

Hitachi Virtual Storage Platform 5000 Series

SVOS RF 9.8

Hitachi Audit Log User Guide

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

© 2019, 2021 Hitachi, Ltd. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including copying and recording, or stored in a database or retrieval system for commercial purposes without the express written permission of Hitachi, Ltd., or Hitachi Vantara LLC (collectively "Hitachi"). Licensee may make copies of the Materials provided that any such copy is: (i) created as an essential step in utilization of the Software as licensed and is used in no other manner; or (ii) used for archival purposes. Licensee may not make any other copies of the Materials. "Materials" mean text, data, photographs, graphics, audio, video and documents.

Hitachi reserves the right to make changes to this Material at any time without notice and assumes no responsibility for its use. The Materials contain the most current information available at the time of publication.

Some of the features described in the Materials might not be currently available. Refer to the most recent product announcement for information about feature and product availability, or contact Hitachi Vantara LLC at <https://support.hitachivantara.com/en-us/contact-us.html>.

Notice: Hitachi products and services can be ordered only under the terms and conditions of the applicable Hitachi agreements. The use of Hitachi products is governed by the terms of your agreements with Hitachi Vantara LLC.

By using this software, you agree that you are responsible for:

1. Acquiring the relevant consents as may be required under local privacy laws or otherwise from authorized employees and other individuals; and
2. Verifying that your data continues to be held, retrieved, deleted, or otherwise processed in accordance with relevant laws.

Notice on Export Controls. The technical data and technology inherent in this Document may be subject to U.S. export control laws, including the U.S. Export Administration Act and its associated regulations, and may be subject to export or import regulations in other countries. Reader agrees to comply strictly with all such regulations and acknowledges that Reader has the responsibility to obtain licenses to export, re-export, or import the Document and any Compliant Products.

Hitachi and Lumada are trademarks or registered trademarks of Hitachi, Ltd., in the United States and other countries.

AIX, AS/400e, DB2, Domino, DS6000, DS8000, Enterprise Storage Server, eServer, FICON, FlashCopy, GDPS, HyperSwap, IBM, Lotus, MVS, OS/390, PowerHA, PowerPC, RS/6000, S/390, System z9, System z10, Tivoli, z/OS, z9, z10, z13, z14, z/VM, and z/VSE are registered trademarks or trademarks of International Business Machines Corporation.

Active Directory, ActiveX, Bing, Excel, Hyper-V, Internet Explorer, the Internet Explorer logo, Microsoft, the Microsoft Corporate Logo, MS-DOS, Outlook, PowerPoint, SharePoint, Silverlight, SmartScreen, SQL Server, Visual Basic, Visual C++, Visual Studio, Windows, the Windows logo, Windows Azure, Windows PowerShell, Windows Server, the Windows start button, and Windows Vista are registered trademarks or trademarks of Microsoft Corporation. Microsoft product screen shots are reprinted with permission from Microsoft Corporation.

All other trademarks, service marks, and company names in this document or website are properties of their respective owners.

Copyright and license information for third-party and open source software used in Hitachi Vantara products can be found at <https://www.hitachivantara.com/en-us/company/legal.html>.

Contents

| | |
|---|-----------|
| Preface..... | 21 |
| Intended audience..... | 21 |
| Product version..... | 21 |
| Release notes..... | 21 |
| Changes in this revision..... | 21 |
| Document conventions..... | 22 |
| Conventions for storage capacity values..... | 23 |
| Accessing product documentation..... | 24 |
| Getting help..... | 24 |
| Comments..... | 24 |
| Chapter 1: Introduction..... | 25 |
| Overview..... | 25 |
| Features..... | 26 |
| Audit Log file description..... | 26 |
| Audit log file format..... | 28 |
| Log output formats for different versions..... | 35 |
| Syslog file format..... | 35 |
| Syslog file format (RFC3164-compliant)..... | 35 |
| Syslog file format (RFC5424-compliant)..... | 37 |
| Chapter 2: Using audit logs..... | 40 |
| Downloading audit log files..... | 40 |
| Downloading syslog files..... | 41 |
| Automatically transferring audit log files to FTP servers..... | 41 |
| Completing SIM generated when FTP transfer of audit log files failed..... | 43 |
| Manually transferring audit log files to FTP servers..... | 43 |
| Transferring audit log to syslog servers..... | 43 |
| Chapter 3: Audit Log Quick reference..... | 46 |
| Audit Log Functions..... | 46 |
| Device Manager - Storage Navigator and SVP operation..... | 47 |
| Encryption Key operation..... | 63 |
| Command sent from the host..... | 66 |
| PIN Deletion Tool operation..... | 66 |
| Audit log reproduced output..... | 67 |

| | |
|--|-----------|
| Audit log lost output..... | 67 |
| Chapter 4: Audit log examples..... | 68 |
| Audit Log Descriptions..... | 68 |
| [AuditLog] Create File..... | 68 |
| [AuditLog] DKCAuditLog was lost..... | 68 |
| [AuditLog] Over MaxLine..... | 68 |
| [AuditLog] Over Threshold..... | 69 |
| [AuditLog] Send Test Message..... | 70 |
| [AuditLog] Set FTP Server..... | 70 |
| [AuditLog] Set Syslog Server..... | 71 |
| [AuditLog] SIM Complete..... | 73 |
| ACM Descriptions..... | 73 |
| [ACM] AddUsersToUserGroup..... | 73 |
| [ACM] CreateUser..... | 74 |
| [ACM] CreateUserGroup..... | 75 |
| [ACM] DeleteUserGroups..... | 75 |
| [ACM] DeleteUsers..... | 76 |
| [ACM] DisableUsers..... | 76 |
| [ACM] EnableUsers..... | 77 |
| [ACM] Release Lockout..... | 77 |
| [ACM] RemoveUsersFromUserGroup..... | 78 |
| [ACM] Set Login Message..... | 79 |
| [ACM] Setup Server..... | 79 |
| [ACM] UpdatePassword..... | 85 |
| [ACM] UpdateUserAuthentication..... | 86 |
| [ACM] UpdateUserGroupAllResourceGrp..... | 86 |
| [ACM] UpdateUserGroupName..... | 87 |
| [ACM] UpdateUserGroupResourceGrpBmp..... | 87 |
| [ACM] UpdateUserGroupRole..... | 88 |
| BASE Descriptions..... | 88 |
| [BASE] Advanced Settings..... | 88 |
| [BASE] Automatic LDAP Password change..... | 89 |
| [BASE] Certificate Setting..... | 89 |
| [BASE] Certificate Update..... | 92 |
| [BASE] Communication Settings..... | 92 |
| [BASE] ControlPanel Backup..... | 94 |
| [BASE] ControlPanel Restore..... | 95 |
| [BASE] Create Conf Report..... | 95 |
| [BASE] Delete CVAE Info..... | 96 |
| [BASE] Delete Reports..... | 96 |
| [BASE] Delete Tasks..... | 97 |

| | |
|---|-----|
| [BASE] Disable Auto Delete..... | 98 |
| [BASE] Edit Alert Setting..... | 98 |
| [BASE] Edit SIM Syslog Serv..... | 99 |
| [BASE] Edit Storage System..... | 100 |
| [BASE] Enable Auto Delete..... | 101 |
| [BASE] Entry Tasks..... | 101 |
| [BASE] Flash Disable/Enable..... | 102 |
| [BASE] Forcibly Disable SVP..... | 102 |
| [BASE] Forcibly Fail Over SVP..... | 102 |
| [BASE] HCSSO Authentication..... | 103 |
| [BASE] HCSSO SetOneTimeKey..... | 103 |
| [BASE] Login..... | 103 |
| [BASE] Logout..... | 104 |
| [BASE] Release HTTP Block..... | 105 |
| [BASE] Resume Tasks..... | 105 |
| [BASE] Set CVAE Info..... | 106 |
| [BASE] Set Up HTTP Block..... | 107 |
| [BASE] Suspend Tasks..... | 107 |
| [BASE] Unlock Forcibly..... | 108 |
| [BASE] Update HCS Crt..... | 108 |
| [BASE] Update SMIS CrtFiles..... | 108 |
| [BASE] Upload SMIS ConfFile..... | 109 |
| [BASE] WindowsServerUpdateServices..... | 109 |
| [BASE] WSUS Settings..... | 110 |
| Compatible PAV Descriptions..... | 111 |
| [CPAV] Add Alias..... | 111 |
| [CPAV] Delete Alias..... | 111 |
| E-Mail Descriptions..... | 112 |
| [E-Mail] MailAddress Write..... | 112 |
| [E-Mail] Valid Flag Update..... | 113 |
| Information Descriptions..... | 114 |
| [Information] Delete Log..... | 114 |
| [Information] ORM Value..... | 114 |
| [Information] SIM Complete..... | 117 |
| [Information] SIM Reporting Option..... | 117 |
| [Information] Threshold Value..... | 118 |
| Install Descriptions..... | 120 |
| [Install] All Config..... | 120 |
| [Install] Backup Config..... | 120 |
| [Install] Dku Emulation..... | 121 |
| [Install] FlashDrive ORM Value..... | 121 |

| | |
|---|-----|
| [Install] Initialize ORM Value..... | 122 |
| [Install] Machine Install Date..... | 122 |
| [Install] Micro Program..... | 123 |
| [Install] NEW Installation..... | 124 |
| [Install] Restore Config..... | 125 |
| [Install] Set Battery Life..... | 126 |
| [Install] Set IP Address..... | 126 |
| [Install] Set Subsystem Time..... | 128 |
| [Install] System Option..... | 129 |
| [Install] System Tuning..... | 131 |
| Local Replication Descriptions..... | 132 |
| [Local Replication] Assign S-VOLs..... | 132 |
| [Local Replication] Create Pairs..... | 133 |
| [Local Replication] Delete Pairs..... | 135 |
| [Local Replication] Edit Options..... | 136 |
| [Local Replication] Initialize..... | 138 |
| [Local Replication] Release Reserved CTG..... | 138 |
| [Local Replication] Remove S-VOLs..... | 139 |
| [Local Replication] Reserve CTG..... | 140 |
| [Local Replication] Resync Pairs..... | 141 |
| [Local Replication] Split Pairs..... | 142 |
| [Local Replication] Suspend Pairs..... | 143 |
| Maintenance Descriptions..... | 144 |
| [Maintenance] Block..... | 144 |
| [Maintenance] Block(Remove)..... | 148 |
| [Maintenance] Block(Type Change)..... | 148 |
| [Maintenance] Boot System SafeMode..... | 150 |
| [Maintenance] Change SFP Type..... | 150 |
| [Maintenance] Check Remove..... | 150 |
| [Maintenance] Edit System Param..... | 151 |
| [Maintenance] DMA Restore..... | 151 |
| [Maintenance] Drive Interrupt..... | 152 |
| [Maintenance] DRR Restore..... | 152 |
| [Maintenance] Force RIs SysLock..... | 153 |
| [Maintenance] Install..... | 153 |
| [Maintenance] MP Restore..... | 155 |
| [Maintenance] Reboot GUM..... | 156 |
| [Maintenance] Remove | 156 |
| [Maintenance] Replace..... | 159 |
| [Maintenance] Reset HUB..... | 160 |
| [Maintenance] Restore..... | 160 |

| | |
|--|-----|
| [Maintenance] Restore(Remove)..... | 163 |
| [Maintenance] Restore(Type Change)..... | 164 |
| [Maintenance] Set Battery Life..... | 166 |
| [Maintenance] Size Change..... | 167 |
| [Maintenance] Stop Copy..... | 167 |
| [Maintenance] Switch SVP..... | 167 |
| [Maintenance] Transfer Config..... | 168 |
| [Maintenance] Turn Off Locate LEDs..... | 168 |
| [Maintenance] Turn On Locate LEDs..... | 168 |
| Monitor Descriptions..... | 169 |
| [Monitor] Threshold..... | 169 |
| Performance Monitor Descriptions..... | 170 |
| [PFM] Delete Unused WWNs..... | 170 |
| [PFM] Edit CU Monitor Mode..... | 170 |
| [PFM] Edit Monitoring SW..... | 171 |
| [PFM] Edit WWN..... | 171 |
| [PFM] Edit WWN MonitorMode..... | 172 |
| Program Product Key (PP KEY) Descriptions..... | 173 |
| [PP KEY] Enable Licenses..... | 173 |
| [PP KEY] Install Licenses..... | 173 |
| [PP KEY] Remove Licenses..... | 174 |
| [PP KEY] Update License Status..... | 175 |
| Provisioning Descriptions..... | 175 |
| [PROV] Add Hosts..... | 175 |
| [PROV] Add LUN Paths..... | 176 |
| [PROV] Assign MP Unit..... | 176 |
| [PROV] Block LDEVs..... | 177 |
| [PROV] CalculateTieringMonitorData..... | 177 |
| [PROV] Complete SIMs..... | 178 |
| [PROV] Create Host Groups..... | 178 |
| [PROV] Create LDEVs..... | 179 |
| [PROV] CreateLdev..... | 181 |
| [PROV] Create Resource Grps..... | 182 |
| [PROV] Create VDKC-Box..... | 183 |
| [PROV] Create/Expand Pools..... | 184 |
| [PROV] CreateAlus..... | 188 |
| [PROV] CreateiScsiName..... | 188 |
| [PROV] CreateiScsiPath..... | 189 |
| [PROV] CreateiScsiTarget..... | 191 |
| [PROV] CreateParityGroups..... | 192 |
| [PROV] CreateRemoteChapUser..... | 194 |

| | |
|--|-----|
| [PROV] CreateSlus..... | 194 |
| [PROV] CreateThinProvisioningVolumes..... | 195 |
| [PROV] CreateTiPairsWithSlu..... | 196 |
| [PROV] CreateTiVolumes..... | 198 |
| [PROV] Delete Host Groups..... | 199 |
| [PROV] Delete LDEVs..... | 199 |
| [PROV] DeleteLdev..... | 200 |
| [PROV] Delete Login WWNs..... | 201 |
| [PROV] Delete LUN Paths..... | 202 |
| [PROV] Delete Resource Grps..... | 202 |
| [PROV] Delete VDKC-Box..... | 203 |
| [PROV] DeleteAlus..... | 203 |
| [PROV] DeleteDataSavingOfSlusAsync..... | 204 |
| [PROV] DeleteDataSavingOfThinProvisioningVolumesAsync..... | 205 |
| [PROV] DeleteiScsiInitiatorUser..... | 205 |
| [PROV] DeleteiScsiName..... | 206 |
| [PROV] DeleteiScsiPath..... | 206 |
| [PROV] DeleteiScsiTarget..... | 207 |
| [PROV] DeleteLoginiScsiName..... | 208 |
| [PROV] DeleteParityGroups..... | 208 |
| [PROV] DeleteRemoteChapUser..... | 209 |
| [PROV] DeleteSlus..... | 210 |
| [PROV] DeleteTargetChapUser..... | 210 |
| [PROV] DeleteTiVolumes..... | 211 |
| [PROV] DRU Expiration-Lock..... | 211 |
| [PROV] Edit Cmd Dev(Auth)..... | 212 |
| [PROV] Edit Cmd Dev(DevGrp)..... | 212 |
| [PROV] Edit Cmd Dev(Sec)..... | 213 |
| [PROV] Edit Command Devices..... | 213 |
| [PROV] Edit DRU Attribute..... | 214 |
| [PROV] Edit External LDEV Tier Rank..... | 215 |
| [PROV] Edit Full Allocation..... | 216 |
| [PROV] Edit Host..... | 217 |
| [PROV] Edit Host Grps(Mode)..... | 218 |
| [PROV] Edit Host Grps(Name)..... | 225 |
| [PROV] Edit LDEVs(tier)..... | 225 |
| [PROV] Edit MP Units..... | 226 |
| [PROV] Edit Ports(Address)..... | 226 |
| [PROV] Edit Ports(Attr)..... | 228 |
| [PROV] Edit Ports(Security)..... | 229 |
| [PROV] Edit Ports(Speed)..... | 229 |

| | |
|---------------------------------------|-----|
| [PROV] Edit Ports(Topology)..... | 230 |
| [PROV] Edit Resource Grp..... | 230 |
| [PROV] Edit SCP Time..... | 231 |
| [PROV] Edit Tiering Policy..... | 231 |
| [PROV] Edit VR Attribute..... | 232 |
| [PROV] Edit V-VOL Option..... | 233 |
| [PROV] Edit/Delete Pools..... | 234 |
| [PROV] Edit/Delete UUIDs..... | 238 |
| [PROV] EditiScsilInitiatorUser..... | 238 |
| [PROV] EditiScsiName..... | 239 |
| [PROV] EditiScsiNickName..... | 239 |
| [PROV] EditiScsiTarget..... | 240 |
| [PROV] EditiSNS..... | 241 |
| [PROV] EditPortInfo..... | 242 |
| [PROV] EditRemoteChapUser..... | 244 |
| [PROV] EditRemoteTargetUser..... | 244 |
| [PROV] EditT10piMode..... | 246 |
| [PROV] EditTargetChapUser..... | 246 |
| [PROV] ExecBindingOperation..... | 247 |
| [PROV] Expand V-VOLs..... | 248 |
| [PROV] ExpandSlus..... | 249 |
| [PROV] Force Del MF V-VOLs..... | 250 |
| [PROV] Format LDEVs..... | 250 |
| [PROV] Format LDEVs(H)..... | 251 |
| [PROV] Format LDEVs(Q)..... | 251 |
| [PROV] Initialize Pools..... | 252 |
| [PROV] LDEV Name..... | 252 |
| [PROV] LdevsFenceForceRelease..... | 252 |
| [PROV] LdevForceRestore..... | 253 |
| [PROV] MapSecondaryVolumeWithSlu..... | 253 |
| [PROV] Monitor Pools..... | 254 |
| [PROV] Move Resources..... | 255 |
| [PROV] OperateSiPairsWithSlu..... | 256 |
| [PROV] OperateTiPairsWithSlu..... | 257 |
| [PROV] Pool Name..... | 259 |
| [PROV] Reclaim Zero Pages..... | 259 |
| [PROV] Release HostReserved..... | 260 |
| [PROV] Relocate Pool..... | 260 |
| [PROV] Remove Hosts..... | 261 |
| [PROV] Restore LDEVs..... | 261 |
| [PROV] Restore Pools..... | 262 |

| | |
|--|-----|
| [PROV] RevertTiPairsWithSlu..... | 262 |
| [PROV] Set PageTieringLevel..... | 263 |
| [PROV] Set Virtual LDEV..... | 264 |
| [PROV] Shrink Pool..... | 265 |
| [PROV] StartParityGroupsFormat..... | 266 |
| [PROV] StartVerify..... | 267 |
| [PROV] StopFormat..... | 268 |
| [PROV] Stop Monitoring..... | 268 |
| [PROV] Stop Reclm ZeroPages..... | 268 |
| [PROV] Stop Relocating..... | 269 |
| [PROV] Stop Shrinking Pool..... | 269 |
| [PROV] StopVerify..... | 270 |
| [PROV] UnmapSecondaryVolumeWithSlu..... | 270 |
| [PROV] UpdateAluaMode..... | 271 |
| [PROV] UpdateAsymmetricAccessStatePerHG..... | 271 |
| [PROV] UpdateDataSavingOptions..... | 272 |
| [PROV] UpdateMFSsystemFunctions..... | 273 |
| [PROV] UpdateParityGroupSettings..... | 274 |
| [PROV] UpdatePoolDeduplication..... | 274 |
| [PROV] UpdateSpareDrives..... | 275 |
| [PROV] VTOC..... | 276 |
| Remote Maintenance Descriptions..... | 276 |
| [Remote Maintenance] Micro Program..... | 276 |
| [Remote Maintenance] PS Control..... | 278 |
| [Remote Maintenance] Reboot MP..... | 278 |
| [Remote Maintenance] Reboot Port..... | 279 |
| [Remote Maintenance] Reboot SVP..... | 279 |
| [Remote Maintenance] StartVerify..... | 279 |
| [Remote Maintenance] StopVerify..... | 280 |
| [Remote Maintenance] Switch SVP..... | 280 |
| [Remote Maintenance] Transfer Config..... | 280 |
| Remote Replication Descriptions..... | 280 |
| [Remote Replication] Add Path..... | 280 |
| [Remote Replication] Add Quorum Disk ID..... | 282 |
| [Remote Replication] Add RCU..... | 283 |
| [Remote Replication] Change JNL Option..... | 285 |
| [Remote Replication] Change Mirror Option..... | 287 |
| [Remote Replication] Change RCU Option..... | 288 |
| [Remote Replication] Clear SIM..... | 290 |
| [Remote Replication] Create Pairs..... | 290 |
| [Remote Replication] Delete Cmd.Dev..... | 298 |

| | |
|---|-----|
| [Remote Replication] Delete Pairs..... | 298 |
| [Remote Replication] Delete Path..... | 304 |
| [Remote Replication] Del Quorum Disk ID..... | 305 |
| [Remote Replication] Delete RCU..... | 306 |
| [Remote Replication] Edit EXCTG..... | 308 |
| [Remote Replication] Edit Options..... | 309 |
| [Remote Replication] Edit Pair Options..... | 314 |
| [Remote Replication] Journal Owner..... | 317 |
| [Remote Replication] Journal Vol..... | 318 |
| [Remote Replication] R-Cmd.Dev..... | 322 |
| [Remote Replication] Resync Pairs..... | 323 |
| [Remote Replication] Split Pairs..... | 330 |
| [Remote Replication] Suspend Pairs..... | 334 |
| [Remote Replication] UpdateQuorumDisks..... | 336 |
| SNMP Descriptions..... | 336 |
| [SNMP] UpdateSnmpSetting..... | 336 |
| Server Priority Manager Descriptions..... | 339 |
| [SPM] Change SPMGrp..... | 339 |
| [SPM] Clear SPM Info..... | 340 |
| [SPM] Default Set..... | 341 |
| [SPM] Set All Prio Port..... | 341 |
| [SPM] Set All Prio WWN..... | 342 |
| [SPM] Set Ctrl Kind..... | 342 |
| [SPM] Set Prio Port..... | 343 |
| [SPM] Set Prio WWN..... | 344 |
| [SPM] SPMGrp Del/Chg..... | 345 |
| [SPM] Update Port WWN..... | 345 |
| [SPM] Update SPMGrp..... | 346 |
| [SPM] Update WWN..... | 347 |
| Spreadsheet Descriptions..... | 348 |
| [Spreadsheet] CflSet End..... | 348 |
| [Spreadsheet] CflSet Start..... | 348 |
| Universal Volume Manager Descriptions..... | 349 |
| [UVM] Add External Volumes..... | 349 |
| [UVM] Assign MP Unit..... | 352 |
| [UVM] Delete ES VOLs..... | 352 |
| [UVM] Disconnect ES Paths..... | 353 |
| [UVM] Disconnect ES VOLs..... | 354 |
| [UVM] Edit Es Path Config..... | 355 |
| [UVM] Edit ES VOLs..... | 356 |
| [UVM] Edit External WWNs / iSCSI Targets..... | 359 |

| | |
|--|------------|
| [UVM] ProfileUpgrade..... | 360 |
| [UVM] Reconnect ES Paths..... | 360 |
| [UVM] Reconnect ES VOLs..... | 361 |
| Volume Migration Descriptions..... | 362 |
| [VM] Delete All Histories..... | 362 |
| [VM] Del Migration Plans..... | 362 |
| [VM] Migrate Volumes..... | 363 |
| Virtual Partition Manager Descriptions..... | 364 |
| [VPM] Edit CLPR..... | 364 |
| Volume Shredder Descriptions..... | 365 |
| [VS] Abort Shredding..... | 365 |
| [VS] End Shredding..... | 365 |
| [VS] Shred LDEVs..... | 366 |
| Compatible XRC Descriptions..... | 367 |
| [XRC] Set XRC Option..... | 367 |
| Chapter 5: Audit log examples of encryption key operations..... | 369 |
| ENC Descriptions..... | 369 |
| [ENC] Add keys to DKC..... | 369 |
| [ENC] Backup Keys..... | 369 |
| [ENC] Backup Keys to File..... | 370 |
| [ENC] Backup Keys to Serv..... | 370 |
| [ENC] Backup Keys to Serv(Auto)..... | 371 |
| [ENC] Change CEK Status..... | 372 |
| [ENC] Change DEK Status..... | 372 |
| [ENC] Clear Keys..... | 373 |
| [ENC] Create KEK Dynamic..... | 373 |
| [ENC] Create Keys..... | 375 |
| [ENC] Create Keys..... | 375 |
| [ENC] Create Keys On Serv..... | 376 |
| [ENC] DEK assign SpareDisk..... | 377 |
| [ENC] DEK delete..... | 377 |
| [ENC] Delete KEK Dynamic..... | 377 |
| [ENC] Delete Keys..... | 378 |
| [ENC] Delete Keys..... | 378 |
| [ENC] Delete Keys on Serv..... | 379 |
| [ENC] Delete Keys on Serv(Auto)..... | 380 |
| [ENC] Edit Encryption..... | 381 |
| [ENC] Edit ENC Settings..... | 381 |
| [ENC] Edit Password Policy..... | 382 |
| [ENC] Register KEK Dynamic..... | 383 |
| [ENC] Regular Backup Keys to Serv..... | 384 |

| | |
|--|-----|
| [ENC] Regular Delete Keys on Serv..... | 384 |
| [ENC] Rekey CEK..... | 385 |
| [ENC] Rekey KEK Dynamic..... | 386 |
| [ENC] Restore Keys..... | 386 |
| [ENC] Restore Keys fr File..... | 386 |
| [ENC] Restore Keys fr File(Forcibly)..... | 386 |
| [ENC] Restore Keys fr Serv..... | 386 |
| [ENC] Restore Keys fr Serv(Forcibly)..... | 387 |
| [ENC] Retry KEK Dynamic..... | 388 |
| [ENC] Set Up Key Mng Serv..... | 388 |
| [ENC] Succeeded Backup to Serv..... | 390 |
| [ENC] Use Keys for CEK/KEK..... | 391 |
| KEK Acquisition Descriptions..... | 391 |
| [KEK Acquisition] Acquisition Key..... | 391 |
| [KEK Acquisition] Set Key..... | 392 |
| Key Recovery..... | 392 |
| [Key Recovery] Restore Keys fr Serv(Boot)..... | 392 |
| [Key Recovery] Set Key Blob..... | 392 |

