=null,
```

```
Emulation=OPEN-V,Capacity(Block)=96000,Position=0,
MpUnitId=0,T10pi=true,Ssid=0x0004,Result=Normal end}}
```

Detailed Information

Item		Description
LogicalDevice[x]		The setting information of the LDEV
	ID	The LDEV ID
	ParityGroupID	The ID of the parity group that the LDEV belongs to "null" is output when you create an external volume.
	ExternalGroupID	The ID of the external volume group that the LDEV belongs to "null" is output when you create an internal volume.
	Emulation	The emulation type
	Capacity(Block)	The capacity
	Position	The LDEV ID (start numer)
	MpUnitId	The ID of the MP unit to be assigned to the LDEV
	T10pi	The setting status of the T10 PI attribute true: enable, false: disable
	Ssid	The SSID
	Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] Create Resource Grps

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],Create Resource Grps,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{VDKC-Box ID,Resource
Group ID,Resource Group Name,Result} =[{0,1,RSG1,Normal end},{0,2,RSG2,Normal end}],
Num. of Resource Groups=2
```

Detailed Information

Item	Description
VDKC-Box ID	The number of the VDKC-Box to which the created resource group belongs. A hyphen (-) is output when the creating operation failed.
Resource Group ID	The number of the 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 VDKC-Box

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],Create VDKC-Box,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{VDKC-Box ID,Model,SerialNo,Result} ={1,0x0400,28528,Normal end}
++{VDKC-Box ID,Resource Group ID,Resource Group Name,Result}
=[{1,1,RSG1,Normal end},{1,2,RSG2,Normal end}], Num.
of Resource Groups=2
```

Detailed Information

Item	Description
VDKC-Box ID	The number of the created VDKC-Box. A hyphen (-) is output when the creating operation failed.
Model	The model of the created VDKC-Box
SerialNo	The serial number of the created VDKC-Box
Result	The result of the VDKC-Box operation Normal end: Normal end, Error(*xxxx*-*yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

Item	Description
VDKC-Box ID	The number of the VDKC-Box to which the created resource group belongs. A hyphen (-) is output when the creating operation failed.
Resource Group ID	The number of the 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 resource group 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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],Create/Expand Pools,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Pool ID,Pool Type,Multi Tier Pool,Warning Threshold(%), Depletion Threshold(%),
Subscription
Limit(%), Protect V-VOLs when I/O fails to Blocked Pool VOL, Protect V-VOLs when I/O
fails to Full Pool, Tier Management,Cycle Time,Monitoring Period,Monitoring Mode,
Relocation Speed,Data Direct Mapping,Suspend TI pairs when depletion threshold is
exceeded,
Automatically manage compressed space from FMD parity group,
PoolResult,Execute Command} ={1,Dynamic Provisioning,
Enable,20,70,100,Yes,Yes,Auto,24,00:00-23:59,Continuous Mode,3,Disable,Yes,Disable,
Normal
end,Create}], 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

Item	Description
Pool Type	The pool type. Dynamic Provisioning: Dynamic Provisioning, Thin Image: Thin Image (HTI only)
Multi Tier Pool	The setting status of the multi-tier mode and active flash function for the created or expanded pool Enable(Active Flash): Both Dynamic Tiering and active flash are enabled. Enable: Dynamic Tiering is enabled and active flash is disabled. Disable: Both Dynamic Tiering and active flash are disabled. If Pool Type is Thin Image, a hyphen (-) is output.
Warning Threshold(%)	The warning threshold of the usage rate of the created pool. The unit is indicated as a percentage. If Execute Command is Expand, a hyphen (-) is output.
Depletion Threshold(%)	The depletion threshold of the usage rate of the created pool. The unit is indicated as a percentage. If Pool Type is Thin Image, if the depletion threshold is not specified, or if Execute Command is Expand, a hyphen (-) is output.
Subscription Limit(%)	The reserve amount of the created pool. The unit is percent (%). If the reserve amount is not specified, it outputs "Unlimited". If Pool Type is Thin Image, or if Execute Command is Expand, a hyphen (-) is output.
Protect V-VOLs when I/O fails to Blocked Pool VOL	Indicates whether the setting of the protect access attribute on the virtual volume is enabled or disabled when the pool is blocked. Yes: Enabled, No: Disabled If Pool Type is not Dynamic Provisioning, or if the pool is not a pool for an open system, or if Execute Command is Expand, a hyphen (-) is output.
Protect V-VOLs when I/O fails to Full Pool	Indicates whether the setting of the protect access attribute on the virtual volume is enabled or disabled when the pool is full. Yes: Enabled, No: Disabled If Pool Type is not Dynamic Provisioning, or if the pool is not a pool for an open system, or if Execute Command is Expand, a hyphen (-) is output.

Item	Description
Tier Management	The auto control mode of the created or expanded pool Auto: Auto, Manual: Manual If Multi Tier Pool is not Enable, a hyphen (-) is output.
Cycle Time	The cycle of performance monitoring for the created 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 not Auto, or if Execute Command is Expand, 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 not 24, or if Execute Command is Expand, a hyphen (-) is output.
Monitoring Mode	The monitoring mode Continuous Mode: Continuous mode, Period Mode: Period mode If Multi Tier Pool is not Enable, or if Execute Command is Expand, a hyphen (-) is output.
Relocation Speed	The relocation speed 1: Slowest, 2: Slower, 3: Normal, 4: Faster, 5: Fastest If Multi Tier Pool is not Enable, or if Execute Command is Expand, a hyphen (-) is output.
Data Direct Mapping	Indicates the setting status of Data Direct Mapping Enable: Data Direct Mapping is enabled. Disable: Data Direct Mapping is disabled. If Execute Command is Expand, a hyphen (-) is output.
Suspend TI pairs when depletion threshold is exceeded	Indicates the setting status of whether the Thin Image (HTI only) pairs are suspended when the depletion threshold is exceeded Yes: Thin Image pairs are suspended when the depletion threshold is exceeded. No: Thin Image pairs are not suspended even if the depletion threshold is exceeded. If Execute Command is Expand, a hyphen (-) is output.

Item	Description
Automatically manage compressed space of FMD parity group	Indicates the setting status of automatically manage compressed space of FMD parity group Enable: Automatically manage compressed space of FMD parity group is enabled. Disable: Automatically manage compressed space of FMD parity group is disabled. If Execute Command is Expand, 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, *yyyyy*: Error code
Execute Command	The executed operation Create: Pools are created. Expand: Pools are expanded. If Pool Result is not Normal end, a hyphen (-) is output.
Num. of Pools	The number of 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 created or expanded pool volume

[PROV] CreateAlus

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],CreateAlus,,Normal end,
```

```
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Alus[0]{LdevId=0x00:0x00:0xBC,Result=Normal end,Ssid=0x0004,MpBladeId=Auto,
Clpr{ Id=0},
Id="60-06-0E-81-30-76-D9-30-76-D9-00-00-00-00-00-BC"}}
```

Detailed Information

Item		Description
Alus[x]		The setting information of the created LDEV with the ALU attribute
	LdevId	The LDEV ID
	Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end, Not Execute: Not Executed *xxxx*: Part code, *yyyyy*: Error code
	Ssid	The SSID
	MpBladeId	The MP Blade ID "Auto" indicates the auto assignment is enabled.
	Clpr	The CLPR setting information
	Id	The CLPR ID
	Id	The ALU ID

[PROV] CreateiScsiName

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],CreateiScsiName,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{iScsiPort[0]{Port=1A, iScsiTarget[0]{ Id=0, RemoteiScsiName[0]{
Name="Name",NickName="NickName",Result=Normal end}}}}
```

Detailed Information

Item		Description
iScsiPort[x]		The setting information of the port
	Port	The port ID to be set

Item				Description
	iScsiTarget[x]			The iSCSI target information
		Id		The iSCSI target ID
		RemoteiScsiName[x]		The information of the iSCSI name of the host bus adapter
			Name	The iSCSI name of the host bus adapter
			NickName	The host name (nick name) "null" is output if this item is not set or changed.
			Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] CreateiScsiPath

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,Task Name,
[PROV],CreateiScsiPath,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{ConnectionTest=true,
iScsiPath[0]{
  iScsiPort{
    Port=1A},
  RemoteiScsiPort{
    Function=UVM,IpType=IPv4,Ipv4Address=192.168.0.101,
    Ipv6Address=0:0:0:0:0:0:0:0,TcpPortNumber=3260,
    RemoteiScsiTarget{
      Name="iqn.1994-04.jp.co.hitachi:rsd.r90.t.00001.3a000",
      iScsiUser{
        AuthSwitch=None,AuthMode=Unidirectional,UserId="CHAPUser"}}},
Result=Normal end}}
```

Detailed Information

Item	Description
ConnectionTest	Indicates whether to perform the connection test after creating iSCSI paths true: Test is performed. false: Test is not performed.

Item	Description
iScsiPath[x]	The path information between the iSCSI port on the local storage system and the iSCSI target on the remote storage system
iScsiPort	The information of the iSCSI port on the local storage system
Port	The Port ID
RemoteiScsiPort	The information of the iSCSI port on the remote storage system
Function	Function that uses the created iSCSI path UVM: Universal Volume Manager RemoteReplication: Remote Replication
IpType	The type of the IP address IPv4: IPv4 address, IPv6: IPv6 address
IPv4Address	The IPv4 address*
IPv6Address	The IPv6 address*
TcpPortNumber	The TCP port number
RemoteiScsiTarget	The iSCSI target information
Name	The iSCSI name
iScsiUser	The user authentication information
AuthSwitch	Indicates whether the CHAP authentication method is enabled or disabled* None: CHAP is disabled. CHAP: CHAP is enabled.
AuthMode	Indicates the CHAP authentication mode* Unidirectional: CHAP is one-way. Mutual: CHAP is two-way.
UserId	The CHAP user name*
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code
* "null" is output if this item is not set or changed.	

[PROV] CreateiScsiTarget

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],CreateiScsiTarget,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{iScsiPort[0]{Port=1A, iScsiTarget[0]{ Id=0,Name="Name",Alias="Alias",
UserAuthSwitch=Enable,
AuthMode=Unidirectional,Result=Normal end}}}
```

Detailed Information

Item			Description
iScsiPort[x]			The setting information of the port
	Port		The port ID to be set
	iScsiTarget[x]		The iSCSI target information
		Id	The iSCSI target ID
		Name	The iSCSI target name
		Alias	The iSCSI target alias
		UserAuthSwitch	The setting status of the CHAP user authentication Enable: Enabled, Disable: Disabled, UseHostSetting: Using host settings
		AuthMode	The authentication mode. Unidirectional: One-way, Mutual: Two-way
		Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] CreateParityGroups

Example 1: when no interleaved parity group exists

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],CreateParityGroups,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{ParityGroup[0]{
  ID=1-1,RAIDLevel=2D+2D,
  CachePartition{
```

```
    CLPR=0},
  Encryption=true,Accelerated Compression=true,
  Emulation=OPEN-V,
  Drive[0]
    {Location="HDD0-0"},
  Result=Normal end}}
```

Detailed Information for Example 1

Item			Description
ParityGroup[x]			The setting information of a parity group
	ID		The parity group ID
	RAIDLevel		RAID level
	CachePartition		CLPR information
		CLPR	CLPR ID
	Encryption		The status of encryption setting true: enabled, false: disabled
	Accelerated Compression		The setting status of cpacity expansion true: enabled, false: disabled
	Emulation		Emulation type
	Drive[x]		Information of the drives that make up the parity group
		Location	The location where each drive is installed
	Result		The result of operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *where xxxx*: Part code, *yyyyy*: Error code

Example 2: when any interleaved parity group exists

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],CreateParityGroups,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{ParityGroup[0]{
  ID=1-1,RAIDLevel=2D+2D,
  CachePartition{
    CLPR=0},
  Encryption=true,Accelerated Compression=true,
```

```
  Emulation=OPEN-V,
  Drive[0]
    {Location="HDD0-0"},
  Result=Normal end},
Concatenate[0]{
  ParityGroup[0]{
    ID=1-1},
  ParityGroup[1]{
    ID=1-2}}}
```

Detailed Information for Example 2

Item			Description
ParityGroup[x]			Setting information of a parity group
	ID		The parity group ID
	RAIDLevel		RAID level
	CachePartition		CLPR information
		CLPR	CLPR ID
	Encryption		The status of encryption setting true: enabled, false: disabled
	Accelerated Compression		The setting status of capacity expansion true: enabled, false: disabled
	Emulation		Emulation type
	Drive[x]		Information of drives that make up the parity group
		Location	The location where each drive is installed
	Result		The result of operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *where xxxx*: Part code, *yyyyy*: Error code
Concatenate[x]			Information of the interleaved parity groups
	PartyGroup[x]		Information of the parity groups that make up each interleaved parity group
		ID	The parity group ID

[PROV] CreateRemoteChapUser

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],CreateRemoteChapUser,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{iScsiPort[0]{Port=1A, iScsiTarget[0]{ Id=0, RemoteiScsiUser[0]{
ChapUserId="ChapUserId",Result=Normal end}}}}
```

Detailed Information

Item				Description
iScsiPort[x]				The setting information of the port
	Port			The port ID to be set
	iScsiTarget[x]			The iSCSI target information
		Id		The iSCSI target ID
		RemoteiScsiUser[x]		The user information of the CHAP authentication
			ChapUserId	The user ID of the CHAP authentication
			Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] CreateSlus

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],CreateSlus,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Slus[0]{LdevId=0x00:0x00:0xBC,Result=Normal end,Capacity=8388608,
Ssid=0x0004,MpBladeId=Auto, Clpr{ Id=0}, Pool{ Id=9},
Id="60-06-0E-81-30-76-D9-30-76-D9-00-00-00-00-00-BC",
FullAllocation=false}}
```

Detailed Information

Item			Description
Slus[x]			The setting information of the created LDEV with the SLU attribute
	LdevId		The LDEV ID
	Result		The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end, Not Execute: Not Executed *xxxx*: Part code, *yyyyy*: Error code
	Capacity		The capacity
	Ssid		The SSID
	MpBladeId		The MP Blade ID "Auto" indicates the auto assignment is enabled.
	Clpr		The CLPR setting information
		Id	The CLPR ID
	Pool		The pool setting information
		Id	The pool number
	Id		The SLU ID
	FullAllocation		Indicates the setting status of the Full Allocation true: Full Allocation is enabled. false: Full Allocation is disabled.

[PROV] CreateThinProvisioningVolumes

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],CreateThinProvisioningVolumes,,Normal end,from=xxxx:xxxx:xxxx:xxxx:xxxx:
xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{ThinProvisioningVolumes[0]{
  PoolId=1,
  LdevId=0x00:0x00:0xBC,Result=Normal end,Capacity=8388608,
  Ssid=0x0004,MpBladeId=Auto,
  Clpr{
    Id=0}}}
```

Detailed Information

Item			Description
ThinProvisioningVolumes[x]			The setting information of the created DP-VOL
	PoolId		The pool ID
	LdevId		The LDEV ID
	Result		The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code
	Capacity		The capacity
	Ssid		The SSID
	MpBladeId		The MP unit ID "Auto" indicates the auto assignment is enabled.
	Clpr		The CLPR setting information
		Id	The CLPR ID

[PROV] CreateTiPairsWithSlu

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],CreateTiPairsWithSlu,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{TiPairs[0]{
  PrimaryVolume{
    Slu{
      Id="60-06-0E-81-30-00-32-30-00-32-00-00-00-00-30-00"},
    Ldev{
      Id=0x00:0x30:0x00}},
  SecondaryVolume{
    Slu{
      Id=""60-06-0E-81-30-00-32-30-00-32-00-00-00-00-40-00""},
    Ldev{
      Id=0x00:0x40:0x00}},
  BaseVolume{
    Slu{
      Id=""60-06-0E-81-30-00-32-30-00-32-00-00-00-00-50-00""}},
  AccessAttribute=ReadOnly,FastClone=false,
  Cascade=false,Clone=false,DiffClone=false,
  Pool{
```

```
  Id=2},
Result=Normal end,MirrorUnit=3,
SnapshotSlu{
  Id="60-06-0E-81-30-00-32-30-00-32-00-00-80-00-00-00"}}}
```

Detailed Information

Item	Description
TiPairs[x]	The setting information of the created Thin Image pair
PrimaryVolume	The setting information of the primary volume
Slu	The SLU information
Id	The SLU ID
Ldev	The LDEV information
Id	The LDEV ID
SecondaryVolume	The setting information of the secondary volume
Slu	The SLU information
Id	The SLU ID
Ldev	The LDEV information
Id	The LDEV ID
BaseVolume	The setting information of the diff compare volume
Slu	The SLU information
Id	The SLU ID
AccessAttribute	The access attribute FullAccess: Read/Write, ReadOnly: Read Only
FastClone	The setting status of the fast clone for the snapshot true: Enabled, false: Disabled
Cascade	The setting status of the cascade for the snapshot true: Enabled, false: Disabled
Clone	The setting status of the clone for the snapshot true: Enabled, false: Disabled
DiffClone	The setting status of the diff clone for the snapshot true: Enabled, false: Disabled

Item		Description
Pool		The pool information
	Id	The pool number
Result		The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code
MirrorUnit		The mirror unit number
SnapshotSlu		The SLU information of the secondary volume
	Id	The SLU ID

[PROV] CreateTiVolumes

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],CreateTiVolumes,,Normal end,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+{TiVolumes[0]{ LdevId=0x00:0x00:0xBC,Result=Normal
end,Capacity=8388608, Ssid=0x0004,MpBladeId=Auto, Clpr{ Id=0}}}
```

Detailed Information

Item		Description
TiVolumes[x]		The setting information of the created secondary volume for Thin Image (HTI only)
	LdevId	The LDEV ID
	Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end, Not Execute: Not Executed *xxxx*: Part code, *yyyyy*: Error code
	Capacity	The capacity
	Ssid	The SSID
	MpBladeId	The MP Blade ID

Item			Description
			"Auto" indicates the auto assignment is enabled.
	Clpr		The CLPR setting information
		Id	The CLPR ID

[PROV] Delete Host Groups

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],Delete Host Groups,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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

This log information is output when you delete a Thin Image (HTI only) volume or DP-VOL. When you delete an internal or exteral volume, DeleteLdev is output.

Example 1: Deleting Thin Image volumes

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,Task Name,
[PROV],Delete LDEVs,Snapshot,Normal end,from=xxxx:xxxx:xxxx:xxxx:xxxx:
xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{LDKC:CU:LDEV, Result}=[{0x00: 0x00: 0x00, Normal end},{0x00: 0x01:
0x00, Normal end},{0x00: 0x02: 0x00, Normal end}],Num. of LDEVs=3
```

Example 2: Deleting DP-VOLs

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,Task Name,
[PROV],Delete LDEVs,Thin Provisioning,Normal end,from=xxxx:xxxx:xxxx:
```

```
xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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 1 and 2

Item	Description
Snapshot	Operating for the Thin Image (HTI only) volumes.
Thin Provisioning	Operating for the Dynamic Provisioning virtual volumes.

Detailed Information for Example 1 and 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 *where xxxx*: Part code, *yyyyy*: Error code
Num. of LDEVs	The number of deleted V-Vols

[PROV] DeleteLdev

This log information is output when you delete an internal or exteral volume. When you delete a Thin Image (HTI only) volume or DP-VOL, Delete LDEVs is output.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],DeleteLdev,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{LogicalDevice[0]{
  ID=0x00:0x00:0x00,ParityGroupID=1-1,ExternalGroupID=null,
  Result=Normal end}}
```

Detailed Information for Example 1

Item		Description
LogicalDevice[x]		The setting information of the LDEV
	ID	The LDEV ID
	ParityGroupID	The ID of the parity group that the LDEV belongs to "null" is output when you delete an external volume.
	ExternalGroupID	The ID of the external volume group that the LDEV belongs to "null" is output when you delete an internal volume.
	Result	The result of operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *where xxxx*: Part code, *yyyyy*: Error code

[PROV] Delete Login WWNs

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],Delete Login WWNs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Port,Delete WWN}=[{XX,0xXXXXXXXXXXXXXXXX},{XX,0xXXXXXXXXXXXXXXXX}], 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 LUN Paths

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],Delete LUN Paths,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Port,HostGrpID,LUN}
=[{XX,0xXXX,XXXX},{XX,0xXXX,XXXX},{XX,0xXXX,XXXX}], 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
Num. of Paths	The number of LU paths deleted

[PROV] Delete Resource Grps

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],Delete Resource Grps,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{VDKC-Box ID,Resource Group ID,Result} =[{0,1,Normal end},{0,2,Normal end}],Num. of
Resource
Groups=2
```

Detailed Information

Item	Description
VDKC-Box ID	The number of the VDKC-Box to which the deleted resource group belongs
Resource Group ID	The number of the deleted resource group
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end

Item	Description
	xxxx: Part code, *yyyyy*: Error code
Num. of Resource Groups	The number of deleted resource groups

[PROV] Delete VDKC-Box

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],Delete VDKC-Box,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{VDKC-Box ID,Result}={1,Normal end},Num. of VDKC-Boxes=1
```

Detailed Information

Item	Description
VDKC-Box ID	The number of the deleted VDKC-Box
Result	The result of the operation Normal end: Normal end, Error(*xxxx*-*yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code
Num. of VDKC-Boxes	The number of deleted VDKC-Boxes

[PROV] DeleteAlus

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],DeleteAlus,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Alus[0]{Id="60-06-0E-81-30-76-D9-30-76-D9-00-00-00-00-00-49", Result=Normal
end,LdevId=0x00:0x00:0x49}}
```

Detailed Information

Item	Description
Alus[x]	The setting information of the deleted LDEV with the ALU attribute

Item		Description
	Id	The ALU ID
	Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end, Not Execute: Not Executed *xxxx*: Part code, *yyyyy*: Error code
	LdevId	The LDEV ID

[PROV] DeleteDataSavingOfSlusAsync

This logged information indicates that this operation was only requested but not completed.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name, [PROV], DeleteDataSavingOfSlusAsync,,
Normal end,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Slus[0]{Id="60-06-0E-81-30-76-D9-30-76-D9-00-00-00-00-00-49",Result=Normal end,
LdevId=0x00:0x00:0x49}}
```

Detailed Information

Item		Description
Slus[x]		The setting information of an LDEV with the SLU attribute, whose setting of capacity saving is enabled.
	Id	The SLU ID
	Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end, Not Execute: Not Executed *xxxx*: Part code, *yyyyy*: Error code
	LdevId	The LDEV ID

[PROV] DeleteDataSavingOfThinProvisioningVolumesAsync

This logged information indicates that this operation was only requested but not completed.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV], DeleteDataSavingOfThinProvisioningVolumesAsync,,
Normal end,from=xxxx:xxxx:xxxx:xxxx:xxxx: xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{ThinProvisioningVolumes [0]{ Id="0x00:0x00:0x49",Result=Normal end}}
```

Detailed Information

Item		Description
ThinProvisioningVolumes[x]		The setting information of an LDEV, whose setting of capacity saving is enabled.
	Id	The LDEV ID
	Result	The result of the operation Normal end: Normal end, Error(*xxxx*-*yyyyy*): Abnormal end, Not Execute: Not Executed *xxxx*: Part code, *yyyyy*: Error code

[PROV] DeleteiScsiInitiatorUser

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],DeleteiScsiInitiatorUser,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{iScsiPort[0]{Port=1A,Result=Normal end}}
```

Detailed Information

Item		Description
iScsiPort[x]		The setting information of the port
	Port	The port ID to be set
	Result	The result of the operation Normal end: Normal end, Error(*xxxx*-*yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] DeleteiScsiName

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],DeleteiScsiName,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{iScsiPort[0]{Port=1A, iScsiTarget[0]{ Id=0, RemoteiScsiName[0]{ Name="Name",
Result=Normal end}}}}
```

Detailed Information

Item				Description
iScsiPort[x]				The setting information of the port
	Port			The port ID to be set
	iScsiTarget[x]			The iSCSI target information
		Id		The iSCSI target ID
		RemoteiScsiName[x]		The information of the iSCSI name of the host bus adapter
			Name	The iSCSI name of the host bus adapter
			Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] DeleteiScsiPath

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,1,Task Name,
[PROV],DeleteiScsiPath,,Normal end,from=xxxx:xxxx:xxxx:xxxx:xxxx:
xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{iScsiPath[0]{
  iScsiPort{
    Port=1A},
  RemoteiScsiPort{
    Function=UVM,IpType=IPv4,Ipv4Address=192.168.0.101,
    Ipv6Address=0:0:0:0:0:0:0:0,
    RemoteiScsiTarget{
      Name="iqn.1994-04.jp.co.hitachi:rsd.r90.t.00001.3a000"}},
  Result=Normal end}}
```

Detailed Information

Item	Description
iScsiPath[x]	The path information between the iSCSI port on the local storage system and the iSCSI target on the remote storage system
iScsiPort	The information of the iSCSI port on the local storage system
Port	The port ID
RemoteiScsiPort	The information of the iSCSI port on the remote storage system
Function	Function that uses the iSCSI path UVM: Universal Volume Manager RemoteReplication: Remote Replication
IpType	The type of the IP address IPv4: IPv4 address, IPv6: IPv6 address
IPv4Address	The IPv4 address*
IPv6Address	The IPv6 address*
RemoteiScsiTarget	The iSCSI target information
Name	The iSCSI name
Result	The result of the operation Normal end: Normal end, Error(*xxxx*-*yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code
* "null" is output if this item is not set.	

[PROV] DeleteiScsiTarget

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],DeleteiScsiTarget,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{iScsiPort[0]{Port=1A, iScsiTarget[0]{ Id=0,Result=Normal end}}}
```

Detailed Information

Item			Description
iScsiPort[x]			The setting information of the port
	Port		The port ID to be set
	iScsiTarget[x]		The iSCSI target information
		Id	The iSCSI target ID
		Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] DeleteLoginiScsiName

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],DeleteLoginiScsiName,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{iScsiPort[0]{Port=1A,Result=Normal end}}
```

Detailed Information

Item		Description
iScsiPort[x]		The setting information of the port
	Port	The port ID to be set
	Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] DeleteParityGroups

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],DeleteParityGroups,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{ParityGroup[0]{
  ID=1-1,Result=Normal end}}
```

Detailed Information

Item				Description
ParityGroup[x]				The setting information of the parity group
	ID			The parity group ID
	Result			The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] DeleteRemoteChapUser

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],DeleteRemoteChapUser,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{iScsiPort[0]{Port=1A, iScsiTarget[0]{ Id=0, RemoteiScsiUser[0]{
ChapUserId="ChapUserId",Result=Normal end}}}}
```

Detailed Information

Item				Description
iScsiPort[x]				The setting information of the port
	Port			The port ID to be set
	iScsiTarget[x]			The iSCSI target information
		Id		The iSCSI target ID
		RemoteiScsiUser[x]		The user information of the CHAP authentication
			ChapUserId	The user ID of the CHAP authentication
			Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] DeleteSlus

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],DeleteSlus,,Normal end, from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+{Slus[0]{Id="60-06-0E-81-30-76-D9-30-76-D9-00-00-00-00-00-49", Result=Normal
end,LdevId=0x00:0x00:0x49}}
```

Detailed Information

Item		Description
Slus[x]		The setting information of the deleted LDEV with the SLU attribute
	Id	The SLU ID
	Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end, Not Execute: Not Executed *xxxx*: Part code, *yyyyy*: Error code
	LdevId	The LDEV ID

[PROV] DeleteTargetChapUser

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
TaskName,[PROV],DeleteTargetChapUser,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{iScsiPort[0]{Port=1A, iScsiTarget[0]{ Id=0,ChapUserId="ChapUserId",
Result=Normal end}}}
```

Detailed Information

Item			Description
iScsiPort[x]			The setting information of the port
	Port		The port ID to be set
	iScsiTarget[x]		The iSCSI target information
		Id	The iSCSI target ID

Item			Description
		ChapUserId	The user ID of the CHAP authentication
		Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] DeleteTiVolumes

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],DeleteTiVolumes,,Normal end,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+{TiVolumes[0]{ LdevId=0x00:0x10:0x00,Result=Normal end}}
```

Detailed Information

Item		Description
TiVolumes[x]		The setting information of the deleted secondary volume for Thin Image (HTI only)
	LdevId	The LDEV ID
	Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end, Not Execute: Not Executed *xxxx*: Part code, *yyyyy*: Error code

[PROV] DRU Expiration-Lock

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],DRU Expiration-Lock,SYSTEM:Enable,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],Edit Cmd Dev(Auth),,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],Edit DevGrpDef,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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
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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],Edit CommandDevSec,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],Edit Command Devices,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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

```
09xx,YYYY/MM/DD,HH:MM.SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],Edit DRU Attribute,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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	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: ▪ 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*

Item	Description
	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. A hyphen (-) is output when a setting is not changed.
RT	The number of days set in Retention Term. A hyphen (-) is output when setting is not changed.
Result	The result of operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *where xxxx*: Part code, *yyyyy*: Error code
Num. of LDEVs	The number of 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 External LDEV Tier Rank

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],Edit External LDEV Tier Rank,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{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, *yyyyy*: Error code

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

[PROV] Edit Full Allocation

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],Edit Full Allocation,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Pool ID,LDKC:CU:LDEV,Full Allocation,Result} =[{0,0x00:0x00:0x00,Enable,Normal
end}],Num. of VOLs=1
```

Detailed Information

Item	Description
Pool ID	The pool ID associated with the virtual volume of Dynamic Provisioning
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the virtual volume of Dynamic Provisioning
Full Allocation	Indicates the setting status of the Full Allocation Enable: Full Allocation is enabled. Disable: Full Allocation is disabled.
Result	The result of operation

Item	Description
	Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *where xxxx*: Part code, *yyyyy*: Error code
Num. of VOLs	The number of virtual volumes of Dynamic Provisioning whose page reservation settings were changed

[PROV] Edit Host

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],Edit Host,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Port,HostGrpID,WWN,Change WWN,Change Nickname}
=[{XX,0xXXX,0xXXXXXXXXXXXXXXXX,0xXXXXXXXXXXXXXXXX, XXXXXXXXXXXXXXXX}], 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

```
09xx,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.=xxxxxxxxxx
```

```
+{Port,HostGrpID,Mode,Option[0:31],Option[32:63],Option[64:95],
Option[96:127],Option[128:159],Option[160:191],Option[192:223],Option[224
:255]}=
[{XX,0xXXX,0x00,0x20000000,0x00000000,0x00000000,0x00000000,0x00080000,0x
00000000,0x00000000,0x00000000},
{XX,0xXXX,0x09,0x00080000,0x00000000,0x00000000,0x00000000,0x00080000,0x0
0000000,0x00000000,0x00000000}],
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.
Mode	The specified host mode. See the *Provisioning Guide for Open Systems* for the meaning of the host mode number.
Option[0:31] Option[32:63] Option[64:95] Option[96:127] Option[128:159] Option[160:191] Option[192:223] Option[224:225]	The specified host mode option. 256 host mode options from 0 to 255 are output in groups of 32 options. The following tables show the output values corresponding to the host mode options. See the *Provisioning Guide for Open Systems* for the meaning of the host mode options.
Num. of Host Groups	The number of host groups that the host mode setting is changed.

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

Host mode option	Value of Option[0:31]	Host mode option	Value of Option[0:31]
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

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

Host mode option	Value of Option[32:63]	Host mode option	Value of Option[32:63]
43	0x00100000	59	0x00000010
44	0x00080000	60	0x00000008
45	0x00040000	61	0x00000004
46	0x00020000	62	0x00000002
47	0x00010000	63	0x00000001

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

Host mode option 96 to 127 and output contents of Option[96:127]

Host mode option	Value of Option[96:127]	Host mode option	Value of Option[96:127]
96	0x80000000	112	0x00008000
97	0x40000000	113	0x00004000
98	0x20000000	114	0x00002000
99	0x10000000	115	0x00001000
100	0x08000000	116	0x00000800
101	0x04000000	117	0x00000400
102	0x02000000	118	0x00000200
103	0x01000000	119	0x00000100
104	0x00800000	120	0x00000080
105	0x00400000	121	0x00000040
106	0x00200000	122	0x00000020
107	0x00100000	123	0x00000010
108	0x00080000	124	0x00000008
109	0x00040000	125	0x00000004
110	0x00020000	126	0x00000002
111	0x00010000	127	0x00000001

Host mode option 128 to 159 and output contents of Option[128:159]

Host mode option	Value of Option[128:159]	Host mode option	Value of Option[128:159]
128	0x80000000	144	0x00008000
129	0x40000000	145	0x00004000
130	0x20000000	146	0x00002000
131	0x10000000	147	0x00001000
132	0x08000000	148	0x00000800
133	0x04000000	149	0x00000400

Host mode option	Value of Option[128:159]	Host mode option	Value of Option[128:159]
134	0x02000000	150	0x00000200
135	0x01000000	151	0x00000100
136	0x00800000	152	0x00000080
137	0x00400000	153	0x00000040
138	0x00200000	154	0x00000020
139	0x00100000	155	0x00000010
140	0x00080000	156	0x00000008
141	0x00040000	157	0x00000004
142	0x00020000	158	0x00000002
143	0x00010000	159	0x00000001

Host mode option 160 to 191 and output contents of Option[160:191]

Host mode option	Value of Option[160:191]	Host mode option	Value of Option[160:191]
160	0x80000000	176	0x00008000
161	0x40000000	177	0x00004000
162	0x20000000	178	0x00002000
163	0x10000000	179	0x00001000
164	0x08000000	180	0x00000800
165	0x04000000	181	0x00000400
166	0x02000000	182	0x00000200
167	0x01000000	183	0x00000100
168	0x00800000	184	0x00000080
169	0x00400000	185	0x00000040
170	0x00200000	186	0x00000020
171	0x00100000	187	0x00000010
172	0x00080000	188	0x00000008

Host mode option	Value of Option[160:191]	Host mode option	Value of Option[160:191]
173	0x00040000	189	0x00000004
174	0x00020000	190	0x00000002
175	0x00010000	191	0x00000001

Host mode option 192 to 223 and output contents of Option[192:223]

Host mode option	Value of Option[192:223]	Host mode option	Value of Option[192:223]
192	0x80000000	208	0x00008000
193	0x40000000	209	0x00004000
194	0x20000000	210	0x00002000
195	0x10000000	211	0x00001000
196	0x08000000	212	0x00000800
197	0x04000000	213	0x00000400
198	0x02000000	214	0x00000200
199	0x01000000	215	0x00000100
200	0x00800000	216	0x00000080
201	0x00400000	217	0x00000040
202	0x00200000	218	0x00000020
203	0x00100000	219	0x00000010
204	0x00080000	220	0x00000008
205	0x00040000	221	0x00000004
206	0x00020000	222	0x00000002
207	0x00010000	223	0x00000001

Host mode option 224 to 255 and output contents of Option[224:255]

Host mode option	Value of Option[224:255]	Host mode option	Value of Option[224:255]
224	0x80000000	240	0x00008000
225	0x40000000	241	0x00004000
226	0x20000000	242	0x00002000
227	0x10000000	243	0x00001000
228	0x08000000	244	0x00000800
229	0x04000000	245	0x00000400
230	0x02000000	246	0x00000200
231	0x01000000	247	0x00000100
232	0x00800000	248	0x00000080
233	0x00400000	249	0x00000040
234	0x00200000	250	0x00000020
235	0x00100000	251	0x00000010
236	0x00080000	252	0x00000008
237	0x00040000	253	0x00000004
238	0x00020000	254	0x00000002
239	0x00010000	255	0x00000001

When more than one option is set, a logical sum of their values is output. For example, if 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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[PROV],Edit Host Grps(Name),,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Port,HostGrpID,HostGrpName}
=[{XX,0xXXX,XXXXXXXXXXXXXXXX},{XX,0xXXX,XXXXXXXXXXXXXXXX}], 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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],Edit LDEVs(tier),,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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 edited LDEVs

[PROV] Edit MP Units

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],Edit MP Units,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

```
+{DKC,MP Unit ID,Auto Assignment,Result}=[{0,010,Enable,Normal end}],
Num. of MP Units=1
```

Detailed Information

Item	Description
DKC	The DKC number (0 or 1)
MP Unit ID	The MP Unit number in the DKC module displayed in the window (0 to 7)
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-yyyyy*): Abnormal end *where xxxx*: Part code, *yyyyy*: Error code
Num. of MP Units	The number of specified MP Units (1 to 8)

[PROV] Edit Ports(Address)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[PROV],Edit Ports(Address),,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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.
Num. of Ports	The number of ports where address has been changed

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)

Value	Address*	Value	Address*	Value	Address*	Value	Address*
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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],Edit Ports(Attr),,Normal end,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:
xxxx:xxxx,,Seq.=xxxxxxxxxx
+Attribute=Bidirectional
++Port=[1E],Num. of Ports=1
```

Detailed Information

Item	Description
Attribute	The attribute of the port after change. Target: Target port, Biderectional: Bidirectional 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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],Edit Ports(Security),,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],Edit Ports(Speed),,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Port,Speed(Gbps)}=[{XX,4},{XX,8},{XX,Auto},{XX,16}],Num. of Ports=4
```

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] Edit Ports(Topology)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],Edit Ports(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 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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],Edit Resource Grp,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{VDKC-Box ID,Resource Group ID,Resource Group Name,Result} =[{0,1,RSG1,Normal end}],
Num. of Resource Groups=1
```

Detailed Information

Item	Description
VDKC-Box ID	The number of the VDKC-Box to which the configured resource group belongs
Resource Group ID	The number of the configured resource group
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 *where xxxx*: Part code, *yyyyy*: Error code
Num. of Resource Groups	The number of resource groups that operated the setting

[PROV] Edit SCP Time

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[PROV],Edit SCP Time,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{CU,SCP Time(sec.)}=[{0x00,600},{0x01,600},(snip),{0xFE,600}], Num. of CUs=255
```

Detailed Information

Item	Description
CU	The CU number
SCP Time(sec.)	The SCP (State Change Pending) time in seconds
Num. of CUs	The number of CUs where the SCP time is set

[PROV] Edit Tiering Policy

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],Edit Tiering Policy,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Tiering Policy ID,Tiering Policy Name,Tier1 Max(%), Tier1 Min(%),Tier3 Max(%),Tier3
Min(%),Result}
=[{6,SamplePolicy,90,10,90,10,Normal end}],Num. of Policies=1
```

Detailed Information

Item	Description
Tiering Policy ID	The tiering policy ID
Tiering Policy Name	The tiering policy name This is output when a tiering policy name is set.
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

Item	Description
	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 operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end, Not Execute: Not Executed *where xxxx*: Part code, *yyyyy*: Error code
Num. of Policies	The number of tiering policies that was set

[PROV] Edit VR Attribute

Example

```
09xx,YYYY/MM/DD,HH:MM.SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],Edit VR Attribute,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{LDKC:CU:LDEV,Attribute,Result} =[{0x00:0x00:0x00,Protect,Normal end},
{0x00:0x00:0x01,Protect,Normal end}],Num. of LDEVs=2
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC number, the CU number, and the LDEV number of the volume in which the access attribute is set
Attribute	Indicates the set access attribute Read/Write: The attribute that enables reading and writing

Item	Description
	Read Only: The attribute that enables reading only Protect: The attribute that disables accessing
Result	The result of operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *where xxxx*: Part code, *yyyyy*: Error code
Num. of LDEVs	The number of edited volumes

[PROV] Edit V-VOL Option

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[PROV],Edit V-VOL Option,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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 V-VOL for Dynamic Provisioning to which Tiering policy is set
LDKC:CU:LDEV	The LDKC number, CU number, and LDEV number of the V-VOL for Dynamic Provisioning
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.

Item	Description
Result	The result of the operation. Normal end: Normal end, Error(*xxxx*-*yyyyy*): Abnormal end, Not Execute: Not Executed *xxxx*: Part code, *yyyyy*: Error code
Num. of VOLs	The number of operated V-VOLs for Dynamic Provisioning

[PROV] Edit/Delete Pools

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[PROV],Edit/Delete Pools,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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	The operation on the pool Change: Changing pool information about the threshold and the subscription limit Change Tier: Changing information about Dynamic Tiering Delete: Delete pool
Pool ID	The pool ID of the pool where the settings have been changed or the number of the pool that have been deleted
Pool Type	The pool type Dynamic Provisioning: Dynamic Provisioning, Thin Image: Thin Image (HTI only)
Multi Tier Pool	The setting status of the multi-tier mode and active flash function for the pool Enable(Active Flash): Both Dynamic Tiering and active flash are enabled.

Item	Description
	Enable: Dynamic Tiering is enabled and active flash is disabled. Disable: Both Dynamic Tiering and active flash are disabled. This item is output only when "Command" is "Change Tier". If Pool Type is Thin Image, a hyphen (-) is output.
Warning Threshold(%)	The warning threshold of the usage rate of the pool in percent (%). This item is output only when "Command" is "Change".
Depletion Threshold(%)	The depletion threshold of the usage rate of the pool in percent (%). If the depletion threshold is not specified, this percentage is not output. This item is output only when "Command" is "Change". If Pool Type is Thin Image, or if the depletion threshold is not specified, a hyphen (-) is output.
Subscription Limit(%)	The reserve amount of the pool where the setting was changed. The unit is percent (%). If the reserve amount is not specified, it outputs "Unlimited". This item is output only when "Command" is "Change". If Pool Type is Thin Image, a hyphen (-) is output.
Protect V-VOLs when I/O fails to Blocked Pool VOL	Indicates whether the setting of the protect access attribute on the virtual volume is enabled or disabled when the pool is blocked. Yes: Enabled, No: Disabled This item is output only when "Command" is "Change". If the pool type is not Dynamic Provisioning or the pool is not a pool for an open system, a hyphen (-) is output.
Protect V-VOLs when I/O fails to Full Pool	Indicates whether the setting of the protect access attribute on the virtual volume is enabled or disabled when the pool is full. Yes: Enabled, No: Disabled This item is output only when "Command" is "Change". If the pool type is not Dynamic Provisioning or the pool is not a pool for an open system, a hyphen (-) is output.
Tier Management	The auto control mode of the created or expanded pool. Auto: Auto, Manual: Manual This item is output only when "Command" is "Change Tier". If Multi Tier Pool is anything other than Enable, a hyphen (-) is output.
Cycle Time	The cycle of performance monitoring for the pool.

Item	Description
	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 This item is output only when "Command" is "Change Tier". 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). 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.
Data Direct Mapping	Indicates the setting status of Data Direct Mapping Enable: Data Direct Mapping is enabled. Disable: Data Direct Mapping is disabled. This item is output only when "Command" is "Change".
Suspend TI pairs when depletion threshold is exceeded	Indicates the setting status of whether the Thin Image (HTI only) pairs are suspended when the depletion threshold is exceeded Yes: Thin Image pairs are suspended when the depletion threshold is exceeded. No: Thin Image pairs are not suspended even if the depletion threshold is exceeded. This item is output only when "Command" is "Change".
Automatically manage compressed space of FMD parity group	Indicates the setting status of automatically manage compressed space of FMD parity group Enable: Automatically manage compressed space of FMD parity group is enabled. Disable: Automatically manage compressed space of FMD parity group is disabled. This item is output only when the "Command" is "Change".
Result	The result of the operation

Item	Description
	Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end, Not Execute: Not Executed *xxxx*: Part code, *yyyyy*: Error code
Num. of Pools	The number of pools where the settings have been changed or the number of pools that have been deleted
Tier	The tier number This item is output only when the "Command" is "Change Tier".
Buffer Space for New page assignment(%)	The capacity rate of buffer space for new page assignment The unit is percent (%) This item 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 item is output only when the "Command" is "Change Tier".
Tier Result	The result of Tier operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end, Not Execute: Not Executed where *xxxx*: Part code, *yyyyy*: Error code This item is output only when the "Command" is "Change Tier".
Num. of Tiers	The number of Tiers for the created pools This item is output only when the "Command" is "Change Tier".

[PROV] Edit/Delete UUIDs

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],Edit/Delete UUIDs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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] EditiScsiInitiatorUser

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],EditiScsiInitiatorUser,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{iScsiPort[0]{Port=1A, iScsiInitiator{ iScsiUser{ UserId="CHAPUser"}}, Result=Normal
end}}
```

Detailed Information

Item			Description
iScsiPort[x]			The setting information of the port
	Port		The port ID
	iScsiInitiator		The iSCSI initiator information
		iScsiUser	The authentication information
			UserId	The CHAP user name "null" is output if this item is not set or changed.
	Result		The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] EditiScsiName

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],EditiScsiName,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

```
+{iScsiPort[0]{Port=1A, RemoteiScsiName[0]{ Name="Name",ChangeName="ChangeName",
Result=Normal end}}}
```

Detailed Information

Item			Description
iScsiPort[x]			The setting information of the port
	Port		The port ID to be set
	RemoteiScsiName[x]		The information of the iSCSI name of the host bus adapter
		Name	The iSCSI name of the host bus adapter before change
		ChangeName	The iSCSI name of the host bus adapter after change
		Result	The result of the operation. Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] EditiScsiNickName

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],EditiScsiNickName,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{iScsiPort[0]{Port=1A, RemoteiScsiName[0]{ Name="iScsiName",NickName="NickName",
Result=Normal end}}}
```

Detailed Information

Item			Description
iScsiPort[x]			The setting information of the port
	Port		The port ID to be set
	RemoteiScsiName[x]		The information of the iSCSI name of the host bus adapter
		Name	The iSCSI name of the host bus adapter
		NickName	The host name (nick name) after change
		Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end

Item	Description
	xxxx: Part code, *yyyyy*: Error code

[PROV] EditiScsiTarget

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],EditiScsiTarget,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{iScsiPort[0]{Port=1A, iScsiTarget[0]{ Id=0,Name="Name",Alias="Alias",
UserAuthSwitch=Enable,
AuthMode=Unidirectional,Result=Normal end}}}
```

Detailed Information

Item	Description
iScsiPort[x]	The setting information of the port
Port	The port ID to be set
iScsiTarget[x]	The iSCSI target information
Id	The iSCSI target ID
Name	The iSCSI target name*
Alias	The iSCSI target alias*
UserAuthSwitch	The setting status of the CHAP user authentication* Enable: Enabled, Disable: Disabled, UseHostSetting: Using host settings
AuthMode	The authentication mode* Unidirectional: One-way, Mutual: Two-way
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code
* "null" is output if this item is not set or changed.	

[PROV] EditiSNS

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[PROV],EditiSNS,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{iScsiPort[0]{Port=1A, iSnsServer{ Enabled=true,IpType=IPv4,IPv4Address=192.168.10.2,
IPv6Address=null,TcpPortNumber=3205}, Result=Normal end}}
```

Detailed Information

Item			Description
iScsiPort[x]			The setting information of the port
	Port		The port ID to be set
	iSnsServer		The iSNS server information
		Enabled	Indicates whether the iSNS server is used. true: iSNS server is used. false: iSNS server is not used.
		IpType	The IP type (IPv4 or IPv6) of the iSNS server*
		IPv4Address	The IPv4 address of the iSNS server*
		IPv6Address	The IPv6 address of the iSNS server*
		TcpPortNumber	The TCP port number*
	Result		The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code
* "null" is output if this item is not set or changed.			

