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HiCommand® Tuning Manager Command Line Interface Guide

MK-96HC119-02

Trademarks

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Document Revision Level

Revision	Date	Description
MK-96HC119-00	June 2006	Initial Release
MK-96HC119-01	August 2006	Revision 1, supersedes and replaces MK-96HC119-00
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Preface

This manual describes how to use Command Line Interface of HiCommand® Tuning Manager. In this manual, **Command Line Interface** of HiCommand Tuning Manager is abbreviated to **CLI**.

Intended Readers

This manual is provided for the users who will execute the commands of HiCommand Tuning Manager by using CLI. Such users should have a basic knowledge of:

- SAN (Storage Area Network)
- The contents presented in user manuals for storage subsystems.
- The Windows® or Solaris™ operating system (OS) required for CLI.

Software Version

This document revision applies to HiCommand Tuning Manager version 5.5.

Conventions for Storage Capacity Values

Storage capacity values displayed by HiCommand Tuning Manager are calculated based on the following values:

1 KB (kilobyte) = 1,024 bytes
1 MB (megabyte) = $1,024^2$ bytes
1 GB (gigabyte) = $1,024^3$ bytes
1 TB (terabyte) = $1,024^4$ bytes

Referenced Documents

- *HiCommand Tuning Manager Server Administration Guide*, MK-92HC021
- *HiCommand Tuning Manager User's Guide*, MK-92HC022
- *HiCommand Tuning Manager Installation Guide*, MK-96HC141

Referenced Documents Related to Alarm Operations

Use commands to complete the sequence of tasks from preparation to using alarms. For details on the commands, see this manual. For details on the messages output during alarm definitions and operations, see the *HiCommand Tuning Manager Messages Reference*. For details on alarm definitions and operations, see the *HiCommand Tuning Manager Agent Administration Guide*.

1. Preparations

   Use the Performance Reporter commands to define the operations to be performed by the system when an alarm occurs.

2. Alarm Definition

   Create an alarm definition file according to the syntax of alarm definition files. In the alarm definition file, you need to define a field for which you want to set an alarm. For details on the records and fields of each Agent, see the following manuals:

   - *Hitachi HiCommand Tuning Manager Hardware Reports Reference*
   - *Hitachi HiCommand Tuning Manager Operating System Reports Reference*
   - *Hitachi HiCommand Tuning Manager Application Reports Reference*

   You can also create an alarm definition file by copying and customizing an alarm defined in a solution set. For details on information defined in an alarm of a solution set, see the above manuals.

3. Alarm Usage

   Bind the defined alarm table to the Agent, then start alarm-based monitoring.

Comments

Please send us your comments on this document. Make sure to include the document title, number, and revision. Please refer to specific section(s) and paragraph(s) whenever possible.

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Thank you! (All comments become the property of Hitachi Data Systems Corporation.)

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Chapter 1 Overview

This chapter gives an overview of the commands provided by Tuning Manager, HiCommand Suite Common Component, Performance Reporter, Collection Manager, and the Agent.

- Tuning Manager Main Console Commands (see section 1.1)
- HiCommand Suite Common Component Commands (see section 1.2)
- Performance Reporter Commands (see section 1.3)
- Collection Manager and Agent Commands (see section 1.4)

1.1 Tuning Manager Main Console Commands

You can use Tuning Manager commands from the command line interface (CLI) to access Tuning Manager data.

The CLI is typically used to:

- manually execute the CLI programs from the command line in the OS
- invoke the CLI programs within scripts, macros, or development products

Perl, Microsoft Visual Basic, and Tcl are common tools used to invoke the CLI programs. Scripts and other programs enable you to automatically report and collect Tuning Manager data. (For example, scheduled execution of scripts, and customized reports by parsing and manipulating results)

Note: The maximum length of resource information displayed as the execution result of the CLI programs is 20 characters for each metric. If you want to check the resource information that exceeds 20 characters, specify the --csv option for the CLI program parameter to output results to a file in CSV format. For details, see section 2.4 *Usage*.

For details about Tuning Manager commands, see Chapter 2 *Performing Commands from the Main Console*.

1.2 HiCommand Suite Common Component Commands

HiCommand Suite Common Component provides commands that can be used by all HiCommand Suite products.

For example, for setups, you can use hcmdsrep and hcmdssup; for collecting maintenance information, there is hcmdsgetlogs.

For details about the HiCommand Suite Common Component commands, see Chapter 3 *Performing Commands from HiCommand Suite Common Component*.

1.3 Performance Reporter Commands

Performance Reporter provides commands for defining new reports to be displayed in Performance Reporter, and commands for defining how to record data into the Store database.

For details about the Performance Reporter commands, see Chapter 4 Performing Commands from Performance Reporter.

1.4 Collection Manager and Agent Commands

Collection Manager and the Agent provide commands for starting and stopping the Tuning Manager series programs on the local host, and commands for displaying the configuration and status of the Tuning Manager series program services.

For details about the Collection Manager and Agent commands, see Chapter 5 *Performing Commands from Collection Manager and Agent*.

Chapter 2 Performing Commands from the Main Console

This chapter describes how to execute commands from the HiCommand Tuning Manager Main Console.

- Reviewing Tuning Manager Commands (see section 2.1)
- Understanding the Command Line Format (see section 2.2)
- Working with Resource IDs (see section 2.3)
- Usage (see section 2.4)
- List of Commands (see section 2.5)

2.1 Reviewing Tuning Manager Commands

The commands provided by HiCommand Tuning Manager are divided into two types:

- Report commands, for displaying the size and performance of resources. For details, see section 2.1.1.
- Management commands, for executing the operations required for system management. For details, see section 2.1.2.

2.1.1 Main Console Report Commands

Table 2.1 lists the report commands provided by HiCommand Tuning Manager Main Console.

Table 2.1 Main Console Report Commands

Command Name	Function	See:
htm-whole-network	Shows overall capacity or performance of the whole network.	2.5.1.1
htm-subnets	Shows a list of subnetworks with their resource IDs and capacity or performance metrics.	2.5.1.2
htm-servers	Shows a list of servers with their resource IDs and capacity or performance metrics.	2.5.1.3
htm-filesystems	Shows a list of file systems for a server, as well as the resource IDs and capacity metrics for each file system.	2.5.1.4
htm-devicefiles	Shows a list of device files for a server, as well as the resource IDs and performance metrics for each device file.	2.5.1.5
htm-storage	Shows performance metrics of the entire storage.	2.5.1.6
htm-subsystems	Shows a list of storage subsystems with their resource IDs and performance metrics.	2.5.1.7
htm-slprs	Displays a list of SLPR resource IDs and performance metrics.	2.5.1.8
htm-clprs	Displays a list of CLPRs used for the subsystem and SLPR, as well as the resource IDs and performance metrics for each CLPR.	2.5.1.9
htm-ports	Shows a list of ports for a subsystem or an SLPR, as well as the resource IDs and performance metrics for each port.	2.5.1.10
htm-arraygroups	Shows a list of array groups for a subsystem, as well as the performance metrics for each array group.	2.5.1.11
htm-logicaldisks	Shows a list of logical disks of a subsystem, as well as the performance metrics for each logical disk.	2.5.1.12
htm-whole-fabric	Shows performance metrics for the entire fabric.	2.5.1.13
htm-fabrics	Shows a list of fabrics with their resource IDs and performance metrics.	2.5.1.14
htm-switches	Shows a list of SAN switches for a specified fabric, as well as the performance metrics for each SAN switch.	2.5.1.15
htm-switchports	Shows a list of ports for the specified SAN switch, as well as the performance metrics for each port.	2.5.1.16
htm-oracle	Shows a list of Oracle database servers with the capacity or performance metrics.	2.5.1.17

Command Name	Function	See:
htm-instances	Shows a list of Oracle instances with the capacity or performance metrics.	2.5.1.18
htm-tablespaces	Shows a list of Oracle tablespaces in the specified instance, as well as the capacity or performance metrics for each tablespace.	2.5.1.19
htm-datafiles	Shows a list of Oracle data files in the specified tablespace, as well as the capacity or performance metrics for each data file.	2.5.1.20

2.1.2 Main Console Admin Commands

Table 2.2 lists the management commands provided by HiCommand Tuning Manager Main Console. For details on how to use these commands, see the *HiCommand Tuning Manager Server Administration Guide*.

Table 2.2 Main Console Admin Commands

Command Name	Function	See:
htm-dump	Copies the HiCommand Tuning Manager database, logs and property files to the target directory for submission to technical support. We recommend that you compress the contents of the directory into an archive file before sending it to technical support.	2.5.2.1
htm-getlogs	Creates a target directory and copies the HiCommand Tuning Manager database, logs and property files and extracts Performance Reporter and Collection Manager information to the target directory for submission to technical support. We recommend that you execute `htm-getlogs` with the `-z` option to compress the contents of the target directory into an archive file before sending it to technical support.	2.5.2.2
htm-switch-mode	Changes between single sign-on (SSO) and standalone mode for user authentication.	2.5.2.3
htm-db-setup	Expands the database configuration.	2.5.2.4
htm-db-cleanup	Deletes unnecessary records from the Tuning Manager database.	2.5.2.5

2.2 Understanding the Command Line Format

To execute a command line program:

1. Log into the server running HiCommand Tuning Manager.
2. (Optional) Change directory to *Installation-directory*`/bin`.

   For the default installation directory, see the *HiCommand Tuning Manager Installation Guide*.
3. Type the desired CLI command.

Example:

installation-directory`/bin/htm-whole-network -c -u myUser1 -w myPassword`

General Characteristics

- Case-sensitivity
  - The command itself is invoked at the command line subject to rules of the operating system. (Windows® is not case-sensitive. UNIX® implementations are case-sensitive.)
  - Parameter names and values can be supplied using any combination of upper and lower case characters.
  - User IDs and passwords follow the rules of the authentication mode in use at your site. For further information, contact your system administrator.
  - If your password uses non-alphanumeric characters, be sure to enclose your password in double-quote characters.
- By default, data is returned to the standard output as a series of tab-delimited lines terminated with newline characters. Each output stream begins with a header row.

  The subsequent sections provide sample output.
- You can capture the output of command line programs to files by redirecting the output at the command line:

  Example: `htm-servers -u myUsr -w mypass SN_501 > serv.txt`
- Each time you invoke a command line program, you must pass Tuning Manager login values.
- Some commands require a resource ID parameter for the parent resource.

Example:

The following command line example requests capacity data at the whole network level and provides login information:

```
htm-whole-network -c -u myUser1 -w myPassword
```

Note: Specifying user ID and password at the command line requires passing them as clear, unencrypted strings.

- Specify the following option when CLI programs are to be executed in an environment where SSL is enabled.

  ```
  --port 23016
  ```

  Example: `htm-storage -u user-ID -w password --port 23016`

2.3 Working with Resource IDs

Table 2.3 lists the commands that require a resource ID for designating the parent resource. The table also lists prefixes of parent resources.

Table 2.3 Commands Requiring a Resource ID

Parent Resource	Resource Prefix	Command Name	See
Subnetwork	SN_	htm-servers	2.5.1.3
Server	SV_	htm-filesystems	2.5.1.4
		htm-devicefiles	2.5.1.5
Subsystem	SS_	htm-slprs	2.5.1.8
		htm-clprs	2.5.1.9
		htm-ports	2.5.1.10
		htm-arraygroups	2.5.1.1
		htm-logicaldisks	2.5.1.12
SLPR	SLPR_	htm-clprs	2.5.1.9
		htm-ports	2.5.1.10
		htm-arraygroups	2.5.1.11
		htm-logicaldisks	2.5.1.12
Fabrics	FB_	htm-switches	2.5.1.15
Switches	SW_	htm-switchports	2.5.1.16
Oracle Instance	OI_	htm-tablespaces	2.5.1.19
Oracle Table	OT_	htm-datafiles	2.5.1.20

Note: Resource IDs are persistent. As long as a given resource is consistently available to HiCommand Tuning Manager, you can rely on using the same resource ID to refer to the same resource.

Example:

The following command line example obtains information about servers on the subnet with resource ID SN_100:

```
htm-servers -user orionadmin -w orion --capacity SN_100
```

2.3.1 Steps for Obtaining the Correct Resource ID

Before you can request information on a lower level resource, you will need the resource ID for its parent. This requires starting higher in the resource hierarchy and working downward. Once you have captured the resource IDs for future use, you can refer to them directly as parameters in the future.

For Whole Network-related resources:

- Execute `htm-subnets` (2.5.1.2) to obtain a list of subnetwork resource IDs. This provides the resource ID for obtaining detailed information on servers. (Specify the subnet resource ID (obtained here) as a parameter, and then execute the command.)
- Execute `htm-servers` (2.5.1.3) to obtain a list of server resource IDs. This provides the server resource ID for obtaining detailed information on filesystems and devicefiles.

For Storage-related resources:

- Execute `htm-subsystems` (2.5.1.7) to obtain a list of subsystem resource IDs. This provides the subsystem resource ID for obtaining detailed information on SLPRs, ports, array groups, logical disks, and CLPRs.
- Execute `htm-slprs` (2.5.1.8) to obtain a list of SLPR resource IDs. This provides the subsystem resource ID for obtaining detailed information on ports, array groups, logical disks, and CLPRs.

For Fabric-related resources:

- Execute `htm-fabrics` (2.5.1.14) to obtain a list of fabric resource IDs. This provides the fabric resource ID for obtaining detailed information on switches. (Specify the fabric resource ID (obtained here) as a parameter, and then execute the command.)
- Execute `htm-switches` (2.5.1.15) to obtain a list of switch port resource IDs. This provides the switch resource ID for obtaining detailed information on switch ports. (Specify the switch resource ID (obtained here) as a parameter, and then execute the command.)

For Oracle-related resources:

- Execute `htm-instances` (2.5.1.18) to obtain a list of Oracle instance resource IDs. This provides the Oracle instance resource ID for obtaining detailed information on tablespaces. (Specify the Oracle instance resource ID (obtained here) as a parameter, and then execute the command.)
- Execute `htm-tablespaces` (2.5.1.19) to obtain a list of Oracle tablespace resource IDs. This provides the resource ID for obtaining detailed information on data files.