Chapter 6: Audit log examples of commands sent from hosts, computers using CCI, or hosts using Business Continuity Manager.... 393

| | |
|--|-----|
| Config Command (Open system)..... | 393 |
| Add CHAP User..... | 393 |
| Add CLPR..... | 394 |
| Add Copy Group..... | 395 |
| Add Device Group(Name)..... | 395 |
| Add DP Pool..... | 396 |
| Add External Group..... | 397 |
| Add External iSCSI Name/Modify External CHAP User..... | 398 |
| Add HBA iSCSI..... | 399 |
| Add Host Group..... | 400 |
| Add Host Group(iSCSI)..... | 401 |
| Add Host NQN..... | 401 |
| Add Journal(Ldev)..... | 402 |
| Add Ldev..... | 403 |
| Add Ldev(ALU)..... | 404 |
| Add Ldev(Dynamic Provisioning)..... | 405 |
| Add Ldev(SLU)..... | 407 |
| Add Ldev(Snapshot)..... | 407 |
| Add License..... | 409 |
| Add LUN..... | 409 |
| Add Namespace..... | 410 |

| | |
|--|-----|
| Add Namespace Path..... | 411 |
| Add NVM Subsystem..... | 411 |
| Add NVM Subsystem Port..... | 412 |
| Add Parity Group..... | 413 |
| Add Path..... | 414 |
| Add QoS Group(Group)..... | 415 |
| Add QoS Group(LDEV)..... | 415 |
| Add Quorum..... | 416 |
| Add RCU..... | 417 |
| Add RCU iSCSI Port..... | 417 |
| Add RCU Path..... | 418 |
| Add Resource(Group)..... | 419 |
| Add Resource(Resource Name)..... | 420 |
| Add Resource/Delete Resource..... | 420 |
| Add Snap Pool..... | 421 |
| Add Snapshot..... | 422 |
| Add SPM Group..... | 424 |
| Add SPM Host Group..... | 425 |
| Add SPM WWN..... | 426 |
| Add SSID..... | 426 |
| Add WWN..... | 427 |
| Check External Storage Group..... | 427 |
| Check External Storage Path..... | 428 |
| CTQM..... | 428 |
| Delete CHAP User..... | 429 |
| Delete CLPR..... | 430 |
| Delete Copy Group..... | 431 |
| Delete Device Group..... | 431 |
| Delete External Group..... | 432 |
| Delete External iSCSI Name..... | 432 |
| Delete HBA iSCSI..... | 433 |
| Delete Host Group..... | 433 |
| Delete Host NQN..... | 434 |
| Delete Journal..... | 434 |
| Delete Journal(Ldev)..... | 435 |
| Delete Ldev..... | 435 |
| Delete Ldev(Initialize Capacity Saving)..... | 436 |
| Delete License..... | 436 |
| Delete LUN..... | 437 |
| Delete Namespace..... | 438 |
| Delete Namespace Path..... | 438 |

| | |
|---|-----|
| Delete NVM Subsystem..... | 439 |
| Delete NVM Subsystem Port..... | 439 |
| Delete Parity Group..... | 440 |
| Delete Path..... | 440 |
| Delete Pool..... | 441 |
| Delete Pool(Ldev)..... | 441 |
| Delete QoS Group(Group)..... | 442 |
| Delete QoS Group(LDEV)..... | 442 |
| Delete Quorum..... | 443 |
| Delete RCU..... | 443 |
| Delete RCU iSCSI Port..... | 444 |
| Delete RCU Path..... | 445 |
| Delete Resource(Group)..... | 446 |
| Delete Snapshot..... | 446 |
| Delete Snapshot(Tree)..... | 447 |
| Delete SPM Group..... | 447 |
| Delete SPM Host Group..... | 448 |
| Delete SPM WWN..... | 448 |
| Delete SPM WWN(Nickname)..... | 449 |
| Delete SSID..... | 449 |
| Delete WWN..... | 450 |
| Disconnect External Group..... | 451 |
| Disconnect Path..... | 451 |
| Extend Ldev..... | 451 |
| Extend Ldev(Asynchronous)..... | 452 |
| Initialize Ldev(Format)..... | 453 |
| Initialize Ldev(Shredding)..... | 454 |
| Initialize Ldev(Stop Shredding)..... | 454 |
| Initialize Parity Group..... | 455 |
| Initialize Pool..... | 455 |
| Map Resource(LDEV)..... | 456 |
| Map Resource(Port)..... | 457 |
| Map Snapshot..... | 457 |
| Modify CLPR..... | 458 |
| Modify Drive..... | 459 |
| Modify External Group(ALUA Switch)..... | 460 |
| Modify External Group(Cache Inflow)..... | 460 |
| Modify External Group(Cache Mode)..... | 461 |
| Modify External Group(Load Balance Mode)..... | 461 |
| Modify External Group(MP Blade)..... | 462 |
| Modify Host Group(Host Mode)..... | 462 |

| | |
|--|-----|
| Modify Host Group(Host Mode Option)..... | 463 |
| Modify Host NQN..... | 465 |
| Modify Initiator CHAP User..... | 465 |
| Modify Journal..... | 466 |
| Modify Journal(Command Device)..... | 467 |
| Modify Journal(MP Blade)..... | 468 |
| Modify Ldev(ALUA)..... | 468 |
| Modify Ldev(Blocked)..... | 469 |
| Modify Ldev(Capacity Saving)..... | 469 |
| Modify Ldev(Capacity Saving Mode)..... | 470 |
| Modify Ldev(CLPR)..... | 470 |
| Modify Ldev(Command Device)..... | 471 |
| Modify Ldev(Compression Acceleration)..... | 472 |
| Modify Ldev(Discard Zero Page)..... | 473 |
| Modify Ldev(Full Allocation)..... | 473 |
| Modify Ldev(MP Blade)..... | 474 |
| Modify Ldev(Nickname)..... | 474 |
| Modify Ldev(QoS Alert)..... | 475 |
| Modify Ldev(QoS Parameters)..... | 475 |
| Modify Ldev(Quorum Disable)..... | 476 |
| Modify Ldev(Quorum Enable)..... | 476 |
| Modify Ldev(Restore)..... | 477 |
| Modify Ldev(SSID)..... | 478 |
| Modify Ldev(Stop Discard Zero Page)..... | 478 |
| Modify Ldev(Tier)..... | 478 |
| Modify License(Disable)..... | 479 |
| Modify License(Enable)..... | 480 |
| Modify Local Replica Opt..... | 480 |
| Modify LUN(Asymmetric Access)..... | 481 |
| Modify LUN(Reservation release)..... | 482 |
| Modify Namespace..... | 482 |
| Modify NVM Subsystem..... | 483 |
| Modify Parity Group..... | 484 |
| Modify Path(Path Blocked Watch)..... | 484 |
| Modify Path(Que Depth)..... | 485 |
| Modify Path(Timeout)..... | 485 |
| Modify Pool(Auto Add Pool Volume)..... | 485 |
| Modify Pool(Data Direct Mapping)..... | 486 |
| Modify Pool(Deduplication)..... | 487 |
| Modify Pool>Delete DSD Volumes)..... | 488 |
| Modify Pool(Restore)..... | 488 |

| | |
|--|-----|
| Modify Pool(Stop Shrinking)..... | 488 |
| Modify Pool(Suspend TI Pair)..... | 489 |
| Modify Pool(Threshold)..... | 489 |
| Modify Pool(TierOpt)..... | 490 |
| Modify Port..... | 491 |
| Modify Port(Attribute)..... | 492 |
| Modify Port(Delete Login Host NQN)..... | 493 |
| Modify Port(iSCSI)..... | 493 |
| Modify Port(iSCSI Virtual Port Mode)..... | 502 |
| Modify Port(SCSI/NVMe Mode)..... | 502 |
| Modify Port(T10PI)..... | 503 |
| Modify QoS Group(QoS Alert)..... | 503 |
| Modify QoS Group(QoS Parameters)..... | 504 |
| Modify Quorum..... | 505 |
| Modify RCU..... | 505 |
| Modify Remote Replica Opt(Copy Activity Setting)..... | 506 |
| Modify Remote Replica Opt(Num. of Copy Activity)..... | 507 |
| Modify Remote Replica Opt(Path Blocked Watch)..... | 507 |
| Modify Remote Replica Opt(Path Blocked Watch SIM)..... | 508 |
| Modify Snapshot(Clone)..... | 508 |
| Modify Snapshot(Delete Garbage)..... | 509 |
| Modify Snapshot(Rename)..... | 510 |
| Modify Snapshot(Restore)..... | 510 |
| Modify Snapshot(Resync)..... | 511 |
| Modify Snapshot(Revert)..... | 511 |
| Modify Snapshot(Split)..... | 512 |
| Modify Snapshot(Stop Deleting Garbage)..... | 513 |
| Modify SPM Group..... | 513 |
| Modify SPM Host Group..... | 514 |
| Modify SPM WWN..... | 515 |
| Modify SPM WWN(Nickname)..... | 515 |
| Modify System..... | 516 |
| Monitor Pool..... | 517 |
| Paircreate(LocalCopy)..... | 517 |
| Paircreate(RemoteCopy)..... | 519 |
| Pairresync(LocalCopy)..... | 522 |
| Pairresync(RemoteCopy)..... | 524 |
| Pairsplit(LocalCopy)..... | 527 |
| Pairsplit(RemoteCopy)..... | 529 |
| Pairsplit-S(LocalCopy)..... | 531 |
| Pairsplit-S(RemoteCopy)..... | 532 |

| | |
|--|-----|
| Raidvchkset(Data Retention Utility) | 534 |
| Reallocate Pool(Start)..... | 535 |
| Reallocate Pool(Stop)..... | 535 |
| Rename Pool..... | 536 |
| Replace Quorum..... | 536 |
| Replace Snapshot..... | 537 |
| Reset CHAP User..... | 537 |
| Reset Command Status..... | 538 |
| Reset Ldev Priority..... | 539 |
| Reset WWN..... | 540 |
| Set CHAP User..... | 541 |
| Set HBA iSCSI..... | 542 |
| Set Ldev Priority..... | 542 |
| Set WWN..... | 544 |
| Stop Monitor Pool..... | 545 |
| System Option(Correction Copy)..... | 545 |
| System Option(Destage Mode)..... | 545 |
| System Option(Disk Copy Pace)..... | 546 |
| System Option(Dynamic Sparing)..... | 546 |
| System Option(Link Failure Threshold)..... | 547 |
| System Option(Mode)..... | 547 |
| System Option(Spare Disk Recover)..... | 548 |
| Unmap Resource(LDEV)..... | 549 |
| Unmap Resource(Port)..... | 549 |
| Unmap Snapshot..... | 550 |
| Update License..... | 550 |
| Config Command (Mainframe system)..... | 551 |
| Business Continuity Manager..... | 551 |
| Add CTG..... | 551 |
| Add Pair..... | 552 |
| Add RCU..... | 556 |
| At-time Split..... | 557 |
| BCM UVM..... | 559 |
| Build Command Device..... | 559 |
| Change Tier Option..... | 560 |
| Delete Command Device..... | 561 |
| Delete CTG..... | 561 |
| Delete Pair..... | 562 |
| Delete RCU..... | 564 |
| EXCTG..... | 565 |
| FREEZE..... | 566 |

| | |
|--|------------|
| Remote DKC Control..... | 566 |
| Resume Pair..... | 567 |
| RUN..... | 571 |
| Set Interface..... | 572 |
| Start Calculation(Pair Sync)..... | 573 |
| Suspend Pair..... | 574 |
| Suspend Pairs..... | 577 |
| M Series..... | 578 |
| DEL PATH..... | 578 |
| EST PAIR..... | 579 |
| EST PATH..... | 582 |
| SPLIT PAIRS..... | 583 |
| SUSP PAIR..... | 583 |
| TERM PAIR..... | 585 |
| FC-SP..... | 586 |
| User Auth..... | 587 |
| [User Auth] Login..... | 587 |
| [User Auth] Logout..... | 587 |
| Chapter 7: Audit log examples of PIN Deletion Tool operation..... | 588 |
| [PINDeletion] Delete..... | 588 |
| Appendix A: Audit log user operations..... | 589 |
| Logging in or out..... | 589 |
| Using Maintenance menu..... | 590 |
| Using Actions menu..... | 590 |
| Using Reports menu..... | 609 |
| Using Settings menu..... | 612 |
| Using Maintenance Utility menu..... | 617 |
| Using Maintenance Utility window..... | 618 |
| When operations are locked..... | 622 |
| Using External API..... | 622 |
| When executing single sign-on from Hitachi Command Suite..... | 623 |
| Appendix B: Audit log SVP operations..... | 624 |
| Logging in to or out from SVP..... | 624 |
| Using Maintenance button..... | 624 |
| Using Initial Setting button..... | 625 |
| Using Micro Program Install button..... | 626 |
| Using Information button..... | 626 |
| Using Monitor button..... | 626 |

| | |
|---|------------|
| Appendix C: Audit log GUI reference..... | 627 |
| Audit Log Properties window..... | 627 |
| Edit Audit Log Settings wizard..... | 628 |
| Edit Audit Log Settings window..... | 628 |
| Confirm window..... | 633 |

Preface

The Audit Log feature enables you to track users' operations, which 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 90-08-01 or later
- SVOS RF 9.8 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





- Added information for VSP 5200 and VSP 5600.
- Added audit logs regarding maintenance operations for VSP 5200 and VSP 5600.
- Added information and logs regarding compression accelerator.
- Added a note on downloading audit logs in syslog format during upgrade or downgrade.

Document conventions

This document uses the following typographic conventions:

| Convention | Description |
|---------------------|---|
| Bold | <ul style="list-style-type: none"> Indicates text in a window, including window titles, menus, menu options, buttons, fields, and labels. Example: Click OK. Indicates emphasized words in list items. |
| <i>Italic</i> | <ul style="list-style-type: none"> 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: <pre>pairdisplay -g group</pre> (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: <code>pairdisplay -g oradb</code> |
| < > angle brackets | Indicates variables in the following scenarios: <ul style="list-style-type: none"> Variables are not clearly separated from the surrounding text or from other variables. Example: <pre>Status-<report-name><file-version>.csv</pre> 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 important or additional information. |
|  | Tip | Provides helpful information, guidelines, or suggestions for performing tasks more effectively. |
|  | Caution | Warns the user of adverse conditions and/or consequences (for example, disruptive operations, data loss, or a system crash). |
|  | 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 Open-systems: <ul style="list-style-type: none"> ▪ OPEN-V: 960 KB ▪ Others: 720 KB |

| Logical capacity unit | Value |
|-----------------------|-----------------------------|
| 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](https://support.hitachivantara.com/en_us/contact-us.html) 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](https://community.hitachivantara.com) 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 us your comments on this document 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 Maintenance 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 |

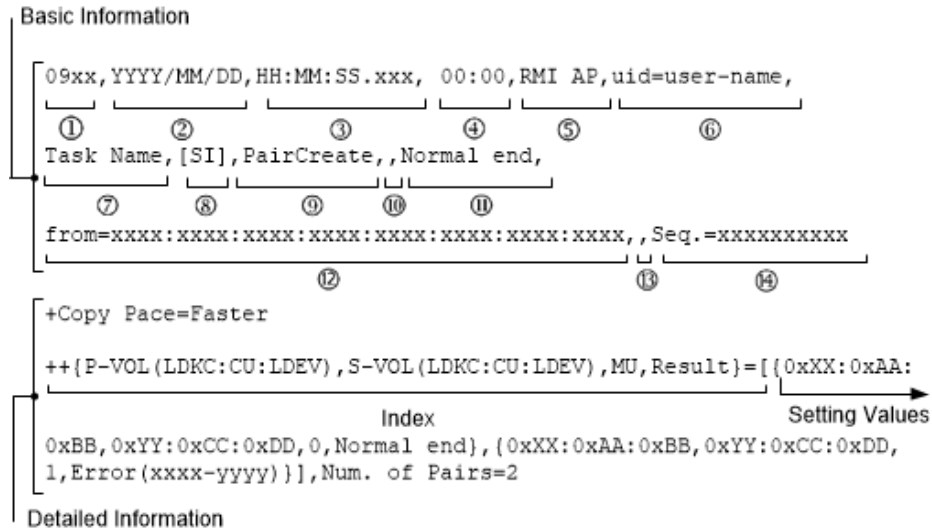
| Component | Audit Log File | Syslog File |
|---|---|--|
| | The file name can be changed when downloading. | The file name can be changed when downloading. |
| File Name Transferred to the FTP Server | <p>When the file is automatically transferred:</p> <p>Audit-SVPSSSSSYYYYMMDDHHMMSS.tgz or Audit-DKCSSSSSYYYYMMDDHHMMSS.tgz</p> <p>When the file is manually transferred:</p> <p>AuditSSSSSYYYYMMDDHHMMSS.tgz</p> <p>where</p> <p>SSSSS = serial number</p> <p>YYYYMMDD = date of the transfer</p> <p>HHMMSS = hour (HH), minute (MM) and second (SS) of the transfer</p> <p>The output folder must be specified in the FTP tab on the Edit Audit log Settings window.</p> | N/A |
| Linefeed Codes | <p>CR + LF</p> <p>The standard linefeed codes for Windows. Some text editors cannot display these codes correctly.</p> | <p>LF</p> <p>The standard linefeed code for UNIX. Some text editors cannot display this code correctly.</p> |
| File Output | <p>Contains login and logout information as well as basic and detailed information about settings made for each option.</p> <ul style="list-style-type: none"> ▪ Basic information consists of information common to each audit log. ▪ Detailed information consists of information about the operations of each executed option. This includes an index representing each item and its values. | <p>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.)</p> |
| 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 | <p>The newest data overwrites the oldest data (wrap around).</p> <p> is shown on the Device Manager - Storage Navigator main window.</p> | <p>The newest data overwrites the oldest data (wrap around).</p> <p>Also, the following log is output in the syslog file.</p> <ul style="list-style-type: none"> ▪ [AuditLog], Over MaxLine |
| Threshold of the Maximum Number of Lines and When Reaching Threshold | <p>The threshold value is 70% (175,000 lines) of the maximum number of lines.</p> <ul style="list-style-type: none"> ▪ 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. | <p>The threshold value is 70% (175,000 lines) of the maximum number of lines.</p> <p>When the audit log information reaches the threshold, the following log is output in the syslog file.</p> <ul style="list-style-type: none"> ▪ [AuditLog], Over Threshold <p>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.</p> |