[PROV] EditPortInfo

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[PROV],EditPortInfo,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{iScsiPort[0]{Port=1A, IPv4{ IpAddress=192.168.0.100,SubNetMask=255.255.255.0,
DefaultGateway=0.0.0.0}, IPv6{ Available=true, LinkLocalAddress{
AutoMode=true,ManualAddress=FE80:0:0:0:0:0:0:0}, GlobalAddress{
AutoMode=true,ManualAddress=0:0:0:0:0:0:0:0}, GlobalAddress2{
```

```
ManualAddress=0:0:0:0:0:0:0:0}, DefaultGateway{ AssignedAddress=0:0:0:0:0:0:0:0}},
TcpPortNumber=3260,SelectiveAck=true,DelayedAck=true, TcpWindowSize(KB)=64,
EthernetMtuSize{ Mtu(byte)=1500}, Vlan{
AvailableTagging=true,RemovalId=1,AdditionId=2},
KeepAliveTimer(second)=60,Result=Normal end}}
```

Detailed Information

Item	Description
iScsiPort[x]	The setting information of the port
Port	The port ID to be set
IPv4	The setting information of IPv4
IpAddress	The IP address of IPv4*
SubNetMask	The subnet mask of IPv4*
DefaultGateway	The IP address of the default gateway of IPv4*
IPv6	The setting information of IPv6
Available	The setting status of IPv6 Mode* true: Enabled, false: Disabled
LinkLocalAddress	The setting information of the local link address of IPv6
AutoMode	The setting status of the local link address of IPv6* true: Automatic, false: Manual
ManualAddress	The local link address set manually*
GlobalAddress	The setting information of the global address and the global address 2 of IPv6
AutoMode	The setting status of the global address and the global address 2 of IPv6* true: Automatic, false: Manual
ManualAddress	The global address set manually*
GlobalAddress2	The setting information of the global address 2 of IPv6
ManualAddress	The global address 2 set manually*
DefaultGateway	The setting information of the default gateway of IPv6
AssignedAddress	The address of the default gateway of IPv6*
TcpPortNumber	The TCP port number*

Item			Description
	SelectiveAck		The setting status of the selective ACK* true: Enabled, false: Disabled
	DelayedAck		The setting status of the delayed ACK* true: Enabled, false: Disabled
	TcpWindowSize(KB)		The window size of TCP*
	EthernetMtuSize		The information of the Ethernet MTU (Maximum Transmission Unit)
		Mtu(byte)	The size of the Ethernet MTU*
	Vlan		The information of the VLAN
		AvailableTagging	The setting status of the VLAN tagging mode* true: Enabled, false: Disabled
		RemovalId	The removed VLAN ID*
		AdditionId	The added VLAN ID*
	KeepAliveTimer(second)		The setting value of the Keep Alive timer*
	Result		The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code
* "null" is output if this item is not set or changed.			

[PROV] EditRemoteChapUser

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[PROV],EditRemoteChapUser,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{iScsiPort[0]{Port=1A, RemoteiScsiUser[0]{
ChapUserId="ChapUserId",ChangeChapUserId="ChangeChapUserId", Result=Normal end}}}
```

Detailed Information

Item	Description
iScsiPort[x]	The setting information of the port

Item			Description
	Port		The port ID to be set
	RemoteiScsiUser[x]		The user information of the CHAP authentication
		ChapUserId	The user ID of the CHAP authentication before change
		ChangeChapUserId	The user ID of the CHAP authentication after change "null" is output if this item is not set or changed.
		Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] EditRemoteTargetUser

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],EditRemoteTargetUser,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{ConnectionTest=true,iScsiPath[0]{ iScsiPort{ Port=1A}, RemoteiScsiPort{
IpType=IPv4,Ipv4Address=192.168.0.101,
Ipv6Address=0:0:0:0:0:0:0:0,TcpPortNumber=3260, RemoteiScsiTarget{ Name="iqn.1994-
04.jp.co.hitachi:rsd.r80.t.00001.3a000", iScsiUser{
AuthSwitch=None,AuthMode=Unidirectional,UserId="CHAPUser"}}}, Result=Normal
end}}
```

Detailed Information

Item			Description
ConnectionTest			Indicates whether to perform the connection test after editing iSCSI paths true: Test is performed. false: Test is not performed.
iScsiPath[x]			The path information between the iSCSI port on the local storage system and the iSCSI target on the remote storage system
	iScsiPort		The information of the iSCSI port on the local storage system
		Port	The Port ID

Item			Description
	RemoteiScsiPort		The information of the iSCSI port on the remote storage system
		IpType	The type of the IP address IPv4: IPv4 address, IPv6: IPv6 address
		IPv4Address	The IPv4 address*
		IPv6Address	The IPv6 address*
		TcpPortNumber	The TCP port number
		RemoteiScsiTarget	The iSCSI target information
		Name	The iSCSI name
		iScsiUser	The authentication information
		AuthSwitch	Indicates whether the CHAP authentication method is enabled or disabled* None: CHAP is disabled. CHAP: CHAP is enabled.
		AuthMode	Indicates the CHAP authentication mode* Unidirectional: CHAP is one-way. Mutual: CHAP is two-way.
		UserId	The CHAP user name*
	Result		The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code
* "null" is output if this item is not set or changed.			

[PROV] EditT10piMode

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],EditT10piMode,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Port[0]{Port=1A,T10pi=true,Result=Normal end}}
```

Detailed Information

Item			Description
Port[x]			The setting information of the T10 PI mode on the port
	Port		The ID of a port representing ports that share the T10 PI mode
	T10pi		The setting status of the T10 PI mode true: Enabled, false: Disabled "null" is output if this item is not set or changed.
	Result		The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] EditTargetChapUser

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],EditTargetChapUser,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{iScsiPort[0]{Port=1A, iScsiTarget[0]{ Id=0,ChapUserId="ChapUserId",Result=Normal
end}}}
```

Detailed Information

Item			Description
iScsiPort[x]			The setting information of the port
	Port		The port ID to be set
	iScsiTarget[x]		The iSCSI target information
		Id	The iSCSI target ID
		ChapUserId	The user ID of the CHAP authentication
		Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] ExecBindingOperation

Example

```
09xx,YYYY/MM/DD,HH:MM.SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],ExecBindingOperation,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{BindingOperations[0]{Operation=Bind,Port=1A,HostGroup=0,Lun=0, Alu{
Id="60-06-0E-81-30-00-32-30-00-32-00-00-00-00-00-01", Ldev{ Id=0x00:0x00:0x01}},
Slu{ Id="60-06-0E-81-30-00-32-30-00-32-00-00-00-00-00-02", Ldev{ Id=0x00:0x00:0x02},
SecondaryId="E2-00-00-00-02-00"}, Result=Normal end}}
```

Detailed Information

Item				Description
BindingOperations[x]				The setting information when an LDEV with the SLU attribute is bound to the LDEV with the ALU attribute or when an LDEV with the SLU attribute is unbounded from the LDEV with the ALU attribute Binding can be operated from hosts associated with vSphere. Unbinding can be operated from hosts associated with vSphere or Device Manager - Storage Navigator.
	Operation			Type of operations Bind: Bind mode, Unbind: Unbind mode
	Port			The port number of the LUN path set to the LDEV with the ALU attribute
	HostGroup			The host group number of the LUN path set to the LDEV with the ALU attribute
	Lun			The LUN ID of the LUN path set to the LDEV with the ALU attribute
	Alu			The setting information of the LDEV with the ALU attribute
		Id		The ALU ID
		Ldev		The setting information of the LDEV
			Id	The LDEV ID
	Slu			The setting information of the LDEV with the SLU attribute
		Id		The SLU ID
		Ldev		The setting information of the LDEV
			Id	The LDEV ID

Item	Description
SecondaryId	The secondary ID
Result	The result of the operation Normal end: Normal end, Error(*xxxx*-*yyyyy*): Abnormal end, Not Execute: Not Executed *xxxx*: Part code, *yyyyy*: Error code

[PROV] Expand V-VOLs

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],Expand V-VOLs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{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 expanded V-VOLs

[PROV] ExpandSlus

Example

```
09xx,YYYY/MM/DD,HH:MM.SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],ExpandSlus,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{Slus[0]{
Id="60-06-0E-81-30-76-D9-30-76-D9-00-00-00-00-15-01",PoolId=2,
Capacity=96158,Result=Normal end,LdevId=0x00:0x15:0x01}}
```

Detailed Information

Item		Description
Slus[x]		The setting information of the LDEV with the SLU attribute whose capacity is increased
	Id	The SLU ID
	PoolId	The number of an associated pool
	Capacity	The capacity after it is increased
	Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end, Not Execute: Not Executed *xxxx*: Part code, *yyyyy*: Error code
	LdevId	The LDEV ID

[PROV] Force Del MF V-VOLs

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[PROV],Force Del MF V-VOLs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{LDKC:CU:LDEV,Result}=[{0x00:0x00:0x00,Normal end}, {0x00:0x01:0x00,Normal
end},{0x00:0x02:0x00,Normal end}], Num. of LDEVs=3
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDEV ID of the forcibly deleted V-Vol for Dynamic Provisioning for Mainframe, Dynamic Tiering for Mainframe, or active flash for mainframe
Result	Result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code
Num. of LDEVs	The number of deleted V-Vols

[PROV] Format LDEVs

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

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[PROV],Format LDEVs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+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(H)

The logged information indicates that the Format operation using the Write to Control Blocks function was only requested but not completed.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[PROV],Format LDEVs(H),,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],Format LDEVs(Q),,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[PROV],Initialize Pools,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[PROV] LDEV Name

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],LDEV Name,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{LDKC:CU:LDEV,Name,Result} =[{0x00:0x00:0x00,nickname_0000,Normal end},
{0x00:0x80:0xFF,$%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 *where xxxx*: Part code, *yyyyy*: Error code
Num. of LDEVs	The number of specified LDEVs

[PROV] LdevsFenceForceRelease

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],LdevsFenceForceRelease,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{FenceType=1,
LogicalDevice[0]{ ID=0x00:0x04:0x02}, LogicalDevice[1]{ ID=0x00:0x04:0x03}}
```

Detailed Information

Item		Description
FenceType		The type of the Fence 1: Soft Fence, 2: SPID Fence
LogicalDevice[x]		The information of the LDEV to be released forcibly
	ID	The LDKC number, the CU number, and the LDEV number of the LDEV

[PROV] LdevForceRestore

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],LdevForceRestore,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

```
+{LogicalDevice[0]{
  ID=0x00:0x00:0x00}}
```

Detailed Information

Item		Description
LogicalDevice[x]		The information of the LDEV that was restored forcibly
	ID	The LDEV ID

[PROV] MapSecondaryVolumeWithSlu

Example

```
09xx,YYYY/MM/DD,HH:MM.SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],MapSecondaryVolumeWithSlu,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{TiPairs[0]{
SnapshotSlu{ Id="60-06-0E-81-30-00-32-30-00-32-00-00-80-00-00-00"}, SecondaryVolume{
Ldev{ Id=0x00:0x00:0x06}}, Result=Normal end}}
```

Detailed Information

Item			Description
TiPairs[x]			The setting information of Thin Image pairs whose secondary volume is mapped
	SnapshotSlu		The SLU information
		Id	The SLU ID
	SecondaryVolume		The information of the secondary volume
		Ldev	The LDEV information
			Id	The LDEV ID
	Result		The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[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

```
09xx,YYYY/MM/DD,HH:MM.SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],Monitor Pools,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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 *where xxxx*: Part code, *yyyyy*: Error code
Num. of Pools	The number of pools where the performance monitoring started

[PROV] Move Resources

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[PROV],Move Resources,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{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, *yyyyy*: 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, *yyyyy*: Error code
Num. of LDEVs	The number of moved LDEVs
PG	The number of a moved parity group E1-1: In the case of an external volume V1-1: In the case of a virtual volume X1-1: In the case of a Dynamic Provisioning volume
PGResult	The result of the parity group Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end, *where xxxx*: Part code, *yyyyy*: 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, *yyyyy*: 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

Item	Description
	Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end, *where xxxx*: Part code, *yyyyy*: Error code
Num. of Host Groups	The number of moved host groups
Num. of Resource Groups	The number of resource groups that operated the setting

[PROV] OperateSiPairsWithSlu

Example

```
09xx,YYYY/MM/DD,HH:MM.SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],OperateSiPairsWithSlu,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{OperationCode=PairCreate, SiPairs[0]{ PrimaryVolume{ Slu{
Id="60-06-0E-81-30-00-32-30-00-32-00-00-00-00-30-00"}, Ldev{ Id=0x00:0x30:0x00}},
SecondaryVolume{ Slu{ Id="60-06-0E-81-30-00-32-30-00-32-00-00-00-00-30-01"}, Ldev{
Id=0x00:0x30:0x01}}, MirrorUnit=2,Result=Normal end}}
```

Detailed Information

Item	Description
OperationCode	The ShadowImage pair operation PairCreate: Create pairs, PairDelete: Delete pairs, CreateAndQuickSplit: Create and split pairs, QuickResync: Resynchronize pairs
SiPairs[x]	The setting information of ShadowImage pairs
PrimaryVolume	The primary volume information
Slu	The SLU information
Id	The SLU ID
Ldev	The LDEV information
Id	The LDEV ID
SecondaryVolume	The secondary volume information
Slu	The SLU information

Item	Description
Id	The SLU ID
Ldev	The LDEV information
Id	The LDEV ID
MirrorUnit	The mirror unit number
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] OperateTiPairsWithSlu

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],OperateTiPairsWithSlu,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{OperationCode=PairSplit,
TiPairs[0]{
   PrimaryVolume{
     Slu{
       Id="60-06-0E-81-30-00-32-30-00-32-00-00-80-00-10-00"}},
   SnapshotSlu{
    Id="60-06-0E-81-30-00-32-30-00-32-00-00-80-00-00-00"},
    Clone=false,DiffClone=false,CopyPace=medium,
  Result=Normal end}}
```

Detailed Information

Item	Description
OperationCode	The Thin Image pair operation PairSplit: Split pairs, PairDelete: Delete pairs, PairResync: Resynchronize pairs
TiPairs[x]	The setting information of Thin Image pairs
PrimaryVolume	The setting information of the primary volume
Slu	The SLU information
Id	The SLU ID

Item		Description
SnapshotSlu		The SLU information of the secondary volume
	Id	The SLU ID
Clone		The setting status of the clone for the snapshot true: Enabled, false: Disabled
DiffClone		The setting status of the diff clone for the snapshot true: Enabled, false: Disabled
CopyPace		The copy pace for the snapshot data Invalid: Disabled, Low: Low pace, Medium: Standard pace, Fast: Fast pace
Result		The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] Pool Name

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],Pool Name,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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, *where xxxx*: Part code, *yyyyy*: Error code

Item	Description
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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],Reclaim Zero Pages,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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 LDEVs where zero pages are reclaimed

[PROV] Release HostReserved

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],Release HostReserved,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Port,HostGrpID,LUN,Result}=[{XXX,0xXXX,XXXX,Normal end},
{XXX,0xXXX,XXXX,Error(xxxx-yyyyy)}],Num. of LUNs=2
```

Detailed Information

Item	Description
Port	The name of the port to which the host group belongs
HostGrpID	The host group number
LUN	The LUN where Release HostReserved is forcefully executed

Item	Description
Result	The result of the operation: Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end, Not Execute: Not Executed *where xxxx*: Part code, *yyyyy*: Error code
Num. of LUNs	The number of LUNs for which Release HostReserved is forcefully executed

[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

```
09xx,YYYY/MM/DD,HH:MM.SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],Relocate Pool,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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 *where xxxx*: Part code, *yyyyy*: Error code
Num. of Pools	The number of pools where the tier relocation was performed

[PROV] Remove Hosts

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],Remove Hosts,,Normal end,
```

```
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Port,HostGrpID,WWN}=[{XX,0xXXX,0xXXXXXXXXXXXXXXXX},
{XX,0xXXX,0xXXXXXXXXXXXXXXXX}],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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],Restore LDEVs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],Restore Pools,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{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 *where xxxx*: Part code, *yyyyy*: Error code
Num. of Pools	The number of restored pools

[PROV] RevertTiPairsWithSlu

Example

```
09xx,YYYY/MM/DD,HH:MM.SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],RevertTiPairsWithSlu,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{TiPairs[0]{
PrimaryVolume{ Slu{ Id="60-06-0E-81-30-00-32-30-00-32-00-00-00-00-30-00"}},
SnapshotSlu{ Id="60-06-0E-81-30-00-32-30-00-32-00-00-80-00-00-00"}, Result=Normal
end}}
```

Detailed Information

Item	Description
TiPairs[x]	The volume information of the reverted Thin Image pairs
PrimaryVolume	The setting information of the primary volume
Slu	The SLU information
Id	The SLU ID
SnapshotSlu	The setting information of the secondary volume
Id	The SLU ID
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] Set PageTieringLevel

Example

```
09xx,YYYY/MM/DD,HH:MM.SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],Set PageTieringLevel,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{LDKC:CU:LDEV,Result}=[{0x00:0x00:0x00,Normal end}] ++{Start Page,Page Length,Page
Tiering Level,Page Range Result} =[{10,5, Level1,Normal end},{100,10, Level1,Normal
end}], Num. of Page Ranges=2 +Num. of VOLs=1
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the volume where the tiering policy is set
Result	The result of setting the tiering policy to the volume Normal end: Normal end Warning(xxxx-yyyyy): End with warning Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Start Page	The beginning page number of page ranges
Page Length	The length of page ranges
Page Tiering Level	The level of the tiering policy that is set to the page ranges If you unset the tiering policy, a hyphen (-) is output.
Page Range Result	The result of setting the tiering policy in page ranges Normal end: Normal end Warning(xxxx-yyyyy): End with warning Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Page Ranges	The specified number of page ranges
Num. of VOLs	The number of volumes where the tiering policy is set

[PROV] Set Virtual LDEV

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[PROV],Set Virtual LDEV,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{Operation}={Set
H-UVM ON} ++{LDKC:CU:LDEV,Virtual LDKC:CU:LDEV,Virtual Emulation, Virtual
SSID,Virtual LUSE,Virtual Attribute,Result}=
[{0x00:0x00:0x00,0x00:0x01:0x00,OPEN-V,0x0004,0,-,Normal end}], Num. of LDEVs=1
```

Detailed Information

Item	Description
Operation	Indicates the performed operations Set H-UVM ON Set H-UVM OFF Set Virtual Ldev ID Delete Virtual Ldev ID Set Virtual Ldev Information Delete Virtual Ldev Information Set Virtual Ldev ID and Virtual Ldev Information Delete Virtual Ldev ID and Virtual Ldev Information Set Property Normal Set Property Migration Set Property Migration and Virtual Ldev ID and Virtual Ldev Information Set Property GAD S-Vol
LDKC:CU:LDEV	The logical DKC, CU, and LDEV numbers of an LDEV that is mapped the virtual information
Virtual LDKC:CU:LDEV	The logical DKC, CU, and LDEV numbers of the virtual LDEV
Virtual Emulation	The emulation type of the virtual LDEV
Virtual SSID	The SSID of the virtual LDEV
Virtual LUSE	The number of LUSE volumes of the virtual LDEV
Virtual Attribute	The attribute of the virtual LDEV CVS: CVS attribute, -: No attribute

Item	Description
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*):Abnormal end *where xxxx*: Part code, *yyyyy*: Error code
Num. of LDEVs	The number of LDEVs that is mapped the virtual information

[PROV] Shrink Pool

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

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],Shrink Pool,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{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 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

Item	Description
	Not Execute: Not executed where *xxxx*: Part Code, *yyyyy*: Error Code
Num. of LDEVs	The number of shrinking LDEVs

[PROV] StartParityGroupsFormat

This log information does not indicate completion of format processing for a parity group, but indicates completion of format operation for the parity group.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],StartParityGroupsFormat,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{ParityGroup[0]{
  ID=1-1}}
```

Detailed Information

Item		Description
ParityGroup[x]		Information of the parity group
	ID	The parity group ID

[PROV] StartVerify

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

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],StartVerify,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{AutoCorrectMode=true,ErrorStopCount=16,
LogicalDevice[0]{
  ID=0x00:0x00:0x00}}
```

Detailed Information

Item		Description
AutoCorrectMode		The setting status of Auto Correct mode (which automatically correct an error detected by verification processing) true: enabled, false: disabled
ErrorStopCount		The set number of errors that is used to stop verification. If the number of errors detected by verifycation processing reaches this number, the verification processing stops.
LogicalDevice[x]		The setting information of the LDEV
	ID	The LDEV ID

[PROV] StopFormat

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],StopFormat,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[PROV] Stop Monitoring

Example

```
09xx,YYYY/MM/DD,HH:MM.SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],Stop Monitoring,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{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, *yyyyy*: Error code

Item	Description
Num. of Pools	The number of pools where the performance monitoring stopped

[PROV] Stop Reclm ZeroPages

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],Stop Reclm ZeroPages,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{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

```
09xx,YYYY/MM/DD,HH:MM.SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],Stop Relocating,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{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, *yyyyy*: Error code
Num. of Pools	The number of pools where the tier relocation was stopped

[PROV] Stop Shrinking Pool

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],Stop Shrinking Pool,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{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.
Num. of Pools	The number of pools where shrinking is stopped

[PROV] StopVerify

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],StopVerify,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[PROV] UnmapSecondaryVolumeWithSlu

Example

```
09xx,YYYY/MM/DD,HH:MM.SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],UnmapSecondaryVolumeWithSlu,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{TiPairs[0]{
SnapshotSlu{ Id="60-06-0E-81-30-00-32-30-00-32-00-00-80-00-00-00"}, Result=Normal
end, SecondaryVolume{ Ldev{ Id=0x00:0x00:0x06}}}}
```

Detailed Information

Item	Description
TiPairs[x]	The setting information of Thin Image pairs whose secondary volume is unmapped
SnapshotSlu	The SLU information of the secondary volume
Id	The SLU ID
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*):Abnormal end *xxxx*: Part code, *yyyyy*: Error code
SecondaryVolume	The unmapped secondary volume information
Ldev	The LDEV information
Id	The LDEV ID

[PROV] UpdateAluaMode

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],UpdateAluaMode,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{Ldev[0]{
Id=0x00:0x00:0x01,AluaMode=true,Result=Normal end}}
```

Detailed Information

Item	Description
Ldev[x]	The setting information of ALUA mode of the LDEV
Id	The LDEV ID
AluaMode	The setting status of ALUA mode true: Enabled, false: Disabled
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] UpdateAsymmetricAccessStatePerHG

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],UpdateAsymmetricAccessStatePerHG,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{AsymmetricAccessStateSettingOperation[0]{ AsymmetricAccessState=ActiveOptimized,
Port{ Id=1A, HostGroup{ Id=0}}, Result=Normal end}}
```

Detailed Information

Item			Description
AsymmetricAccessStateSettingOperation[x]			The setting information of Asymmetric Access States
	AsymmetricAccessState		The setting status of Asymmetric Access States ActiveOptimized: Prioritized, ActiveNonOptimized: Non-prioritized
	Port		The setting information of the port
		Id	The port ID
		HostGroup	The setting information of the host group
			Id	The host group ID
	Result		The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] UpdateDataSavingOptions

Example

```
09xx,YYYY/MM/DD,HH:MM.SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],UpdateDataSavingOptions,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx,
+{ThinProvisioningVolumes[0]{Id=0x00:0x00:0x00,Result=Normal end,
CapacitySaving=Compression,Option="Compression Acceleration(Enable)"}}
```

Detailed Information

Item		Description
ThinProvisioningVolumes[x]		The setting information of Capacity Saving of the edited Dynamic Provisioning volume
	Id	The ID of the Dynamic Provisioning volume
	Result	The result of operation Normal end: Normal end, Error(*xxxxx-xxxxxxx*): Abnormal end *where xxxx*: Part code, *yyyyy*: Error code
	CapacitySaving	The setting status of Capacity Saving Disabled: Capacity Saving is disabled. Compression: Compression is enabled. Deduplication and Compression: Deduplication and compression are enabled.
	Option	The setting status of compression accelerator Compression Acceleration(Enable): Compression accelerator is enabled. Compression Acceleration(Disable): Compression accelerator is disabled. Compression Acceleration(Default): The setting status of compression accelerator is not specified. (This status is output when the Capacity Saving setting is Disabled.)

[PROV] UpdateEseAttribute

Example

```
09xx,YYYY/MM/DD,HH:MM.SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],UpdateEseAttribute,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx,
+{ThinProvisioningVolumes[0]{Id=0x00:0x00:0x00,Result=Normal end,
ESE Attribute=ESE}}
```

Detailed Information

Item		Description
ThinProvisioningVolumes[x]		The setting information of the ESE attribute of the edited Dynamic Provisioning volume
	Id	The ID of the Dynamic Provisioning volume
	Result	The result of operation Normal end: Normal end, Error(*xxxxx-xxxxxxx*): Abnormal end *where xxxx*: Part code, *yyyyy*: Error code
	ESE Attribute	The setting information of the ESE attribute Disabled: The ESE attribute is disabled. ESE: The ESE attribute is enabled.

[PROV] UpdateMFSystemFunctions

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],UpdateMFSystemFunctions,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{MFSystemFunctions[0]{ ID=0, Status=0, Result=Normal end}, MFSystemFunctions[1]{
ID=1, Status=1, Result=Normal end}, : MFSystemFunctions[255]{ ID=255, Status=1,
Result=Normal end}}
```

Detailed Information

Item		Description
MFSystemFunctions[x]		The setting information of the Mainframe System Function
	ID	The Mainframe System Function ID
	Status	The setting status of the Mainframe System Function 0: Enabled, 1: Disabled
	Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] UpdateParityGroupSettings

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],UpdateParityGroupSettings,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{ParityGroup[0]{
  ID=1-1,Accelerated Compression=true,Result=Normal end}}
```

Detailed Information

Item		Description
ParityGroup[x]		The setting information of the parity group
	ID	The parity group ID
	Accelerated Compression	The setting status of the accelerated compression true: Enabled, false: Disabled
	Result	The result of the operation Normal end: Normal end, Error(*xxxx*-*yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code

[PROV] UpdatePoolDeduplication

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],UpdatePoolDeduplication,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx,
+{Deduplication=true,Pools[0]{Id=1,Result=Normal end,
ThinProvisioningVolumes[0]{Id=0x00:0x00:0x00,Ssid=0x0004}}}
```

Detailed Information

Item	Description
Deduplication	Indicates the setting status of the deduplication of the edited pool true: Enabled, false: Disabled
Pools[x]	The setting information of the deduplication of the edited pool

Item			Description
	Id		The pool ID of the associated pool
	Result		The result of operation Normal end: Normal end, Error(*xxxxx-xxxxxxx*): Abnormal end *where xxxx*: Part code, *yyyyy*: Error code
	ThinProvisioningVolumes[x]		The setting information of the deduplication system data volume
		Id	The ID of the deduplication system data volume
		Ssid	The SSID of the deduplication system data volume

[PROV] UpdateSpareDrives

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[PROV],UpdateSpareDrives,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Drive[0]{
  Location=HDD0-0,Spare=true,Result=Normal end}}
```

Detailed Information

Item		Description
Drive[x]		The information of the drive
	Location	The location where the drive is installed
	Spare	The status of whether the spare drive is assigned true: The spare drive is assigned. false: Assignment of the spare drive is released.
	Result	The result of operation Normal end: Normal end Error(*xxxxx-xxxxxxx*): Abnormal end *where xxxx*: Part code, *yyyyy*: Error code

[PROV] VTOC

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[PROV],VTOC,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{LDKC:CU:LDEV,VTOC(Trk),Result} =[{0x00:0x00:0x00,14,Normal end},
{0x00:0x00:0x01,14,Normal end}],Num. of LDEVs=2
```

Detailed Information

Item	Description
LDKC:CU:LDEV	The LDKC number, the CU number, and the LDEV number of the volume in which a VTOC size is set
VTOC(Trk)	The set VTOC size is displayed with the number of tracks
Result	The result of operation Normal end: Normal end Error(*xxxxx-xxxxxxx*): Abnormal end *where xxxx*: Part code, *yyyyy*: Error code
Num. of LDEVs	The number of VTOC sizes

Remote Maintenance Descriptions

[Remote Maintenance] Micro Program

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RM AP,,,[Remote Maintenance],
Micro Program,,Normal end,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Micro Media=Media
+Exchange How=Online
+Reboot Grp.=By 1/4 per System
+{Micro Kind,Old Ver,New Ver}=[{DKCMAIN,9000000050,9000000060},{SVP,90005005,
90006005}],Num. of Kinds=2
+Forcibly update the micro-program regardless of the operating status of
processors=Disable
+Forcibly run without safety checks=Disable
+Forcibly upload the micro-program=Disable
+Forcibly update the micro-program even if the update results in version
```

```
downgrade=Disable
```

Detailed Information

Item	Description
Micro Media	The media that the microcode to be exchanged is stored (Media, SVP Local Drive, Version Down, 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 per System, By 1/4 per System, By 1/8 per System, By One per DKC). If the microcode is exchanged offline, this item is ouput only when the MP reboot is executed.
Micro Kind	The type of the microcode
Old Ver	The version of the microcode before exchange
New Ver	The version of the microcode after exchange
Num. of Kinds	The number of types of microcodes
Forcibly update the micro-program regardless of the operating status of processors	Indicates whether the option for ignoring the MP usage rate is enabled (Enable or Disable).
Forcibly run without safety checks	Indicates whether the option for forcibly avoiding the prior check is enabled (Enable or Disable).
Forcibly upload the micro-program	Indicates whether the option for forcibly transferring the microcode is enabled (Enable or Disable).
Forcibly update the micro-program even if the update results in version downgrade	Indicates whether the option for forcibly downgrading the microcode is enabled (Enable or Disable).

[Remote Maintenance] PS Control

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RM AP,,,
[Remote Maintenance],PS Control,,Normal end,,,Seq.=xxxxxxxxxx +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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RM AP,,,[Remote Maintenance],
Reboot MP,,Normal end,,,Seq.=xxxxxxxxxx
+MP=MP010-00
```

Detailed Information

Item	Description
MP	Indicates the name of MP to be rebooted

[Remote Maintenance] Reboot Port

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RM AP,,,
[Remote Maintenance],Reboot Port,,Normal end,,,Seq.=xxxxxxxxxx
+PORT=1E
```

Detailed Information

Item	Description
Port	Indicates the port name to be rebooted

[Remote Maintenance] Reboot SVP

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RM AP,,,
[Remote maintenance],Reboot SVP,,Normal end,,,Seq.=xxxxxxxxxx
```

[Remote Maintenance] StartVerify

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RM AP,,,
[Remote Maintenance],StartVerify,,Normal end,,,Seq.=xxxxxxxxxx
+{AutoCorrectMode=true,ErrorStopCount=16, LogicalDevice[0]{
ID=0x00:0x00:0x00}}
```

Detailed Information

Item	Description
AutoCorrectMode	Indicates the setting status of the automatic correction mode (where errors detected by the verification are corrected automatically) true: Enabled, false: Disabled
ErrorStopCount	The setting value of the number of errors. The verification will be stopped when the number of detected errors reaches this value.
LogicalDevice[x]	The setting information of the LDEV
ID	The LDEV ID

[Remote Maintenance] StopVerify

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RM AP,,,
[Remote Maintenance],StopVerify,,Normal end,,,Seq.=xxxxxxxxxx
```

[Remote Maintenance] Switch SVP

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RM AP,,,
[Remote Maintenance],Switch SVP,,Normal end,,,Seq.=xxxxxxxxxx
```

[Remote Maintenance] Transfer Config

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RM AP,,,
[Remote Maintenance],Transfer Config,,Normal end,,,Seq.=xxxxxxxxxx
```

Remote Replication Descriptions

[Remote Replication] Add Path

Example 1: system connection

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Add Path,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{S/N,MCU LDKC,RCU LDKC,Path Gr.ID,Controller ID,Result}
={99999,0x00,0x00,Default,6,Normal end}
++{MCU Port,RCU Port}
=[{1E,3E},{5E,7E},{1F,3F},{5F,7F},{1G,3G},{5G,7G},{1H,3H}],
Num. of Port Pairs=7
(Snip)
+{S/N,MCU LDKC,RCU LDKC,Path Gr.ID,Controller ID,Result}
={99998,0x00,0x00,Default,6,Normal end}
++{MCU Port,RCU Port}
=[{1E,3E},{5E,7E},{1F,3F},{5F,7F},{1G,3G},{5G,7G},{1H,3H}],
Num. of Port Pairs=7
+Num. of RCUs=xx
```

Example 2: CU connection

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Add Path,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{S/N,MCU LDKC,MCU,RCU LDKC,RCU,SSID,Controller ID,Result}
={99999,0x00,0x3F,0x00,0x7F,0x0004,6,Normal end}
++{MCU Port,RCU Port}
=[{1E,3E},{5E,7E},{1F,3F},{5F,7F},{1G,3G},{5G,7G},{1H,3H}],
Num. of Port Pairs=7
(Snip)
+{S/N,MCU LDKC,MCU,RCU LDKC,RCU,SSID,Controller ID,Result}
={99998,0x00,0x3F,0x00,0x7F,0x0004,6,Normal end}
++{MCU Port,RCU Port}
=[{1E,3E},{5E,7E},{1F,3F},{5F,7F},{1G,3G},{5G,7G},{1H,3H}],
Num. of Port Pairs=7
+Num. of RCUs=xx
```

Example 3: mixture of system connection and CU connection

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Add Path,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{S/N,MCU LDKC,RCU LDKC,Path Gr.ID,Controller ID,Result}
={99999,0x00,0x00,Default,6,Normal end}
++{MCU Port,RCU Port}
=[{1E,3E},{5E,7E},{1F,3F},{5F,7F},{1G,3G},{5G,7G},{1H,3H}],
Num. of Port Pairs=7
(Snip)
+{S/N,MCU LDKC,MCU,RCU LDKC,RCU,SSID,Controller ID,Result}
={99998,0x00,0x3F,0x00,0x7F,0x0004,6,Normal end}
++{MCU Port,RCU Port}
=[{1E,3E},{5E,7E},{1F,3F},{5F,7F},{1G,3G},{5G,7G},{1H,3H}],
Num. of Port Pairs=7
+Num. of RCUs=xx
```

Detailed Information

Item	Description
S/N	The serial number of the RCU
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 of the RCU 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
MCU	The CU number of the connected CU
RCU	The CU number of the paired CU
SSID	The SSID
MCU Port	The port number of MCU
RCU Port	The port number of RCU

Item	Description
Num. of Port Pairs	Number of pairs of the port to be operated
Num. of RCUs	The number of RCUs set

[Remote Replication] Add Quorum Disk ID

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Add Quorum Disk ID,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Quorum Disk ID,Paired S/N,Controller ID,Quorum Disk(LDKC:CU:LDEV),
Result}=[{0x01,64024,7,0x00:0xFE:0x01,Normal end},
{0x02,64024,7,0x00:0xFE:0x02,Normal end},(Snip),
{0x7F,64024,7,0x00:0xFE:0x7F,Error(xxxx-yyyyy)}]
-,Num. of IDs=xx
```

Detailed Information

Item	Description
Quorum Disk ID	The added quorum disk ID used by global-active device
Paired S/N	The serial number of the remote storage system
Controller ID	The controller ID of the remote storage system 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8:VSP 5000 series, 18: VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800
Quorum Disk(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the added quorum disk used by global-active device No value is output if the LDEV is not set on the Quorum disk.
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of IDs	The number of added quorum disk IDs used by global-active device

[Remote Replication] Add RCU

Example 1: system connection

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Add RCU,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{S/N,MCU LDKC,RCU LDKC,Path Gr.ID,Controller ID,Min.Path,
MIH Time(s),Round Trip Time(ms),FREEZE,Result}
={99998,0x00,0x00,Default,6,08,015,001,Disable,Normal end}
++{MCU Port,RCU Port}
=[{1E,3E},{5E,7E},{1F,3F},{5F,7F},{1G,3G},{5G,7G},{1H,3H},
{5H,7H}],Num. of Port Pairs=8
(Snip)
+{S/N,MCU LDKC,RCU LDKC,Path Gr.ID,Controller ID,Min.Path,
MIH Time(s),Round Trip Time(ms),FREEZE,Result}
={99999,0x00,0x00,Default,6,08,015,001,Disable,Normal end}
++{MCU Port,RCU Port}
=[{1E,3E},{5E,7E},{1F,3F},{5F,7F},{1G,3G},{5G,7G},{1H,3H},
{5H,7H}],Num. of Port Pairs=8
+Num. of RCUs=xx
```

Example 2: CU connection

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Add RCU,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{S/N,MCU LDKC,MCU,RCU LDKC,RCU,SSID,Controller ID,Min.Path,
MIH Time(s),Round Trip Time(ms),FREEZE,Result}
={99998,0x00,0x3F,0x00,0x7F,0x0004,6,08,015,001,Disable,Normal end}
++{MCU Port,RCU Port}
=[{1E,3E},{5E,7E},{1F,3F},{5F,7F},{1G,3G},{5G,7G},{1H,3H},
{5H,7H}],Num. of Port Pairs=8
(Snip)
+{S/N,MCU LDKC,MCU,RCU LDKC,RCU,SSID,Controller ID,Min.Path,
MIH Time(s),Round Trip Time(ms),FREEZE,Result}
={99999,0x00,0x3F,0x00,0x7F,0x0004,6,08,015,001,Disable,Normal end}
++{MCU Port,RCU Port}
=[{1E,3E},{5E,7E},{1F,3F},{5F,7F},{1G,3G},{5G,7G},{1H,3H},
{5H,7H}],Num. of Port Pairs=8
+Num. of RCUs=xx
```

Example 3: mixture of system connection and CU connection

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Add RCU,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{S/N,MCU LDKC,RCU LDKC,Path Gr.ID,Controller ID,Min.Path,
MIH Time(s),Round Trip Time(ms),FREEZE,Result}
={99998,0x00,0x00,Default,6,08,015,001,Disable,Normal end}
```

```
++{MCU Port,RCU Port}
=[{1E,3E},{5E,7E},{1F,3F},{5F,7F},{1G,3G},{5G,7G},{1H,3H},
{5H,7H}],Num. of Port Pairs=8
(Snip)
+{S/N,MCU LDKC,MCU,RCU LDKC,RCU,SSID,Controller ID,Min.Path,
MIH Time(s),Round Trip Time(ms),FREEZE,Result}
={99999,0x00,0x3F,0x00,0x7F,0x0004,6,08,015,001,Disable,Normal end}
++{MCU Port,RCU Port}
=[{1E,3E},{5E,7E},{1F,3F},{5F,7F},{1G,3G},{5G,7G},{1H,3H},
{5H,7H}],Num. of Port Pairs=8
+Num. of RCUs=xx
```

Detailed Information

Item	Description
S/N	The serial number of the registered RCU
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 registered RCU. When the path group ID is default setting, "Default" is output.
Controller ID	The controller ID of the registered RCU 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800
MCU	The CU number of the connected CU
RCU	The CU number of the paired CU
SSID	The SSID of the registered RCU
MCU Port	The port number of MCU
RCU Port	The port number of the registered RCU
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 complete). 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 or TrueCopy for Mainframe is used.
FREEZE	Indicates whether CGROUP (FREEZE/RUN) PPRC TSO command support is enabled or disabled. This value is output only when TrueCopy for Mainframe is used.

Item	Description
	Enable or Disable is output.
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Port Pairs	The number of port pairs set
Num. of RCUs	The number of RCUs set

[Remote Replication] Change JNL Option

Example 1: when the copy type is UR

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Change JNL Option,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Copy Type=UR +{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
```

Example 2: when the copy type is URMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Change JNL Option,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Copy Type=URMF
+{LDKC,JNL,Data Overflow Watch(s),Inflow Control, Timer Type,Use of Cache,Result}
=[{0x00,0x001,20,Yes,System,Not Use,Normal end}, {0x00,0x002,20,No,Local,Use,Normal
end}],Num. of JNLs=2
```

Detailed Information

Item	Description
Copy Type	The copy type of this operation UR: Universal Replicator, URMF: Universal Replicator for Mainframe
LDKC	The LDKC number to which the journal belongs
JNL	The journal number
Data Overflow Watch(s)	The overflow watch time of the meta data or journal data (in seconds)

Item	Description
Inflow Control	Whether to restrict the flow of update I/O to the journal volume Yes: Restricted, No: Not restricted
Timer Type	Type of the clock used for the consistency time System: Uses the system clock of the mainframe host of the primary site. Local: Does not use the system clock. None: Uses the system clock of the mainframe host of the primary site when data copying is from the storage system of the secondary site to the storage system of the primary site. This information is output only when the copy type is "URMF".
Use of Cache	Whether to store the journal data in the restore journal in cache. Use: Stores, Not Use: Does not store
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of JNLs	The number of journals

[Remote Replication] Change Mirror Option

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Change Mirror Option,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Copy Type=UR +{LDKC,
JNL,MirrorID,Copy Pace,Path
Watch Time, Forward Path Watch Time,Transfer Speed(Mbps), Delta resync
Failure,Result} =[{0x00,0x001,0x00,Medium,12(hour),Yes,100,Entire,Normal end},
{0x00,0x002,0x00,Low,1(day),No,10,None,Normal end}], Num. of Mirrors=2
```

Detailed Information

Item	Description
Copy Type	The copy type of this operation UR: Universal Replicator, URMF: Universal Replicator for Mainframe

Item	Description
LDKC	The LDKC number to which 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 Times	Path block watch time (observation time from the path block till the mirror split <suspended>) 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).
Delta resync Failure	Indicates the operation mode when Delta resync operation have failed. Entire: Copy the entire data volume, None: Do not copy the entire data volume
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Mirrors	The number of mirrors

[Remote Replication] Change RCU Option

Example 1: system connection

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Change RCU Option,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{S/N,MCU LDKC,RCU LDKC,Path Gr.ID,Controller ID,Min.Path,
MIH Time(s),Round Trip Time(ms),FREEZE,Result}
={99998,0x00,0x00,Default,6,08,015,001,Disable,Normal end}
(Snip)
+{S/N,MCU LDKC,RCU LDKC,Path Gr.ID,Controller ID,Min.Path,
MIH Time(s),Round Trip Time(ms),FREEZE,Result}
```

```
={99999,0x00,0x00,Default,6,08,015,001,Disable,Normal end}
+Num. of RCUs=xx
```

Example 2: CU connection

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Change RCU Option,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{S/N,MCU LDKC,MCU,RCU LDKC,SSID,Controller ID,Min.Path,
MIH Time(s),Round Trip Time(ms),FREEZE,Result}
={99998,0x00,0x3F,0x00,0x0004,6,08,015,001,Disable,Normal end}
(Snip)
+{S/N,MCU LDKC,MCU,RCU LDKC,SSID,Controller ID,Min.Path,
MIH Time(s),Round Trip Time(ms),FREEZE,Result}
={99999,0x00,0x3F,0x00,0x0004,6,08,015,001,Disable,Normal end}
+Num. of RCUs=xx
```

Example 3: mixture of system connection and CU connection

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Change RCU Option,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{S/N,MCU LDKC,RCU LDKC,Path Gr.ID,Controller ID,Min.Path,
MIH Time(s),Round Trip Time(ms),FREEZE,Result}
={99998,0x00,0x00,Default,6,08,015,001,Disable,Normal end}
(Snip)
+{S/N,MCU LDKC,MCU,RCU LDKC,SSID,Controller ID,Min.Path,
MIH Time(s),Round Trip Time(ms),FREEZE,Result}
={99999,0x00,0x3F,0x00,0x0004,6,08,015,001,Disable,Normal end}
+Num. of RCUs=xx
```

Detailed Information

Item	Description
S/N	The serial number of the RCU on which the RCU option is changed
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 on which the RCU option is changed. When the path group ID is default setting, "Default" is output.
Controller ID	The controller ID of the RCU on which the RCU option is changed 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800

Item	Description
MCU	The CU number of the connected CU
SSID	The SSID of the RCU on which the RCU option is changed
Min.Path	The number of minimum paths after the change
MIH Time(s)	The value of RIO MIH (Remote I/O Missing Interrupt Handler) timer after the change (wait time until data copy from MCU to RCU is complete). The unit is second.
Round Trip Time(ms)	The round-trip response time after the change (delay time for round-trip remote I/O). The unit is millisecond. This value is output when TrueCopy or TrueCopy for Mainframe is used.
FREEZE	Indicates whether CGROUP (FREEZE/RUN) PPRC TSO command support is enabled or disabled. This value is output only when TrueCopy for Mainframe is used. Enable or Disable is output.
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of RCUs	The number of RCUs set

[Remote Replication] Clear SIM

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Clear SIM,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[Remote Replication] Create Pairs

Example 1: when the copy type is TC

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Create Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=TC,{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,GR-0xFE-1023,99999,0x00,Default,6,Sync,Entire,
Never,15,032,Track,Normal end},(Snip)-(Snip)],Num. of Pairs=xx
```

Detailed Information 1

Item	Description
Copy Type	The copy type of this operation TC: TrueCopy
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the volume specified to the primary volume
S-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the volume specified to the secondary volume
S/N	The serial number of the RCU
LDKC	The LDKC number of the RCU
ID	The path group ID or SSID When the path group ID is default setting, "Default" is output.
Controller ID	The controller ID of the RCU 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800
Type	Type of the update copy operation Outputs Sync (synchronization mode) as a fixed parameter.
Initial Copy	Type of the pair creation operation Entire: Creates pairs and copies data from the primary volume to the secondary volume. None: Creates pairs but does not copy data from the primary volume to the secondary volume.
Fence Level	Configured fence level (conditions where the local storage system rejects write operations to the primary volume) Never: Can write to the primary volume even the pair is split. Data: Cannot write to the primary volume when update copying fails. Status: Cannot write to the primary volume, only when the storage system of the primary site cannot change the pair status of the secondary volume to PSUE.
Copy Pace	The setting of the initial copy speed (the number of tracks that can be copied at a time)

Item	Description
Priority	The priority of the set initial copy operation (scheduling order).
Diff	The unit of the difference management setting Outputs Track as a fixed parameter.
Result	The result of the operation Normal end: Normal end, Error(*xxxx*-*yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Pairs	The number of create pairs

Example 2: when the copy type is TCMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Create Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=TCMF,{P-VOL(LDKC:CU:LDEV),S-VOL(LDEV),
S/N,LDKC,SSID,Controller ID,Type,Initial Copy,Fence Level,
Copy Pace,Priority,Diff,CFW,DFW,TS,Result}
=[{0x00:0x00:0x00,0xFF,99999,0x00,0x0004,6,Sync,Entire,Never,
15,032,Track,Only P-VOL,Required,Enable,Normal end},
(Snip)-(Snip)],Num. of Pairs=xx
```

Detailed Information 2

Item	Description
Copy Type	The copy type of this operation TCMF: TrueCopy for Mainframe
P-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the primary volume
S-VOL(LDEV)	The LDEV number of the secondary volume
S/N	The serial number of the RCU
LDKC	The LDKC number of the RCU
SSID	The SSID of the RCU
Controller ID	The controller ID of the RCU

Item	Description
	5: USP V/VM, 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series
Type	Type of the update copy operation Outputs Sync (synchronization mode) as a fixed parameter.
Initial Copy	Type of the pair creation operation Entire: Creates pairs and copies data from the primary volume to the secondary volume. None: Creates pairs but does not copy data from the primary volume to the secondary volume.
Fence Level	Configured fence level (conditions where the local storage system rejects write operations to the primary volume) Never: Can write to the primary volume even the pair is split. Data: Cannot write to the primary volume when update copying fails. Status: Cannot write to the primary volume, only when the storage system of the primary site cannot change the pair status of the secondary volume to Suspend.
Copy Pace	The setting of the initial copy speed (the number of tracks that can be copied at a time)
Priority	The priority of the set initial copy operation (scheduling order).
Diff	The unit of the difference management setting Outputs Track as a fixed parameter.
CFW	Whether to copy CFW (cache fast write) data to the secondary volume. Only P-VOL: Does not copy, Copy to S-VOL: Copies
DFW	Whether the storage system of the primary site splits pairs when the storage system of the secondary site cannot copy DFW data to the secondary volume. Required: Splits pairs. Not Required: Does not split pairs.
TS	Indicates whether to transfer the host I/O time stamp to the secondary volume when creating a pair. Enable: Transfer, Disable: Not transfer
Result	The result of the operation Normal end: Normal end,

Item	Description
	Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Pairs	The number of create pairs

Example 3: when the copy type is UR

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Create Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=UR
+{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 3

Item	Description
Copy Type	The copy type of this operation UR: Universal Replicator
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 RCU
CTRLID	The controller ID of the RCU 5: USP V/VM, 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800, 19: HUS VM
Priority	The priority of the set initial copy operation (scheduling order).
CTG	The consistency group ID
Initial Copy	Type of the pair creation operation

Item	Description
	Entire: Creates pairs and copies data from the primary volume to the secondary volume. None: Creates pairs but does not copy data from the primary volume to the secondary volume. Delta: Creates delta resynchronization pairs.
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	Range of the pair split at failure occurrence Mirror: When a pair fails, all the pairs are split that exist in the same mirror as the pair. LU: When a pair fails, only the pair is split.
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Pairs	The number of created pairs

Example 4: when the copy type is URMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Create Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=URMF
+{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),MirrorID,S/N,
CTRLID,Priority,Initial Copy,M-JNL,R-JNL,Path Gr. ID,
Error Level,CFW,Result}
=[{0x00:0x00:0x00,0x00:0x20:0x00,0x00,65432,6,32,Entire,
0x002,0x000,Default,Mirror,Copy to S-VOL,Normal end},
-{0x00:0x00:0x01,0x00:0x20:0x01,0x00,65432,6,32,Entire,
0x002,0x000,Default,Mirror,Copy to S-VOL,Normal end}],
Num. of Pairs=2
```

Detailed Information 4

Item	Description
Copy Type	The copy type of this operation URMF: Universal Replicator for Mainframe
P-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the primary data volume
S-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the secondary data volume
MirrorID	The mirror ID
S/N	The serial number of the RCU
CTRLID	The controller ID of the RCU 5: USP V/VM, 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series
Priority	The priority of the set initial copy operation (scheduling order).
Initial Copy	Type of the pair creation operation Entire: Creates pairs and copies data from the primary volume to the secondary volume. None: Creates pairs but does not copy data from the primary volume to the secondary volume. Delta: Creates delta resynchronization pairs.
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	Range of the pair split at failure occurrence Mirror: When a pair fails, all the pairs are split that exist in the same mirror as the pair. Volume: When a pair fails, only the pair is split.
CFW	Whether to copy CFW (cache fast write) data to the secondary volume. Only P-VOL: Does not copy, Copy to S-VOL: Copies
Result	The result of the operation

Item	Description
	Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Pairs	The number of created pairs

Example 5: when the copy type is GAD

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Create Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=GAD,{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),
S/N_P,S/N_S,Path Gr.ID,Controller ID,SSID,Copy Pace,Quorum Disk ID,
MirrorID,CTG,Initial Copy,Result}=
[{1A-0x00-0,GR-0xFE-1023,62345,62355,0x00,7,0x0004,15,0x15, 0,
0x000, None,Normal end},(Snip)-(Snip)],Num. of Pairs=xx
```

Detailed Information 5

Item	Description
Copy Type	The copy type of this operation GAD: global-active device
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the primary volume
S-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the secondary volume
S/N_P	The serial number of the local storage system
S/N_S	The serial number of the remote storage system
Path Gr.ID	Path group ID used in a global-active device pair
Controller ID	The controller ID of the remote storage system 5: USP V/VM, 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800, 19: HUS VM
SSID	The SSID
Copy Pace	The setting of the initial copy speed (the number of tracks that can be copied at a time)

Item	Description
Quorum Disk ID	The quorum disk ID used by global-active device
MirrorID	The mirror ID
CTG	The consistency group ID A hyphen (-) is displayed if the consistency group is not specified.
Initial Copy	Type of the pair creation operation Entire: Creates pairs and copies data from the primary volume to the secondary volume. None: Creates pairs but does not copy data from the primary volume to the secondary volume.
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Pairs	The number of created pairs

[Remote Replication] Delete Cmd.Dev

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Delete Cmd.Dev,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[Remote Replication] Delete Pairs

Example 1: when the copy type is TC

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Delete Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=TC,{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),
Type,Force,VOL(LDKC:CU:LDEV),PairVOL(LDEV),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 1

Item	Description
Copy Type	The copy type of this operation TC: TrueCopy
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the primary volume of a pair that uses a volume connected to a host by using Fibre Channel or iSCSI
S-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the secondary volume of a pair that uses a volume connected to a host by using Fibre Channel or iSCSI
Type	Volume type of the local storage system P-VOL: Primary volume, S-VOL: Secondary volume
Force	Conditions to delete pairs forcibly Yes: Deletes pairs, also when the local storage system cannot communicate with the remote storage system. No: Deletes pairs, only when the local storage system can change the pair to simplex volumes.
VOL(LDKC:CU:LDEV)	The LDKC number, CU number, and LDEV number of the volume (on the local storage system) of a pair that uses a volume connected to a host by using NVMe-oF
PairVOL(LDEV)	The LDEV number of the volume (on the remote storage system) of a pair that uses a volume connected to a host by using NVMe-oF
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Pairs	The number of delete pairs

Example 2: when the copy type is TCMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Delete Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=TCMF,{VOL(LDKC:CU:LDEV),PairVOL(LDEV),
Type,Mode,Result}
=[{0x00:0x00:0x00,0xFD,P-VOL,Normal,Normal end},
{0x00:0x00:0x01,0xFE,P-VOL,Normal,Normal end},
```

```
{0x00:0x00:0x02,0xFF,P-VOL,Normal,Normal end},(Snip)-(Snip)],
Num. of Pairs=xx
```

Detailed Information 2

Item	Description
Copy Type	The copy type of this operation TCMF: TrueCopy for Mainframe
VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the volume on MCU
PairVOL(LDEV)	The LDEV number of the volume on RCU
Type	Volume type of the local storage system P-VOL: Primary volume, S-VOL: Secondary volume
Mode	Type of the pair deletion operation Normal: Deletes pairs. Force: Deletes pairs forcibly. All: Deletes forcibly all the pairs that use the same remote connection as the pair.
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Pairs	The number of deleted pairs

Example 3: when the copy type is UR

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Delete Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=UR
+{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),MirrorID,
S/N,CTRLID,Type,Range,Delete Mode,P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),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 Requests=2
```

Detailed Information 3

Item	Description
Copy Type	The copy type of this operation UR: Universal Replicator
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the primary volume of a pair that uses a volume connected to a host by using Fibre Channel or iSCSI
S-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the secondary volume of a pair that uses a volume connected to a host by using Fibre Channel or iSCSI
MirrorID	The mirror ID
S/N	The serial number of the RCU
CTRLID	The controller ID of the RCU 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800
Type	The volume type of the deleted volume P-VOL: Primary volume, S-VOL: Secondary volume
Range	The delete range Mirror: All the pairs are delete that exist in the same mirror as the pair. LU: Only the pair is delete.
Delete Mode	Type of the pair deletion operation Normal: Deletes pairs, Force: Deletes pairs forcibly.
P-VOL (LDKC:CU:LDEV)	The LDKC number, CU number, and LDEV number of the primary volume of a pair that uses a volume connected to a host by using NVMe-oF
S-VOL (LDKC:CU:LDEV)	The LDKC number, CU number, and LDEV number of the secondary volume of a pair that uses a volume connected to a host by using NVMe-oF
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Requests	The number of deleted mirrors when Range is Mirror

Item	Description
	The number of deleted pairs when Range is LU

Example 4: when the copy type is URMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Delete Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=URMF
+{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),MirrorID,S/N,
CTRLID,Type,Range,Delete Mode,Result}
=[{0x00:0x00:0x00,0x00:0x20:0x00,0x00,65432,6,P-VOL,Volume,
Normal,Normal end},
{0x00:0x00:0x02,0x00:0x20:0x02,0x00,65432,6,P-VOL,Volume,
Normal,Normal end}],Num. of Requests=2
```

Detailed Information 4

Item	Description
Copy Type	The copy type of this operation URMF: Universal Replicator for Mainframe
P-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the primary data volume
S-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the secondary data volume
MirrorID	The mirror ID
S/N	The serial number of the RCU
CTRLID	The controller ID of the RCU 5: USP V/VM, 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series
Type	The volume type of the deleted volume P-VOL: Primary volume, S-VOL: Secondary volume
Range	The delete range Mirror: All the pairs are delete that exist in the same mirror as the pair. LU: Only the pair is delete.

Item	Description
Delete Mode	Type of the pair deletion operation Normal: Deletes pairs, Force: Deletes pairs forcibly.
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Requests	The number of deleted mirrors when Range is Mirror The number of deleted pairs when Range is Volume

Example 5: when the copy type is GAD

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Delete Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=GAD,{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),
S/N_P,S/N_S,Type,SSID_P,SSID_S,CTG,Range,Force,MirrorID,
Invisible,Result}=
[{1A-0x00-0,GR-0xFE-1023,62345,62355,P-VOL,0x0004,0x0004,-,
Volume,Yes,0,Disable,Normal end},
(Snip)-(Snip)],Num. of Requests=xx
```

Detailed Information 5

Item	Description
Copy Type	The copy type of this operation GAD: global-active device
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the primary volume
S-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the secondary volume
S/N_P	The serial number of the local storage system
S/N_S	The serial number of the remote storage system
Type	Volume type of the local storage system SMPL: simplex, P-VOL: Primary volume, S-VOL: Secondary volume
SSID_P	The SSID of the primary volume

Item	Description
SSID_S	The SSID of the secondary volume
CTG	The consistency group ID A hyphen (-) is displayed when Range is Volume.
Range	The applicable range of pair deletion Volume: Only this volume, Group: All volumes in the consistency group to which this volume belongs
Force	Conditions to delete pairs forcibly Yes: Deletes pairs, also when the local storage system cannot communicate with the remote storage system. No: Deletes pairs, only when the local storage system can change the pair to simplex volumes.
MirrorID	The mirror ID
Invisible	Indicates whether the host can access volumes after deleting pairs. Enable: Deletes the virtual LDEV ID of the volume of the local storage system so that no hosts can access the volume. Disable: Keeps the virtual LDEV ID of the volume of the local storage system so that hosts can access the volume.
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Requests	The number of requests to delete pairs

[Remote Replication] Delete Path

Example 1: system connection

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Delete Path,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{S/N,MCU LDKC,RCU LDKC,Path Gr.ID,Controller ID,Result}
={99999,0x00,0x00,Default,6,Normal end}
++{MCU Port,RCU Port}
=[{1E,3E},{5E,7E},{1F,3F},{5F,7F},{1G,3G},{5G,7G},{1H,3H}],
Num. of Port Pairs=7
(Snip)
+{S/N,MCU LDKC,RCU LDKC,Path Gr.ID,Controller ID,Result}
```