2.4 Usage

Following are examples of commands entered from the Main Console:

- To display a list of subnetworks capacities and to set an interval for reporting the capacities:

```
htm-subnets --user youruserid --password yourpassword --period DAILY --capacity
```

Command: `htm-subnets--capacity --period`

```
bin>htm-subnets --user youruserid  --password yourpassword --capacity --period YEARLY
Resource             Resource ID       Capacity     Used         Free          Free %
Servers  Local Filesystems Device Files  Growth Rate Record Taken
-------------------------------------------------------------------------------------
-----------------------------------------------------------------
10.208.118.0         SN_271           30.94 GB      9.13 GB     21.81 GB  70.49%    1
3              36              n/a               2004
```

- To output a list of subnetworks capacities in CSV format to a file:

```
htm-subnets --user youruserid --password yourpassword --capacity --csv
```

Command: `htm-subnets --capacity --csv`

```
bin/htm-subnets --user youruserid --password yourpassword --capacity -csv
"Resource","Resource Id","Capacity","Used","Free","Free %","Servers","Local
Filesystems","
Device Files","Growth Rate","Record Taken"
"192.168.1.0","SN_120","748.00 GB","338.00 GB","410.00 GB","54.81%","5","10","14","-
21.68%
","06 19, 2003 10:00"
"192.168.35.0","SN_124","160.00 GB","57.92 GB","102.08 GB","63.8%","2","2","6","-
52.28%","
06 19, 2003 10:00"
```

2.5 List of Commands

2.5.1 Main Console Report Commands Details

The following describes the overview of the main console report commands. For details on the arguments of each command, see section 2.5.3.

Storage Directory

Windows: *installation-directory*\bin

Solaris: /opt/HiCommand/TuningManager/bin

2.5.1.1 htm-whole-network

Format

```
htm-whole-network   {{ -c | --capacity }|{ -p | --performance }}
                    { -u | --user } userID
                    { -w | --password } password
                    [ -d | --date date-format ]
                    [ -o | --period date-format ]
                    [ --csv ]
                    [ --help | -h ]
```

Returned Columns

The returned results differ depending on the information category parameter (-c or -p). Table 2.4 shows the difference.

Table 2.4 Returned Information from htm-whole-network Command

Information Category	Returned columns	
Capacity	▪ Resource ▪ Capacity ▪ Used ▪ Free ▪ Free % ▪ Servers ▪ Local Filesystems	▪ Device Files ▪ Growth Rate ▪ Record Taken
Performance	▪ Resource ▪ Servers ▪ Local Filesystems ▪ Device Files ▪ Capacity ▪ Used ▪ IOPS	▪ Read IOPS ▪ Write IOPS ▪ Transfer ▪ Read Transfer ▪ Write Transfer ▪ Record Taken

2.5.1.2 htm-subnets

Format

```
htm-subnets          {{ -c | --capacity }|{ -p | --performance }}
                     { -u | --user } userID
                     { -w | --password } password
                     [ -d | --date date-format ]
                     [ -o | --period date-format ]
                     [ --csv ]
                     [ --help | -h ]
```

Returned Columns

The returned results differ depending on the information category parameter (`-c` or `-p`). Table 2.5 shows the difference.

Table 2.5 Returned Information from htm-subnets Command

Information Category	Returned columns	
Capacity	▪ Resource ▪ Resource ID ▪ Capacity ▪ Used ▪ Free ▪ Free % ▪ Servers	▪ Local Filesystems ▪ Device Files ▪ Growth Rate ▪ Record Taken
Performance	▪ Resource ▪ Resource ID ▪ Servers ▪ Local Filesystems ▪ Device Files ▪ Capacity ▪ Used	▪ IOPS ▪ Read IOPS ▪ Write IOPS ▪ Transfer ▪ Read Transfer ▪ Write Transfer ▪ Record Taken

2.5.1.3 htm-servers

Format

```
htm-servers          {{ -c | --capacity }|{ -p | --performance }}
                     { -u | --user } userID
                     { -w | --password } password
                     SN_ ResourceID
                     [ -d | --date date-format ]
                     [ -o | --period date-format ]
                     [ --csv ]
                     [ --help | -h ]
```

Returned Columns

The returned results differ depending on the information category parameter (`-c` or `-p`). Table 2.6 shows the difference.

Table 2.6 Returned information from htm-servers command

Information Category	Returned columns	
Capacity	▪ Resource ▪ Resource ID ▪ Operating System ▪ Capacity ▪ Used ▪ Free ▪ Free % ▪ Growth Rate	▪ Filesystems ▪ Local Filesystems ▪ Device Files ▪ Record Taken
Performance	▪ Resource ▪ Resource ID ▪ Operating System ▪ Capacity ▪ Used ▪ IOPS ▪ Read IOPS ▪ Write IOPS	▪ Transfer ▪ Read Transfer ▪ Write Transfer ▪ Filesystems ▪ Local Filesystems ▪ Device Files ▪ Record Taken

2.5.1.4 htm-filesystems

Format

```
htm-filesystems     { -u | --user } userID
                    { -w | --password } password
                    SV_ ResourceID
                    [ -d | --date date-format ]
                    [ -o | --period date-format ]
                    [ --csv ]
                    [ --help | -h ]
```

Returned Columns

Table 2.7 describes the results returned from the htm-filesystems command.

Table 2.7 Returned Information from htm-filesystems Command

Information Category	Returned columns	
Capacity	▪ Resource ▪ Resource ID ▪ Filesystem Type ▪ Capacity ▪ Used ▪ Free	▪ Free % ▪ Growth Rate ▪ Filesystems Over Capacity ▪ Inodes ▪ Record Taken
Performance	Performance metrics are not available for this resource.	

2.5.1.5 htm-devicefiles

Format

```
htm-devicefiles     { -u | --user } userID
                    { -w | --password } password
                    SV_ ResourceID
                    [ -d | --date date-format ]
                    [ -o | --period date-format ]
                    [ --csv ]
                    [ --help | -h ]
```

Returned Columns

Table 2.8 describes the results returned from the htm-devicefiles command.

Table 2.8 Returned Information from htm-devicefiles Command

Information Category	Returned columns	
Capacity	Capacity metrics are not available for this resource.	
Performance	▪ Resource ▪ Resource ID ▪ IOPS ▪ Read IOPS ▪ Write IOPS ▪ Transfer ▪ Read Transfer ▪ Write Transfer	▪ I/O Response Time ▪ Vendor ▪ Product ▪ Serial Number ▪ Port ▪ Array Group ▪ Logical Disk *Note*: If a logical disk is a LUSE, this is indicated in the display name. ▪ Record Taken

2.5.1.6 htm-storage

Format

```
htm-storage          { -u | --user } userID
                     { -w | --password } password
                     [ -d | --date date-format ]
                     [ -o | --period date-format ]
                     [ --csv ]
                     [ --help | -h ]
```

Returned Columns

Table 2.9 describes the results returned from the htm-storage command.

Table 2.9 Returned Information from htm-storage Command

Information Category	Returned columns	
Capacity	Capacity metrics are not available for this resource.	
Performance	▪ Resource ▪ Port IOPS ▪ Port Transfer ▪ Disk IOPS	▪ Disk Transfer ▪ Subsystems ▪ Record Taken

2.5.1.7 htm-subsystems

Format

```
htm-subsystems      { -u | --user } userID
                    { -w | --password } password
                    [ -d | --date date-format ]
                    [ -o | --period date-format ]
                    [ --csv ]
                    [ --help | -h ]
```

Returned Columns

Table 2.10 describes the results returned from the htm-subsystems command.

Table 2.10 Returned Information from htm-subsystems Command

Information Category	Returned columns	
Capacity	Capacity metrics are not available for this resource.	
Performance	▪ Resource ▪ Resource ID ▪ Vendor ▪ Product ▪ Serial Number ▪ Port IOPS ▪ Port Transfer ▪ Disk IOPS	▪ Disk Transfer ▪ Cache % ▪ Write Pending Rate ▪ Max Write Pending Rate ▪ Side File Usage ▪ Max Side File Usage ▪ Record Taken

2.5.1.8 htm-slprs

Format

```
htm-slprs           { -u | --user } userID
                    { -w | --password } password
                    SS_ ResourceID
                    [ -d | --date date-format ]
                    [ -o | --period date-format ]
                    [ --csv ]
                    [ --help | -h ]
```

Returned Columns

Table 2.11 describes the results returned from the htm-slprs command.

Table 2.11 Returned Information from htm-slprs Command

Information Category	Returned columns
Capacity	Capacity metrics are not available for this resource.

Information Category	Returned columns	
Performance	▪ Resource ▪ Resource ID ▪ Ports	▪ Array Groups ▪ Logical Disks ▪ Cache Capacity

2.5.1.9 htm-clprs

Format

```
htm-clprs          { -u | --user } userID
                   { -w | --password } password
                   { SS_ ResourceID | SLPR_ResourceID }
                   [ -d | --date date-format ]
                   [ -o | --period date-format ]
                   [ --csv ]
                   [ --help | -h ]
```

Returned Columns

Table 2.12 describes the results returned from the htm-clprs command.

Table 2.12 Returned Information from htm-clprs Command

Information Category	Returned columns	
Capacity	Capacity metrics are not available for this resource.	
Performance	▪ Resource ▪ Resource ID ▪ Cache Capacity ▪ Write Pending Rate	▪ Max Write Pending Rate ▪ Side File Usage ▪ Max Side File Usage ▪ Record Taken

2.5.1.10 htm-ports

Format

```
htm-ports          { -u | --user } userID
                   { -w | --password } password
                   { SS_ ResourceID | SLPR_ResourceID }
                   [ -d | --date date-format ]
                   [ -o | --period date-format ]
                   [ --csv ]
                   [ --help | -h ]
```

Returned Columns

Table 2.13 describes the results returned from the htm-ports command.

Table 2.13 Returned Information from htm-ports Command

Information Category	Returned columns	
Capacity	Capacity metrics are not available for this resource.	
Performance	▪ Resource ▪ Resource ID ▪ Port ▪ Port Speed ▪ Port Role ▪ Port IOPS	▪ Port Min IOPS ▪ Port Max IOPS ▪ Port Transfer ▪ Port Min Transfer ▪ Port Max Transfer ▪ Record Taken

2.5.1.11 htm-arraygroups

Format

```
htm-arraygroups     { -u | --user } userID
                    { -w | --password } password
                    { SS_ ResourceID | SLPR_ResourceID }
                    [ -d | --date date-format]
                    [ -o | --period date-format]
                    [ --csv ]
                    [ --help | -h ]
```

Returned Columns

Table 2.14 describes the results returned from the htm-arraygroups command.

Table 2.14 Returned Information from htm-arraygroups Command

Information Category	Returned columns	
Capacity	Capacity metrics are not available for this resource.	
Performance	▪ Resource ▪ Resource ID ▪ I/O Usage ▪ Max I/O Usage ▪ Disk IOPS ▪ Disk Read IOPS ▪ Disk Write IOPS ▪ Disk Random IOPS	▪ Disk Sequential IOPS ▪ Disk Transfer ▪ Disk Read Transfer ▪ Disk Write Transfer ▪ Disk Random Transfer ▪ Disk Sequential Transfer ▪ Record Taken

2.5.1.12 htm-logicaldisks

Format

```
htm-logicaldisks    { -u | --user } userID
                    { -w | --password } password
                    { SS_ ResourceID | SLPR_ResourceID }
                    [ -d | --date date-format ]
                    [ -o | --period date-format ]
                    [ --csv ]
                    [ --help | -h ]
```

Returned Columns

Table 2.15 describes the results returned from the htm-logicaldisks command.

Table 2.15 Returned Information from htm-logicaldisks Command

Information Category	Returned columns	
Capacity	Capacity metrics are not available for storage resources.	
Performance	▪ Resource *Note*: If a logical disk is a LUSE, this is indicated in the display name. ▪ Resource ID ▪ Logical Disk ▪ I/O Response Time ▪ Read I/O Response Time ▪ Write I/O Response Time ▪ Disk IOPS ▪ Disk Read IOPS ▪ Disk Write IOPS	▪ Disk Random IOPS ▪ Disk Sequential IOPS ▪ Disk Transfer ▪ Disk Read Transfer ▪ Disk Write Transfer ▪ Disk Random Transfer ▪ Disk Sequential Transfer ▪ Record Taken

2.5.1.13 htm-whole-fabric

Format

```
htm-whole-fabric    { -u | --user } userID
                    { -w | --password } password
                    [ -d | --date date-format ]
                    [ -o | --period date-format ]
                    [ --csv ]
                    [ --help | -h ]
```

Returned Columns

Table 2.16 describes the results returned from the htm-whole-fabric command.

Table 2.16 Returned Information from htm-whole-fabric Command

Information Category	Returned columns	
Capacity	Capacity metrics are not available for this resource.	
Performance	▪ Resource ▪ Received Bytes ▪ Transferred Bytes ▪ Received Frames	▪ Transferred Frames ▪ Fabrics ▪ Switches ▪ Record Taken

2.5.1.14 htm-fabrics

Format

```
htm-fabrics         { -u | --user } userID
                    { -w | --password } password
                    [ -d | --date date-format ]
                    [ -o | --period date-format ]
                    [ --csv ]
                    [ --help | -h ]
```

Returned Columns

Table 2.17 describes the results returned from the htm-fabrics command.

Table 2.17 Returned Information from htm-fabrics Command

Information Category	Returned columns:	
Capacity	Capacity metrics are not available for this resource.	
Performance	▪ Resource ▪ Resource ID ▪ Fabric ▪ Received Bytes ▪ Transferred Bytes	▪ Received Frames ▪ Transferred Frames ▪ Switches ▪ Ports ▪ Record Taken

2.5.1.15 htm-switches

Format

```
htm-switches        { -u | --user } userID
                    { -w | --password } password
                    FB_ ResourceID
                    [ -d | --date date-format ]
                    [ -o | --period date-format ]
                    [ --csv ]
                    [ --help | -h ]
```

Returned Columns

Table 2.18 describes the results returned from the htm-switches command.