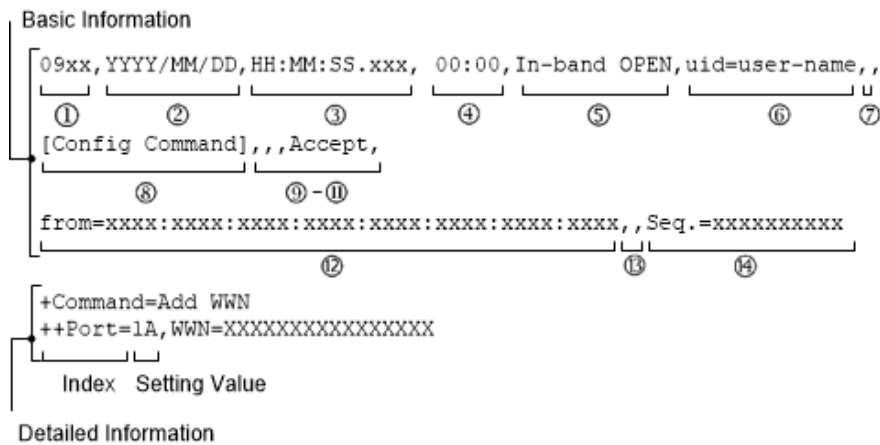
Audit log file format

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 | <p>XXYY indicates the model name (XX) and the version number in audit log output format (YY). When the output format is changed, the value of YY is updated.</p> <p>See Log output formats for different versions (on page 35) for the changed contents of XXYY.</p> | Same as File 1. |

| No. | Item | File 1 (SVP) | File 2 (DKC) |
|-----|-----------|--|--|
| ② | Date | <p>YYYYMMDD indicates the year, month, and day the audit log was created.</p> <p>A date and a time being set on the SVP are output as log data. If a failure, such as an SVP failure and a LAN failure, occurs in the storage system, the data and the time may be output of the accumulated date and time since January 01, 1970.</p> | <p>YYYYMMDD indicates the year, month, and day the audit log was created.</p> <p>A date and a time that were received from the storage system are output as log data.</p> |
| 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 | <p>The time difference between Coordinated Universal Time (UTC) and the local time is displayed as "±HH:MM" (HH: hour, MM: minute).</p> <p>For example: "+09:00", "-08:00", "00:00"</p> | Same as File 1. |
| ⑤ | Interface | <ul style="list-style-type: none"> ▪ 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 | <ul style="list-style-type: none"> ▪ 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 | <ul style="list-style-type: none"> ▪ 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. | <ul style="list-style-type: none"> ▪ A user name is output for commands received by a command device for authentication. ▪ <Host> is output for other 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 | <p>The abbreviation indicating the function that performed the operation.</p> <ul style="list-style-type: none"> ▪ Maintenance window name is output for SVP operations. | <ul style="list-style-type: none"> ▪ User Auth indicates an user authentication command. ▪ FC-SP indicates a device authentication command. ▪ Config Command indicates a configuration changing command. ▪ [ENC] is output for the event about encryption keys. |
| ⑨ | Operation or event name | The operation or event name. | <p>The following items are output only when Function name is User Auth. No output for other operations.</p> <ul style="list-style-type: none"> ▪ Login indicates that a log-in command is received. ▪ Logout indicates that a log-out command is received. <p>The event name is output when the function name is [ENC].</p> |
| ⑩ | Parameters | Parameters for certain functions. | No output. |

| No. | Item | File 1 (SVP) | File 2 (DKC) |
|-----|---------------------|---|---|
| ⑪ | Result | <p>The result of your operation.</p> <ul style="list-style-type: none"> ▪ Normal end. The operation has ended normally. ▪ Error (xxxx-yyyyy). The operation has ended abnormally. ▪ Warning (xxxx-yyyyy). The operation has partly ended abnormally or was canceled during the operation. <p>xxxx-yyyyy is an error code. xxxx is a part code of four or five digits showing where the error occurs. yyyyy is a message ID of four, five, or six digits. For more information about error codes, see <i>Hitachi Device Manager - Storage Navigator Messages</i>. Note that error codes "xxxx-yyyyy" appear only for Device Manager - Storage Navigator operations.</p> | <p>The result of the received commands.</p> <ul style="list-style-type: none"> ▪ 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 | <p>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.</p> <p>No output for RM AP operations. No output when the login user name is <System>.</p> <p>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.</p> | <ul style="list-style-type: none"> ▪ A WWN is output for unauthenticated open-system host. <p>When a command is received from a different storage system, a WWN for the storage system sending the command is output.</p> <ul style="list-style-type: none"> ▪ A host name is output for authenticated open-system hosts. ▪ A serial number is output for main-frame system hosts. <p>When a command is received from a different storage system, a serial number for the storage system sending the command is output.</p> <ul style="list-style-type: none"> ▪ A host name is output for computers using CCI. |

| No. | Item | File 1 (SVP) | File 2 (DKC) |
|-----|----------------------------|--|---|
| | | | <ul style="list-style-type: none"> ▪ 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. | <ul style="list-style-type: none"> ▪ 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. <p>No output for the FC-SP authentication, computers using CCI, hosts using Business Continuity Manager or the event about encryption keys.</p> |
| 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-D9-00-00-00-00-49",
  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. <ul style="list-style-type: none"> '+' 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. <i>Parent setting item{Child setting item 1, Child setting item 2{Grandchild setting item 2-1, Grand child setting item 2-2,...},...}</i> |
| = | 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. <i>Setting item[x]</i> (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 90-00-0x-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.

```
<149> Jan 24 18:10:30 GUM Storage: 0000001571,Service,H2(Serial#400102),Japan-Tokyo,
 1         2         3         4         5         6         7         8
RefCode:7FFA00,Synchronization time failure
 9
```

| No. | Item | Description |
|-----|-------------------------|---|
| 1 | Priority | <p>The priority of a syslog message is determined according to the following formula, enclosed by angle brackets (< >):</p> $\text{Priority} = 8 \times \text{Facility} + \text{Severity}$ <p><i>Facility</i> is 18 (fixed).</p> <p><i>Severity</i> depends on the type of log information:</p> <ul style="list-style-type: none"> ▪ 3: Error (abnormal end) ▪ 4: Warning (partially abnormal end, or an operation was canceled before it could be completed) ▪ 5: Notice (normal end) <p>For example, if <i>Severity</i> is 3 (Error), <147> is output as the priority value.</p> |
| 2 | Date, time ¹ | <p>The date and time in the format of "MMM DD HH:MM:SS"</p> <ul style="list-style-type: none"> ▪ <i>MMM</i>: first three letters of the month (Jan to Dec) ▪ <i>DD</i>: date <p>If <i>DD</i> is a single digit (for example, 1), it is displayed as " 1" (with a blank space before "1") and not as "01".</p> <ul style="list-style-type: none"> ▪ <i>HH</i>: hour ▪ <i>MM</i>: minute ▪ <i>SS</i>: second |
| 3 | Detected location | "GUM" (fixed) |
| 4 | Program name | "Storage" (fixed) |
| 5 | Message identification | The serial number (0000000000 to 4294967295) |
| 6 | Event type | <p>Any of the following event category names. (The event category corresponds to <i>Severity</i>.)</p> <ul style="list-style-type: none"> ▪ Acute <i>Severity</i> is 3 (Error). ▪ Serious <i>Severity</i> is 3 (Error). |

| No. | Item | Description |
|--|--------------------------------------|--|
| | | <ul style="list-style-type: none"> ▪ Moderate Severity is 4 (Warning). ▪ Service Severity is 5 (Notice). |
| 7 | Hardware identification ² | The storage system name and serial number |
| 8 | Related information | The location identification information set in the Syslog tab of the maintenance utility |
| 9 | Detailed information | The SIM reference code and failure information that are displayed in the alert window |
| <p>Notes:</p> <ol style="list-style-type: none"> 1. 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. 2. While the controller model is being upgraded, information before upgrade might be output. While the controller model is being downgraded, information before downgrade might be output. | | |

Syslog file format (RFC5424-compliant)

The following figure shows a sample syslog file.

```

<149>1 2017-01-24T18:17:09.0+09:00 GUM Storage --- 0000001572,Service,H2(Serial#400102),
 1 2 3 4 5 678 9 10 11
Japan-Tokyo,RefCode:7FFA00,Synchronization time failure
 12 13

```

| No. | Item | Description |
|-----|----------|---|
| 1 | Priority | <p>The priority of a syslog message is determined according to the following formula, enclosed by angle brackets (< >):</p> $\text{Priority} = 8 \times \text{Facility} + \text{Severity}$ <p>Facility is 18 (fixed).</p> |

| No. | Item | Description |
|-----|-------------------------|--|
| | | <p><i>Severity</i> depends on the type of log information:</p> <ul style="list-style-type: none"> ▪ 3: Error (abnormal end) ▪ 4: Warning (partially abnormal end, or an operation was canceled before it could be completed) ▪ 5: Notice (normal end) <p>For example, if <i>Severity</i> is 3 (Error), <147> is output as the priority value.</p> |
| 2 | Version | "1" (fixed) |
| 3 | Date, time ¹ | <p>The date, time, and the time difference between UTC (Coordinated Universal Time) and the local time in the format of "YYYY-MM-DDThh:mm:ss.s±hh:mm"</p> <ul style="list-style-type: none"> ▪ YYYY: year, MM: month, DD: date ▪ hh: hour, mm: minute, ss.s: second in one decimal place ▪ ±hh:mm: hours and minutes of the time difference. "Z" is written instead of "± hh:mm" when there is no time difference between UTC and the local time, such as "2018-12-26T23:06:58.0Z". |
| 4 | Detected location | "GUM" (fixed) |
| 5 | Program name | "Storage" (fixed) |
| 6 | Process name | "-" (fixed.) |
| 7 | Message ID | "-" (fixed.) |
| 8 | Structured data | "-" (fixed.) |
| 9 | Message identification | The serial number (0000000000 to 4294967295) |
| 10 | Event type | <p>Any of the following event category names. (The event category corresponds to <i>Severity</i>.)</p> <ul style="list-style-type: none"> ▪ Acute <i>Severity</i> is 3 (Error). ▪ Serious <i>Severity</i> is 3 (Error). |

| No. | Item | Description |
|---|--------------------------------------|--|
| | | <ul style="list-style-type: none"> <li>▪ Moderate Severity is 4 (Warning). <li>▪ Service Severity is 5 (Notice). |
| 11 | Hardware identification ² | The storage system name and serial number |
| 12 | Related information | The location identification information set in the Syslog tab of the maintenance utility |
| 13 | Detailed information | The SIM reference code and failure information that are displayed in the alert window |
| <p>Notes:</p> <ol style="list-style-type: none"> <li>1. 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. <li>2. While the controller model is being upgraded, information before upgrade might be output. While the controller model is being downgraded, information before downgrade might be output. | | |

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 \(on page 43\)](#) 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 \(on page 43\)](#).

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 \(on page 43\)](#).

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 \(on page 41\)](#).

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 Cert | Registering or deleting a certificate for Hitachi Command Suite |
| BASE | Update SMIS CertFiles | 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 |
| 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 RIs 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 | <ul style="list-style-type: none"> ▪ Adding the specified host to a host group ▪ Adding a host to the specified host group |
| PROV | Add LUN Paths | <ul style="list-style-type: none"> ▪ Mapping an LU path ▪ Creating an alternate LUN path ▪ Copying the selected LUN path |
| PROV | 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 | <ul style="list-style-type: none"> ▪ Creating a basic volume ▪ Creating an external volume ▪ Creating a virtual volume for Dynamic Provisioning |
| PROV | Create Resource Grps | Creating a resource group |
| PROV | Create VDKC-Box | Creating a VDKC-Box from Hitachi Command Suite |
| PROV | Create/Expand Pools | <ul style="list-style-type: none"> ▪ 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 | <ul style="list-style-type: none"> ▪ 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 | <ul style="list-style-type: none"> ▪ Deleting a basic volume ▪ Deleting an external volume ▪ Deleting a virtual volume for Dynamic Provisioning |
| PROV | Delete Login WWNs | Deleting an unnecessary WWN |

| 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 | <ul style="list-style-type: none"> ▪ 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 | <ul style="list-style-type: none"> ▪ Creating an LDEV ▪ Changing information of an LDEV |
| PROV | Edit/Delete Pools | <ul style="list-style-type: none"> ▪ Deleting a pool ▪ Editing pool settings |
| PROV | Edit/Delete UUIDs | <ul style="list-style-type: none"> ▪ Editing an UUID ▪ Deleting an UUID |
| PROV | Edit iScsi Initiator User | Editing the setting information of users with CHAP authentication on ports |
| PROV | Edit iScsi Name | 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 | <ul style="list-style-type: none"> ▪ 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 | <ul style="list-style-type: none"> ▪ 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 | <ul style="list-style-type: none"> ▪ 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 | <ul style="list-style-type: none"> ▪ Creating an LDEV ▪ Setting an SSID |
| PROV | Set Virtual LDEV | <ul style="list-style-type: none"> ▪ 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 | <ul style="list-style-type: none"> ▪ 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 | UpdateMFSsystemFunctions | Changing settings of the Mainframe System Functions |
| PROV | UpdateParityGroupSettings | Enabling or disabling accelerated compressions |
| PROV | UpdateSpareDrives | Assigning or releasing the assignment of a spare drive |
| PROV | VTOC | Volume Retention Manager |
| Remote Maintenance | Micro Program PS Control Reboot MP Reboot Port Reboot SVP StartVerify StopVerify Switch SVP Transfer Config | Hitachi Remote Ops |
| Remote Replication | Add Path | Adding 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 | 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. |
| Remote Replication | Del Quorum Disk ID | Deleting quorum disk IDs used by global-active device. |

| Function Name | Operation Name | Corresponding GUI Operation |
|--------------------|-------------------|---|
| 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 | 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. |
| 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. |

| Function Name | Operation Name | Corresponding GUI Operation |
|---------------|---|--|
| 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 | <ul style="list-style-type: none"> ▪ Adding a path to an external path group ▪ Deleting a path from an external path group ▪ Changing priority among external paths |
| UVM | Edit ES VOLs | Editing external volume settings |
| UVM | Edit External WWNs / iSCSI Targets | <ul style="list-style-type: none"> ▪ Editing external WWN parameters ▪ Editing external iSCSI target parameters |
| UVM | ProfileUpgrade | Operable by tool only |
| UVM | Reconnect ES Paths | Reconnecting an external path |

| Function Name | Operation Name | Corresponding GUI Operation |
|---------------|--|--|
| 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 |
| | 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 |

| Function Name | Operation Name | Corresponding GUI Operation |
|---------------|---------------------------|--|
| | 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 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 |

| Function Name | Operation Name | Corresponding GUI Operation |
|-----------------|--------------------------------|--|
| | 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 | <ul style="list-style-type: none"> ▪ When the encryption environment setting is configured from the initial setting. ▪ When the certificate encryption key is updated. ▪ When the encryption disk board is deleted or replaced. |
| | Change DEK Status | <ul style="list-style-type: none"> ▪ When the encryption environment setting is configured from the initial setting. ▪ When the encryption environment setting is initialized. ▪ When the data encryption is enabled/disabled. |

| Function Name | Event Name | Output Trigger |
|---------------|----------------------|--|
| | | <ul style="list-style-type: none"> ▪ 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 | <ul style="list-style-type: none"> ▪ When the encryption environment setting is configured from the initial setting. ▪ When the certificate encryption key is updated. ▪ When the encryption disk 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. |

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.=xxxxxxxxxxx
```

Basic Information

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

[AuditLog] DKCAuditLog was lost

Example

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

[AuditLog] Over MaxLine

This information appears in the syslog file only.

Example: 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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+Transfer Protocol=TLS1.2
+Location Identification Name=ABCDEFGF
+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.=xxxxxxxxxxx
+{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 Local: 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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
```

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.=xxxxxxxxxxx +
{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 |

| Item | Description |
|-----------------------|--|
| Search User's DN | Indicates the DN of the user for searching |
| Timeout | Indicates the number of seconds before connection to the LDAP server times out |
| Retry Interval | Indicates the retry interval in seconds when the connection to the LDAP server fails |
| Number of Retries | Indicates the retry times when the connection to the LDAP server fails |
| Secondary Server | Indicates whether to use a secondary LDAP server Enable: Use the secondary server Disable: Do not use the secondary server |
| Secondary Host Name | Indicates the host name of the secondary LDAP server |
| Secondary Port Number | Indicates the port number of the secondary LDAP server |
| Num. of Servers | The number of external authentication servers that are set |

Example 3

```

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 |

| Item | Description |
|-------------------------|--|
| 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 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 |

| Item | Description |
|-------------------------|--|
| | 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 |
| 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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{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}=  
}
```


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. <ul style="list-style-type: none"> ▪ 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.=xxxxxxxxxxx +{File
Name,Result}=[{server.crt,Normal end},
{server.key,Error(xxxx-yyyy)}]
```

Detailed Information

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

[BASE] 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.=xxxxxxxxxxx
+[{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 |

| Item | Description |
|------------------------------------|---|
| Change CipherSuites Setting TLS1.2 | <p>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.</p> <ul style="list-style-type: none"> ▪ 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 ▪ 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 <p>Either of the following statuses is output. true: Enabled, false: Disabled</p> |
| Change CipherSuites Setting TLS1.3 | <p>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.</p> <ul style="list-style-type: none"> ▪ TLS_AES_128_GCM_SHA256 ▪ TLS_AES_256_GCM_SHA384 <p>Either of the following statuses is output. true: Enabled, false: Disabled</p> |

| Item | Description |
|---------------------------------------|--|
| Change Minimum KeyExchange Key Length | <p>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.</p> <ul style="list-style-type: none"> ▪ RSA <ul style="list-style-type: none"> • 2048 bit • 3072 bit • 4096 bit ▪ DHE <ul style="list-style-type: none"> • 2048 bit ▪ ECDHE <ul style="list-style-type: none"> • 256 bit (secp256r1) • 384 bit (secp384r1) • 521 bit (secp521r1) |
| Change Renegotiation Setting | <p>Indicates whether renegotiation is enabled.</p> <p>This item is output only when TLS 1.2 is enabled. This item is not output when the setting has not been changed.</p> <p>Renegotiation=true: Enabled, Renegotiation=false: Disabled</p> |

[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.=xxxxxxxxxxx
+{File Name,Result} =[{User Account Information,Normal end},
{Environment Parameter List,Normal end},
{Log Transfer Information,Normal end},{External Authentication,-},
{External Application Link,-},{HiCommand Setting,-},
{Key Management Server,Normal end},{Password Policy,Normal end},,{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}=[{XXXXXXXXXX,Normal end},{XXXXXXXXXX,Normal end},
{XXXXXXXXXX,Normal end},
-{XXXXXXXXXX,Normal end}],Num. of Reports=4
```


Detailed Information

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

[BASE] Delete Tasks**Example**

```
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.=xxxxxxxxxxx
+{Task Name,Type,User Name,Submission Time,Result}=
[{{20100101-EditStorageSystem,Edit Storage System,User01,
YYYY/MM/DD HH:MM:SS,Normal end},{20100101-CreateLdev,Create LDEV,User02,
YYYY/MM/DD HH:MM:SS,Normal end}},Num. of Tasks=2
```

Detailed Information

| Item | Description |
|-----------------|---|
| Task Name | Name of the deleted task |
| Type | Type of the task |
| User Name | The user ID who deleted the task |
| Submission Time | Time when the task was registered |
| Result | Result of the operation Normal end: normal end, Error(xxxx-yyyyy): Abnormal end xxxx: part code, yyyy: error code |
| Num. of Tasks | The number of 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.=xxxxxxxxxxx
+{Task Name,Type,User Name,Submission Time,Result}=
[{20100101-EditStorageSystem,Edit Storage System,User01,
YYYY/MM/DD HH:MM:SS,Normal end},{20100101-CreateLdev,Create LDEV,User02,
YYYY/MM/DD HH:MM:SS,Normal end}],Num. of Tasks=2
```

Detailed Information

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

[BASE] Edit 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.=xxxxxxxxxxx +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.=xxxxxxxxxxx
+Transfer Protocol=TLS1.2 +Location Identification Name=ABCDEFGHJK
+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. |
| 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. |

| Item | Description |
|------------------------------|---|
| | 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.=xxxxxxxxxxx
+{Name,Contact,Location}=[{XXXXX,XXXXX,XXXXX}],Num. of SystemInfos=1
```

Detailed Information

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

[BASE] Enable Auto Delete

Example

```
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.=xxxxxxxxxxx
+{Task Name,Type,User Name,Submission Time,Result}=
[{20100101-EditStorageSystem,Edit Storage System,User01,
YYYY/MM/DD HH:MM:SS,Normal end},{20100101-CreateLdev,Create LDEV,User02,
YYYY/MM/DD HH:MM:SS,Normal end}],Num. of Tasks=2
```

Detailed Information

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

[BASE] Entry Tasks

This log is output when each task on the 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.=xxxxxxxxxxx
+{Action Name}=[{xxxxxxx},{xxxxxxx},{xxxxxxx},{xxxxxxx},{xxxxxxx}],
Num. of Actions=5
```

Detailed Information

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

[BASE] 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx
```

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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx
```

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.=xxxxxxxxxxx
```

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.=xxxxxxxxxxx
```

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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+{Operation Name,Lockout}={Control Panel,Yes}
```

Detailed Information

| Item | Description |
|----------------|--|
| Operation Name | Indicates which operation window that was logged in on the Tool Panel |
| 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.=xxxxxxxxxxx
```


[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.=xxxxxxxxxxx +{HTTP
Block,Result}={-,Normal end}
```

Detailed Information

| Item | Description |
|------------|--|
| HTTP Block | Status of the HTTP Block. -: disabled, Blocked: enabled |
| Result | Result of the HTTP Block setting Normal end: normal end, Error(xxxx-yyyy) Abnormal end 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.=xxxxxxxxxxx
+{Task Name,Type,User Name,Submission Time,Result}=
[{20100101-EditStorageSystem,Edit Storage System,User01,
YYYY/MM/DD HH:MM:SS,Normal end},{20100101-CreateLdev,Create LDEV,User02,
YYYY/MM/DD HH:MM:SS,Normal end}],Num. of Tasks=2
```

Detailed Information

| Item | Description |
|-----------------|--|
| Task Name | Name of the resumed task |
| Type | The type of task |
| User Name | The ID of the user who resumed the task |
| Submission Time | Time when the task was registered |
| Result | Result of the operation Normal end: normal end, Error(xxxx-yyyyy): Abnormal end |

| Item | Description |
|---------------|-----------------------------------|
| | xxxx: part code, yyyy: 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 |
| 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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{Task Name,Type,User Name,Submission Time,Result}=
[{{20100101-EditStorageSystem,Edit Storage System,User01,
YYYY/MM/DD HH:MM:SS,Normal end},{20100101-CreateLdev,Create LDEV,User02,
YYYY/MM/DD HH:MM:SS,Normal end}],Num. of Tasks=2
```

Detailed Information

| Item | Description |
|-----------------|--|
| Task Name | Name of the 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 |

| Item | Description |
|---------------|-----------------------------------|
| | xxxx: part code, yyyy: 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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+{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, yyyy: 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, yyyy: 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:
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

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:
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

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 <i>HH</i> : Start time in hours (00 to 23) |
| Active End | End time of the active hours <i>HH</i> : 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.=xxxxxxxxxxx +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.=xxxxxxxxxxx +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.=xxxxxxxxxxx
+{MailServerSetting,MailServer}={HostName,smtp.test.co.jp} +{SMTP
AUTH,Account}={Enable,Account}
+{FromAddress,ReturnAddress}={TransAddr@co.jp,ReplyAddr@co.jp}
+UsedCount=32
++{ToAddressList,Attribute}=[{usr1@co.jp,TO},{usr2@co.jp,TO},
{usr3@co.jp,TO},{usr4@co.jp,CC}, [snip] {usr25@co.jp,CC},
{usr26@co.jp,BCC},{usr27@co.jp,BCC},{-,-},{-,-}, {usr31@co.jp,BCC}],Num. of
Accounts=32
```


Detailed Information

| Item | Description |
|-------------------|---|
| MailServerSetting | The specification type of the server HostName: Host name, IP Address: IP address (IPv4 or IPv6) |
| MailServer | The SMTP server domain name or IP address. If IP address is specified, the address divided by periods means IPv4 address and the address divided by colons means IPv6 address. |
| SMTP AUTH | Indicates whether the SMTP authentication is enabled or disabled. Disable or Enable will appear. |
| Account | SMTP server account |
| FromAddress | Mail source address |
| ReturnAddress | Return mail address. If you want to receive the reply to another mail address, you can specify the desired address by using ReturnAddress. |
| UsedCount | The number of 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxxx
```

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.=xxxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 |

| Item | Description |
|----------------------------|--|
| 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 |
| 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.=xxxxxxxxxxx
+Reference Code=[XXXXXX,XXXXXX],Num. of Reference Codes=2
```

Detailed Information

| Item | Description |
|-------------------------|---|
| Reference Code | The reference code of the SIM whose error and service request are resolved. |
| Num. of Reference Codes | The number of 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.=xxxxxxxxxxx +Type=DKC SIM
++{Acute,Serious,Moderate,Service}={ON,ON,ON,ON} +Type=Cache SIM
++{Acute,Serious,Moderate,Service}={ON,ON,ON,ON} +Type=Media SIM
++{Acute,Serious,Moderate,Service}={ON,ON,ON,ON} +Type=Device SIM
++{Acute,Serious,Moderate,Service}={ON,ON,ON,ON} +Num. of Types=4
```

Detailed Information

| Item | Description |
|---------------|--|
| Type | The type of SIM. DKC SIM: SIM related to storage system, Cache SIM: SIM related to cache, Media SIM: SIM related to recording media Device SIM: SIM related to disk device |
| Acute | Report acute level information as a SIM. ON: Report, OFF: Do not report |
| 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.=xxxxxxxxxxx
+Type=7days
+{Mechanical error(Recovered,Unrecd.),Media error(Recovered, Unrecd.),Read/
Write
error(Recovered,Unrecd.), Drive I/F error(Recovered,Unrecd.), Controller
hardware
error(Recovered,Unrecd.), 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.=xxxxxxxxxxxx
+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 |

| Item | Description |
|------------------------|--|
| Port 0 error (Unrecd.) | The threshold of the Port 0 error |
| Port 1 error (Unrecd.) | The threshold of the Port 1 error |
| PDEV | The mounting location of PDEV (physical device) that is the target of Alter or error reset |
| Num. of PDEVs | The number of PDEVs (physical devices) |