```
={99998,0x00,0x00,Default,6,Normal end}
++{MCU Port,RCU Port}
=[{1E,3E},{5E,7E},{1F,3F},{5F,7F},{1G,3G},{5G,7G},{1H,3H}],
Num. of Port Pairs=7
+Num. of RCUs=xx
```

Example 2: CU connection

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Delete Path,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{S/N,MCU LDKC,MCU,RCU LDKC,RCU,SSID,Controller ID,Result}
={99999,0x00,0x3F,0x00,0x7F,0x0004,6,Normal end}
++{MCU Port,RCU Port}
=[{1E,3E},{5E,7E},{1F,3F},{5F,7F},{1G,3G},{5G,7G},{1H,3H}],
Num. of Port Pairs=7
(Snip)
+{S/N,MCU LDKC,MCU,RCU LDKC,RCU,SSID,Controller ID,Result}
={99998,0x00,0x3F,0x00,0x7F,0x0004,6,Normal end}
++{MCU Port,RCU Port}
=[{1E,3E},{5E,7E},{1F,3F},{5F,7F},{1G,3G},{5G,7G},{1H,3H}],
Num. of Port Pairs=7
+Num. of RCUs=xx
```

Example 3: mixture of system connection and CU connection

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Delete Path,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{S/N,MCU LDKC,RCU LDKC,Path Gr.ID,Controller ID,Result}
={99999,0x00,0x00,Default,6,Normal end}
++{MCU Port,RCU Port}
=[{1E,3E},{5E,7E},{1F,3F},{5F,7F},{1G,3G},{5G,7G},{1H,3H}],
Num. of Port Pairs=7
(Snip)
+{S/N,MCU LDKC,MCU,RCU LDKC,RCU,SSID,Controller ID,Result}
={99998,0x00,0x3F,0x00,0x7F,0x0004,6,Normal end}
++{MCU Port,RCU Port}
=[{1E,3E},{5E,7E},{1F,3F},{5F,7F},{1G,3G},{5G,7G},{1H,3H}],
Num. of Port Pairs=7
+Num. of RCUs=xx
```

Detailed Information

Item	Description
S/N	The serial number of the RCU on which a path is deleted

Item	Description
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 deleted path. When the path group ID is default setting, "Default" is output.
Controller ID	The controller ID of the RCU on which a path is deleted 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
MCU	The CU number of the connected CU
RCU	The CU number of the paired CU
SSID	The SSID
MCU Port	The port number of MCU
RCU Port	The port number of RCU
Num. of Port Pairs	Number of pairs of the port to be operated
Num. of RCUs	The number of RCUs set

[Remote Replication] Del Quorum Disk ID

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Del Quorum Disk ID,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Quorum Disk ID,Paired S/N,Controller ID,Quorum Disk(LDKC:CU:LDEV),
Result}=[{0x01,64024,7,0x00:0xFE:0x01,Normal end},
{0x02,64024,7,0x00:0xFE:0x02,Normal end},(Snip),
{0x7F,64024,7,0x00:0xFE:0x7F,Error(xxxx-yyyyy)}]
-,Num. of IDs=xx
```

Detailed Information

Item	Description
Quorum Disk ID	The deleted quorum disk ID used by global-active device
Paired S/N	The serial number of the remote storage system
Controller ID	The controller ID of the remote storage system 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800
Quorum Disk(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the deleted quorum disk used by global-active device No value is output if the LDEV is not set on the Quorum disk.
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of IDs	The number of deleted quorum disk IDs used by global-active device

[Remote Replication] Delete RCU

Example 1: system connection

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Delete RCU,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{S/N,MCU LDKC,RCU LDKC,Path Gr.ID,Controller ID,Result}
={99999,0x00,0x00,Default,6,Normal end}
(Snip)
+{S/N,MCU LDKC,RCU LDKC,Path Gr.ID,Controller ID,Result}
={99998,0x00,0x00,Default,6,Normal end}
+Num. of RCUs=xx
```

Example 2: CU connection

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Delete RCU,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{S/N,MCU LDKC,MCU,RCU LDKC,SSID,Result}
={99999,0x00,0x3F,0x00,0x0004,Normal end}
(Snip)
+{S/N,MCU LDKC,MCU,RCU LDKC,SSID,Result}
```

```
={99998,0x00,0x3F,0x00,0x0004,Normal end}
+Num. of RCUs=xx
```

Example 3: mixture of system connection and CU connection

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Delete RCU,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{S/N,MCU LDKC,RCU LDKC,Path Gr.ID,Controller ID,Result}
={99999,0x00,0x00,Default,6,Normal end}
(Snip)
+{S/N,MCU LDKC,MCU,RCU LDKC,SSID,Result}
={99998,0x00,0x3F,0x00,0x0004,Normal end}
+Num. of RCUs=xx
```

Detailed Information

Item	Description
S/N	The serial number of the deleted RCU
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 deleted RCU. When the path group ID is default setting, "Default" is output.
Controller ID	The controller ID of the deleted RCU 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800
MCU	The CU number of the connected CU
SSID	The SSID of the deleted RCU
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of RCUs	The number of deleted RCUs

[Remote Replication] Edit EXCTG

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Edit EXCTG,Add,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{LDKC,EXCTG}={0x00,0x00}
++{LDKC,JNL,MirrorID,S/N,CTRLID,Cmd.Dev.(LDKC:CU:LDEV),Result}=
[{0x00,0x000,0x01,65432,5,0x00:0x20:0x00,Normal end},
{0x00,0x001,0x01,65432,5,0x00:0x20:0x00,Normal end}],
Num. of JNLs=2
+{LDKC,EXCTG}={0x00,0x01}
++{LDKC,JNL,MirrorID,S/N,CTRLID,Cmd.Dev.(LDKC:CU:LDEV),Result}=
[{0x00,0x002,0x01,65433,5,0x00:0x20:0x00,Normal end}],
Num. of JNLs=1
+Num. of EXCTGs=2
```

Basic Information

Parameter	Description
Add	Indicates the addition of the journal to the expanded consistency group
Remove	Indicates the deletion of the journal from the expanded consistency group

Detailed Information

Item	Description
LDKC	The number of the LDKC to which the expanded consistency group belongs
EXCTG	The number of the expanded consistency group
LDKC	The LDKC number to which the journal belongs
JNL	The journal number
MirrorID	The mirror ID
S/N	The serial number of the RCU
CTRLID	The controller ID of the RCU 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series

Item	Description
Cmd.Dev. (LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the remote command device.
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of JNLs	The number of journals set to the expanded consistency group
Num. of EXCTGs	The number of the expanded consistency groups whose settings are changed

[Remote Replication] Edit Options

Example 1: Editing storage system options

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Edit Options,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=TC,{Max Initial Copy,CU Activity, Path
Blockade Watch(s),Path Blockade SIM Watch(s), Service SIM,Switch}
={128,Enable,45,070,Not Report,-}
```

Example 2: Editing CU options

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Edit Options,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=TC,
{LDKC,CU,Service SIM,PPRC Support,Max Initial Copy} =[{0x00,0x00,Not Report,Yes,04},
{0x00,0x01,Not Report,Yes,04},
{0x00,0x02,Not Report,Yes,04}, {0x00,0x03,Not Report,Yes,04}, {0x00,0x04,Not Report,
Yes,04},(Snip)-(Snip)], Num. of CUs=255
```

Example 3: Editing both storage system options and CU options

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Edit Options,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=TC,{Max Initial Copy,CU Activity, Path
Blockade Watch(s),Path Blockade SIM Watch(s), Service SIM,Switch}
={128,Enable,45,070,Not Report,-} +{LDKC,CU,Service SIM,PPRC Support,Max Initial
Copy} =[{0x00,0x00,Not Report,Yes,04}, {0x00,0x01,Not Report,Yes,04}, {0x00,0x02,Not
```

```
Report,Yes,04}, {0x00,0x03,Not Report,Yes,04}, {0x00,0x04,Not
Report,Yes,04},(Snip)-(Snip)], Num. of CUs=255
```

Example 4: Editing remote replication function switch

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Edit Options,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=TC,{Max Initial Copy,CU Activity, Path
Blockade Watch(s),Path Blockade SIM Watch(s), Service SIM,Switch} ={-,-,-,-,-,1000
0000 0000 0000 0100 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
0000}
```

Detailed Information

Item	Description
Copy Type	The copy type of this operation TC: TrueCopy
Max Initial Copy	The setting of the maximum number of initial copy operations If this is not a subject to change, a hyphen (-) is displayed. If any one of Max Initial Copy, CU Activity, Path Blockade Watch(s), Path Blockade SIM Watch(s), and Service SIM is changed, this will be the subject to change.
CU Activity	Indicates whether the parallel operation of initial copy by the control unit is enabled or not. Enable or Disable will appear. If this is not a subject to change, a hyphen (-) is displayed. If any one of Max Initial Copy, CU Activity, Path Blockade Watch(s), Path Blockade SIM Watch(s), and Service SIM is changed, this will be the subject to change.
Path Blockade Watch(s)	The path blockade watch period setting (in seconds). If this is not a subject to change, a hyphen (-) is displayed. If any one of Max Initial Copy, CU Activity, Path Blockade Watch(s), Path Blockade SIM Watch(s), and Service SIM is changed, this will be the subject to change.
Path Blockade SIM Watch(s)	The path blockade SIM watch period setting (in seconds). If this is not a subject to change, a hyphen (-) is displayed. If any one of Max Initial Copy, CU Activity, Path Blockade Watch(s), Path Blockade SIM Watch(s), and Service SIM is changed, this will be the subject to change.
Service SIM	Indicates whether the remote replication related SIM is reported or not.

Item	Description
	Report, Not Report If this is not a subject to change, a hyphen (-) is displayed. If any one of Max Initial Copy, CU Activity, Path Blockade Watch(s), Path Blockade SIM Watch(s), and Service SIM is changed, this will be the subject to change.
Switch	Indicates the ON/OFF information of each bit of the function switch that is allocated in the 64 bit format; the first digit corresponds to the bit 0 while the last one corresponds to the bit 63. 0: OFF, 1: ON If this is not a subject to change, a hyphen (-) is displayed.
LDKC	The LDKC number
CU	The CU number of the connected CU
Service SIM	Indicates whether the remote replication related SIM is reported. Report, Not Report If this is not a subject to change, a hyphen (-) is displayed. If any one of Service SIM, PPRC Support, and Max Initial Copy is changed, this will be the subject to change.
PPRC Support	Indicates whether the host supports PPRC Yes: Support, No: Not support If this is not a subject to change, a hyphen (-) is displayed. If any one of Service SIM, PPRC Support, and Max Initial Copy is changed, this will be the subject to change.
Max Initial Copy	The number of parallel operation of initial copy by CU. If this is not a subject to change, a hyphen (-) is displayed. If any one of Service SIM, PPRC Support, and Max Initial Copy is changed, this will be the subject to change.
Num. of CUs	The number of CUs set

Example 5: Editing Max Initial Copy

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Edit Options,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Copy Type=UR +Max
Initial Copy=64
```

Example 6: Editing SIM Report

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Edit Options,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=UR +{LDKC:CU,SIM Report}
=[{0x00:0x00,Report},{0x00:0x01,Not Report}, {0x00:0x02,Not
Report},(Snip)-(Snip),{0x00:0xFE,Report}], Num. of CUs=256
```

Example 7: Editing both Max Initial Copy and SIM Report

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Edit Options,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=UR +Max Initial Copy=64 +{LDKC:CU,SIM
Report} =[{0x00:0x00,Report},{0x00:0x01,Not Report}, {0x00:0x02,Not
Report},(Snip)-(Snip),{0x00:0xFE,Report}], Num. of CUs=256
```

Detailed Information

Item	Description
Copy Type	The copy type of this operation UR: Universal Replicator
Max Initial Copy	The setting of the maximum number of initial copy operations
LDKC:CU	The LDKC and CU numbers
SIM Report	Whether to report SIM to the host or not. Report, Not report
Num. of CUs	The number of CUs on which the setting is changed
Note: Only the changed items are output.	

Example 8: when the copy type is GAD

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Edit Options,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=GAD,{Max Initial
Copy,Path Blockade Watch(s), Path Blockade SIM Watch(s),Service SIM,Switch,Max
Initial Copy HA}= {128,45,70,Not Report,0000 0000 0000 0000 0000 0000 0000 0000 0000
0000 0000 0000 0000 0000 0000 0000,50}
```

Detailed Information 8

Item	Description
Copy Type	The copy type of this operation GAD: global-active device
Max Initial Copy	The setting of the maximum number of initial copy operations
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 replication related SIM is reported. Report: Reported, Not Report: Not reported
Switch	Indicates the ON/OFF information of each bit of the function switch that is allocated in the 64 bit format; the first digit corresponds to the bit 0 while the last one corresponds to the bit 63. 0: OFF, 1: ON If this is not a subject to change, a hyphen (-) is displayed.
Max Initial Copy HA	The setting of the number of initial copy operations of GAD

[Remote Replication] Edit Pair Options

Example 1: when the copy type is TC

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Edit Pair Options,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Copy Type=TC,{P-
VOL(Port-G-ID-LUN),Fence
Level,VOL(LDKC:CU:LDEV),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 1

Item	Description
Copy Type	The copy type of this operation TC: TrueCopy

Item	Description
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the primary volume of a pair that uses a volume connected to a host by using Fibre Channel or iSCSI
Fence Level	The changed fence level setting (the condition that MCU rejects the write operation to the primary volume). Never: Can write to the primary volume even when the pair is split. Data: Cannot write to the primary volume when update copying fails. Status: Cannot write to the primary volume, only when the storage system of the primary site cannot change the pair status of the secondary volume to PSUE.
VOL(LDKC:CU:LDEV)	The LDKC number, CU number, and LDEV number of the volume (on the local storage system) of a pair that uses a volume connected to a host by using NVMe-oF
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Pairs	The number of pairs on which the setting is changed

Example 2: when the copy type is TCMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],EditPair Options,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Copy Type=TCMF,{P-
VOL(LDKC:CU:LDEV),Fence Level,CFW,Result}
=[{0x00:0x00:0x00,Never,Copy To S-VOL,Normal end}, {0x00:0x01,Never,Copy to
S-VOL,Normal end},(Snip)-(Snip)], Num. of Pairs=x
```

Detailed Information 2

Item	Description
Copy Type	The copy type of this operation TCMF: TrueCopy for Mainframe
P-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the primary volume

Item	Description
Fence Level	The changed fence level setting (the condition that MCU rejects the write operation to the primary volume). Never: Can write to the primary volume even when the pair is split. Data: Cannot write to the primary volume when update copying fails. Status: Cannot write to the primary volume, only when the storage system of the primary site cannot change the pair status of the secondary volume to Suspend.
CFW	Indicates whether the setting to copy the CFW (Cache Fast Write) data to the secondary volume is enabled or not. Only P-VOL: Copy to primary volume only is enabled Copy to S-VOL: Copy to primary and secondary volume is enabled
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Pairs	The number of pairs on which the setting is changed

Example 3: when the copy type is UR

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMIAP,uid=user-name,,
[Remote Replication],Edit Pair Options,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Copy Type=UR
+{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),MirrorID, M-JNL,R-JNL,Error
Level,P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),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 3

Item	Description
Copy Type	The copy type of this operation UR: Universal Replicator
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the primary volume of a pair that uses a volume connected to a host by using Fibre Channel or iSCSI

Item	Description
S-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the secondary volume of a pair that uses a volume connected to a host by using Fibre Channel or iSCSI
MirrorID	The mirror ID
M-JNL	The master journal number
R-JNL	The restore journal number
Error Level	Range of the pair split at failure occurrence Mirror: When a pair fails, all the pairs are split that exist in the same mirror as the pair. LU: When a pair fails, only the pair is split.
P-VOL (LDKC:CU:LDEV)	The LDKC number, CU number, and LDEV number of the primary volume of a pair that uses a volume connected to a host by using NVMe-oF
S-VOL (LDKC:CU:LDEV)	The LDKC number, CU number, and LDEV number of the secondary volume of a pair that uses a volume connected to a host by using NVMe-oF
Result	The result of the operation Normal end: Normal end, Error(*xxxx*-*yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Pairs	The number of pairs on which the setting is changed

Example 4: when the copy type is URMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMIAP,uid=user-name,,
[Remote Replication],Edit Pair Options,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Copy Type=URMF
+{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV), MirrorID,M-JNL,R-JNL,Error
Level,CFW,Result} =[{0x00:0x00:0x00,0x00:0x20:0x00,0x03,0x001,0x002,Volume, Only
P-VOL,Normal end}, {0x00:0x00:0x02,0x00:0x20:0x02,0x03,0x001,0x002,Volume, Only
P-VOL,Normal end}], Num. of Pairs=2
```

Detailed Information

Item	Description
Copy Type	The copy type of this operation

Item	Description
	URMF: Universal Replicator for Mainframe
P-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the primary data volume
S-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the secondary data volume
MirrorID	The mirror ID
M-JNL	The master journal number
R-JNL	The restore journal number
Error Level	Range of the pair split at failure occurrence Mirror: When a pair fails, all the pairs are split that exist in the same mirror as the pair. Volume: When a pair fails, only the pair is split.
CFW	Indicates whether the setting to copy the CFW data to the secondary volume is enabled or not. Only P-VOL: Copy to primary volume only is enabled Copy to S-VOL: Copy to primary and secondary volume is enabled
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end
Num. of Pairs	The number of pairs on which the setting is changed

[Remote Replication] I/O Mode Switch

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],I/O Mode Switch,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Pair[0]{
PrimaryVolume={LdevId=0x00:0x00:0x00,Port=1A,HostGroup=254,Lun=2047,
SSID=0x6500,S/N="23456"},
SecondaryVolume={LdevId=0x00:0x00:0x00,Port=1A,HostGroup=254,Lun=2047,
SSID=0x6500,S/N="23456"},
Type=P-VOL,ChangeOrder=Block,MirrorID=1,Result=Normal end}}
```

Detailed Information

Item			Description
Pair[x]			The setting information of the global-active device pair for which the I/O mode is forcibly changed
	PrimaryVolume		The information of the primary volume
		LdevId	The LDEV ID of the primary volume
		Port	The port number of the LUN path that was set for the primary volume
		HostGroup	The host group number of the LUN path that was set for the primary volume
		Lun	The LUN ID of the LUN path that was set for the primary volume
		SSID	The SSID of the primary volume
		S/N	The serial number of the storage system that has the primary volume
	SecondaryVolume		The information of the secondary volume
		LdevId	The LDEV ID of the secondary volume
		Port	The port number of the LUN path that was set for the secondary volume
		HostGroup	The host group number of the LUN path that was set for the secondary volume
		Lun	The LUN ID of the LUN path that was set for the secondary volume
		SSID	The SSID of the secondary volume
		S/N	The serial number of the storage system that has the secondary volume
	Type		The volume type of the volume of the local storage system (P-VOL or S-VOL)
	ChangeOrder		Indicates which I/O mode the global-active device pair is changed to. Local: The I/O mode is changed to Local. Block: The I/O mode is changed to Block.
	MirrorID		The mirror ID
	Result		Result of the operation Normal end: normal end, Error(*xxxxx-yyyyyy*):abnormal end

Item	Description
	xxxxx: part code, *yyyyyy*: error code

[Remote Replication] Journal Owner

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Journal Owner,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{JNL,Owner,Result}={0x000,0x00,Normal end}, {0x001,0x00,Normal end}, Num. of
JNLs=2
```

Detailed Information

Item	Description
JNL	The journal number
Owner	The ownership to which the journal belongs
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end
Num. of JNLs	The number of journals

[Remote Replication] Journal Vol

Example 1: Adding journal volumes when the copy type is UR

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Journal Vol,Add,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=UR
+{LDKC,JNL,2DC Cascade,Owner}={0x00,0x001,Disable,0x00}
++{LDKC:CU:LDEV,Result}
=[{0x00:0xD7:0x01,Normal end}],Num. of LDEVs=1
+{LDKC,JNL,2DC Cascade,Owner}={0x00,0x002,Disable,0x00}
++{LDKC:CU:LDEV,Result}
=[{0x00:0xD8:0x21,Normal end}],Num. of LDEVs=1
+Num. of JNLs=2
```

Example 2: Deleting journal volumes when the copy type is UR

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Journal Vol,Delete,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=UR
+{LDKC,JNL}={0x00,0x001}
++{LDKC:CU:LDEV,Result}
=[{0x00:0xD7:0x01,Normal end}],Num. of LDEVs=1
+{LDKC,JNL}={0x00,0x002}
++{LDKC:CU:LDEV,Result}
=[{0x00:0xD8:0x21,Normal end}],Num. of LDEVs=1
+Num. of JNLs=2
```

Basic Information (Adding or deleting journal volumes when the copy type is UR)

Parameter	Description
Add	Indicates the addition of journal volumes
Delete	Indicates the deletion of journal volumes

Detailed Information (Adding or deleting journal volumes when the copy type is UR)

Item	Description
Copy Type	The copy type of this operation UR: Universal Replicator
LDKC	The LDKC number to which the journal belongs
JNL	The journal number
Owner	The ownership to which the journal belongs This information is output when the parameter is Add.
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the volume
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of LDEVs	The number of LDEVs set for the journal
Num. of JNLs	The number of journals

Example 3: Adding journal volumes when the copy type is URMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Journal Vol,Add,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=URMF
+{LDKC,JNL,Timer Type,Owner}={0x00,0x001,System,0x00}
++{LDKC:CU:LDEV,Result}
=[{0x00:0xD7:0x01,Normal end}],Num. of LDEVs=1
+{LDKC,JNL,Timer Type,Owner}={0x00,0x002,System,0x00}
++{LDKC:CU:LDEV,Result}
=[{0x00:0xD8:0x21,Normal end}],Num. of LDEVs=1
+Num. of JNLs=2
```

Example 4: Deleting journal volumes when the copy type is URMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Journal Vol,Delete,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=URMF
+{LDKC,JNL}={0x00,0x001}
++{LDKC:CU:LDEV,Result}
=[{0x00:0xD7:0x01,Normal end}],Num. of LDEVs=1
+{LDKC,JNL}={0x00,0x002}
++{LDKC:CU:LDEV,Result}
=[{0x00:0xD8:0x21,Normal end}],Num. of LDEVs=1
+Num. of JNLs=2
```

Basic Information (Adding or deleting journal volumes when the copy type is URMF)

Parameter	Description
Add	Indicates the addition of journal volumes
Delete	Indicates the deletion of journal volumes

Detailed Information (Adding or deleting journal volumes when the copy type is URMF)

Item	Description
Copy Type	The copy type of this operation URMF: Universal Replicator for Mainframe
LDKC	The LDKC number to which the journal belongs
JNL	The journal number

Item	Description
Timer Type	Type of the clock used for the consistency time System: Uses the system clock of the mainframe host of the primary site. Local: Does not use the system clock. None: Uses the system clock of the mainframe host of the primary site when data copying is from the storage system of the secondary site to the storage system of the primary site. This information is output when the parameter is Add.
Owner	The ownership to which the journal belongs This information is output when the parameter is Add.
LDKC:CU:LDEV	The LDKC, CU, and LDEV numbers of the volume
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of LDEVs	The number of LDEVs set for the journal
Num. of JNLs	The number of journals

Example 5: Deleting journals when the copy type is UR or URMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Journal Vol,Delete JNL,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=UR
+{LDKC,JNL,Result}
=[{0x00,0x001,Normal end},{0x00,0x003,Normal end},
{0x00,0x005,Normal end}],Num. of JNLs=3
```

Basic Information

Parameter	Description
Delete JNL	Indicates the deletion of journals

Detailed Information

Item	Description
Copy Type	The copy type of this operation UR: Universal Replicator, URMF: Universal Replicator for Mainframe
LDKC	The LDKC number to which the journal belongs
JNL	The journal number
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of JNLs	The number of journals

Example 6: Forcibly deleting journals when the copy type is URMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Journal Vol,Remove JNL(Force),Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=URMF
+{LDKC,JNL,Result}=[{0x00,0x000,Normal end}],Num. of JNLs=1
```

Basic Information

Parameter	Description
Remove JNL(Force)	Forcible deletion of journals from the expanded consistency group

Detailed Information

Item	Description
Copy Type	The copy type of this operation URMF: Universal Replicator for Mainframe
LDKC	The LDKC number to which the journal belongs
JNL	The journal number
Result	The result of the operation

Item	Description
	Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of JNLs	The number of journals

[Remote Replication] R-Cmd.Dev.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],R-Cmd.Dev.,Assign,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Copy Type=UR
+{LDKC,JNL,MirrorID,R-Cmd.Dev.(LDKC:CU:LDEV),Result}
=[{0x00,0x001,0x01,0x00:0x12:0x34,Normal end},
{0x00,0x010,0x02,0x00:0x56:0x78,Normal end}], Num. of Mirrors=2
```

Basic Information

Parameter	Description
Assign	The remote command device is assigned.
Release	The remote command device is released.

Detailed Information

Item	Description
Copy Type	The copy type of this operation UR: Universal Replicator, URMF: Universal Replicator for Mainframe
LDKC	The LDKC number to which the journal belongs
JNL	The journal number
MirrorID	The mirror ID
R-Cmd.Dev. (LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the remote command device.

Item	Description
	The hyphen (-) indicates ▪ When assigning a remote command device without specifying a remote command device as a parameter. ▪ When releasing a remote command device.
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Mirrors	The number of mirrors on which the setting is changed

[Remote Replication] Resync Pairs

Example 1: when the copy type is TC

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Resync Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=TC,{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),
Fence Level,Copy Pace,Priority,VOL(LDKC:CU:LDEV),PairVOL(LDEV),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 1

Item	Description
Copy Type	The copy type of this operation TC: TrueCopy
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the primary volume of a pair that uses a volume connected to a host by using Fibre Channel or iSCSI
S-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the secondary volume of a pair that uses a volume connected to a host by using Fibre Channel or iSCSI
Fence Level	Configured fence level (conditions where the local storage system rejects write operations to the primary volume) Never: Can write to the primary volume even the pair is split.

Item	Description
	Data: Cannot write to the primary volume when update copying fails. Status: Cannot write to the primary volume, only when the storage system of the primary site cannot change the pair status of the secondary volume to PSUE.
Copy Pace	The setting of the initial copy speed (the number of tracks that can be copied at a time)
Priority	The priority of resynchronizing operation set (scheduling order)
VOL(LDKC:CU:LDEV)	The LDKC number, CU number, and LDEV number of the volume (on the local storage system) of a pair that uses a volume connected to a host by using NVMe-oF
PairVOL(LDEV)	The LDEV number of the volume (on the remote storage system) of a pair that uses a volume connected to a host by using NVMe-oF
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Pairs	The number of resynchronized pairs

Example 2: when the copy type is TCMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Resync Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=TCMF,{P-VOL(LDKC:CU:LDEV),S-VOL(LDEV),Fence Level,
Copy Pace,Priority,TS,Result}
=[{0x00:0x00:0x00,0xFE,Never,15,256,Enable,Normal end},
{0x00:0x00:0x01,0xFF,Never,15,256,Enable,Normal end},
(Snip)-(Snip)],Num. of Pairs=xx
```

Detailed Information 2

Item	Description
Copy Type	The copy type of this operation TCMF: TrueCopy for Mainframe
P-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the primary volume

Item	Description
S-VOL(LDEV)	The LDEV number of the secondary volume
Fence Level	Configured fence level (conditions where the local storage system rejects write operations to the primary volume) Never: Can write to the primary volume even the pair is split. Data: Cannot write to the primary volume when update copying fails. Status: Cannot write to the primary volume, only when the storage system of the primary site cannot change the pair status of the secondary volume to Suspend.
Copy Pace	The setting of the initial copy speed (the number of tracks that can be copied at a time)
Priority	The priority of resynchronizing operation set (scheduling order)
TS	Indicates whether to transfer the host I/O time stamp to the secondary volume when resynchronizing a pair Enable: Transfer, Disable: Not transfer
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Pairs	The number of resynchronized pairs

Example 3: when the copy type is UR

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Resync Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=UR
+{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,P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),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 Requests=2
```

Detailed Information 3

Item	Description
Copy Type	The copy type of this operation UR: Universal Replicator
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the primary data volume of a pair that uses a volume connected to a host by using Fibre Channel or iSCSI
S-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the secondary data volume of a pair that uses a volume connected to a host by using Fibre Channel or iSCSI
MirrorID	The mirror ID
S/N	The serial number of the RCU
CTRLID	The controller ID of the RCU 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800
Priority	The priority of resynchronizing operation set (scheduling order)
CTG	The consistency group ID
Range	The applicable range of resynchronization Mirror: All the pairs are resync that exist in the same mirror as the pair. LU: Only the pair is resync.
M-JNL	The master journal number
R-JNL	The restore journal number
Error Level	Range of the pair split at failure occurrence Mirror: When a pair fails, all the pairs are split that exist in the same mirror as the pair. LU: When a pair fails, only the pair is split.
Resync Mode	Type of the pair resynchronization operation Normal: normal resync, Delta: delta resync, Return to standby: return to standby status
P-VOL (LDKC:CU:LDEV)	The LDKC number, CU number, and LDEV number of the primary volume of a pair that uses a volume connected to a host by using NVMe-oF

Item	Description
S-VOL (LDKC:CU:LDEV)	The LDKC number, CU number, and LDEV number of the secondary volume of a pair that uses a volume connected to a host by using NVMe-oF
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Requests	The number of resynchronized mirrors when Range is Mirror The number of resynchronized pairs when Range is LU

Example 4: when the copy type is URMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Resync Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=URMF
+{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),MirrorID,S/N,CTRLID,
Priority,Range,M-JNL,R-JNL,Error Level,Resync Mode,Result}
=[{0x00:0x00:0x00,0x00:0x20:0x00,0x00,65432,6,7,Volume,0x002,
0x000,Volume,Normal,Normal end},
-{0x00:0x00:0x01,0x00:0x20:0x01,0x00,65432,6,7,Volume,0x003,
0x001,Volume,Normal,Normal end}],Num. of Requests=2
```

Detailed Information 4

Item	Description
Copy Type	The copy type of this operation URMF: Universal Replicator for Mainframe
P-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the primary data volume
S-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the secondary data volume
MirrorID	The mirror ID
S/N	The serial number of the RCU

Item	Description
CTRLID	The controller ID of the RCU 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series
Priority	The priority of resynchronizing operation set (scheduling order)
Range	The applicable range of resynchronization Mirror: All the pairs are resync that exist in the same mirror as the pair. Volume: Only the pair is resync.
M-JNL	The master journal number
R-JNL	The restore journal number
Error Level	Range of the pair split at failure occurrence Mirror: When a pair fails, all the pairs are split that exist in the same mirror as the pair. Volume: When a pair fails, only the pair is split.
Resync Mode	Type of the pair resynchronization operation Normal: normal resync, Delta: delta resync, Return to standby: return to standby status
Result	The result of the operation Normal end: Normal end, Error(*xxxx*-*yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Requests	The number of resynchronized mirrors when Range is Mirror The number of resynchronized pairs when Range is Volume

Example 5: when the copy type is GAD

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Resync Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=GAD,{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),
S/N_P,S/N_S,Type,Path Gr.ID,Controller ID,SSID_P,SSID_S,
Copy Pace,Quorum Disk ID,MirrorID,Swap,Range,CTG,Result}=
-[{1A-0x00-0,GR-0xFE-1023,62345,62345,P-VOL,0x00,7,0x0004,
0x0004,15,0x00,1,Yes,Group,0x000,Normal end},
(Snip)-(Snip)],Num. of Requests=xx
```

Detailed Information 5

Item	Description
Copy Type	The copy type of this operation GAD: global-active device
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the primary volume
S-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the secondary volume
S/N_P	The serial number of the local storage system
S/N_S	The serial number of the remote storage system
Type	The volume type of the volume on the local storage system P-VOL: Primary volume, S-VOL: Secondary volume
Path Gr.ID	Path group ID used in a global-active device pair
Controller ID	The controller ID of the remote storage system 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800
SSID_P	The SSID of the primary volume
SSID_S	The SSID of the secondary volume
Copy Pace	The setting of the initial copy speed (the number of tracks that can be copied at a time)
Quorum Disk ID	The quorum disk ID used by global-active device
MirrorID	The mirror ID
Swap	Indicate whether the attributes of the primary and secondary volumes are swapped. No: Not swapped, Yes: Swapped
Range	The applicable range of resynchronization Volume: Only this volume, Group: All volumes in the consistency group to which this volume belongs
CTG	The consistency group ID A hyphen (-) is displayed when the volume does not belong to a consistency group.
Result	The result of the operation

Item	Description
	Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Requests	The number of requests to resynchronize pairs

[Remote Replication] Split Pairs

Example 1: when the copy type is TC

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Split Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=TC,{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),
Type,S-VOL Write,Kind,VOL(LDKC:CU:LDEV),PairVOL(LDEV),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 1

Item	Description
Copy Type	The copy type of this operation TC: TrueCopy
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the primary volume of a pair that uses a volume connected to a host by using Fibre Channel or iSCSI
S-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the secondary volume of a pair that uses a volume connected to a host by using Fibre Channel or iSCSI
Type	The volume type of the volume on the primary site P-VOL: Primary volume, S-VOL: Secondary volume
S-VOL Write	Indicates whether the writing to the secondary volume is enabled Enable: Writing is enabled, Disable: Writing is disabled
Kind	Indicates whether the primary volume is writable after splitting a pair. P-VOL Failure: Not writable S-VOL: Writable

Item	Description
VOL(LDKC:CU:LDEV)	The LDKC number, CU number, and LDEV number of the volume (on the local storage system) of a pair that uses a volume connected to a host by using NVMe-oF
PairVOL(LDEV)	The LDEV number of the volume (on the remote storage system) of a pair that uses a volume connected to a host by using NVMe-oF
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Pairs	The number of split pairs

Example 2: when the copy type is TCMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Split Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=TCMF,{VOL(LDKC:CU:LDEV),PairVOL(LDEV),
Type,SSB,Kind,Result}
=[{0x00:0x00:0x00,0xFE,P-VOL,Disable,S-VOL,Normal end},
{0x00:0x00:0x01,0xFF,P-VOL,Disable,S-VOL,Normal end},
(Snip)-(Snip)],Num. of Pairs=xx
```

Detailed Information 2

Item	Description
Copy Type	The copy type of this operation TCMF: TrueCopy for Mainframe
VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the volume on the primary site
PairVOL(LDEV)	The LDEV number of the paired volume
Type	The volume type of the connected volume P-VOL: Primary volume, S-VOL: Secondary volume
SSB	Whether to notify SSB (F/M = FB) to the host Enable: Notifies SSB, Disable: Does not notify SSB
Kind	Indicates whether the primary volume is writable after splitting a pair.

Item	Description
	P-VOL Failure: Not writable S-VOL: Writable
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Pairs	The number of split pairs

Example 3: when the copy type is UR

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Split Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=UR
+{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),MirrorID,
S/N,CTRLID,Type,S-VOL Write,Range,Suspend Mode,P-VOL(LDKC:CU:LDEV),
S-VOL(LDKC:CU:LDEV),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 Requests=2
```

Detailed Information 3

Item	Description
Copy Type	The copy type of this operation UR: Universal Replicator
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the primary volume of a pair that uses a volume connected to a host by using Fibre Channel or iSCSI
S-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the secondary volume of a pair that uses a volume connected to a host by using Fibre Channel or iSCSI
MirrorID	The mirror ID
S/N	The serial number of the RCU
CTRLID	The controller ID of the RCU

Item	Description
	6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800
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 the writing to the secondary volume is enabled Disable: Disabled, Enable: Enabled
Range	The split range Mirror: All the pairs are split that exist in the same mirror as the pair. LU: Only the pair is split.
Suspend Mode	Indicates how to handle updated data that is not reflected in the secondary volume. Flush: The updated data is reflected when splitting a pair. Purge: The updated data is not reflected when splitting a pair. However, the updated data is reflected when the pair is resynchronized later.
P-VOL (LDKC:CU:LDEV)	The LDKC number, CU number, and LDEV number of the primary volume of a pair that uses a volume connected to a host by using NVMe-oF
S-VOL (LDKC:CU:LDEV)	The LDKC number, CU number, and LDEV number of the secondary volume of a pair that uses a volume connected to a host by using NVMe-oF
Result	The result of the operation Normal end: Normal end, Error(*xxxx*-*yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Requests	The number of split mirrors when Range is Mirror The number of split pairs when Range is LU

Example 4: when the copy type is URMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Split Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Copy Type=URMF
++{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),MirrorID,S/N,
```

```
CTRLID,Type,S-VOL Write,Range,Suspend Mode,Result}
=[{0x00:0x00:0x00,0x00:0x20:0x00,0x00,65432,6,
P-VOL,Disable,Volume,Flush,Normal end},
{0x00:0x00:0x01,0x00:0x20:0x00,0x01,65432,6,
P-VOL,Disable,Volume,Flush,Normal end}],Num. of Requests=2
```

Detailed Information 4

Item	Description
Copy Type	The copy type of this operation URMF: Universal Replicator for Mainframe
P-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the primary data volume
S-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the secondary data volume
MirrorID	The mirror ID
S/N	The serial number of the RCU
CTRLID	The controller ID of the RCU 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series
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 the writing to the secondary volume is enabled Disable: Disabled, Enable: Enabled
Range	The split range Mirror: All the pairs are split that exist in the same mirror as the pair. Volume: Only the pair is split.
Suspend Mode	Indicates how to handle updated data that is not reflected in the secondary volume. Flush: The updated data is reflected when splitting a pair. Purge: The updated data is not reflected when splitting a pair. However, the updated data is reflected when the pair is resynchronized later.
Result	The result of the operation Normal end: Normal end,

Item	Description
	Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Requests	The number of split mirrors when Range is Mirror The number of split pairs when Range is Volume

[Remote Replication] Suspend Pairs

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication],Suspend Pairs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Copy Type=GAD,{P-
VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),
S/N_P,S/N_S,Type,SSID_P,SSID_S,Kind,CTG,Range, Swap,MirrorID,Result}
=[{1A-0x00-0,GR-0xFE-1023,62345,62345,P-VOL,0x0008,0x000C,S-VOL,
-,Volume,No,0,Normal end},
{1A-0x00-0,GR-0xFE-1023,62345,62345,P-VOL,0x0008,0x000C,S-VOL, -,Volume,No,0,Normal
end},(Snip)-(Snip)],Num. of Requests=xx
```

Detailed Information

Item	Description
Copy Type	The copy type of this operation GAD: global-active device
P-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the primary volume
S-VOL(Port-G-ID-LUN)	The port number, host group number, and LUN of the secondary volume
S/N_P	The serial number of the local storage system
S/N_S	The serial number of the remote storage system
Type	The volume type of the volume on the local storage system P-VOL: Primary volume, S-VOL: Secondary volume
SSID_P	The SSID of the primary volume
SSID_S	The SSID of the secondary volume
Kind	Indicates whether the primary volume is writable after suspending a pair.

Item	Description
	P-VOL Failure: Not writable S-VOL: Writable
CTG	The consistency group ID A hyphen (-) is displayed when Range is Volume.
Range	The applicable range of suspension Volume: Only this volume, Group: All volumes in the consistency group to which this volume belongs
Swap	Indicate whether the attributes of the primary and secondary volumes are swapped. No: Not swapped, Yes: Swapped, Rollback: Returning the pair status of the secondary volume to PSUS from SSWS
MirrorID	The mirror ID
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Requests	The number of requests to suspend pairs

[Remote Replication] UpdateQuorumDisks

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Remote Replication], UpdateQuorumDisks,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{QuorumDisks[0]{
Result=Normal end,Id=31,ReadResponseGuaranteedTime=40}}
```

Detailed Information

Item		Description
QuorumDisks		The setting information of quorum disks.
	Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end

Item		Description
		where *xxxx*: Part code, *yyyyy*: Error code
	Id	Indicates the ID of a global-active device quorum disk whose Read Response Guaranteed Time When Quorum monitoring has stopped value will be updated.
	ReadResponseGuaranteedTime	Indicates the updated value of Read Response Guaranteed Time When Quorum monitoring has stopped for global-active device in seconds.

SNMP Descriptions

[SNMP] UpdateSnmpSetting

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,[SNMP],
UpdateSnmpSetting,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{SnmpSetting{
  SnmpAvailable=true,SnmpVersion=v3,
  V1V2c{
    TrapSettings[]{
      CommunityName=null,
      Managers[]{
        IpType=null,Ipv4Address=null,Ipv6Address=null}},
    RequestSettings[]{
      CommunityName=null,ManagerAvailable=null,
      Managers[]{
        IpType=null,Ipv4Address=null,Ipv6Address=null}}},
  V3{
    TrapSetting{
      Managers[0]{
        IpType=Ipv4,Ipv4Address=10.10.10.0,Ipv6Address=null,
        SecuritySetting{
          SecurityName="xxxxx",SecurityLevel=authPriv,AuthProtocol=SHA-1,
          PrivProtocol=AES-128}}},
    RequestSetting{
      SecuritySettings[0]{
        SecurityName="xxxx",SecurityLevel=authPriv,AuthProtocol=SHA-1,
        PrivProtocol=AES-128}}},
  SystemGroup{
    SystemName="xxxxx",SystemContact="xxxxx",SystemLocation="xxxxx"}}}
```

Detailed Information

Item	Description
SnmpSetting	The setting information of SNMP
SnmpAvailable	The setting status of SNMP Agent true: Enabled, false: Disabled
SnmpVersion	The version of SNMP protocol
V1V2c	For SNMP protocol v1 or v2c, the setting information is output. For SNMP protocol v3, "null" is output as the setting information of V1V2c.
TrapSettings[x]	The setting information of SNMP trap destinations
CommunityName	The community name
Managers[x]	The information of SNMP Managers
IpType	The type of IP address (IPv4 or IPv6)
Ipv4Address	IPv4 address For IPv6, "null" is output.
Ipv6Address	IPv6 address For IPv4, "null" is output.
RequestSettings[x]	The information of request authentication settings
CommunityName	The community name
ManagerAvailable	Indicates SNMP Managers that are allowed to perform request operations true: The SNMP Manager with the specified IP address is allowed. false: All SNMP Managers are allowed.
Managers[x]	The information of SNMP Managers
IpType	The type of IP address (IPv4 or IPv6)
Ipv4Address	IPv4 address For IPv6, "null" is output.
Ipv6Address	IPv6 address For IPv4, "null" is output.

Item	Description
V3	For SNMP protocol v3, the setting information is output. For SNMP protocol v1 or v2c, "null" is output as the setting information of V3.
TrapSetting	The setting information of SNMP trap destinations
Managers[x]	The information of SNMP Managers
IpType	The type of IP address (IPv4 or IPv6)
Ipv4Address	IPv4 address For IPv6, "null" is output.
Ipv6Address	IPv6 address For IPv4, "null" is output.
SecuritySetting	The setting information of security
SecurityName	The user name used for SNMP trap notification
SecurityLevel	Indicates security levels noAuthNoPriv: Both Authentication and Encryption are disabled. authNoPriv: Authentication is enabled and Encryption is disabled. authPriv: Both Authentication and Encryption are enabled.
AuthProtocol	Indicates the type of authentication protocol If Authentication is disabled, "null" is output.
PrivProtocol	Indicates the type of encryption protocol If Encryption is disabled, "null" is output.
RequestSetting	The information of request authentication settings
SecuritySettings[x]	The setting information of security
SecurityName	User names whose requests are accepted
SecurityLevel	Indicates security levels noAuthNoPriv: Authentication and Encryption are disabled. authNoPriv: Authentication is enabled and Encryption is disabled.

Item	Description
	authPriv: Both Authentication and Encryption are enabled.
AuthProtocol	Indicates the type of authentication protocol If Authentication is disabled, "null" is output.
PrivProtocol	Indicates the type of encryption protocol If Encryption is disabled, "null" is output.
SystemGroup	The setting information of the system group
SystemName	The storage system name
SystemContact	The system administrator and related information
SystemLocation	The location where the storage system is installed

Server Priority Manager Descriptions

[SPM] Change SPMGrp

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[SPM],Change SPMGrp,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{SPM Group,Priority,UpperLimit,Mode}
=[{XXXXXXXXXXXXXXXX,Non-Prio,XXXXXXXX,IOPS}],Num. of SPM Groups=1
```

Detailed Information

Item	Description
SPM Group	An SPM group name
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.

Item	Description
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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[SPM],Clear SPM Info,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[SPM] Default Set

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[SPM],Default Set,Kind=WWN,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[SPM],Set All Prio Port,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[SPM],Set All Prio WWN,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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.

Item	Description
	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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[SPM],Set Ctrl Kind,Kind=WWN,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[SPM],Set Prio Port,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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.
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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[SPM],Set Prio WWN,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{WWN,Priority,Upper Limit,Mode}
=[{0xXXXXXXXXXXXXXXXX,Non-Prio,XXXXXXXX,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, "0" is 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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[SPM],SPMGrp Del/Chg,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Mode,SPM Group,Change Name}
=[{Update,XXXXXXXXXXXXXXXX,XXXXXXXXXXXXXXXX}],
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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[SPM],Update Port WWN,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Mode,WWN,SPM Name,Priority}
={Add WWN,0xXXXXXXXXXXXXXXXX,XXXXXXXXXXXXXXXX,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

Item	Description
	This information is output only when a WWN (HBA) is added.
Port	A name of the port where the HBA is added
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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[SPM],Update SPMGrp,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{UpdateMode,SPM Group,Priority,Upper Limit,Mode}
=[{Add New Group,XXXXXXXXXXXXXXXX,Non-Prio,XXXXXXXX,IOPS},
++WWN=[0xXXXXXXXXXXXXXXXX,0xXXXXXXXXXXXXXXXX],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 SPM group 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

Item	Description
	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 an 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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[SPM],Update WWN,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Update Mode,WWN,Change SPM Name,Change WWN}
={Change WWN,0xXXXXXXXXXXXXXXXX,,0xXXXXXXXXXXXXXXXX},
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.

Item	Description
Num. of WWNs	The number of HBAs whose settings are changed

Spreadsheet Descriptions

[Spreadsheet] CflSet End

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Spreadsheet],CflSet End,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[Spreadsheet] CflSet Start

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[Spreadsheet],CflSet Start,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Input,Output}={C:\Set_IN.spd,C:\Set_OUT.spd}
```

Detailed Information

Parameter	Description
Input	Indicates the name of the input file
Output	Indicates the name of the output file

Universal Volume Manager Descriptions

[UVM] Add External Volumes

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[UVM],Add External Volumes,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Vendor,Product,Serial,VolumeID1,VolumeID2,
```

```
Device,Capa(blocks),ExGroup,PathGroup,CLPR,Emulation,Cache,Inflow,
MP Unit ID,LoadBalanceMode,ALUA Permitted,Data Direct Mapping,Result}=
{HITACHI,HITACHI,00001,05D0,484954414348492035303530303030313035443000000
0000000000000000000,
OPEN-V,2097152,E1-1,1,0,3390-3,Disable,Disable,Auto,Normal Roundrobin,
Disable,Disable,Normal end}
1,0000000018,++{Port,Virtual Port ID,WWN,IP Address,
iSCSI Target Name,LUN,PathResult}=[{1C,-,50060E8008000106,-,-,2,Normal
end}],Num. of Paths=1
1,0000000019,++{LDKC:CU:LDEV,LDEVCapa(blocks),SSID,
LDEV MP Unit ID,LDEVResult}=[{0x00:0x00:0x21,1990560,0x0005,Auto,Normal
end}],Num. of LDEVs=1
1,0000000020,+Num. of Volumes=1
```

Detailed Information

Item	Description
Vendor	The name of the vendor of the external storage system that the mapped external volume exists
Product	The product name of the external storage system that the mapped external volume exists
Serial	The serial number the external storage system that the mapped external volume exists
VolumeID1	The volume properties of the mapped external volume
VolumeID2	The device ID of the mapped external volume
Device	The device name that the mapped external volume notifies to the host
Capa(blocks)	The capacity of the mapped external volume indicated by blocks
ExGroup	The number of the external volume group and the reference number assigned to the external volume of the mapped external volume. 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 mapped external volume
CLPR	The CLPR ID of the mapped external volume
Emulation	The emulation type of the mapped external volume
Cache	The cache mode of the mapped external volume Enable: Enabled, Disable: Disabled
Inflow	The inflow control setting of the cache of the mapped external volume.

Item	Description
	Enable: Enabled, Disable: Disabled
MP Unit ID	MP Unit ID specified for the external volume When an 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.
ALUA Permitted	The ALUA permitted of the mapped external volume Enable: Enabled, Disable: Disabled
Data Direct Mapping	Indicates the setting status of Data Direct Mapping Enable: Data Direct Mapping is enabled. Disable: Data Direct Mapping is disabled.
Result	The result of the operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Port	The port name of the local storage system
WWN	For connection through the fibre channel port, the WWN of the target port on the external storage system is indicated. For connection through the iSCSI port, a hyphen (-) is output.
IP Address	For connection through the iSCSI port, the IP address of the iSCSI port on the external storage system is indicated. For connection through the fibre channel port, a hyphen (-) is output.
iSCSI Target Name	For connection through the iSCSI port, the iSCSI target name on the external storage system is indicated. For connection through the fibre channel port, a hyphen (-) is output.
LUN	The LUN of the external volume
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 yyyyy is the Error code

Item	Description
Num. of Paths	The number of mapping path (Port-WWN-LUN) configured
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	The SSID
LDEV MP Unit ID	MP Unit ID specified for the LDEV. When an 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 yyyyy 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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[UVM],Assign MP Unit,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
1,0000000217,+{Group,MP Unit ID,Result}=[{E2-2,010,Normal end}],Num. of
Groups=1
```

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

Item	Description
Result	The result of operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Groups	The number of groups of configured external volumes

[UVM] Delete ES VOLs

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[UVM],Delete ES VOLs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: 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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,[UVM],Disconnect
ES Paths,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Port,WWN,IP Address,iSCSI Target Name,Result}=
[{1A,50560E8000C3E211,-,-,Normal end},
{2A,-,192.168.0.136,
iqn.1994-04.jp.co.hitachi:rsd.r80.t.00001.2b000,Normal end},
{3A,-,FE80:0:0:0:0:0:0:1,
iqn.1994-04.jp.co.hitachi:rsd.r80.t.00001.3b000,Normal end}],
Num. of Paths=3
```

Detailed Information

Item	Description
Port	The port name of the local storage system
WWN	For connection through the fibre channel port, the WWN of the target port on the external storage system is indicated. For connection through the iSCSI port, a hyphen (-) is output.
IP Address	For connection through the iSCSI port, the IP address of the iSCSI port on the external storage system is indicated. For connection through the fibre channel port, a hyphen (-) is output.
iSCSI Target Name	For connection through the iSCSI port, the iSCSI target name on the external storage system is indicated. For connection through the fibre channel port, a hyphen (-) is output.
Result	The result of operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Paths	The number of mapping paths that has been disconnected.

[UVM] Disconnect ES VOLs

If this operation is performed from Device Manager - 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 the External API (if this logged information appears between the CflSet Start operation and the CflSet End operation), this logged information indicates that the Disconnect External Volumes operation was completed.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[UVM],Disconnect ES VOLs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,Seq.=xxxxxxxxxx
+{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*-*yyyyy*): Abnormal end *xxxx*: Part code, *yyyyy*: Error code
Num. of Groups	The number of external volume groups that contain the disconnected external volume

[UVM] Edit Es Path Config

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,[UVM],Edit Es Path
Config,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{ExGroup,PathGroup,Result}={E1-1,1,Normal end}
++{Port,WWN,IP Address,iSCSI Target Name,LUN,PathResult}=
[{1A,50560E8000C3E211,-,-,1,Normal end},
{2A,-,192.168,0,136,
iqn.1994-04.jp.co.hitachi:rsd.r80.t.00001.2b000,1,Normal end},
{3A,-,FE80:0:0:0:0:0:0:1,
iqn.1994-04.jp.co.hitachi:rsd.r80.t.00001.3b000,1,Normal end},
{4A,-,0:0:0:0:0:FFFF:192.168.0.137,
iqn.1994-04.jp.co.hitachi:rsd.r80.t.00001.4b000,1,Normal end}],
Num. of Paths=4
+{ExGroup,PathGroup,Result}={E1-2,1,Normal end}
++{Port,WWN,IP Address,iSCSI Target Name,LUN,PathResult}=
[{1A,50560E8000C3E211,-,-,2,Normal end},
{2A,-,192.168,0,136,
iqn.1994-04.jp.co.hitachi:rsd.r80.t.00001.2b000,2,Normal end},
{3A,- FE80:0:0:0:0:0:0:1,
iqn.1994-04.jp.co.hitachi:rsd.r80.t.00001.3b000,2,Normal end},
{4A,-,0:0:0:0:0:FFFF:192.168.0.137,
iqn.1994-04.jp.co.hitachi:rsd.r80.t.00001.4b000,2,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, *yyyyy*: Error code
Port	The port name of the local storage system
WWN	For connection through the fibre channel port, the WWN of the target port on the external storage system is indicated. For connection through the iSCSI port, a hyphen (-) is output.
IP Address	For connection through the iSCSI port, the IP address of the iSCSI port on the external storage system is indicated. For connection through the fibre channel port, a hyphen (-) is output.
iSCSI Target Name	For connection through the iSCSI port, the iSCSI target name on the external storage system is indicated. For connection through the fibre channel port, a hyphen (-) is output.
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, *yyyyy*: Error code
Num. of Paths	The number of mapping path (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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[UVM],Edit ES VOLs,CacheMode,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[UVM],Edit ES VOLs, InflowControl,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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 for Example 1 and 2

Parameter	Description
Cachemode	The cache mode is changed.
InflowControl	The cache inflow control is set.