Table 2.18 Returned Information from htm-switches Command

Information Category	Returned columns	
Capacity	Capacity metrics are not available for this resource.	
Performance	▪ Resource ▪ Resource ID ▪ Received Bytes ▪ Transferred Bytes ▪ Received Frames ▪ Transferred Frames	▪ Input Buffer Full ▪ Buffer Credit Zero State ▪ Ports ▪ Port Modules ▪ Record Taken

2.5.1.16 htm-switchports

Format

```
htm-switchports     { -u | --user } userID
                    { -w | --password } password
                    SW_ ResourceID
                    [ -d | --date date-format ]
                    [ -o | --period date-format ]
                    [ --csv ]
                    [ --help | -h ]
```

Returned Columns

Table 2.19 describes the results returned from the htm-switchports command.

Table 2.19 Returned Information from htm-switchports Command

Information Category	Returned columns
Capacity	Capacity metrics are not available for this resource.

Information Category	Returned columns	
Performance	▪ Resource ▪ Resource ID ▪ Port Speed ▪ Port Type ▪ Received Bytes	▪ Transferred Bytes ▪ Received Frames ▪ Transferred Frames ▪ Record Taken

2.5.1.17 htm-oracle

Format

```
htm-oracle          {{ -c | --capacity }|{ -p | --performance }}
                    { -u | --user } userID
                    { -w | --password } password
                    [ -d | --date date-format ]
                    [ -o | --period date-format ]
                    [ --csv ]
                    [ --help | -h ]
```

Returned Columns

The returned results differ depending on the information category parameter (`-c` or `-p`). Table 2.20 shows the difference.

Table 2.20 Returned Information from htm-oracle Command

Information Category	Returned columns	
Capacity	▪ Resource ▪ Capacity ▪ Used ▪ Free ▪ Free %	▪ Growth Rate ▪ Oracle Instances ▪ Tablespaces ▪ Data Files ▪ Record Taken
Performance	▪ Resource ▪ Capacity ▪ Used ▪ IOPS ▪ Read IOPS	▪ Write IOPS ▪ Oracle Instances ▪ Tablespaces ▪ Data Files ▪ Record Taken

2.5.1.18 htm-instances

Format

```
htm-instances       {{ -c | --capacity }|{ -p | --performance }}
                    { -u | --user } userID
                    { -w | --password } password
                    [ -d | --date date-format ]
                    [ -o | --period date-format ]
                    [ --csv ]
                    [ --help | -h ]
```

Returned Columns

The returned results differ depending on the information category parameter (`-c` or `-p`). Table 2.21 shows the difference.

Table 2.21 Returned Information from htm-instances Command

Information Category	Returned columns	
Capacity	▪ Resource ▪ Resource ID ▪ Version ▪ Host ▪ Capacity ▪ Used	▪ Free ▪ Free % ▪ Growth Rate ▪ Tablespaces ▪ Data Files ▪ Record Taken
Performance	▪ Resource ▪ Resource ID ▪ Version ▪ Host ▪ Capacity ▪ Used	▪ IOPS ▪ Read IOPS ▪ Write IOPS ▪ Tablespaces ▪ Data Files ▪ Record Taken

2.5.1.19 htm-tablespaces

Format

```
htm-tablespaces     {{ -c | --capacity }|{ -p | --performance }}
                    { -u | --user } userID
                    { -w | --password } password
                    OI_ ResourceID
                    [ -d | --date date-format ]
                    [ -o | --period date-format ]
                    [ --csv ]
                    [ --help | -h ]
```

Returned Columns

The returned results differ depending on the information category parameter (`-c` or `-p`). Table 2.22 shows the difference.

Table 2.22 Returned Information from htm-tablespaces Command

Information Category	Returned columns	
Capacity	▪ Resource ▪ Resource ID ▪ Capacity ▪ Used ▪ Free ▪ Free %	▪ Growth Rate ▪ Data Files ▪ Rollback Segments ▪ Sort Segments ▪ Record Taken
Performance	▪ Resource ▪ Resource ID ▪ Capacity ▪ Used ▪ IOPS ▪ Read IOPS	▪ Write IOPS ▪ Data Files ▪ Rollback Segments ▪ Sort Segments ▪ Record Taken

2.5.1.20 htm-datafiles

Format

```
htm-datafiles       {{ -c | --capacity }|{ -p | --performance }}
                    { -u | --user } userID
                    { -w | --password } password
                    OT_ ResourceID
                    [ -d | --date date-format ]
                    [ -o | --period date-format ]
                    [ --csv ]
                    [ --help | -h ]
```

Returned Columns

The returned results differ depending on the information category parameter (`-c` or `-p`). Table 2.23 shows the difference.

Table 2.23 Returned Information from htm-datafiles Command

Information Category	Returned columns	
Capacity	▪ Resource ▪ Resource ID	▪ Size ▪ Record Taken
Performance	▪ Resource ▪ Resource ID ▪ Size ▪ IOPS	▪ Read IOPS ▪ Write IOPS ▪ Record Taken

2.5.2 Main Console Admin Commands Details

The following describes the overview of the main console admin commands. For details on the arguments of each command, see section 2.5.3.

Storage Directory

Windows: *installation-directory*\bin\

Solaris: /opt/HiCommand/TuningManager/bin/

2.5.2.1 htm-dump

Format

```
htm-dump            -d path-to-destination-directory
                    [ -z ]
                    [ -v ]
                    [ -h | --help ]
```

Note: In Windows, the command file name is htm-dump.bat. In Solaris, the command file name is htm-dump.sh.

Function

Copies the HiCommand Tuning Manager database, logs and property files to the target directory for submission to technical support. We recommend that you compress the contents of the directory into an archive file before sending it to technical support.

The following files and directories are copied:

- All logs in the *HTM-home*/logs directory
- Contents of the *HTM-home*/inst directory (including properties)
- Database backup

Note: Make sure that Tuning Manager is stopped before executing htm-dump. (For more information, see the *HiCommand Tuning Manager Server Administration Guide*.)

2.5.2.2 htm-getlogs

Format

```
htm-getlogs         -d path-to-destination-directory
                    [ -z ]
                    [ -h | --help ]
```

Note: In Windows, the command file name is `htm-getlogs.bat`. In Solaris, the command file name is `htm-getlogs.sh`.

Function

Creates a target directory and copies the HiCommand Tuning Manager database, logs and property files and extracts Performance Reporter and Collection Manager information to the target directory for submission to technical support. We recommend that you execute htm-getlogs with the `-z` option to compress the contents of the target directory into an archive file before sending it to technical support.

The following information is written to subdirectories under the specified target directory:

- Results from running jpcprras are written to *target-directory*`\PR`
- Results from running htm-dump are written to *target-directory*`\MC`
- Results from running jpcras are written to *target-directory*`\CLMgr`

Note: Make sure that Tuning Manager is stopped before executing htm-getlogs. (For more information, see the *HiCommand Tuning Manager Server Administration Guide*.)

2.5.2.3 htm-switch-mode

Format

```
htm-switch-mode     { -sso | -standalone | -status }
```

Note: In Windows, the command file name is `htm-switch-mode.bat`. In Solaris, the command file name is `htm-switch-mode.sh`.

Function

Changes between single sign-on (SSO) and standalone mode for user authentication.

***Note*:** HiCommand Device Manager must be running when switching to SSO mode.

2.5.2.4 htm-db-setup

Format

```
htm-db-setup        { [ -scale new-database-configuration ]
                    [ -areapath directory-path-for-database-files ] |
                    -status |
                    { -h | --help } }
```

Note: In Windows, the command file name is `htm-db-setup.bat`. In Solaris, the command file name is `htm-db-setup`.

Function

The htm-db-setup command is used when expanding the database configuration or when checking the current database configuration.

Note: You cannot make the size of the current HiRDB database smaller by using this command.

Return Values

Table 2.24 describes the values returned when the htm-db-setup command is executed with the `scale` option specified, and Table 2.25 describes the values returned when the htm-db-setup command is executed with the `status` option specified.

Table 2.24 htm-db-setup Return Values with the Scale Option

Return value	Meaning
0	Normal termination
102	User operation error
251	The available storage capacity is insufficient.
253	A database initialization error occurred.
255	Abnormal termination

Table 2.25 htm-db-setup Return Values with the Status Option

Return value	Meaning
1	The current configuration is a small-scale configuration
2	The current configuration is a middle-scale configuration
3	The current configuration is a large-scale configuration
4	The database setup is unfinished
255	Abnormal termination

2.5.2.5 htm-db-cleanup

Format

```
htm-db-cleanup      [-h] [--help]
                    [{-target {N|D|W|S} | -all -dir directory-name | -count}]
```

Note: In Windows, the command file name is `htm-db-cleanup.bat`. In Solaris, the command file name is `htm-db-cleanup`.

Function

Deletes unnecessary records from the Tuning Manager database.

The execution time of the htm-db-cleanup command depends on the number of records to be deleted and the specifications of the machine.

If this command is executed, the number of records to be deleted is displayed. A message is then displayed, asking if you are sure you want to delete them. Type `y` to delete them.

The record deletion is carried out in several transactions. At the end of each transaction, the progress is displayed. A completion message is displayed at completion of the deletion of all the unnecessary records.

Prerequisites:

- Tuning Manager version 04-00-00 or later must be installed and set up.
- Make sure that the Tuning Manager service is stopped.
- Make sure that the HiCommand Suite Common Component database is running.

Notes:

- This command outputs messages and prompts in English, even in a Japanese OS.
- The `htm-db-cleanup` command can also be executed from the CD-ROM (HTM-CD2).

  Storage Directory of `htm-db-cleanup`:

  Windows

  The following shows the example when the CD-ROM is set for the C drive:

  `C:\UTL\bin`

  Solaris

  The following shows the example when the CD-ROM is mounted on the `/cdrom/cdrom0` directory:

  `/cdrom/cdrom0/UTL/bin`
- This command outputs some of the log files to */tmp (%temp%).* If the command is executed directly from the CD-ROM without installing this version, then, since the hcmdsgetlogs command that corresponds to the log location has not been installed, you must copy the following log files to the copy destination, and then execute the hcmdsgetlogs command.

Copy-source files:

Windows: `%temp%\htm-db-cleanup.log`

Solaris: `/tmp/htm-db-cleanup.log`

Copy destination for the files:

Windows: *installation-directory*`\logs\`

Solaris: `/opt/HiCommand/TuningManager/logs/`

- If you execute the `htm-db-cleanup` command on the machine where other HiCommand Suite related products or applications are running, stop their services.
- As long as the situations described in *Unnecessary Data Accumulation Conditions and Problems: Case 1* or *Unnecessary Data Accumulation Conditions and Problems: Case 2* do not occur, there is no problem. For details on the unnecessary data accumulation conditions and problems, see the section that describes *Deleting Unnecessary Data* in the *HiCommand Tuning Manager Server Administration Guide*.

  Note that, if you perform polling after executing the `htm-db-cleanup` command, records to be deleted might be created. Therefore, execute the `-count` option periodically to check the number of records, and then execute the `-all` option to delete unnecessary records.

Return Values

Table 2.26 describes the values returned when the htm-db-cleanup command is executed.

Table 2.26 Return Values for the htm-db-cleanup Command

Return value	Meaning
`0`	Normal termination
`102`	Invalid parameter
`103`	Invalid environment
`120`	Canceled by the user
`255`	Abnormal termination

2.5.3 Reviewing Command Arguments

2.5.3.1 -all -dir directory-name

Table 2.27 describes the argument for `–all –dir` *directory-name*.

Table 2.27 Argument for -all -dir directory-name.

Item	Content
Purpose	Executes all the options, which can be specified by `–target`, at once.
Required Value	For *directory-name*, specify the storage destination for the backup of the database.
Required/optional	Optional
Notes	▪ For *directory-name*, specify an existing directory that is empty by using the absolute path. ▪ Make sure that the directory has sufficient free space for storing the backup of the database. For details on the size of the area to which databases are to be backed up, see the section *Backing up the Database* in the *HiCommand Tuning Manager Server Administration Guide*. ▪ The displayed number is an approximate value. Although the number might be different from the actual number of records to be deleted, this does not affect the operation.

2.5.3.2 –areapath

Table 2.28 describes the argument for `-areapath`.

Table 2.28 Argument for -areapath

Item	Content
Purpose	Specifies the database storage folder.
Required Value	Path to the destination directory in which the database files are to be stored. Characters that can be entered for a path are as follows: ▪ Windows: 0 to 9, a to z, A to Z, periods (.), colon (:), backslash (\), underscores (_), and space characters ▪ Solaris: 0 to 9, a to z, A to Z, periods (.), forward slash (/), and underscores (_)
Required/optional	Required depending on the value of the `scale` option.
Notes	▪ When you specify this option, the `status` option cannot be specified. ▪ Specify the absolute path to the destination directory within 64 bytes of characters. ▪ For Windows, you cannot specify the root directory.

Note: You do not have to specify the `-areapath` option when the same configuration values as those of the existing database are specified.

2.5.3.3 -c(--capacity) or -p(--performance)

Table 2.29 describes the argument for `-c` (`--capacity`) or `-p` (`--performance`).

Table 2.29 Argument for -c (--capacity) or -p (--performance).

Item	Content
Purpose	Capacity or performance data returned by command.
Required Value	None
Required/optional	`Required`
Notes	▪ `-c` and `--capacity` are synonyms ▪ `-p` and `--performance` are synonyms

2.5.3.4 -count

Table 2.30 describes the argument for -count.

Table 2.30 Argument for -count.

Item	Content
Purpose	Displays the number of records to be deleted.
Required Value	None
Required/optional	Optional
Notes	▪ The displayed number is an approximate value. Although the number might be different from the actual number of records to be deleted, this does not affect the operation. ▪ If you execute this command with the `–count` option specified, you do not have to stop the services of HiCommand Suite products.