Install Descriptions

[Install] 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.=xxxxxxxxxxx
+{New Ver.,Old Ver.}={xx-xx-xx/xx,xx-xx-xx/xx}
```

Detailed Information

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

[Install] 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+{Flash Drive Collective setting,Dynamic Sparing,Warning SIM}={Valid,99,95}
+{FMD Battery Collective setting,Warning SIM}={Valid,95}
```

Detailed Information

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

[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.=xxxxxxxxxxx
+Date=YYYY/MM/DD HH:mm
```

Detailed Information

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

[Install] 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.=xxxxxxxxxxx
+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). |

| Item | Description |
|---|--|
| 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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+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
xxxxxxxxxx,, x,
xxxxxxxxxx, +Mode=Restore Configuration
x,xxxxxxxxxx,+Object=Configuration
```

Detailed Information for Example 2

| Item | Description |
|------|--------------------------|
| Mode | The type of installation |

| Item | Description |
|--------|-----------------------------------|
| 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.=xxxxxxxxxxx
+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. 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.=xxxxxxxxxxx
+{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 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+{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. |
| 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 |
| 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 Sparring) | Indicates the setting status of Copy Operation (Dynamic Sparring). ON: Execute Dynamic Sparring, OFF: Do not execute Dynamic Sparring |
| 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. |

| Item | Description |
|--|--|
| 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.=xxxxxxxxxxx
+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 |

| Item | Description |
|----------------|--|
| | 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.=xxxxxxxxxxx
+Copy Type=TI
++{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),PoolID,MU, Snapshot Group,
Result}
={ {0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,0,1,SnapshotSet1,Normal end},
{0xX:0xAA:0xBB,0xY:0xCC:0xDD,0,,SnapshotSet2,Error(xxxx-yyyyy)}}, Num. of
Pairs=2
```

Detailed Information

| Item | Description |
|-------------------------|---|
| Copy Type | The program product name for 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. |

| Item | Description |
|----------------|---|
| Snapshot Group | The snapshot group name |
| Result | The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end xxxx: Part code, yyyy: Error code |
| Num. of Pairs | The number of 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.=xxxxxxxxxxxx
+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.=xxxxxxxxxxxx +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 program product name for 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 |

| Item | Description |
|-------------------------|--|
| | This item is output only when the copy type is SI or SIMF. |
| Split Type | <p>The split type</p> <p>Non Split: Does not split the pair, Quick Split: Pair split by background copy, Steady Split: Pair split by update copy</p> <p>This item is output only when the copy type is SI or SIMF.</p> |
| 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) | <p>The LDKC number, the CU number and the LDEV number of the secondary volume in the created pair</p> <p>No output if Copy Type is TI, and a secondary volume is not specified during the pair creation operation.</p> |
| PoolID | <p>The pool ID of the secondary volume of the created pair</p> <p>This item is output only when the copy type is TI.</p> |
| MU | <p>The mirror unit number of the created pair</p> <p>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.</p> |
| Snapshot Group | <p>The snapshot group name</p> <p>This item is output only when the copy type is TI.</p> |
| Cascade | <p>Indicates the cascade attribute of the created pair.</p> <p>Enable: Supported pair, Disable: Not supported pair</p> <p>This item is output only when the copy type is TI.</p> |
| Pair Type | <p>Indicates the clone attribute of the created pair.</p> <p>Clone: Cloned, Snapshot: Non-cloned</p> <p>This item is output only when the copy type is TI.</p> |
| Result | <p>The result of the operation</p> <p>Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end</p> <p>xxxx: Part code, yyyy: Error code</p> |
| 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.=xxxxxxxxxxx +Copy Type=SI
++{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),Result}
=[{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,Normal end},
{0xX:0xAA:0xBB,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.=xxxxxxxxxxx +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 program product name for 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 |
| 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, yyyy: 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.=xxxxxxxxxxx +Copy Type=SI
++Swap & Freeze=Enable,HOST I/O Performance=Enable, Reserve03=Enable,
(snip),
Nondisruptive Migration Data Consistency
=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),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.=xxxxxxxxxxx +Copy
Type=SIMF
++Swap & Freeze=Enable,HOST I/O Performance=Enable, FC
Slower Copy1=Enable,FC
Slower Copy2=Enable, Reserve05=Disable,(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),Reserve32=Disable
```

Detailed Information

| Item | Description |
|----------------------|---|
| Copy Type | The program product name for this operation SI: ShadowImage, SIMF: 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 |

| Item | Description |
|---|---|
| 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. |
| Nondisruptive Migration Data Consistency | Indicates whether the Nondisruptive Migration Data Consistency option is enabled or disabled. Enable: Enabled, Disable: Disabled |
| 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 |
| 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 |

| Item | Description |
|--|--|
| 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 |
| Reserve X | Reserved items If Copy Type is SI, X is a number: 03 to 15, 17 to 19, 23, 27 to 29 or 31 to 32. If Copy Type is SIMF, X is a number: 05 to 15, 19, 23, 27 to 29 or 31 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.=xxxxxxxxxxxx
```

[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.=xxxxxxxxxxxx +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 program product name for 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(yyyy-xxxx): Abnormal end xxxx: Part code, yyyy: 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.=xxxxxxxxxxx +Copy Type=TI
++{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),PoolID,MU, Snapshot Group,
Result}
={ {0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,0,1,SnapshotSet1,Normal end},
{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,0,,SnapshotSet2,Error(yyyy-xxxx)}}, Num. of
Pairs=2
```

Detailed Information

| Item | Description |
|-------------------------|---|
| Copy Type | The program product name for this operation TI: Thin Image |
| 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. |

| Item | Description |
|----------------|--|
| 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.=xxxxxxxxxxx +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 program product name for this operation SIMF: ShadowImage for Mainframe |
| CTG | The CTG ID of a reserved 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 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.=xxxxxxxxxxx +Copy
Type=SI,Copy
Pace=Medium,Resync Type=Normal Copy
++{P-VOL (LDKC:CU:LDEV),S-VOL (LDKC:CU:LDEV),Result}
=[{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,Normal end},
{0xX:0xAA:0xBB,0xY:0xCC:0xDD,Error(xxxx-yyyyy)}], Num. of
Pairs=2
```

Example 2: when the copy type is TI

```
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.=xxxxxxxxxxx +Copy
Type=TI,Resync Type=Reverse Copy
++{P-VOL (LDKC:CU:LDEV),S-VOL (LDKC:CU:LDEV),MU,Result}
=[{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,,Normal end},
{0xX:0xAA:0xBB,0xYY:0xCC:0xDD,,Error(xxxx-yyyyy)}],Num. of Pairs=2
```

Detailed Information

| Item | Description |
|----------------------|--|
| Copy Type | The program product name for 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 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. |

| Item | Description |
|---------------|--|
| 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-YYYY): Abnormal end XXXX: Part code, YYYY: 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.=xxxxxxxxxxx +Copy
Type=SI,Copy Pace=Faster,Split
Type=Steady Split ++{P-VOL(LDKC:CU:LDEV),S-VOL(LDKC:CU:LDEV),Result}
={0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,Normal end},
{0xX:0xAA:0xBB,0xY:0xCC:0xDD,Error(XXXX-YYYY)}], Num. of Pairs=2
```

Example 2: when the copy type is TI

```
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.=xxxxxxxxxxx +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-YYYY)}], Num.
of
Pairs=2
```

Detailed Information

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

| Item | Description |
|-------------------------|--|
| Copy Pace | The copy speed of the splitted 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-yyyy): Abnormal end xxxx: Part code, yyyy: 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.=xxxxxxxxxxx +Copy Type=SI
++{P-VOL (LDKC:CU:LDEV) ,S-VOL (LDKC:CU:LDEV) ,Result}
=[{0xXX:0xAA:0xBB,0xYY:0xCC:0xDD,Normal end},
{0xX:0xAA:0xBB,0xY:0xCC:0xDD,Error (xxxx-yyyyy) }], Num. of
Pairs=2
```

Detailed Information

| Item | Description |
|-------------------------|---|
| Copy Type | The program product name for this operation SI: ShadowImage, 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, yyyy: 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.=xxxxxxxxxxx
+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). |

| Item | Description |
|------------------------------------|--|
| | 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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) |
| 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 |

| Item | Description |
|------------------------------------|--|
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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. |
| Forcibly run without safety checks | Indicates whether the function of forcible replacement (without running safety checks) is enabled. |

| Item | Description |
|---|--|
| 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 cache memory is installed, during replacement

```
09XX,0,YYYY/MM/DD,HH:MM:SS.xxx,00:00,GUM,, [Maintenance],Block,,Normal end,
Seq.=xxxxxxxxxxx
+Cache Size=xxxxxxxxx,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.=xxxxxxxxxxx
+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. |
| 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 DKB when the 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 DKB to be blocked (DKB-xxx) |
| Forcibly block | Indicates whether the function for forcibly blocking a DKB is enabled. |
| Type | The unit type of the 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) |

| Item | Description |
|------------------------------------|--|
| 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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 |

| Item | Description |
|---------------|--|
| 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.=xxxxxxxxxxx
+Auto Define Configuration Mode=Disable
```

Detailed Information

| Item | Description |
|--|---|
| Auto Define Configuration Mode | The setting status of the ADC mode (Auto Define Configuration 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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
xxxxxxxx,
+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.=xxxxxxxxxxx
+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 safety 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.=xxxxxxxxxxx
+Shared Memory Function=[xxxxxxxxx,xxxxxxxxx]
```

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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+ 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.=xxxxxxxxxxx
+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
xxxxxxxxx,
+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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+Location=xxx
```


Detailed Information for Example 2

| Item | Description |
|----------|---|
| Location | <p>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).</p> <p>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.)</p> |

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 | <p>The unit type of CFM010/020 that was installed</p> <p>A hyphen (-) is displayed if the unit is not changed or mounted.</p> |
| CFM Type for CFM011/021 | <p>The unit type of CFM011/021 that was installed</p> <p>A hyphen (-) is displayed if the unit is not changed or mounted.</p> |
| CFM Type for CFM110/120 | <p>The unit type of CFM110/120 that was installed</p> <p>A hyphen (-) is displayed if the unit is not changed or mounted.</p> |
| CFM Type for CFM111/121 | <p>The unit type of CFM111/121 that was installed</p> <p>A hyphen (-) is displayed if the unit is not changed or mounted.</p> |
| CFM Type for CFM210/220 | <p>The unit type of CFM210/220 that was installed</p> <p>A hyphen (-) is displayed if the unit is not changed or mounted.</p> |
| CFM Type for CFM211/221 | <p>The unit type of CFM211/221 that was installed</p> |

| 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.=xxxxxxxxxxx
+Location=xxx,Type=xxxxxxx
```

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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+Cache Size=xxxxxxxxx,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 DKB when the 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.=xxxxxxxxxxx
+Location=xxx,Type=xxxxxxx
```

Detailed Information for Example 2

| Item | Description |
|----------|---|
| Location | The mounting location of the DKB to be restored (DKB-xxx) |
| Type | The unit type of the 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.=xxxxxxxxxxx
+Location=xxx,Type=xxxxxxx,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.=xxxxxxxxxxx
+Location=xxx,Type=xxxxxx,BKMFTType=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 |
| BKMFTType | 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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
```

[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,,Seq.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx
+[LDKC:CU] = [0x00:0x00,0x00:0x01,0x00:0x02],Num. of CUs = 3
```

Basic Information

| Parameter | Description |
|-----------|-----------------------------|
| Enable | The monitored CU is enabled |

Detailed Information

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

Basic Information

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

[PFM] Edit WWN

Example

```
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.=xxxxxxxxxxx +{Update
Mode,HBA
WWN,Change WWN Name,Change HBA WWN} =[{Change HBA
WWN,0xxxxxxxxxxxxxxxxxxx,,0xxxxxxxxxxxxxxxxxxx}, {Change WWN Name,
0xxxxxxxxxxxxxxxxxxx,
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx, }],Num.
```

of
WWNs=2

Detailed Information

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

[PFM] Edit WWN MonitorMode

Example

```
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, ,Seq.=xxxxxxxxxxx
+{Mode,HBA WWN,WWN Name}={Add WWN,0xxxxxxxxxxxxxxxxxxx,
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx},
++Port=[XX],Num. of Ports=1, -Num. of WWNs=1
```

Detailed Information

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

| Item | Description |
|--------------|-------------------------------------|
| 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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{KeyCode[0]{Key
Code="XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
```

```
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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{Port,HostGrpID,WWN,Nickname} =[{XX,0xXXX,0xxxxxxxxxxxxxxxxxxx,
XXXXXXXXXXXXXXXXXXXX},
{XX,0xXXX,0xxxxxxxxxxxxxxxxxxx,XXXXXXXXXXXXXXXXXXXX}],Num. of WWNs=2
```

Detailed Information

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

| 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-yyyy): Abnormal end xxxx: Part code, yyyy: 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.=xxxxxxxxxxx
+LDKC:CU:LDEV=[0x00:0x00:0x01,0x00:0x00:0x02,0x00:0x00:0x03,
0x00:0x00:0x04,0x00:0x00:0x05,0x00:0x00:0x06,0x00:0x00:0x07,
0x00:0x00:0x08,0x00:0x00:0x09,0x00:0x00:0x0A], Num. of LDEVs=10
```

Detailed Information

| Item | Description |
|---------------|---|
| LDKC:CU:LDEV | The LDKC number, the CU number, and the LDEV number |
| Num. of LDEVs | The number of LDEVs 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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
```

```
+{Port,HostGrpID,HostGrpName}=[{XX,0xxx,XXXXXXXXXXXXXXXXXX},
{XX,0xxx,XXXXXXXXXXXXXXXXXX}],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 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 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, yyyy: 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 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, yyyy: 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.=xxxxxxxxxxx +{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, yyyy: 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.=xxxxxxxxxxx
+{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, yyyy: 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-yyyy): Abnormal end xxxx: Part code, yyyy: 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.=xxxxxxxxxxx
+{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 |
| Pool Type | The pool type. Dynamic Provisioning: Dynamic Provisioning, Thin Image: Thin Image |
| 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 |

| Item | Description |
|---|---|
| | 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. |
| 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 Suspend Thin Image pairs when depletion threshold is exceeded Yes: Suspend Thin Image pairs is enabled when the depletion threshold is exceeded. No: Suspend Thin Image pairs is disabled even if the depletion threshold is exceeded. |

| Item | Description |
|---|---|
| | If Execute Command is Expand, a hyphen (-) is output. |
| Automatically manage compressed space of FMD parity group | <p>Indicates the setting status of automatically manage compressed space of FMD parity group</p> <p>Enable: Automatically manage compressed space of FMD parity group is enabled.</p> <p>Disable: Automatically manage compressed space of FMD parity group is disabled.</p> <p>If Execute Command is Expand, a hyphen (-) is output.</p> |
| Pool Result | <p>The result of pool creation or expansion</p> <p>Normal end: Normal end, Error(xxxx-yyyy): Abnormal end, Not Execute: Not Executed</p> <p>xxxx: Part code, yyyy: Error code</p> |
| Execute Command | <p>The executed operation</p> <p>Create: Pools are created.</p> <p>Expand: Pools are expanded.</p> <p>If Pool Result is not Normal end, a hyphen (-) is output.</p> |
| 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 | <p>The external LDEV tier rank of the pool volume assigned to the created or expanded pool</p> <p>High: An external volume (High)</p> <p>Middle/Internal: An external volume (Middle) or an internal volume</p> <p>Low: An external volume (Low)</p> |
| LDEV Result | <p>The result of creating or expanding pools per pool volume</p> <p>Normal end: Normal end, Error(xxxx-yyyy): Abnormal end, Not Execute: Not Executed</p> <p>xxxx: Part code, yyyy: Error code</p> |
| 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.=xxxxxxxxxxx
+{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, yyyy: 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.=xxxxxxxxxxx
+{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 |
| 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, yyyy: 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.=xxxxxxxxxxx
+{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. |
| 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* |

| Item | Description |
|--|---|
| Result | The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end xxxx: Part code, yyyy: 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.=xxxxxxxxxxx
+{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, yyyy: 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.=xxxxxxxxxxx
+{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 capacity 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 <i>where xxxx: Part code, yyyy: Error code</i> |

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 <i>where xxxx: Part code, yyyy: Error code</i> |

| Item | | Description |
|----------------|---------------|---|
| 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.=xxxxxxxxxxx
+{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, yyyy: 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.=xxxxxxxxxxx
+{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, yyyy: 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.=xxxxxxxxxxx
+{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-yyyy): Abnormal end xxxx: Part code, yyyy: 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.=xxxxxxxxxxx
+{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-81-30-00-32-30-00-32-00-00-00-50-00""}},
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 |

| Item | Description |
|-------------|--|
| | true: Enabled, false: Disabled |
| DiffClone | The setting status of the diff clone for the snapshot true: Enabled, false: Disabled |
| 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, yyyy: 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.=xxxxxxxxxxxx
+{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 |
| 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, yyyy: Error code |
| Capacity | The capacity |

| Item | | Description |
|------|-----------|---|
| | Ssid | The SSID |
| | MpBladeId | The MP Blade ID "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.=xxxxxxxxxxx
+{Port,HostGrpID}
=[{XX,0xXXX},{XX,0xXXX}],Num. of Host Groups=2
```

Detailed Information

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

[PROV] Delete LDEVs

This log information is output when you delete a Thin Image volume or DP-VOL. When you delete an internal or external 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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{LDKC:CU:LDEV, Result}=[{0x00: 0x00: 0x00, Normal end},{0x00: 0x01:
0x00, Normal end},{0x00: 0x02: 0x00, Normal end}],Num. of LDEVs=3
```

Basic Information for Example 1 and 2

| Item | Description |
|-------------------|---|
| Snapshot | Operating for the Thin Image 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 <i>where xxxx: Part code, yyyy: Error code</i> |
| Num. of LDEVs | The number of deleted V-Vols |

[PROV] DeleteLdev

This log information is output when you delete an internal or external volume. When you delete a Thin Image 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.=xxxxxxxxxxx
+{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 <i>where</i> xxxx: Part code, yyyy: 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.=xxxxxxxxxxx
+{Port,Delete WWN}=[{XX,0xxxxxxxxxxxxxxxxxxx},{XX,0xxxxxxxxxxxxxxxxxxx}], 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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{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, yyyy: 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.=xxxxxxxxxxx
+{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, yyyy: 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.=xxxxxxxxxxx
+{Alus[0]{Id="60-06-0E-81-30-76-D9-30-76-D9-00-00-00-00-49",
Result=Normal
end,LdevId=0x00:0x00:0x49}}
```

Detailed Information

| Item | Description |
|---------|--|
| Alus[x] | The setting information of the deleted LDEV with the ALU attribute |
| 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, yyyy: 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.=xxxxxxxxxxx
+{Slus[0]{Id="60-06-0E-81-30-76-D9-30-76-D9-00-00-00-00-49",
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, yyyy: 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.=xxxxxxxxxxx
+{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, yyyy: 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.=xxxxxxxxxxx
+{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, yyyy: 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.=xxxxxxxxxxx
+{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, yyyy: 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.=xxxxxxxxxxx
+{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-yyyy): Abnormal end xxxx: Part code, yyyy: 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.=xxxxxxxxxxx
+{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, yyyy: 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.=xxxxxxxxxxx
+{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, yyyy: 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.=xxxxxxxxxxx
```



```
+{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, yyyy: 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.=xxxxxxxxxxx
+{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, yyyy: 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.=xxxxxxxxxxx
+{Slus[0]{Id="60-06-0E-81-30-76-D9-30-76-D9-00-00-00-00-49",
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, yyyy: 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.=xxxxxxxxxxx
+{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, yyyy: 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 |
| | 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, yyyy: 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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{LDKC:CU:LDEV,CommandDevSec} =[{0xXX:0xXX:0xXX,Disable},{0xXX:0xXX:0xXX,
Enable}],
Num. of LDEVs=2
```

Detailed Information

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

[PROV] Edit Command Devices**Example**

```
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.=xxxxxxxxxxx
+{LDKC:CU:LDEV,CommandDev}=[{0xXX:0xXX:0xXX,Disable},{0xXX:0xXX:0xXX,
```

```
Enable}], Num.
of LDEVs=2
```

Detailed Information

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

[PROV] Edit DRU Attribute

Example

```
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: <ul style="list-style-type: none"> ▪ Bit 0: Mounting of LEDV (fixed to 1) ▪ Bit 1: Setting of S-VOL Disable ▪ Bit 2: Setting of Zero Read Cap mode ▪ Bit 3: Setting of Invisible mode |

| Item | Description |
|--|--|
| | <ul style="list-style-type: none"> ▪ Bit 4: Setting of reserve ▪ Bit 5: Fixed to 0 (zero)* ▪ Bit 6: Setting of Read Only attribute* ▪ Bit 7: Setting of Protect attribute* <p>When 0x88 is output to the attribute, for example, Read/Write attribute is set to the logical volume to show that the reserve setting has been enabled.</p> <p>A hyphen (-) is output when a setting is not changed.</p> |
| RT | <p>The number of days set in Retention Term.</p> <p>A hyphen (-) is output when setting is not changed.</p> |
| Result | <p>The result of operation</p> <p>Normal end: Normal end,</p> <p>Error(xxxx-yyyyy): Abnormal end</p> <p>where xxxx: Part code, yyyy: Error code</p> |
| 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 |

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

| Item | Description |
|-----------------|---|
| 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 Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end <i>where xxxx: Part code, yyyy: Error code</i> |
| 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,0xxxxxxxxxxxxxxxxxxx,0xxxxxxxxxxxxxxxxxxx, xxxxxxxxxxxxxxxxxxxx}],
Num. of
WWNs=1
```

Detailed Information

| Item | Description |
|-----------------|--|
| Port | The name of the port where the host is connected |
| HostGrpID | The host group number on which the host with WWN or nickname of the host bus adapter being changed is registered |
| WWN | Indicates 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 |

| Item | Description |
|--------------|--|
| 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.=xxxxxxxxxxxx
+{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 <i>Provisioning Guide for Open Systems</i> 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 <i>Provisioning Guide for Open Systems</i> for the meaning of the host mode options. |
| Num. of Host Groups | The number of host groups that the host mode setting is changed. |

Host mode option 0 to 31 and output contents of Option[0:31]

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

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 |

| Host mode option | Value of Option[32:63] | Host mode option | Value of Option[32:63] |
|------------------|------------------------|------------------|------------------------|
| 38 | 0x02000000 | 54 | 0x00000200 |
| 39 | 0x01000000 | 55 | 0x00000100 |
| 40 | 0x00800000 | 56 | 0x00000080 |
| 41 | 0x00400000 | 57 | 0x00000040 |
| 42 | 0x00200000 | 58 | 0x00000020 |
| 43 | 0x00100000 | 59 | 0x00000010 |
| 44 | 0x00080000 | 60 | 0x00000008 |
| 45 | 0x00040000 | 61 | 0x00000004 |
| 46 | 0x00020000 | 62 | 0x00000002 |
| 47 | 0x00010000 | 63 | 0x00000001 |

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 |

| Host mode option | Value of Option[64:95] | Host mode option | Value of Option[64:95] |
|------------------|------------------------|------------------|------------------------|
| 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 |
| 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 |

| Host mode option | Value of Option[160:191] | Host mode option | Value of Option[160:191] |
|------------------|--------------------------|------------------|--------------------------|
| 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 |
| 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 |

| Host mode option | Value of Option[192:223] | Host mode option | Value of Option[192:223] |
|------------------|--------------------------|------------------|--------------------------|
| 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,XXXXXXXXXXXXXXXXXX},{XX,0xXXX,XXXXXXXXXXXXXXXXXX}], 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 |

| Item | Description |
|---------------|----------------------------|
| 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.=xxxxxxxxxxx
+{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 <i>where xxxx: Part code, yyyy: Error code</i> |
| 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.=xxxxxxxxxxx
+{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) |

| Value | Address* | Value | Address* | Value | Address* | Value | Address* |
|-------|----------|-------|----------|-------|----------|-------|----------|
| 21 | C9 (20) | 53 | 88 (52) | 85 | 51 (84) | 117 | 1D (116) |
| 22 | C7 (21) | 54 | 84 (53) | 86 | 4E (85) | 118 | 1B (117) |
| 23 | C6 (22) | 55 | 82 (54) | 87 | 4D (86) | 119 | 18 (118) |
| 24 | C5 (23) | 56 | 81 (55) | 88 | 4C (87) | 120 | 17 (119) |
| 25 | C3 (24) | 57 | 80 (56) | 89 | 4B (88) | 121 | 10 (120) |
| 26 | BC (25) | 58 | 7C (57) | 90 | 4A (89) | 122 | 0F (121) |
| 27 | BA (26) | 59 | 7A (58) | 91 | 49 (90) | 123 | 08 (122) |
| 28 | B9 (27) | 60 | 79 (59) | 92 | 47 (91) | 124 | 04 (123) |
| 29 | B6 (28) | 61 | 76 (60) | 93 | 46 (92) | 125 | 02 (124) |
| 30 | B5 (29) | 62 | 75 (61) | 94 | 45 (93) | 126 | 01 (125) |
| 31 | B4 (30) | 63 | 74 (62) | 95 | 43 (94) | - | - |
| 32 | B3 (31) | 64 | 73 (63) | 96 | 3C (95) | - | - |

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

[PROV] Edit Ports(Attr)

Example