Detailed Information for Example 1 and 2

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, *yyyyy*: Error code
Num. of Groups	The number of external volumes groups configured

Example 3: Changing a load balance mode

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[UVM],Edit ES VOLs,LoadBalanceMode,Normal end,
```

```
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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, *yyyyy*: Error code
Num. of Groups	The number of external volumes groups configured

Example 4: Changing ALUA Permitted

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[UVM],Edit ES VOLs,ALUA Permitted,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Group,ALUA Permitted,Result}=[{E1-1,Enable,Normal end}, {E1-2,Enable,Normal
end}],Num. of Groups=2
```

Basic Information for Example 4

Parameter	Description
ALUA Permitted	The ALUA Permitted is changed.

Detailed Information for Example 4

Item	Description
Group	The external volume group number of the external volume on which the setting is performed
ALUA Permitted	The ALUA permitted after the change Enable: enable, Disable: disable
Result	The result of operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of Groups	The number of external volume groups on which the setting is performed

[UVM] Edit External WWNs / iSCSI Targets

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[UVM],Edit External WWNs / iSCSI Targets,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{WWN,IP Address,iSCSI Target Name,I/O-TOV,Quedepth,LinkDown,Result}
=[{50060E8000C3E214,-,-,15,8,180,Normal end}, {-,192.168.0.136,iqn.1994-
04.jp.co.hitachi:rsd.r80.t.00001.2b000, 15,8,180,Normal end},
{-,FE80:0:0:0:0:0:0:1,iqn.1994-04.jp.co.hitachi:rsd.r80.t.00001.3b000, 15,8,180,
Normal end}],Num. of WWNs=3
```

Detailed Information

Item	Description
WWN	For connection through the fibre channel port, the WWN of the target port on the external storage system is indicated. For connection through the iSCSI port, a hyphen (-) is output.
IP Address	For connection through the iSCSI port, the IP address of the iSCSI port on the external storage system is indicated. For connection through the fibre channel port, a hyphen (-) is output.
iSCSI Target Name	For connection through the iSCSI port, the iSCSI target name on the external storage system is indicated.

Item	Description
	For connection through the fibre channel port, a hyphen (-) is output.
I/O-TOV	The I/O time over value setting
Quedepth	The Quedepth value (the number of commands issuable)
LinkDown	The Blocked Path Monitoring value
Result	The result of operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: Error code
Num. of WWNs	The number of WWNs setting of the external storage system

[UVM] ProfileUpgrade

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,,
[UVM], ProfileUpgrade,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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, *yyyyy*: 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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,[UVM],Reconnect ES
Paths,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Port,WWN,IP Address,iSCSI Target Name,Result}=
[{1A,50060E8000C3E214,-,-,Normal end},
{2A,-,192.168,0,136,
iqn.1994-04.jp.co.hitachi:rsd.r80.t.00001.2b000,Normal end},
{3A,-,FE80:0:0:0:0:0:0:1,
iqn.1994-04.jp.co.hitachi:rsd.r80.t.00001.3b000,Normal end}],
Num. of Paths=3
```

Detailed Information

Item	Description
Port	The port name of the local storage system
WWN	For connection through the fibre channel port, the WWN of the target port on the external storage system is indicated. For connection through the iSCSI port, a hyphen (-) is output.
IP Address	For connection through the iSCSI port, the IP address of the iSCSI port on the external storage system is indicated. For connection through the fibre channel port, a hyphen (-) is output.
iSCSI Target Name	For connection through the iSCSI port, the iSCSI target name on the external storage system is indicated. For connection through the fibre channel port, a hyphen (-) is output.
Result	The result of operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end where *xxxx*: Part code, *yyyyy*: 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 Device Manager - 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 the External API (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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[UVM],Reconnect ES VOLs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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, *yyyyy*: Error code
Num. of Groups	The number of external volumes resumed

Volume Migration Descriptions

For information on using Volume Migration, contact the customer support.

[VM] Delete All Histories

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[VM],Delete All Histories,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[VM] Del Migration Plans

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[VM],Del Migration Plans,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{SourceVolume,TargetVolume,OwnerID,Result}
=[{0x00:0x00:0x00,0x00:0x00:0x01,0xFF,Normal end},
{0x00:0x00:0x02,0x00:0x00:0x03,0xFF,Error(xxxx-yyyyy)},
{0x00:0x00:0x04,0x00:0x00:0x05,-,Normal end},
{0x00:0x00:0x06,0x00:0x00:0x07,-,Error(xxxx-yyyyy)}], Num. of Plans=4
```

Detailed Information

Item	Description
SourceVolume	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.
TargetVolume	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.
OwnerID	The application by which a migration plans to be deleted is set. 0x00: Device Manager - Storage Navigator 0x01: Command Control Interface 0xFF: Tiered Storage Manager A hyphen (-) is output, no matter which application is used for a migration plan to be set, if the plan is deleted from the Volume Migration window.
Result	The result of operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end, Not Execute: Not executed *where xxxx*: Part code, *yyyyy*: Error code
Num. of Plans	The number of migration plans deleted.

[VM] Migrate Volumes

This logged information indicates that the migration was only requested but not completed.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[VM],Migrate Volumes,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{SourceVolume,TargetVolume,OwnerID,Migration Type,Result}
=[{0x00:0x00:0x00,0x00:0x00:0x01,0x00,Nondisruptive Migration,
Normal end}, {0x00:0x00:0x02,0x00:0x00:0x03,0xFF,Normal,Error(xxxx-yyyyy)},
{0x00:0x00:0x04,0x00:0x00:0x05,0x00,Normal,Normal end},
{0x00:0x00:0x06,0x00:0x00:0x07,0xFF,Nondisruptive Migration,
Error(xxxx-yyyyy)}],Num. of VOLs=4
```

Detailed Information

Item	Description
SourceVolume	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.
TargetVolume	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 migration plan is set.
OwnerID	The application by which a migration plans is set. 0x00: Device Manager - Storage Navigator 0x01: Command Control Interface 0xFF: Tiered Storage Manager
Migration Type	The migration type of the migration plan. Nondisruptive Migration: nondisruptive migration Normal: Normal
Result	The result of operation Normal end: Normal end, Error(*xxxx-yyyyy*): Abnormal end, Not Execute: Not executed *where xxxx*: Part code, *yyyyy*: Error code
Num. of VOLs	The number of migration volumes.

Virtual Partition Manager Descriptions

[VPM] Edit CLPR

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[VPM],Edit CLPR,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+CLPR=0:CLPR0,Total Cache Size=15360
++PG=[1-1,1-2,1-3,1-4],Num. of PGs=4
+Num. of CLPRs=1
```

Detailed Information

Item	Description
CLPR	The CLPR ID and the CLPR name
Total Cache Size	The cache capacity setting. The unit is megabyte (MB).
PG	The parity group number assigned to CLPR E1-1: In the case of an external volume V1-1: In the case of a virtual volume X1-1: In the case of a Dynamic Provisioning volume
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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[VS],Abort Shredding,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +OwnerID=0
```

Detailed Information

Item	Description
OwnerID	The owner ID 0: Indicates Device Manager - Storage Navigator 0xXX: Owner ID is expressed in two hexadecimal digits.

[VS] End Shredding

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,<system>,,
[VS], End Shredding,,Normal end,,Seq.=xxxxxxxxxx
+{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 shredding processes

[VS] Shred LDEVs

This logged information indicates that the Shredding operation was only requested but not completed.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[VS],Shred LDEVs,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +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 Device Manager - Storage Navigator 0xXX: Owner ID is expressed in two digits of the hexadecimal format
Data	The shredding data pattern Random: Random, 0xXXXX: Define

Item	Description
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

Compatible XRC Descriptions

[XRC] Set XRC Option

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[XRC],Set XRC Option,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{CLPR,LV2 THD(%),Block Option,Donot Block,LV1 Sleep,
Sleep Time(ms),LV1 SIM,LV2 Suspend}
=[{00,50,Cache,Disable,Disable,100,Disable,Disable},
-{1,70,Cache,Enable ,Disable,10,Disable,Disable},
-{2,60,Cache,Disable,Disable, 10,Enable ,Enable }],
Num. of CLPRs=32
```

Detailed Information

Item	Description
CLPR	The CLPR ID (0 to 31).
LV2 THD(%)	The Level 2 Threshold (30, 40, 50, 60, and 70). The unit is percent (%).
Block Option	The status of Block Option Volume: Volume Level, Cache: Cache Level
Donot Block	The status of Donot Block (Volume Level) Enable: enabled, Disable: disabled

Item	Description
LV1 Sleep	The status of Level 1 Sleep Enable: enabled, Disable: disabled
Sleep Time(ms)	The Sleep Time (10 or 100). The unit is millisecond (msec).
LV1 SIM	The status of Level 1 SIM Enable: enabled, Disable: disabled
LV2 Suspend	The status of Level 2 Suspend Enable: enabled, Disable: disabled
Num. of CLPRs	The number of CLPRs

Chapter 5: Audit log examples of encryption key operations

This topic provides examples 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 the table for format changes for each version number in Log output formats for different versions (on page 35).

ENC Descriptions

[ENC] Add keys to DKC

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[ENC],Add keys to DKC,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{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 of encryption keys 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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[ENC],Backup Keys,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[ENC], Backup Keys to File,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,
Task Name,[ENC], Backup Keys to Serv,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{UUID,Backup
Date,Description,Result,Server_Repry}
=[{3E2332580B110E052D13C378866427A218EF1609881BC058FCBCF79FCD 7727C7,2013/07/06
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(*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.

Item	Description
Num. of Keys	The number of encryption keys to be backed up This value is fixed to "1" because all of the created encryption keys are backed up as one key.

[ENC] Backup Keys to Serv(Auto)

This logged information is output when encryption key information created in the storage system is automatically 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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC], Backup Keys to Serv(Auto),,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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(*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 encryption keys to be backed up

Item	Description
	This value is fixed to "1" because all of the created encryption keys are backed up as one key.

[ENC] Change CEK Status

This information is output to the audit log information file 2, and it is asynchronous with the Device Manager - Storage Navigator operations.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,,<system>,,
[ENC],ChangeCEK Status,,Normal end,,,Seq.=xxxxxxxxxx +CEK
Status=Unassigned
```

Detailed Information

Item	Description
CEK Status	The status of certificate encryption key Unassigned: CEK is not assigned. Assigned: CEK is assigned.

[ENC] Change DEK Status

This information is output to the audit log information file 2, and it is asynchronous with the Device Manager - Storage Navigator operations.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,,<system>,,
[ENC],ChangeDEK Status,,Normal end,,,Seq.=xxxxxxxxxx
+{Device,DEK Status,DEK}=[{HDD000-01,NotCreated,0x0000000C}, {HDD001-01,Free,
0x0000000E}],Num. of
DEKs=2
```

Detailed Information

Item	Description
Device	The device on which events occur to generate this audit log
DEK Status	The status of encryption keys

Item	Description
	Not Created: An encryption key is not created. Free: An encryption key is not yet assigned and not used. Not Encrypted: The encryption key is created but the device is not encrypted. Encrypted: The encryption key is created and the device is encrypted.
DEK	The key IDs of encryption keys
Num. of DEKs	The number of encryption keys

[ENC] Clear Keys

This information is output to the audit log information file 2, and it is asynchronous with the Device Manager - Storage Navigator operations.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,,<system>,,
[ENC],ClearKeys,,Normal end,,,Seq.=xxxxxxxxxx +DEK={0x00000000,0x00000002,0x00000003},
Num. of
DEKs=3
```

Detailed Information

Item	Description
DEK	The key IDs of encryption keys
Num. of DEKs	The number of encryption keys

[ENC] Create KEK Dynamic

Example 1: Editing the encryption environment settings

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC], Create KEK Dynamic,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{UUID,Result,Server_Reply}=
[{C53F242C7DCC27CC9698A72413C1C4DC280A757FDF93CED8AEBDF8807A79A06D,
Normal end,-}],Num. of Keys=1
```

Detailed Information for Example 1

Item	Description
UUID	The UUID of the created 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 created encryption keys

Example 2: Creating or rekeying a key encryption key

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC], Create KEK Dynamic,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{UUID,Result,Server_Reply,KMS migration}=
[{C53F242C7DCC27CC9698A72413C1C4DC280A757FDF93CED8AEBDF8807A79A06D,
Normal end,-,true}],Num. of Keys=1
```

Detailed Information for Example 2

Item	Description
UUID	The UUID of the created 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.
KMS migration	Indicates whether Create a new key encryption key on the key management server was selected in the Rekey Key Encryption Key window. true: Create a new key encryption key on the key management server was selected.

Item	Description
	false: Create a new key encryption key on the key management server was not selected.
Num. of Keys	The number of created encryption keys

[ENC] Create Keys

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[ENC],Create Keys,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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 Device Manager - Storage Navigator operations.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,,<system>,,
[ENC], Create Keys,,Normal end,,,Seq.=xxxxxxxxxx
+DEK={0x00000000,0x00000002,0x00000003},Num. of DEKs=3
```

Detailed Information

Item	Description
DEK	The key IDs of encryption keys
Num. of DEKs	The number of encryption keys

[ENC] Create Keys On Serv

Example 1: Creating encryption keys

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC], Create Keys On Serv,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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(*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 created encryption keys

Example 2: Creating key encryption keys

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task
                Name,[ENC], Create Keys On Serv,,Normal end,
                from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +{Key
                Type,UUID,Result,Server_Reply}
                =[{KEK,4365A0465C69FA96DF64C9BBB77122E9AB65D4D6A2E9BBDE5987EAB
86A0FE94E,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(*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 created keys

[ENC] DEK assign SpareDisk

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[ENC],DEK assign SpareDisk,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[ENC] DEK delete

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[ENC],DEK delete,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[ENC] Delete KEK Dynamic

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[ENC], Delete KEK Dynamic,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC],Delete Keys,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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 Device Manager - Storage Navigator operations.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,,<system>,,
[ENC], Delete Keys,,Normal end,,,Seq.=xxxxxxxxxx
+DEK={0x00000000,0x00000002,0x00000003},Num. of DEKs=3
```

Detailed Information

Item	Description
DEK	The key IDs of encryption keys
Num. of DEKs	The number of encryption keys

[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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC], Delete Keys on Serv,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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(*xxxx-yyyyy*): Abnormal end
Server_Reply	The return value from the key management server A hyphen (-) is displayed unless an error occurred while processing.

Item	Description
	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] Delete Keys on Serv(Auto)

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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC], Delete Keys on Serv(Auto),,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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(*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 encryption keys to be deleted

[ENC] Edit Encryption

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[ENC],Edit Encryption,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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 is enabled Disable: Encryption is disabled
Num. of PGs	The number of parity groups

[ENC] Edit ENC Settings

Example 1: Setting the environment of managing encryption key

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC],Edit ENC Settings,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{KMS, Generate ENC Keys on KMS, Protect the KEK at the KMS}
=[No Set, No, No],Num. of Settings=1
```

Detailed Information 1

Item	Description
KMS	Indicates whether the key management server is used No Set: Not set Enable: The key management server is used Disable: The key management server is not used
Generate ENC Keys on KMS	Indicates where the encryption keys are created Yes: The keys are created on the key management server No: The keys are created on the storage system

Item	Description
Protect the KEK at the KMS	Indicates whether the 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 configured encryption environment settings

Example 2: Setting the encryption key option

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC], Edit ENC Settings,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Delete Internal Encryption Keys at PS OFF=true}
```

Detailed Information 2

Item	Description
Delete Internal Encryption Keys at PS OFF	Indicates whether the encryption key is deleted when the storage system is powered off. True: Delete option is valid False: Delete option is invalid

[ENC] Edit Password Policy

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC], Edit Password Policy,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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)	Indicates the minimum number of numeric characters used for the password
Uppercase Characters (A-Z)	Indicates the minimum number of uppercase characters used for the password
Lowercase Characters (a-z)	Indicates the minimum number of lowercase characters used for the password
Symbols	Indicates the minimum number of symbols used for the password
Total	Indicates the minimum number of total characters used for the password
Num. of Settings	The number of configured password policies

[ENC] Register KEK Dynamic

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC], Register KEK Dynamic,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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(*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 registered encryption keys

[ENC] Regular Backup Keys to Serv

This logged information is output when encryption key information created in the storage system is backed up regularly 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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC], Regular Backup Keys to Serv,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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(*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 encryption keys to be backed up This value is fixed to "1" because all of the created encryption keys are backed up as one key.

[ENC] Regular 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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC], Regular Delete Keys on Serv,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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(*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 encryption keys to be deleted

Note: A question mark (?) is displayed if an error occured in deleting encryption key.

[ENC] Rekey CEK

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC],Rekey CEK,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[ENC] Rekey KEK Dynamic

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC],Rekey KEK Dynamic,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[ENC] Restore Keys

This logged information is output when encryption key information in the storage system is restored with key information obtained externally.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC],Restore Keys,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[ENC] Restore Keys fr File

This logged information is output when encryption key information is obtained from the backup file.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name, Task Name,
[ENC], Restore Keys fr File,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[ENC] Restore Keys fr File(Forcibly)

This logged information is output when encryption key information is obtained from the backup file.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC], Restore Keys fr File(Forcibly),,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[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

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC], Restore Keys fr Serv,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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(*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 encryption keys that are used for restoring This value is fixed to "1" because all of the encryption keys that are used for restoring are backed up as one key.

[ENC] Restore Keys fr Serv(Forcibly)

This logged information is output when the backup of encryption key information is obtained from the key management server.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC], Restore Keys fr Serv(Forcibly),,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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(*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 encryption keys that are used for restoring This value is fixed to "1" because all of the encryption keys that are used for restoring are backed up as one key.

[ENC] Retry KEK Dynamic

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC],Retry KEK Dynamic,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[ENC] Set Up Key Mng Serv

Example 1: Using a key management server

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC], Set Up Key Mng Serv,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{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 +{Encryption Key
Regular Backup to Server,Regular Backup Time,Regular Backup User Name}=
[{Yes,03:00_10:00-12:00_23:00,username}],Num. of Settings=1
```

Example 2: Not using a key management server

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC], Set Up Key Mng Serv,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Server Type,Key Management Server}= [{Primary,Disable},{Secondary,Disable}],Num. of
Servers=2
+{Encryption Key Regular Backup to Server,Regular Backup Time,Regular Backup User
Name}= [{,,}],Num. of Settings=1
```

Example 3: Initializing a encryption environmental settings

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC], Set Up Key Mng Serv,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{Server Type,Key Management Server} =[{Primary,No Set},{Secondary,No Set}],Num. of
Servers=2
+{Encryption Key Regular Backup to Server,Regular Backup Time,Regular Backup User
Name}= [{,,}],Num. of Settings=1
```

Detailed Information

Item	Description
Server Type	The type of the key management server Primary: primary server, Secondary: secondary server
Key Management Server	Indicates whether the key management server is used, or whether the encryption environment settings are to be initialized Enable: The server is used Disable: The server is not used No Set: The encryption environmental 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

Item	Description
Num. of Servers	The number of the configured key management servers
Encryption Key Regular Backup to Server	Indicates whether to back up encryption keys regularly. Yes: Backs up encryption keys regularly No: Does not back up encryption keys regularly
Regular Backup Time	Indicates the specified regular backup times. The specified regular backup times are displayed, separated by underscores (_). If any of the regular backup times are consecutive, they are output with a hyphen (-) between them.
Regular Backup User Name	Indicates the user name specified exclusively for regular backups.
Num. of Settings	Indicates the specified number of regular backups.

Note: When using the primary server, the values for Encryption Key Regular Backup to Server, Regular Backup Time, and Regular Backup User Name are output.

[ENC] Succeeded Backup to Serv

Using Succeeded Backup to Serv, when the auto backup is succeeded, the succeeded backup flag is output, and when the backup UUID is set, the UUID is output.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[ENC], Succeeded Backup to Serv,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+{BackupSuccessFlag=true,BackupUuid="2147483648"}
```

Detailed Information

Item	Description
BackupSuccess Flag	Indicates the success of backup or the failure of backup True: Backup was succeeded False: Backup was failed
BackupUuid	UUID when the backup was performed

[ENC] Use Keys for CEK/KEK

This information is output to the audit log information file 2, and it is asynchronous with the Device Manager - Storage Navigator operations.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,,<system>,,
[ENC], Use Keys for CEK/KEK,,Normal end,,,Seq.=xxxxxxxxxx
+DEK={0x00000000,0x00000002,0x00000003},Num. of DEKs=3
```

Detailed Information

Item	Description
DEK	The key IDs of encryption keys
Num. of DEKs	The number of encryption keys

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 the power is turned on again with the Protect the Key Encryption Key at the Key Management Server is enabled.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[KEK Acquisition],Acquisition Key,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[KEK Acquisition] Set Key

This logged information is output when KEK Dynamic is configured for the storage system after the power is turned on again with the Protect the Key Encryption Key at the Key Management Server is enabled.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,Task Name,
[KEK Acquisition],Set Key,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

Key Recovery

[Key Recovery] Restore Keys fr Serv(Boot)

This logged information is output when the key information of the stored data encryption in the storage system was restored after the power is turned on again with the Delete Internal Encryption Keys at PS OFF is enabled.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,Task Name,
[Key Recovery],Restore Keys fr Serv(Boot),,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

[Key Recovery] Set Key Blob

This logged information is output when the result that the key information of the stored data encryption in the storage system was restored was set after the power is turned on again with the Delete Internal Encryption Keys at PS OFF is enabled.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,SVP,uid=user-name,Task Name,
[Key Recovery],Set Key Blob,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

Chapter 6: Audit log examples of commands sent from hosts, computers using CCI, or hosts using Business Continuity Manager

This topic provides examples and descriptions of the audit logs when a storage system receives commands sent from hosts, computers using Command Control Interface, or hosts using Business Continuity Manager.

The descriptions are listed alphabetically by function name and operation name. For detailed information on the version numbers in log output examples, see the table for format changes for each version number in Log output formats for different versions (on page 35).

Config Command (Open system)

The following shows examples and descriptions of the audit logs when a storage system receives commands sent from hosts for open system or computers using CCI.

Add CHAP User

Example 1: Adding the CHAP user name on the initiator side

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Add CHAP User
++Port=1A,Target ID=0x00,Initiator CHAP User=AAAAAAA, Virtual Storage Machine
S/N=23456
```

Detailed Information 1: Adding the CHAP user name on the initiator side

Item	Description
Command	The command name
Port	The name of a port to which an iSCSI target, to which a CHAP user is added, belongs
Target ID	The iSCSI target ID
Initiator CHAP User	The CHAP user name on the initiator side

Item	Description
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Example 2: Adding the CHAP user name on the target side

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Add CHAP User
++Port=1A,Target ID=0x00,Target CHAP User=AAAAAAA, Virtual Storage Machine
S/N=23456
```

Detailed Information 2: Adding the CHAP user name on the target side

Item	Description
Command	The command name
Port	The name of a port to which an iSCSI target, to which a CHAP user is added, belongs
Target ID	The iSCSI target ID
Target CHAP User	The CHAP user name on the target side
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Add CLPR

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Add CLPR
++CLPR=31,CLPR Name=CLPR31,Cache Size=8192
```

Detailed Information

Item	Description
Command	The command name

Item	Description
CLPR	The CLPR ID
CLPR Name	The CLPR name
Cache Size	The cache size

Add Copy Group

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Add Copy
Group ++Copy Group=AAAAAAA ++Device Group={BBBBBB,CCCCCC},Num. of Device Groups=2,
MU={10,11},JNL={0x020,0x021}
```

Detailed Information

Item	Description
Command	The command name
Copy Group	The name of a copy group to be registered
Device Group	The name of device groups to be registered
Num. of Device Groups	The number of device groups to be registered
MU	The MU number to be registered
JNL	The journal number to be registered

Add Device Group(Name)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Add Device Group(Name) ++Device Group=AAAAAAAA,, Device
Name=XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
++LDEV(LDKC:CU:LDEV) ={0x00:0xAA:0xBB,0x00:0xCC:0xDD,……,0x00:0xEE:0xFF},Num. of
LDEVs=4
```

Detailed Information

Item	Description
Command	The command name
Device Group	The name of a device group to be operated
Blank item	Nothing is output due to unused.
Device Name	The name of a device to be assigned to LDEVs
LDEV(LDKC:CU:LDEV)	The LDEV IDs for LDEVs to be added to the device group
Num. of LDEVs	The number of LDEVs to be added to the device group

Add DP Pool

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,[Config Command],,,
Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Add DP Pool
++Pool ID=10,Pool Name=Pool_Name_AA,Warning Threshold(%)=85,
High water mark Threshold(%)=85
++LDEV(LDKC:CU:LDEV)
={0x00:0xAA:0xBB,0x00:0xCC:0xDD,……,0x00:0xEE:0xFF},
Num. of LDEVs=4
++Suspend TI Pair=Yes,Auto Add Pool Volume=Enable
```

Detailed Information

Item	Description
Command	The command name
Pool ID	The pool number of a pool for Dynamic Provisioning to be created
Pool Name	The pool name of a pool for Dynamic Provisioning to be created
Warning Threshold(%)	The warning threshold of the usage rate of a pool for Dynamic Provisioning to be created
High water mark Threshold(%)	The depletion threshold of a pool for Dynamic Provisioning to be created
LDEV(LDKC:CU:LDEV)	The LDEV IDs for LDEVs of a pool volume

Item	Description
Num. of LDEVs	The number of pool volumes
Suspend TI Pair	The setting status of whether the Thin Image (HTI only) pair is suspended when the high water mark threshold is exceeded Yes: Thin Image pair is suspended. No: Thin Image pair is not suspended. A hyphen (-) is output if it is not specified at the command option

Add External Group

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Add External Group
++PG=E11111-1,Port=1A,WWN=AAAAAAAA,Path Group ID=1,LUN=1,
Emulation=xxxxxxxx,Migration=Enable,CLPR=3,
Data Direct Mapping=Enable,Command Device= Enable,
LDEV(LDKC:CU:LDEV)=0x00:0xFE:0xFF,Add LDEV Mode=Enable,Resource Group
ID=0,Safety Check=Enable
```

Detailed Information

Item	Description
Command	The command name
PG	The external volume group number
Port	The port name of the storage system (connection source)
WWN	The WWN of the storage system (connection target)
Path Group ID	The path group ID
LUN	The LU number of the external volume
Emulation	The emulation type of the mapped external volume
Migration	The setting status of the nondisruptive migration function Enable: Enabled, Disable: Disabled
CLPR	The CLPR ID

Item	Description
Data Direct Mapping	The setting status of the data direct mapping attribute Enable: Enabled, Disable: Disabled
Command Device	The setting status of the remote command device Enable: Enabled, Disable: Disabled
LDEV(LDKC:CU:LDEV)	The LDEV ID of the remote command device No value is output if the setting status of the Command Device is not "Enable".
Add LDEV Mode	The setting status for adding an LDEV to the created external volume group Enable: Enabled, Disable: Disabled
Resource Group	The resource group ID of the LDEV to be added No value is output if the ID is not specified.
Safety Check	Indicates whether to suppress the processing that affects the connection status of the existing path being used between the external storage system and the local storage system. Enable: The processing is suppressed. Disable: The processing is not suppressed.

Add External iSCSI Name/Modify External CHAP User

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Add External iSCSI Name/Modify External CHAP User ++Port=3B,iSCSI
Name=iqn.1994-04.jp.co.hitachi:rsd.r80.t.00001.4b000, TCP Port=3260,IP
Address=192.168.0.169,CHAP User=user1, User Auth Switch=Enable,Auth
Mode=Unidirectional,iSCSI Virtual Port ID=15
```

Detailed Information

Item	Description
Command	The command name
Port	The name of the port to which the iSCSI initiator belongs

Item	Description
iSCSI Name	The iSCSI name
TCP Port	The TCP port number If this item is not specified by the command option, the TCP port number of the iSCSI target on the port is output.
IP Address	The IP address of the external system
CHAP User	The CHAP user name to be set for Secret When the iSCSI name of the external storage system is added, a hyphen (-) is output.
User Auth Switch	The setting status of CHAP authentication Enable: CHAP authentication is enabled. Disable: CHAP authentication is disabled. When the iSCSI name of the external storage system is changed, a hyphen (-) is output.
Auth Mode	The CHAP authentication mode Unidirectional: One-way CHAP authentication Mutual: Mutual-way CHAP authentication When the iSCSI name of the external storage system is changed, a hyphen (-) is output.
iSCSI Virtual Port ID	The iSCSI virtual port ID (0-15) No value is output when the option is not specified.

Add HBA iSCSI

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Add HBA iSCSI
++Port=1A,Target ID=0x00,iSCSI Name=XXXXXXXXXXXXXXXX, Virtual Storage Machine
S/N=23456
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port to which iSCSI targets are added, or on which iSCSI targets are changed When a virtual storage machine is specified, the port name of the virtual storage machine is output.
Target ID	The iSCSI target ID
iSCSI Name	The iSCSI name of the host bus adapter
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Add Host Group

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Add Host Group
++Port=1A,Host Group ID=0x0001,Host Group Name=XXXXXX, Virtual Storage Machine S/
N=23456
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port to which a host group is added When a virtual storage machine is specified, the port name of the virtual storage machine is output.
Host Group ID	The host group ID to be added
Host Group Name	The name of the host group to be added
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Add Host Group(iSCSI)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Add Host Group(iSCSI) ++Port=1A,Target Alias=XXXXXX,iSCSI
Name=YYYYYYYY,Auth Mode=Chap, Chap Mutual=Enable,Virtual Storage Machine S/N=23456
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port to which the host group is added When a virtual storage machine is specified, the port name of the virtual storage machine is output.
Target Alias	The alias to be added
iSCSI Name	The iSCSI name to be added
Auth Mode	The setting status of the CHAP authentication mode Chap: CHAP authentication is enabled None: CHAP authentication is disabled Both: Connection is available both with and without CHAP authentication
Chap Mutual	CHAP authentication is unidirectional or bidirectional Enable: Set to bidirectional authentication mode Disable: Set to the unidirectional authentication mode
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Add Host NQN

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Add Host NQN
++Client=0x00,Request ID=1234,NVMSS ID=1,Host NQN=nqn.xxx
```

Detailed Information

Item	Description
Command	The command name
Client	The client type
Request ID	The request ID
NVMSS ID	The specified NVM subsystem ID
Host NQN	The host NQN to be added

Add Journal(Ldev)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Add Journal(Ldev) ++JNL=0x001,JNL Kind=Open,MP Blade ID=0,Timer Type=
++LDEV(LDKC:CU:LDEV) ={0x00:0xAA:0xBB,0x00:0xCC:0xDD,……,0x00:0xEE:0xFF}, Num. of
LDEVs=4
```

Detailed Information

Item	Description
Command	The command name
JNL	The journal number
JNL Kind	The journal kind Open: Open system, MF: Mainframe system
MP Blade ID	The MP blade ID No value is output when a journal volume is added to the existing journal group.
Timer Type	The clock type used for consistency time System: The system clock of the main frame host on the primary site Local: No system clock is used. None: The system clock of the main frame host on the primary site when data is copied from the storage system on the secondary site to the one on the primary site

Item	Description
	No value is output if JNL Kind is Open.
LDEV(LDKC:CU:LDEV)	The LDEV IDs of journal volumes to be created
Num. of LDEVs	The number of journal volumes to be created

Add Ldev

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Add Ldev
++PG=1-1,LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Emulation=OPEN-3, Size=200
Capacity,Location=10000000,MP Blade ID=0,T10PI=Disable
```

Detailed Information

Item	Description
Command	The command name
PG	The parity group number to which an LDEV to be created belongs If the LDEV to be created is an external volume, "E" is added on the top of the parity group number.
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV to be created "Auto" indicates the auto numbering is enabled.
Emulation	The type of emulation
Size	The capacity and method for specifying the capacity of an LDEV to be created

Item	Description
	Specifying the capacity ▪ Capacity: Specify a capacity by the byte or block. Units, byte or block, are not output. If a capacity is specified by the kilobyte, megabyte, gigabyte, or terabyte, the capacity is output on a byte basis. ▪ Offset-Capacity: Specify a capacity by the byte or block, and then the storage system corrects the capacity. Units, byte or block, are not output. If a capacity is specified by the kilobyte, megabyte, gigabyte, or terabyte, the capacity is output on a byte basis. ▪ Cylinder: Specify a capacity by the cylinder. ▪ ALL Capacity: All free space is assigned to the LDEV capacity. The capacity value is not output. For details, see the section describing CV size calculation in *Provisioning Guide for Open Systems*.
Location	The starting point of an LDEV to be created in the parity group or external volume group
MP Blade ID	The MP blade ID
T10PI	The setting status of T10 PI attribute Enable: Enabled, Disable: Disabled

Add Ldev(ALU)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,,
[Config Command],,,Accept,Seq.=xxxxxxxxxx
+Command=Add Ldev(ALU)
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV to be created

Add Ldev(Dynamic Provisioning)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Add Ldev(Dynamic Provisioning)
++Pool ID=127,LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,SSID=0x6500,
Emulation=OPEN-V,Size=200 Capacity,MP Blade ID=0,CLPR=1,
TSE=Enable,Full Allocation=Enable,
Data Direct Mapping LDEV(LDKC:CU:LDEV)=,T10PI=Enable,
Capacity Saving=Deduplication Compression,
Capacity Saving Mode=Post Process,Nickname=AAAAAAAAAA,
Compression Acceleration=Enable,ESE=Disable,
Data Reduction Shared Volume=Enable
```

Detailed Information

Item	Description
Command	The command name
Pool ID	The pool number of a pool to which a virtual volume of Dynamic Provisioning to be created belongs No value is output when the data direct mapping attribute is enabled.
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV to be created "Auto" indicates the auto numbering is enabled.
SSID	The SSID
Emulation	The type of emulation
Size	The capacity and method for specifying the capacity of an LDEV to be created **Specifying the capacity** ▪ Capacity: Specify a capacity by the byte or block. Units, byte or block, are not output. If a capacity is specified by the kilobyte, megabyte, gigabyte, or terabyte, the capacity is output on a byte basis. ▪ Offset-Capacity: Specify a capacity by the byte or block, and then the storage system corrects the capacity. Units, byte or block, are not output. If a capacity is specified by the kilobyte, megabyte, gigabyte, or terabyte, the capacity is output on a byte basis.

Item	Description
	▪ Cylinder: Specify a capacity by the cylinder. ▪ ALL Capacity: All free space is assigned to the LDEV capacity. The capacity value is not output. For details, see the section describing CV size calculation in *Provisioning Guide for Open Systems*.
MP Blade ID	The MP blade ID of an LDEV to be created
CLPR	The CLPR ID
TSE	The setting status of TSE attribute Enable: Enabled, Disable: Disabled
Full Allocation	The setting status of the full allocation Enable: Enabled, Disable: Disabled
Data Direct Mapping LDEV(LDKC:CU:LDEV)	The LDEV ID of a pool volume with the data direct mapping attribute when the data direct mapping attribute is enabled. No value is output when the data direct mapping attribute is disabled.
T10PI	The setting status of T10 PI attribute Enable: Enabled, Disable: Disabled
Capacity Saving	The status of the capacity saving setting Disable: Capacity saving is disabled, Compression: Compression, Deduplication Compression: Deduplication and compression
Capacity Saving Mode	The status of the capacity saving setting mode Post Process: post process method, Inline: inline method If the option is not specified, a hyphen (-) is output.
Nickname	The name to be set for the LDEV No value is output if no name is specifed for the LDEV.
Compression Acceleration	The setting status of compression accelerator Enable: Compression accelerator is enabled. Disable: Compression accelerator is disabled. This item is output when compression accelerator is set.
ESE	The setting status of the ESE attribute Enable: The ESE attribute is enabled. Disable: The ESE attribute is disabled.

Item	Description
Data Reduction Shared Volume	The setting status of the data reduction shared volume (DRS-VOL) Enable: The DRS-VOL is enabled. Disable: The DRS-VOL is disabled. This item is output only when the -drs -request_id auto option (which is used to create a DRS-VOL) is specified.

Add Ldev(SLU)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,,
[Config Command],,,Accept,Seq.=xxxxxxxxxx
+Command=Add Ldev(SLU)
++Pool ID=127,LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Size=200 Capacity
```

Detailed Information

Item	Description
Command	The command name
Pool ID	The pool number of a pool to which a virtual volume of Dynamic Provisioning to be created belongs
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV to be created
Size	The capacity and method for specifying the capacity of an LDEV to be created **Specifying the capacity** ▪ Capacity: Specify a capacity by the byte or block. Units, byte or block, are not output. If a capacity is specified by the kilobyte, megabyte, gigabyte, or terabyte, the capacity is output on a byte basis. ▪ Offset-Capacity: Specify a capacity by the byte or block, and then the storage system corrects the capacity. Units, byte or block, are not output. If a capacity is specified by the kilobyte, megabyte, gigabyte, or terabyte, the capacity is output on a byte basis.

Item	Description
	▪ Cylinder: Specify a capacity by the cylinder. ▪ ALL Capacity: All free space is assigned to the LDEV capacity. The capacity value is not output. For details, see the section describing CV size calculation in *Provisioning Guide for Open Systems*.

Add Ldev(Snapshot)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Add Ldev(Snapshot) ++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Emulation=OPEN-V,
Size=200 Capacity,MP Blade ID=0,CLPR=1,T10PI=Disable
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV to be created "Auto" indicates the auto numbering is enabled.
Emulation	The emulation type
Size	The capacity and method for specifying the capacity of an LDEV to be created **Specifying the capacity** ▪ Capacity: Specify a capacity by the byte or block. Units, byte or block, are not output. If a capacity is specified by the kilobyte, megabyte, gigabyte, or terabyte, the capacity is output on a byte basis. ▪ Offset-Capacity: Specify a capacity by the byte or block, and then the storage system corrects the capacity. Units, byte or block, are not output. If a capacity is specified by the kilobyte, megabyte, gigabyte, or terabyte, the capacity is output on a byte basis.

Item	Description
	▪ Cylinder: Specify a capacity by the cylinder. ▪ ALL Capacity: All free space is assigned to the LDEV capacity. The capacity value is not output. For details, see the section describing CV size calculation in *Provisioning Guide for Open Systems*.
MP Blade ID	The MP blade ID of an LDEV to be created
CLPR	The CLPR ID
T10PI	The setting status of T10 PI attribute Enable: Enabled, Disable: Disabled

Add License

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Add License
++Key Code=xxx
```

Detailed Information

Item	Description
Command	The command name
Key Code	The key code of the license

Add LUN

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Add LUN
++Port=1A,Host Group ID=0x0FE,LUN=0,
LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Virtual Storage Machine S/N=523456,
Command Device=Enable
```

```
++Additional Port(Port,Host Group ID,LUN)=[{1B,0x1AA,2},{1C,0x1AA,2}],
Num. of Paths=2
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port to which an LU is added When a virtual storage machine is specified, the port name of the virtual storage machine is output.
Host Group ID	The ID of a host group to which an LU is added
LUN	The LU number to be added "Auto" is output when auto is specified instead of the LU number.
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV to be set as an LU
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.
Command Device	The setting status of the command device attribute Enable: Enabled, Disable: Disabled A hyphen (-) is output for the value when LUN is "Auto".
Additional Port(Port,Host Group ID,LUN)	The port name, host group ID, and LUN of the LU path to be additionally set This index is output if it is specified for a command option. "Auto" is ouptut when LUN is "Auto".
Num. of Paths	The number of the additional LU paths to be set This index is output if it is specified for a command option.

Add Namespace

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Add Namespace
++Client=0x00,Request ID=1234,NVMSS ID=1,LDEV ID=10,Namespace ID=1
```

Detailed Information

Item	Description
Command	The command name
Client	The client type
Request ID	The request ID
NVMSS ID	The specified NVM subsystem ID
LDEV ID	The LDEV ID to be assigned
Namespace ID	The namespace ID to be created "Auto" indicates that the auto numbering is enabled.

Add Namespace Path

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Add Namespace Path
++Client=0x00,Request ID=1234,NVMSS ID=1,Namespace ID=1,Host NQN=nqn.xxx
```

Detailed Information

Item	Description
Command	The command name
Client	The client type
Request ID	The request ID
NVMSS ID	The specified NVM subsystem ID
Namespace ID	The namespace ID for the path to be added
Host NQN	The host NQN for the path to be added

Add NVM Subsystem

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
```

```
Seq.=xxxxxxxxxx
+Command=Add NVM Subsystem
++Client=0x00,Request ID=1234,NVMSS ID=1,Resource Group ID=1,
Namespace Security=Disable,T10PI=Disable,Mode=0x00,
Option[0:31]=0x00002004,Option[32:63]=0x00000000,
Option[64:95]=0x00000000,Option[96:127]=0x00000000,
Option[128:159]=0x00000000,Option[160:191]=0x00000000,
Option[192:223]=0x00000000,Option[224:255]=0x00000000,Name=nvm_subsystem
```

Detailed Information

Item	Description
Command	The command name
Client	The client type
Request ID	The request ID
NVMSS ID	The specified NVM subsystem ID
Resource Group ID	The specified resource group ID No value is output when the option is not specified.
Namespace Security	Indicates whether the specified namespace security is enabled. Enable: Enabled, Disable: Disabled No value is output when the option is not specified.
T10PI	Indicates whether the specified T10 PI mode is enabled. Enable: Enabled, Disable: Disabled No value is output when the option is not specified.
Mode	The specified host mode No value is output when the option is not specified.
Option[0:31] to Option[224:255]	The specified host mode option No value is output when the option is not specified.
Name	The specified NVM subsystem name No value is output when the option is not specified.

Add NVM Subsystem Port

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
```

```
Seq.=xxxxxxxxxx
+Command=Add NVM Subsystem Port
++Client=0x00,Request ID=1234,NVMSS ID=1,Port=1A
```

Detailed Information

Item	Description
Command	The command name
Client	The client type
Request ID	The request ID
NVMSS ID	The specified NVM subsystem ID
Port	The name of the port to be added

Add Parity Group

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Add Parity Group
++PG=1-1,Drive Location={0-0,0-1,0-2,0-3,0-4,0-5,0-6,0-7}
++PG=1-2,Drive Location={1-0,1-1,1-2,1-3,1-4,1-5,1-6,1-7}
++PG=1-3,Drive Location={2-0,2-1,2-2,2-3,2-4,2-5,2-6,2-7}
++PG=1-4,Drive Location={3-0,3-1,3-2,3-3,3-4,3-5,3-6,3-7}
++Num. of PGs=4
++RAID Level=7D+1P,CLPR=1,Encryption=Disable,Copy
Back=Disable,Accelerated Compression=Enable,
Emulation=OPEN-V,Password=Enable
```

Detailed Information

Item	Description
Command	The command name
PG	The parity group number
Drive Location	The location of the drive
PG	The parity group number (2) This index is not output if the number of parity groups is less than 2.

Item	Description
Drive Location	The location of the drive (2) This index is not output if the number of parity groups is less than 2.
PG	The parity group number (3) This index is not output if the number of parity groups is less than 3.
Drive Location	The location of the drive (3) This index is not output if the number of parity groups is less than 3.
PG	The parity group number (4) This index is not output if the number of parity groups is less than 4.
Drive Location	The location of the drive (4) This index is not output if the number of parity groups is less than 4.
Num. of PGs	The number of parity groups
RAID Level	The RAID level
CLPR	The CLPR ID
Encryption	The status of encryption setting Enable: Enabled, Disable: Disabled
Copy Back	The setting status of the copy back mode Enable: Enabled, Disable: Disabled
Accelerated Compression	The setting status of capacity expansion Enable: Enabled, Disable: Disabled
Emulation	The emulation type
Password	Indicates whether the one-time password is specified Enable: The one-time password is specified. This index is not output if no one-time password is specified.

Add Path

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Add Path ++Port=1B,WWN=XXXXXXXXXXXXXXXX,Path Group ID=1,Safety Check=Enable
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port to be connected to the external storage system
WWN	The WWN of the external storage system
Path Group ID	The path group ID of the external volume
Safety Check	Indicates whether to suppress the processing that affects the connection status of the existing path being used between the external storage system and the local storage system. Enable: The processing is suppressed. Disable: The processing is not suppressed.

Add QoS Group(Group)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Add QoS Group(Group)
++QoS Group ID=1
```

Detailed Information

Item	Description
Command	The command name
QoS Group ID	The ID of the QoS group to be created No value is output if the QoS group ID is not specified.

Add QoS Group(LDEV)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Add QoS Group(LDEV)
++QoS Group ID=1,LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB
```

Detailed Information

Item	Description
Command	The command name
QoS Group ID	The ID of the QoS group that the LDEV is added to No value is output if the QoS group ID is not specified.
LDEV(LDKC:CU:LDEV)	The ID of the LDEV to be added to the QoS group

Add Quorum

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Add Quorum
++Quorum Disk ID=1,Controller ID=8,S/N=512345,
LDEV(LDKC:CU:LDEV)=0x00:0x01:0x02
```

Detailed Information

Item	Description
Command	The command name
Quorum Disk ID	The ID of the quorum disk used by global-active device to be set
Controller ID	The controller ID of the storage system that setting the quorum disk used by global-active device 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP E series, VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800

Item	Description
S/N	The serial number of the storage system that setting the quorum disk used by global-active device
LDEV(LDKC:CU:LDEV)	The LDEV ID of the volume to be set as a quorum disk used by global-active device No value is output if the LDEV is not set to Quorum disk.

Add RCU

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Add RCU
++S/N=512345,MCU=0xAAAA,RCU=0xBBBB,Controller ID=8,MCU Port=1A,
RCU Port=1B,SSID=0x0123,Path Gr. ID=0
```

Detailed Information

Item	Description
Command	The command name
S/N	The serial number of the remote storage system
MCU	The CU number of the local storage system "Free" is output when CU Free is specified.
RCU	The CU number of the remote storage system "Free" is output when CU Free is specified.
Controller ID	The controller ID of the remote storage system 5: USP V/VM, 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP E series, VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800, 19: HUS VM
MCU Port	The port name of the local storage system
RCU Port	The port name of the remote storage system
SSID	The SSID of the remote storage system

Item	Description
Path Gr. ID	The path group ID of the remote storage system No value is output when CU Free is not specified.

Add RCU iSCSI Port

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Add RCU iSCSI Port
++S/N=512345,Controller ID=8,MCU Port=3B,RCU Port=4B,TCP Port=3260,
IP Address=192.168.0.169
```

Detailed Information

Item	Description
Command	The command name
S/N	The serial number of the remote storage system
Controller ID	The controller ID of the remote storage system 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP E series, VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800, 19: HUS VM
MCU Port	The name of the port on the local storage system
RCU Port	The name of the port on the remote storage system
TCP Port	The TCP port number A hyphen (-) is displayed if the TCP port number is not specified.
IP Address	The IP address of the port on the remote storage system

Add RCU Path

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
```

```
+Command=Add RCU Path
++S/N=512345,MCU=0xAAAA,RCU=0xBBBB,MCU Port=1A,RCU Port=1B,
SSID=0x0123,Controller ID=8,Path Gr. ID=0
```

Detailed Information

Item	Description
Command	The command name
S/N	The serial number of the remote storage system
MCU	The CU number of the local storage system "Free" is output when CU Free is specified.
RCU	The CU number of the remote storage system "Free" is output when CU Free is specified.
MCU Port	The port name of the local storage system to be added
RCU Port	The port name of the remote storage system to be added
SSID	The SSID of the remote storage system
Controller ID	The controller ID of the remote storage system 5: USP V/VM, 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP E series, VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800, 19: HUS VM
Path Gr. ID	The path group ID of the remote storage system No value is output when CU Free is not specified.

Add Resource(Group)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Add Resource(Group)
++Resource Group=AAAAAAAA,Controller ID=139,S/N=523456
```

Detailed Information

Item	Description
Command	The command name
Resource Group	The name of a resource group to be created
Controller ID	The controller ID of the virtual storage machine 5: USP V/VM, 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 19: HUS VM, 110: VSP G200, 111: VSP G400/VSP F400/VSP G600 and VSP F600, 112: VSP G800 and VSP F800, 129: VSP G350, 130: VSP G370, 131: VSP G700, 132: VSP G900, 133: VSP F350, 134: VSP F370, 135: VSP F700, 136: VSP F900, 137: VSP G130, 138: VSP 5100H and VSP 5500H, 139: VSP 5100 and VSP 5500, 140: VSP E990, 141: VSP E790, 142: VSP E590, 144: VSP 5200H and VSP 5600H, 145: VSP 5200 and VSP 5600, 148: VSP E790H, 149: VSP E590H No output when a virtual storage machine is not specified.
S/N	The serial number of the virtual storage machine No output when a virtual storage machine is not specified.

Add Resource(Resource Name)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Add Resource(Resource Name)
++Resource Group ID=123456,Resource Group Name=XXXXXXXXX
```

Detailed Information

Item	Description
Command	The command name
Resource Group ID	The number of the resource group whose name is changed
Resource Group Name	The newly changed resource group name

Add Resource/Delete Resource

Example: when the resource of the operation target is LDEV

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,[Config Command],,,
Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Add Resource/Delete Resource
++Resource Group ID=123456,LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB
```

Example: when the resource of the operation target is NVM subsystem

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Add Resource/Delete Resource
++Resource Group ID=123456,NVMSS ID=1
```

Detailed Information

Item	Description
Command	The command name
Resource Group ID	The number of a resource group to be registered or deleted This value is always 0 when you delete a resource from a resource group.
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV to be registered or deleted This item is output when the resource of the operation target is LDEV
PG	The number of a parity group to be registered or deleted This item is output when the resource of the operation target is the parity group or external volume group.
Port	The name of a port to be registered or deleted This item is output when the resource of the operation target is Port or Host Group
Host Group ID	The ID of a host group to be registered or deleted This item is output when the resource of the operation target is Host Group
NVMSS ID	The NVM subsystem ID to be registered or deleted

Add Snap Pool

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Add Snap Pool ++Pool ID=10,Pool Name=XXXXXXXX,User Threshold(%)=85
++LDEV(LDKC:CU:LDEV)={0x00:0xAA:0xBB,0x00:0xCC:0xDD,……, 0x00:0xEE:0xFF},Num. of
LDEVs=4 ++Auto Add Pool Volume=Enable
```

Detailed Information

Item	Description
Command	The command name
Pool ID	The pool number of a pool for Thin Image (HTI only) to be created
Pool Name	The pool name of a pool for Thin Image (HTI only) to be created No value is output if a pool name is not specified.
User Threshold(%)	The user defined threshold
LDEV(LDKC:CU:LDEV)	The LDEV IDs of pool volumes
Num. of LDEVs	The number of pool volumes
Auto Add Pool Volume	Indicates the setting status of the function to automatically manage the compressed space of the pool. Enable: Enabled, Disable: Disabled A hyphen (-) is output if it is not specified at the command option

Add Snapshot

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Add Snapshot
++Snapshot Group=SSSSSSSS,Pool ID=2,P-VOL(LDKC:CU:LDEV)=0x00:0xAA:0xBB,
S-VOL(LDKC:CU:LDEV)=0x00:0xCC:0xDD,Virtual Storage Machine S/N=523456,
Range=Group,S-VOL Storage Machine S/N=512345,
S-VOL Actual Controller ID=8,Add Mode=Cascade,Add Mode Option=AutoSplit,
S-VOL Create=No,S-VOL Nickname=,Resource Group ID=1,
```

```
S-VOL ID Range Start(LDKC:CU:LDEV)=0x00:0xAA:0xBB,
S-VOL ID Range End(LDKC:CU:LDEV)=0x00:0xCC:0xDD,MU=127,SLU=Enable
```

Detailed Information

Item	Description
Command	The command name
Snapshot Group	The name of a snapshot group
Pool ID	The pool ID of a pool to which a pair to be registered belongs
P-VOL(LDKC:CU:LDEV)	The LDEV ID of the primary volume for a pair to be registered When a virtual storage machine is specified, the LDEV ID of the virtual storage machine is output.
S-VOL(LDKC:CU:LDEV)	The LDEV ID of the secondary volume for a pair to be registered No output when a secondary volume is not specified
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.
Range	The range for splitting pairs Volume: Only the pair is split. Group: All pairs in the group including the pair are split.
S-VOL Storage Machine S/N	The serial number of the actual storage system to which the secondary volume belongs
S-VOL Actual Controller ID	The controller ID of the actual storage system to which the secondary volume belongs 5: USP V/VM, 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP E series, VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800, 19: HUS VM
Add Mode	The mode of the pair to be registered Cascade: cascade configuration, Clone: cloned pair You can configure the cascade configuration, also when the "Clone" is specified.
Add Mode Option	Indicates whether cloning or pair splitting is automatically performed. AutoClone: Cloning is automatically performed. AutoSplit: Pair splitting is automatically performed.

Item	Description
	None: Both cloning and pair splitting are not automatically performed.
S-VOL Create	Indicates whether the secondary volume is automatically created. Yes: The secondary volume is automatically created. No: The secondary volume is not automatically created.
S-VOL Nickname	The name to be set for the secondary volume No value is output if the secondary volume is not automatically created.
Resource Group ID	The resource group ID of the secondary volume No value is output if specification of this index is omitted.
S-VOL ID Range Start(LDKC:CU:LDEV)	The start LDEV ID that is used to search for the automatically numbered secondary volume No value is output if the range of the LDEV IDs for the secondary volume is not specified.
S-VOL ID Range End(LDKC:CU:LDEV)	The end LDEV ID that is used to search for the automatically numbered secondary volume No value is output if the range of LDEV IDs for the secondary volume is not specified.
MU	The MU number No value is output if the MU number is not specified.
SLU	Indicates whether the SLU attribute is specified for the snapshot data. Enable: The SLU attribute is specified. This item is output only when the SLU attribute is specified.

Add SPM Group

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Add SPM Group ++Port=1A,WWN=XXXXXXXXXXX,SPM
Group=AAAAAAAAA,Nickname=
```

Detailed Information

Item	Description
Command	The command name
Port	The port name to which the SPM target WWN to be registered to the SPM group belongs
WWN	The SPM target WWN to be registered to the SPM group No value is output when the Nickname is output.
SPM Group	The name of the SPM group to which the SPM target WWN is registered
Nickname	The SPM name (nickname) for the WWN No value is output when the WWN value is output.