2.5.3.5 –csv

Table 2.31 describes the argument for `--csv`.

Table 2.31 Argument for --csv

Item	Content
Purpose	Outputs values delimited by commas.
Required Value	None
Required/optional	Optional
Notes	To capture output to a file, use operating system redirection: `htm-subnets -c --csv > file.csv`

2.5.3.6 -d destination-directory

Table 2.32 describes the argument for `-d` *destination-directory*.

Table 2.32 Argument for -d destination-directory

Item	Content
Purpose	Specifies the directory where the command will deposit all collected files.
Required Value	Specify an empty directory. If the directory does not exist, the command will create it.
Required/optional	Required
Notes	▪ The value for *destination-directory* must be an empty directory where `htm-dump` will deposit collected files. ▪ If *destination-directory* contains spaces, *destination-directory* must be enclosed in quotes: `-d "C:\db data dir"`

2.5.3.7 -d or –date

Table 2.33 describes the argument for `-d` or `--date`.

Table 2.33 Argument for -d or --date

Item	Content
Purpose	Specifies the ending date/time value to use when calculating capacity and performance. When you specify a period, use the appropriate `--date` format: Hourly *YYYY/MM/DD/hh/mm* Daily *YYYY/MM/DD* Weekly *YYYY/MM/DD* Monthly *YYYY/MM* Quarterly *YYYY/MM* Yearly *YYYY*

Item	Content
Required Value	If you specify the period by using the `--date` format: Hourly *YYYY/MM/DD/hh/mm* Daily *YYYY/MM/DD* Weekly *YYYY/MM/DD* Monthly *YYYY/MM* Quarterly *YYYY/MM* Yearly *YYYY* *YYYY/MM/DD/hh/mm* where: ▪ *YYYY* = year in 4 digits ▪ *MM* = Month of year (integer months 01 = January, 12 = December) ▪ *DD* = Day of month *hh* = Hour of day (using 24 hour clock) ▪ *mm* = Minute of hour
Required/optional	Optional
Notes	▪ If you omit the `--date` option, HiCommand Tuning Manager will use the current date and the time on the server system clock. ▪ If you omit both the `--date` and `--period` options, HiCommand Tuning Manager will assume `HOURLY` and use the Last Record Taken (defined in *Glossary*) for the `--date` option.

2.5.3.8 FB_resource-ID

Table 2.34 describes the argument for `FB_resource-ID`.

Table 2.34 Argument for FB_resource-ID

Item	Content
Purpose	Specifies parent resource ID.
Required Value	Valid ID with `FB_` prefix.
Required/optional	Required
Notes	For more information, see section 2.3.

2.5.3.9 –h or —help

Table 2.35 describes the argument for `-h` or `--help`.

Table 2.35 Argument for -h or --help

Item	Content
Purpose	Displays parameters to this command and other usage information.
Required Value	None
Required/optional	Optional
Notes	For the `htm-db-setup` command, you cannot specify any other option when this option is specified.

2.5.3.10 -o or –period

Table 2.36 describes the argument for `-o` or `--period`.

Table 2.36 Argument for -o or --period

Item	Content
Purpose	Sets the interval with which HiCommand Tuning Manager reports information to the system administrator. Specify the reporting interval.
Required Value	▪ YEARLY ▪ QUARTERLY ▪ MONTHLY ▪ WEEKLY ▪ DAILY ▪ HOURLY* *This reporting interval is always enabled.
Required/optional	Optional
Notes	If you omit the --period parameter, HiCommand Tuning Manager will default to HOURLY. If you omit both the --date and --period parameters: - HiCommand Tuning Manager will assume HOURLY. - HiCommand Tuning Manager will use the Last Record Taken (defined in 011*Glossary*) for the --date parameter.

2.5.3.11 OI_resource-ID

Table 2.37 describes the argument for `OI_resource-ID`.

Table 2.37 Argument for OI_resource-ID

Item	Content
Purpose	Specifies parent resource ID.
Required Value	Valid ID with `OI_` prefix.
Required/optional	Required
Notes	For more information, see section 2.3

2.5.3.12 OT_resource-ID

Table 2.38 describes the argument for `OT_resource-ID`.

Table 2.38 Argument for OT_resource-ID

Item	Content
Purpose	Specifies parent resource ID.
Required Value	Valid ID with `OT_` prefix.
Required/optional	Required
Notes	For more information, see section 2.3.

2.5.3.13 -scale

Table 2.39 describes the argument for `-scale`.

Table 2.39 Argument for -scale

Item	Content
Purpose	Specifies the database scale after changing the configuration.
Required Value	`small`: Small-scale configuration(Note) `medium`: Medium-scale configuration(Note) `large`: Large-scale configuration(Note)
Required/optional	Optional
Notes	If you specify this option, you cannot specify the `–status`, `-h`, or `--help` option.

Note: You cannot change to a large-scale configuration when Device Manager is installed on the same machine.

2.5.3.14 SLPR_resource-ID

Table 2.40 describes the argument for `SLPR_resource-ID`.

Table 2.40 Argument for SLPR_resource-ID

Item	Content
Purpose	Specifies parent resource ID.
Required Value	Valid ID with `SLPR_` prefix.
Required/optional	Required
Notes	For more information, see section 2.3.

2.5.3.15 SN_resource-ID

Table 2.41 describes the argument for `SN_resource-ID`.

Table 2.41 Argument for SN_resource-ID

Item	Content
Purpose	Specifies parent resource ID.
Required Value	Valid ID with `SN_` prefix.
Required/optional	Required
Notes	For more information, see section 2.3.

2.5.3.16 SS_resource-ID

Table 2.42 describes the argument for `SS_resource-ID`.

Table 2.42 Argument for SS_resource-ID

Item	Content
Purpose	Specifies parent resource ID.
Required Value	Valid ID with `SS_` prefix.
Required/optional	Required
Notes	For more information, see section 2.3.

2.5.3.17 –sso

Table 2.43 describes the argument for `-sso`.

Table 2.43 Argument for -sso

Item	Content
Purpose	Switches Tuning Manager to single sign-on mode (SSO)
Required Value	n/a
Required/optional	Required
Notes	▪ Requires prior installation of HiCommand Device Manager. ▪ In SSO mode, Tuning Manager no longer provides user administration.

2.5.3.18 –standalone

Table 2.44 describes the argument for `-standalone`.

Table 2.44 Argument for -standalone

Item	Content
Purpose	Switches Tuning Manager to standalone mode.
Required Value	n/a
Required/optional	Required
Notes	In standalone mode, Tuning Manager uses its own user list and provides an administration view.

2.5.3.19 –status

Table 2.45 describes the argument for `-status` of the `htm-switch-mode` command, and Table 2.46 describes the argument for `-status` of the `htm-db-setup` command.

Table 2.45 Argument for -status of the htm-switch-mode Command

Item	Content
Purpose	Displays current login mode.
Required Value	-status
Required/optional	Required
Notes	None

Table 2.46 Argument for -status of the htm-db-setup Command

Item	Content
Purpose	Displays the current database configuration.
Required Value	None
Required/optional	Optional
Notes	You cannot specify any other option when this option is specified.

2.5.3.20 SV_resource-ID

Table 2.47 describes the argument for `SV_resource-ID`.

Table 2.47 Argument for SV_resource-ID

Item	Content
Purpose	Specifies parent resource ID
Required Value	Valid ID with `SV_` prefix.
Required/optional	Required
Notes	For more information, see section 2.3.

2.5.3.21 SW_resource-ID

Table 2.48 describes the argument for `SW_resource-ID`.

Table 2.48 Argument for SW_resource-ID

Item	Content
Purpose	Specifies parent resource ID.
Required Value	Valid ID with `SW_` prefix.
Required/optional	Required
Notes	For more information, see section 2.3.

2.5.3.22 -target N|D|W|S

Table 2.49 describes the argument for `-target N|D|W|S`.

Table 2.49 Argument for -target N|D|W|S

Item	Content
Purpose	Specifies the data attributes to be deleted. ▪ When `N` is specified: The argument deletes data that gives rise to *Unnecessary Data Accumulation Conditions and Problems: Case 1* in the *HiCommand Tuning Manager Server Administration Guide*. ▪ When `D` is specified: The argument deletes data that gives rise to *Unnecessary Data Accumulation Conditions and Problems: Case 2* in the *HiCommand Tuning Manager Server Administration Guide*. ▪ When `W` is specified: The argument deletes data that gives rise to *Unnecessary Data Accumulation Conditions and Problems: Case 3* in the *HiCommand Tuning Manager Server Administration Guide*. ▪ When `S` is specified: The argument deletes data that gives rise to *Unnecessary Data Accumulation Conditions and Problems: Case 3* in the *HiCommand Tuning Manager Server Administration Guide*.
Required Value	None
Required/optional	Optional
Notes	▪ If not specified, the process continues as if `-target N` is specified. ▪ If the `-target {N|D|W|S}`option is specified, do not start any services of HiCommand Suite products until all data is deleted.

2.5.3.23 -u or –user

Table 2.50 describes the argument for `-u` or `--user`.

Table 2.50 Argument for -u or --user

Item	Content
Purpose	Specify when you log in.
Required Value	User ID
Required/optional	Required
Notes	Specifies the user who will log in.

2.5.3.24 -v

Table 2.51 describes the argument for `-v`.

Table 2.51 Argument for -v

Item	Content
Purpose	Displays detailed status information.
Required Value	None
Required/optional	Optional
Notes	None

2.5.3.25 -w or --password

Table 2.52 describes the argument for `-w` or `--password`.

Table 2.52 Argument for -w or --password

Item	Content
Purpose	Specify when you log in.
Required Value	Password
Required/optional	Required
Notes	Specifies the password for the user who will log in.

2.5.3.26 –z

Table 2.53 describes the argument for `-z`.

Table 2.53 Argument for -z

Item	Content
Purpose	Creates a .ZIP compressed archive of all collected files.
Required Value	n/a
Required/optional	Optional
Notes	Creates a file named `HTM.zip` in *destination-directory*.

Chapter 3 Performing Commands from HiCommand Suite Common Component

This chapter provides an overview of HiCommand Suite Common Component and describes how to use the commands.

- Overview (see section 3.1)
- List of Commands (see section 3.2)
- Reviewing Command Arguments (see section 3.3)

3.1 Overview

Table 3.1 lists and describes the commands provided by HiCommand Suite Common Component.

Table 3.1 HiCommand Suite Common Component Commands

Command Name	Function	See
hcmdsbanner	The `hcmdsbanner` command enables and disables Warning Banner messages.	3.2.1
hcmdsgetlogs	In the explanation of an error message, if the recommended action instructs you to contact customer support, use the log file collection command (hcmdsgetlogs) to collect the maintenance information.	3.2.2
hcmdsrep	The `hcmdsrep` command registers or deletes information used for starting Tuning Manager to the repository provided by HiCommand Suite Common Component.	3.2.3
hcmdssup	The `hcmdssup` command registers one of the following items of information for connecting to the HiCommand Suite Common Component repository: ▪ Repository service's host name ▪ IP address and port number	3.2.4

3.2 List of Commands

The following describes the overview of the commands. For details on the arguments of each command, see section 3.3.

Storage Directory

Windows: *installation-directory*`\bin\`

Solaris: `/opt/HiCommand/Base/bin/`

3.2.1 hcmdsbanner

Format

Windows systems:

```
hcmdsbanner          {{ /add /file file-name }| /delete }
                     [ /locale locale-name ]
```

Solaris systems:

```
hcmdsbanner          {{ -add -file file-name }| -delete }
                     [ -locale locale-name ]
```

Function

This command enables and disables Warning Banner messages.

The settings are applied for each locale. If you execute the command for the locale that has already been set, the settings are overwritten. If you omit the locale, the settings are applied for the default messages. When you want to disable messages, specify a locale to disable the messages for that locale. If the messages are disabled for a locale, the Warning Banner for that locale will not be displayed. If you omit the locale, the default messages are disabled.

Notes: Messages are enabled and disabled for each machine.

Return values

Table 3.2 describes the values returned from the hcmdsbanner command.

Table 3.2 Return Values for the hcmdsbanner Command

Return values	Means
0	Normal termination
253	Message text exceeded 1,000 characters
254	Messages for the specified locale are already deleted
255	Failed

3.2.2 hcmdsgetlogs

Format

Windows systems:

```
hcmdsgetlogs        /dir directory-name
                    [ /type application-name ]
                    [ /arc archive-file-name ]
```

Solaris systems:

```
hcmdsgetlogs        -dir directory-name
                    [ -type application-name ]
                    [ -arc archive-file-name ]
```

Function

In the explanation of an error message, if the recommended action instructs you to contact customer support, use the log file collection command (hcmdsgetlogs) to collect the maintenance information. If an event that needs to be investigated occurs when the single sign-on function is used, collect the thread dump of Java VM.

Notes:

- When you execute the hcmdsgetlogs command, the content of the directory specified with the `dir` option must be empty. If the directory specified with the `dir` option does not exist, the hcmdsgetlogs command creates the directory.
- Set the write permission of the directory specified with the dir option so that files can be created in the directory.
- Do not run more than one hcmdsgetlogs command simultaneously.
- To execute the hcmdsgetlogs command, you need to log in as a user with Administrator permissions in Windows or root permissions in Solaris.

Return values

Table 3.3 describes the values returned from the hcmdsgetlogs command.