```
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.=xxxxxxxxxxx
+Attribute=Bidirectional
++Port=[1E],Num. of Ports=1
```

Detailed Information

| Item | Description |
|---------------|---|
| Attribute | The attribute of the port after change. Target: Target port, Bidirectional: 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.=xxxxxxxxxxx
+{Port,Switch}=[{XX,Disable},{XX,Enable}],Num. of Ports=2
```

Detailed Information

| Item | Description |
|---------------|---|
| Port | The name of the port where the LUN security setting is changed |
| Switch | Indicates whether the LUN security setting is enabled or disabled. Disable or Enable 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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{Port,Fabric,Connection}=[{XX,Enable,FC-AL},{XX,Disable,FC-AL},
{XX,Enable,P-to-P},{XX,Disable,P-to-P}],Num. of Ports=4
```

Detailed Information

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

[PROV] Edit Resource Grp

Example

```
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.=xxxxxxxxxxx
+{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 |

| Item | Description |
|-------------------------|---|
| Result | The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end <i>where xxxx: Part code, yyyy: Error code</i> |
| Num. of 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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{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 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 <i>where xxxx: Part code, yyyy: Error code</i> |
| 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.=xxxxxxxxxxx
```



```
+{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 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 <i>where xxxx: Part code, yyyy: Error code</i> |
| 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 |

| Item | Description |
|--------------------------|---|
| | This is output when the tiering policy is set. |
| New Page Assignment Tier | The new page assignment tier Middle: A middle performance tier, High: A high performance tier, Low: A low performance tier This is output when the new page assignment tier is set. |
| Relocation Priority | The relocation priority information Default: Normal, Prioritize: Prioritized This is output when the relocation priority information is set. |
| Result | The result of the operation. Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end, Not Execute: Not Executed xxxx: Part code, yyyy: Error code |
| Num. of VOLs | The number of operated 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.=xxxxxxxxxxx
+{Command,Pool ID,Pool Type,Multi Tier Pool,Tier Management, Cycle Time,
Monitoring Period,Monitoring
Mode,Result} =[{Change Tier,1,Dynamic Provisioning,Enable,Auto,24,
10:00-11:00,Continuous Mode,Normal End}],Num. of Pool=1 ++{Tier,Buffer
Space for New
page assignment(%), Buffer Space for Tier relocation(%),Tier Result}
=[{1,10,10,Normal end},{2,20,20,Normal end}],Num. of Tiers=2
```

Detailed Information

| Item | Description |
|---------|--|
| Command | The operation on the pool Change: Changing pool information about the threshold and the subscription limit Change Tier: Changing information about Dynamic Tiering |

| Item | Description |
|---|--|
| | 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 |
| 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. 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 |

| Item | Description |
|---|--|
| | <p>This item is output only when "Command" is "Change".</p> <p>If the pool type is not Dynamic Provisioning or the pool is not a pool for an open system, a hyphen (-) is output.</p> |
| Tier Management | <p>The auto control mode of the created or expanded pool.</p> <p>Auto: Auto, Manual: Manual</p> <p>This item is output only when "Command" is "Change Tier".</p> <p>If Multi Tier Pool is anything other than Enable, a hyphen (-) is output.</p> |
| Cycle Time | <p>The cycle of performance monitoring for the pool.</p> <p>0.5: every thirty minutes, 1: every one hour, 2: every two hours, 4: every four hours, 8: every eight hours, 24: every twenty-four hours</p> <p>This item is output only when "Command" is "Change Tier".</p> <p>If Tier Management is anything other than Auto, a hyphen (-) is output.</p> |
| Monitoring Period | <p>The monitoring period of the pool.</p> <p>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).</p> <p>This item is output only when "Command" is "Change Tier".</p> <p>If Cycle Time is anything other than 24, a hyphen (-) is output.</p> |
| Monitoring Mode | <p>The monitoring mode</p> <p>Continuous Mode: Continuous mode, Period Mode: Period mode</p> <p>This item is output only when "Command" is "Change Tier".</p> <p>If Multi Tier Pool is anything other than Enable, a hyphen (-) is output.</p> |
| Data Direct Mapping | <p>Indicates the setting status of Data Direct Mapping</p> <p>Enable: Data Direct Mapping is enabled.</p> <p>Disable: Data Direct Mapping is disabled.</p> <p>This item is output only when "Command" is "Change".</p> |
| Suspend TI pairs when depletion threshold is exceeded | <p>Indicates the setting status of Suspend Thin Image pairs when depletion threshold is exceeded</p> <p>Yes: Suspend Thin Image pairs is enabled when the depletion threshold is exceeded.</p> <p>No: Suspend Thin Image pairs is disabled even if the depletion threshold is exceeded.</p> <p>This item is output only when "Command" is "Change".</p> |

| Item | Description |
|---|--|
| Automatically manage compressed space of FMD parity group | <p>Indicates the setting status of automatically manage compressed space of FMD parity group</p> <p>Enable: Automatically manage compressed space of FMD parity group is enabled.</p> <p>Disable: Automatically manage compressed space of FMD parity group is disabled.</p> <p>This item is output only when the "Command" is "Change".</p> |
| Result | <p>The result of the operation</p> <p>Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end, Not Execute: Not Executed</p> <p>xxxx: Part code, yyyy: Error code</p> |
| Num. of Pools | <p>The number of pools where the settings have been changed or the number of pools that have been deleted</p> |
| Tier | <p>The tier number</p> <p>This item is output only when the "Command" is "Change Tier".</p> |
| Buffer Space for New page assignment(%) | <p>The capacity rate of buffer space for new page assignment</p> <p>The unit is percent (%)</p> <p>This item is output only when the "Command" is "Change Tier".</p> |
| Buffer Space for Tier relocation(%) | <p>The capacity rate of buffer space for Tier relocation</p> <p>The unit is percent (%)</p> <p>This item is output only when the "Command" is "Change Tier".</p> |
| Tier Result | <p>The result of Tier operation</p> <p>Normal end: Normal end,</p> <p>Error(xxxx-yyyyy): Abnormal end,</p> <p>Not Execute: Not Executed</p> <p>where xxxx: Part code, yyyy: Error code</p> <p>This item is output only when the "Command" is "Change Tier".</p> |
| Num. of Tiers | <p>The number of Tiers for the created pools</p> <p>This item is output only when the "Command" is "Change Tier".</p> |

[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.=xxxxxxxxxxx
+{LDKC:CU:LDEV,UUID}=[{0xXX:0xXX:0xXX,abcdefg},{0xXX:0xXX:0xXX,12345},
{0xXX:0xXX:0xXX,}],Num. of UUIDs=3
```

Detailed Information

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

[PROV] EditiScsilInitiatorUser

Example

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

Detailed Information

| Item | Description |
|-----------------|---|
| iScsiPort[x] | The setting information of the port |
| Port | The port ID |
| iScsilInitiator | The iSCSI initiator information |
| iScsilUser | 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(yyyy-xxxx): Abnormal end |

| Item | Description |
|------|-----------------------------------|
| | xxxx: Part code, yyyy: 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.=xxxxxxxxxxx
+{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-yyyy): Abnormal end xxxx: Part code, yyyy: 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.=xxxxxxxxxxx
+{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 xxxx: Part code, yyyy: 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.=xxxxxxxxxxx
+{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 |

| Item | | Description |
|--|----------|---|
| | 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, yyyy: 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.=xxxxxxxxxxx
+{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 |

| Item | Description |
|--|-----------------------------------|
| | xxxx: Part code, yyyy: 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.=xxxxxxxxxxx
+{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* |

| Item | Description |
|------------------------|--|
| | 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* |
| 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-yyyy): Abnormal end xxxx: Part code, yyyy: Error code |

| Item | Description |
|--|-------------|
| * "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.=xxxxxxxxxxx
+{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 |
| 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 |
| ChangeChapUserl d | 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, yyyy: 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.=xxxxxxxxxxx
+{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 |
| 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* |

| Item | Description |
|--|---|
| Result | The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end xxxx: Part code, yyyy: 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.=xxxxxxxxxxx
+{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, yyyy: 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.=xxxxxxxxxxx
+{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, yyyy: 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.=xxxxxxxxxxx
+{BindingOperations[0]{Operation=Bind,Port=1A,HostGroup=0,Lun=0, Alu{
Id="60-06-0E-81-30-00-32-30-00-32-00-00-00-00-01",
Ldev{ Id=0x00:0x00:0x01}},
Slu{ Id="60-06-0E-81-30-00-32-30-00-32-00-00-00-00-02",
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 unbound 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 |

| Item | Description |
|-------------|---|
| 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 |
| 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, yyyy: 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.=xxxxxxxxxxx +{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, yyyy: 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.=xxxxxxxxxxx
+{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, yyyy: 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.=xxxxxxxxxxx
+LDKC:CU:LDEV=[0x00:0x00:0x01,0x00:0x00:0x02,0x00:0x00:0x03,
0x00:0x00:0x04,0x00:0x00:0x05,0x00:0x00:0x06,0x00:0x00:0x07,
0x00:0x00:0x08,0x00:0x00:0x09,0x00:0x00:0x0A], Num. of LDEVs=10
```

Detailed Information

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

[PROV] Format LDEVs(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.=xxxxxxxxxxx
+LDKC:CU:LDEV=[0x00:0x00:0x01,0x00:0x00:0x02,
0x00:0x00:0x03,0x00:0x00:0x04,0x00:0x00:0x05,
0x00:0x00:0x06,0x00:0x00:0x07,0x00:0x00:0x08, 0x00:0x00:0x09,
0x00:0x00:0x0A],Num. of LDEVs=10
```

Detailed Information

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

[PROV] Format LDEVs(Q)

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

Example

```
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.=xxxxxxxxxxx
+LDKC:CU:LDEV=[0x00:0x00:0x01,0x00:0x00:0x02,
0x00:0x00:0x03,0x00:0x00:0x04,0x00:0x00:0x05,
0x00:0x00:0x06,0x00:0x00:0x07,0x00:0x00:0x08, 0x00:0x00:0x09,
0x00:0x00:0x0A],Num. of LDEVs=10
```

Detailed Information

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

[PROV] Initialize Pools

Example

```
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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx
+{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 <i>where xxxx: Part code, yyyy: Error code</i> |
| 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.=xxxxxxxxxxx +
{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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx +{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, yyyy: 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.=xxxxxxxxxxx
+{Pool ID,Result}=[{1,Normal end}],Num. of Pools = 1
```

Detailed Information

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

| Item | Description |
|---------------|--|
| 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, yyyy: Error code |
| LDKC:CU:LDEV | The logical DKC, CU, and LDEV numbers of the moved LDEV. |
| LDEVResult | The result of the LDEV Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end, xxxx: Part code, yyyy: Error code |
| Num. of LDEVs | The number of moved LDEVs |
| PG | The number of a moved parity group |

| Item | Description |
|-------------------------|---|
| | 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, <i>where xxxx: Part code, yyyy: Error code</i> |
| 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, <i>where xxxx: Part code, yyyy: Error code</i> |
| Num. of Ports | The number of moved ports |
| Port(HostGrp) | The port name of a moved host group |
| HostGrpID | The host group ID of the moved host group |
| HostGrpResult | The result of the host group Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end, <i>where xxxx: Part code, yyyy: Error code</i> |
| 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.=xxxxxxxxxxx
+{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 |
| 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, yyyy: 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.=xxxxxxxxxxx
```

```
+{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 |
| 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, yyyy: 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.=xxxxxxxxxxx
+{Pool ID,Name,Result}=[{0,poolname_0000,Normal end},{127,,Normal end}],
Num. of Pools=2
```

Detailed Information

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

[PROV] Reclaim Zero Pages

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

Example

```
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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{Port,HostGrpID,LUN,Result}=[{XXX,0xxx,XXXX,Normal end},
{XXX,0xxx,XXXX,Error(xxxx-yyyy)}],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 |
| Result | The result of the operation: Normal end: Normal end, Error(xxxx-yyyy): Abnormal end, Not Execute: Not Executed <i>where xxxx: Part code, yyyy: Error code</i> |
| Num. of LUNs | The number of LUNs 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.=xxxxxxxxxxx
+{Pool ID,Result}=[{1,Normal end}],Num. of Pools = 1
```

Detailed Information

| Item | Description |
|---------------|--|
| Pool ID | The pool ID of a pool where the tier relocation was performed |
| Result | The result of relocating the tier of pools Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end, Not Execute: Not Executed <i>where xxxx: Part code, yyyy: Error code</i> |
| Num. of Pools | The number of 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,0XXXXXXXXXXXXXXXXXXXX},
{XX,0xXXX,0XXXXXXXXXXXXXXXXXXXX}],Num. of WWNs=2
```

Detailed Information

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

[PROV] Restore LDEVs**Example**

```
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.=xxxxxxxxxxx +{Pool ID,
Result}
=[{1,Normal end},{2,Normal end},{128,Normal end}], Num. of Pools=3
```

Detailed Information

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

| Item | Description |
|---------------------|--|
| | Warning(xxxx-yyyyy): End with warning Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: 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, yyyy: 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.=xxxxxxxxxxx +
{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 |

| Item | Description |
|----------------------|---|
| | 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 |
| Result | The result of the operation Normal end: Normal end, Error(xxxx-yyyy):Abnormal end <i>where</i> xxxx: Part code, yyyy: 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.=xxxxxxxxxxx +{Pool
ID,Result}=[{1,Normal end},{2,Normal end}], Num. of Pools = 2 ++
{LDKC:CU:LDEV,LDEV
Result} =[{0x00:0x00:0x02,Normal end}, {0x00:0x00:0x03,Normal
end},{0x00:0x02:0x01,Normal end}], Num. of LDEVs = 3

```

Detailed Information

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

[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.=xxxxxxxxxxx + {Pool
ID,Result}={1,Normal end}],Num. of Pools = 1
```

Detailed Information

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

[PROV] Stop Reclm ZeroPages

Example

```
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.=xxxxxxxxxxx +
{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, yyyy: 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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx +{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 |

| Item | | Description |
|------|-----------------|--|
| | | Normal end: Normal end, Error(xxxx-yyyyy):Abnormal end xxxx: Part code, yyyy: 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.=xxxxxxxxxxx +{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, yyyy: 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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx,
+{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, |

| Item | Description |
|----------------|---|
| | Error(xxxxx-xxxxxxx): Abnormal end where xxxx: Part code, yyyy: 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] 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.=xxxxxxxxxxx
+{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 |

| Item | Description |
|--------|---|
| Result | The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end xxxx: Part code, yyyy: 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.=xxxxxxxxxxx
+{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, yyyy: 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.=xxxxxxxxxxx,
+{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 |
| Id | The pool ID of the associated pool |
| Result | The result of operation Normal end: Normal end, Error(xxxx-xxxxxx): Abnormal end <i>where xxxx: Part code, yyyy: Error code</i> |
| 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 |

| Item | Description |
|------|---|
| | Normal end: Normal end Error(xxxxx-xxxxxxx): Abnormal end <i>where xxxx: Part code, yyyyy: Error code</i> |

[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 <i>where xxxx: Part code, yyyyy: Error code</i> |
| 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 output 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). |

| Item | Description |
|---|---|
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
```

[Remote Maintenance] StartVerify

Example

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

[Remote Maintenance] Switch SVP

Example

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

[Remote Maintenance] Transfer Config

Example

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

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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{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. |

| Item | Description |
|--------------------|--|
| 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-YYYY): Abnormal end where XXXX: Part code, YYYY: 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] 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.=xxxxxxxxxxx
+{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-YYYY)}]
-,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 |

| Item | Description |
|---------------------------|---|
| 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, yyyy: 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.=xxxxxxxxxxx
+{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 |

| 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 |
| 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. 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.=xxxxxxxxxxx +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.=xxxxxxxxxxx +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 program product name for 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) |
| 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, |

| Item | Description |
|--------------|--|
| | Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: 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.=xxxxxxxxxxx +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 program product name for 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 |
| 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 |

| Item | Description |
|----------------------|--|
| 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, yyyy: 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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{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 |
| 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. |

| Item | Description |
|--------------|--|
| Result | The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: 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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx
+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 program product name for 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 |

| Item | Description |
|---------------|---|
| 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) |
| 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, yyyy: 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 program product name for 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 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. |

| Item | Description |
|---------------|---|
| | 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, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: 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.=xxxxxxxxxxx
+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 program product name for 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 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 |

| Item | Description |
|---------------|---|
| | Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: 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.=xxxxxxxxxxx
+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 program product name for 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). |

| Item | Description |
|---------------|---|
| 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 Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: 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.=xxxxxxxxxxx
+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 program product name for 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) |
| 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, yyyy: 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.=xxxxxxxxxxxx
```

[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.=xxxxxxxxxxxx
+Copy Type=TC,{P-VOL(Port-G-ID-LUN),S-VOL(Port-G-ID-LUN),
Type,Force,Result}
=[{1A-0x00-0,1B-0x00-0,P-VOL,No,Normal end},
{1A-0x00-1,1B-0x00-1,P-VOL,No,Normal end},
{1A-0x00-2,1B-0x00-2,P-VOL,No,Normal end}),(Snip)-(Snip)],
Num. of Pairs=xx
```

Detailed Information 1

| Item | Description |
|----------------------|---|
| Copy Type | The program product name for 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 |
| 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. |
| Result | The result of the operation Normal end: Normal end, |

| Item | Description |
|---------------|--|
| | Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: 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.=xxxxxxxxxxxx
+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 program product name for 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, yyyy: Error code |

| Item | Description |
|---------------|-----------------------------|
| 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.=xxxxxxxxxxx
+Copy Type=UR
+{P-VOL (Port-G-ID-LUN) ,S-VOL (Port-G-ID-LUN) ,MirrorID,
S/N,CTRLID,Type,Range,Delete Mode,Result}
=[{4C-0x00-0,4A-0x00-0,0x00,67676,6,P-VOL,LU,Normal,Normal end},
{4C-0x00-1,4A-0x00-1,0x00,67676,6,P-VOL,LU,Normal,Normal end}],
Num. of Requests=2
```

Detailed Information 3

| Item | Description |
|----------------------|--|
| Copy Type | The program product name for 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 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 |

| Item | Description |
|------------------|--|
| | 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, yyyy: Error code |
| Num. of Requests | The number of deleted mirrors when Range is Mirror 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.=xxxxxxxxxxx
+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 program product name for 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 |

| Item | Description |
|------------------|---|
| | 5: USP V/V/M, 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. |
| 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.=xxxxxxxxxxx
+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 program product name for this operation GAD: global-active device |
| P-VOL(Port-G-ID-LUN) | The port number, host group number, and LUN of the primary volume |

| Item | Description |
|----------------------|---|
| 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 |
| 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, yyyy: 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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{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 |
| 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, yyyy: 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.=xxxxxxxxxxx
+{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, yyyy: 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.=xxxxxxxxxxx
+{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 |

| Item | Description |
|--------------|---|
| | where xxxx: Part code, yyyy: 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 |

| Item | Description |
|----------------------------|--|
| 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 |
| 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, yyyy: 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 program product name for 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. |

| Item | Description |
|----------------------------|--|
| Path Blockade Watch(s) | <p>The path blockade watch period setting (in seconds).</p> <p>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.</p> |
| Path Blockade SIM Watch(s) | <p>The path blockade SIM watch period setting (in seconds).</p> <p>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.</p> |
| Service SIM | <p>Indicates whether the remote replication related SIM is reported or not.</p> <p>Report, Not Report</p> <p>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.</p> |
| Switch | <p>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.</p> <p>0: OFF, 1: ON</p> <p>If this is not a subject to change, a hyphen (-) is displayed.</p> |
| LDKC | The LDKC number |
| CU | The CU number of the connected CU |
| Service SIM | <p>Indicates whether the remote replication related SIM is reported.</p> <p>Report, Not Report</p> <p>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.</p> |
| PPRC Support | <p>Indicates whether the host supports PPRC</p> <p>Yes: Support, No: Not support</p> <p>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.</p> |
| Max Initial Copy | The number of parallel operation of initial copy by CU. |

| Item | Description |
|-------------|--|
| | 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.=xxxxxxxxxxx +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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 program product name for 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 |

| Item | Description |
|--|---|
| 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.=xxxxxxxxxxx
+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 program product name for 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.=xxxxxxxxxxx +Copy
Type=TC,{P-VOL(Port-G-ID-LUN),Fence
Level,Result} =[{1A-0x00-0,Never,Normal end},{1A-0x00-1,Never,Normal end},
{1A-0x00-2,Never,Normal end}),(Snip)-(Snip)], Num. of Pairs=xx
```

Detailed Information 1

| Item | Description |
|----------------------|--|
| Copy Type | The program product name for this operation TC: TrueCopy |
| P-VOL(Port-G-ID-LUN) | The port number, host group number, and LUN of the primary volume |
| 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. |
| Result | The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: 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.=xxxxxxxxxxx +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 program product name for this operation TCMF: TrueCopy for Mainframe |
| P-VOL(LDKC:CU:LDEV) | The LDKC, CU, and LDEV numbers of the primary volume |
| 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.=xxxxxxxxxxx +Copy Type=UR
+{P-VOL (Port-G-ID-LUN),S-VOL (Port-G-ID-LUN),MirrorID, M-JNL,R-JNL,Error
Level,Result} =[{4C-0x00-0,4A-0x00-0,0x00,0x001,0x001,Mirror,Normal end},
{4C-0x00-1,4A-0x00-1,0x00,0x001,0x001,Mirror,Normal end}], Num. of
Pairs=2
```

Detailed Information 3

| Item | Description |
|----------------------|--|
| Copy Type | The program product name for 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 |
| 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. |
| 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 program product name for 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 |
| 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] 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 program product name for 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,,Seq.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 program product name for this operation URMF: Universal Replicator for Mainframe |
| LDKC | The LDKC number to which the journal belongs |
| JNL | The journal number |
| 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 |

| Item | Description |
|---------------|--|
| Result | The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: 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,,Seq.=xxxxxxxxxxx
+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 program product name for 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, yyyy: 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 program product name for 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 Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: 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 program product name for 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. The hyphen (-) indicates <ul style="list-style-type: none"> ▪ 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, yyyy: 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.=xxxxxxxxxxx
+Copy Type=TC,{P-VOL (Port-G-ID-LUN),S-VOL (Port-G-ID-LUN),
Fence Level,Copy Pace,Priority,Result}
=[{1A-0x00-0,1B-0x00-0,Never,15,256,Normal end},
```

```
{1A-0x00-1,1B-0x00-1,Never,15,256,Normal end},(Snip)-(Snip)],
Num. of Pairs=xx
```