Add SPM Host Group

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Add SPM Host Group
++Port=1A,SPM Group=XXXXXXXXXXX,Host Group Name=AAAAAAAAA
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port for the host group to which the WWN to be set to the SPM group is registered
SPM Group	The name of an SPM group to be set
Host Group Name	The name of a host group to which the WWN to be set to the SPM group is registered

Add SPM WWN

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Add SPM WWN ++Port=1A,WWN=XXXXXXXXXXX,Nickname=AAAAAAAAA
```

Detailed Information

Item	Description
Command	The command name
Port	The port name to which the WWN belongs
WWN	The WWN
Nickname	The SPM name (nickname) for the WWN

Add SSID

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Add SSID
++S/N=512345,MCU=0xAAAA,RCU=0xBBBB,Controller ID=8,SSID=0xCCCC
```

Detailed Information

Item	Description
Command	The command name
S/N	The serial number of the remote storage system
MCU	The CU number of the local storage system
RCU	The CU number of the remote storage system
Controller ID	The controller ID of the remote storage system

Item	Description
	5: USP V/VM, 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP E series, VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800, 19: HUS VM
SSID	The SSID to be added

Add WWN

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Add WWN
++Port=1A,Host Group ID=0x0FE,WWN=XXXXXXXXXXXXXXXX, Virtual Storage Machine
S/N=23456
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port to which a WWN is set When a virtual storage machine is specified, the port name of the virtual storage machine is output.
Host Group ID	The ID of a host group to which the WWN is set
WWN	The WWN to be set
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Check External Storage Group

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Check External Storage Group ++PG=E11111-1
```

Detailed Information

Item	Description
Command	The command name
PG	The external volume group number

Check External Storage Path

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Check External Storage Path
++Port=1B,WWN=XXXXXXXXXXXXXXXX,Path Group ID=1
```

Detailed Information

Item	Description
Command	The command name
Port	The name of the port to be connected to the external storage system
WWN	The WWN of the external storage system
Path Group ID	The path group ID of the external volume

CTQM

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=CTQM
++LDEV(CU:LDEV)=0x12:0x34,MU=5,Virtual Storage Machine S/N=23456, Suspend
Status=Suspend,CTQM=EOM
```

Detailed Information

Item	Description
Command	The command name
LDEV(CU:LDEV)	The CU number and the LDEV number of the primary or secondary volume shared by a pair that is included in the consistency group for executing the command When a virtual storage machine is specified, the CU number and the LDEV number of the virtual storage machine is output.
MU	The MU number of the pair to which the LDEV belongs
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.
Suspend Status	The instruction to the journal in the suspend status Suspend: Suspended Full Suspend: Full and suspended Obstacle Suspend: Suspended due to an error
CTQM	The synchronization status in the suspend status CTQM: Synchronization is underway. EOM: Synchronization is complete.

Delete CHAP User

Example 1: Deleting the CHAP user name on the initiator side

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete CHAP User
++Port=1A,Target ID=0x00,Initiator CHAP User=AAAAAAA, Virtual Storage Machine S/
N=23456
```

Detailed Information 1: Deleting the CHAP user name on the initiator side

Item	Description
Command	The command name
Port	The name of a port to which an iSCSI target, from which CHAP users are deleted, belongs

Item	Description
Target ID	The iSCSI target ID
Initiator CHAP User	The CHAP user name on the initiator side
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Example 2: Deleting the CHAP user name on the target side

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete CHAP User ++Port=1A,Target ID=0x00,Target CHAP User=AAAAAAA,
Virtual Storage Machine S/N=23456
```

Detailed Information 2: Deleting the CHAP user name on the target side

Item	Description
Command	The command name
Port	The name of a port to which an iSCSI target, from which CHAP users are deleted, belongs
Target ID	The iSCSI target ID
Target CHAP User	The CHAP user name on the target side
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Delete CLPR

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Delete CLPR
++CLPR=31
```

Detailed Information

Item	Description
Command	The command name
CLPR	The CLPR ID

Delete Copy Group

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete Copy Group ++Copy Group=AAAAAAAA
```

Detailed Information

Item	Description
Command	The command name
Copy Group	The name of a copy group to be deleted

Delete Device Group

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete Device Group
++Device Group=AAAAAAAA
++LDEV(LDKC:CU:LDEV)={0x00:0xAA:0xBB,0x00:0xCC:0xDD,……, 0x00:0xEE:0xFF},Num. of
LDEVs=4
```

Detailed Information

Item	Description
Command	The command name
Device Group	The name of a device group from which LDEVs are deleted

Item	Description
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV to be deleted from the device group
Num. of LDEVs	The number of LDEVs to be deleted from the device group

Delete External Group

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete External Group ++PG=E11111-1
```

Detailed Information

Item	Description
Command	The command name
PG	The external volume group number

Delete External iSCSI Name

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete External iSCSI Name ++Port=3B,iSCSI Name=iqn.1994-
04.jp.co.hitachi:rsd.r80.t.00001.4b000, IP
Address=192.168.0.169,iSCSI Virtual Port ID=15
```

Detailed Information

Item	Description
Command	The command name
Port	The name of the port to which the iSCSI initiator belongs
iSCSI Name	The iSCSI name

Item	Description
IP Address	The IP address of the port on the external storage system
iSCSI Virtual Port ID	The iSCSI virtual port ID (0-15) No value is output when the option is not specified.

Delete HBA iSCSI

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete HBA iSCSI
++Port=1A,Target ID=0x00,iSCSI Name=XXXXXXXXXXXXXXXX, Virtual Storage Machine S/
N=23456
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port from which iSCSI targets are deleted When a virtual storage machine is specified, the port name of the virtual storage machine is output.
Target ID	The iSCSI target ID
iSCSI Name	The iSCSI name of the host bus adapter
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Delete Host Group

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete Host Group
++Port=1A,Host Group ID=0x003,,Virtual Storage Machine S/N=23456
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port from which a host group is deleted When a virtual storage machine is specified, the port name of the virtual storage machine is output.
Host Group ID	The ID of a host group to be deleted
Blank item	Nothing is output due to unused.
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Delete Host NQN

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Delete Host NQN
++Client=0x00,Request ID=1234,NVMSS ID=1,Host NQN=nqn.xxx
```

Detailed Information

Item	Description
Command	The command name
Client	The client type
Request ID	The request ID
NVMSS ID	The specified NVM subsystem ID
Host NQN	The host NQN to be deleted

Delete Journal

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
```

```
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete Journal ++JNL=0xAAA
```

Detailed Information

Item	Description
Command	The command name
JNL	The number of a journal to be deleted

Delete Journal(Ldev)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete Journal(Ldev) ++JNL=0xAAA ++LDEV(LDKC:CU:LDEV)
={0x00:0xAA:0xBB,0x00:0xCC:0xDD,……,0x00:0xEE:0xFF}, Num. of LDEVs=4
```

Detailed Information

Item	Description
Command	The command name
JNL	The journal number of a journal from which journal volumes are deleted
LDEV(LDKC:CU:LDEV)	The LDEV ID of a journal volume to be deleted
Num. of LDEVs	The number of journal volumes to be deleted

Delete Ldev

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,,
[Config Command],,,Accept,Seq.=xxxxxxxxxx
+Command=Delete Ldev
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB, ALU/SLU Delete Mode=Enable
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV to be deleted
ALU/SLU Delete Mode	Indicates whether the method of deleting an LDEV for Dynamic Provisioning, Dynamic Tiering, active flash, the ALU attribute, and the SLU attribute is enabled. Enable: Enabled, Disable: Disabled

Delete Ldev(Initialize Capacity Saving)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete Ldev(Initialize Capacity Saving)
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV to be deleted

Delete License

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Delete License
++Product Name=xxx
```

Detailed Information

Item	Description
Command	The command name
Product Name	The program product name

Delete LUN

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Delete LUN
++Port=1A,Host Group ID=0x0FE,LUN=2047,
LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Virtual Storage Machine S/N=523456
++Additional Port(Port,Host Group ID,LUN)=[{1B,0x100,3},{1C,0x100,3}],
Num. of Paths=2
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port from which an LU is deleted When a virtual storage machine is specified, the port name of the virtual storage machine is output.
Host Group ID	The ID of a host group from which an LU is deleted
LUN	The LU number to be deleted
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV to be deleted
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.
Additional Port(Port,Host Group ID,LUN)	The port name, host group ID, and LUN of the LU path to be additionally deleted If the LDEV is specified for a command option and the LUN is not specified, the LUN is not output. This index is output if it is specified for a command option.

Item	Description
Num. of Paths	The number of LU paths to be additionally deleted This index is output if it is specified for a command option.

Delete Namespace

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Delete Namespace
++Client=0x00,Request ID=1234,NVMSS ID=1,Namespace ID=1
```

Detailed Information

Item	Description
Command	The command name
Client	The client type
Request ID	The request ID
NVMSS ID	The specified NVM subsystem ID
Namespace ID	The namespace ID to be deleted

Delete Namespace Path

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Delete Namespace Path
++Client=0x00,Request ID=1234,NVMSS ID=1,Namespace ID=1,Host NQN=nqn.xxx
```

Detailed Information

Item	Description
Command	The command name

Item	Description
Client	The client type
Request ID	The request ID
NVMSS ID	The specified NVM subsystem ID
Namespace ID	The namespace ID for the path to be deleted
Host NQN	The host NQN for the path to be deleted

Delete NVM Subsystem

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Delete NVM Subsystem
++Client=0x00,Request ID=1234,NVMSS ID=1
```

Detailed Information

Item	Description
Command	The command name
Client	The client type
Request ID	The request ID
NVMSS ID	The NVM subsystem ID to be deleted

Delete NVM Subsystem Port

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Delete NVM Subsystem Port
++Client=0x00,Request ID=1234,NVMSS ID=1,Port=1A
```

Detailed Information

Item	Description
Command	The command name
Client	The client type
Request ID	The request ID
NVMSS ID	The specified NVM subsystem ID
Port	The name of a port to be deleted from the NVM subsystem

Delete Parity Group

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Delete Parity Group
++PG={1-1},Num. of PGs=1,Password=Enable
```

Detailed Information

Item	Description
Command	The command name
PG	The parity group number
Num. of PGs	The number of parity groups
Password	Indicates whether the one-time password is specified Enable: The one-time password is specified. This index is not output if no one-time password is specified.

Delete Path

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete Path
++Port=1B,WWN=XXXXXXXXXXXXXXXX,Path Group ID=1
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port to be connected to the external storage system
WWN	The WWN of the external storage system
Path Group ID	The path group ID of the external volume

Delete Pool

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Delete Pool
++Pool ID=10,Target=-
```

Detailed Information

Item	Description
Command	The command name
Pool ID	The pool number of a pool to be deleted
Target	The target to be deleted Pool: Pool Pool(Pool VOL): Pool and pool volume Pool(PG): Pool, pool volume, and parity group A hyphen (-) is displayed if no deletion target is specified.

Delete Pool(Ldev)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete Pool(Ldev) ++Pool ID=10 ++LDEV(LDKC:CU:LDEV)={0x00:0xAA:0xBB,
```

```
0x00:0xCC:0xDD,……,
0x00:0xEE:0xFF},Num. of LDEVs=4
```

Detailed Information

Item	Description
Command	The command name
Pool ID	The pool ID of a pool whose capacity is to be decreased
LDEV(LDKC:CU:LDEV)	The LDEV IDs of pool volumes to be deleted from the pool
Num. of LDEVs	The number of pool volumes to be deleted from the pool

Delete QoS Group(Group)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Delete QoS Group(Group)
++QoS Group ID=1
```

Detailed Information

Item	Description
Command	The command name
QoS Group ID	The ID of the QoS group to be deleted No value is output if the QoS group ID is not specified.

Delete QoS Group(LDEV)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Delete QoS Group(LDEV)
++QoS Group ID=1,LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB
```

Detailed Information

Item	Description
Command	The command name
QoS Group ID	The ID of the QoS group whose LDEV is to be deleted No value is output if the QoS group ID is not specified.
LDEV(LDKC:CU:LDEV)	The ID of the LDEV to be deleted from the QoS group

Delete Quorum

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete Quorum ++ Quorum Disk ID=1
```

Detailed Information

Item	Description
Command	The command name
Quorum Disk ID	The quorum disk ID used by global-active device to be deleted

Delete RCU

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Delete RCU
++S/N=512345,MCU=0xAAAA,RCU=0xBBBB,SSID=0x0123,Controller ID=8,
Path Gr. ID=0
```

Detailed Information

Item	Description
Command	The command name
S/N	The serial number of the remote storage system
MCU	The CU number of the local storage system "Free" is output when CU Free is specified.
RCU	The CU number of the remote storage system "Free" is output when CU Free is specified.
SSID	The SSID of the remote storage system
Controller ID	The controller ID of the remote storage system 5: USP V/VM, 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP E series, VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800, 19: HUS VM
Path Gr. ID	The path group ID of the remote storage system No value is output when CU Free is not specified.

Delete RCU iSCSI Port

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Delete RCU iSCSI Port
++S/N=512345,Controller ID=8,MCU Port=3B,RCU Port=4B
```

Detailed Information

Item	Description
Command	The command name
S/N	The serial number of the remote storage system
Controller ID	The controller ID of the remote storage system

Item	Description
	7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP E series, VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800, 19: HUS VM
MCU Port	The port name of the local storage system
RCU Port	The port name of the remote storage system

Delete RCU Path

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Delete RCU Path
++S/N=512345,MCU=0xAAAA,RCU=0xBBBB,MCU Port=1A,RCU Port=1B,
SSID=0x0123,Controller ID=8,Path Gr. ID=0
```

Detailed Information

Item	Description
Command	The command name
S/N	The serial number of the remote storage system
MCU	The CU number of the local storage system "Free" is output when CU Free is specified.
RCU	The CU number of the remote storage system "Free" is output when CU Free is specified.
MCU Port	The port name of the local storage system
RCU Port	The port name of the remote storage system
SSID	The SSID of the remote storage system
Controller ID	The controller ID of the remote storage system 5: USP V/VM, 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP E series, VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800, 19: HUS VM

Item	Description
Path Gr. ID	The path group ID of the remote storage system No value is output when CU Free is not specified.

Delete Resource(Group)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete Resource(Group) ++Resource Group ID=123456
```

Detailed Information

Item	Description
Command	The command name
Resource Group ID	The number of the resource group to be deleted

Delete Snapshot

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Delete Snapshot
++Snapshot Group=SSSSSSSS,P-VOL(LDKC:CU:LDEV)=0x00:0xAA:0xBB,MU=A,
Virtual Storage Machine S/N=523456
```

Detailed Information

Item	Description
Command	The command name
Snapshot Group	The name of the snapshot group
P-VOL(LDKC:CU:LDEV)	The LDEV ID of the primary volume of a pair to be deleted

Item	Description
	When a virtual storage machine is specified, the LDEV ID of the virtual storage machine is output.
MU	The MU number of the pair to be deleted
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Delete Snapshot(Tree)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete Snapshot(Tree) ++ROOT-VOL(LDKC:CU:LDEV)=0x00:0xAA:0xBB, Virtual
Storage Machine S/N=23456
```

Detailed Information

Item	Description
Command	The command name
ROOT-VOL(LDKC:CU:LDEV)	The LDKC, CU, and LDEV numbers of the root volume to be deleted When a virtual storage machine is specified, the LDEV ID of the virtual storage machine is output.
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Delete SPM Group

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete SPM Group ++Port=1A,SPM Group=XXXXXXXXXXXX
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port to which the WWN to be deleted from the SPM group belongs
SPM Group	The name of an SPM group from which the WWN is deleted

Delete SPM Host Group

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete SPM Host Group
++Port=1A,Host Group Name=XXXXXXXXXXXX
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port to which the WWN to be deleted from the SPM group belongs
Host Group Name	The name of a host group to which the WWN to be deleted from the SPM group belongs

Delete SPM WWN

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete SPM WWN
++Port=1A,WWN=XXXXXXXXXXXX
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port to which the WWN to be deleted from the SPM target belongs
WWN	The WWN to be deleted from the SPM target

Delete SPM WWN(Nickname)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete SPM WWN(Nickname)
++Port=1A,Nickname=XXXXXXXXXXXX
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port to which the WWN to be deleted from the SPM target belongs
Nickname	The SPM name (nickname) of the WWN to be deleted from the SPM target

Delete SSID

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete SSID
++S/N=12345,MCU=0xAAAA,RCU=0xBBBB,SSID=0xCCCC
```

Detailed Information

Item	Description
Command	The command name
S/N	The serial number of the remote storage system
MCU	The CU number of the local storage system
RCU	The CU number of the remote storage system
SSID	The SSID to be deleted

Delete WWN

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete WWN
++Port=1A,Host Group ID=0x0FE,WWN=XXXXXXXXXXXXXXXX, Virtual Storage Machine S/N=23456
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port from which a WWN is deleted When a virtual storage machine is specified, the port name of the virtual storage machine is output.
Host Group ID	The ID of a host group from which the WWN is deleted
WWN	The WWN to be deleted
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Disconnect External Group

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
```

```
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Disconnect External Group ++PG=E11111-1
```

Detailed Information

Item	Description
Command	The command name
PG	The external volume group number

Disconnect Path

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Disconnect Path
++Port=1B,WWN=XXXXXXXXXXXXXXXX,Path Group ID=1
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port to be connected to the external storage system
WWN	The WWN of the external storage system
Path Group ID	The path group ID of the external volume

Extend Ldev

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Extend Ldev
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB, Virtual Storage Machine S/N=23456,Size=200
Capacity
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of the virtual volume for Dynamic Provisioning to be extended When a virtual storage machine is specified, the LDEV ID of the virtual storage machine is output.
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.
Size	The capacity and method for specifying the capacity of an LDEV to be created **Specifying the capacity** ▪ Capacity: Specify a capacity by the byte or block. Units, byte or block, are not output. If a capacity is specified by the kilobyte, megabyte, gigabyte, or terabyte, the capacity is output on a byte basis. ▪ Offset-Capacity: Specify a capacity by the byte or block, and then the storage system corrects the capacity. Units, byte or block, are not output. If a capacity is specified by the kilobyte, megabyte, gigabyte, or terabyte, the capacity is output on a byte basis. ▪ Cylinder: Specify a capacity by the cylinder. For details, see the section describing CV size calculation in *Provisioning Guide for Open Systems*.

Extend Ldev(Asynchronous)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Extend Ldev(Asynchronous)
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Virtual Storage Machine S/N=23456,
Size=200 Capacity
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of the Dynamic Provisioning virtual volume to be extended asynchronously with the operation When a virtual storage machine is specified, the LDEV ID of the virtual storage machine is output.
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.
Size	The capacity of an LDEV to be created, and how the capacity is specified **How the capacity is specified** ▪ Capacity: The capacity is specified by the byte or block. Units, byte or block, are not output. If the capacity is specified by the kilobyte, megabyte, gigabyte, or terabyte, the capacity is output on a byte basis. ▪ Offset-Capacity: The capacity is specified by the byte or block, and the storage system corrects the capacity. Units, byte or block, are not output. If the capacity is specified by the kilobyte, megabyte, gigabyte, or terabyte, the capacity is output on a byte basis. ▪ Cylinder: The capacity is specified by the cylinder. For details, see the section describing CV size calculation in *Provisioning Guide for Open Systems*.

Initialize Ldev(Format)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Initialize Ldev(Format)
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Format Option=Normal
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV to be formatted
Format Option	The format options Normal: Normal format, Quick: Quick format

Initialize Ldev(Shredding)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Initialize Ldev(Shredding)
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Data=00-FF-00
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV whose data is to be deleted
Data	The data pattern used for deleting the data 00-FF-00: Default pattern Random: Random value 0xXXXXXXXX: User defined value

Initialize Ldev(Stop Shredding)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Initialize Ldev(Stop Shredding) ++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV in which deletion of its data is to be stopped

Initialize Parity Group

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Initialize Parity Group
++PG=1-5,Password=Enable, Wait Time=1000
```

Detailed Information

Item	Description
Command	The command name
PG	The number of the parity group to be initialized
Password	Indicates whether the one-time password is specified Enable: The one-time password is specified. This index is not output if no one-time password is specified.
Wait Time	Indicates the time waiting for command execution in seconds. This index is not output if the wait time for command execution is not specified.

Initialize Pool

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,, Seq.=xxxxxxxxxx
+Command=Initialize Pool ++Pool ID=10,Operation=Initialize Deduplication
```

Detailed Information

Item	Description
Command	The command name
Pool ID	The pool ID of the pool to be initialized
Operation	The operation Initialize Deduplication: Initializes the deduplication system data volume and one or more volumes in which deduplicated data exists.

Map Resource(Asynchronous LDEV)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Map Resource(Asynchronous LDEV)
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,
Map LDEV(LDKC:CU:LDEV)=0x00:0xCC:0xDD,SSID=0x0123,Emulation=AAAAAA
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of the actual volume
Map LDEV(LDKC:CU:LDEV)	The LDEV ID of the virtual volume assigned to the actual volume "Reserve" is output if the reservation attribute of global-active device is set on the LDEV ID of the volume used as a secondary volume of a global-active device pair.
SSID	The SSID of a virtual volume
Emulation	The emulation type of a virtual volume

Map Resource(LDEV)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Map Resource(LDEV)
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB, Map LDEV(LDKC:CU:LDEV)=0x00:0xCC:0xDD,
SSID=0x0123,
Emulation=AAAAAA
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of the actual volume
Map LDEV(LDKC:CU:LDEV)	The LDEV ID of the virtual volume assigned to the actual volume "Reserve" is output if the reservation attribute of global-active device is set on the LDEV ID of the volume used as a secondary volume of a global-active device pair.
SSID	The SSID of a virtual volume
Emulation	The emulation type of a virtual volume

Map Resource(Port)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Map Resource(Port) ++Port=1A,Map Port=1E
```

Detailed Information

Item	Description
Command	The command name
Port	The port name of the actual port

Item	Description
Map Port	The name of the virtual port assigned to the actual port

Map Snapshot

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Map Snapshot
++P-VOL(LDKC:CU:LDEV)=0x00:0xAA:0xBB,S-VOL(LDKC:CU:LDEV)=0x00:0xCC:0xDD,
MU=1,Virtual Storage Machine S/N=523456,
S-VOL Storage Machine S/N=512345,S-VOL Actual Controller ID=8,
S-VOL Create=yes,S-VOL Nickname=Snapshot of ABCDEF ID:43707
```

Detailed Information

Item	Description
Command	The command name
P-VOL(LDKC:CU:LDEV)	The LDEV ID of the primary volume When a virtual storage machine is specified, the LDEV ID of the virtual storage machine is output.
S-VOL(LDKC:CU:LDEV)	The LDEV ID of the secondary volume When a virtual storage machine is specified, the LDEV ID of the virtual storage machine is output.
MU	The MU number of the mapped snapshot
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.
S-VOL Storage Machine S/N	The serial number of the actual storage system to which the secondary volume belongs
S-VOL Actual Controller ID	The controller ID of the actual storage system to which the secondary volume belongs 5: USP V/VM, 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP E series, VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800, 19: HUS VM

Item	Description
S-VOL Create	Indicates whether to create the secondary volume automatically. Yes: Automatically create the secondary volume. No: Not automatically create the secondary volume.
S-VOL Nickname	The name to be set for the secondary volume The value is output only when the secondary volume is automatically created.

Modify CLPR

Example 1: when moving the CLPR

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify CLPR
++PG=1-1,CLPR=31,CLPR Name=,Cache Size=
```

Example 2: when changing the CLPR name and cache size

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify CLPR
++PG=,CLPR=31,CLPR Name=CLPR31,Cache Size=8192
```

Detailed Information

Item	Description
Command	The command name
PG	The number of a parity group for CLPR to be migrated The parity group number with "E" on the top of the name indicates that the parity group contains an external volume
CLPR	The CLPR ID of the target of migration
CLPR Name	The CLPR name
Cache Size	The cache size

Modify Drive

Example 1

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Drive
++Drive Location=0-1,Spare=Enable,Password=Enable
++Drive Information(Type Code,Num. of Drives)=[], Num. of Information=
```

Example 2

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Drive
++Drive Location=,Spare=Enable,Password=Enable
++Drive Information(Type Code,Num. of Drives)=[{XXXXXX,2},{YYYYYY,4}],
Num. of Information=2
```

Detailed Information

Item	Description
Command	The command name
Drive Location	The location where the drive is installed No value is output if the drive information is specified.
Spare	The status of spare drive assignment Enable: Assign the spare drive. Disable: Release the assignment.
Password	Indicates whether the one-time password is specified Enable: The one-time password is specified. This index is not output if no one-time password is specified.
Drive Information(Type Code,Num. of Drives)	The drive information (Drive Type-Code, Number of Drives) No value is output if Drive Location is specified.
Num. of Information	The number of information items for the drive No value is output if Drive Location is specified.

Modify External Group(ALUA Switch)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify External Group(ALUA Switch) ++PG=E101-3,ALUA Switch=Enable
```

Detailed Information

Item	Description
Command	The command name
PG	The external volume group number
ALUA Switch	The setting status of the ALUA mode Enable: Enabled, Disable: Disabled

Modify External Group(Cache Inflow)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Modify
External Group(Cache Inflow) ++PG=E11111-1,Cache Inflow=Enable
```

Detailed Information

Item	Description
Command	The command name
PG	The external volume group number
Cache Inflow	The inflow control setting of the cache of the external volume. Enable: Enabled, Disable: Disabled

Modify External Group(Cache Mode)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify External Group(Cache Mode) ++PG=E11111-1,Cache Mode=Enable
```

Detailed Information

Item	Description
Command	The command name
PG	The external volume group number
Cache Mode	The cache mode to be set Enable: The cache mode is enabled Disable: The cache mode is disabled Through: Cache through mode Write Sync: Write synchronous mode

Modify External Group(Load Balance Mode)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Modify
External Group(Load Balance Mode) ++PG=E11111-1,Load Balance Mode=Extend
```

Detailed Information

Item	Description
Command	The command name
PG	The external volume group number
Load Balance Mode	The load balance mode to be set Normal: Standard round robin Extend: Extended round robin Disable: Disabled

Modify External Group(MP Blade)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify External Group(MP Blade) ++PG=E11111-1,MP Blade ID=0
```

Detailed Information

Item	Description
Command	The command name
PG	The external volume group number
MP Blade ID	The MP blade ID to be allocated to a target volume

Modify Host Group(Host Mode)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Host Group(Host Mode)
++Port=1A,Host Group ID=0x0FE,Virtual Storage Machine S/N=23456,
Mode=0x0A,Auth Mode=Chap,Chap Mutual=Disable
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port to which a host group for the host mode to be set belongs When a virtual storage machine is specified, the port name of the virtual storage machine is output.
Host Group ID	The ID of a host group for which the host mode is set
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.
Mode	The host mode

Item	Description
	For details about the host mode, see *Provisioning Guide for Open Systems*.
Auth Mode	The authentication mode Chap: CHAP authentication is enabled None: CHAP authentication is disabled Both: Connection is available both with and without CHAP authentication
Chap Mutual	CHAP authentication is unidirectional or bidirectional Enable: Set to bidirectional authentication mode Disable: Set to the unidirectional authentication mode

Modify Host Group(Host Mode Option)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Host Group(Host Mode Option)
++Port=1A,Host Group ID=0x0FE,Virtual Storage Machine S/N=23456,
Mode=0x0A,Option[0:31]=0x80000000,Option[32:63]=0x80000000,Option[64:95]=0x80000000,
Option[96:127]=0x80000000,Option[128:159]=0x80000000,Option[160:191]=0x80000000,
Option[192:223]=0x80000000,Option[224:255]=0x80000000,Auth Mode=Chap,Chap
Mutual=Disable
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port to which a host group for the host mode option to be changed belongs When a virtual storage machine is specified, the port name of the virtual storage machine is output.
Host Group ID	The ID of a host group whose host mode option is changed
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Item	Description
Mode	The host mode For details about the host mode, see *Provisioning Guide for Open Systems*.
Option[0:31]	The host mode options (from 0 to 31) to be set to the host group, indicated as a 4 byte bitmap
Option[32:63]	The host mode options (from 32 to 63) to be set to the host group, indicated as a 4 byte bitmap
Option[64:95]	The host mode options (from 64 to 95) to be set to the host group, indicated as a 4 byte bitmap
Option[96:127]	The host mode options (from 96 to 127) to be set to the host group, indicated as a 4 byte bitmap
Option[128:159]	The host mode options (from 128 to 159) to be set to the host group, indicated as a 4 byte bitmap
Option[160:191]	The host mode options (from 160 to 191) to be set to the host group, indicated as a 4 byte bitmap
Option[192:223]	The host mode options (from 192 to 223) to be set to the host group, indicated as a 4 byte bitmap
Option[224:255]	The host mode options (from 224 to 255) to be set to the host group, indicated as a 4 byte bitmap
Auth Mode	The authentication mode Chap: CHAP authentication is enabled None: CHAP authentication is disable Both: Connection is available both with and without CHAP authentication
Chap Mutual	CHAP authentication is unidirectional or bidirectional Enable: Set to bidirectional authentication mode Disable: Set to the unidirectional authentication mode

Modify Host NQN

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Host NQN
```

```
++Client=0x00,Request ID=1234,NVMSS ID=1,Host NQN=nqn.xxx,
Host Name=my_host
```

Detailed Information

Item	Description
Command	The command name
Client	The client type
Request ID	The request ID
NVMSS ID	The specified NVM subsystem ID
Host NQN	The specified host NQN
Host Name	The nickname of the host NQN to be changed If the nickname is deleted, a blank is output.

Modify Initiator CHAP User

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Initiator CHAP User ++Port=2B,CHAP User=user1
```

Detailed Information

Item	Description
Command	The command name
Port	The name of the port to which the iSCSI initiator belongs
CHAP User	The CHAP user name to be set for Secret

Modify Journal

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Journal
```

```
++JNL=0xAAA,Timer Type=System,Use of Cache=Use,Inflow Control=Enable,
Data Over flow Watch(s)=600,MU=0,Copy Pace=Medium,
Path blockade watch timer Transfer=Enable,
Path blockade watch timer(m)=60,Entire Copy=-,Transfer Speed(Mbps)=-
```

Detailed Information

Item	Description
Command	The command name
JNL	The number of a journal whose options to be changed
Timer Type	The clock type used for consistency time System: The system clock of the main frame host on the primary site Local: No system clock is used. None: The system clock of the main frame host on the primary site when data is copied from the storage system on the secondary site to the one on the primary site
Use of Cache	Indicates whether journal data in the restore journal is stored in cache or not Not Use: Not stored in cache, Use: Stored in cache
Inflow Control	The setting status of data inflow Enable: Enabled, Disable: Disabled
Data Over flow Watch(s)	The time for data over flow to be watched: 0 to 600 seconds
MU	The MU number
Copy Pace	The data transfer speed for copy operation Low: Low speed, Medium: Medium speed, High: High speed
Path blockade watch timer Transfer	The setting status of the path blockade watch timer Enable: Enabled, Disable: Disabled
Path blockade watch timer(m)	The path blockade watch time: 1 to 60 minutes If the value is 0, the path blockade watch timer is disabled.
Entire Copy	The behavior of when Delta Sync fails Enable: Copy the entire data on the primary volume to the secondary volume. Disable: Not copy the data on the primary volume to the secodary volume.

Item	Description
Transfer Speed(Mbps)	The data transfer speed on the communication line

Modify Journal(Command Device)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Journal(Command Device) ++JNL=0x001, MU=0, Command Device= Enable,
LDEV(LDKC:CU:LDEV)=0x00:0xFE:0xFF
```

Detailed Information

Item	Description
Command	The command name
JNL	The number of a journal whose options to be changed
Command Device	The assignment status of the remote command device Enable: Enabled, Disable: Disabled
LDEV(LDKC:CU:LDEV)	The LDEV ID of the remote command device If the setting status of Command Device is "Enable" and the LDEV ID is not specified, a hyphen (-) is output. If the setting status of Command Device is "Disable", this index is not output.

Modify Journal(MP Blade)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Journal(MP Blade) ++JNL=0xAAA,MP Blade ID=1
```

Detailed Information

Item	Description
Command	The command name
JNL	The number of a journal to be modified
MP Blade ID	The MP Blade ID to be assigned to a target journal

Modify Ldev(ALUA)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Ldev(ALUA) ++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,ALUA=Disable
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The ID of the LDEV on which the ALUA mode is set or canceled
ALUA	The setting status of the ALUA mode Enable: Enabled, Disable: Disabled

Modify Ldev(Blocked)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Ldev(Blocked) ++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB
```

Detailed Information

Item	Description
Command	The command name

Item	Description
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV to be blocked

Modify Ldev(Capacity Saving)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx +Command=Modify Ldev(Capacity Saving)
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Capacity Saving=Deduplication Compression
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of the LDEV for which capacity saving is to be set
Capacity Saving	The status of the capacity saving setting Disable: Capacity saving is disabled, Compression: Compression, Deduplication Compression: Deduplication and compression

Modify Ldev(Capacity Saving Mode)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,, Seq.=xxxxxxxxxx
+Command=Modify Ldev(Capacity Saving Mode)
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Capacity Saving Mode=Post Process
```

Detailed Information

Item	Description
Command	The command name

Item	Description
LDEV(LDKC:CU:LDEV)	The LDEV ID of the LDEV for which capacity saving is to be set
Capacity Saving Mode	The status of the capacity saving setting Post Process: post process method, Inline: inline method

Modify Ldev(CLPR)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Ldev(CLPR) ++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,CLPR=31
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV in which the CLPR is changed
CLPR	The ID of the CLPR to be changed

Modify Ldev(Command Device)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Ldev(Command Device) ++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Command
Device=Enable, Security=Enable,UserAuth=Disable,DeviceGroup=Disable
```

Detailed Information

Item	Description
Command	The command name

Item	Description
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV to be set
Command Device	The setting status of the command device attribute Enable: Enabled, Disable: Disabled
Security	The setting status of the command device security Enable: Enabled, Disable: Disabled
UserAuth	The setting status of the user authentication Enable: Enabled, Disable: Disabled
DeviceGroup	The setting status of the device group definition Enable: Enabled, Disable: Disabled

Modify Ldev(Compression Acceleration)

Example 1: when data compression is set with an LDEV specified

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Ldev(Compression Acceleration)
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Compression Acceleration=Enable
```

Detailed Information for Example 1

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV for which data is compressed
Compression Acceleration	The setting status of compression accelerator Enable: Compression accelerator is enabled. Disable: Compression accelerator is disabled. This item is output when compression accelerator is set.

Example 2: when data compression is set with a pool specified

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
```

```
Seq.=xxxxxxxxxx
+Command=Modify Ldev(Compression Acceleration)
++Pool ID=10,Compression Acceleration=Enable
```

Detailed information for Example 2

Item	Description
Command	The command name
Pool ID	The ID of a pool for which data is compressed
Compression Acceleration	The setting status of compression accelerator Enable: Compression accelerator is enabled. Disable: Compression accelerator is disabled. This item is output when compression accelerator is set.

Modify Ldev(Discard Zero Page)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Ldev(Discard Zero Page) ++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV from which the zero data page is discarded

Modify Ldev(ESE)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,196,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Ldev(ESE)
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,ESE=Enable
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV for which the ESE attribute is set
ESE	The setting of the ESE attribute Enable: The ESE attribute is enabled. Disable: The ESE attribute is disabled.

Modify Ldev(Full Allocation)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Ldev(Full Allocation) ++LDEV(LDKC:CU:LDEV)=0x00:0x01:0x02,
Full Allocation=Disable
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV for which Full Allocation is set to be enabled or disabled
Full Allocation	The setting status of Full Allocation Enable: Full Allocation is enabled. Disable: Full Allocation is disabled.

Modify Ldev(MP Blade)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Ldev(MP Blade) ++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,MP Blade ID=7
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV to which an MP Blade is assigned
MP Blade ID	The ID of the MP Blade to which the LDEV is assigned

Modify Ldev(Nickname)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Ldev(Nickname)
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Nickname=AAAAAAAAAA
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV on which a name is designated
Nickname	The name to be designated to the LDEV

Modify Ldev(QoS Alert)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,Seq.=xxxxxxxxxx
+Command=Modify Ldev(QoS Alert)
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Upper Alert Time=600,Lower Alert
Time=600,Response Alert Time=10
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV for which a QoS alert is to be set, changed, or deleted
Upper Alert Time	The threshold time (in seconds) used to determeine whether to issue the upper limit alert If the threshold time is not specified, a hyphen (-) is output. If the value is 0, the threshold time is not valid.
Lower Alert Time	The threshold time (in seconds) used to determine whether to issue an alert indicating that the lower limit is not reached If the threshold time is not specified, a hyphen (-) is displayed. If the threshold time is disabled, 0 is output.
Response Alert Time	The threshold time (in seconds) used to determine whether to issue an alert indicating that the response is delayed If the threshold time is not specified, a hyphen (-) is output. If the threshold time is disabled, 0 is output.

Modify Ldev(QoS Parameters)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,Seq.=xxxxxxxxxx
+Command=Modify Ldev(QoS Parameters)
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Upper Throughput IO=2147483647,Upper
Data Trans MB=2097151,Lower Throughput IO=-,Lower Data Trans
MB=-,Response Priority=3
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV for which QoS parameters are to be set, changed, or deleted
Upper Throughput IO	The upper-limit value of the throughput per second If this value is not specified, a hyphen (-) is output.

Item	Description
	If the value is 0, the upper-limit value is not valid.
Upper Data Trans MB	The upper-limit value (MB) of the amount of data transfer per second If this value is not specified, a hyphen (-) is output. If the value is 0, the upper-limit value is not valid.
Lower Throughput IO	The lower-limit value of the I/O rate (IOPS) If the lower-limit value is not specified, a hyphen (-) is output. If the lower-limit value is disabled, 0 is output.
Lower Data Trans MB	The lower-limit value of the transfer rate (MB/s) If the lower-limit value is not specified, a hyphen (-) is output. If the lower-limit value is disabled, 0 is output.
Response Priority	The priority of the I/O processing If the priority is not specified, a hyphen (-) is output. If the priority is disabled, 0 is output.

Modify Ldev(Quorum Disable)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Ldev(Quorum Disable) ++LDEV(LDKC:CU:LDEV)=0x00:0x01:0x02
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of the volume whose setting as a quorum disk used by global-active device is released

Modify Ldev(Quorum Enable)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Ldev(Quorum Enable)
++LDEV(LDKC:CU:LDEV)=0x00:0x01:0x02,Quorum Disk ID=1,
Controller ID=8,S/N=512345
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of the volume to be set as a quorum disk used by global-active device
Quorum Disk ID	The ID of the quorum disk used by global-active device to be set
Controller ID	The controller ID of the storage system on which the quorum disk used by global-active device is set 5: USP V/VM, 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP E series, VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800, 19: HUS VM
S/N	The serial number of the storage system on which the quorum disk used by global-active device is set

Modify Ldev(Restore)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Ldev(Restore)
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Forcible=Enable,Password=Enable
```

Detailed Information

Item	Description
Command	The command name

Item	Description
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV to be restored
Forcible	The setting status of force restore Enable: Enabled, Disable: Disabled
Password	Indicates whether the one-time password is specified Enable; The one-time password is specified. This index is not output if Forcible is Disable.

Modify Ldev(SSID)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Ldev(SSID) ++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,SSID=0x0123
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV to which the SSID is set
SSID	The SSID to be set

Modify Ldev(Stop Discard Zero Page)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Ldev(Stop Discard Zero Page)
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The ID of the LDEV for which the zero pages reclaiming processing is suspended

Modify Ldev(Tier)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Ldev(Tier) ++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Tier
Relocation=Enable,
Tiering Policy=Level1,New Page Assignment Tier=High
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV to which the tier is relocated
Tier Relocation	The setting status of the tier relocation Enable: Relocated, Disable: Not relocated
Tiering Policy	The tiering policy ID is output in the format of "Level*ID*". All is output when all tiers are used at relocation. A hyphen (-) is output for the value when Tier Relocation is disabled.
New Page Assignment Tier	The tier when a new page is assigned High: High performance tier Middle: Medium performance tier Low: Low performance tier

Modify License(Disable)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify License(Disable)
++Product Name=xxx
```

Detailed Information

Item	Description
Command	The command name
Product Name	The program product name

Modify License(Enable)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify License(Enable)
++Product Name=xxx
```

Detailed Information

Item	Description
Command	The command name
Product Name	The program product name

Modify Local Replica Opt

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Local Replica Opt
++Option Type=Open,Option=Enable ++Option ID={1,2,25},Num. of IDs=3
```

Detailed Information

Item	Description
Command	The command name
Option Type	The local replica option type to be set Open: Local replica options for ShadowImage, Thin Image, Volume Migration, and nondisruptive migration MF: Local replica options for ShadowImage for Mainframe, Compatible FlashCopy® V2, Compatible FlashCopy® SE, and Volume Migration
Option	The setting status of the local replica option Enable: Enabled, Disable: Disabled
Option ID	The IDs of the specified local replica options For details of the local replica option ID, see *Hitachi ShadowImage® User Guide*, *Hitachi ShadowImage® for Mainframe User Guide*, *Hitachi Thin Image User Guide*, and *Hitachi Compatible FlashCopy/FlashCopy SE User Guide*.
Num. of IDs	The number of IDs of the specified local replica options

Modify LUN(Asymmetric Access)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify LUN(Asymmetric Access) ++Port=1A,Host Group ID=0x001,
Virtual Storage Machine S/N=23456, Asymmetric Access State=Active Optimized
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port whose setting is modified When a virtual storage machine is specified, the port name of the virtual storage machine is output.
Host Group ID	The ID of a host group whose setting is modified

Item	Description
	When a virtual storage machine is specified, the host group ID of the virtual storage machine is output.
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.
Asymmetric Access State	The setting status of the asymmetric access states Active Optimized: Prioritized, Active Non Optimized: Not prioritized

Modify LUN(Reservation release)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify LUN(Reservation release) ++Port=1A,Host Group ID=0x001,LUN=2
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port whose reservation is released
Host Group ID	The ID of a host group whose reservation is released
LUN	The LU number whose reservation is released No value is output when a LU number is not specified.

Modify Namespace

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Namespace
++Client=0x00,Request ID=1234,NVMSS ID=1,Namespace ID=1,
Namespace Name=namespace
```

Detailed Information

Item	Description
Command	The command name
Client	The client type
Request ID	The request ID
NVMSS ID	The specified NVM subsystem ID
Namespace ID	The specified namespace ID
Namespace Name	The nickname of the namespace to be changed If the nickname is deleted, a blank is output.

Modify NVM Subsystem

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify NVM Subsystem
++Client=0x00,Request ID=1234,NVMSS ID=1,
Namespace Security=Disable,T10PI=Disable,Mode=0x00,
Option[0:31]=0x00002004,Option[32:63]=0x00000000,
Option[64:95]=0x00000000,Option[96:127]=0x00000000,
Option[128:159]=0x00000000,Option[160:191]=0x00000000,
Option[192:223]=0x00000000,Option[224:255]=0x00000000,Name=nvm_subsystem
```

Detailed Information

Item	Description
Command	The command name
Client	The client type
Request ID	The request ID
NVMSS ID	The specified NVM subsystem ID
Namespace Security	Indicates whether the namespace security to be set is enabled. Enable: Enabled, Disable: Disabled
T10PI	Indicates whether the T10 PI mode to be set is enabled.

Item	Description
	Enable: Enabled, Disable: Disabled
Mode	The host mode to be set
Option[0:31] to Option[224:255]	The host mode option to be set
Name	The NVM subsystem name to be set If the NVM subsystem name is deleted, a blank is output.

Modify Parity Group

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Parity Group ++PG=1-1,Accelerated Compression=Disable
```

Detailed Information

Item	Description
Command	The command name
PG	The parity group number
Accelerated Compression	The setting status of the Accelerated Compression for a parity group Enable: Enabled, Disable: Disabled

Modify Path(Path Blocked Watch)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Path(Path Blocked Watch)
++WWN=XXXXXXXXXXXXXXXX,Path Blocked Watch=5
```

Detailed Information

Item	Description
Command	The command name
WWN	The WWN of the external storage system
Path Blocked Watch	The setting value (in seconds) of timeout for path disconnection monitoring

Modify Path(Que Depth)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Path(Que Depth)
++WWN=XXXXXXXXXXXXXXXX,Que Depth=2
```

Detailed Information

Item	Description
Command	The command name
WWN	The WWN of the external storage system
Que Depth	The setting value of Que Depth (the number of command queues)

Modify Path(Timeout)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Path(Timeout)
++WWN=XXXXXXXXXXXXXXXX,Timeout=5
```

Detailed Information

Item	Description
Command	The command name
WWN	The WWN of the external storage system
Que Depth	The setting value (in seconds) of I/O timeout

Modify Pool(Auto Add Pool Volume)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Pool(Auto Add Pool Volume)
++Pool ID=10,Auto Add Pool Volume=Enable,Password=Enable
```

Detailed Information

Item	Description
Command	The command name
Pool ID	Indicates the pool ID for setting the function to automatically manage the compressed space of the pool
Auto Add Pool Volume	Indicates the setting status of the function to automatically manage the compressed space of the pool. Enable: Enabled, Disable: Disabled A hyphen (-) is output if it is not specified at the command option
Password	Indicates whether the one-time password is specified Enable: The one-time password is specified. This index is not output if no one-time password is specified.

Modify Pool(Data Direct Mapping)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
```

```
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Pool(Data Direct Mapping) ++Pool ID=10,Data Direct Mapping=Enable
```

Detailed Information

Item	Description
Command	The command name
Pool ID	The ID of the pool on which Data Direct Mapping is set
Data Direct Mapping	The setting status of Data Direct Mapping Enable: Data Direct Mapping is enabled. Disable: Data Direct Mapping is disabled.

Modify Pool(Deduplication)

Example (When assigning the deduplication system data volume)

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,, Seq.=xxxxxxxxxx
+Command=Modify Pool(Deduplication) ++Pool ID=10,Deduplication=Yes
++{LDEV(LDKC:CU:LDEV),SSID}=[{0x00:0xAA:0xBB,0x6500}],Num. of LDEVs=1
```

Example (When not assigning the deduplication system data volume)

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,, Seq.=xxxxxxxxxx
+Command=Modify Pool(Deduplication) ++Pool ID=10,Deduplication=No
```

Detailed Information

Item	Description
Command	The command name
Pool ID	The pool ID of the pool to which the deduplication system data volume is to be assigned
Deduplication	Whether to assign the deduplication system data volume Yes: Assigns the volume. No: Does not assign the volume.

Item	Description
LDEV(LDKC:CU:LDEV)	The LDEV IDs for LDEVs to be set as the deduplication system data volume If Deduplication is No, this index is not output.
SSID	The SSID to be set for the deduplication system data volume If Deduplication is No, this index is not output. If the option is not specified or auto is specified, a hyphen (-) is output.
Num. of LDEVs	The number of deduplication system data volumes to be created If Deduplication is No, this index is not output.

Modify Pool(Delete DSD Volumes)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Pool(Delete DSD Volumes)
++Pool ID=10
```

Detailed Information

Item	Description
Command	The command name
Pool ID	The ID of the pool to which the deduplication system data volume to be removed is assigned

Modify Pool(Restore)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Pool(Restore) ++Pool ID=10
```

Detailed Information

Item	Description
Command	The command name
Pool ID	The pool ID of a pool to be restored

Modify Pool(Stop Shrinking)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Pool(Stop Shrinking)
++Pool ID=AA
```

Detailed Information

Item	Description
Command	The command name
Pool ID	The ID of the pool for which shrinking processing is suspended

Modify Pool(Suspend TI Pair)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,, Seq.=xxxxxxxxxx
+Command=Modify Pool(Suspend TI Pair) ++Pool ID=10,Suspend TI Pair=Yes
```

Detailed Information

Item	Description
Command	The command name
Pool ID	The pool ID of a pool to be suspended
Suspend TI Pair	The setting status of whether the Thin Image (HTI only) pair is suspended when the high water mark threshold is exceeded

Item	Description
	Yes: Thin Image pair is suspended. No: Thin Image pair is not suspended.

Modify Pool(Threshold)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Pool(Threshold) ++Pool ID=10,Warning Threshold(%)=85, High water mark
Threshold(%)=85,Subscription(%)=65530, Monitor Mode=-,Blocking Mode=pool_full
```

Detailed Information

Item	Description
Command	The command name
Pool ID	The pool ID of a pool whose threshold is to be changed
Warning Threshold(%)	The warning threshold of the usage rate of a pool
High water mark Threshold(%)	The depletion threshold of the usage rate of a pool
Subscription(%)	The maximum reserve rate of virtual volumes for the pool capacity Unlimited is output as a value when the reserve rate is unlimited.
Monitor Mode	The monitor mode period: Monitoring periodically continuous: Monitoring continuously realtime_tiering: The active flash function is enabled. non_realtime_tiering: The active flash function is disabled. A hyphen (-) is output for the value when Blocking Mode option is specified.
Blocking Mode	The blocking mode pool_full: Read and write to the virtual volume are not available when the pool is full. When the pool is blocked, read and write to the virtual volume are available.

Item	Description
	pool_vol_blockade: Read and write to the virtual volume are not available when the pool is blocked. When the pool is full, read and write to the virtual volume are available. full_or_blockade: Read and write to the virtual volume are not available when the pool is full or blocked. no_blocking: Read and write to the virtual volume are available even if the pool is full or blocked.