Table 3.3 Return Values for the hcmdsgetlogs Command

Return values	Means
0	Normal termination
1	Parameter error
2	Abnormal termination

Examples:

- In this example, the command collects the log of Tuning Manager only:

  When the Operating System of the Tuning Manager server is Windows:

```
hcmdsgetlogs /dir desired-directory /type TuningManager
```

  When the Operating System of the Tuning Manager server is Solaris:

```
hcmdsgetlogs -dir desired-directory -type TuningManager
```

- In this example, the command collects the log of every HiCommand product in the `hicmd_log` archive file:

  Windows systems:

```
hcmdsgetlogs /dir desired-directory /arc hicmd_log
```

  Solaris systems:

```
hcmdsgetlogs -dir desired-directory -arc hicmd_log
```

3.2.3 hcmdsrep

Format

Windows systems:

```
hcmdsrep            {{ /add
                    /type application-name
                    [ /displayname unique-name ]
                    /url application-startup-URL }|
                    { /delete
                    /type application-name
                    [ /displayname unique-name ] }|
                    { /print
                    [ /type application-name ] } }
                    [ /nolog ]
                    /user user-ID
                    /pass password
```

Solaris systems:

```
hcmdsrep            {{ -add
                    -type application-name
                    [ -displayname unique-name ]
                    -url application-startup-URL }|
                    { -delete
                    -type application-name
                    [ -displayname unique-name ] }|
                    { -print
                    [ -type Tuning Manager ] } }
                    [ -nolog ]
                    -user user-ID
                    -pass password
```

Function

The hcmdsrep command registers or deletes information used for starting Tuning Manager to the repository provided by HiCommand Suite Common Component. This enables Tuning Manager to be launched from another HiCommand application. To change registered information, delete and then re-register the information because the Tuning Manager startup information cannot be updated.

If a Tuning Manager has already been registered, multiple Tuning Managers can still be registered by changing their unique names. If the unique name is omitted, the information is registered with a blank unique name. Therefore, if a user deletes information without specifying a unique name, the information with a blank unique name will be deleted. The `nolog` option is ignored when displaying the registered information.

Return values

Table 3.4 describes the values returned from the hcmdsrep command.

Table 3.4 Return values for the hcmdsrep command

Return values	Means
0	Normal end
255	Failed

If the `nolog` option is not specified, the user can check the command results by messages output to the command line. If the `nolog` option is specified, no messages will be output. In this case, you can check the results from the command return code.

The command outputs the cause of a failure to the following log file even when the `nolog` option is specified, enabling users to confirm the cause of the failure. Various messages are output to the following log file depending on the log level, so some log levels may output the same message to the command line.

Log file

Windows: *installation-directory*`\HiCommand\Base\log\RepClient`*n*`.log`

Solaris: `/opt/HiCommand/Base/log/RepClientn.log`

Other

The URL for starting Tuning Manager is managed by a unique name. Therefore, the same unique name cannot be used in the same repository. (This restriction will not be released in later versions, for the sake of compatibility.)

Only users with Global Admin rights for Device Manager can register a HiCommand application with this command.

3.2.4 hcmdssup

Format

Windows systems:

```
hcmdssup            [ /nolog ]
                    /host host-name
                    /port port-number
                    [ /sslport SSL-port-number ]
```

Solaris systems:

```
hcmdssup            [ -nolog ]
                    -host host-name
                    -port port-number
                    [ -sslport SSL-port-number ]
```

Function

The hcmdssup command registers one of the following items of information for connecting to the HiCommand Suite Common Component repository:

- Repository service's host name
- IP address and port number

The default port for connecting to the repository service is 23015. Certification using the user ID and password is performed when applications or commands access the HiCommand Suite Common Component repository. If the `sslport` option is specified, the user ID and password are sent using the SSL (Secure Sockets Layer) protocol. Do not specify the `sslport` option when you do not want to use the SSL protocol.

Notes:

- Do not run this command line utility if Tuning Manager and Device Manager are running on the same host. (To use Device Manager through SSO on a remote host, you must be running Device Manager version 3.0 or later.)
- After running hcmdssup you must run hcmdsrep. If you do not run hcmdsrep, you will not be able to log in to Tuning Manager. For details on hcmdsrep, see section 3.2.3.

Return values

Table 3.5 describes the values returned from the hcmdssup command.

Table 3.5 Return values for the hcmdssup command

Return values	Means
0	Normal end
255	Failed

If the `nolog` option is not specified, the user can check the command results by messages output to the command line. If the `nolog` option is specified, no messages will be output. In this case, you can check the results from the command return code.

The command outputs the cause of a failure to the following log file even when the `nolog` option is specified, enabling users to confirm the cause of the failure. Various messages are output to the following log file depending on the log level, so some log levels may output the same message to the command line.

Log file

Windows: *installation-directory*`\HiCommand\Base\log\hcmdssup`*n*`.log`

Solaris: `/opt/HiCommand/Base/log/hcmdssup`*n*`.log`

3.3 Reviewing Command Arguments

3.3.1 -add (/add)

Table 3.6 describes the argument for `-add` (`/add`).

Table 3.6 Argument for -add (/add)

Item	Content
Purpose	For the `hcmdsbanner` command: Enables Warning Banner messages. For the `hcmdsrep` command: Adds Tuning Manager to the HiCommand launch library before switching to single sign-on mode.
Required Value	None
Required/optional	Required (at registration)
Notes	For the `hcmdsrep` command: Required for registering Tuning Manager in the HiCommand Suite.

3.3.2 -arc archive-file-name

Table 3.7 describes the argument for `-arc` archive-filename.

Table 3.7 Argument for -arc archive-filename

Item	Content
Purpose	Specifies the name of the archive file to be created.
Required Value	If you do not specify the arc parameter, `HiCommand_log` is assumed. When the archive file name is output, extension `jar` is appended. If you do not specify the arc parameter, `HiCommand_log.jar` is output.
Required/optional	Optional
Notes	For the `arc` option, do not use a character that is not permitted for a file name by the OperatingSystem.

3.3.3 -delete (/delete)

Table 3.8 describes the argument for `-delete` (`/delete`).

Table 3.8 Argument for -delete (/delete)

Item	Content
Purpose	For the `hcmdsbanner` command: Disables Warning Banner messages. For the `hcmdsrep` command: Deletes Tuning Manager from the HiCommand launch library before switching to standalone mode.
Required Value	None
Required/optional	Required (for deleting the registration)
Notes	For the `hcmdsrep` command: Required for deleting Tuning Manager from the HiCommand Suite.

3.3.4 -dir directory-name

Table 3.9 describes the argument for `-dir` *directory-name*.

Table 3.9 Argument for -dir directory-name

Item	Content
Purpose	Specifies the name of the directory that stores the log file.
Required Value	You can use the following characters to specify log file directory names: Space ! # ( ) + - . 0-9 = @ A-Z [ ] ^ _ a-z { } ~. Note that you cannot include multi-byte characters in directory names.
Required/optional	Required
Notes	▪ In Windows, you can use a backslash (\), colon (:), or forward slash (/) as a file separator. ▪ In Solaris, you can use only a forward slash (/) as a file separator. ▪ For the `dir` option, do not use a character that is not permitted for a directory name by the Operating System

3.3.5 -displayname (/displayname)

Table 3.10 describes the argument for `-displayname` (`/displayname`).

Table 3.10 Argument for -displayname (/displayname)

Item	Content
Purpose	Specifies the hyperlink string seen by the user when launching the HiCommand application.
Required Value	`<StringForGUIDisplay>`
Required/optional	Required when multiple instances of the same HiCommand application exist or multiple copies of the same HiCommand application are installed or will be installed. Optional in all other cases.
Notes	None

3.3.6 –file (/file) file-name

Table 3.11 describes the argument for `-file` (`/file`) *file-name*.

Table 3.11 Argument for -file (/file) file-name

Item	Content
Purpose	Specifies the message file in which the messages to be specified as arguments are described.
Required Value	The characters that can be specified for the file name are printable ASCII characters (0x20 to 0x7E), except special characters such as the backslash (\), forward slash(/) colon(:), comma (,), semicolon (;), asterisk (*), question mark (?), double quotation mark (“), left angle bracket (<), right angle bracket (>), vertical bar (|), dollar sign ($), percent sign (%), ampersand (&), single quotation mark (‘), and grave accent mark (`). In Windows, you can use the backslash (\), colon (:), and forward slash (/) as file separators. In Solaris, you can use the forward slash (/) as a file separator.
Required/optional	Required.
Notes	Paragraph characters in the specified file are deleted.

3.3.7 -host(/host)

Table 3.12 describes the argument for `-host` (`/host`).

Table 3.12 Argument for -host (/host)

Item	Content
Purpose	Specifies the host on which HiCommand Device Manager is running.
Required Value	*Device-Manager-host-name*
Required/optional	Required
Notes	Specify the name or IP address of the Device Manager host that has the repository.

3.3.8 –locale (/locale) locale-name

Table 3.13 describes the argument for `-locale` (`/locale`) *locale-name*.

Table 3.13 Argument for -locale (/locale) locale-name

Item	Content
Purpose	Specifies the target locale as the argument
Required Value	`en` for English, `ja` for Japanese.
Required/optional	Optional
Notes	If you omit this option, the default messages are assumed.

3.3.9 -nolog (/nolog)

Table 3.14 describes the argument for `-nolog` (`/nolog`).

Table 3.14 Argument for -nolog (/nolog)

Item	Content
Purpose	Prevents messages from being logged. Messages are logged by default.
Required Value	None
Required/optional	Optional
Notes	A message is output if the `nolog` option is specified incorrectly.

3.3.10 -pass (/pass)

Table 3.15 describes the argument for `-pass` (`/pass`).

Table 3.15 Argument for -pass (/pass)

Item	Content
Purpose	Specifies the password of the Device Manager administrative account.
Required Value	*password*
Required/optional	Required
Notes	None

3.3.11 -port (/port)

Table 3.16 describes the argument for `-port` (`/port`).

Table 3.16 Argument for -port (/port)

Item	Content
Purpose	Specifies the port for the Device Manager to receive requests. Used to change the port number.
Required Value	*Device-Manager-port-number*
Required/optional	Required
Notes	None

3.3.12 -print (/print)

Table 3.17 describes the argument for `-print` (`/print`).

Table 3.17 Argument for -print (/print)

Item	Content
Purpose	Prints information about the registered HiCommand application.
Required Value	`TuningManager`
Required/optional	Optional Required for printing SSO registration information.
Notes	None

3.3.13 -sslport (/sslport)

Table 3.18 describes the argument for `-sslport` (`/sslport`).

Table 3.18 Argument for -sslport (/sslport)

Item	Content
Purpose	Specifies the port for the Device Manager to receive requests using Secure Socket Layer (SSL) protocol. Used to specify the port when accessing the repository using SSL protocol.
Required Value	*port-number*
Required/optional	Optional
Notes	Omit this parameter when not using the SSL service.

3.3.14 -type application-name

Table 3.19 describes the argument for `-type` *application-name*.

Table 3.19 Argument for -type application-name

Item	Content
Purpose	Specifies the name of the target application.
Required Value	If the target application is HiCommand Tuning Manager, specify `TuningManager` as the application name.
Required/optional	Optional Required for the `hcmdsrep` command to add or delete information.
Notes	If you omit the `type` option for the `hcmdsgetlogs` command, all the Web applications registered in HiCommand Common Component are subject to be logged.

3.3.15 -url (/url)

Table 3.20 describes the argument for `-url` (`/url`).

Table 3.20 Argument for -url (/url)

Item	Content
Purpose	Specifies the URL for launching the application.
Required Value	*Tuning-Manager-startup-URL* Example: `http://`*host-name* | *IP-address*`:`*port-number*`/login.do`
Required/optional	Required (startup URL) (for registering the launch point)
Notes	The port number is set to 23015 by default. Required for registering the Tuning Manager startup URL in the HiCommand Suite.

3.3.16 -user (/user)

Table 3.21 describes the argument for `-user` (`/user`).

Table 3.21 Argument for -user (/user)

Item	Content
Purpose	Specifies the Device Manager administrative account for authenticating the application registration.
Required Value	*Device-Manager-admin-user*
Required/optional	Required
Notes	None

Chapter 4 Performing Commands from Performance Reporter

This chapter describes the commands and syntax used for recording and saving the Store database, and for defining Performance Reporter reports. The command format is the same for both Windows and Solaris.

For Windows, enter commands from the command prompt. For Solaris, enter commands from the control terminal. This chapter contains the following sections:

- Reviewing Performance Reporter Commands (see section 4.1)
- Understanding the Command Line Format (see section 4.2)
- Executing Commands Simultaneously (see section 4.3)
- List of Commands (see section 4.4)
- Reviewing Command Arguments (see section 4.5)

4.1 Reviewing Performance Reporter Commands

Table 4.1 lists the commands provided by Performance Reporter.

Table 4.1 Performance Reporter Commands

Command Name	Function	Required User Access		See
		Windows	Solaris	
jpcrdef output	Outputs existing report definition information.	None	root user	4.4.1.1
jpcrdef create	Registers new report definitions.	None	root user	4.4.1.2
jpcrdef delete	Deletes existing report definitions	None	root user	4.4.1.3
jpcasrec output	Outputs method of report definition information in Store database.	None	root user	4.4.1.4
jpcasrec update	Changes method of report definition in Store database recording methods.	None	root user	4.4.1.5
jpcaspsv output	Outputs definition of data retention in the Store database.	None	root user	4.4.1.6
jpcaspsv update	Changes definition of data retention in the Store database.	None	root user	4.4.1.7
jpcrpt	Outputs the report to CSV-format files.	None	root user	4.4.1.8
jpcprras	Extracts Performance Reporter materials.	Administrators	root user	4.4.1.9
jpcpragtsetup	Sets the Agent icon.	Administrators	root user	4.4.2.1
jpcahprp output	Outputs definition information for a specified Action Handler to a file in XML format.	None	root user	4.4.3.1
jpcahprp update	Modifies Action Handler definition information.	None	root user	4.4.3.2
jpctgprp output	Collects Trap Generator definition information and outputs it to a file in XML format.	None	root user	4.4.3.3
jpctgprp create	Adds an SNMP host name to Trap Generator definition information.	None	root user	4.4.3.4
jpctgprp delete	Deletes an SNMP host name from Trap Generator definition information.	None	root user	4.4.3.5

Note: The command names are described in the format of the command names and subcommand names combined; however, the jpcrpt, jpcpragtsetup, and jpcprras commands do not have subcommands.