Detailed Information 1

| Item | Description |
|----------------------|---|
| Copy Type | The program product name for this operation TC: TrueCopy |
| 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 |
| 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) |
| Priority | The priority of resynchronizing operation set (scheduling order) |
| Result | The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code |
| Num. of Pairs | The number of resynchronized pairs |

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.=xxxxxxxxxxx
+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 program product name for 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 |
| 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, yyyy: 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.=xxxxxxxxxxx
+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,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 program product name for 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 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 |
| Result | The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end |

| Item | Description |
|------------------|--|
| | where xxxx: Part code, yyyy: 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.=xxxxxxxxxxx
+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 program product name for 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 |
| 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. |

| Item | Description |
|------------------|--|
| 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.=xxxxxxxxxxx
+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 program product name for this operation GAD: global-active device |
| P-VOL(Port-G-ID-LUN) | The port number, host group number, and LUN of the primary volume |

| Item | Description |
|----------------------|--|
| 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 Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: 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.=xxxxxxxxxxx
+Copy Type=TC,{P-VOL (Port-G-ID-LUN),S-VOL (Port-G-ID-LUN),
Type,S-VOL Write,Kind,Result}
=[{1A-0x00-0,1B-0x00-0,P-VOL,Disable,S-VOL,Normal end},
{1A-0x00-1,1B-0x00-1,P-VOL,Disable,S-VOL,Normal end},
(Snip)-(Snip)],Num. of Pairs=xx
```

Detailed Information 1

| Item | Description |
|----------------------|--|
| Copy Type | The program product name for this operation TC: TrueCopy |
| 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 |
| 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 |
| Result | The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code |
| Num. of Pairs | The number of split pairs |

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.=xxxxxxxxxxx
+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 program product name for 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. 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, yyyy: 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.=xxxxxxxxxxx
+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,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 program product name for 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 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. |
| Result | The result of the operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code |

| Item | Description |
|------------------|--|
| Num. of 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.=xxxxxxxxxxx
+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 program product name for 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 |

| Item | Description |
|------------------|---|
| 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, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: 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.=xxxxxxxxxxx +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 program product name for this operation GAD: global-active device |

| Item | Description |
|----------------------|---|
| 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. 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, yyyy: 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.=xxxxxxxxxxx +
{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 where xxxx: Part code, yyyy: 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] UpdateSnmSetting

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,RMI AP,uid=user-name,,
[SNMP],UpdateSnmSetting,,Normal end,
from=xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx,,Seq.=xxxxxxxxxxx +
{SnmSetting{
SnmAvailable=true,SnmVersion=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,
PrivProtocol=AES}}},
RequestSetting{ SecuritySettings[0]{
SecurityName="xxxx",SecurityLevel=authPriv,AuthProtocol=SHA,
PrivProtocol=AES}}},
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. |

| Item | Description | | |
|----------------|-------------|---|---|
| | 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. |
| 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 authentication protocol (SHA or MD5) If Authentication is disabled, "null" is output. | |
| PrivProtocol | | Indicates encryption protocol (AES or DES) If Encryption is disabled, "null" is output. | |
| RequestSetting | | The information of request authentication settings | |

| Item | Description |
|---------------------|--|
| 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. authPriv: Both Authentication and Encryption are enabled. |
| AuthProtocol | Indicates authentication protocol (SHA or MD5) If Authentication is disabled, "null" is output. |
| PrivProtocol | Indicates encryption protocol (AES or DES) 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}
=[{XXXXXXXXXXXXXXXXXX,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. |
| 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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx
```

Basic Information

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

[SPM] Set All Prio Port

Example

```
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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{AllPriority,Threshold,Mode}={Enable,XXXXXXXX,IOPS}
```

Detailed Information

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

[SPM] Set Ctrl Kind

Example

```
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.=xxxxxxxxxxx
```

Basic Information

| Parameter | Description |
|---------------|---|
| Kind=Port | Indicates that you switched a definition of the server priority by a port without configuring All Thresholds. |
| Kind=All Port | Indicates that you switched a definition of the server priority by a port with configuring All Thresholds. |

| Parameter | Description |
|-----------|--|
| 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.=xxxxxxxxxxx
+{Port,Priority,Use,Threshold/Upper Limit,Mode}
=[{1A,Non-Prio,Enable,XXXXXXXX,IOPS}],Num. of Ports=1
```

Detailed Information

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

| Item | Description |
|---------------|---|
| | 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,xxxxxxx,IOPS}],Num. of WWNs=1
```

Detailed Information

| Item | Description |
|--------------|--|
| WWN | A WWN of an HBA A WWN is a 16-digit number in the hexadecimal format. |
| Priority | An attribute specified to the HBA Prio: a prioritized WWN Non-Prio: a non-prioritized WWN |
| Upper Limit | When the WWN is a non-prioritized WWN, this information indicates the upper limit. When the WWN is a prioritized WWN, "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,XXXXXXXXXXXXXXXXXX,XXXXXXXXXXXXXXXXXX},
Num. of SPM Groups=1
```

Detailed Information

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

[SPM] Update Port WWN

Example

```
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,0XXXXXXXXXXXXXXXXXX,XXXXXXXXXXXXXXXXXX,Non-Prio},
```

```
++Port=[1A,3A],Num. of Ports=2,
-Num. of WWNs=1
```

Detailed Information

| Item | Description |
|---------------|---|
| Mode | An executed operation Add WWN: Added a WWN (an HBA is monitored). Delete WWN: Deleted a WWN (an HBA is not monitored). |
| WWN | An added or deleted WWN A WWN is a 16-digit number in the hexadecimal format. |
| SPM Name | An SPM name for an added or deleted HBA |
| Priority | An attribute specified to the HBA Prio: a prioritized WWN Non-Prio: a non-prioritized WWN This information is output only when a WWN (HBA) is added. |
| Port | A name of the port where the HBA is added |
| 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.=xxxxxxxxxxx
+{UpdateMode,SPM Group,Priority,Upper Limit,Mode}
=[{Add New Group,XXXXXXXXXXXXXXXXXX,Non-Prio,XXXXXXXXXX,IOPS},
++WWN=[0XXXXXXXXXXXXXXXXXX,0XXXXXXXXXXXXXXXXXX],Num. of WWNs=2],
+Num. of SPM Group=1
```

Detailed Information

| Item | Description |
|-------------|--|
| Update Mode | An executed operation Add New Group: Added a new SPM group. |

| Item | Description |
|-------------------|---|
| | 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 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,0xxxxxxxxxxxxxxxxxx,,0xxxxxxxxxxxxxxxxxx},
Num. of WWNs=1
```

Detailed Information

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

Spreadsheet Descriptions**[Spreadsheet] 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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx
+{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,00001,05D0,48495441434849203530353030303030313035443000000
00000000000000000000,
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 |

| Item | Description |
|---------------------|--|
| 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. 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, yyyy: 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. |

| Item | Description |
|-------------------|---|
| | 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 yyyy is the Error code |
| 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 yyyy is the Error code |
| Num. of LDEVs | The number of LDEVs in the mapped external volumes |
| Num. of Volumes | The number of mapped external volumes |

[UVM] Assign MP Unit

Example

```
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.=xxxxxxxxxxx
1,000000217,+{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 |
| Result | The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code |
| Num. of Groups | The number of 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.=xxxxxxxxxxx
+{ExGroup,Mode,Result}=[{E1-1,Force,Normal end},{E1-2,Force, Normal
end},{E1-3,Normal,Normal end}],Num. of Volumes=3
```

Detailed Information

| Item | Description |
|---------|--|
| ExGroup | The number of the external volume group and the reference number assigned to the external volume of the external volume that the mapping has been released. The number on the left of a dash (-) is the external volume number and the number on the right of the dash (-) is the reference number of the group. |
| Mode | The mode of execution when mapping was released |

| Item | Description |
|-----------------|--|
| | Normal: normal execution. Force: forcible execution |
| Result | The result of operation Normal end: Normal end, Error(xxxx-yyyyy): Abnormal end where xxxx: Part code, yyyy: Error code |
| Num. of Volumes | The number of volumes in the external volumes that mapping has been released |

[UVM] Disconnect ES Paths

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

Example

```
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.=xxxxxxxxxxxx
+{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,-,FE80:0:0:0:0:0:1,
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. |

| Item | Description |
|---------------|--|
| | 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, yyyy: Error code |
| Num. of Paths | The number of mapping paths that has been disconnected. |

[UVM] Disconnect ES VOLs

If this operation is performed from 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 CfiSet Start operation and the CfiSet 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.=xxxxxxxxxxxx
+{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, yyyy: 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.=xxxxxxxxxxx
+{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, yyyy: Error code |
| Port | The port name of the local storage system |

| 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. 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.=xxxxxxxxxxx +{Group,
Result}
=[{E1-1,Enable,Normal end},{E1-2,Enable,Normal end}, {E1-3,Enable,Normal
end},{E1-4,Enable,Normal end}], Num. of Groups=4
```

Example 2: Set the cache inflow control

```
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.=xxxxxxxxxxx
+{Group,Mode,Result}=[{E1-1,Enable,Normal end}, {E1-2,Enable,Normal end},
{E1-3,
Enable,Normal end}, {E1-4, Enable,Normal end}],Num. of Groups=4
```

Basic Information 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, yyyy: 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, yyyy: 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.=xxxxxxxxxxx
+{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 |

| Item | Description |
|----------------|--|
| | where xxxx: Part code, yyyy: 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.=xxxxxxxxxxx
+{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},
{-,FE80:0:0:0:0:0:1,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. 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, yyyy: Error code |

| Item | Description |
|--------------|---|
| 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, yyyy: Error code |
| Num. of Profiles | The number of Profiles operated setting |

[UVM] Reconnect ES Paths

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

Example

```
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, yyyy: Error code |
| Num. of Paths | The number of mapping paths that path status has been checked. |

[UVM] Reconnect ES VOLs

If this operation is performed from 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 CfiSet Start operation and the CfiSet 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.=xxxxxxxxxxx
+{Group,Result}={E1-1,Normal end},{E1-2,Normal end},{E1-3,Normal end},{E1-
4,Normal
end}},Num. of Groups=4
```

Detailed Information

| Item | Description |
|----------------|--|
| Group | The group number of the external volume resumed |
| Result | The result of operation Normal end: Normal end, Error(yyyy-xxxx): Abnormal end xxxx: Part code, yyyy: 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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx
+{SourceVolume,TargetVolume,OwnerID,Result}
=[{0x00:0x00:0x00,0x00:0x00:0x01,0xFF,Normal end},
{0x00:0x00:0x02,0x00:0x00:0x03,0xFF,Error(yyyy-xxxx)},
{0x00:0x00:0x04,0x00:0x00:0x05,-,Normal end},
{0x00:0x00:0x06,0x00:0x00:0x07,-,Error(yyyy-xxxx)}], 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 <i>where xxxx: Part code, yyyy: Error code</i> |
| 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.=xxxxxxxxxxx
+{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 <i>where xxxx: Part code, yyyy: Error code</i> |
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx +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.=xxxxxxxxxxx
+{Times,Result} =[{1,Normal},{2,Normal},{3,Normal}],Num. of Data=3
```

Detailed Information

| Item | Description |
|--------------|---|
| Times | The order of the shredding processes. A number from 1 to 8 is displayed. |
| Result | The result of the shredding processes. Normal: Normal end. Failed: Abnormal end. Aborted: Operation aborted. Not executed: Not executed. Data transfer error: An error occurred while outputting the result to the file. Data verify error: The error occurred in verifying the data. No data assigned: No data. |
| Num. of Data | The number of 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.=xxxxxxxxxxx +OwnerID=0 +
{Data,
Output File} =[{0xffff,Disable},{Random,Disable},{0x00,Enable}], Num. of
Data=3
+Output LDEV=[0x00:0x00:0x00,0x00:0x00:0x01,0x00:0x00:0x02], Num. of
LDEVs=3 +Shred
LDEV=[0x00:0x00:0x00,0x00:0x00:0x01,0x00:0x00:0x02], Num. of LDEVs=3
```

Detailed Information

| Item | Description |
|---------|--|
| OwnerID | The owner ID 0: Indicates Device Manager - Storage Navigator 0xXX: Owner ID is expressed in two digits of the hexadecimal format |

| Item | Description |
|---------------|---|
| Data | The shredding data pattern Random: Random, 0XXXXX: Define |
| Output File | Whether the result of shredding is output to the file Disable: No output, Enable: Output |
| Num. of Data | The number of shredding data patterns |
| Output LDEV | Indicates LDEVs whose shredding results are output to the file |
| Num. of LDEVs | The number of target LDEVs of Data Output |
| Shred LDEV | The LDEV to be shredded |
| Num. of LDEVs | The number of LDEVs to be shredded |

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.=xxxxxxxxxxx
+{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 |

| Item | Description |
|----------------|--|
| Donot Block | The status of Donot Block (Volume Level) Enable: enabled, Disable: disabled |
| 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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx +{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_Repry | 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 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.=xxxxxxxxxxx
+{UUID,Backup Date,Description,Result,Server_Reply}=
[{{3E2332580B110E052D13C378866427A218EF1609881BC058FCBCF79FCD7727C7,
2013/07/06 09:20:37,BACK0706,Normal end,-}},Num. of Keys=1
```

Detailed Information

| Item | Description |
|--------------|--|
| UUID | The UUID of the encryption key to be backed up on the key management server |
| Backup Date | The date and time entered into the backup information when an encryption key is backed up on the key management server |
| Description | The description set in the backup information when an encryption key is backed up on the key management server |
| Result | The result of the operation Normal end: Normal end, Error(yyyy-yy): Abnormal end |
| Server_Reply | The return value from the key management server A hyphen (-) is displayed unless an error occurred while processing. For details on return values, see the manuals for each key management server. |
| Num. of Keys | The number of encryption keys to be backed up |

| 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 |

| Item | Description |
|--------------|--|
| DEK Status | The status of encryption keys 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(yyyy-yyyy): 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.=xxxxxxxxxxx
+{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(yyyy-yyyy): 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.=xxxxxxxxxxx
+{Num. of Keys}=[1]
```

Detailed Information

| Item | Description |
|--------------|---------------------------------------|
| Num. of Keys | The number of created encryption keys |

[ENC] Create Keys

This information is output to the audit log information file 2, and it is asynchronous with the Device Manager - Storage Navigator operations.

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,,<system>,,
[ENC], Create Keys,,Normal end,,,Seq.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+{UUID,Tweak_UUID,Result,Server_Reply}
=[{30708B5A94F5BE54DA84E0CB55BD2CFE5ABEBECBD8309B02EB1B71F17F805617,
94DA26FE13EF6196EF15A3CCCD333CD63D6867E57CF5BD5EB3CB9DF2CDE7CE1A, Normal
end,-}],Num. of Keys=1
```

Detailed Information for Example 1

| Item | Description |
|--------------|--|
| UUID | The UUID of the created encryption key on the key management server A hyphen (-) is displayed when an error occurred while processing. |
| Tweak_UUID | The UUID of the created encryption key for Tweak on the key management server A hyphen (-) is displayed when an error occurred while processing. |
| Result | The result of the operation Normal end: Normal end, Error(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.=xxxxxxxxxxx +{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(yyyy-xxxx): Abnormal end |
| Server_Reply | The return value from the key management server A hyphen (-) is displayed unless an error occurred while processing. For details on return values, see the manuals for each key management server. |
| Num. of Keys | The number of created keys |

[ENC] DEK assign SpareDisk**Example**

```
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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx
+{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(yyyy-xxxx): Abnormal end |
| Server_Reply | The return value from the key management server A hyphen (-) is displayed unless an error occurred while processing. For details on return values, see the manuals for each key management server. |
| Num. of Keys | The number of 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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+{UUID,Backup Date,Description,Result,Server_Reply}=
[ {FBC095D54493A45CAC4BE80EECD1BE51D7E0D4023D377D37B0BFDE72B887CED9 ,
2013/07/06
09:13:18,BACK0706,Normal end,-} ],Num. of Keys=1
```

Detailed Information

| Item | Description |
|--------------|---|
| UUID | The UUID of the encryption key to be deleted |
| Backup Date | The date and time of the backup information for the encryption key to be deleted |
| Description | The description of the backup information for the encryption key to be deleted |
| Result | The result of the operation Normal end: Normal end, Error(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.=xxxxxxxxxxx
+{UUID,Backup Date,Description,Result,Server_Reply}=
[ {FBC095D54493A45CAC4BE80EECD1BE51D7E0D4023D377D37B0BFDE72B887CED9,
2013/07/06 09:13:18,BACK0706,Normal end,-}],Num. of Keys=1
```

Detailed Information

| Item | Description |
|--------------|--|
| UUID | The UUID of the encryption key to be deleted |
| Backup Date | The date and time of the backup information for the encryption key to be deleted |
| Description | The description of the backup information for the encryption key to be deleted |
| Result | The result of the operation Normal end: Normal end, Error(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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{Numeric Characters (0-9),Uppercase Characters (A-Z), Lowercase Characters
(a-z),Symbols,Total}={1,2,3,4,10}, Num. of Settings=1
```

Detailed Information

| Item | Description |
|----------------------------|--|
| Numeric Characters (0-9) | 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.=xxxxxxxxxxx
+{UUID,Result,Server_Reply}=
[{B75E9D1699659C10B088E027798ACB082F1375AF2FF613229F15E9FE70D1EC4D ,Normal
end,-}],Num. of Keys=1
```

Detailed Information

| Item | Description |
|--------------|--|
| UUID | The UUID of the registered encryption key |
| Result | The result of the operation Normal end: Normal end, Error(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.=xxxxxxxxxxx
+{UUID,Backup Date,Description,Result,Server_Reply}=
[{3E2332580B110E052D13C378866427A218EF1609881BC058FCBCF79FCD7727C7,
2013/07/06
09:20:37,BACK0706,Normal end,-}],Num. of Keys=1
```

Detailed Information

| Item | Description |
|--------------|--|
| UUID | The UUID of the encryption key to be backed up on the key management server |
| Backup Date | The date and time entered into the backup information when an encryption key is backed up on the key management server |
| Description | The description set in the backup information when an encryption key is backed up on the key management server |
| Result | The result of the operation Normal end: Normal end, Error(xxxx-yyyy): 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.=xxxxxxxxxxx
+{UUID,Backup Date,Description,Result,Server_Reply}=
[ {FBC095D54493A45CAC4BE80EECD1BE51D7E0D4023D377D37B0BFDE72B887CED9,
2013/07/06
09:13:18,BACK0706,Normal end,-}],Num. of Keys=1
```

Detailed Information

| Item | Description |
|--------------|--|
| UUID | The UUID of the encryption key to be deleted |
| Backup Date | The date and time of the backup information for the encryption key to be deleted |
| Description | The description of the backup information for the encryption key to be deleted |
| Result | The result of the operation Normal end: Normal end, Error(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 occurred 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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx
+{UUID,Backup Date,Description,Result,Server_Reply}=
[ {FBC095D54493A45CAC4BE80EECD1BE51D7E0D4023D377D37B0BFDE72B887CED9 ,
2013/07/06
09:13:18,BACK0706,Normal end,-}],Num. of Keys=1
```

Detailed Information

| Item | Description |
|--------------|--|
| UUID | The UUID of the encryption key that is used for restoring on the key management server |
| Backup Date | The date and time entered into the backup information for the encryption key that is used for restoring |
| Description | The contents of Description in the backup information for the encryption key that is used for restoring |
| Result | The result of the operation Normal end: Normal end, Error(yyyy-yyyy): 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.=xxxxxxxxxxx
+{UUID,Backup Date,Description,Result,Server_Reply}
=[ {FBC095D54493A45CAC4BE80EECD1BE51D7E0D4023D377D37B0BFDE72B887CED9,
2013/07/06 09:13:18,BACK0706,Normal end,-}],Num. of Keys=1
```

Detailed Information

| Item | Description |
|--------------|--|
| UUID | The UUID of the encryption key that is used for restoring on the key management server |
| Backup Date | The date and time entered into the backup information for the encryption key that is used for restoring |
| Description | The contents of Description in the backup information for the encryption key that is used for restoring |
| Result | The result of the operation Normal end: Normal end, Error(yyyy-yyyy): 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.=xxxxxxxxxxx
```

[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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxx
+{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 |

| Item | Description |
|---|---|
| Client Certificate File Name | The file name of the client certificate |
| Root Certificate File Name | The file name of the root certificate |
| Num. of Servers | The number of the 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.=xxxxxxxxxxx
+{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.=xxxxxxxxxxxx
```

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.=xxxxxxxxxxxx
```

[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.=xxxxxxxxxxxx
```

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 |

| Item | Description |
|-----------------------------|---|
| 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: 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 |
| 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,CCCCC},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=AAAAAAA,, Device
Name=XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
++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.=xxxxxxxxxxx
+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 |

| Item | Description |
|------------------------------|---|
| 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 |
| Num. of LDEVs | The number of pool volumes |
| Suspend TI Pair | The setting status of Suspend TI Pair 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.=xxxxxxxxxxx
+Command=Add External Group
++PG=E11111-1,Port=1A,WWN=AAAAAAAA,Path Group ID=1,LUN=1,
Emulation=xxxxxxxxx,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 |

| Item | Description |
|---------------------|--|
| 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 |
| 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 |
| 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.=xxxxxxxxxxx
+Command=Add HBA iSCSI
++Port=1A,Target ID=0x00,iSCSI Name=XXXXXXXXXXXXXXXXXX, 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
```

```
+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.=xxxxxxxxxxx
+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 |

| Item | Description |
|---------------------|--|
| | 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 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.=xxxxxxxxxxx
+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 |
|-------------|---|
| | <p>Specifying the capacity</p> <ul style="list-style-type: none"> ▪ 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. <p>For details, see the section describing CV size calculation in <i>Provisioning Guide for Open Systems</i>.</p> |
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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
```

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 <ul style="list-style-type: none"> ▪ 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 |
|---|---|
| | <ul style="list-style-type: none"> ▪ Cylinder: Specify a capacity by the cylinder. ▪ ALL Capacity: All free space is assigned to the LDEV capacity. The capacity value is not output. <p>For details, see the section describing CV size calculation in <i>Provisioning Guide for Open Systems</i>.</p> |
| MP Blade ID | The MP blade ID of an LDEV to be created |
| CLPR | The CLPR ID |
| TSE | <p>The setting status of TSE attribute</p> <p>Enable: Enabled, Disable: Disabled</p> |
| Full Allocation | <p>The setting status of the full allocation</p> <p>Enable: Enabled, Disable: Disabled</p> |
| Data Direct Mapping LDEV(LDKC:CU:LDEV) | <p>The LDEV ID of a pool volume with the data direct mapping attribute when the data direct mapping attribute is enabled.</p> <p>No value is output when the data direct mapping attribute is disabled.</p> |
| T10PI | <p>The setting status of T10 PI attribute</p> <p>Enable: Enabled, Disable: Disabled</p> |
| Capacity Saving | <p>The status of the capacity saving setting</p> <p>Disable: Capacity saving is disabled, Compression: Compression, Deduplication Compression: Deduplication and compression</p> |
| Capacity Saving Mode | <p>The status of the capacity saving setting mode</p> <p>Post Process: post process method, Inline: inline method</p> <p>If the option is not specified, a hyphen (-) is output.</p> |
| Nickname | <p>The name to be set for the LDEV</p> <p>No value is output if no name is specified for the LDEV.</p> |
| Compression Acceleration | <p>The setting status of compression accelerator</p> <p>Enable: Compression accelerator is enabled.</p> <p>Disable: Compression accelerator is disabled.</p> <p>This item is output when compression accelerator is set.</p> |