Modify Pool(TierOpt)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Pool(TierOpt)
++Pool ID=10,Tier=1,Tier Ratio(%)=2,Tier Buffer Rate(%)=40,
Attribute=DP
```

Detailed Information

Item	Description
Command	The command name
Pool ID	The ID of a pool to be modified
Tier	The tier to be modified
Tier Ratio(%)	The rate of space for new allocation per tier
Tier Buffer Rate(%)	The buffer rate for relocation per tier
Attribute	The pool attribute after the change DP: Dynamic Provisioning, DT: Dynamic Tiering, DT (Auto Default): Dynamic Tiering (Default value setting mode for automatic execution)

Modify Port

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Modify Port
++Port=1A,Speed(Gbps)=8,Fibre. Address=1,Fabric=Enable,
Connection=FC-AL,Switch=Enable,,Virtual Storage Machine S/N=23456
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port whose setting is to be changed When a virtual storage machine is specified, the port name of the virtual storage machine is output.
Speed(Gbps)	The host speed of a port
Fibre. Address	The address of the Fibre Channel Port 0 (zero) is output for an operation on a FICON port.
Fabric	The setting status of the fabric switch Enable: Enabled, Disable: Disabled Disable is output for an operation on a FICON port.
Connection	The topology of the Fabric switch FC-AL: FC-AL (Fibre Channel-Arbitrated Loop) is selected P-to-P: Point-to-Point is selected 0x00 is output for an operation on a FICON port.
Switch	The setting status of the LUN security Enable: Enabled, Disable: Disabled Disable is output for an operation on a FICON port.
Blank item	Nothing is output due to unused.
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Modify Port(Attribute)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Port(Attribute)
++Port=1A,Attribute=Target
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port whose attribute is to be changed
Attribute	The attribute after the change Target: Target port Initiator: Initiator port External: External port RCU Target: RCU Target port Bidirectional: Bidirectional port

Modify Port(Delete Login Host NQN)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Port(Delete Login Host NQN)
++Client=0x00,Port=3E
```

Detailed Information

Item	Description
Command	The command name
Client	The client type
Port	The name of a port from which login information is to be deleted

Modify Port(iSCSI)

Example 1:Changing a physical port

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Port(iSCSI)
++Port=1A,Speed(Gbps)=8,Security Switch=Enable,Ethernet MTU(byte)=1500,
VLAN Tagging Mode=Enable,VLAN ID=100,New VLAN ID=200, IPv4 Address=127.0.0.1,Subnet
Mask=255.255.255.0, Default Gateway=10.0.0.4,IPv6 Mode=Enable, LinkLocal Addressing
Mode=Enable, IPv6 LinkLocal Address=fe80:0:0:0:199a:b948:fbc:a149, Global Addressing
Mode=Manual, IPv6 Global Address=fe80:0:0:0:199a:b948:fbc:a149, IPv6 Global Address
2=fe80:0:0:0:199a:b948:fbc:a149, IPv6 Default Gateway=fe80:0:0:0:199a:b948:fbc:a149,
TCP Port=25,Selective ACK Mode=Enable, Delayed ACK Mode=Disable,Window
Scale(K)=128,Keep Alive Timer(s)=30, iSNS Server=Disable,iSNS Server
IP=127.0.0.1,iSNS Server TCP Port=26, Virtual Storage Machine S/N=23456, iSCSI
Virtual Port ID=,iSCSI Virtual Port Operation=
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port whose settings are modified When a virtual storage machine is specified, the port name of the virtual storage machine is output.
Speed(Gbps)	The port host speed: Auto, 1, 2, 4, 8, 10, or 16
Security Switch	The setting status of the security switch Enable: Enabled, Disable: Disabled
Ethernet MTU(byte)	The value of Ethernet MTU (maximum transmission unit): 1500, 4500, or 9000 *
VLAN Tagging Mode	The VLAN tagging mode* Enable: Enabled, Disable: Disabled No value is output when VLAN ID is deleted.
VLAN ID	The VLAN ID before modification* No value is output when VLAN ID is added. For a VLAN ID to be deleted, the VLAN ID (1 to 4094) to be deleted is output. For a VLAN ID to be modified, the VLAN ID (1 to 4094) to be modified is output.

Item	Description
New VLAN ID	The VLAN ID after modification* For a VLAN ID to be added, the added VLAN ID (1 to 4094) is output. For a VLAN ID to be deleted, no value is output. For a VLAN ID to be modified, the modified VLAN ID (1 to 4094) is output.
IPv4 Address	The IPv4 address*
Subnet Mask	The subnet mask of the IPv4*
Default Gateway	The default gateway of the IPv4*
IPv6 Mode	The IPv6 setting status* Enable: Enabled, Disable: Disabled
LinkLocal Addressing Mode	The input mode of the link local address* Auto: Automatic input, Manual: Manual input No value is output when IPv6 Mode is disabled.
IPv6 LinkLocal Address	The IPv6 link local address* No value is output when IPv6 Mode is disabled or Link Local Addressing Mode is Auto.
Global Addressing Mode	The input mode of the global address and the global address 2* Auto: Automatic input, Manual: Manual input No value is output when IPv6 Mode is disabled.
IPv6 Global Address	The IPv6 global address* No value is output when IPv6 Mode is disabled or Link Local Addressing Mode is Auto.
IPv6 Global Address 2	The IPv6 global address 2* No value is output when IPv6 Mode is disabled or Link Local Addressing Mode is Auto.
IPv6 Default Gateway	The IPv6 default gateway* No value is output when IPv6 Mode is disabled.
TCP Port	The TCP port number*
Selective ACK Mode	The setting status of Selective ACK Mode* Enable: Enabled, Disable: Disabled
Delayed ACK Mode	The setting status of Delayed ACK Mode*

Item	Description
	Enable: Enabled, Disable: Disabled
Window Scale(K)	The TCP window size: 64, 128, 256, 512, or 1024*
Keep Alive Timer(s)	The setting status of Keep Alive Ttimer*
iSNS Server	The setting status of iSNS Server* Enable: Enabled, Disable: Disabled
iSNS Server IP	The IP address of the iSNS server*
iSNS Server TCP Port	The TCP port number of the iSNS server*
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.
iSCSI Virtual Port ID	The iSCSI virtual port ID (0-15) No value is output when changeing a physical port.
iSCSI Virtual Port Operation	The operation to the iSCSI virtual port Add: add, Modify: modify, Delete: delete No value is output when changing a physical port.
*For settings other than port attributes, the user setting values are output even if options are omitted.	

Example 2:Adding a virtual port

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Port(iSCSI)
++Port=1A,,,Ethernet MTU(byte)=1500, VLAN Tagging Mode=Enable,VLAN
ID=0,New VLAN ID=200, IPv4 Address=127.0.0.1,Subnet Mask=255.255.255.0, Default
Gateway=10.0.0.4,IPv6 Mode=Enable, LinkLocal Addressing Mode=Manual, IPv6 LinkLocal
Address=fe80:0:0:0:199a:b948:fbc:a149, Global Addressing Mode=Manual, IPv6 Global
Address=fe80:0:0:0:199a:b948:fbc:a149,, IPv6 Default
Gateway=fe80:0:0:0:199a:b948:fbc:a149, TCP Port=25,Selective ACK Mode=Enable,
Delayed ACK Mode=Disable,Window Scale(K)=128,Keep Alive Timer(s)=30,,,,, iSCSI
Virtual Port ID=15,iSCSI Virtual Port Operation=Add
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port whose settings are modified When a virtual storage machine is specified, the port name of the virtual storage machine is output.
Speed(Gbps)	This item is not output when adding a virtual port.
Security Switch	This item is not output when adding a virtual port.
Ethernet MTU(byte)	The value of Ethernet MTU (maximum transmission unit): 1500, 4500, or 9000 *
VLAN Tagging Mode	The VLAN tagging mode* Enable: Enabled, Disable: Disabled
VLAN ID	The VLAN ID before modification* No value is output when VLAN ID is added. For a VLAN ID to be deleted, the VLAN ID (1 to 4094) to be deleted is output. For a VLAN ID to be modified, the VLAN ID (1 to 4094) to be modified is output.
New VLAN ID	The VLAN ID after modification* For a VLAN ID to be added, the added VLAN ID (1 to 4094) is output. For a VLAN ID to be deleted, no value is output. For a VLAN ID to be modified, the modified VLAN ID (1 to 4094) is output.
IPv4 Address	The IPv4 address*
Subnet Mask	The subnet mask of the IPv4*
Default Gateway	The default gateway of the IPv4*
IPv6 Mode	The IPv6 setting status* Enable: Enabled, Disable: Disabled
LinkLocal Addressing Mode	The input mode of the link local address* Auto: Automatic input, Manual: Manual input No value is output when IPv6 Mode is disabled.

Item	Description
IPv6 LinkLocal Address	The IPv6 link local address*
Global Addressing Mode	The input mode of the global address* Auto: Automatic input, Manual: Manual input
IPv6 Global Address	The IPv6 global address*
IPv6 Global Address 2	This item is not output when adding a virtual port.
IPv6 Default Gateway	The IPv6 default gateway*
TCP Port	The TCP port number*
Selective ACK Mode	The setting status of Selective ACK Mode* Enable: Enabled, Disable: Disabled
Delayed ACK Mode	The setting status of Delayed ACK Mode* Enable: Enabled, Disable: Disabled
Window Scale(K)	The TCP window size: 64, 128, 256, 512, or 1024*
Keep Alive Timer(s)	The setting status of Keep Alive Timer**
iSNS Server	This item is not output when adding a virtual port.
iSNS Server IP	This item is not output when adding a virtual port.
iSNS Server TCP Port	This item is not output when adding a virtual port.
Virtual Storage Machine S/N	This item is not output when adding a virtual port.
iSCSI Virtual Port ID	The iSCSI virtual port ID (0-15)
iSCSI Virtual Port Operation	The operation to the iSCSI virtual port Add: add, Modify: modify, Delete: delete
*No value is output when the option is not specified.	

Example 3:Changing a virtual port

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=ModifyPort(iSCSI)
++Port=1A,,,Ethernet MTU(byte)=1500, VLAN Tagging Mode=Enable,VLAN
ID=100,New VLAN ID=200, IPv4 Address=127.0.0.1,Subnet Mask=255.255.255.0, Default
Gateway=10.0.0.4,IPv6 Mode=Enable, LinkLocal Addressing Mode=Manual, IPv6 LinkLocal
Address=fe80:0:0:0:199a:b948:fbc:a149, Global Addressing Mode=Manual, IPv6 Global
```

```
Address=fe80:0:0:0:199a:b948:fbc:a149, IPv6 Global Address
2=fe80:0:0:0:199a:b948:fbc:a149, IPv6 Default Gateway=fe80:0:0:0:199a:b948:fbc:a149,
TCP Port=25,Selective ACK Mode=Enable, Delayed ACK Mode=Disable,Window
Scale(K)=128,Keep Alive Timer(s)=30,,,,, iSCSI Virtual Port ID=15,iSCSI Virtual Port
Operation=Modify
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port whose settings are modified When a virtual storage machine is specified, the port name of the virtual storage machine is output.
Speed(Gbps)	This item is not output when changing a virtual port.
Security Switch	This item is not output when changing a virtual port.
Ethernet MTU(byte)	The value of Ethernet MTU (maximum transmission unit): 1500, 4500, or 9000 *
VLAN Tagging Mode	The VLAN tagging mode* Enable: Enabled, Disable: Disabled
VLAN ID	The VLAN ID before modification* No value is output when VLAN ID is added. For a VLAN ID to be deleted, the VLAN ID (1 to 4094) to be deleted is output. For a VLAN ID to be modified, the VLAN ID (1 to 4094) to be modified is output.
New VLAN ID	The VLAN ID after modification* For a VLAN ID to be added, the added VLAN ID (1 to 4094) is output. For a VLAN ID to be deleted, no value is output. For a VLAN ID to be modified, the modified VLAN ID (1 to 4094) is output.
IPv4 Address	The IPv4 address*
Subnet Mask	The subnet mask of the IPv4*
Default Gateway	The default gateway of the IPv4*
IPv6 Mode	The IPv6 setting status* Enable: Enabled, Disable: Disabled

Item	Description
LinkLocal Addressing Mode	The input mode of the link local address* Auto: Automatic input, Manual: Manual input No value is output when IPv6 Mode is disabled.
IPv6 LinkLocal Address	The IPv6 link local address*
Global Addressing Mode	The input mode of the global address and the global address 2* Auto: Automatic input, Manual: Manual input
IPv6 Global Address	The IPv6 global address*
IPv6 Global Address 2	The IPv6 global address 2*
IPv6 Default Gateway	The IPv6 default gateway*
TCP Port	The TCP port number*
Selective ACK Mode	The setting status of Selective ACK Mode* Enable: Enabled, Disable: Disabled
Delayed ACK Mode	The setting status of Delayed ACK Mode* Enable: Enabled, Disable: Disabled
Window Scale(K)	The TCP window size: 64, 128, 256, 512, or 1024*
Keep Alive Timer(s)	The setting status of Keep Alive Timer**
iSNS Server	This item is not output when changing a virtual port.
iSNS Server IP	This item is not output when changing a virtual port.
iSNS Server TCP Port	This item is not output when changing a virtual port.
Virtual Storage Machine S/N	This item is not output when changing a virtual port.
iSCSI Virtual Port ID	The iSCSI virtual port ID (0-15)
iSCSI Virtual Port Operation	The operation to the iSCSI virtual port Add: add, Modify: modify, Delete: delete
*No value is output when the option is not specified.	

Example 4:Deleting a virtual port

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
```

```
+Command=Modify Port(iSCSI)
++Port=1A,,,,,,,,,,,,,,,,,,,,,,,,iSCSI Virtual Port ID=15,iSCSI Virtual
Port Operation=Delete
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port whose settings are modified When a virtual storage machine is specified, the port name of the virtual storage machine is output.
Speed(Gbps)	This item is not output when deleting a virtual port.
Security Switch	This item is not output when deleting a virtual port.
Ethernet MTU(byte)	This item is not output when deleting a virtual port.
VLAN Tagging Mode	This item is not output when deleting a virtual port.
VLAN ID	This item is not output when deleting a virtual port.
New VLAN ID	This item is not output when deleting a virtual port.
IPv4 Address	This item is not output when deleting a virtual port.
Subnet Mask	This item is not output when deleting a virtual port.
Default Gateway	This item is not output when deleting a virtual port.
IPv6 Mode	This item is not output when deleting a virtual port.
LinkLocal Addressing Mode	This item is not output when deleting a virtual port.
IPv6 LinkLocal Address	This item is not output when deleting a virtual port.
Global Addressing Mode	This item is not output when deleting a virtual port.
IPv6 Global Address	This item is not output when deleting a virtual port.
IPv6 Global Address 2	This item is not output when deleting a virtual port.
IPv6 Default Gateway	This item is not output when deleting a virtual port.
TCP Port	This item is not output when deleting a virtual port.
Selective ACK Mode	This item is not output when deleting a virtual port.
Delayed ACK Mode	This item is not output when deleting a virtual port.

Item	Description
Window Scale(K)	This item is not output when deleting a virtual port.
Keep Alive Timer(s)	This item is not output when deleting a virtual port.
iSNS Server	This item is not output when deleting a virtual port.
iSNS Server IP	This item is not output when deleting a virtual port.
iSNS Server TCP Port	This item is not output when deleting a virtual port.
Virtual Storage Machine S/N	This item is not output when deleting a virtual port.
iSCSI Virtual Port ID	The iSCSI virtual port ID (0-15)
iSCSI Virtual Port Operation	The operation to the iSCSI virtual port Add: add, Modify: modify, Delete: delete

Modify Port(iSCSI Virtual Port Mode)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Port(iSCSI Virtual Port Mode) ++Port=1A,iSCSI Virtual Port Mode=Enable
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port for which iSCSI virtual port mode is set When a virtual storage machine is specified, the port name of the virtual storage machine is output.
iSCSI Virtual Port Mode	The setting status of the iSCSI virtual port mode Enable: Enabled; Disable: Disabled

Modify Port(SCSI/NVMe Mode)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Port(SCSI/NVMe Mode)
++Request ID=1234,Port=1A,Mode=NVMe
```

Detailed Information

Item	Description
Command	The command name
Request ID	The request ID
Port	The name of a port for which the operation mode is to be set
Mode	Indicates whether the operation mode of the port to be set is SCSI or NVMe. NVMe: NVMe mode, SCSI: SCSI mode

Modify Port(T10PI)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Port(T10PI) ++Port=1A,T10PI=Enable
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port for which T10 PI mode is set When a virtual storage machine is specified, the port name of the virtual storage machine is output.
T10PI	The setting status of the T10 PI mode Enable: Enabled; Disable: Disabled

Modify QoS Group(QoS Alert)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify QoS Group(QoS Alert)
++QoS Group ID=1,Upper Alert Time=600,Response Alert Time=10
```

Detailed Information

Item	Description
Command	The command name
QoS Group ID	The ID of the QoS group for which the QoS alert is set No value is output if the QoS group ID is not specified.
Upper Alert Time	The time (in second) during which an alert notification indicating that the upper-limit value is exceeded is issued A hyphen (-) is output if the alert notification time is not specified. If the alert notification time is invalid, 0 (zero) is output.
Response Alert Time	The threshold time (in seconds) used to determine whether to issue an alert indicating that the response is delayed If the threshold time is not specified, a hyphen (-) is output. If the threshold time is disabled, 0 is output.

Modify QoS Group(QoS Parameters)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify QoS Group(QoS Parameters)
++QoS Group ID=1,Upper Throughput IO=2147483647,Upper Data Trans MB=209715,Response
Priority=3
```

Detailed Information

Item	Description
Command	The command name

Item	Description
QoS Group ID	The ID of the QoS group for which the QoS parameter is set No value is output if the QoS group ID is not specified.
Upper Throughput IO	The upper-limit value of the throughput per second A hyphen (-) is output if the upper-limit value is not specified. If the upper-limit value is invalid, 0 (zero) is output.
Upper Data Trans MB	The upper-limit value of the amount of data transfer (MB) per second A hyphen (-) is output if the upper-limit value is not specified. If the upper-limit value is invalid, 0 (zero) is output.
Response Priority	The priority of the I/O processing If the priority is not specified, a hyphen (-) is output. If the priority is disabled, 0 is output.

Modify Quorum

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,, Seq.=xxxxxxxxxx
+Command=Modify Quorum ++Quorum Disk ID=1, Read Response Guaranteed Time=15
```

Detailed Information

Item	Description
Command	The command name
Quorum Disk ID	Indicates the ID of a global-active device quorum disk whose Read Response Guaranteed Time When Quorum monitoring has stopped value will be updated.
Read Response Guaranteed Time	Indicates the updated value of Read Response Guaranteed Time When Quorum monitoring has stopped for global-active device in seconds.

Modify RCU

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify RCU
++S/N=512345,MCU=0xAAAA,RCU=0xBBBB,SSID=0x0123,Controller ID=8,
Path Gr. ID=0,Min.Path=1,Round Trip Time(ms)=30,RIO MIH(s)=3,
FREEZE=Enable
```

Detailed Information

Item	Description
Command	The command name
S/N	The serial number of the remote storage system
MCU	The CU number of the local storage system "Free" is output when CU Free is specified.
RCU	The CU number of the remote storage system "Free" is output when CU Free is specified.
SSID	The SSID of the remote storage system No value is output when CU Free is specified.
Controller ID	The controller ID of the remote storage system 5: USP V/VM, 6: VSP, 7: VSP G1000/G1500 and VSP F1500, 8: VSP 5000 series, 18: VSP E series, VSP G130, G/F350, G/F370, G/F700, G/F900, VSP G200, G400, G600, G800, and VSP F400, F600, F800, 19: HUS VM No value is output when CU Free is not specified.
Path Gr. ID	The path group ID of the remote storage system No value is output when CU Free is not specified.
Min.Path	The minimum number of paths between the local storage system and remote storage system
Round Trip Time(ms)	The round trip time: the delayed time for the remote I/O round trip
RIO MIH(s)	The value of the RIO MTH (remote I/O missing interrupt handler) timer: The wait time for data copy from the local storage system to the remote storage system to be complete

Item	Description
FREEZE	The setting status of the CGROUP (FREEZE/RUN) PPRC TSO command Enable: Enabled, Disable: Disabled

Modify Remote Replica Opt(Copy Activity Setting)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Remote Replica Opt(Copy Activity Setting)
++Option Type=TC, Copy Activity Setting=System
```

Detailed Information

Item	Description
Command	The command name
Option Type	The type of remote replica option to be set TC: Remote replica option for TrueCopy UR: Remote replica option for Universal Replicator GAD: Remote replica option for global-active device
Copy Activity Setting	The unit used to manage the number of maximum initial copy activities System: The number is managed by the system. Cu: The number is managed by each CU.

Modify Remote Replica Opt(Num. of Copy Activity)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Remote Replica Opt(Num. of Copy Activity)
++Option Type=TC, Num. of Copy Activity=4, CU=128
```

Detailed Information

Item	Description
Command	The command name
Option Type	The type of remote replica option to be set TC: Remote replica option for TrueCopy UR: Remote replica option for Universal Replicator GAD: Remote replica option for global-active device
Num. of Copy Activity	The number of maximum initial copy activities
CU	The CU number

Modify Remote Replica Opt(Path Blocked Watch)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Remote Replica Opt(Path Blocked Watch)
++Path Blocked Watch(s)=45
```

Detailed Information

Item	Description
Command	The command name
Path Blocked Watch(s)	The time (in seconds) for blocked path monitoring

Modify Remote Replica Opt(Path Blocked Watch SIM)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Remote Replica Opt(Path Blocked Watch SIM)
++Path Blocked Watch SIM(s)=50
```

Detailed Information

Item	Description
Command	The command name
Path Blocked Watch SIM(s)	The time (in seconds) for blocked path SIM monitoring

Modify Snapshot(Clone)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Snapshot(Clone)
++P-VOL(LDKC:CU:LDEV)=0x00:0xAA:0xBB, MU=1,Copy Pace=Medium,Virtual Storage Machine
S/N=23456,Range=Group
```

Detailed Information

Item	Description
Command	The command name
P-VOL(LDKC:CU:LDEV)	The LDEV ID of the primary volume shared by a pair to be cloned When a virtual storage machine is specified, the LDEV ID of the virtual storage machine is output.
MU	The MU number of the pair to be cloned
Copy Pace	The copy speed Faster: High speed, Medium: Medium speed, Slower: Low speed
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.
Range	The range for cloned pairs Volume: The pair to be cloned Group: All pairs in the group including the pair is cloned

Modify Snapshot(Delete Garbage)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,Seq.=xxxxxxxxxx
+Command=Modify Snapshot(Delete Garbage)
++LDEV(LDKC:CU:LDEV)=0x00:0x12:0x34
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of the root volume that is subject to the deletion processing for the snapshot garbage data (deflag processing)

Modify Snapshot(Rename)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,, Seq.=xxxxxxxxxx
+Command=Modify Snapshot(Rename) ++Snapshot Group=oldSSGroup,New Snapshot
Group=newSSGroup,Virtual Storage Machine S/N=23456
```

Detailed Information

Item	Description
Command	The command name
Snapshot Group	The name of a snapshot group before change
New Snapshot Group	The name of a snapshot group after change
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Modify Snapshot(Restore)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Snapshot(Restore)
++P-VOL(LDKC:CU:LDEV)=0x00:0xAA:0xBB,MU=1, Virtual Storage Machine S/N=23456
```

Detailed Information

Item	Description
Command	The command name
P-VOL(LDKC:CU:LDEV)	The LDEV ID of the primary volume shared by a pair to be restored When a virtual storage machine is specified, the LDEV ID of the virtual storage machine is output.
MU	The MU number of the pair to be restored
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Modify Snapshot(Resync)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Snapshot(Resync)
++P-VOL(LDKC:CU:LDEV)=0x00:0xAA:0xBB,MU=1, Virtual Storage Machine S/N=23456
```

Detailed Information

Item	Description
Command	The command name
P-VOL(LDKC:CU:LDEV)	The LDEV ID of the primary volume shared by a pair to be resynchronized When a virtual storage machine is specified, the LDEV ID of the virtual storage machine is output.

Item	Description
MU	The MU number of the pair to be resynchronized
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Modify Snapshot(Revert)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify Snapshot(Revert)
++P-VOL(LDKC:CU:LDEV)=0x00:0xAA:0xBB,MU=1,
Virtual Storage Machine S/N=23456,Range=Group
```

Detailed Information

Item	Description
Command	The command name
P-VOL(LDKC:CU:LDEV)	The LDEV ID of the primary volume shared by a pair to be restored When a virtual storage machine is specified, the LDEV ID of the virtual storage machine is output.
MU	The MU number of the pair to be restored
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Modify Snapshot(Split)

Note:

When splitting pairs in a consistency group, the audit log is registered only once for the direction of splitting the pair that uses the representative volume of the consistency group.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
```

```
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify Snapshot(Split)
++P-VOL(LDKC:CU:LDEV)=0x00:0xAA:0xBB,MU=1, Virtual Storage Machine S/N=23456,
Range=Group,ReadOnly=Enable
```

Detailed Information

Item	Description
Command	The command name
P-VOL(LDKC:CU:LDEV)	The LDEV ID of the primary volume shared by a pair to be split When a virtual storage machine is specified, the LDEV ID of the virtual storage machine is output.
MU	The MU number of the pair to be split
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.
Range	The range for splitting pairs Volume: The pair to be split Group: All pairs in the group including the pair is split
ReadOnly	Indicates whether to set the ReadOnly attribute for the snapshot data. This item is output only when the setting of the ReadOnly attribute is specified. Enable: The ReadOnly attribute is set to the snapshot data.

Modify Snapshot(Stop Deleting Garbage)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,Seq.=xxxxxxxxxx
+Command=Modify Snapshot(Stop Deleting Garbage)
++LDEV(LDKC:CU:LDEV)=0x00:0x12:0x34
```

Detailed Information

Item	Description
Command	The command name

Item	Description
LDEV(LDKC:CU:LDEV)	The LDEV ID of the root volume for which the deletion processing for the snapshot garbage data (deflag processing) is to be stopped

Modify SPM Group

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify SPM Group
++Port=1A,SPM Group=XXXXXXXXXXXX,Priority=Prio,Limit=100
IOPS
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port to which the SPM group, for which SPM information is set, belongs
SPM Group	The name of an SPM group for which SPM information is set
Priority	The attribute after the WWN is modified Prio: Prioritized WWN, Non-Prio: Not prioritized WWN
Limit	The threshold value for the WWN when Priority is Prio The upper limit value for the WWN when Priority is Non-Prio The unit is I/O rate (IOPS) or transfer rate (KB/s) If MB is specified at the command option, the value calculated on the basis of 1MB=1024KB is output.

Modify SPM Host Group

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
```

```
+Command=Modify SPM Host Group
++Port=1A,Host Group Name=XXXXXXXXXXXX,Priority=Prio, Limit=100 IOPS
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port to which the SPM group, for which SPM information is set, belongs
Host Group Name	The name of a host group to which the SPM group, for which SPM information is set, belongs
Priority	The attribute after the WWN is modified Prio: Prioritized WWN, Non-Prio: Not prioritized WWN
Limit	The threshold value for the WWN when Priority is Prio The upper limit value for the WWN when Priority is Non-Prio The unit is I/O rate (IOPS) or transfer rate (KB/s) If MB is specified at the command option, the value calculated on the basis of 1MB=1024KB is output.

Modify SPM WWN

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify SPM WWN ++Port=1A,WWN=XXXXXXXXXXXX,Priority=Prio,Limit=100
IOPS
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port to which the WWN, for which the SPM information is set, belongs
WWN	The WWN for which the SPM information is set
Priority	The attribute after the WWN is modified

Item	Description
	Prio: Prioritized WWN, Non-Prio: Not prioritized WWN
Limit	The threshold value for the WWN when Priority is Prio The upper limit value for the WWN when Priority is Non-Prio The unit is I/O rate (IOPS) or transfer rate (KB/s) If MB is specified at the command option, the value calculated on the basis of 1MB=1024KB is output.

Modify SPM WWN(Nickname)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Modify SPM WWN(Nickname)
++Port=1A,Nickname=XXXXXXXXXXXX,Priority=Prio,Limit=100 IOPS
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port to which the WWN, for which SPM information is set, belongs
Nickname	The SPM name (nickname) of the WWN for which SPM information is set
Priority	The attribute after the WWN is modified Prio: Prioritized WWN, Non-Prio: Not prioritized WWN
Limit	The threshold value for the WWN when Priority is Prio The upper limit value for the WWN when Priority is Non-Prio The unit is I/O rate (IOPS) or transfer rate (KB/s) If MB is specified at the command option, the value calculated on the basis of 1MB=1024KB is output.

Modify System

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Modify System
++Description=This is a storage system
```

Detailed Information

Item	Description
Command	The command name
Description	The description of the storage system to be set If the description of the storage system is deleted, a null character is output for the value.

Monitor Pool

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Monitor Pool
++Pool ID=10
```

Detailed Information

Item	Description
Command	The command name
Pool ID	The pool number of a pool to be monitored

Paircreate(LocalCopy)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Paircreate(LocalCopy) ++Copy Kind=Local
++P-VOL(Port-LUN-LDEV)=1A-2047-0x1A, S-VOL(Port-LUN-LDEV)=1B-3-0x3B,MCU
S/N=12345,MCU SSID=0x6500, RCU S/N=12345,RCU SSID=0x6500, Virtual Storage
Machine S/N=23456, Copy Pace(TRK)=1,Range=Group,CTG ID=100,Split Mode=Normal,
S-VOL Hidden Mode=Enable,Pool ID(TI)=10, Device Option=Enable
```

Detailed Information

Item	Description
Command	The command name
Copy Kind	The local copy Local is output as the fixed value.
P-VOL(Port-LUN-LDEV)[*1]	The port number, the LU number, and the LDEV number of the primary volume The port number and the LU number show the expanded LU of Command Control Interface The LU number is the absolute LUN[*2] of Command Control Interface
S-VOL(Port-LUN-LDEV)[*1]	The port number, the LU number, and the LDEV number of the secondary volume The port number and the LU number show the expanded LU of Command Control Interface The LU number is the absolute LUN[*2] of Command Control Interface
MCU S/N[*1]	The serial number of the local storage system
MCU SSID[*1]	The SSID to which the primary volume belongs
RCU S/N[*1]	The same value as that of MCU S/N is output.
RCU SSID[*1]	The SSID to which the secondary volume belongs
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Item	Description
Copy Pace(TRK)	The track size for copy
Range	Specifies a range of pairs to be created Device: Specifies by the device Group: Specifies by the consistency group
CTG ID	The consistency group ID 0 (zero) is output if the consistency group option (-m grp) is not specified.
Split Mode	The split mode when ShadowImage pairs are split Normal: The pair is split normally. Quick: The pair is split quickly. If it is not specified at the command option or the pair is other than ShadowImage one, a hyphen (-) is output.
S-VOL Hidden Mode	Indicates whether the secondary volume is hidden after a ShadowImage pair is created Enable: Hides the secondary volume Disable: Not hides the secondary volume Disable is output for pairs other than ShadowImage ones.
Pool ID(TI)	The pool ID of Thin Image (HTI only) pairs 0 (zero) is output for pairs other than Thin Image ones.
Device Option	Indicates whether the volume name defined in the configuration definition file is used Enable: Used, Disable: Not used
*1 When a virtual storage machine is specified, the value of the virtual storage machine is output. *2 For more information about the absolute LUN, see *Command Control Interface Installation and Configuration Guide*	

Paircreate(RemoteCopy)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Paircreate(RemoteCopy) ++Copy Kind=Remote
++P-VOL(Port-LUN-LDEV)=1A-2047-0x1A, S-VOL(Port-LUN-LDEV)=1B-3-0x3B, MCU
```

```
S/N=12345,MCU SSID=0x6500,RCU S/N=22364,RCU SSID=0x3001, Virtual Storage Machine
S/N=23456, Write Permission(Update Copy Error)=Enable, Write Permission(RCU Suspend
Failure)=Enable, Initial Copy=None,Copy Pace(TRK)=1,JNL ID Option=Disable, CTG
ID=100,CTG Mode(Multi)=Disable, Paircreate Mode(Diff)=Normal,CTG Option=Enable, CTO
Option=Enable,Inflow Control=Disable,Offloading Timer(s)=, M-JNL=,R-JNL=,Quorum Disk
ID=,Device Option=Enable,IO Preference Mode=
```

Detailed Information

Item	Description
Command	The command name
Copy Kind	The remote copy Remote is output as the fixed value.
P-VOL(Port-LUN-LDEV)[*1]	The port number, the LU number, and the LDEV number of the primary volume The port number and the LU number show the expanded LU of Command Control Interface The LU number is the absolute LUN[*2]> of Command Control Interface
S-VOL(Port-LUN-LDEV)[*1]	The port number, the LU number, and the LDEV number of the secondary volume The port number and the LU number show the expanded LU of Command Control Interface The LU number is the absolute LUN[*2] of Command Control Interface
MCU S/N[*1]	The serial number of the local storage system
MCU SSID[*1]	The SSID to which a volume on the local storage system belongs
RCU S/N[*1]	The serial number of the remote storage system
RCU SSID[*1]	The SSID to which a volume on the remote storage system belongs
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.
Write Permission(Update Copy Error)	The setting status of write permission if an error occurs during update copy Enable: Enabled, Disable: Disabled

Item	Description
Write Permission(RCU Suspend Failure)	The setting status of permission to write to the local storage system if the suspension operation cannot be performed on the remote storage system Enable: Enabled, Disable: Disabled
Initial Copy	The type of pair creation Entire: Creates pairs and copies data from the primary volume to the secondary volume None: Creates pairs and does not copy data from the primary volume to the secondary volume
Copy Pace(TRK)	The track size for copy
JNL ID Option	Indicates whether an option (-jp or -js) is specified for a journal ID Enable: Specified, Disable: Not specified Disable is output for pairs other than Universal Replicator ones
CTG ID	The consistency group ID 0 (zero) is output if the consistency group option (-fg) is not specified.
CTG Mode(Multi)	Indicates whether pairs are specified for consistency groups across multiple storage systems Enable: Specified, Disable: Not specified Disable is output for pairs other than Universal Replicator ones.
Paircreate Mode(Diff)	The pair creation mode Normal: Normal mode, Diff: Difference mode Normal is output for pairs other than Universal Replicator ones.
CTG Option	Indicates whether the consistency group option (-fg) is specified Enable: Specified, Disable: Not specified
CTO Option	Indicates whether the CTO option (-cto) is specified Enable: Specified, Disable: Not specified
Inflow Control	The setting status of the inflow control mode Enable: Enabled, Disable: Disabled No value is output when the CTO option is not specified.
Offloading Timer(s)	The time out value for the inflow control in seconds No value is output when the CTO option is not specified or the inflow control mode is disabled.

Item	Description
M-JNL	The master journal number No value is output for pairs other than Universal Replicator ones.
R-JNL	The restore journal number No value is output for pairs other than Universal Replicator ones.
Quorum Disk ID	The Quorum Disk ID No value is output for pairs other than global-active device ones.
Device Option	Indicates whether the volume name defined in the configuration definition file is used Enable: Used, Disable: Not used
IO Preference Mode	I/O preference mode for when a failure occurs on the remote path between the primary and secondary storage systems (I/O preference mode for remote path failure). A value is displayed when the I/O preference mode for remote path failure is specified. P-VOL: Primary volume preference mode
*1 When a virtual storage machine is specified, the value of the virtual storage machine is output. *2 For more information about the absolute LUN, see *Command Control Interface Installation and Configuration Guide*	

Pairresync(LocalCopy)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Pairresync(LocalCopy) ++Copy Kind=Local
++P-VOL(Port-LUN-LDEV)=1A-2047-0x1A, S-VOL(Port-LUN-LDEV)=1B-3-0x3B,MCU
S/N=12345,MCU SSID=0x6500, RCU S/N=12345,RCU SSID=0x6500,Resync Type=Reverse,
Virtual Storage Machine S/N=23456,Copy Pace(TRK)=1, Pair Target Range=Device,CTG
ID=100,Split Mode=Normal, Device Option=Enable
```

Detailed Information

Item	Description
Command	The command name

Item	Description
Copy Kind	The local copy Local is output as the fixed value.
P-VOL(Port-LUN-LDEV)[*1]	The port number, the LU number, and the LDEV number of the primary volume The port number and the LU number show the expanded LU of Command Control Interface The LU number is the absolute LUN[*2] ofCommand Control Interface
S-VOL(Port-LUN-LDEV)[*1]	The port number, the LU number, and the LDEV number of the secondary volume The port number and the LU number show the expanded LU of Command Control Interface The LU number is the absolute LUN[*2] ofCommand Control Interface
MCU S/N[*1]	The serial number of the local storage system
MCU SSID[*1]	The SSID to which the primary volume belongs
RCU S/N[*1]	The same value as that of MCU S/N is output.
RCU SSID[*1]	The SSID to which the secondary volume belongs
Resync Type	Indicates the direction of resynchronizing a pair Normal: Normal direction (Primary volume to secondary volume) Reverse: Reverse direction (Secondary volume to primary volume)
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.
Copy Pace(TRK)	The track size for copy
Pair Target Range	Specifies the range of pairs to be resynchronized Device: Specifies by the device Group: Specifies by the consistency group
CTG ID	The consistency group ID 0 (zero) is output if the consistency group option (-m grp) is not specified.
Split Mode	The resynchronization mode when pairs are resynchronized Normal: The pair is resynchronized normally

Item	Description
	Quick: The pair is resynchronized quickly If it is not specified at the command option, a hyphen (-) is output.
Device Option	Indicates whether the volume name defined in the configuration definition file is used Enable: Used, Disable: Not used
*1 When a virtual storage machine is specified, the value of the virtual storage machine is output. *2 For more information about the absolute LUN, see *Command Control Interface Installation and Configuration Guide*	

Pairresync(RemoteCopy)

Note:

When resynchronizing UR pairs and GAD pairs in a consistency group, the audit log is registered only once for the direction of resynchronizing the pair that uses the representative volume of the consistency group.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Pairresync(RemoteCopy) ++Copy Kind=Remote
++P-VOL(Port-LUN-LDEV)=1A-2047-0x1A, S-VOL(Port-LUN-LDEV)=1B-3-0x3B,MCU
S/N=12345,MCU SSID=0x6500, RCU S/N=12345,RCU SSID=0x3001, Virtual Storage Machine
S/N=23456, Write Permission(Update Copy Error)=Enable, Write Permission(RCU Suspend
Failure)=Enable, Copy Pace(TRK)=1,JNL ID Option=Disable,CTG ID=100,
Resync-SWAP=Disable,CTG Mode(Multi)=Enable,CTG Option=Enable, CTO
Option=Enable,Inflow Control=Disable, Offloading Timer(s)=1,Device Option=Enable,IO
Preference Mode=
```

Detailed Information

Item	Description
Command	The command name
Copy Kind	The remote copy Remote is output as the fixed value.

Item	Description
P-VOL(Port-LUN-LDEV)[*1]	The port number, the LU number, and the LDEV number of the primary volume The port number and the LU number show the expanded LU of Command Control Interface The LU number is the absolute LUN[*2] ofCommand Control Interface
S-VOL(Port-LUN-LDEV)[*1]	The port number, the LU number, and the LDEV number of the secondary volume The port number and the LU number show the expanded LU of Command Control Interface No value is output when the option "-swaps" or "-swapp" is specified. The LU number is the absolute LUN[*2] ofCommand Control Interface
MCU S/N[*1]	The serial number of the local storage system
MCU SSID[*1]	The SSID to which a volume on the local storage system belongs
RCU S/N[*1]	The serial number of the remote storage system No value is output when the option "-swaps" or "-swapp" is specified.
RCU SSID[*1]	The SSID to which a volume on the remote storage system belongs
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.
Write Permission(Update Copy Error)	The setting status of write permission if an error occurs during update copy Enable: Enabled, Disable: Disabled Enable is output when the option "-swaps" or "-swapp" is specified.
Write Permission(RCU Suspend Failure)	The setting status of permission to write to the local storage system if the suspension operation cannot be performed on the remote storage system Enable: Enabled, Disable: Disabled Enable is output when the option "-swaps" or "-swapp" is specified.
Copy Pace(TRK)	The track size for copy

Item	Description
JNL ID Option	Indicates whether an option (-jp or -js) is specified for a journal ID Enable: Specified, Disable: Not specified Disable is output for pairs other than Universal Replicator ones.
CTG ID	The consistency group ID No value is output when the option "-swaps" or "-swapp" is specified.
Resync-SWAP	Indicates whether an option (-swaps or -swapp) is specified Enable: Specified, Disable: Not specified
CTG Mode(Multi)	Indicates whether pairs are specified for consistency groups across multiple storage systems Enable: Specified, Disable: Not specified Disable is output for pairs other than Universal Replicator ones.
CTG Option	Indicates whether the consistency group option (-fg) is specified Enable: Specified, Disable: Not specified If the option "-swaps" or "-swapp" is specified, Disable is output for Universal Replicator pair.
CTO Option	Indicates whether the CTO option (-cto) is specified Enable: Specified, Disable: Not specified
Inflow Control	The setting status of the inflow control mode Enable: Enabled, Disable: Disabled No value is output when the CTO option is not specified.
Offloading Timer(s)	The time out value for the inflow control in seconds No value is output when the CTO option is not specified or the inflow control mode is disabled.
Device Option	Indicates whether the volume name defined in the configuration definition file is used Enable: Used, Disable: Not used
IO Preference Mode	I/O preference mode for when a failure occurs on the remote path between the primary and secondary storage systems (I/O preference mode for remote path failure). A value is displayed when the I/O preference mode for remote path failure is specified. P-VOL: Primary volume preference mode Disable: The I/O preference mode for remote path failure is disabled.

Item	Description
*1 When a virtual storage machine is specified, the value of the virtual storage machine is output. *2 For more information about the absolute LUN, see *Command Control Interface Installation and Configuration Guide*	

Pairsplit(LocalCopy)

Note:

- When you perform the paircreate -split command using CCI, this log is output.
- When splitting pairs in a consistency group, the audit log is registered only once for the direction of splitting the pair that uses the representative volume of the consistency group.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Pairsplit(LocalCopy) ++Copy Kind=Local ++P-VOL(Port-LUN-LDEV)=1A-2047-0x1A,
S-VOL(Port-LUN-LDEV)=1B-3-0x3B,MCU S/N=12345,MCU SSID=0x6500, RCU S/N=12345,RCU
SSID=0x6500,Range=LU, Virtual Storage Machine S/N=23456,Suspend Mode=Normal, Split
Mode=Normal,Copy Pace(TRK)=1,S-VOL Hidden Mode=Enable, Pool ID(TI)=10
```

Detailed Information

Item	Description
Command	The command name
Copy Kind	The local copy Local is output as the fixed value.
P-VOL(Port-LUN-LDEV)*1	The port number, the LU number, and the LDEV number of the primary volume The port number and the LU number show the expanded LU of Command Control Interface The LU number is the absolute LUN*2 ofCommand Control Interface
S-VOL(Port-LUN-LDEV)*1	The port number, the LU number, and the LDEV number of the secondary volume

Item	Description
	The port number and the LU number show the expanded LU of Command Control Interface The LU number is the absolute LUN[*2] ofCommand Control Interface
MCU S/N[*1]	The serial number of the local storage system
MCU SSID[*1]	The SSID to which the primary volume belongs
RCU S/N[*1]	The same value as that of MCU S/N is output.
RCU SSID[*1]	The SSID to which the secondary volume belongs
Range	The range of pair split Group: Split by the device group unit LU: Split by the LU unit
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.
Suspend Mode	Indicates whether ShadowImage pairs are forcibly suspended at an error Normal: Not suspended, Force: Forcibly suspended If it is not specified at the command option or the pair is other than ShadowImage one, Normal is output.
Split Mode	The split mode when ShadowImage pairs are split Normal: The pair is split normally. Quick: The pair is split quickly. If it is not specified at the command option or the pair is other than ShadowImage one, a hyphen (-) is output.
Copy Pace(TRK)	The track size for copy
S-VOL Hidden Mode	Indicates whether the secondary volume is hidden after a ShadowImage pair is created Enable: Hides the secondary volume Disable: Not hides the secondary volume If it is not specified at the command option or the pair is other than ShadowImage one, a hyphen (-) is output.
Pool ID(TI)	The pool ID of Thin Image (HTI only) If it is not paircreate –split operation, 0 (zero) is output.

Item	Description
*1 When a virtual storage machine is specified, the value of the virtual storage machine is output. *2 For more information about the absolute LUN, see *Command Control Interface Installation and Configuration Guide*	

Pairsplit(RemoteCopy)

Note:

When splitting pairs in a consistency group, the audit log is registered only once for the direction of splitting the pair that uses the representative volume of the consistency group.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Pairsplit(RemoteCopy)
++Copy Kind=Remote
++P-VOL(Port-LUN-LDEV)=1A-2047-0x1A,S-VOL(Port-LUN-LDEV)=1B-3-0x3B,
MCU S/N=12345,MCU SSID=0x6500,RCU S/N=22364,RCU SSID=0x3001,Range=LU,
Virtual Storage Machine S/N=23456,Suspend Status=P-VOL Failure,
S-VOL Write Permission (Suspend)=Disable,
P-VOL Write Permission (Force Suspend)=Disable,
Side File Liberation Kind=Flush,Rewind=Normal Suspend,CTG ID=100,
CTG Option=Disable,IO Mode=Local
```

Detailed Information

Item	Description
Command	The command name
Copy Kind	The remote copy Remote is output as the fixed value.
P-VOL(Port-LUN-LDEV)*1	The port number, the LU number, and the LDEV number of the primary volume The port number and the LU number show the expanded LU of Command Control Interface No value is output when the option "-RS" is specified.

Item	Description
	No value is output when the option "-iomd" is specified for the secondary volume. The LU number is the absolute LUN[*2] of Command Control Interface
S-VOL(Port-LUN-LDEV)[*1]	The port number, the LU number, and the LDEV number of the secondary volume The port number and the LU number show the expanded LU of Command Control Interface The LU number is the absolute LUN[*2] ofCommand Control Interface
MCU S/N[*1]	The serial number of the local storage system No value is output when the option "-RS" is specified. No value is output when the option "-iomd" is specified for the secondary volume.
MCU SSID[*1]	The SSID to which a volume on the local storage system belongs
RCU S/N[*1]	The serial number of the remote storage system
RCU SSID[*1]	The SSID to which a volume on the remote storage system belongs
Range	The range of pair split Group: Split by the device group unit LU: Split by the LU unit
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.
Suspend Status	Indicates whether the primary volume is writable after splitting a TrueCopy pair. P-VOL Failure: Not writable S-VOL Suspend: Writable S-VOL Suspend is output for pairs other than TrueCopy ones.
S-VOL Write Permission (Suspend)	Indicates whether the writing to the secondary volume is enabled in the suspend status Enable: Enabled, Disable: Disabled
P-VOL Write Permission (Force Suspend)	Indicates whether the writing to the primary volume is enabled in the forcible suspend status Enable: Enabled, Disable: Disabled

Item	Description
Side File Liberation Kind	The liberation kind of the side file Flush: Flush is specified. Purge: Purge is specified.
Rewind	Rewinds from SSWS to PSUS/PSUE Normal Suspend: Normal suspend SSWS Rewind: Rewound to PSUS/PSUE
CTG ID	The consistency group ID No value is output when the consistency group option "-fg" is not specified.
CTG Option	Indicates whether the consistency group option (-fg) is specified Enable: Specified, Disable: Not specified
IO Mode	Indicates which I/O mode the global-active device pair is changed to. A value is displayed only when the option "-iomd" is specified. Local: The I/O mode is changed to Local. Block: The I/O mode is changed to Block.
*1 When a virtual storage machine is specified, the value of the virtual storage machine is output. *2 For more information about the absolute LUN, see *Command Control Interface Installation and Configuration Guide*	

Pairsplit-S(LocalCopy)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Pairsplit-S(LocalCopy) ++Copy Kind=Local
++P-VOL(Port-LUN-LDEV)=1A-2047-0x1A, S-VOL(Port-LUN-LDEV)=1B-3-0x3B, MCU
S/N=12345,MCU SSID=0x6500,RCU S/N=12345,RCU SSID=0x6500, Virtual Storage Machine
S/N=23456,Delete Range=LU
```

Detailed Information

Item	Description
Command	The command name
Copy Kind	The local copy Local is output as the fixed value.
P-VOL(Port-LUN-LDEV)*1	The port number, the LU number, and the LDEV number of the primary volume The port number and the LU number show the expanded LU of Command Control Interface The LU number is the absolute LUN*2 ofCommand Control Interface
S-VOL(Port-LUN-LDEV)*1	The port number, the LU number, and the LDEV number of the secondary volume The port number and the LU number show the expanded LU of Command Control Interface The LU number is the absolute LUN*2 ofCommand Control Interface
MCU S/N*1	The serial number of the local storage system
MCU SSID*1	The SSID to which the primary volume belongs
RCU S/N*1	The same value as that of MCU S/N is output.
RCU SSID*1	The SSID to which the secondary volume belongs
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.
Delete Range	The range for deleting pairs Group: Deletes pairs by the device group LU: deletes pairs by the LU
*1 When a virtual storage machine is specified, the value of the virtual storage machine is output. *2 For more information about the absolute LUN, see *Command Control Interface Installation and Configuration Guide*	

Pairsplit-S(RemoteCopy)

Note:

When splitting UR pairs in a consistency group, the audit log is registered only once for the direction of splitting the pair that uses the representative volume of the consistency group.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Pairsplit-S(RemoteCopy) ++Copy Kind=Remote
++P-VOL(Port-LUN-LDEV)=1A-2047-0x1A, S-VOL(Port-LUN-LDEV)=1B-3-0x3B,MCU
S/N=12345,MCU SSID=0x6500, RCU S/N=22364,RCU SSID=0x3001, Virtual Storage Machine
S/N=23456,,Delete Range=LU,
Force=Enable,Invisible=Enable,Type=P-VOL
```

Detailed Information

Item	Description
Command	The command name
Copy Kind	The remote copy Remote is output as the fixed value.
P-VOL(Port-LUN-LDEV)[*1]	The port number, the LU number, and the LDEV number of the primary volume The port number and the LU number show the expanded LU of Command Control Interface No value is output when the option "-R" is specified. The LU number is the absolute LUN[*2] ofCommand Control Interface
S-VOL(Port-LUN-LDEV)[*1]	The port number, the LU number, and the LDEV number of the secondary volume The port number and the LU number show the expanded LU of Command Control Interface The LU number is the absolute LUN[*2] ofCommand Control Interface
MCU S/N[*1]	The serial number of the local storage system No value is output when the option "-R" is specified.
MCU SSID[*1]	The SSID to which a volume on the local storage system belongs

Item	Description
RCU S/N*1	The serial number of the remote storage system
RCU SSID*1	The SSID to which a volume on the remote storage system belongs
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.
Blank item	Nothing is output due to unused.
Delete Range	The range for deleting pairs Group: Deletes pairs by the device group LU: deletes pairs by the LU
Force	Indicates whether the setting for deleting pairs forcibly is enabled Enable: Pairs are forcibly deleted. Disable: Pairs are not forcibly deleted.
Invisible	Indicates whether hosts can access the volume after pairs are deleted Enable: The virtual LDEV ID is deleted from the volume on the local storage system not to be accessed by hosts. Disable: The virtual LDEV ID is not deleted from the volume on the local storage system to be accessed by hosts.
Type	The type of volumes of pairs to be deleted P-VOL: Primary volume, S-VOL: Secondary volume
*1 When a virtual storage machine is specified, the value of the virtual storage machine is output. *2 For more information about the absolute LUN, see *Command Control Interface Installation and Configuration Guide*	

Raidvchkset(Data Retention Utility)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Raidvchkset(Data Retention Utility)
++Guard Type=inv svd,Retention Term=365,Virtual Storage Machine S/N=23456
```

Detailed Information

Item	Description
Command	The command name
Guard Type	The guard type to be specified for volumes by using Data Retention Utility inv: Invisible mode to be set sz0: Zero Read Cap mode to be set rwd: Protection from reading/writing wtd: Protection from writing svd: Protection from copying program products - (hyphen): Released from all protection modes If svd is specified along with a different guard type, two values separated by a space are displayed.
Retention Term	The retention term (days) A hyphen (-) is output for the value if it is not specified by the command option.
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Reallocate Pool(Start)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Reallocate Pool(Start) ++Pool ID=10
```

Detailed Information

Item	Description
Command	The command name
Pool ID	The pool number of a pool in which the manual tier relocation is performed

Reallocate Pool(Stop)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Reallocate Pool(Stop) ++Pool ID=10
```

Detailed Information

Item	Description
Command	The command name
Pool ID	The pool number of a pool in which the manual tier relocation is interrupted

Rename Pool

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Rename Pool
++Pool ID=AA,Pool Name=XXXXXXX
```

Detailed Information

Item	Description
Command	The command name
Pool ID	The pool number of a pool to be renamed
Pool Name	The pool name after the change

Replace Quorum

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,, Seq.=xxxxxxxxxx
+Command= Replace Quorum ++Quorum Disk ID=1,LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB
```

Detailed Information

Item	Description
Command	The command name
Quorum Disk ID	The quorum disk ID of a quorum disk to be replaced
LDEV(LDKC:CU:LDEV)	The LDEV ID of the LDEV to be a quorum disk

Replace Snapshot

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Replace Snapshot
++Snapshot Group=ABCDEF,S-VOL(LDKC:CU:LDEV)=0x00:0xCC:0xDD, MU=1,Virtual Storage
Machine S/N=23456
```

Detailed Information

Item	Description
Command	The command name
Snapshot Group	The Snapshot Group name. The value is output only when Snapshot Group is specified.
S-VOL(LDKC:CU:LDEV)	The LDEV ID of the secondary volume. When a virtual storage machine is specified, the LDEV ID of the virtual storage machine is output.
MU	The MU number. The value is output only when an MU number is specified.
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Reset CHAP User

Example 1: Resetting the secret of the CHAP user on the initiator side

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Reset CHAP User
++Port=1A,Target ID=0x00,Initiator CHAP User=AAAAAAA, Virtual Storage Machine
S/N=23456
```

Detailed Information 1: Resetting the secret of the CHAP user on the initiator side

Item	Description
Command	The command name
Port	The name of a port to which iSCSI targets belong
Target ID	The iSCSI target ID
Initiator CHAP User	The CHAP user name on the initiator side
Virtual Storage Machine S/N	The serial number of the virtual storage machine No output when a virtual storage machine is not specified

Example 2: Resetting the secret of the CHAP user on the target side

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band OPEN,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Reset CHAP User
++Port=1A,Target ID=0x00,Target CHAP User=AAAAAAA, Virtual Storage Machine
S/N=23456
```

Detailed Information 2: Resetting the secret of the CHAP user on the target side

Item	Description
Command	The command name
Port	The name of a port to which iSCSI targets belong
Target ID	The iSCSI target ID
Target CHAP User	The CHAP user name on the target side

Item	Description
Virtual Storage Machine S/N	The serial number of the virtual storage machine No output when a virtual storage machine is not specified

Reset Command Status

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Reset Command Status
```

Detailed Information

Item	Description
Command	The command name

Reset Ldev Priority

Example 1: Deleting priority information from a combination of an LDEV and WWNs

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx,00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Reset Ldev Priority
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB
++WWN={AAAAAAAAA,BBBBBBBBB,……,DDDDDDDD},Num. of WWNs=10
++Priority Type=WWN
```

Detailed Information 1: Deleting priority information from a combination of an LDEV and WWNs

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV from which the priority information is deleted.
WWN	The WWN from which priority information is deleted

Item	Description
Num. of WWNs	The number of WWNs from which priority information is deleted
Priority Type	The target from which priority information is deleted WWN: A combination of WWNs and an LDEV

Example 2: Deleting priority information from a combination of an LDEV and iSCSI names

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band OPEN,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Reset Ldev Priority ++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB ++iSCSI
Name={iqn.z1,iqn.z2,……,iqn.z10},Num. of iSCSI Names=10 ++Priority
Type=iSCSI
```

Detailed Information 2: Deleting priority information from a combination of an LDEV and iSCSI names

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV from which the priority information is deleted.
iSCSI Name	The iSCSI name from which priority information is deleted
Num. of iSCSI Names	The number of iSCSI names from which priority information is deleted
Priority Type	The target from which priority information is deleted iSCSI: A combination of iSCSI names and an LDEV

Reset WWN

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Reset WWN
++Port=1A,Host Group ID=0x0FE,WWN=XXXXXXXXXXXXXXXX, Virtual Storage Machine S/N=23456
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port to which a WWN, on which the nickname is deleted, belongs When a virtual storage machine is specified, the port name of the virtual storage machine is output.
Host Group ID	The ID of a host group to which a WWN, on which the nickname is deleted, belongs
WWN	The WWN on which the nickname is deleted
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Set CHAP User

Example 1: Setting the secret of the CHAP user on the initiator side

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Set CHAP User ++Port=1A,Target ID=0x00,Initiator CHAP User=AAAAAAA,
Virtual Storage Machine S/N=23456
```

Detailed Information 1: Setting the secret of the CHAP user on the initiator side

Item	Description
Command	The command name
Port	The name of a port to which iSCSI targets belong
Target ID	The iSCSI target ID
Initiator CHAP User	The CHAP user name on the initiator side
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Example 2: Setting the secret of the CHAP user on the target side

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
```

```
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Set CHAP User
++Port=1A,Target ID=0x00,Target CHAP User=AAAAAAA,
Virtual Storage Machine S/N=23456
```

Detailed Information 2: Setting the secret of the CHAP user on the target side

Item	Description
Command	The command name
Port	The name of a port to which iSCSI targets belong
Target ID	The iSCSI target ID
Target CHAP User	The CHAP user name on the target side
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Set HBA iSCSI

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Set HBA iSCSI
++Port=1A,Target ID=0x00,iSCSI Name=XXXXXXXXXXXXXXXX,
iSCSI Nickname=VVVVVVVVVVVVVVV,Virtual Storage Machine S/N=23456
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port to which iSCSI targets belong
Target ID	The iSCSI target ID
iSCSI Name	The iSCSI name of a host bus adapter for which a nickname is set No value is output when the nickname is deleted.
iSCSI Nickname	The specified nickname
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Set Ldev Priority

Example 1: Setting priority information for a combination of an LDEV and WWNs

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Set Ldev
Priority ++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB
++{WWN,Priority,Limit}=[{AAAAAAAAA,Non-Prio,10 IOPS}……], Num. of WWNs=10
++Priority Type=WWN
```

Detailed Information 1: Setting priority information for a combination of an LDEV and WWNs

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV to which the definition of priority is set
WWN	The WWN for which the priority information is set
Priority	The setting status of priority information to be set for the WWN Prio: Prioritized, Non-Prio: Not prioritized
Limit	The upper limit value of the WWN when Priority is Non-Prio The unit is I/O rate (IOPS) or transfer rate (MB/s)
Num. of WWNs	The number of WWNs to be set
Priority Type	The target for which priority information is set WWN: A combination of WWNs and an LDEV

Example 2: Setting priority information for a combination of an LDEV and iSCSI names

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,, Seq.=xxxxxxxxxx
+Command=Set Ldev Priority ++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB
++{iSCSI Name,Priority,Limit}=[{iqn.z1,Non-Prio,10 IOPS}……], Num. of iSCSI Names=10
++Priority Type=iSCSI
```

Detailed Information 2: Setting priority information for a combination of an LDEV and iSCSI names

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of an LDEV to which the definition of priority is set
iSCSI Name	The iSCSI name for which priority information is set
Priority	The setting status of priority information to be set for the iSCSI name Prio: Prioritized, Non-Prio: Not prioritized
Limit	The upper limit value of the iSCSI name when Priority is Non-Prio The unit is I/O rate (IOPS) or transfer rate (MB/s)
Num. of iSCSI Names	The number of iSCSI names for which priority information is set
Priority Type	The target for which priority information is set iSCSI: A combination of iSCSI names and an LDEV

Set WWN

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Set WWN
++Port=1A,Host Group ID=0x0FE,WWN=XXXXXXXXXXXXXXXX, Nickname=AAAAAAA,Virtual Storage
Machine S/N=23456
```

Detailed Information

Item	Description
Command	The command name
Port	The name of a port to which a WWN, on which the nickname is set, belongs When a virtual storage machine is specified, the port name of the virtual storage machine is output.
Host Group ID	The ID of a host group to which a WWN, in which the nickname is set, belongs

Item	Description
WWN	The WWN on which the nickname is set
Nickname	The nickname to be set
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Stop Monitor Pool

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Stop Monitor Pool ++Pool ID=10
```

Detailed Information

Item	Description
Command	The command name
Pool ID	The pool number of a pool, the monitoring of which is stopped

System Option(Correction Copy)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=System Option(Correction Copy)
++Correction Copy=Enable
```

Detailed Information

Item	Description
Command	The command name
Correction Copy	The behavior of when a disk is blocked Enable: Correction copy is performed for the spare disk.