4.2 Understanding the Command Line Format

4.2.1 Prerequisites

The prerequisites for executing commands are as follows:

- Create the parameter file that is specified in a command.
- For Solaris, acquire the path of **config.xml** from the environment variables **PR_CONFIG**.
- For Windows, the path will be acquired by the installer automatically.
- Make sure that <common>, <logging>, and <vsa> are set in the file config.xml. For more information about **config.xml** files, see the chapter that describes setup of Performance Reporter in the *HiCommand Tuning Manager Installation Guide*.
- Collection Manager must be operating during command execution.
- When commands related to the Store database and commands for outputting reports are executed, the corresponding Agent must be operating.
- To output the log information, full-control access permission is required under the log output directory.

4.2.2 Command Syntax

Figure 4.1 shows the format for specifying commands:

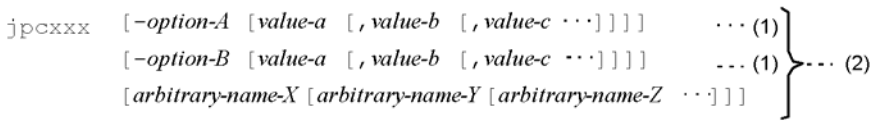


Figure 4.1 Command Format

(1) is called an option. (2) is called an argument.

Table 4.2 shows the symbols used in explanations of command syntax.

Table 4.2 Symbols Used for Explanations of Command Syntax

Symbol	Meaning	Example
|	(Stroke) Indicates a division between multiple items, and means or.	A|B|C means A, B, or C.
{ }	(Brackets) One group item must be selected from the multiple items located between these symbols. Spaces between items are shown with the symbol |.	{A|B|C} means specify one of A, B, or C.
[ ]	(Square brackets) Items placed between these symbols can be specified or omitted at the discretion of the user.	[A] means specify A as necessary. [B|C] means specify B or C as necessary.

Symbol	Meaning	Example
...	(Ellipsis) Items located directly before this symbol can be specified multiple times. Use a space as the delimiter when specifying an item multiple times.	A B... means that, after A, B can be specified multiple times.
_	(Underline) When all items enclosed inside parenthesis are omitted, the system will use the underlined item.	[A|B] means that when neither A nor B is specified, the system will use A.

4.2.3 General Command Format

General command formats are as follows:

- Command input format: an XML file is specified as a command argument.
- Parameters are enclosed in the **<pr-cli-parameters>** tag and are specified immediately after the XML version and encoding.
- XML-format control characters must be entered in accordance with the XML standard. For example, enter **<** for **<** and **>** for **>**.
- Unless explicitly stated, only all uppercase or only all lowercase letters may be used for specified values (e.g., field ID, record ID, date range, or report interval), because these are selected from fixed tokens specified in the parameter file specifications for a command. For information about the defining the parameter values, see the DTD file or the parameter file format description of each command.
- When `TRUE` can be specified for a parameter, `true` can also be specified for that parameter. Also, when `FALSE` can be specified for a parameter, `false` can also be specified for that parameter.
- Element and attribute values that consist of spaces only are omitted. One-byte spaces before or after element and attribute values are ignored.
- If you specify characters other than printing characters in an element or attribute, an error occurs.
- The **DOCTYPE** declaration of the parameter file is fixed. For the parameter file **DOCTYPE** declaration, the name of the DTD file defining the parameter settings must be specified., e.g., **<!DOCTYPE pr-cli-parameters SYSTEM "DTD-file-name">**

4.2.4 Command Input and Output Formats

Detailed information regarding command processing is output to the standard output, standard error output, and the trace log file. Table 4.3 shows the output destinations of detailed information.

Table 4.3 Detailed Output Destinations

Item	Output Destination
Execution results	Standard output
Message	Standard error output
Trace log	Outputs the following file to the log output directory specified in the initialization file: **command-name_processing-type_log#.log** *Note:* # is the log file number. If you generate a report, the trace log is **jpcrdef_create_log1.log**. The **jpcrtp** command outputs the following file to the log output directory specified in the initialization file: **command-name_process-ID_log#.log** where # is the log file number, from 1 to the number of log files produced. When the process ID is 100, the file name is **jpcrpt_100_log1.log**. Each time a command is executed, the total size of the log files is calculated. When the maximum is exceeded, old files (starting from the oldest updated date) are deleted. However, only files whose last update was before the period specified for logFileRetention in the initialization file from the command startup time can be deleted. The maximum size is determined by multiplying logFileSize by logFileNumber in config.xml.

The following items are added as common titles or end lines for all commands:

- Command name
- Target Collection Manager host name/IP address
- Collection Manager connection time
- Collection Manager disconnection time.

Figure 4.2 illustrates a standard output when three report definitions were specified in a report, two report definitions are generated, and one report definition caused an error.

```
Jpcrdef create connected to hostname at dd MM yyyy HH:MM:SS.mmm
Create result OK   :  report-definition-directory-path1/report-definition-name1
Create result OK   :  report-definition-directory-path2/report-definition-name2
Create result OK   :  report-definition-directory-path3/report-definition-name3
Error-cause
Jpcrdef create disconnected at dd MM yyyy HH:MM:SS.mmm
```

Figure 4.2 Example Output of the Execution Result

Table 4.4 contains information about the output results.

Table 4.4 Detailed Output Results

Item	Output Destination
dd MM yyyy	Date format: dd = Day MM = Month yyyy = Year
HH : MM : SS . mmm	Time format: HH = Hour MM = Minute SS = Second Mmm = Millisecond
Report Definition Directory Path	Shows the names of the directories set in the parent-folder attributes of the report-definition parameters, in which report definitions are stored.
Report Definition Name	Shows the names of the report definitions that are set in the name attributes of the report-definition parameters.

4.2.5 DTD File Commands

Table 4.5 lists the DTD files that are supported by the commands.

Table 4.5 DTD Files Supported by the Commands

Command Name	DTD File Name
jpcrdef output	rdef_create_params.dtd
	rdef_output_params.dtd
	rdef_params.dtd
jpcrdef create	rdef_create_params.dtd
	rdef_params.dtd
jpcrdef delete	rdef_create_params.dtd
	rdef_delete_params.dtd
	rdef_output_params.dtd
	rdef_params.dtd
jpcasrec update	asrec_params.dtd
jpcasrec output	asrec_params.dtd
jpcaspsv update	aspsv_params.dtd
jpcaspsv output	aspsv_params.dtd
`jpcrpt`	rpt_params.dtd
`jpcahprp update`	act_params.dtd

Command Name	DTD File Name
`jpctgprp create`	trap_params.dtd
`jpcahprp output`	act_params.dtd
`jpctgprp delete`	trap_params.dtd

4.2.6 CLI Parameters

To specify the root directory, specify **/** for the parent-folder attribute. To specify Directory1, which is the first directory below the root, specify **/Directory1**. Similarly, to specify directories below Directory1, specify **/Directory1/Directory2**... delimiting each directory name with **/**. An error occurs if you specify User Reports or System Reports in of the root directory (/).

A parameter file error occurs if a value is specified that is outside of the range contained in the subsection Parameter file format.

Table 4.6 explains the PR-CLI-Parameters.

Table 4.6 PR-CLI-Parameters

Type	Explanation	
Definition	Root tag for input of Performance Reporter commands	
Value that can be specified	None	
Omission	Not allowed	
Attributes	Ver	The version of the DTD file. If this is a value that the command does not support, or if this is omitted, a parameter file error occurs. For information about the support range, see the DTD file of each command.
Element	None	
Subelements	report-definitions	Root tag for report definition information
	agent-store-db-record-definition	Root tag for definition information related to changes in the Store database data recording method
	agent-store-db-preserve-definition	Root tag for definition information related to changes in the data retention conditions of the Store database.
	launch-report	Root tag for the definition information of the report output.
	action-handler-definition	Root tag for Action Handler definition information
	trap-generator-definition	Root tag for Trap Generator definition information

4.2.7 Viewing Performance Reporter Help

You can view help on Performance Reporter commands by specifying the **-h** option in a command, e.g., **jpcrdef -h**. If the **-h** option is the first argument of a command, everything that follows is ignored, and the following help is output. Help is also output when the command line format is incorrect.

```
Usage: jpcrdef <subcmd> [ <option>... ] <parameter file>
    <subcmd> Mandatory. Specify one of subcommands listed below:
        create    Creates report definition(s)
        delete    Deletes report definition(s)
        output    Outputs report definition(s)
    <option> Specify options after each extension listed below.
         -o <outputfile> Output file is required only if <subcmd> is 'output'
         -mx      Specify maximum heap size from 1 up to 1024 by MB
                  Example: -mx 64. Default for both is 64MB.
         -ms      Specify minimum heap size. from 1 up to 1024 by MB
                  Example: -ms 32. Default for both is 32MB.
         -y       Only used 'delete' <subcmd>. Assume a yes
                  response to all questions asked by jpcrdef.
       -dateformat <pattern> Specifiable when <subcmd> is
                "create" or "output".
                The specified <pattern> entry determines the date
                format for I/O in the <expression> tag.
                Specifiable <pattern> entries are
                "pattern-ddMMyyyy", "pattern-MMddyyyy",
                or "pattern-yyyyMMdd".
       -dateseparator <pattern> Specifiable when <subcmd> is
                "create" or "output".
                The specified <pattern> entry determines the date
                separator for I/O in the <expression> tag.
                Specifiable <pattern> entries are 'space',
                'slash', 'hyphen', or 'period'.
    <parameter file>    Mandatory. Specify parameter file
```

Figure 4.3 Sample Help Output (jpcrdef -h)

4.3 Executing Commands Simultaneously

Table 4.7 shows which commands can be executed simultaneously.

Concurrent execution means to execute multiple instances of the same command-subcommand combination simultaneously. Parallel execution means to execute different command-subcommand combinations simultaneously.

Commands that cannot be executed simultaneously cannot be executed while other commands are being executed.

Table 4.7 Executing Commands Simultaneously

Command	Subcommand	Concurrent Execution	Parallel Execution
jpcrdef	output	No	No
	create		
	delete		
jpcasrec	update	No	No
	output		
jpcaspsv	update	No	No
	output		
jpcrpt	None	Yes	No
jpcahprp	output	No	No
	update		
jpctgprp	output	No	No
	create		
	delete		

4.4 List of Commands

The following describes the overview of the commands of Performance Reporter. For details on the arguments of each command, see section 4.5.

Storage Directory

Windows: *installation-directory*\tools\

Solaris: /opt/HiCommand/TuningManager/PerformanceReporter/tools/

4.4.1 Reporting Commands

4.4.1.1 jpcrdef output

Format

```
jpcrdef output      -o output-file
                    [ -mx maximum-heap-size ]
                    [ -ms initial-heap-size ]
                    [ -dateformat date-format-pattern-name ]
                    [ -dateseparator date-format-separator-name ]
                    input-file
```

Function

The jpcrdef output command connects to Collection Manager and outputs the specified report definitions to a file in XML format. If you specify a directory, that will include all subfolders and files within that directory, in a single file. You can specify multiple paths and directories. You can also specify that output files are in the form of jpcrdef create command input files.

Return Values

See Table 4.10.

Parameter file format

Table 4.8 report-definitions

Type	Description
Definition	Root tag of the report definition information
Value that can be specified	None
Omission	Not allowed
Attributes	None
Element	pr-cli-parameters
Subelements	report-definition

Table 4.9 report-definition

Type	Description	
Definition	Specifies one report definition	
Value that can be specified	None	
Omission	Not allowed	
Attributes	name	Specify the report definition name in 1 to 64 characters (not 1 to 64 bytes). Replace \ with \\, and / with \. If the name attribute is omitted, that will delete the report definition directory specified in the parent-folder attribute and any lower-level subdirectories or files. Specify the report name without spaces, because a space character is specified before and after the report definition name.
	parent-folder	Specifies the directory where the report definition of the name attribute is stored. Specify a directory name consisting of 1 to 64 characters (not 1 to 64 bytes). Specify the name from the root directory, using / as a separator. Specify a path by using / separator symbols from the upper level directory name. Replace \ with \\, and / with \. Specify the report name without spaces, because a space character is specified before and after the report definition name. Omitting the name attribute will delete the report definition directory specified in the parent-folder attribute, as well as any lower-level subdirectories or files. Omitting this attribute will result in an error.
	id	Ignored even if specified.
	read-only	If set to TRUE, the report definition deletion will be cancelled and the next report-definition attribute will be processed. If set to FALSE or omitted, the report definition is deleted.
Element	report definitions	
Subelements	product-id	Ignored even if specified.
	report-type	
	Record	
	indication-settings	
	view-type	
	Drilldown	

Figure 4.4 shows a jpcrdef output parameter file.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE pr-cli-parameters SYSTEM "rdef_output_params.dtd">
<pr-cli-parameters ver="0100">
   <report-definitions>
      <report-definition name="Workload Status (Multi-Agent)"
                parent-folder="/UserReport"/>
      <report-definition name="CPU Usage Top 10 Processes"
                parent-folder="/UserReport" read-only="FALSE"/>
      <report-definition
                parent-folder="/Windows/Operating System"/>
   </report-definitions>
</pr-cli-parameters>
```

Figure 4.4 Sample Parameter File (jpcrdef output)

Figure 4.5 shows the DTD (rdef_output_params.dtd) for the jpcrdef output parameter file.

```
<!ENTITY  % BOOL_VALUE        "(true|false|TRUE|FALSE)">
<!ELEMENT pr-cli-parameters    (report-definitions)>
<!ATTLIST pr-cli-parameters
          ver                  (0100)                #REQUIRED>
<!ELEMENT report-definitions   (report-definition+)>
<!ELEMENT report-definition    ANY>
<!ATTLIST report-definition
          name                 CDATA                 #IMPLIED
          parent-folder        CDATA                 #REQUIRED
          id                   CDATA                 #IMPLIED
          read-only            %BOOL_VALUE;         "FALSE">
```

Figure 4.5 Sample DTD (rdef_output_params.dtd) File Defining the Parameter Entries

Notes:

- When the report definition directory is specified as the output target and an exception occurs during output of one of the lower level report definitions, the program will skip the processing for that report definition and proceed to another report definition process.
- When multiple report definitions or the report definition directory are specified to be output and an exception occurs while one of the report definitions is being output, the program will skip that processing and continue to output another definition.
- Specified attributes and attributes set as defaults are output to a file. The output outputs node IDs as an id attribute of the report-definition tag. The create and delete ignore the specification of id attributes.
- The output parameter file can be specified as an entered file when generating a report. The contents of the DTD file for the output parameter file are the same as the DTD file specified during generation.

Usage Example

In the following example, the command outputs the parameter file `rdef_input.xml` that contains report definitions. The command outputs this file to the file `rdef_output.xml`.