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 | <p>The capacity and method for specifying the capacity of an LDEV to be created</p> <p>Specifying the capacity</p> <ul style="list-style-type: none"> ▪ 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. <p>For details, see the section describing CV size calculation in <i>Provisioning Guide for Open Systems</i>.</p> |

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.=xxxxxxxxxxxx
+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 | <p>The capacity and method for specifying the capacity of an LDEV to be created</p> <p>Specifying the capacity</p> <ul style="list-style-type: none"> ▪ 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. <p>For details, see the section describing CV size calculation in <i>Provisioning Guide for Open Systems</i>.</p> |
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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. |

| Item | Description |
|---|--|
| 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 output 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 |

| Item | Description |
|------------------------------------|--|
| 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.=xxxxxxxxxxx
+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 |

| Item | Description |
|----------|----------------------------------|
| 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.=xxxxxxxxxxx
+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. |
| 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) |

| Item | Description |
|-------------------------|---|
| | 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.=xxxxxxxxxxx
+Command=Add Path ++Port=1B,WWN=XXXXXXXXXXXXXXXXXX,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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
```

```
+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.=xxxxxxxxxxx
+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 |
| 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.=xxxxxxxxxxx
+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 |
| 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.=xxxxxxxxxxx
```

```
+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.=xxxxxxxxxxx
+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 |

| Item | Description |
|---------------|---|
| | "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.=xxxxxxxxxxx
+Command=Add Resource(Group)
++Resource Group=AAAAAAA,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 |

| Item | Description |
|------|--|
| | 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=XXXXXXXXXX
```

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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 to be created |
| Pool Name | The pool name of a pool for Thin Image 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.=xxxxxxxxxxx
+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. None: Both cloning and pair splitting are not automatically performed. |
| S-VOL Create | Indicates whether the secondary volume is automatically created. |

| Item | Description |
|------------------------------------|--|
| | 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.=xxxxxxxxxxx
+Command=Add SPM Group ++Port=1A,WWN=XXXXXXXXXXXX,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.=xxxxxxxxxxx
+Command=Add SPM Host Group
++Port=1A,SPM Group=XXXXXXXXXXXX,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=XXXXXXXXXXXX,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.=xxxxxxxxxxx
+Command=Add WWN
++Port=1A,Host Group ID=0x0FE,WWN=XXXXXXXXXXXXXXXXXX, 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+Command=Check External Storage Path
++Port=1B,WWN=XXXXXXXXXXXXXXXXXX,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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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=XXXXXXXXXXXXXXXXXX, 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+Command=Delete Path
++Port=1B,WWN=XXXXXXXXXXXXXXXXXX,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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+Command=Delete RCU
++S/N=512345,MCU=0xAAAA,RCU=0xB BBB,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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+Command=Delete SPM Host Group
++Port=1A,Host Group Name=XXXXXXXXXXXXX
```

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.=xxxxxxxxxxx
+Command=Delete SPM WWN
++Port=1A,WWN=XXXXXXXXXXXXX
```


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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+Command=Delete SSID
++S/N=12345,MCU=0xAAAA,RCU=0xBBBB,SSID=0xC CCC
```

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.=xxxxxxxxxxx
+Command=Delete WWN
++Port=1A,Host Group ID=0x0FE,WWN=XXXXXXXXXXXXXXXXXX, 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.=xxxxxxxxxxx
+Command=Disconnect External Group ++PG=E111111-1
```

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.=xxxxxxxxxxx
+Command=Disconnect Path
++Port=1B,WWN=XXXXXXXXXXXXXXXXXX,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.=xxxxxxxxxxx
+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) | <p>The LDEV ID of the virtual volume for Dynamic Provisioning to be extended</p> <p>When a virtual storage machine is specified, the LDEV ID of the virtual storage machine is output.</p> |
| Virtual Storage Machine S/N | <p>The serial number of the virtual storage machine</p> <p>No value is output when a virtual storage machine is not specified.</p> |
| Size | <p>The capacity and method for specifying the capacity of an LDEV to be created</p> <p>Specifying the capacity</p> <ul style="list-style-type: none"> ▪ 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. <p>For details, see the section describing CV size calculation in <i>Provisioning Guide for Open Systems</i>.</p> |

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.=xxxxxxxxxxx
+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 <ul style="list-style-type: none"> ▪ 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 <i>Provisioning Guide for Open Systems</i> . |

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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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(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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 |
| 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.=xxxxxxxxxxx
+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. |

| Item | Description |
|-----------------------------|---|
| 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 |
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 |

| Item | Description |
|---|---|
| | 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
```

```
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
```

```
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 For details about the host mode, see <i>Provisioning Guide for Open Systems</i> . |
| 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.=xxxxxxxxxxx
+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. |
| Mode | The host mode For details about the host mode, see <i>Provisioning Guide for Open Systems</i> . |
| 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 |

| Item | Description |
|-------------|--|
| | 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 |

| Item | Description |
|------------------------------------|---|
| 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 secondary volume. |
| 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.=xxxxxxxxxxx
+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 |

| Item | Description |
|---------------------|--|
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+Command=Modify Ldev(ALUA) ++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,ALUA=Disable
```

Detailed Information

| Item | Description |
|---------|------------------|
| Command | The command name |

| Item | Description |
|---------------------|---|
| 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 |
| 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 |

| Item | Description |
|---------------------|---|
| 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.=xxxxxxxxxxx
+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 |
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 |
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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(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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+Command=Modify Ldev(Nickname)
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Nickname=AAAAAAAAA
```

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.=xxxxxxxxxxx
+Command=Modify Ldev(QoS Alert)
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Upper Alert Time=600
```

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 determine 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. |

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.=xxxxxxxxxxx
+Command=Modify Ldev(QoS Parameters)
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Upper Throughput IO=2147483647,Upper
Data Trans MB=2097151
```

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. If the value is 0, the upper-limit value is not valid. |

| Item | Description |
|---------------------|---|
| 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. |

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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 |

| Item | Description |
|---------------------|---|
| 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.=xxxxxxxxxxx
+Command=Modify Ldev(Restore)
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB,Forcible=Enable,Password=Enable
```

Detailed Information

| Item | Description |
|---------------------|---|
| Command | The command name |
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
```

```
+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/D". 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 |

| Item | Description |
|-------------|--|
| | For details of the local replica option ID, see <i>Hitachi ShadowImage® User Guide</i> , <i>Hitachi ShadowImage® for Mainframe User Guide</i> , <i>Hitachi Thin Image User Guide</i> , and <i>Hitachi Compatible FlashCopy/FlashCopy SE User Guide</i> . |
| 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.=xxxxxxxxxxx
+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 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 |

| Item | Description |
|----------------|---|
| 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.=xxxxxxxxxxx
+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. 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=XXXXXXXXXXXXXXXXXX,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.=xxxxxxxxxxx
+Command=Modify Path(Que Depth)
++WWN=XXXXXXXXXXXXXXXXXX,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.=xxxxxxxxxxx
+Command=Modify Path(Timeout)
++WWN=XXXXXXXXXXXXXXXXXX,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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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. |
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 Suspend TI Pair when the High water mark Threshold is exceeded. Yes: Thin Image pair is interrupted. No: Thin Image pair is uninterrupted. |

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.=xxxxxxxxxxx
+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. 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.=xxxxxxxxxxx
```

Chapter 6: Audit log examples of commands sent from hosts, computers using CCI, or hosts using Business Continuity Manager

```
+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.=xxxxxxxxxxx
+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 |

| Item | Description |
|-----------------------------|---|
| Fabric | The setting status of the fabric switch Enable: Enabled, Disable: Disabled |
| 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 |
| Switch | The setting status of the LUN security Enable: Enabled, Disable: Disabled |
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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:fbca:149, Global
Addressing
Mode=Manual, IPv6 Global Address=fe80:0:0:0:199a:b948:fbca:149, IPv6
Global Address
2=fe80:0:0:0:199a:b948:fbca:149, IPv6 Default
Gateway=fe80:0:0:0:199a:b948:fbca:149,
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. |
| 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 |

| Item | Description |
|-----------------------------|---|
| | 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* 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 changing a physical port. |

| Item | Description |
|---|--|
| 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.=xxxxxxxxxxx
+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:fbca149, Global Addressing Mode=Manual, IPv6
Global
Address=fe80:0:0:0:199a:b948:fbca149,, IPv6 Default
Gateway=fe80:0:0:0:199a:b948:fbca149, 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 * |

| Item | Description |
|---------------------------|--|
| | Enable: Enabled, Disable: Disabled |
| VLAN ID | <p>The VLAN ID before modification*</p> <p>No value is output when VLAN ID is added.</p> <p>For a VLAN ID to be deleted, the VLAN ID (1 to 4094) to be deleted is output.</p> <p>For a VLAN ID to be modified, the VLAN ID (1 to 4094) to be modified is output.</p> |
| New VLAN ID | <p>The VLAN ID after modification*</p> <p>For a VLAN ID to be added, the added VLAN ID (1 to 4094) is output.</p> <p>For a VLAN ID to be deleted, no value is output.</p> <p>For a VLAN ID to be modified, the modified VLAN ID (1 to 4094) is output.</p> |
| IPv4 Address | The IPv4 address* |
| Subnet Mask | The subnet mask of the IPv4* |
| Default Gateway | The default gateway of the IPv4* |
| IPv6 Mode | <p>The IPv6 setting status*</p> <p>Enable: Enabled, Disable: Disabled</p> |
| LinkLocal Addressing Mode | <p>The input mode of the link local address*</p> <p>Auto: Automatic input, Manual: Manual input</p> <p>No value is output when IPv6 Mode is disabled.</p> |
| IPv6 LinkLocal Address | The IPv6 link local address* |
| Global Addressing Mode | <p>The input mode of the global address*</p> <p>Auto: Automatic input, Manual: Manual input</p> |
| 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 | <p>The setting status of Selective ACK Mode*</p> <p>Enable: Enabled, Disable: Disabled</p> |
| 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 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.=xxxxxxxxxxx
+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:fbca:149, Global Addressing Mode=Manual, IPv6
Global
Address=fe80:0:0:0:199a:b948:fbca:149, IPv6 Global Address
2=fe80:0:0:0:199a:b948:fbca:149, IPv6 Default
Gateway=fe80:0:0:0:199a:b948:fbca:149,
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 |
| 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 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.=xxxxxxxxxxx
+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. |
| 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. |

| Item | Description |
|------------------------------|---|
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
```

```
+Command=Modify QoS Group(QoS Alert)
++QoS Group ID=1,Upper Alert Time=600
```

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. |

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.=xxxxxxxxxxx
+Command=Modify QoS Group(QoS Parameters)
++QoS Group ID=1,Upper Throughput IO=2147483647,Upper Data Trans MB=209715
```

Detailed Information

| Item | Description |
|---------------------|--|
| Command | The command name |
| 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. |

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 |

| Item | Description |
|---------------------|--|
| | "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 |
| 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.=xxxxxxxxxxx
+Command=Modify Remote Replica Opt(Copy Activity Setting)
++Option Type=TC, Copy Activity Setting=System
```

Detailed Information

| Item | Description |
|---------|------------------|
| Command | The command name |

| Item | Description |
|-----------------------|--|
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 |

| 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. |

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.=xxxxxxxxxxx
+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. |
| 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.=xxxxxxxxxxx
+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)**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 |

| Item | Description |
|----------|---|
| ReadOnly | <p>Indicates whether to set the ReadOnly attribute for the snapshot data.</p> <p>This item is output only when the setting of the ReadOnly attribute is specified.</p> <p>Enable: The ReadOnly attribute is set to the snapshot data.</p> |

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.=xxxxxxxxxxx
+Command=Modify Snapshot(Stop Deleting 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 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.=xxxxxxxxxxx
+Command=Modify SPM Group
++Port=1A,SPM Group=XXXXXXXXXXXX,Priority=Prio,Limit=100
IOPS
```

Detailed Information

| Item | Description |
|---------|------------------|
| Command | The command name |

| Item | Description |
|-----------|---|
| 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.=xxxxxxxxxxx
+Command=Modify SPM Host Group
++Port=1A,Host Group Name=XXXXXXXXXXXXX,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) |

| Item | Description |
|------|--|
| | 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.=xxxxxxxxxxx
+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 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 |

| Item | Description |
|------------------------------------|---|
| | The LU number is the absolute LUN ^{*2} of Command Control Interface |
| S-VOL(Port-LUN-LDEV) ^{*1} | <p>The port number, the LU number, and the LDEV number of the secondary volume</p> <p>The port number and the LU number show the expanded LU of Command Control Interface</p> <p>The LU number is the absolute LUN^{*2} of Command Control Interface</p> |
| 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 | <p>The serial number of the virtual storage machine</p> <p>No value is output when a virtual storage machine is not specified.</p> |
| Copy Pace(TRK) | The track size for copy |
| Range | <p>Specifies a range of pairs to be created</p> <p>Device: Specifies by the device</p> <p>Group: Specifies by the consistency group</p> |
| CTG ID | <p>The consistency group ID</p> <p>0 (zero) is output if the consistency group option (-m grp) is not specified.</p> |
| Split Mode | <p>The split mode when ShadowImage pairs are split</p> <p>Normal: The pair is split normally.</p> <p>Quick: The pair is split quickly.</p> <p>If it is not specified at the command option or the pair is other than ShadowImage one, a hyphen (-) is output.</p> |
| S-VOL Hidden Mode | <p>Indicates whether the secondary volume is hidden after a ShadowImage pair is created</p> <p>Enable: Hides the secondary volume</p> <p>Disable: Not hides the secondary volume</p> <p>Disable is output for pairs other than ShadowImage ones.</p> |
| Pool ID(TI) | The pool ID of Thin Image pairs |

| Item | Description |
|---|---|
| | 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 |
| <p>*1 When a virtual storage machine is specified, the value of the virtual storage machine is output.</p> <p>*2 For more information about the absolute LUN, see <i>Command Control Interface Installation and Configuration Guide</i></p> | |

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.=xxxxxxxxxxx
+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 |

| Item | Description |
|---------------------------------------|--|
| | <p>The port number and the LU number show the expanded LU of Command Control Interface</p> <p>The LU number is the absolute LUN^{*2} of Command Control Interface</p> |
| S-VOL(Port-LUN-LDEV) ^{*1} | <p>The port number, the LU number, and the LDEV number of the secondary volume</p> <p>The port number and the LU number show the expanded LU of Command Control Interface</p> <p>The LU number is the absolute LUN^{*2} of Command Control Interface</p> |
| 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 | <p>The serial number of the virtual storage machine</p> <p>No value is output when a virtual storage machine is not specified.</p> |
| Write Permission(Update Copy Error) | <p>The setting status of write permission if an error occurs during update copy</p> <p>Enable: Enabled, Disable: Disabled</p> |
| Write Permission(RCU Suspend Failure) | <p>The setting status of permission to write to the local storage system if the suspension operation cannot be performed on the remote storage system</p> <p>Enable: Enabled, Disable: Disabled</p> |
| Initial Copy | <p>The type of pair creation</p> <p>Entire: Creates pairs and copies data from the primary volume to the secondary volume</p> <p>None: Creates pairs and does not copy data from the primary volume to the secondary volume</p> |
| Copy Pace(TRK) | The track size for copy |
| JNL ID Option | <p>Indicates whether an option (-jp or -js) is specified for a journal ID</p> <p>Enable: Specified, Disable: Not specified</p> <p>Disable is output for pairs other than Universal Replicator ones</p> |

| Item | Description |
|-----------------------|--|
| 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. |
| 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 |

| Item | Description |
|---|--|
| 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 |
| <p>*1 When a virtual storage machine is specified, the value of the virtual storage machine is output.</p> <p>*2 For more information about the absolute LUN, see <i>Command Control Interface Installation and Configuration Guide</i></p> | |

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.=xxxxxxxxxxx
+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 |
| 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 |

| Item | Description |
|------------------------------------|--|
| S-VOL(Port-LUN-LDEV) ^{*1} | <p>The port number, the LU number, and the LDEV number of the secondary volume</p> <p>The port number and the LU number show the expanded LU of Command Control Interface</p> <p>The LU number is the absolute LUN^{*2} of Command Control Interface</p> |
| 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 | <p>Indicates the direction of resynchronizing a pair</p> <p>Normal: Normal direction (Primary volume to secondary volume)</p> <p>Reverse: Reverse direction (Secondary volume to primary volume)</p> |
| Virtual Storage Machine S/N | <p>The serial number of the virtual storage machine</p> <p>No value is output when a virtual storage machine is not specified.</p> |
| Copy Pace(TRK) | The track size for copy |
| Pair Target Range | <p>Specifies the range of pairs to be resynchronized</p> <p>Device: Specifies by the device</p> <p>Group: Specifies by the consistency group</p> |
| CTG ID | <p>The consistency group ID</p> <p>0 (zero) is output if the consistency group option (-m grp) is not specified.</p> |
| Split Mode | <p>The resynchronization mode when pairs are resynchronized</p> <p>Normal: The pair is resynchronized normally</p> <p>Quick: The pair is resynchronized quickly</p> <p>If it is not specified at the command option, a hyphen (-) is output.</p> |
| Device Option | <p>Indicates whether the volume name defined in the configuration definition file is used</p> <p>Enable: Used, Disable: Not used</p> |

| Item | Description |
|------|---|
| | <p>*1 When a virtual storage machine is specified, the value of the virtual storage machine is output.</p> <p>*2 For more information about the absolute LUN, see <i>Command Control Interface Installation and Configuration Guide</i></p> |

Pairresync(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.=xxxxxxxxxxx
+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. |
| 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 |

| Item | Description |
|---------------------------------------|--|
| | <p>The port number and the LU number show the expanded LU of Command Control Interface</p> <p>No value is output when the option "-swaps" or "-swapp" is specified.</p> <p>The LU number is the absolute LUN*2 of Command Control Interface</p> |
| 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 | <p>The serial number of the remote storage system</p> <p>No value is output when the option "-swaps" or "-swapp" is specified.</p> |
| RCU SSID*1 | The SSID to which a volume on the remote storage system belongs |
| Virtual Storage Machine S/N | <p>The serial number of the virtual storage machine</p> <p>No value is output when a virtual storage machine is not specified.</p> |
| Write Permission(Update Copy Error) | <p>The setting status of write permission if an error occurs during update copy</p> <p>Enable: Enabled, Disable: Disabled</p> <p>Enable is output when the option "-swaps" or "-swapp" is specified.</p> |
| Write Permission(RCU Suspend Failure) | <p>The setting status of permission to write to the local storage system if the suspension operation cannot be performed on the remote storage system</p> <p>Enable: Enabled, Disable: Disabled</p> <p>Enable is output when the option "-swaps" or "-swapp" is specified.</p> |
| Copy Pace(TRK) | The track size for copy |
| JNL ID Option | <p>Indicates whether an option (-jp or -js) is specified for a journal ID</p> <p>Enable: Specified, Disable: Not specified</p> <p>Disable is output for pairs other than Universal Replicator ones.</p> |
| CTG ID | <p>The consistency group ID</p> <p>No value is output when the option "-swaps" or "-swapp" is specified.</p> |
| Resync-SWAP | Indicates whether an option (-swaps or -swapp) is specified |

| Item | Description |
|---|---|
| | 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. |
| <p>*1 When a virtual storage machine is specified, the value of the virtual storage machine is output.</p> <p>*2 For more information about the absolute LUN, see <i>Command Control Interface Installation and Configuration Guide</i></p> | |

Pairsplit(LocalCopy)



Note:

When you perform the paircreate -split command using CCI, this log is output.

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.=xxxxxxxxxxx
+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 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. |

| Item | Description |
|---|--|
| 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 ofThin Image. If it is not paircreate –split operation, 0 (zero) is output. |
| <p>*1 When a virtual storage machine is specified, the value of the virtual storage machine is output.</p> <p>*2 For more information about the absolute LUN, see <i>Command Control Interface Installation and Configuration Guide</i></p> | |

Pairsplit(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.=xxxxxxxxxxx
+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. 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} of Command Control Interface |
| MCU S/N ^{*1} | The serial number of the local storage system 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. |
| 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 |
| 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 |

| Item | Description |
|---|---|
| | 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 <i>Command Control Interface Installation and Configuration Guide</i> | |

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.=xxxxxxxxxxx
+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} of Command 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 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. |
| 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 <i>Command Control Interface Installation and Configuration Guide</i> | |

Pairsplit-S(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.=xxxxxxxxxxx
+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 |

| Item | Description |
|------------------------------------|---|
| 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} 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 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 |
| 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 |

| Item | Description |
|---|--|
| | <p>Enable: The virtual LDEV ID is deleted from the volume on the local storage system not to be accessed by hosts.</p> <p>Disable: The virtual LDEV ID is not deleted from the volume on the local storage system to be accessed by hosts.</p> |
| Type | <p>The type of volumes of pairs to be deleted</p> <p>P-VOL: Primary volume, S-VOL: Secondary volume</p> |
| <p>*1 When a virtual storage machine is specified, the value of the virtual storage machine is output.</p> <p>*2 For more information about the absolute LUN, see <i>Command Control Interface Installation and Configuration Guide</i></p> | |

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 | <p>The guard type to be specified for volumes by using Data Retention Utility</p> <p>inv: Invisible mode to be set</p> <p>sz0: Zero Read Cap mode to be set</p> <p>rwd: Protection from reading/writing</p> <p>wtd: Protection from writing</p> <p>svd: Protection from copying program products</p> <p>- (hyphen): Released from all protection modes</p> <p>If svd is specified along with a different guard type, two values separated by a space are displayed.</p> |
| Retention Term | The retention term (days) |

| Item | Description |
|-----------------------------|---|
| | 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 |
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+Command=Reset Ldev Priority
++LDEV(LDKC:CU:LDEV)=0x00:0xAA:0xBB
++WWN={AAAAAAAA,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 |
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+Command=Reset WWN
++Port=1A,Host Group ID=0x0FE,WWN=XXXXXXXXXXXXXXXXXX, 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx +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 |

| 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. |

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=XXXXXXXXXXXXXXXXXX,
iSCSI Nickname=VVVVVVVVVVVVVV,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}=[{AAAAAAAA,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.=xxxxxxxxxxx
+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 |

| Item | Description |
|---------------------|--|
| 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.=xxxxxxxxxxx +Command=Set
WWN
++Port=1A,Host Group ID=0x0FE,WWN=XXXXXXXXXXXXXXXXXX, 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 |
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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. 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.=xxxxxxxxxxx
```

```
+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.=xxxxxxxxxxx
+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 Faster: Copy operations take priority. 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.=xxxxxxxxxxx
```