Item	Description
	Disable: Correction copy is not performed for the spare disk.

System Option(Destage Mode)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=System Option(Destage Mode)
++Destage Mode=Enable,LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB
```

Detailed Information

Item	Description
Command	The command name
Destage Mode	Indicates whether write-through operation is enabled Enable: Enabled, Disable: Disabled
LDEV(LDKC:CU:LDEV)	The ID of the LDEV for which write-through operation is to be enabled

System Option(Disk Copy Pace)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=System Option(Disk Copy Pace)
++Disk Copy Pace=Faster
```

Detailed Information

Item	Description
Command	The command name
Disk Copy Pace	The speed of spare disk copy when I/O operations take priority in a spare disk copy processing

Item	Description
	Faster: Copy operations take pirority. Medium: Optimization mode Slower: Host jobs take priority.

System Option(Dynamic Sparing)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=System Option(Dynamic Sparing)
++Dynamic Sparing=Enable
```

Detailed Information

Item	Description
Command	The command name
Dynamic Sparing	The behavior of when the number of drive errors exceeds the threshold value Enable: Data is automatically copied to the spare disk. Disable: Data is not automatically copied to the spare disk.

System Option(Link Failure Threshold)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=System Option(Link Failure Threshold)
++Link Failure Threshold=255
```

Detailed Information

Item	Description
Command	The command name

Item	Description
Link Failure Threshold	The threshold value used to report link errors

System Option(Mode)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=System Option(Mode)
++System Option Mode=System,CLPR=,Mode ID=2047,
Mode=Enable,Cache Tuning=-,Command Control=-,Password=Enable
```

Detailed Information

Item	Description
Command	The command name
System Option Mode	The key for setting the system option System: The system option is specified by the unit of system. CLPR: The system option is specified by the unit of CLPR.
CLPR	The CLPR ID
Mode ID	The system option ID
Mode	The setting value of the system option Enable: Set the mode to ON. Disable: Set the mode to OFF.
Cache Tuning	Cache tuning level
Command Control	Information for switching the prefetch condition
Password	Indicates whether the one-time password is specified Enable: The one-time password is specified. This index is not output if no one-time password is specified.

System Option(Spare Disk Recover)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=System Option(Spare Disk Recover)
++Spare Disk Recover=Interleave
```

Detailed Information

Item	Description
Command	The command name
Spare Disk Recover	The preference of spare disk copy Interleave: I/Os take priority. Fullspeed: Copy processing takes priority.

Unmap Resource(Asynchronous LDEV)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Unmap Resource(Asynchronous LDEV)
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Map LDEV(LDKC:CU:LDEV)=0x00:0xCC:0xDD
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of the actual volume
Map LDEV(LDKC:CU:LDEV)	The LDEV ID of the virtual volume to be unassigned from the actual volume "Reserve" is output if the reservation attribute of global-active device set on the LDEV ID of the volume that is used as a secondary volume of a global-active device pair is released.

Unmap Resource(LDEV)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Unmap
Resource(LDEV) ++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB, Map
LDEV(LDKC:CU:LDEV)=0x00:0xCC:0xDD
```

Detailed Information

Item	Description
Command	The command name
LDEV(LDKC:CU:LDEV)	The LDEV ID of the actual volume
Map LDEV(LDKC:CU:LDEV)	The LDEV ID of the virtual volume to be unassigned from the actual volume "Reserve" is output if the reservation attribute of global-active device set on the LDEV ID of the volume that is used as a secondary volume of a global-active device pair is released.

Unmap Resource(Port)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Unmap
Resource(Port) ++Port=1A,Map Port=1E
```

Detailed Information

Item	Description
Command	The command name
Port	The port name of the actual port
Map Port	The name of the virtual port whose assignment to the actual port is released

Unmap Snapshot

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Unmap Snapshot
++P-VOL(LDKC:CU:LDEV)=0x00:0xAA:0xBB, S-VOL(LDKC:CU:LDEV)=0x00:0xCC:0xDD,
MU=1,Virtual Storage Machine S/N=23456
```

Detailed Information

Item	Description
Command	The command name
P-VOL(LDKC:CU:LDEV)	The LDEV ID of the primary volume. These values are output only when a primary volume is specified. When a virtual storage machine is specified, the volume number of the virtual storage machine is output.
S-VOL(LDKC:CU:LDEV)	The LDEV ID of the secondary volume. These values are output only when a secondary volume is specified. When a virtual storage machine is specified, the volume number of the virtual storage machine is output.
MU	The MU number. The value is output only when the primary volume is specified.
Virtual Storage Machine S/N	The serial number of the virtual storage machine No value is output when a virtual storage machine is not specified.

Update License

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,Out-of-band,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Update License
```

Detailed Information

Item	Description
Command	The command name

Config Command (Mainframe system)

The following shows examples and descriptions of the audit logs when a storage system receives commands sent from hosts for mainframe system, computers using CCI, or hosts using Business Continuity Manager.

Business Continuity Manager

Add CTG

Example 1: when the copy type is SIMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Add CTG ++I/F Version=0x40 ++Copy Type=SIMF,CTG=0x00
```

Example 2: when the copy type is TCMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Add CTG ++I/F Version=0x40 ++Copy Type=TCMF,CTG=0x00,SCP
Time(Sec.)=119
```

Detailed Information

Item	Description
Command	The command name
I/F Version	The command interface version
Copy Type	The copy type of the consistency group which is a target of registration or changing options SIMF: ShadowImage for Mainframe, TCMF: TrueCopy for Mainframe

Item	Description
CTG	The consistency group ID which is a target of registration or changing options
SCP Time(Sec.)	The SCP (Stage Change Pending) delay time This item is output only when Copy Type is TCMF

Add Pair

Example 1: when the copy type is SIMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept, from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Add Pair ++Copy Type=SIMF,I/F Version=0x09,Execute Type=Cmd. Device, S-VOL
Check=Enable ++P-VOL(CU:LDEV)=0x00:0x00,S-VOL(CU:LDEV)=0x00:0x02, MCU S/N=32652,MCU
SSID=0x1B60,RCU S/N=32652,RCU SSID=0x1B60,,, Copy Kind=,Copy
Pace=Normal,CTG=0x17,Initial Copy=None
```

Example 2: when the copy type is TCMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Add Pair
++Copy Type=TCMF,I/F Version=0x40,Execute Type=Cmd. Device, S-VOL Check=Enable
++P-VOL(CU:LDEV)=0x00:0x00,S-VOL(CU:LDEV)=0x00:0x05, MCU S/N=32652,MCU
SSID=0x1B60,RCU S/N=32653,RCU SSID=0x1B60,,, Fence Level=Never,Initial
Copy=None,Copy Pace=Normal,,SCP=Enable, CTG Attribute=CTG,Time
Stamp=Enable,P-CTG=0x11,S-CTG=0x11
```

Example 3: when the copy type is URMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Add Pair
++Copy Type=URMF,I/F Version=0x11,Execute Type=Cmd. Device, S-VOL Check=Disable
++P-VOL(CU:LDEV)=0x00:0x00,S-VOL(CU:LDEV)=0x00:0x01, MCU S/N=32652,MCU
SSID=0x1B60,RCU S/N=32653,RCU SSID=0x1B60, M-JNLG=0x000,R-JNLG=0x003,Mirror
ID=1,Path Gr. ID=,Error Level=, Initial Copy=Delta
```

Detailed Information

Item	Description
Output items common to Example 1 to Example 3	
Command	The command name
Copy Type	The copy type SIMF: ShadowImage for Mainframe, TCMF: TrueCopy for Mainframe, URMF: Universal Replicator for Mainframe
I/F Version	The command interface version
Execute Type	The volume type for executing the command Receive Device: LDEV which receives the command Cmd. Device: Command device
S-VOL Check	The setting status of the option for confirming the use condition of the secondary volume Enable: Enabled, Disable: Disabled
P-VOL(CU:LDEV)	The CU number and the LDEV number of the primary volume
S-VOL(CU:LDEV)	The CU number and the LDEV number of the secondary volume
MCU S/N	The serial number of the local storage system
MCU SSID	The SSID to which a volume on the local storage system belongs The SSID to which the primary volume belongs for operating ShadowImage for Mainframe pairs
RCU S/N	The serial number of the remote storage system The same value as MCU S/N is output for operating ShadowImage for Mainframe pairs
RCU SSID	The SSID to which a volume on the remote storage system belongs The SSID to which the secondary volume belongs for operating ShadowImage for Mainframe pairs
Output items when Copy Type is SIMF	
Blank item	Nothing is output due to unused.
Blank item	Nothing is output due to unused.
Copy Kind	The operation after creating pairs Normal: Copy, Suspend: Suspend

Item	Description
	No value is output if I/F Version is less than 0x10.
Copy Pace	The copy speed Slow: Slow, Normal: Normal, Fast: Fast
CTG	The consistency group ID No value is output if I/F Version is less than 0x04. No value is output if it is not specified at the command option.
Initial Copy	Type of the pair creation operation Entire: Creates pairs and copies data from the primary volume to the secondary volume. None: Creates pairs but does not copy data from the primary volume to the secondary volume. No value is output if I/F Version is less than 0x46.
Output items when Copy Type is TCMF	
Blank item	Nothing is output due to unused.
Blank item	Nothing is output due to unused.
Fence Level	The fence level to be set (conditions where the local storage system rejects write operations to the primary volume) Never: Can write to the primary volume even if the pair is split. Data: Cannot write to the primary volume when update copying fails. Status: Cannot write to the primary volume only when the storage system of the primary site cannot change the pair status of the secondary volume to PSUE
Initial Copy	The type of the pair creation operation Entire: Creates pairs and copies data from the primary volume to the secondary volume None: Creates pairs but does not copy data from the primary volume to the secondary volume
Copy Pace	The copy speed Normal: Normal, Slow: Slow
Blank item	Nothing is output due to unused.
SCP	The setting status of SCP (Stage Change Pending) time change Enable: Enabled, Disable: Disabled

Item	Description
	No value is output if I/F Version is less than 0x04. No value is output if CTG Attribute is Open/MF CTG.
CTG Attribute	The consistency group attribute Open/MF CTG: Consistency group common to Open/Mainframe CTG: Consistency group for Mainframe No value is output if I/F Version is 0x30 or less than 0x22. No value is output if values of P-CTG and S-CTG are not output.
Time Stamp	The transfer setting status of host time stamps to the secondary volume when creating pairs Enable: Enabled, Disable: Disabled No value is output if I/F Version is 0x20 or less than 0x16.
P-CTG	The consistency group number of the local storage system No value is output if I/F Version is less than 0x04. No value is output if the pair does not belong to the consistency group.
S-CTG	The consistency group number of the remote storage system No value is output if I/F Version is less than 0x04. No value is output if the pair does not belong to the consistency group.
Output items when Copy Type is URMF	
M-JNLG	The journal group number of the local storage system
R-JNLG	The journal group number of the remote storage system
Mirror ID	The mirror ID
Path Gr. ID	The path group ID No value is output if I/F Version is less than 0x33.
Error Level	The range of the pair split at failure occurrence Group: All pairs in the same mirror as the pair to be operated are split LU: Only the pair to be operated is split No value is output if I/F Version is less than 0x12.
Initial Copy	The type of the pair creation operation

Item	Description
	Entire: Creates pairs and copies data from the primary volume to the secondary volume None: Creates pairs but does not copy data from the primary volume to the secondary volume Delta: Creates delta resync pairs

Add RCU

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Add RCU ++I/F
Version=0x11,Execute Type=Cmd. Device ++MCU S/N=32652,MCU SSID=0x0000,RCU
S/N=12345,RCU SSID=0x0000, Controller ID=7,Path Gr. ID=,Range=CU ++{MCU Port,RCU
Port,RCU CU}=[{2B,3C,0x00}],Num. of Paths=1
```

Detailed Information

Item	Description
Command	The command name
I/F Version	The command interface version
Execute Type	The volume type for executing the command Receive Device: LDEV which receives the command Cmd. Device: Command device No value is output if I/F Version is less than 0x11 or if Range is System.
MCU S/N	The serial number of the local storage system
MCU SSID	The SSID to which a volume on the local storage system belongs No value is output if Range is System.
RCU S/N	The serial number of the remote storage system
RCU SSID	The SSID to which a volume on the remote storage system belongs No value is output if Range is System.
Controller ID	The controller ID of the remote storage system

Item	Description
	5: USP V/VM, 6: VSP, 7: VSP G1000/G1500 and VSP F1500
Path Gr. ID	The path group ID No value is output if I/F Version is less than 0x11 or if Range is CU.
Range	The connecting mode to RCU CU: CU connection, System: Storage system connection No value is output if I/F Version is less than 0x11.
MCU Port	The port name of the local storage system
RCU Port	The port name of the remote storage system
RCU CU	The CU number of the remote storage system No value is output if Range is System.
Num. of Paths	The number of paths to be created

At-time Split

Example 1: when the copy type is SIMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=At-time Split
++I/F Version=0x40 ++Copy Type=SIMF,Kind=Set,CTG=0x10, Command ID=0,Suspend
Time=2015/11/18 18:58:48,Timeout=3
```

Example 2: when the copy type is URMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=At-time Split
++I/F Version=0x40 ++Copy Type=URMF,Kind=Set,CTG=0x10, P-VOL(CU:LDEV)=0x00:0x00,
Command ID=0, Suspend
Time=2015/11/18 18:55:52,Suspend Type=Steady,Timeout=, Reserve Time=2
```

Detailed Information

Item	Description
Command	The command name
I/F Version	The command interface version

Item	Description
Copy Type	The copy type SIMF: ShadowImage for Mainframe, URMF: Universal Replicator for Mainframe
Kind	The operation kind Set: Setting of a suspend reservation Reset: Releasing of a suspend reservation
CTG	The consistency group ID which is a target of a suspend reservation
P-VOL(CU:LDEV)	The CU number and LDEV number of the primary volume shared by a Universal Replicator for Mainframe pair and ShadowImage for Mainframe pair This item is output only when Copy Type is URMF.
Command ID	The ID assigned to the At-time Split command arbitrarily No value is output when Kind is Reset.
Suspend Time	The reserved suspend time No value is output when Kind is Reset.
Suspend Type	The suspend type Steady: Normal suspend, Quick: High-speed suspend This item is output only when Copy Type is URMF
Timeout	If Copy Type is SIMF, the time difference in minutes from the command issuance time to the start of suspension time is indicated. If Copy Type is URMF, the timeout time in minutes is indicated. No value is output when Kind is Reset or when the timeout is not specified if Copy Type is URMF.
Reserve Time	The time difference from the command issuance time to the reservation time is output in minutes No value is output when Kind is Reset. This item is output only when Copy Type is URMF

BCM UVM

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=BMC UVM
++Operation=Reconnect
```

Detailed Information

Item	Description
Command	The command name
Operation	Type of operations Reconnect: Reconnect an external volume. Disconnect: Disconnect an external volume.

Build Command Device

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Build Command
Device ++I/F Version=0x10 ++VOL(CU:LDEV)=0x00:0x06,APID=0x1234
```

Detailed Information

Item	Description
Command	The command name
I/F Version	The command interface version
VOL(CU:LDEV)	The CU number and the LDEV number of the volume to be allocated as a command device
APID	The application ID

Change Tier Option

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Change Tier
Option ++I/F Version=0x41 ++LDEV(CU:LDEV)=0x00:0x00,Parameter Check=Enable, Execute
Type=Cmd. Device,SSID=0x1B60,S/N=32652, Tiering Policy=Enable,Tiering Policy
Level=0,Relocation=Start, New Page Assignment Tier=Middle,Relocation
Priority=Default
```

Detailed Information

Item	Description
Command	The command name
I/F Version	The command interface version
LDEV(CU:LDEV)	The CU number and the LDEV number of a volume whose storage tier is to be changed
Parameter Check	The setting status of the prior confirmation Enable: Enabled, Disable: Disabled
Execute Type	The volume type for executing the command Receive Device: LDEV which receives the command Cmd. Device: Command device
SSID	The SSID to which the volume to be operated belongs
S/N	The serial number of the storage system to be operated
Tiering Policy	The availability of the tiering policy level change Enable: Changed, Disable: Not changed
Tiering Policy Level	The tiering policy ID to be changed No value is output when Tiering Policy is Disable.
Relocation	The tier relocation command (Start or Stop) A hyphen (-) is output for the value if it is not specified at the command option
New Page Assignment Tier	The new page assignment tier High: High performance tier, Middle: Middle performance tier, Low: Low performance tier

Item	Description
	A hyphen (-) is output for the value if it is not specified at the command option
Relocation Priority	The tier relocation priority Prioritize: Prioritized, Default: Normal A hyphen (-) is output for the value if it is not specified at the command option

Delete Command Device

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Delete
Command Device ++I/F Version=0x10
++VOL(CU:LDEV)=0x00:0x06,APID=0x1234
```

Detailed Information

Item	Description
Command	The command name
I/F Version	The command interface version
VOL(CU:LDEV)	The CU number and the LDEV number of the volume, allocation for which as a command device is to be released
APID	The application ID

Delete CTG

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx
+Command=Delete CTG ++I/F Version=0x40 ++Copy Type=TCMF,CTG=0x01
```

Detailed Information

Item	Description
Command	The command name
I/F Version	The command interface version
Copy Type	The copy type of the consistency group to be deleted SIMF: ShadowImage for Mainframe, TCMF: TrueCopy for Mainframe,
CTG	The consistency group ID to be deleted

Delete Pair

Example 1: when the copy type is SIMF or TCMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept, from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=Delete Pair ++Copy Type=TCMF,I/F Version=0x40,Execute Type=Receive Device
++P-VOL(CU:LDEV)=0x00:0x00,S-VOL(CU:LDEV)=0x00:0x05, MCU S/N=32652,MCU
SSID=0x1B60,RCU S/N=32653,RCU SSID=0x1B60, CTG=
```

Example 2: when the copy type is URMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Delete Pair
++Copy Type=URMF,I/F Version=0x40,Execute Type=Cmd. Device
++P-VOL(CU:LDEV)=0x00:0x00,S-VOL(CU:LDEV)=0x00:0x01, MCU S/N=32652,MCU
SSID=0x1B60,RCU S/N=32653,RCU SSID=0x1B60, Range=LU
```

Detailed Information

Item	Description
Command	The command name
Copy Type	The copy type SIMF: ShadowImage for Mainframe, TCMF: TrueCopy for Mainframe, URMF: Universal Replicator for Mainframe
I/F Version	The command interface version

Item	Description
Execute Type	The volume type for executing the command Receive Device: LDEV which receives the command Cmd. Device: Command device
P-VOL(CU:LDEV)	The CU number and the LDEV number of the primary volume
S-VOL(CU:LDEV)	The CU number and the LDEV number of the secondary volume
MCU S/N	The serial number of the local storage system
MCU SSID	The SSID to which a volume on the local storage system belongs The SSID to which the primary volume belongs for operating ShadowImage for Mainframe pairs
RCU S/N	The serial number of the remote storage system The same value as MCU S/N is output for operating ShadowImage for Mainframe pairs
RCU SSID	The SSID to which a volume on the remote storage system belongs The SSID to which the secondary volume belongs for operating ShadowImage for Mainframe pairs
CTG	The consistency group ID No value is output if the pair deletion is not specified by the group. No value is output when Copy Type is SIMF and I/F Version is less than 0x04. This item is output only when Copy Type is SIMF or TCMF
Range	The range of volumes to be deleted LU: The volume to be operated Group: All volumes in the consistency group to which the volume to be operated belongs EXCTG: All volumes belonging to the extended consistency group This item is output only when Copy Type is URMF

Delete RCU

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Delete RCU
```

```
++I/F Version=0x11,Execute Type=Cmd. Device ++MCU S/N=32652,MCU SSID=0x1B60,RCU
S/N=12345,RCU SSID=0x0000, Controller ID=,Path Gr. ID=,Range=CU
```

Detailed Information

Item	Description
Command	The command name
I/F Version	The command interface version
Execute Type	The volume type for executing the command Receive Device: LDEV which receives the command Cmd. Device: Command device No value is output if I/F Version is less than 0x11 or if Range is System.
MCU S/N	The serial number of the local storage system
MCU SSID	The SSID to which a volume on the local storage system belongs No value is output if Range is System.
RCU S/N	The serial number of the remote storage system
RCU SSID	The SSID to which a volume on the remote storage system belongs No value is output if Range is System.
Controller ID	The controller ID of the remote storage system 5: USP V/VM, 6: VSP, 7: VSP G1000/G1500 and VSP F1500 No value is output if I/F Version is less than 0x11 or if Range is CU.
Path Gr. ID	The path group ID No value is output if I/F Version is less than 0x11 or if Range is CU.
Range	The connecting mode to RCU CU: CU connection, System: Storage system connection No value is output if I/F Version is less than 0x11.

EXCTG

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
```

```
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=EXCTG ++I/F
Version=0x13 ++EXCTG=0x01,Command=Add,Mirror ID=0x01 ++{Slv S/N,Slv Controller
ID,JNLG,Slv Cmd DEV(CU:LDEV)}= [{32652,7,0x004,}],Num. of JNLGs=1
```

Detailed Information

Item	Description
Command	The command name
I/F Version	The command interface version
EXCTG	The extended consistency group ID
Command	Indicates whether to register or delete the extended consistency group Add: Register, Delete: Delete
Mirror ID	The mirror ID
Slv S/N	The serial number of the remote storage system
Slv Controller ID	The controller ID of the remote storage system 5: USP V/VM, 6: VSP, 7: VSP G1000/G1500 and VSP F1500
JNLG	The journal group number
Slv Cmd DEV(CU:LDEV)	The CU number and the LDEV number of the command device for the remote storage system No value is output if the remote storage system is used as a super DKC.
Num. of JNLGs	The number of journal groups

FREEZE

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=FREEZE ++I/F
Version=0x40 ++VOL(CU:LDEV)=0x00:0x00,CTG=0x11,Execute Type=Receive Device, Release
Time(ms)=5000
```

Detailed Information

Item	Description
Command	The command name
I/F Version	The command interface version
VOL(CU:LDEV)	The CU number and the LDEV number of the volume which is a target of FREEZE
CTG	The consistency group ID which is a target of FREEZE
Execute Type	The volume type for executing the command Receive Device: LDEV which receives the command Cmd. Device: Command device
Release Time(ms)	The time to release FREEZE Default is output if it is not specified at the command option

Remote DKC Control

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Remote DKC
Control ++I/F Version=0x40
++S/N=02584,SSID=0x1701,VOL(CU:LDEV)=0x01:0x13,,
```

Detailed Information

Item	Description
Command	The command name
I/F Version	The command interface version
S/N	The serial number of the storage system for executing the command
SSID	The SSID to which a volume for the storage system for executing the command belongs
VOL(CU:LDEV)	The CU number and the LDEV number of the volume for executing the command
Blank item	Nothing is output due to unused.

Item	Description
Blank item	Nothing is output due to unused.

Resume Pair

Example 1: when the copy type is SIMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Resume Pair
++Copy Type=SIMF,I/F Version=0x04,Execute Type=Cmd. Device, S-VOL Check=Enable
++P-VOL(CU:LDEV)=0x00:0x00,S-VOL(CU:LDEV)=0x00:0x02, MCU S/N=32652,MCU
SSID=0x1B60,RCU S/N=32652,RCU SSID=0x1B60, Copy Pace=Slow,Resume Type=Steady,Resume
Mode=Reverse, Range=Group,CTG=0x7F
```

Example 2: when the copy type is TCMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Resume Pair
++Copy Type=TCMF,I/F Version=0x31,Execute Type=Cmd. Device, S-VOL Check=Enable
++P-VOL(CU:LDEV)=0x00:0x00,S-VOL(CU:LDEV)=0x00:0x02, MCU S/N=32652,MCU
SSID=0x1B60,RCU S/N=32653,RCU SSID=0x1B60, Fence Level=,Copy Pace=Normal,Reverse
Resync Mode=Enable, Range=Group,Change CTG=Open/MF CTG,Time Stamp=Enable,
SCP=,CTG=0x7F
```

Example 3: when the copy type is URMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Resume Pair
++Copy Type=URMF,I/F Version=0x40,Execute Type=Cmd. Device, S-VOL Check=Enable
++P-VOL(CU:LDEV)=0x00:0x00,S-VOL(CU:LDEV)=0x00:0x01, MCU S/N=32652,MCU
SSID=0x1B60,RCU S/N=32653,RCU SSID=0x1B60, Error Stop=,Reverse Resync
Mode=Disable,Range=Group, Error Level=,Mode=Delta
```

Detailed Information

Item	Description
Output items common to Example 1 to Example 3	
Command	The command name
Copy Type	The copy type

Item	Description
	SIMF: ShadowImage for Mainframe, TCMF: TrueCopy for Mainframe, URMF: Universal Replicator for Mainframe
I/F Version	The command interface version
Execute Type	The volume type for executing the command Receive Device: LDEV which receives the command Cmd. Device: Command device
S-VOL Check	The setting status of the option for confirming the use condition of the secondary volume Enable: Enabled, Disable: Disabled No value is output when Copy Type is URMF and Mode is Suspend.
P-VOL(CU:LDEV)	The CU number and the LDEV number of the primary volume
S-VOL(CU:LDEV)	The CU number and the LDEV number of the secondary volume
MCU S/N	The serial number of the local storage system
MCU SSID	The SSID to which a volume on the local storage system belongs The SSID to which the primary volume belongs for operating ShadowImage for Mainframe pairs
RCU S/N	The serial number of the remote storage system The same value as MCU S/N is output for operating ShadowImage for Mainframe pairs
RCU SSID	The SSID to which a volume on the remote storage system belongs The SSID to which the secondary volume belongs for operating ShadowImage for Mainframe pairs
Output items when Copy Type is SIMF	
Copy Pace	The copy speed Slow: Slow, Normal: Normal, Fast: Fast
Resume Type	The pair resynchronization type Steady: Normal resync, Quick: High-speed resync
Resume Mode	The pair resynchronization direction Normal: Normal direction (from the primary volume to the secondary volume)

Item	Description
	Reverse: Reverse direction (from the secondary volume to the primary volume)
Range	The pair resynchronization range LU: Only the pair to be operated Group: All pairs in the consistency group to which the pair to be operated belongs No value is output if I/F Version is less than 0x04.
CTG	The consistency group ID No value is output if I/F Version is less than 0x04. No value is output if Range is LU.
Output items when Copy Type is TCMF	
Fence Level	The fence level to be set (conditions where the local storage system rejects write operations to the primary volume) Never: Can write to the primary volume even if the pair is split. Data: Cannot write to the primary volume when update copying fails. Status: Cannot write to the primary volume only when the storage system of the primary site cannot change the pair status of the secondary volume to PSUE No value is output if Range is Group.
Copy Pace	The copy speed Normal: Normal, Slow: Slow
Reverse Resync Mode	The setting status of the reverse resync mode Enable: Enabled, Disable: Disabled No value is output if I/F Version is less than 0x03.
Range	The pair resynchronization range LU: Only the pair to be operated Group: All pairs in the consistency group to which the pair to be operated belongs No value is output if I/F Version is less than 0x04.
Change CTG	The setting status of the change mode of the consistency group attribute None: Not changed

Item	Description
	Open/MF CTG: Changes to the consistency group common to Open/Mainframe CTG: Changes to the consistency group for the Mainframe No CTG: Changes to a pair that does not belong to the consistency group No value is output if I/F Version is 0x30 or less than 0x22.
Time Stamp	The transfer setting status of host time stamps to the secondary volume when resynchronizing pairs Enable: Enabled, Disable: Disabled No value is output if I/F Version is 0x20 or less than 0x16.
SCP	The setting status of SCP (Stage Change Pending) time change Enable: Enabled, Disable: Disabled No value is output if I/F Version is 0x30 or less than 0x22. No value is output if Change CTG is not CTG.
CTG	The consistency group ID No value is output if I/F Version is less than 0x04. The consistency group ID of the pair change destination when Change CTG is Open/MF CTG or CTG No value is output if Range is Group and Change CTG is No CTG. No value is output if Range is LU and Change CTG is None or No CTG.
Output items when Copy Type is URMF	
Error Stop	The setting status of the status change suppression when an error occurs Enable: Enabled, Disable: Disabled No value is output if I/F Version is less than 0x13. A value is output only when Mode is Delta or Delta(Force) and Range is LU.
Reverse Resync Mode	The setting status of the reverse resync mode Enable: Enabled, Disable: Disabled
Range	The pair resynchronization range Group: All pairs in the same mirror as the pair to be operated LU: Only the pair to be operated

Item	Description
	EXCTG: All pairs in the extended consistency group to which the pair to be operated belongs
Error Level	The range of the pair split at failure occurrence Group: All pairs in the same mirror as the pair to be operated are split LU: Only the pair to be operated is split No value is output if I/F Version is less than 0x12. No value is output if Range is Group.
Mode	The copy mode Normal: Normal Suspend: Suspend Delta: Delta resync Delta(Force): Forcible delta resync No value is output if I/F Version is less than 0x13.

RUN

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=RUN ++I/F
Version=0x40 ++VOL(CU:LDEV)=0x00:0x00,CTG=0x11,Execute Type=Receive Device
```

Detailed Information

Item	Description
Command	The command name
I/F Version	The command interface version
VOL(CU:LDEV)	The CU number and the LDEV number of the volume which is a target of RUN
CTG	The consistency group ID which is a target of RUN
Execute Type	The volume type for executing the command Receive Device: LDEV which receives the command

Item	Description
	Cmd. Device: Command device

Set Interface

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Set Interface
++I/F Version=0x40 ++APID=0x1234,I/F=0x0001,Local Cmd. Device=
```

Detailed Information

Item	Description
Command	The command name
I/F Version	The command interface version
APID	The application ID
I/F	The Interface number between the application and the storage system
Local Cmd. Device	The CU number and the LDEV number of the command device of the local storage system when using TPF (Transaction Processing Facility) No value is output if TPF is not used. No value is output if I/F Version is less than 0x33.

Start Calculation(Pair Sync)

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Start
Calculation(Pair Sync) ++Copy Type=URMF,I/F Version=0x11,Execute Type=Cmd. Device,
++P-VOL(CU:LDEV)=0x00:0x00,S-VOL(CU:LDEV)=0x00:0x01,MCU S/N=32652, MCU
SSID=0x1B60,RCU S/N=32652,RCU SSID=0x1B60,Timeout=3
```

Detailed Information

Item	Description
Command	The command name
Copy Type	The copy type TCMF: TrueCopy for Mainframe, URMF: Universal Replicator for Mainframe A request to a TrueCopy for Mainframe pair is not supported, so TCMF is not output.
I/F Version	The command interface version
Execute Type	The volume type for executing the command Receive Device: LDEV which receives the command Cmd. Device: Command device
P-VOL(CU:LDEV)	The CU number and the LDEV number of the primary volume
S-VOL(CU:LDEV)	The CU number and the LDEV number of the secondary volume
MCU S/N	The serial number of the local storage system
MCU SSID	The SSID to which a volume on the local storage system belongs
RCU S/N	The serial number of the remote storage system
RCU SSID	The SSID to which a volume on the remote storage system belongs
Timeout	The time difference in minutes from the command issuance time to the ending time of calculation of the percentage of synchronized data between P-VOL and S-VOL

Suspend Pair

Example 1: when the copy type is SIMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Suspend Pair
++Copy Type=SIMF,I/F Version=0x40,Execute Type=Cmd. Device
++P-VOL(CU:LDEV)=0x00:0x00,S-VOL(CU:LDEV)=0x00:0x02, MCU S/N=32652,MCU
SSID=0x1B60,RCU S/N=32652,RCU SSID=0x1B60, S-VOL Write=Enable,Suspend
Type=Steady,Range=LU,CTG=
```

Example 2: when the copy type is TCMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Suspend Pair
++Copy Type=TCMF,I/F Version=0x31,Execute Type=Cmd. Device
++P-VOL(CU:LDEV)=0x00:0x00,S-VOL(CU:LDEV)=0x00:0x05, MCU S/N=32652,MCU
SSID=0x1B60,RCU S/N=32653,RCU SSID=0x1B60, P-VOL Write=,S-VOL RD/WR=Disable,Swapping
Mode=, Reverse Resync Mode=Disable,Range=Group,CTG Attribute=CTG,
CTG=0x7F
```

Example 3: when the copy type is URMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Suspend Pair
++Copy Type=URMF,I/F Version=0x40,Execute Type=Cmd. Device
++P-VOL(CU:LDEV)=0x00:0x00,S-VOL(CU:LDEV)=0x00:0x01, MCU S/N=32652,MCU
SSID=0x1B60,RCU S/N=32653,RCU SSID=0x1B60, S-VOL RD/WR=Disable,Swapping Mode=,
Reverse Resync Mode=Disable,Range=Group,Suspend Mode=Purge, CPU Time=
```

Detailed Information

Item	Description
Output items common to Example 1 to Example 3	
Command	The command name
Copy Type	The copy type SIMF: ShadowImage for Mainframe, TCMF: TrueCopy for Mainframe, URMF: Universal Replicator for Mainframe
I/F Version	The command interface version
Execute Type	The volume type for executing the command Receive Device: LDEV which receives the command Cmd. Device: Command device
P-VOL(CU:LDEV)	The CU number and the LDEV number of the primary volume
S-VOL(CU:LDEV)	The CU number and the LDEV number of the secondary volume
MCU S/N	The serial number of the local storage system
MCU SSID	The SSID to which a volume on the local storage system belongs

Item	Description
	The SSID to which the primary volume belongs for operating ShadowImage for Mainframe pairs
RCU S/N	The serial number of the remote storage system The same value as MCU S/N is output for operating ShadowImage for Mainframe pairs
RCU SSID	The SSID to which a volume on the remote storage system belongs The SSID to which the secondary volume belongs for operating ShadowImage for Mainframe pairs
Output items when Copy Type is SIMF	
S-VOL Write	Indicates whether the writing to the secondary volume is enabled Enable: Enabled, Disable: Disabled
Suspend Type	The suspend type Steady: Normal suspend, Quick: High-speed suspend
Range	The suspend range LU: Only the pair to be operated Group: All pairs in the consistency group to which the pair to be operated belongs No value is output if I/F Version is less than 0x04.
CTG	The consistency group ID No value is output if I/F Version is less than 0x04. No value is output if Range is LU.
Output items when Copy Type is TCMF	
P-VOL Write	Indicates whether the writing to the primary volume is enabled Enable: Enabled, Disable: Disabled No value is output if I/F Version is less than 0x10 or if Range is Group.
S-VOL RD/WR	Indicates whether the Read/Write access to the secondary volume is enabled Enable: Enabled, Disable: Disabled No value is output if I/F Version is less than 0x03.
Swapping Mode	The setting status of the swapping mode Enable: Enabled, Disable: Disabled

Item	Description
	No value is output if I/F Version is less than 0x44.
Reverse Resync Mode	The setting status of the reverse resync mode Enable: Enabled, Disable: Disabled No value is output if I/F Version is less than 0x03.
Range	The suspend range LU: Only the pair to be operated Group: All pairs in the consistency group to which the pair to be operated belongs No value is output if I/F Version is less than 0x04.
CTG Attribute	The consistency group attribute Open/MF CTG: Consistency group common to Open/Mainframe CTG: Consistency group for Mainframe No value is output if I/F Version is 0x30 or less than 0x22. No value is output if Range is LU.
CTG	The consistency group ID No value is output if I/F Version is less than 0x04. No value is output if Range is LU.
Output items when Copy Type is URMF	
S-VOL RD/WR	Indicates whether the Read/Write access to the secondary volume is enabled Enable: Enabled, Disable: Disabled
Swapping Mode	The setting status of the swapping mode Enable: Enabled, Disable: Disabled No value is output if I/F Version is less than 0x44.
Reverse Resync Mode	The setting status of the reverse resync mode Enable: Enabled, Disable: Disabled
Range	The suspend range LU: Only the pair to be operated Group: All pairs in the consistency group to which the pair to be operated belongs EXCTG: All pairs in the extended consistency group to which the pair to be operated belongs

Item	Description
Suspend Mode	Indicates how to handle updated data that is not reflected in the secondary volume Flush: The updated data is reflected when suspending a pair. Purge: The updated data is not reflected when suspending a pair. However, the updated data is reflected when the pair is resynchronized later.
CPU Time	The CPU time stamp value in the form of YYYY/MM/DD hh:mm:ss No value is output if Suspend Mode is Purge.

Suspend Pairs

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=Suspend Pairs
++I/F Version=0x40 ++CU=0x00,LDEV={0x02},Num. of LDEVs=1,S-VOL Write=Enable, Suspend
Type=Steady,Mode=PAIR & COPY(PD)
```

Detailed Information

Item	Description
Command	The command name
I/F Version	The command interface version
CU	The CU number of the secondary volume
LDEV	The LDEV number of the secondary volume
Num. of LDEVs	The number of secondary volumes
S-VOL Write	Indicates whether the writing to the secondary volume is enabled Enable: Enabled, Disable: Disabled
Suspend Type	The suspend type Steady: Normal suspend, Quick: High-speed suspend
Mode	The status of the pair to be suspended PAIR: Suspends only the pair in the Pair status PAIR & COPY (PD): Suspends the pending pair as well

Item	Description
	No value is output if I/F Version is less than 0x10.

M Series

DEL PATH

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=DEL PATH
++MCU S/N=02584,MCU SSID=0x1700,RCU S/N=32653,RCU SSID=0x1701
```

Detailed Information

Item	Description
Command	The command name
MCU S/N	The serial number of the local storage system
MCU SSID	The SSID to which a volume on the local storage system belongs
RCU S/N	The serial number of the remote storage system
RCU SSID	The SSID to which a volume on the remote storage system belongs

EST PAIR

Example 1: when the copy type is SIMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept, from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,
Seq.=xxxxxxxxxx
+Command=EST PAIR ++P-VOL(LDEV)=0x03,S-VOL(LDEV)=0x02,MCU S/N=30176,MCU SSID=0xC804,
RCU S/N=30176,RCU SSID=0xC805,Copy Type=SIMF,Copy Msg=, S-VOL Write=Enable,Online
Chk=Disable,Force=, Initial Copy=None(Suspend),NoDelay=Disable,Copy
Pace=Normal
```

Example 2: when the copy type is TCMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=EST PAIR
```

```
++P-VOL(LDEV)=0x02,S-VOL(LDEV)=0x02,MCU S/N=30176,MCU SSID=0xC804, RCU S/N=30179,RCU
SSID=0xC805,Copy Type=TCMF,Copy Msg=Disable, Fence Level=Never,Online
Chk=Disable,,Force=Disable, Initial Copy=Diff,S-VOL Wr(PSUE)=Enable,NoDelay=Disable,
Copy Pace=High
```

Detailed Information

Item	Description
Output items common to Example 1 and Example 2	
Command	The command name
P-VOL(LDEV)	The LDEV number of the primary volume
S-VOL(LDEV)	The LDEV number of the secondary volume
MCU S/N	The serial number of the local storage system
MCU SSID	The SSID to which a volume on the local storage system belongs The SSID to which the primary volume belongs for operating ShadowImage for Mainframe pairs
RCU S/N	The serial number of the remote storage system The same value as MCU S/N is output for operating ShadowImage for Mainframe pairs
RCU SSID	The SSID to which a volume on the remote storage system belongs The SSID to which the secondary volume belongs for operating ShadowImage for Mainframe pairs
Copy Type	The program product name SIMF: ShadowImage for Mainframe, TCMF: TrueCopy for Mainframe
Output items when Copy Type is SIMF	
Copy Msg	The setting status of the message request Enable: Enabled, Disable: Disabled No value is output when Initial Copy is None(Suspend).
S-VOL Write	Indicates whether the writing to the secondary volume after the suspend is enabled Enable: Enabled, Disable: Disabled No value is output when Initial Copy is not None(Suspend).
Online Chk	The setting status of the online check

Item	Description
	Enable: Enabled, Disable: Disabled
Force	The setting status of the pair forcible recovery when the pair status is suspending Enable: Enabled, Disable: Disabled No value is output when Initial Copy is not Diff.
Initial Copy	The type of the pair creation operation None(Suspend): Creates pairs and suspends them without copying data from the primary volume to the secondary volume. Entire: Creates pairs and copies data from the primary volume to the secondary volume. Diff: Copies the difference between the primary volume and the secondary volume
NoDelay	The setting status of NoDelay Enable: Enabled, Disable: Disabled
Copy Pace	The copy speed Slow: Low, Normal: Normal
Output items when Copy Type is TCMF	
Copy Msg	The setting status of the message request Enable: Enabled, Disable: Disabled No value is output when Initial Copy is None.
Fence Level	The fence level to be set (conditions where the local storage system rejects write operations to the primary volume) Never: Can write to the primary volume even if the pair is split. Status: Cannot write to the primary volume only when the storage system of the primary site cannot change the pair status of the secondary volume to PSUE
Online Chk	The setting status of the online check Enable: Enabled, Disable: Disabled
Blank item	Nothing is output due to unused.
Force	The setting status of the pair forcible recovery when the pair is in suspending status Enable: Enabled, Disable: Disabled No value is output when Initial Copy is Diff.

Item	Description
Initial Copy	The type of the pair creation operation None: Creates pairs but does not copy data from the primary volume to the secondary volume Entire: Creates pairs and copies data from the primary volume to the secondary volume. Diff: Copies the difference between the primary volume and the secondary volume None(Suspend): Creates pairs and suspends them without copying data from the primary volume to the secondary volume.
S-VOL Wr(PSUE)	Indicates whether the writing to the secondary volume is enabled at the pair suspended error Enable: Enabled, Disable: Disabled
NoDelay	The setting status of NoDelay Enable: Enabled, Disable: Disabled
Copy Pace	The copy speed High: High speed Low: Low speed Default: Normal speed

EST PATH

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=EST PATH
++MCU S/N=02584,MCU SSID=0x1700,RCU S/N=32653,RCU SSID=0x1701, Controller ID=7
++{MCU Port,RCU Port,RCU CU}=[{1A,5A,0x01}],Num. of Paths=1
```

Detailed Information

Item	Description
Command	The command name
MCU S/N	The serial number of the local storage system
MCU SSID	The SSID to which a volume on the local storage system belongs

Item	Description
RCU S/N	The serial number of the remote storage system
RCU SSID	The SSID to which a volume on the remote storage system belongs
Controller ID	The controller ID of the remote storage system 5: USP V/VM, 6: VSP, 7: VSP G1000/G1500 and VSP F1500
MCU Port	The port name of the local storage system
RCU Port	The port name of the remote storage system
RCU CU	The CU number of the remote storage system
Num. of Paths	The number of paths to be created

SPLIT PAIRS

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=SPLIT PAIRS
++S-VOL(CU:LDEV)={0x00:0x41,0x00:0x43},Num. of Pairs=2, S-VOL Write=Enable,Suspend
Type=Steady
```

Detailed Information

Item	Description
Command	The command name
S-VOL(CU:LDEV)	The CU number and the LDEV number of the secondary volume of the pair to be suspended
Num. of Pairs	The number of the secondary volumes of the pair to be suspended
S-VOL Write	Indicates whether the writing to the secondary volume after the suspend is enabled Enable: Enabled, Disable: Disabled
Suspend Type	The suspend type Steady: Normal suspend, Quick: High-speed suspend

SUSP PAIR

Example 1: when the copy type is SIMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=SUSP PAIR
++P-VOL(LDEV)=0x02,S-VOL(LDEV)=0x02,MCU S/N=30176,MCU SSID=0xC804, RCU S/N=30176,RCU
SSID=0xC805,Copy Type=SIMF,S-VOL Write=Disable, Suspend Type=Steady,Force=Disable,
Suspend
Status=S-SUS
```

Example 2: when the copy type is TCMF

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx+Command=SUSP PAIR
++P-VOL(LDEV)=0x02,S-VOL(LDEV)=0x02,MCU S/N=30176,MCU SSID=0xC804, RCU S/N=30179,RCU
SSID=0xC805,Copy Type=TCMF, Force=Disable,Suspend Status=S-SUS,CPU Time=2015/12/28
13:12:24
```

Detailed Information

Item	Description
Output items common to Example 1 and Example 2	
Command	The command name
P-VOL(LDEV)	The LDEV number of the primary volume
S-VOL(LDEV)	The LDEV number of the secondary volume
MCU S/N	The serial number of the local storage system
MCU SSID	The SSID to which a volume on the local storage system belongs The SSID to which the primary volume belongs for operating ShadowImage for Mainframe pairs
RCU S/N	The serial number of the remote storage system The same value as MCU S/N is output for operating ShadowImage for Mainframe pairs
RCU SSID	The SSID to which a volume on the remote storage system belongs The SSID to which the secondary volume belongs for operating ShadowImage for Mainframe pairs
Copy Type	The program product name

Item	Description
	SIMF: ShadowImage for Mainframe, TCMF: TrueCopy for Mainframe
Output items when Copy Type is SIMF	
S-VOL Write	Indicates whether the writing to the secondary volume after the suspend is enabled Enable: Enabled, Disable: Disabled
Suspend Type	The suspend type Steady: Normal suspend, Quick: High-speed suspend
Force	The setting status of the pair forcible suspension when the pair is in copying status Enable: Enabled, Disable: Disabled
Suspend Status	The suspend status P-SUS: P-VOL suspended by error S-SUS: S-VOL suspended Hold: State change pending
Output items when Copy Type is TCMF	
Force	The setting status of the pair forcible suspension when the pair is in copying status Enable: Enabled, Disable: Disabled
Suspend Status	The suspend status P-SUS: P-VOL obstacle suspend S-SUS: S-VOL suspend Hold: State change pending
CPU Time	The CPU time when suspending No value is output if it is not specified at the command option.