```
jpcrdef  output  -o rdef_output.xml  rdef_input.xml
```

Output Example

Figure 4.6 shows the output to the standard output when ten report definitions and five report definition directories were specified, but three of the report definitions caused an error:

```
jpcrdef output connected to vserv01 at 20 03 2003 15:00:55.282
output result OK  : report-definition-directory-path1/report-definition-name11
output result OK  : report-definition-directory-path2/report-definition-name21
output result ERR : report-definition-directory-path3
          Skipped : report-definition-directory-path3/report-definition-name31
error-cause
               OK  : report-definition-directory-path3/report-definition-name32
          Skipped : report-definition-directory-path3/report-definition-name33
error-cause
               OK  : report-definition-directory-path3/report-definition-name34
               OK  : report-definition-directory-path3/report-definition-name35
output result ERR : report-definition-directory-path4/report-definition-name41
error-cause
output result OK  : report-definition-directory-path5
               OK  : report-definition-directory-path5/report-definition-name51
               OK  : report-definition-directory-path5/report-definition-name52
jpcrdef output disconnected at 20 03 2003 15:01:06.2
```

Figure 4.6 Sample Standard Output (jpcrdef output)

The contents of the output DTD file that defines the parameter entries are the same as those for the DTD file specified during creation. For an example of the output parameter file and the DTD file defining the parameter entries, see Figure 4.7, Figure 4.8, and Figure 4.9.

4.4.1.2 jpcrdef create

Format

```
jpcrdef create      [ -mx maximum-heap-size ]
                    [ -ms initial-heap-size ]
                    [ -dateformat date-format-pattern-name ]
                    [ -dateseparator date-format-separator-name ]
                    input-file
```

Function

The **jpcrdef create** command connects to Collection Manager and creates a new report definition. The definition is obtained from the XML-format parameter file, which is specified as a command line argument. You can specify multiple report definitions in a single parameter file, thereby creating multiple report definitions in a batch.

Return Values

Table 4.10 describes the return values.

Table 4.10 Performance Reporter Return Values

Return Value	Meaning
0	Normal end
1	Error in the command line format.
3	Failed to create the output file.
5	The DTD file is not compatible, so the parameters cannot be interpreted.
10	An attempt to create one or more report definitions has failed.
100	The environment is incorrect.
200	A memory error has occurred.
202	A file access error has occurred.
222	An error has occurred in the communication processing.
255	An unexpected error has occurred.

Parameter file format

Table 4.11 report-definitions

Type	Description
Definition	Root tag of the report definition information
Value that can be specified	None
Omission	Not allowed
Attributes	None
Element	pr-cli-parameters
Subelements	report-definition

Table 4.12 report-definition

Type	Description
Definition	Specifies one report definition
Value that can be specified	None
Omission	Not allowed

Type	Description	
Attributes	name	Specify the report definition name in 1 to 64 characters (not 1 to 64 bytes). Replace \ with \\, and / with \. Do not specify the name of an existing report. Do not specify the parent-folder attribute and omit the name attribute. Specify the report name without spaces, because a space character is specified before and after the report definition name.
	parent-folder	Specifies the directory where the defined report will be stored. Specify a directory name consisting of 1 to 64 characters (not 1 to 64 bytes). Specify the name from the highest-order directory, using / as a separator. Specify a path by using / separator symbols from the upper level directory name. Replace \ with \\, and / with \.Do not specify a system-defined report definition directory. Include the directory. If the directory does not exist, it is created. Specify the report name without spaces, because a space character is specified before and after the report definition name.
	id	Ignored even if specified.
	read-only	If set to TRUE, the report definition generation will be cancelled and the next report-definition attribute will be processed. If set to FALSE or omitted, the report definition is created.
Element	Report-definitions	
Subelements	product-id	
	report-type	
	Record	
	indication-settings	
	realtime-indication-settings	
	view-type	
	Drilldown	

Table 4.13 product-id

Type	Description
Definition	Type of product for which report information is collected
Value that can be specified	Specify the product ID and data model version. The product ID is in uppercase alphabetical characters, and the data model version is supplied by the agent. Specify the product code, which consists of the product ID of the agent that is displaying data in the report to be created, concatenated with the data model version number. The product ID identifies the agent and consists of uppercase alphabetical characters. The data model version indicates the data model version of the agent. For a list of product IDs by agent, see Appendix B. For the data model versions of the agents, see the chapter that describes records in the applicable *HiCommand Tuning Manager Hardware Reports Reference*, *HiCommand Tuning Manager Operating System Reports Reference*, and *HiCommand Tuning Manager Application Reports Reference*. In the case of D as the product ID and 7.0 as the data model version, the product code displayed by Agent for RAID would be D7.0. If data-model-version-of-report-A is greater than or equal to data-model-version-of-report-B, you can drill down from report A to report B.

Type	Description
Omission	Not allowed
Attributes	None
Element	report-definition
Subelements	None

Table 4.14 report-type

Type	Description	
Definition	Specifies the report type.	
Value that can be specified	None	
Omission	Not allowed	

Attributes	type	The following values can be specified, in alphabetical characters (only lowercase or only uppercase):
		For a single-agent historical report:
		`historical-single-agent` or `HISTORICAL-SINGLE-AGENT`
		For a multi-agent historical report:
		`historical-multiple-agents` or `HISTORICAL-MULTIPLE-AGENTS`
		For a single-agent real-time report:
		`realtime-single-agent` or `REALTIME-SINGLE-AGENT`

Element	report-definition	
Subelements	None	

Table 4.15 record

Type	Description	
Definition	Specifies the report target record.	
Value that can be specified	None	
Omission	Not allowed	
Attributes	id	Specify the record ID. This setting cannot be omitted. Which record attributes can be specified depends on the combination of report-type setting values (see Table 4.46).
Element	report-definition	
Subelements	Fields	
	condition-expression	

Table 4.16 fields

Type	Description
Definition	Specifies more than 1 report target field.
Value that can be specified	None
Omission	Not allowed
Attributes	None
Element	Record
Subelements	Field

Table 4.17 field

Type	Description	
Definition	Specifies one report target field.	
Value that can be specified	Specify the field ID of the selected record. You cannot specify `FALSE` for all attributes (`table`, `list`, `graph`) of all field elements; make sure that you set at least one item from `table`, `list`, or `graph` to `TRUE`. If you specify `FALSE` for all attributes (`table`, `list`, `graph`) of all field elements, an error occurs. Also, if the same field ID is specified more than once within a `fields` tag, an error occurs. Some fields are collected only as history data when registering in Agent Store,and are calculated as *xxxx* `(Total)` or similar. Such fields cannot be specified for the real-time report. If such a field is specified, an error occurs (see Table 4.50).	
Omission	Not allowed	
Attributes	table	Required setting. To display a table, set this to TRUE, and set all others to FALSE.
	list	Required setting. To display a list, set this to TRUE, and set all others to FALSE.
	graph	Required setting. To display a graph, set this to TRUE, and set all others to FALSE. If TRUE is specified in the case of a text format field, an error occurs.
	display-name	Specify a user display name with up to 24 characters. When omitted, or when a space character is specified (display-name="") or a space character is specified (display-name=" "), the field name is displayed.
Element	Fields	
Subelements	None	

Table 4.18 condition-expression

Type	Description
Definition	Specifies the logical operation of the filter condition expression.
Value that can be specified	None
Omission	Allowed (When omitted, nothing is set.)
Attributes	None
Element	Record
	ref-field
Subelements	And
	Or
	Expression

Table 4.19 expression

Type	Description
Definition	Specifies the condition expression.
Value that can be specified	When specifying a filter condition: Use the format fieldcondition["value"]. Do not use a space to delimit the field, condition and value. Fields for which the data type is time_t can only be specified when the value is omitted and specify-when-displayed is set to TRUE. The values that can be specified in condition expressions are described below. field: Use the Manager name to specify a field included in a record. For information about the Manager name, see the explanation of records in each Agent manual. When specifying a condition: =: The value of the field and ["value"] are equivalent. <: The value of the field is smaller than ["value"]. <=: The value of the field is smaller than or equal to ["value"]. >: The value of the field is larger than ["value"]. >=: The value of the field is larger than or equal to ["value"]. <>: The value of the field and ["value"] is different. For XML notation, use "<" for "<" and ">" for ">". Character string field: comparison is done in ascending order of ASCII codes. ["Value"] should be enclosed in quotation marks (" "), using a maximum of 2048 bytes The text code, data length and data format differ depending on the format of the field specified on the left. If the specify-when-displayed attribute is set to "TRUE", you can omit the value. Control characters and the following characters cannot be specified: (,), [,], <, >, =, ', '. If an invalid character is specified, an error occurs. Specify according to the field format written in individual Agent manuals. You can specify values in the following ranges: ▪ Character (Set the specification value as is.) ▪ Integer (Set a value within the range of values allowed for `Integer`.) ▪ Decimal (Set a value within the range of values allowed for `Double`. When the number of digits after the decimal point is more than four, the number is rounded to the fourth digit according to the *Round to nearest* specifications of IEEE754. See ***Note***). ▪ Date (Depending on the settings of `config.xml`, you can specify one of `dd MM yyyy`, `MM dd yyyy` or `yyyy MM dd`. Time is fixed at `HH:mm:ss`. Specify the format corresponding to the pattern and separator to be specified when you specify `-dateformat` or `-dateseparator` as the command execution.) When specifying a field in a drilldown report: Specify the conditional expression using the format fieldcondition["value"] or fieldconditionfield. Do not use a space to delimit the field, condition and value. field: Specify a field that is included in a record of a drilldown report. condition: Same as filter condition. When specifying a field on the right side: Specify the field ID of a record, a DATETIME field or a key field. For information about the key fields, see each Agent manual.
Omission	Allowed (This setting cannot be omitted if a `condition-expression` is specified.)
Attributes	specify-when-displayed: To set during execution, set to TRUE; specify all others to FALSE. When omitted, the assumed value becomes FALSE. If FALSE is specified without indicating a value in the logical expression of the element value, an error will occur.

Type	Description
Element	condition-expression
	And
	Or
Subelements	None

Note: The following is the *Round to nearest* specification of IEEE754.

- Compare the distance of the two nearest approximate values from the number to be rounded and round to the nearest.
- When the distances of the two nearest approximate values from the number to be rounded are the same, represent the two approximate values as binary digits and round to the nearest approximate value that has "0" in the lowest digit.

Table 4.20 and

Type	Description
Definition	Specifies a logical AND operation on the items specified in expression.
Value that can be specified	None
Omission	Allowed (Use when specifying the AND operation of the condition expressions.)
Attributes	None
Element	And
	Or
	condition-expression
Subelements	Expression
	And
	Or

Table 4.21 or

Type	Description
Definition	Specifies a logical OR operation on the items specified in expression.
Value that can be specified	None
Omission	Allowed (Specify when specifying the OR operation of the condition expressions.)
Attributes	None
Element	And
	Or
	condition-expression

Type	Description
Subelements	Expression
	And
	Or

Table 4.22 indication-settings

Type	Description	
Definition	Specifies the report display period, report interval, peak-time display, and maximum number of records. `indication-settings` can be specified only when `report-type` is `historical-single-agent` or `historical-multiple-agents`. If specified when `report-type` is `realtime-single-agent`, an error occurs.	
Value that can be specified	None	
Omission	Allowed (When omitted, the default will be applied to both indication-settings and its subelement.)	
Attributes	`specify-when-displayed`	To specify during report display, set to TRUE, and set all others to FALSE. When omitted, specify-when-displayed will be FALSE.
	`maximum-number-of-records`	Specify the maximum number of records to display on the report in an integer from 1 to 2,147,483,647. When omitted, maximum-number-of-records will be 1,440.
Element	report-definition	
Subelements	date-range	
	report-interval	
	peak-time	

Table 4.23 date-range

Type	Description
Definition	Specifies the report display period.
Value that can be specified	The following values can be specified (not case-sensitive): WITHIN_THE_PAST_HOUR WITHIN_THE_PAST_24_HOURS WITHIN_THE_PAST_7_DAYS WITHIN_THE_PAST_MONTH WITHIN_THE_PAST_YEAR SPECIFY_WHEN_DISPLAYED
Omission	Allowed (When omitted, the assumed value is SPECIFY_WHEN_DISPLAYED.)
Attributes	None
Element	indication-settings
Subelements	None

Table 4.24 report-interval

Type	Description
Definition	Specifies the report interval.
Value that can be specified	The following values can be specified (not case sensitive): MINUTE HOUR DAY WEEK MONTH YEAR If a record other than a PI record is specified, an error occurs.
Omission	Allowed (When omitted, the assumed value is HOUR.)
Attributes	None
Element	indication-settings
Subelements	None

Table 4.25 peak-time

Type	Description
Definition	Report is displayed only during the time in which the specified field value becomes maximum.
Value that can be specified	When the record specified in record is a single instance, one of the field IDs is specified. Only the records from the time of day during which that field is at its maximum value are displayed. When the report-interval is other than HOUR, a record has multiple instances, or report-type is HISTORICAL-MULTIPLE-AGENTS, an error occurs.
Omission	Allowed (When omitted, the field in peak-time is not set.)
Attributes	None
Element	indication-settings
Subelements	None

Table 4.26 realtime-indication-settings

Type	Description	
Definition	Specifies the refresh interval and ranking indication of the real-time report. `realtime-indication-settings` can be specified only when `report-type` is `realtime-single-agent`. If it is specified for another `report-type`, an error occurs.	
Value that can be specified	None	
Omission	Allowed (When omitted, the default will be applied to both `realtime-indication-settings` and its subelement.).	
Attributes	`specify-when-displayed`	To specify during report display, set to `TRUE`, and set all others to `FALSE`. When omitted, `specify-when-displayed` will be `FALSE`.

Type	Description	
	indicate-delta-value	Specifies TRUE when displayed as delta value, FALSE otherwise. The default when omitted is TRUE. Whether the delta value can be displayed depends on the fields collected by the Agent. For details, see Table 4.49.
Element	report-definition	
Subelements	refresh-interval display-by-ranking	

Table 4.27 refresh-interval

Type	Description	
Definition	Specifies whether auto-refresh is performed, and sets the default value (seconds) and minimum value (seconds) for auto-refresh.	
Value that can be specified	None	
Omission	Allowed (When omitted, the display data is refreshed automatically.)	
Attributes	do-not-refresh-automatically	Specifies TRUE to disable auto-refresh of real-time report display data or FALSE to enable. When omitted, do-not-refresh-automatically will be FALSE.
	initial-value	When do-not-refresh-automatically is FALSE, the auto-refresh interval for report display data can be specified in the range from minimum-value to 3,600 seconds. When do-not-refresh-automatically is TRUE, specifying the initial-value causes an error. When both initial-value and minimum-value are omitted, the initial-value is set to 60 seconds. When minimum-value is specified and initial-value is omitted, the initial-value will be the same as the minimum-value.
	minimum-value	When do-not-refresh-automatically is FALSE, the minimum value of the auto-refresh interval for the report display data can be specified in the range from 10 to 3,600 seconds. When do-not-refresh-automatically is TRUE, specifying the minimum-value causes an error. When both initial-value and minimum-value are omitted, the minimum-value is set to 60 seconds. When initial-value is specified and minimum-value is omitted, the minimum-value will be the same as the initial-value.
Element	realtime-indication-settings	
Subelements	None	

Table 4.28 display-by-ranking

Type	Description	
Definition	When `display-by-ranking` is specified, fields specified with the `field` attribute are sorted in ascending or descending order and displayed in the report using the data specified by `display-number` from the top as the ranking data. `display-by-ranking` can be specified only for multiple-row records (multiple-instance records). If it is specified for a single-row record, an error occurs. When both `display-by-ranking` and `display-key` are specified, the data collected using the `display-by-ranking` conditions are displayed according to the `display-key` conditions.	
Value that can be specified	None	
Omission	Allowed (When omitted, the ranking is not displayed.)	
Attributes	`field`	Specifies the ID of the field to use as basis for ranking display. When omitted, an error occurs. An error also occurs if a field is specified that cannot be specified for ranking display. For information on the data type of fields that can be specified as ranking display, see Table 4.45.
	`display-number`	Integer that specifies the number of data for ranking display. The setting range is from 1 to 100, and 10 when omitted.
	`in-descending-order`	Specifies whether the field ID (from top specified by `display-number` attribute) to be used as basis for ranking display is sorted in descending or ascending order. Specifies `TRUE` for descending order or `FALSE` for ascending order. When omitted, `in-descending-order` will be `FALSE`.
Element	`realtime-indication-settings`	
Subelements	None	

Table 4.29 view-type

Type	Description
Definition	Specifies the notation format of the report.
Value that can be specified	None
Omission	Allowed (display-key and graph-properties are all set to the default.)
Attributes	None
Element	report-definition
Subelements	display-key
	graph-properties

Table 4.30 display-key

Type	Description
Definition	Specify the field for sorting the record. To specify display-key, you cannot specify LINE, AREA, and STACKED_AREA in graph-type.
Value that can be specified	Specify a field ID.
Omission	Allowed (When omitted, the display is ordered by the time series.)
Attributes	in-descending-order. TRUE will display a descending-order sort. FALSE or omitted will display an ascending order sort.
Element	view-type
Subelements	None

Table 4.31 graph-properties

Type	Description	
Definition	Specifies the graph type and graph format. If a field with graph=true in the field attribute does not exist and you specify the graph-properties attribute, an error occurs.	
Value that can be specified	None	
Omission	Allowed	
Attributes	`show-areas-of-missing-data`	If data is missing when TRUE is specified because the agent was not running or for some other reason, and if the graph type is LINE, AREA or STACKED_AREA, and the data is multiple agents or multiple instances, that missing part is not displayed. If FALSE, the missing part is supplemented. When omitted, show-areas-of-missing-data will be FALSE.
	`series-direction`	To organize the displayed graph in units of records (row direction), specify BY_ROW. To organize in units of fields (column direction), specify BY_COLUMN. If graph-type is LINE, AREA, or STACKED_AREA, the specified value is ignored. If graph-type is LINE, AREA, or STACKED_AREA, and the multiple lines or the multiple agents, BY_COLUMN is set. For other than that, BY_ROW is set. When graph-type is other than LINE, AREA, or STACKED_AREA and series-direction is omitted, series-direction will be BY_ROW.
Element	view-type	Specify the report display format.
Subelements	graph-type	
	axis-labels	
	data-label	

Table 4.32 graph-type

Type	Description
Definition	Specifies the type of graph.
Value that can be specified (not case-sensitive)	COLUMN STACKED_COLUMN BAR STACKED_BAR PIE LINE AREA STACKED_AREA
Omission	Allowed (When omitted, graph-type is COLUMN.)
Attributes	None
Element	graph-properties
Subelements	None

Table 4.33 axis-labels

Type	Description
Definition	Specifies the X-axis and Y-axis labels of the graph. If you specify PIE in the graph-type attribute, do not specify an X-axis label or Y-axis label.
Value that can be specified	None
Omission	Allowed (When omitted, the X-axis and Y-axis labels are not displayed.)
Attributes	None
Element	graph-properties
Subelements	X-axis
	Y-axis

Table 4.34 x-axis

Type	Description
Definition	Specifies the X-axis label of the graph.
Value that can be specified	Specify in 0 to 40 characters.
Omission	Allowed (When omitted, the X-axis label is not displayed.)
Attributes	None
Element	axis-labels
Subelements	None

Table 4.35 y-axis

Type	Description
Definition	Specifies the Y-axis label of the graph.
Value that can be specified	Specify in 0 to 40 characters.
Omission	Allowed (When omitted, the Y-axis label is not displayed.)
Attributes	None
Element	axis-labels
Subelements	None

Table 4.36 data-label

Type	Description
Definition	Specifies the label display field. If you specify single instance for a record, historical-single-agent for the report type, and LINE, AREA, or STACKED_AREA for graph-type, an error occurs if you specify a data label.
Value that can be specified	None
Omission	Allowed (When omitted, data labels will not be displayed.)
Attributes	None
Element	graph-properties
Subelements	data-label1
	data-label2

Table 4.37 data-label1

Type	Description
Definition	Specifies the label display field of data label 1. It is also possible to additionally specify data label 2 to the data label. The value displayed in data label 2 is displayed in parenthesis to the right of data label 1.
Value that can be specified	When `report-type` is `historical-single-agent`: For a single-instance record: ▪ The field ID specified in the `fields` tag ▪ The `DATETIME` field For a multi-instance record: ▪ The field ID specified in the `fields` tag ▪ The `DATETIME` field ▪ The unique ODBC key field of the record When `report-type` is `historical-multiple-agents`: For a single-instance record: ▪ The field ID specified in the `fields` tag ▪ The `DATETIME` field ▪ The `DEVICEID` field ▪ The `PROD_INST` field When `report-type` is `realtime-single-agent`: For a single-instance record: ▪ The field ID specified in the `fields` tag ▪ The `RECORD_TIME` field For a multi-instance record: ▪ The field ID specified in the `fields` tag ▪ The `RECORD_TIME` field ▪ The unique ODBC key field of the record The unique key field of the record. (For the key fields, see the manual of each Agent.)
Omission	Allowed (When omitted, data label 1 will not be set.)
Attributes	None
Element	data-label
Subelements	None

Table 4.38 data-label2

Type	Description
Definition	Specify the label display field of data label 2 with a field ID that corresponds to the record. Specifying the data-label2 without specifying data-label1 will cause an error.
Value that can be specified	When `report-type` is `historical-single-agent`: For a single-instance record: ▪ The field ID specified in the `fields` tag ▪ The `DATETIME` field For a multi-instance record: ▪ The field ID specified in the `fields` tag ▪ The `DATETIME` field ▪ The unique ODBC key field of the record When `report-type` is `historical-multiple-agents`: For a single-instance record: ▪ The field ID specified in the `fields` tag ▪ The `DATETIME` field ▪ The `DEVICEID` field ▪ The `PROD_INST` field When `report-type` is `realtime-single-agent`: For a single-instance record: ▪ The field ID specified in the `fields` tag ▪ The `RECORD_TIME` field For a multi-instance record: ▪ The field ID specified in the `fields` tag ▪ The `RECORD_TIME` field ▪ The unique ODBC key field of the record The unique key field of the record. (For the key fields, see the manual of each Agent.)
Omission	Allowed (When omitted, data label 2 will not be set.)
Attributes	None
Element	data-label
Subelements	None

Table 4.39 drilldown

Type	Description
Definition	Specifies the drilldown target field and report.
Value that can be specified	None
Omission	Allowed (When omitted, drilldown will not be set.)
Attributes	None
Element	report-definition

Type	Description
Subelements	field-drilldown
	report-drilldown

Table 4.40 field-drilldown

Type	Description
Definition	Specifies the drilldown target field.
Value that can be specified	None
Omission	Allowed (When omitted, a drilldown target field will not be set.)
Attributes	None
Element	Drilldown
Subelements	ref-field

Table 4.41 ref-field

Type	Description
Definition	Specifies the drilldown target field.
Value that can be specified	None. The field on the left side of the condition expression of a child attribute is the field of a drilldown report specified with ref-report of a child attribute.
Omission	Allowed (When omitted, a drilldown target field will not be set.)
Attributes	id Specifies the field ID corresponding to the record specified in record. An error will occur if the same ID is specified, or if the elements of ref-field are specified more than once. When id is omitted, you cannot specify condition-expression.
Element	field-drilldown
Subelements	ref-report
	condition-expression

Table 4.42 report-drilldown

Type	Description
Definition	Specifies the drilldown target report.
Value that can be specified	None
Omission	Allowed (When omitted, a drilldown target report will not be set.)
Attributes	None
Element	Drilldown
Subelements	ref-report

Table 4.43 ref-report

Type	Description
Definition	Specifies one report definition
Value that can be specified	None
Omission	Allowed (When omitted, a drilldown target report will not be set.)
Attributes	pathname The directory path and the report definition name are specified in the format directory-path/report-definition-name. Specify the name from the root directory, using / as a separator. If \ or / are included in the directory name, replace them with \\ or \ respectively. The directory name and report definition name may include 1 to 64 characters (not 1 to 64 bytes). If a report definition that does not exist is specified, an error will occur. If data-model-version-of-report-A is greater than or equal to data-model-version-of-report-B, you can drill down from report A to report B.
Element	ref-field
	report-drilldown
Subelements	None

Figure 4.7 is an example of a parameter file for a historical report.