```
+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.=xxxxxxxxxxx
+Command=System Option(Link Failure Threshold)
++Link Failure Threshold=255
```

Detailed Information

| Item | Description |
|------------------------|--|
| Command | The command name |
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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(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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx +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.=xxxxxxxxxxx +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. |

| Item | Description |
|---------------|--|
| Controller ID | The controller ID of the remote storage system 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 |
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 |

| Item | Description |
|---------------------|--|
| | High: High performance tier, Middle: Middle performance tier, Low: Low performance tier 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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,,
Seq.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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, |

| Item | Description |
|----------------|--|
| | 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 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.=xxxxxxxxxxx
+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 |

| Item | Description |
|------|--|
| | 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.=xxxxxxxxxxx
+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/MM, 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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. |
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 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 |

| Item | Description |
|--|--|
| | 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) 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. |

| Item | Description |
|---------------------|--|
| Copy Pace | <p>The copy speed</p> <p>Normal: Normal, Slow: Slow</p> |
| Reverse Resync Mode | <p>The setting status of the reverse resync mode</p> <p>Enable: Enabled, Disable: Disabled</p> <p>No value is output if I/F Version is less than 0x03.</p> |
| Range | <p>The pair resynchronization range</p> <p>LU: Only the pair to be operated</p> <p>Group: All pairs in the consistency group to which the pair to be operated belongs</p> <p>No value is output if I/F Version is less than 0x04.</p> |
| Change CTG | <p>The setting status of the change mode of the consistency group attribute</p> <p>None: Not changed</p> <p>Open/MF CTG: Changes to the consistency group common to Open/Mainframe</p> <p>CTG: Changes to the consistency group for the Mainframe</p> <p>No CTG: Changes to a pair that does not belong to the consistency group</p> <p>No value is output if I/F Version is 0x30 or less than 0x22.</p> |
| Time Stamp | <p>The transfer setting status of host time stamps to the secondary volume when resynchronizing pairs</p> <p>Enable: Enabled, Disable: Disabled</p> <p>No value is output if I/F Version is 0x20 or less than 0x16.</p> |
| SCP | <p>The setting status of SCP (Stage Change Pending) time change</p> <p>Enable: Enabled, Disable: Disabled</p> <p>No value is output if I/F Version is 0x30 or less than 0x22.</p> <p>No value is output if Change CTG is not CTG.</p> |
| CTG | <p>The consistency group ID</p> <p>No value is output if I/F Version is less than 0x04.</p> <p>The consistency group ID of the pair change destination when Change CTG is Open/MF CTG or CTG</p> <p>No value is output if Range is Group and Change CTG is No CTG.</p> |

| Item | Description |
|--|--|
| | 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 | <p>The setting status of the status change suppression when an error occurs</p> <p>Enable: Enabled, Disable: Disabled</p> <p>No value is output if I/F Version is less than 0x13.</p> <p>A value is output only when Mode is Delta or Delta(Force) and Range is LU.</p> |
| Reverse Resync Mode | <p>The setting status of the reverse resync mode</p> <p>Enable: Enabled, Disable: Disabled</p> |
| Range | <p>The pair resynchronization range</p> <p>Group: All pairs in the same mirror as the pair to be operated</p> <p>LU: Only the pair to be operated</p> <p>EXCTG: All pairs in the extended consistency group to which the pair to be operated belongs</p> |
| Error Level | <p>The range of the pair split at failure occurrence</p> <p>Group: All pairs in the same mirror as the pair to be operated are split</p> <p>LU: Only the pair to be operated is split</p> <p>No value is output if I/F Version is less than 0x12.</p> <p>No value is output if Range is Group.</p> |
| Mode | <p>The copy mode</p> <p>Normal: Normal</p> <p>Suspend: Suspend</p> <p>Delta: Delta resync</p> <p>Delta(Force): Forcible delta resync</p> <p>No value is output if I/F Version is less than 0x13.</p> |

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 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) |

| Item | Description |
|------|--|
| | 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.=xxxxxxxxxxx
+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 |

| Item | Description |
|----------|--|
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 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 |

| Item | Description |
|--|--|
| | 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 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 |

| Item | Description |
|--|--|
| | 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 |
| 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.=xxxxxxxxxxx
+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 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.=xxxxxxxxxxx +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 |

| Item | Description |
|----------|---|
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx +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 |

| Item | Description |
|--|--|
| 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 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. |

| Item | Description |
|--|---|
| | <p>Entire: Creates pairs and copies data from the primary volume to the secondary volume.</p> <p>Diff: Copies the difference between the primary volume and the secondary volume</p> |
| NoDelay | <p>The setting status of NoDelay</p> <p>Enable: Enabled, Disable: Disabled</p> |
| Copy Pace | <p>The copy speed</p> <p>Slow: Low, Normal: Normal</p> |
| Output items when Copy Type is TCMF | |
| Copy Msg | <p>The setting status of the message request</p> <p>Enable: Enabled, Disable: Disabled</p> <p>No value is output when Initial Copy is None.</p> |
| Fence Level | <p>The fence level to be set (conditions where the local storage system rejects write operations to the primary volume)</p> <p>Never: Can write to the primary volume even if the pair is split.</p> <p>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</p> |
| Online Chk | <p>The setting status of the online check</p> <p>Enable: Enabled, Disable: Disabled</p> |
| Blank item | Nothing is output due to unused. |
| Force | <p>The setting status of the pair forcible recovery when the pair is in suspending status</p> <p>Enable: Enabled, Disable: Disabled</p> <p>No value is output when Initial Copy is Diff.</p> |
| Initial Copy | <p>The type of the pair creation operation</p> <p>None: Creates pairs but does not copy data from the primary volume to the secondary volume</p> <p>Entire: Creates pairs and copies data from the primary volume to the secondary volume.</p> <p>Diff: Copies the difference between the primary volume and the secondary volume</p> <p>None(Suspend): Creates pairs and suspends them without copying data from the primary volume to the secondary volume.</p> |

| Item | Description |
|----------------|--|
| 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.=xxxxxxxxxxx +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 |
| 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 |

| Item | Description |
|---------------|--|
| 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.=xxxxxxxxxxx
+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.=xxxxxxxxxxx
+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 SIMF: ShadowImage for Mainframe, TCMF: TrueCopy for Mainframe |

| Item | Description |
|--|---|
| 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.=xxxxxxxxxxx
+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 |

FC-SP

Example

```
09xx,YYYY/MM/DD,HH:MM:SS.xxx, 00:00,In-band OPEN,<Host>,,,
[FC-SP],,,Normal end,from=xxxxxxxxxxxxxxxxxxxx,Seq.=xxxxxxxx
```

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=xxxxxxxxxxxxxxxxxxxx,
AP=0xXXXX,Seq.=xxxxxxxxxxxx
```

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=xxxxxxxxxxxxxxxxxxxx, AP=0xXXXX,Seq.=xxxxxxxxxxxx
+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=xxxxxxxxxxxxxxxxxxxx,
AP=0xXXXX,Seq.=xxxxxxxxxxxx
```

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, ,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 | Maintenanc e | 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 |
| 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 |
| | 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 |

| GUI operation | | Audit Log Output | | |
|-----------------------------------|--|---|---|----------------------|
| Submenu | Description | Function Name | Operation Name | |
| 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 | |
| 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 | |

| GUI operation | | Audit Log Output | |
|---|--|------------------|----------------------|
| Submenu | Description | Function Name | Operation Name |
| 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 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) |

| GUI operation | | Audit Log Output | |
|--|---|------------------|--|
| Submenu | Description | Function Name | Operation 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) Edit Ports(Topology) |
| Edit T10 PI Mode | Editing T10 PI mode settings on ports | PROV | EditT10piMode |
| Notes: | | | |
| <ol style="list-style-type: none"> 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. | | | |

| GUI operation | | Audit Log Output | |
|--|-------------|------------------|----------------|
| Submenu | Description | Function Name | Operation Name |
| 3. If one or more settings end abnormally when you have applied at one time, the output log information is <i>Error</i> , not <i>Warning</i> . | | | |

| 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 |
| 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) |

| GUI operation | | Audit Log Output | | |
|---|--|---|---|--------------------------|
| Submenu | Description | Function Name | Operation Name | |
| 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 | |
| Authenticat ion | 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 |
| | 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 |
| 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 |

| GUI operation | | Audit Log Output | |
|---|-----------------------------------|------------------|----------------|
| Submenu | Description | Function Name | Operation Name |
| 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 |
| 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 |

| GUI operation | | Audit Log Output | |
|-------------------------------------|--|------------------|------------------------------------|
| Submenu | Description | Function Name | Operation Name |
| 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 | | |
| 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 |

| GUI operation | | Audit Log Output | |
|--------------------|-----------------------|------------------|----------------------|
| Submenu | Description | Function Name | Operation Name |
| 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 | Local Replication | Create Pairs |
| Operate TI Pairs | Creating pairs, 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 |
| 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 |

| GUI operation | | Audit Log Output | |
|--|--|-------------------|----------------------|
| Submenu | Description | Function Name | Operation Name |
| 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 |
| 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 |
| 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 |

| GUI operation | | Audit Log Output | |
|--------------------------------|--|--------------------|--------------------------------|
| Submenu | Description | Function Name | Operation Name |
| 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 |
| 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 |

| GUI operation | | Audit Log Output | |
|--|--|--------------------|-----------------------------------|
| Submenu | Description | Function Name | Operation Name |
| Delete Mirrors | Deleting mirrors for Universal Replicator and Universal Replicator for Mainframe | Remote Replication | Delete Pairs ¹ |
| 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 |

| GUI operation | | Audit Log Output | |
|--|---|--------------------|------------------|
| Submenu | Description | Function Name | Operation Name |
| Clear SIM ² | Collective clearing SIMs for TrueCopy for Mainframe and Universal Replicator for Mainframe | Remote Replication | Clear SIM |
| 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: | | | |
| <ol style="list-style-type: none"> 1. When you apply two or more settings of the same type to the storage system at the same time, the log information is output as one entry. 2. 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 |

| GUI operation | | Audit Log Output | |
|--|--|--------------------|-------------------|
| Submenu | Description | Function Name | Operation Name |
| Edit Journal Options | Editing journal options for Universal Replicator and Universal Replicator for Mainframe | Remote Replication | Change JNL Option |
| 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 |
| | 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 |

| GUI operation | | Audit Log Output | |
|--|--|--------------------|-------------------|
| Submenu | Description | Function Name | Operation Name |
| 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: <ol style="list-style-type: none"> 1. When you apply two or more settings of the same type to the storage system at the same time, the log information is output as one entry. 2. If 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 |

| GUI operation | | Audit Log Output | |
|---|-----------------|------------------|----------------------------------|
| Submenu | Description | Function Name | Operation Name |
| | 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 |
| 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} |

| GUI operation | | Audit Log Output | |
|--|---|------------------|---|
| Submenu | Description | Function Name | Operation Name |
| | Adding WWN | SPM | Update Port WWN ^{1, 2} |
| | Deleting WWN | SPM | Update Port WWN ^{1, 2} |
| | Initializing | SPM | Default Set ² |
| | Adding WWN (to SPM group) | SPM | Update SPMGrp ^{1, 2} |
| | Deleting WWN (from SPM group) | SPM | Update SPMGrp ^{1, 2} |
| | Adding SPM group and WWN | SPM | 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 |
| <p>Notes:</p> <ol style="list-style-type: none"> 1. When you apply two or more settings of the same type to the storage system at the same time, the log information is output as one entry. 2. If one or more settings end abnormally when you have applied at one time, the output log information is <i>Error</i>, not <i>Warning</i>. | | | |

Using 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 |
| 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 | UpdateUserGroupResourceGroupBmp |
| | Changing the setting of all resource groups assignment to a user group | ACM | UpdateUserGroupAllResourceGroup |

| GUI operation | | Audit Log Output | |
|--|--|------------------|---------------------|
| Submenu | Description | Function Name | Operation Name |
| 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 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 |

| GUI operation | | Audit Log Output | |
|--|--|------------------|--|
| Submenu | Description | Function Name | Operation Name |
| 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 |
| 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 |

| GUI operation | | Audit Log Output | |
|--|--|------------------|--|
| Submenu | Description | Function Name | Operation Name |
| | | | Register KEK Dynamic ^{5, 9} Rekey CEK ^{6, 7} Rekey KEK Dynamic ¹¹ Set Up Key Mng Serv Succeeded backup to Serv ³ |
| 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 |
| <p>Notes:</p> <ol style="list-style-type: none"> 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 |
| 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 \(on page 618\)](#).

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 Configurariion | 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 | 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 |
| | | Remove > Mounting location | Maintenance | Remove |

| GUI operation | | | Audit Log Output | |
|---------------|---------|--|------------------|------------------|
| Window Name | Tab | Operation | Function Name | Operation Name |
| | 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 Restore |
| CHBs | Replace | Maintenance | Block | |

| GUI operation | | | Audit Log Output | |
|---------------|--------|--|------------------|------------------------|
| Window Name | Tab | Operation | Function Name | Operation Name |
| | | | | 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 RIs SysLock |
| | Reboot GUM | Maintenance | Reboot GUM |
| | 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 | <ul style="list-style-type: none"> ▪ Alter ▪ Reset | Information | Threshold Value |
| Online Read Margin | <ul style="list-style-type: none"> ▪ Alter ▪ Reset | Information | ORM Value |

Using Monitor button

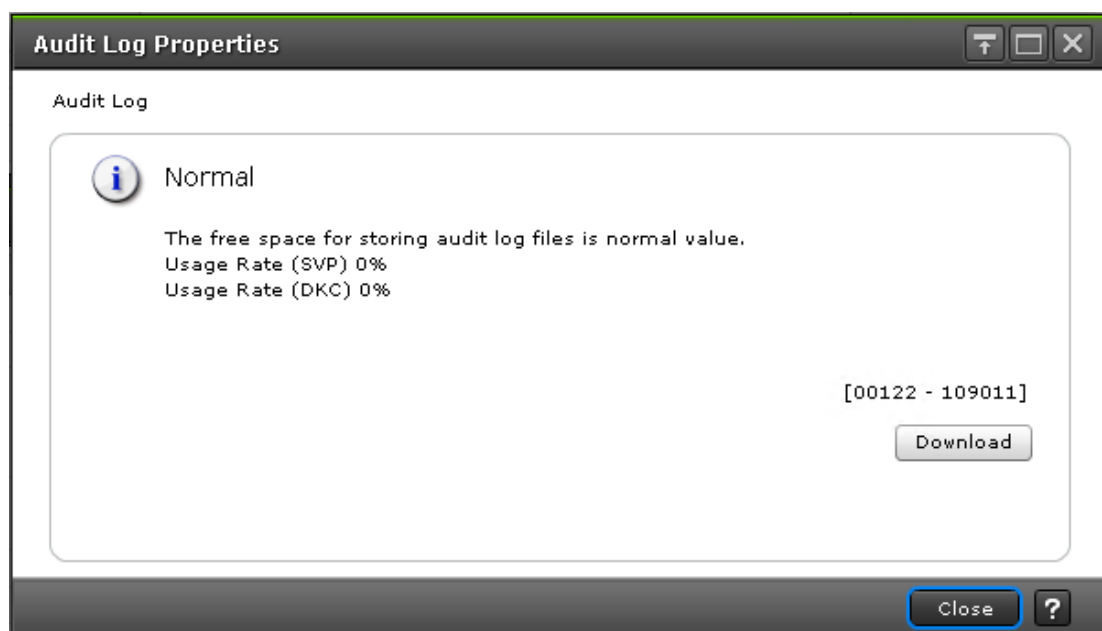
| SVP Operations | | Audit Log Output | |
|----------------|-----------|------------------|----------------|
| Function | Operation | Function Name | Operation Name |
| Threshold | Threshold | Monitor | Threshold |

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 \(on page 628\)](#)
- [FTP tab \(on page 631\)](#)

Syslog tab

| Item | Description |
|-------------------|---|
| Transfer Protocol | Selects a protocol to transfer the audit log. <ul style="list-style-type: none"> ▪ New Syslog Protocol (TLS1.2/RFC5424) ▪ Old Syslog Protocol (UDP/RFC3164) |

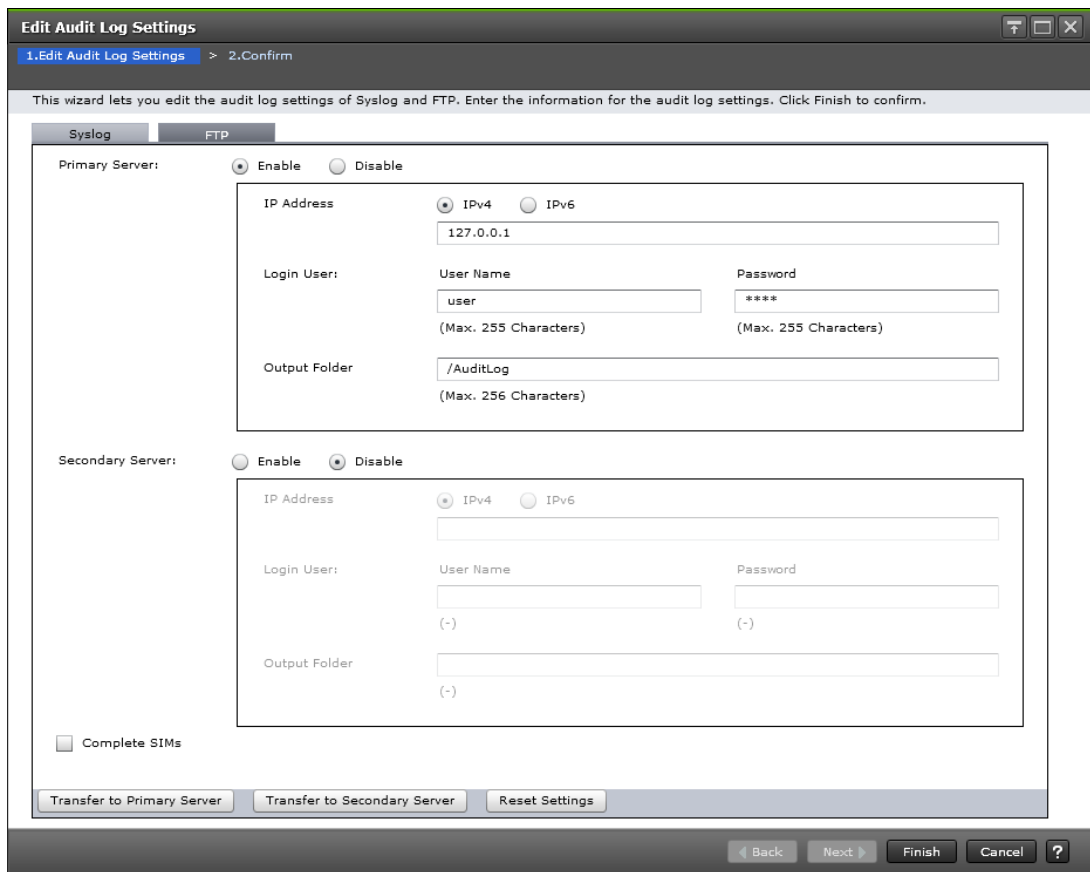
| Item | Description |
|--|--|
| Primary Server | <p>Selects whether to use the syslog server.</p> <ul style="list-style-type: none"> ▪ Enable: Transfers the audit log to the syslog server. ▪ Disable: Do not transfer the audit log to the syslog server. |
| Primary Server-Server settings | <p>Specify 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 (! \$ % - . @ _ ` ~).</p> |
| Primary Server- Port Number | <p>Enters a port number to be used at the syslog server.</p> |
| Primary Server- Client Certificate File Name | <p>Specifies a certificate file. Click Browse, and then specify a certificate file.</p> <p>Specifies this item only when New Syslog Protocol (TLS1.2/ RFC5424) is selected at Transfer Protocol.</p> |
| Primary Server- Password | <p>Enters a password for the client certificate. Up to 128 characters can be entered for the password.</p> <p>Allowed characters are alphanumeric characters and symbols: ! # \$ % & ' () * + , - . / : ; < = > ? @ [\] ^ _ ` { } ~.</p> <p>Inputs this item only when Client Certificate File Name is specified.</p> |
| Primary Server- Root Certificate File Name | <p>Specifies a certificate file. Click Browse, and then specify a certificate file.</p> <p>Specifies this item only when New Syslog Protocol (TLS1.2/ RFC5424) is selected at Transfer Protocol.</p> |
| Secondary Server | <p>Selects whether to use an alternative server (secondary server) to the syslog server.</p> <ul style="list-style-type: none"> ▪ Enable: Transfers the audit log to the secondary server. ▪ Disable: Do not transfer the audit log to the secondary server. |
| Secondary Server- Server Setting | <p>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.</p> |
| Secondary Server- Port Number | <p>Enters a port number to be used on the secondary server.</p> |
| Secondary Server- Client Certificate File Name | <p>Specifies a certificate file. Click Browse, and then specify a certificate file.</p> <p>Specifies this item only when New Syslog Protocol (TLS1.2/ RFC5424) is selected at Transfer Protocol.</p> |

| Item | Description |
|---|--|
| Secondary Server-Password | <p>Enters a password for the client certificate. Up to 128 characters password can be entered.</p> <p>The restriction for the available values is the same as that of Primary Server- Server Setting.</p> |
| Secondary Server-Root Certificate File Name | <p>Specifies a certificate file. Click Browse, and then specify a certificate file.</p> <p>Specifies this item only when New Syslog Protocol (TLS1.2/RFC5424) is selected at Transfer Protocol.</p> |
| Location Identification Name | <p>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.</p> |
| Timeout | <p>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.</p> <p>Inputs this item only when New Syslog Protocol (TLS1.2/RFC5424) at Transfer Protocol is specified.</p> |
| Retry Interval | <p>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.</p> <p>Inputs this item only when New Syslog Protocol (TLS1.2/RFC5424) at Transfer Protocol is specified.</p> |
| Number of Retries | <p>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.</p> <p>Inputs this item only when New Syslog Protocol (TLS1.2/RFC5424) at Transfer Protocol is specified.</p> |
| Output Detailed Information | <p>Selects whether to transfer the detailed information of the audit log to the syslog server.</p> <ul style="list-style-type: none"> ▪ Enable: Transfer the detailed information to the syslog server. ▪ Disable: Do not transfer the detailed information to the syslog server. <p>In the syslog file that is stored in the SVP, the detailed information is always stored regardless of this setting.</p> |

- 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 | <p>Selects whether to use the FTP server.</p> <ul style="list-style-type: none"> ▪ 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 | <p>Sets an IP address for the primary FTP server. You can set either IPv4 address or IPv6 address for IP address.</p> <ul style="list-style-type: none"> ▪ To set an IPv4 address, select IPv4 and enter four integers in the range of 0 to 255 (for example, <code>nnn.nnn.nnn.nnn</code>, 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, <code>hhhh:hhhh:hhhh:hhhh:hhhh:hhhh:hhhh:hhhh</code>, where h is a hexadecimal digit). An abbreviated style of IPv6 address can also be specified. |
| Primary Server- Login User | <p>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.</p> |
| Primary Server- Output Folder | <p>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.</p> |
| Secondary Server | <p>Selects whether to use an alternative server (secondary server) to the FTP server.</p> <ul style="list-style-type: none"> ▪ 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 | <p>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.</p> |
| Secondary Server- Login User | <p>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.</p> |
| Secondary Server- Output Folder | <p>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.</p> |
| Complete SIMs | <p>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.</p> <p>Important: If you do not complete the SIM, the SIM will not occur when an FTP transfer fails next time.</p> |

- 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

Enter a name for the task. Confirm the settings in the list and click Apply to add the task in the Tasks queue for execution.

Task Name: (Max. 32 Characters)

| Syslog Server | | | | | | | | |
|----------------|------------------------|-------------|------------------------------|----------|----------------------------|------------------|------------------------|-------------|
| Primary Server | | | | | | Secondary Server | | |
| Syslog Server | Host Name / IP Address | Port Number | Client Certificate File Name | Password | Root Certificate File Name | Syslog Server | Host Name / IP Address | Port Number |
| Enable | 192.168.0.1 | 514 | - | - | - | Disable | - | - |
| Total: 1 | | | | | | | | |

| FTP Server | | | | | | | | |
|----------------|-------------|-----------------|----------|---------------|------------------|------------|-----------------|---|
| Primary Server | | | | | Secondary Server | | | |
| FTP Server | IP Address | Login User Name | Password | Output Folder | FTP Server | IP Address | Login User Name | |
| Enable | 192.168.0.1 | user | ***** | /AuditLog | Disable | - | - | - |
| Total: 1 | | | | | | | | |

Go to tasks window for status < Back Next > Apply Cancel ?

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. |

Hitachi Vantara



Corporate Headquarters
2535 Augustine Drive
Santa Clara, CA 95054 USA
HitachiVantara.com | community.HitachiVantara.com

Contact Information
USA: 1-800-446-0744
Global: 1-858-547-4526
HitachiVantara.com/contact