TERM PAIR

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band MF,uid=user-name,,
[Config Command],,,Accept,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxx +Command=TERM PAIR
++P-VOL(LDEV)=0x02,S-VOL(LDEV)=0x02,MCU S/N=30176,MCU SSID=0xC804, RCU S/N=30179,RCU
SSID=0xC805,Copy Type=SIMF,Force=Disable
```

Detailed Information

Item	Description
Command	The command name
P-VOL(LDEV)	The LDEV number of the primary volume
S-VOL(LDEV)	The LDEV number of the secondary volume
MCU S/N	The serial number of the local storage system
MCU SSID	The SSID to which a volume on the local storage system belongs The SSID to which the primary volume belongs for operating ShadowImage for Mainframe pairs
RCU S/N	The serial number of the remote storage system The same value as MCU S/N is output for operating ShadowImage for Mainframe pairs
RCU SSID	The SSID to which a volume on the remote storage system belongs The SSID to which the secondary volume belongs for operating ShadowImage for Mainframe pairs
Copy Type	The program product name SIMF: ShadowImage for Mainframe, TCMF: TrueCopy for Mainframe
Force	The setting status of the pair forcible suspension when the pair is in copying or suspending status Enable: Enabled, Disable: Disabled

User Directed Space Release

Example

```
09xx,YYYY/MM/DD,HH:MM:SS,xxx, 00:00,In-band MF,<Host>,,
[ConfigCommand],,,Accept,from=xxxxxxxxxxxxxx, AP=xxxxxx, Seq.=xxxxxxxxxx
+xxxxxxxxxxxxxxx xxxxxxxxxxxxxxx
+xxxxxxxxxxxxxxx xxxxxxxxxxxxxxx xxxxxxxxxxxxxxx xxxxxxxxxxxxxxx
```

FC-SP

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band OPEN,<Host>,,,
[FC-SP],,,Normal end,from=xxxxxxxxxxxxxxxx,,Seq.=xxxxxxxxxx
```

User Auth

[User Auth] Login

Example 1: When login succeeded

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band OPEN,uid=user-name,,
[User Auth],Login,,Normal end,from=xxxxxxxxxxxxxxxx,
AP=0xXXXX,Seq.=xxxxxxxxxx
```

Example 2: When lockout occurred

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band OPEN,uid=user-name,,
[User Auth],Login,,Error,from=xxxxxxxxxxxxxxxx, AP=0xXXXX,Seq.=xxxxxxxxxx
+Lockout=Yes
```

Detailed Information

Item	Description
Lockout	Indicates whether the user account is locked out or not Yes: Locked out, No: Not locked out

[User Auth] Logout

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band OPEN,uid=user-name,,
[User Auth],Logout,,Normal end,from=xxxxxxxxxxxxxxxx,
AP=0xXXXX,Seq.=xxxxxxxxxx
```

Chapter 7: Audit log examples of PIN Deletion Tool operation

This topic provides examples and descriptions of the audit logs produced by the PIN Deletion Tool.

For detailed information on the version numbers in log output examples, see the table for format changes for each version number in Log output formats for different versions (on page 35).

[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

```
08xx,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.=xxxxxxxxxx
+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

Appendix A: Audit log user operations

This topic describes the Device Manager - Storage Navigator operation and the corresponding operation name output to audit logs. A user can perform an operation either using a Device Manager - Storage Navigator menu, or clicking a button or using General Tasks in the main window, and the same log is output for the operation selected in different ways.

Logging in or out

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		Control Panel Backup	--
		Control Panel Restore	
		Certificate Setting	
		Certificate Update	
		Communication Settings	
		Flash Disable/ Enable	
		Release HTTP Block	
		Set Up HTTP Block	

GUI operation	Audit Log Output		Notes
	Function Name	Operation Name	
		Update HCS Crt	
		Update SMIS CrtFiles	
		Upload SMIS ConfFile	
		WSUS Settings	

Using Maintenance menu

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Maintenance Components (General)	Operation on SVP	For details, see Audit log SVP operations.	
Reset Microprocessor	Resetting microprocessor	Maintenance	MP Restore PCB Restore
A menu that is displayed only when accessing SVP with the remote desktop connection.			

Using Actions menu

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Edit MP Units	Editing the MP unit setting	PROV	Edit MP Units

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
View Port conditions > Edit Mainframe Fibre Ports*	Setting the FICON port speed	PROV	Edit Ports(Speed)
* Click Edit Mainframe Fibre Ports in the Port Condition window.			

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
Create LDEVs	Creating an LDEV	PROV	Create LDEVs[3] CreateLdev[4] CreateAlus Edit Full Allocation Edit V-VOL Option Format LDEVs Format LDEVs(H) Format LDEVs(Q) LDEV Name
Delete LDEVs	Deleting an LDEV	PROV	Delete LDEVs[3] DeleteLdev[4] DeleteAlus
Edit LDEVs	Editing LDEV information	PROV	Edit Full Allocation Edit LDEVs(tier) Edit V-VOL Option LDEV Name UpdateAluaMode
Format LDEVs	Formatting an LDEV	PROV	Format LDEVs

GUI operation			Audit Log Output	
Submenu		**Description**	**Function Name**	**Operation Name**
		Formatting an LDEV using the Write to Control Blocks function	PROV	Format LDEVs(H)
		Quick formatting an LDEV	PROV	Format LDEVs(Q)
Interrupt Format Task[2]		Interrupting the format task for an LDEV	PROV	StopFormat
Block LDEVs		Blocking LDEVs	PROV	Block LDEVs
Restore LDEVs		Restoring an LDEV	PROV	Restore LDEVs
Force Restore LDEVs[2]		Restoring an LDEV forcibly	PROV	LdevForceRestore
Shred LDEVs		Shredding an LDEV	VS	Shred LDEVs Abort Shredding[1] End Shredding
Assign MP Unit		Assigning an MP unit	PROV	Assign MP Unit
Migration	Migrate Volumes	Directing migrate volumes	VM	Migrate Volumes
	Delete Migration Plans	Deleting migration plans	VM	Del Migration Plans
	Delete All Histories	Deleting all histories of migration operation	VM	Delete All Histories
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
Edit UUIDs		Changing UUID	PROV	Edit/Delete UUIDs
Delete UUIDs		Deleting UUID		
Expand V-VOLs		Increasing virtual volume capacity	PROV	Expand V-VOLs

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
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 Command Devices	Editing Command Devices	PROV	Edit Cmd Dev(Auth) Edit Cmd Dev(DevGrp) Edit Cmd Dev(Sec) Edit Command Devices
Release Mainframe Command Devices	Releasing TrueCopy for Mainframe command devices	Remote Replication	Delete Cmd.Dev
Force Delete Mainframe DP-VOLs [2]	Forcibly deleting a V-Vol for Dynamic Provisioning for Mainframe, Dynamic Tiering for Mainframe, or active flash for mainframe	PROV	Force Del MF V-VOLs
Unbind SLUs	Unbinding an LDEV with the SLU attribute from the LDEV with the ALU attribute	PROV	ExecBindingOperation
Verify LDEVs[2]	Verifying an LDEV	PROV	StartVerify
Interrupt Verification Task[2]	Interrupting the verification task for an LDEV	PROV	StopVerify

Notes:

1. Abort Shredding is output when a shredding operation is aborted from the Confirm window during a shredding operation by Shred LDEVs.
2. A menu that is displayed only when accessing SVP with the remote desktop connection.
3. This log is output when you create or delete a Thin Image (HTI only) volume or DP-VOL.
4. This log is output when you create or delete an internal volume or external volume.

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(Mode) Edit Host Grps(Name)
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	PROV	Add Hosts
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 Alternative LUN Paths	Creating an alternative 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
View Host-Reserved LUNs > Release Host-Reserved LUNs[1]	Releasing Host-Reserved LUNs	PROV	Release HostReserved
Edit Asymmetric Access States	Editing Asymmetric Access States settings	PROV	UpdateAsymmetricAccessStatePerHG
Edit Ports	Editing port settings	PROV	Edit Ports(Address) Edit Ports(Attr) Edit Ports(Security) Edit Ports(Speed)

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
			Edit Ports(Topology)
Edit T10 PI Mode	Editing T10 PI mode settings on ports	PROV	EditT10piMode

Notes:

1. Release Host-Reserved LUNs window opened from Host-Reserved LUNs window.
2. 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.
3. If one or more settings end abnormally when you have applied at one time, the output log information is *Error*, not *Warning*.

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
Create iSCSI Targets	Creating iSCSI targets	PROV	CreateiScsiTarget
	Editing CHAP users assigned to iSCSI targets	PROV	EditTargetChapUser
Delete iSCSI Targets	Deleting iSCSI targets	PROV	DeleteiScsiTarget
Edit iSCSI Targets	Editing iSCSI target settings	PROV	EditiScsiTarget
	Editing CHAP users assigned to iSCSI targets	PROV	EditTargetChapUser
Add Hosts	Adding hosts to selected iSCSI targets	PROV	CreateiScsiName
Remove Hosts	Removing hosts from selected iSCSI targets	PROV	DeleteiScsiName

GUI operation			Audit Log Output	
Submenu		**Description**	**Function Name**	**Operation Name**
Delete Login iSCSI Names		Deleting unnecessary iSCSI names	PROV	DeleteLoginiScsiName
Edit Host		Editing host settings	PROV	EditiScsiName EditiScsiNickName
Create Alternative LUN Paths		Creating an alternative 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
View Host-Reserved LUNs > Release Host-Reserved LUNs*		Releasing Host-Reserved LUNs	PROV	Release HostReserved
Edit Ports		Editing port settings	PROV	Edit Ports(Security) Edit Ports(Speed) EditPortInfo EditiSNS
		Editing the setting information of users with CHAP authentication on ports	PROV	EditiScsiInitiatorUser
Authentication	Add CHAP Users	Adding CHAP users to selected iSCSI targets	PROV	CreateRemoteChapUser
	Remove CHAP Users	Removing CHAP users from selected iSCSI targets	PROV	DeleteRemoteChapUser
	Edit CHAP User	Editing CHAP user settings	PROV	EditRemoteChapUser

GUI operation			Audit Log Output	
Submenu		Description	Function Name	Operation Name
	Remove Target CHAP Users	Removing CHAP users assigned to iSCSI targets	PROV	DeleteTargetChapUser
	Remove Port CHAP Users	Deleting the setting information of users with CHAP authentication on ports	PROV	DeleteiScsiInitiatorUser
*Release Host-Reserved LUNs window opened from Host-Reserved LUNs window.				

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
Delete Pools	Deleting a pool	PROV	Edit/Delete Pools Pool Name
Expand Pool	Increasing pool capacity	PROV	Create/Expand Pools
Shrink Pool	Decreasing pool capacity	PROV	Shrink Pool
Stop Shrinking Pools	Stop decreasing pool capacity	PROV	Stop Shrinking Pool
Edit Pools	Editing pool settings	PROV	Edit/Delete Pools Pool Name
Edit External LDEV Tier Rank	Editing the external LDEV tier ranks of pool volumes that are assigned to a pool	PROV	Edit External LDEV Tier Rank

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
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
Initialize Pools*	Initializing a pool	PROV	Initialize Pools
Edit Tiering Policies	Editing Tiering Policies	PROV	Edit Tiering Policy
Complete SIMs	Completing SIMs related to a pool	PROV	Complete SIMs
*A menu that is displayed only when accessing SVP with the remote desktop connection.			

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
Create Parity Groups	Creating parity groups	PROV	CreateParityGroups
Remove Parity Groups	Removing parity groups	PROV	DeleteParityGroups
Format Parity Groups	Formatting parity groups	PROV	StartParityGroupsFormat
Interrupt Format Task*	Interrupting the format task for a parity group	PROV	StopFormat
Edit Encryption	Enabling or disabling data encryption	ENC	Edit Encryption

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
Edit Parity Groups	Enabling or disabling accelerated compression	PROV	UpdateParityGroupSettings
Assign Spare Drives	Assigning or releasing the assignment of spare drives	PROV	UpdateSpareDrives
*This menu is displayed only when the SVP is remotely connected.			

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
Edit External Volumes	Editing external volume settings	UVM	Edit ES VOLs
Disconnect External Volumes	Disconnecting external volumes	UVM	Disconnect ES VOLs
Reconnect External Volumes	Reconnecting an external volume	UVM	Reconnect ES VOLs
Assign MP Unit	Assigning an 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 WWNs	Editing external WWN parameters	UVM	Edit External WWNs / iSCSI Targets
Edit External iSCSI Targets	Editing external iSCSI target parameters		

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
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
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
Add iSCSI Paths	Adding iSCSI paths	PROV	CreateiScsiPath
Delete iSCSI Paths	Deleting iSCSI paths	PROV	DeleteiScsiPath
Edit iSCSI Targets	Editing iSCSI targets	PROV	EditRemoteTargetUser

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
Create SI Pairs	Creating pairs for ShadowImage or ShadowImage for Mainframe	Local Replication	Create Pairs
Create TI Pairs	Creating pairs for Thin Image (HTI only)	Local Replication	Create Pairs
Operate TI Pairs	Creating pairs (HTI only), splitting pairs, resynchronizing pairs, and removing pairs for Thin Image Assigning and removing S-VOLs for Thin Image pairs	Local Replication	Create Pairs Split Pairs Resync Pairs Delete Pairs Assign S-VOLs Remove S-VOLs

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
Split Pairs	Splitting pairs for ShadowImage, ShadowImage for Mainframe, or Thin Image	Local Replication	Split Pairs
Resync Pairs	Resynchronizing pairs for ShadowImage, ShadowImage for Mainframe, or Thin Image	Local Replication	Resync Pairs
Suspend Pairs	Suspending pairs for ShadowImage or ShadowImage for Mainframe	Local Replication	Suspend Pairs
Delete Pairs	Deleting pairs for ShadowImage, ShadowImage for Mainframe, or Thin Image	Local Replication	Delete Pairs
Initialize Local Replica Pairs*	Initializing pairs for ShadowImage, ShadowImage for Mainframe, or Thin Image	Local Replication	Initialize
Assign Secondary Volumes	Assigning secondary volumes of Thin Image pairs	Local Replication	Assign S-VOLs
Remove Secondary Volumes	Removing secondary volumes of Thin Image pairs	Local Replication	Remove S-VOLs
Edit Local Replica Options	Editing option information for ShadowImage or ShadowImage for Mainframe	Local Replication	Edit Options

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
Edit SCP Time	Setting a SCP (State Change Pending) time to the mainframe host	PROV	Edit SCP Time
Reserve Mainframe CTGs	Reserving consistency groups for ShadowImage for Mainframe	Local Replication	Reserve CTG
Release Reserved Mainframe CTGs	Releasing reserved consistency groups for ShadowImage for Mainframe	Local Replication	Release Reserved CTG
* A menu that is displayed only when accessing SVP with the remote desktop connection.			

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
Create TC Pairs	Creating pairs for TrueCopy or TrueCopy for Mainframe	Remote Replication	Create Pairs[1]
Create UR Pairs	Creating pairs for Universal Replicator or Universal Replicator for Mainframe	Remote Replication	Create Pairs[1]
Create GAD Pairs	Creating pairs for global-active device	Remote Replication	Create Pairs[1]
		PROV	UpdateAluaMode

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
Split Pairs	Splitting pairs for TrueCopy, TrueCopy for Mainframe, Universal Replicator, or Universal Replicator for Mainframe	Remote Replication	Split Pairs[1]
Resync Pairs	Resynchronizing pairs for TrueCopy, TrueCopy for Mainframe, Universal Replicator, Universal Replicator for Mainframe, or global-active device	Remote Replication	Resync Pairs[1]
		PROV	UpdateAluaMode
Delete Pairs	Deleting pairs for TrueCopy, TrueCopy for Mainframe, Universal Replicator, Universal Replicator for Mainframe, or global-active device	Remote Replication	Delete Pairs[1]
Suspend Pairs	Suspending pairs for global-active device	Remote Replication	Suspend Pairs[1]
Force Delete Pairs (TC Pairs)	Force deleting pairs for TrueCopy and TrueCopy for Mainframe	Remote Replication	Delete Pairs[1]
Force Delete Pairs (UR Pairs)	Force deleting pairs for Universal Replicator and Universal Replicator for Mainframe	Remote Replication	Delete Pairs[1]
Force Delete Pairs (GAD Pairs)	Force deleting pairs for global-active device	Remote Replication	Delete Pairs[1]

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
Force Edit I/O Mode to Local	Force changing the I/O mode of the global-active device pair to Local	Remote Replication	I/O Mode Switch
Force Edit I/O Mode to Block	Force changing the I/O mode of the global-active device pair to Block	Remote Replication	I/O Mode Switch
Edit Pair Options	Editing pair options for TrueCopy, TrueCopy for Mainframe, Universal Replicator, or Universal Replicator for Mainframe	Remote Replication	Edit Pair Options[1]
Suspend Consistency Groups	Suspending pairs for global-active device by the consistency group	Remote Replication	Suspend Pairs
Resync Consistency Groups	Resynchronizing pairs for global-active device by the consistency group	Remote Replication	Resync Pairs
		PROV	UpdateAluaMode
Split Mirrors	Splitting mirrors for Universal Replicator and Universal Replicator for Mainframe	Remote Replication	Split Pairs[1]
Resync Mirrors	Resynchronizing mirrors for Universal Replicator and Universal Replicator for Mainframe	Remote Replication	Resync Pairs[1]
Delete Mirrors	Deleting mirrors for Universal Replicator and Universal Replicator for Mainframe	Remote Replication	Delete Pairs[1]

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
Edit Mirror Options	Editing mirror options for Universal Replicator and Universal Replicator for Mainframe	Remote Replication	Change Mirror Option[1]
Assign Remote Command Devices	Assigning remote command devices for Universal Replicator and Universal Replicator for Mainframe	Remote Replication	R-Cmd.Dev.
Release Remote Command Devices	Releasing remote command devices for Universal Replicator and Universal Replicator for Mainframe	Remote Replication	R-Cmd.Dev.
Edit Remote Replica Options	Editing remote replica options for TrueCopy, TrueCopy for Mainframe, Universal Replicator, Universal Replicator for Mainframe, or global-active device	Remote Replication	Edit Options
Edit SCP Time	Setting a SCP (State Change Pending) time to the mainframe host	PROV	Edit SCP Time
Edit Remote Replica Function Switch[2]	Editing system options for TrueCopy and TrueCopy for Mainframe	Remote Replication	Edit Options
Clear SIM[2]	Collective clearing SIMs for TrueCopy for Mainframe and Universal Replicator for Mainframe	Remote Replication	Clear SIM

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
Assign GAD Reserves	Assigning the GAD reserve attribute to a volume for the secondary volume of a global-active device pair	PROV	Set Virtual LDEV
Release GAD Reserved	Releasing the GAD reserve attribute from a volume for the secondary volume of a global-active device pair	PROV	Set Virtual LDEV

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. A menu that is displayed only when accessing SVP with the remote desktop connection.

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
Create Journals	Creating journal volumes for Universal Replicator and Universal Replicator for Mainframe	Remote Replication	Journal Vol
Delete Journals	Deleting journal volumes for Universal Replicator and Universal Replicator for Mainframe	Remote Replication	Journal Vol
Edit Journal Options	Editing journal options for Universal Replicator and Universal Replicator for Mainframe	Remote Replication	Change JNL Option

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
Assign MP Unit	Migrating the journal ownership for Universal Replicator and Universal Replicator for Mainframe	Remote Replication	Journal Owner
Initialize EXCTGs	Removing all journals from expanded consistency groups for Universal Replicator for Mainframe	Remote Replication	Edit EXCTG
Force Remove Journals from EXCTG	Forcibly removing journals from expanded consistency groups for Universal Replicator for Mainframe	Remote Replication	Journal Vol
Assign Journal Volumes	Assigning journal volumes for Universal Replicator and Universal Replicator for Mainframe	Remote Replication	Journal Vol
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.			

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
Add Remote Connection	Adding remote storage system connections	Remote Replication	Add RCU
		PROV	CreateiScsiPath

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
	Deleting iSCSI paths when connections cannot be added to remote storage systems	PROV	DeleteiScsiPath
Remove Remote Connections	Removing remote storage system connections	Remote Replication	Delete RCU
Edit Remote Connection Options	Editing remote storage system connection options	Remote Replication	Change RCU Option
Add Remote Paths	Adding remote storage system paths	Remote Replication	Add Path
Remove Remote Paths	Removing remote storage system paths	Remote Replication	Delete Path
Add SSIDs	Adding remote storage system SSIDs	Remote Replication	Add RCU
Remove SSIDs	Removing remote storage system SSIDs	Remote Replication	Delete RCU
Add Quorum Disks	Adding quorum disk IDs used by global-active device	Remote Replication	Add Quorum Disk ID
Remove Quorum Disks	Deleting quorum disk IDs used by global-active device	Remote Replication	Del Quorum Disk ID
Edit Quorum Disks	Editing the value of Read Response Guaranteed Time When Quorum monitoring has stopped for global-active device	Remote Replication	UpdateQuorumDisks
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.			

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
Compatible PAV	Add	CPAV	Add Alias[1, 2]
	Delete	CPAV	Delete Alias[1, 2]
Volume Retention Manager	Attribute	PROV	Edit VR Attribute[1]
	VTOC	PROV	VTOC[1]
XRC	Change XRC Option	XRC	Set XRC Option

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 you perform the Add Alias and Delete Alias operations at the same time, Delete Alias is executed first. If Delete Alias operation fails, Add Alias is not executed.

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
Data Retention	Attribute / S-VOL / Reserved/ Mode Clear / Retention term	PROV	Edit DRU Attribute[1]
	Expiration-Lock	PROV	DRU Expiration Lock[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.

Using Reports menu

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

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
Create Configuration Report	Creating a configuration report	BASE	Create Conf Report
Delete Reports	Deleting a configuration report	BASE	Delete Reports

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 MonitorMode

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
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
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 All Prio Port Set Prio Port[1, 2]
	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]
Server Priority Manager (WWN)	All Thresholds	SPM	Set All Prio WWN[1, 2]
	Setting priority for WWNs (Attribute / Upper)	SPM	Set All Prio WWN Set Prio WWN[1, 2]
	Changing WWN and SPM name	SPM	Set All Prio WWN Update WWN[1, 2]
	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]

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
	Adding SPM group and WWN	SPM	Set All Prio WWN Update SPMGrp[1, 2]
	Deleting SPM group	SPM	Set All Prio WWN SPMGrp Del/Chg Update SPMGrp[1, 2]
	Setting priority for SPM groups (Attribute / Upper)	SPM	Change SPMGrp[1, 2] Set All Prio WWN
	Changing SPM group name	SPM	Set All Prio WWN SPMGrp Del/Chg[1, 2]
	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 *Error*, not *Warning*.

Using Settings menu

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
Create User	Creating a new user account	ACM	CreateUser
Add Uses	Adding a user account to a user group	ACM	AddUsersToUserGroup
Remove Users	Removing a user from a user group	ACM	RemoveUsersFromUserGroup

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
Edit User	Changing the user authentication method	ACM	UpdateUserAuthentication
	Enabling or disabling a user account	ACM	DisableUsers EnableUsers
Delete Users	Deleting a user account	ACM	DeleteUsers
Change Password	Changing a password	ACM	UpdatePassword
Release Lockout	Releasing a user account from lockout	ACM	Release Lockout
Create User Group	Creating a new user group	ACM	CreateUserGroup
Edit User Group	Changing the name of a user group	ACM	UpdateUserGroupName
Delete User Groups	Deleting a user group	ACM	DeleteUserGroups
Edit Resource Group Assignment	Changing the resource group assignment to a user group	ACM	UpdateUserGroupResourceGrpBmp
	Changing the setting of all resource groups assignment to a user group	ACM	UpdateUserGroupAllResourceGrp
Edit Role Assignment	Changing the role assignment of a user group	ACM	UpdateUserGroupRole
View External Authentication Server Properties	Setting up Server	ACM	Setup Server

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
Create CLPRs	Creating new CLPRs	VPM	Edit CLPR
Edit CLPR	Editing a CLPR		
Delete CLPRs	Deleting CLPRs		
Migrate CLPR Resources	Migrating parity groups to another CLPR		
Edit Virtualization Management Settings	Editing Virtualization Management Settings	PROV	Set Virtual LDEV

GUI operation			Audit Log Output	
Submenu		**Description**	**Function Name**	**Operation Name**
Encryption Keys	Create Keys	Creating encryption keys	ENC	Add keys to DKC[1] Backup Keys to Serv(Auto)[10] Create Keys[2] Create Keys On Serv[1, 9] Delete Keys on Serv(Auto)[10]

GUI operation			Audit Log Output	
Submenu		Description	Function Name	Operation Name
				Succeeded backup to Serv[10]
	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 Device Manager - 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] Succeeded backup to Serv[9]
	Restore Keys from File	Restoring encryption keys with backup files on the Device Manager - 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]

GUI operation			Audit Log Output	
Submenu		Description	Function Name	Operation Name
	Restore Keys forcibly from File	Restoring encryption keys forcibly from backup files on the management client	ENC	Restore Keys Restore Keys fr File(Forcibly)[9]
	Restore Keys forcibly from Server	Restoring encryption keys forcibly from backup files on the key management server	ENC	Restore Keys Restore Keys fr Serv(Forcibly)[9]
	View Backup Keys on Server	Deleting encryption keys backed up on the key management server	ENC	Delete Keys on Server[9]
	Edit Encryption Environmental Settings	Configuring encryption environment settings	ENC	Add keys to DKC[3] Backup Keys to Serv(Auto)[3, 11] Create Keys[4] Create KEK Dynamic[5, 9, 11] Create Keys On Serv[3, 9] DEK assign SpareDisk[6] DEK delete[7] Delete KEK Dynamic[8, 9] Delete Keys on Serv(Auto)[3] Edit ENC Settings Register KEK Dynamic[5, 9] Rekey CEK[6, 7] Rekey KEK Dynamic[11] Set Up Key Mng Serv Succeeded backup to Serv[3]

GUI operation			Audit Log Output	
Submenu		Description	Function Name	Operation Name
	Edit Password Policy (Backup Encryption Keys)	Editing password policies for backing up encryption keys	ENC	Edit Password Policy
Edit Audit Log Settings		Setting up syslog and FTP server	AuditLog	SIM Complete Set FTP Server Set Syslog Server
Login Message		Setting login message	ACM	Set Login Message

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
10. Output when the key management server is Enable
11. Output when the connection destination of the key management server is changed

GUI operation		Audit Log Output	
Submenu	Description	Function Name	Operation Name
Edit Storage System	Editing storage system information	BASE	Edit Storage System

GUI operation		Audit Log Output	
Submenu	**Description**	**Function Name**	**Operation Name**
Install Licenses	Installing licenses	PP KEY	Install Licenses
	Installing licenses using the key code file	PP KEY	Install Licenses
Remove Licenses	Uninstalling licenses	PP KEY	Remove Licenses
Enable Licenses	Enabling licenses	PP KEY	Enable Licenses
Disable Licenses	Disabling licenses	PP KEY	Enable Licenses
Update License Statuses	Updating license statuses	PP KEY	Update License Status
Edit Alert Settings	Setting a destination of the alert	BASE	Edit Alert Setting
	Editing settings in the Syslog tab	BASE	Edit SIM Syslog Serv
	Editing settings in the SNMP tab	SNMP	UpdateSnmpSetting
	Editing settings in the E-mail tab	E-Mail	MailAddress Write Valid Flag Update
Edit Advanced System Settings	Editing advanced system settings	BASE	Advanced Settings

Using Maintenance Utility menu

If you select a submenu item of the Maintenance Utility menu, another window opens and displays the Maintenance Utility operation window. For details about the correspondence between the operations on the Maintenance Utility window and the operation names output to the audit log, see Using Maintenance Utility window (on page 625).

Using Maintenance Utility window

GUI operation			Audit Log Output	
Window Name	**Tab**	**Operation**	**Function Name**	**Operation Name**
Storage System	Chassis	Install > Controller Boards(CTL0 2/11)	Maintenance	Install
		Install > Controller Chassis	Maintenance	Install
		Install > DKU	Maintenance	Install
		Remove > Controller Boards(CTL0 2/11)	Maintenance	Remove
		Remove > Controller Chassis	Maintenance	Remove
		Remove > DKU	Maintenance	Remove
		Locate LED > Turn on	Maintenance	Turn On Locate LEDs
		Locate LED > Turn off	Maintenance	Turn Off Locate LEDs
	Drives	Install	Maintenance	Install
		Remove	Maintenance	Check Remove Remove
		Block	Maintenance	Block
		Stop Copy	Maintenance	Stop Copy
	CTLs	Replace (Type Change)	Maintenance	Block(Type Change) Restore(Type Change)

GUI operation			Audit Log Output	
Window Name	**Tab**	**Operation**	**Function Name**	**Operation Name**
	Memory	Change Cache Memories Configurarion	Maintenance	Install Block(Type Change) Restore(Type Change) Block(Remove) Restore(Remove)
		Install > Shared Memory	Maintenance	Install
		Remove > Shared Memory	Maintenance	Remove
	BKMFs	Replace (Type Change)	Maintenance	Block(Type Change) Restore(Type Change)
	CHBs	Replace (Type Change)	Maintenance	Block(Type Change) Restore(Type Change)
		Install > Mounting location	Maintenance	Install
		Remove > Mounting location	Maintenance	Remove
		Change SFP type by clicking SFP Status	Maintenance	Change SFP Type
	DKBs	Replace (Type Change)	Maintenance	Block(Type Change) Restore(Type Change)
		Install > Mounting location	Maintenance	Install

GUI operation			Audit Log Output	
Window Name	**Tab**	**Operation**	**Function Name**	**Operation Name**
		Remove > Mounting location	Maintenance	Remove
	X-paths	Replace > Mounting location	Maintenance	Block Restore
		Replace X-path related parts > Specify the HSN box	Maintenance	Block Restore
	DKCPSs	Block	Maintenance	Block

GUI operation			Audit Log Output	
Window Name	**Tab**	**Operation**	**Function Name**	**Operation Name**
HSN Box	ISWs	Replace > Mounting location	Maintenance	Block Restore
Controller Chassis	CTLs	Replace > Specify the CTL	Maintenance	Block Restore
		Replace > Cache Memory > Specify the CTL	Maintenance	Block Restore
	BKMFs	Block	Maintenance	Block
		Replace	Maintenance	Block Restore
	CFMs	Replace	Maintenance	Block Restore
	HIEs	Replace	Maintenance	Block

GUI operation			Audit Log Output	
Window Name	**Tab**	**Operation**	**Function Name**	**Operation Name**
				Restore
	CHBs	Replace	Maintenance	Block Restore
		View Port Status	Maintenance	Change SFP Type
		Change SFP type by clicking SFP Status	Maintenance	Change SFP Type
	DKBs	Replace	Maintenance	Block Restore
	LANBs	Reset HUB	Maintenance	Reset HUB
	PSs	Block	Maintenance	Block
Drive Box	Drives	Install	Maintenance	Install
		Remove	Maintenance	Check Remove Remove
		Block	Maintenance	Block
		Stop Copy	Maintenance	Stop Copy
	ENCs	Replace	Maintenance	Block Restore

GUI operation		Audit Log Output	
Selection Item		**Function Name**	**Operation Name**
System Management	Edit System Parameters	Maintenance	Edit System Param
	Force Release System Lock	Maintenance	Force Rls SysLock
	Reboot GUM	Maintenance	Reboot GUM

GUI operation		Audit Log Output	
Selection Item		Function Name	Operation Name
	Boot System Safe Mode	Maintenance	Boot System SafeMode

GUI operation	Audit Log Output	
Selection Item	Function Name	Operation Name
Click System Locked on the upper right of the window	Maintenance	Force Rls SysLock

When operations are locked

The following table describes the correspondence between the window that is opened when you click the icon (or) on the top of the window and the audit log that is output due to the GUI operation.

GUI operation		Audit Log Output	
Window Name	Description	Function Name	Operation Name
Operation Lock Properties	Canceling all locks forcibly	BASE	Unlock Forcibly

Using External API

External API 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

GUI operations	Audit Log Output	
	Function Name	Operation Name
Issuing OneTimeKey from Hitachi Command Suite	BASE	HCSSO SetOneTimeKey
Launching Device Manager - Storage Navigator from Hitachi Command Suite		HCSSO Authentication

Appendix B: 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

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

SVP Operations		Audit Log Output	
Function	Operation	Function Name	Operation Name
Maintenance	Replace	Maintenance	Replace
Maintenance	Replace	Maintenance	Set Battery Life
Maintenance	Drive Interrupt	Maintenance	Drive Interrupt
Maintenance	Restore	Maintenance	Restore
Maintenance	Restore	Maintenance	MP Restore

SVP Operations		Audit Log Output	
Function	**Operation**	**Function Name**	**Operation Name**
Maintenance	Restore	Maintenance	DMA Restore
Maintenance	Restore	Maintenance	DRR Restore
Maintenance	Size Change	Maintenance	Size Change
Maintenance	Switch SVP	Maintenance	Switch SVP
Maintenance	Transfer Config	Maintenance	Transfer Config

Using Initial Setting button

SVP Operations		Audit Log Output	
Function	**Operation**	**Function Name**	**Operation Name**
Copy Config Files	All Configuration Files	Install	All Config
Copy Config Files	Create Configuration Backup	Install	Backup Config
Change Emulation Type	Change Emulation Type	Install	Dku Emulation
Set Flash Drive ORM Value	FlashDrive ORM Value	Install	FlashDrive ORM Value
Initialize ORM Value	Initialize ORM Value	Install	Initialize ORM Value
NEW Installation	NEW Installation	Install	NEW Installation
Set Machine Install Date	Set Machine Install Date	Install	Machine Install Date
Copy Config Files	Restore Configuration	Install	Restore Config
Setting Battery Life	Setting Battery Life	Install	Set Battery Life
Set IP address	Set IP address	Install	Set IP address
Set Subsystem Time	Set Subsystem Time	Install	Set Subsystem Time
Set System Option/Tuning	System Option	Install	System Option
Set System Option/Tuning	System Tuning	Install	System Tuning

Using Micro Program Install button

SVP Operations		Audit Log Output	
Function	**Operation**	**Function Name**	**Operation Name**
Micro Program Install	Micro Program	Install	Micro Program

Using Information button

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 ▪ Reset	Information	Threshold Value
Online Read Margin	▪ Alter ▪ Reset	Information	ORM Value

Using Monitor button

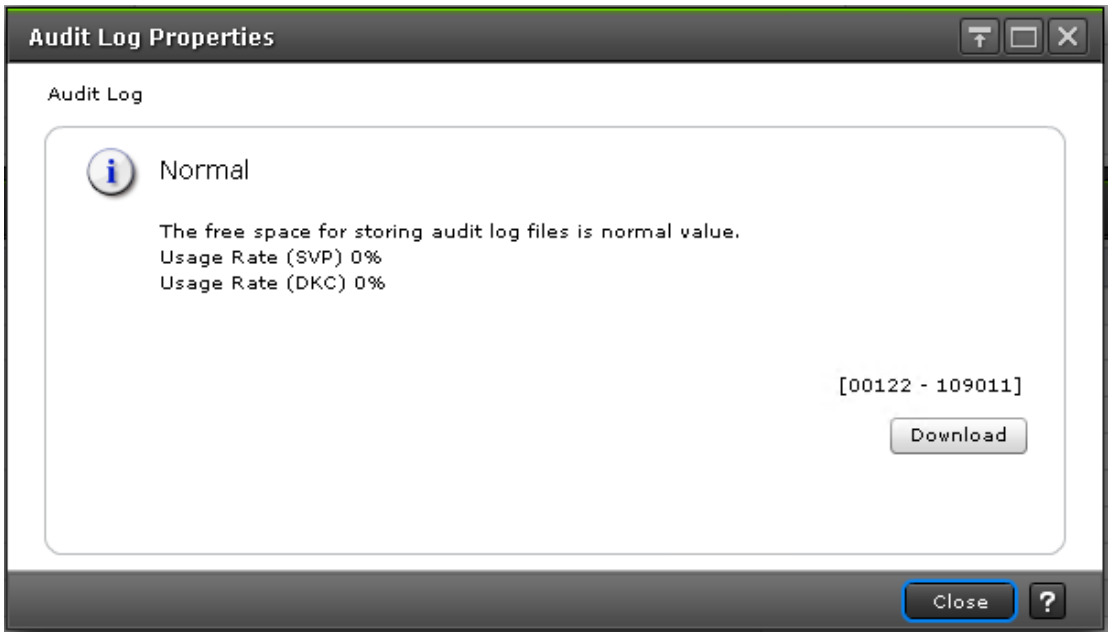
SVP Operations		Audit Log Output	
Function	**Operation**	**Function Name**	**Operation Name**
Threshold	Threshold	Monitor	Threshold

Appendix C: Audit log GUI reference

This topic describes the audit log screens in the Device Manager - 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 window

Use this window to download audit log files to the Device Manager - Storage Navigator computer.



Item	Description
Download	This option downloads audit log: Audit log information file 1 and Audit log information file 2 to Device Manager - Storage Navigator computer. Audit log information file 1 includes logs for operations from Device Manager - Storage Navigator and SVP, and logs for various kinds of operations for Maintenance Utility.

Item	Description
	Audit log information file 2 includes logs for commands sent from hosts, computers using CCI, or hosts using Business Continuity Manager, and logs for events about encryption keys.

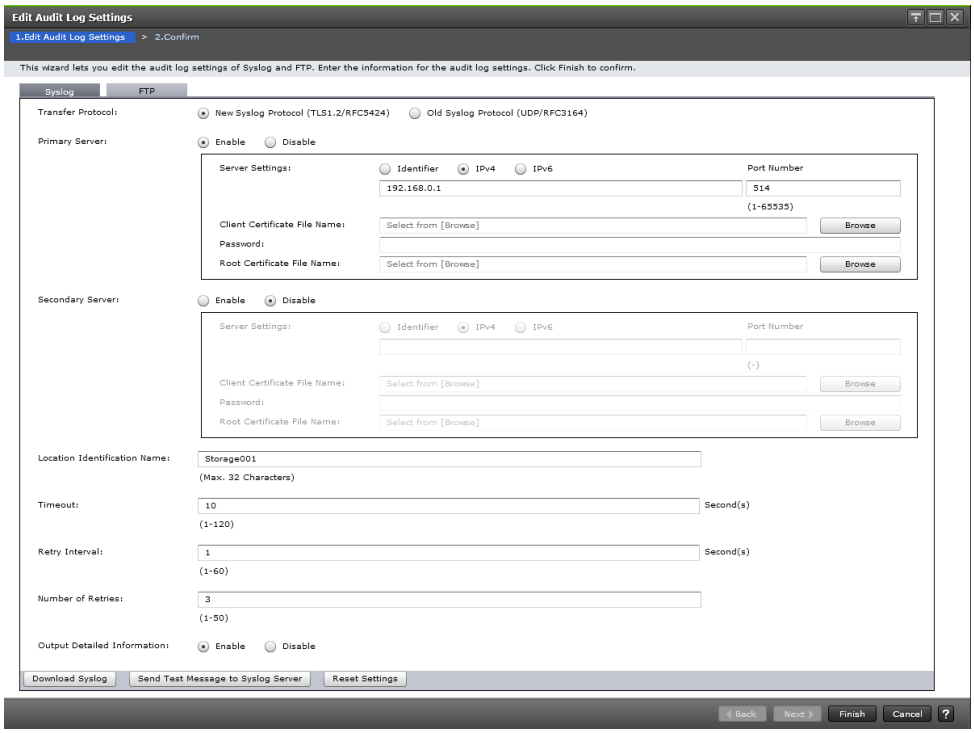
Edit Audit Log Settings wizard

Use the Edit Audit Log Settings wizard to transfer the audit log or download a syslog file to the Device Manager - Storage Navigator computer.

Edit Audit Log Settings window

- Syslog tab (on page 635)
- FTP tab (on page 638)

Syslog tab



Item	Description
Transfer Protocol	Selects a protocol to transfer the audit log. ▪ New Syslog Protocol (TLS1.2/RFC5424) ▪ Old Syslog Protocol (UDP/RFC3164)

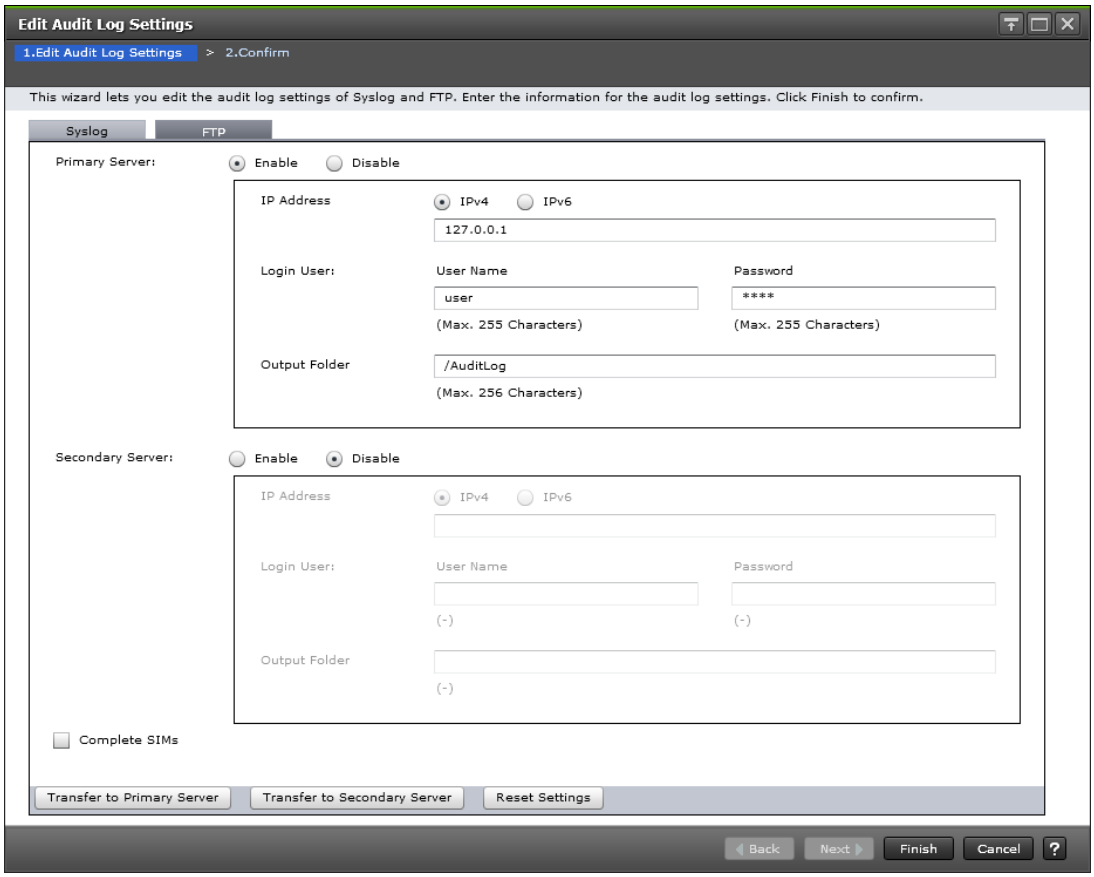
Item	Description
Primary Server	Selects whether to use the syslog server. ▪ Enable: Transfers the audit log to the syslog server. ▪ Disable: Do not transfer the audit log to the syslog server.
Primary Server- Server settings	Specify the IPv4 address, IPv6 address, or host name of the server that you want to configure as the syslog server. To specify the host name, select Identifier and then enter up to 255 characters of alphabets, numerals, and symbols (! $ % - . @ _ ` ~).
Primary Server- Port Number	Enters a port number to be used at the syslog server.
Primary Server- Client Certificate File Name	Specifies a certificate file. Click Browse, and then specify a certificate file. Specifies this item only when New Syslog Protocol (TLS1.2/ RFCS5424) is selected at Transfer Protocol.
Primary Server- Password	Enters a password for the client certificate. Up to 128 characters can be entered for the password. Allowed characters are alphanumeric characters and symbols: ! # $ % & ' ( ) * + , - . / : ; < = > ? @ [\ ] ^ _ ` { | } ~. Inputs this item only when Client Certificate File Name is specified.
Primary Server- Root Certificate File Name	Specifies a certificate file. Click Browse, and then specify a certificate file. Specifies this item only when New Syslog Protocol (TLS1.2/ RFCS5424) is selected at Transfer Protocol.
Secondary Server	Selects whether to use an alternative server (secondary server) to the syslog server. ▪ Enable: Transfers the audit log to the secondary server. ▪ Disable: Do not transfer the audit log to the secondary server.
Secondary Server- Server Setting	Enters an IP address or a host name of a server you want to set as a secondary server. The restriction for the available values is the same as that of Primary Server- Server Setting.
Secondary Server- Port Number	Enters a port number to be used on the secondary server.
Secondary Server- Client Certificate File Name	Specifies a certificate file. Click Browse, and then specify a certificate file. Specifies this item only when New Syslog Protocol (TLS1.2/ RFCS5424) is selected at Transfer Protocol.

Item	Description
Secondary Server-Password	Enters a password for the client certificate. Up to 128 characters password can be entered. The restriction for the available values is the same as that of Primary Server- Server Setting.
Secondary Server-Root Certificate File Name	Specifies a certificate file. Click Browse, and then specify a certificate file. Specifies this item only when New Syslog Protocol (TLS1.2/RFCS5424) is selected at Transfer Protocol.
Location Identification Name	Enters an arbitrary name for the storage system that transfers the audit log to the syslog servers, so that you can identify the storage system. Enter 32 characters at the maximum. Allowed characters are alphanumeric characters and symbols: ! " # $ % & ' ( ) * + - . / : ; < = > ? @ [\ ] ^ _ ` { | } ~. A comma (,) and a space cannot be used.
Timeout	Enters the time to detect the timeout of communication with the syslog server in the range of 1 to 120 seconds. The default is 10 seconds. Inputs this item only when New Syslog Protocol (TLS1.2/RFC5424) at Transfer Protocol is specified.
Retry Interval	Enters the retry interval when the communication with the syslog server fails in the range of 1 to 60 seconds. The default is 1 second. Inputs this item only when New Syslog Protocol (TLS1.2/RFC5424) at Transfer Protocol is specified.
Number of Retries	Enters the number of retry times when the communication with the syslog server fails in the range of 1 to 50. The default is 3. Inputs this item only when New Syslog Protocol (TLS1.2/RFC5424) at Transfer Protocol is specified.
Output Detailed Information	Selects whether to transfer the detailed information of the audit log to the syslog server. ▪ Enable:Transfer the detailed information to the syslog server. ▪ Disable: Do not transfer the detailed information to the syslog server. In the syslog file that is stored in the SVP, the detailed information is always stored regardless of this setting.

- Button

Item	Description
Download Syslog	Downloads the syslog file to the Device Manager - Storage Navigator computer.
Send Test Message to Syslog Server	Sends the test log to the syslog server.
Reset Settings	Cancel the change within tab.

FTP tab



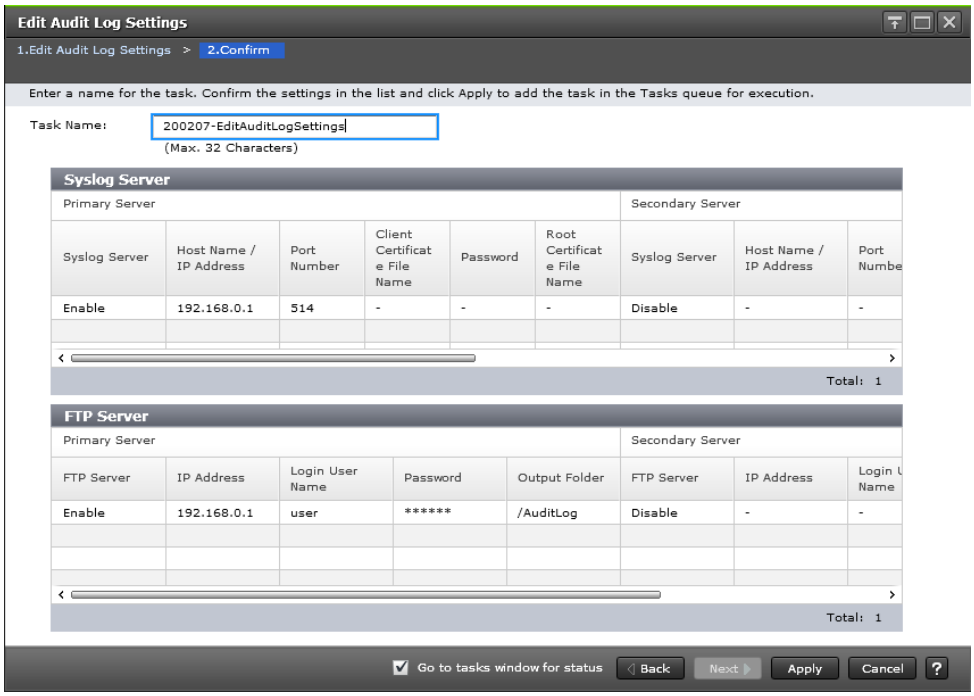
Item	Description
Primary Server	Selects whether to use the FTP server. ▪ Enable: Transfers the audit log file to the FTP server. ▪ Disable: Do not transfer the audit log file to the FTP server.

Item	Description
Primary Server- IP Address	Sets an IP address for the primary FTP server. You can set either IPv4 address or IPv6 address for IP address. ▪ To set an IPv4 address, select IPv4 and enter four integers in the range of 0 to 255 (for example, `nnn.nnn.nnn.nnn`, where n is a number). ▪ To set an IPv6 address, select IPv6 and enter eight hexadecimal alphanumeric in the range of 0 to FFFF. (for example, `hhhh:hhhh:hhhh:hhhh:hhhh:hhhh:hhhh:hhhh`, where h is a hexadecimal digit). An abbreviated style of IPv6 address can also be specified.
Primary Server- Login User	Sets the user name and password to log in to the primary FTP server. Enter up to 255 alphanumeric characters and symbols (ASCII codes) for user name and password.
Primary Server- Output Folder	Specifies 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.
Secondary Server	Selects whether to use an alternative server (secondary server) to the FTP server. ▪ Enable: Transfers the audit log file to the secondary FTP server. ▪ Disable: Do not transfer the audit log file to the secondary FTP server.
Secondary Server- IP Address	Enters an IP address of a server you want to set as a secondary FTP server. The restriction for the available values is the same as that of Primary Server- IP Address.
Secondary Server- Login User	Sets the user name and password to log in to the secondary FTP server. The restriction for the available values is the same as that of Primary Server- Login User.
Secondary Server- Output Folder	Specifies the secondary FTP server folder location to save the audit log file. The restriction for the available values is the same as that of Primary Server- Output Folder.
Complete SIMs	Completes (resolve) the SIM that occurred when transferring audit logs to any FTP servers fails. Resolve the error condition, manually transfer the audit log file by clicking Transfer to Primary Server or Transfer to Secondary Server, and then complete the SIM. The SIM status will change to Completed. **Important:** If you do not complete the SIM, the SIM will not occur when an FTP transfer fails next time.

- Button

Item	Description
Transfer to Primary Server	The audit log file is transferred to the primary FTP server. You can transfer the current audit log file without waiting to reach the threshold value with the automatic transfer.
Transfer to Secondary Server	The audit log file is transferred to the secondary FTP server. You can transfer the current audit log file without waiting to reach the threshold value with the automatic transfer.
Reset Settings	Cancel the change within tab.

Confirm window



Syslog Server table

This table displays only when you have made settings in the Syslog tab of the Edit Audit Log Settings window.

Item	Description
Primary Server-Syslog Server	Indicates whether to use the syslog server or not.

Item	Description
Primary Server- Host Name / IP Address	Indicates the IP address or host name of the syslog server.
Primary Server- Port Number	Indicates the port number to be used on the syslog server.
Primary Server- Client Certificate File Name	Indicates the file name of the client certificate.
Primary Server- Password	Indicates the password of the client certificate with "*" mark.
Primary Server- Root Certificate File Name	Indicates the file name of the root certificate.
Secondary Server- Syslog Server	Indicates whether to use the alternative server to the syslog server.
Secondary Server- Host Name / IP Address	Indicates the IP address or host name of the alternative server to the syslog server.
Secondary Server- Port Number	Indicates the port number to be used on the alternative server to the syslog server.
Secondary Server- Client Certificate File Name	Indicates the file name of the client certificate.
Secondary Server- Password	Indicates the password of the client certificate with "*" mark.
Secondary Server- Root Certificate File Name	Indicates the file name of the root certificate.
Location Identification Name	Indicates the name to identify the storage system that transfer the audit log file to the syslog server.
Timeout (sec.)	Indicates the time to detect the timeout of communication with the syslog server in seconds.
Retry Interval (sec.)	Indicates the retry interval when the communication with the syslog server fails in seconds.
Number of Retries	Indicates the number of retry times when the communication with the syslog server fails.
Output Detailed Information	Indicates whether to transfer the detailed information of the audit log file to the syslog server.

FTP Server table

This table displays only when you have made settings in the FTP tab of the Edit Audit Log Settings window. When you only complete a SIM, items from Primary Server- FTP Server to Secondary Server-Output Folder do not display.

Item	Description
Primary Server- FTP Server	Indicates whether to use the FTP server or not.
Primary Server- IP Address	Indicates the IP address of the primary FTP server.
Primary Server- Login User Name	Indicates the login user name of the primary FTP server
Primary Server- Password	Indicates the password of the primary FTP server with "*" mark.
Primary Server- Output Folder	Indicates the output folder of the primary FTP server.
Secondary Server- FTP Server	Indicates whether to use an alternative server to the FTP server.
Secondary Server- IP Address	Indicates the IP address of the alternative server to the FTP server.
Secondary Server- Login User Name	Indicates the login user name of the alternative server to the FTP server.
Secondary Server- Password	Indicates the password of the alternative server to the FTP server with "*" mark.
Secondary Server- Output Folder	Indicates the output folder of the alternative server to the FTP server.
Complete SIMs	Yes displays when you complete a SIM. This item does not display when you do not complete a SIM.

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