```
<?xml version="1.0" encoding="UTF-8"?>
<!--  Workload Status (Multi-Agent) Report -->
<!--  Displays the workload related data per hour, -->
<!--  for multiple systems in the last 24 hours. -->
<!DOCTYPE pr-cli-parameters SYSTEM "rdef_create_params.dtd">
<pr-cli-parameters ver="0100">
   <report-definitions>
      <report-definition name="Workload Status (Multi-Agent)"
                         parent-folder="/HQ/Monthly/Windows/Operating System/Status
Reporting/Daily Trend"
                         read-only="FALSE">
         <product-id>T3.0</product-id>
         <report-type type="historical-multiple-agents"/>
         <record id="PI">
            <fields>
               <field table="true"
                      list="false"
                      graph="true">PROCESSES</field>
               <field table="true"
                      list="false"
                      graph="false">SERVER_SESSIONS</field>
               <field table="true"
                      list="false"
                      graph="false">CONTEXT_SWITCHES_PER_SEC</field>
               <field table="true"
                      list="false"
                      graph="false">SYSTEM_CALLS_PER_SEC</field>
               <field table="true"
                      list="false"
                      graph="false">PCT_TOTAL_PROCESSOR_TIME</field>
               <field table="true"
                       list="false"
                       graph="false">PROCESSOR_QUEUE_LENGTH</field>
               <field table="true"
                       list="false"
                       graph="false">BYTES_TOTAL_PER_SEC</field>
            </fields>
         </record>
         <indication-settings specify-when-displayed="false"
```

```
                        maximum-number-of-records="1440">
               <date-range>WITHIN_THE_PAST_24_HOURS</date-range>
               <report-interval>HOUR</report-interval>
               <peak-time/>
         </indication-settings >
         <view-type>
            <graph-properties show-areas-of-missing-data="false"
                                    series-direction="BY_COLUMN">
               <graph-type>LINE</graph-type>
               <axis-labels>
                  <x-axis/>
                  <y-axis>Processes</y-axis>
               </axis-labels>
               <data-label>
                  <data-label1>PROCESSES</data-label1>
                  <data-label2/>
               </data-label>
            </graph-properties>
         </view-type>
      </report-definition>
   </report-definitions>
</pr-cli-parameters>
<!-- Workload Status (Multi-Agent) Report definition complete -->
```

Figure 4.7 Sample Parameter File (jpcrdef create) for Historical Reports

Figure 4.8 is an example of the parameter file entry format for real-time reports.

```
<?xml version="1.0" encoding="UTF-8"?>
<!--  CPU Usage - The Top 10 Processes report shows -->
<!--  the 10 processes with the highest CPU usage ratio.-->
<!DOCTYPE pr-cli-parameters SYSTEM "rdef_create_params.dtd">
<pr-cli-parameters ver="0100">
  <report-definitions>
    <report-definition name="CPU Usage - Top 10 Processes"
       parent-folder="/HQ/Monthly/Windows/Operating System/Troubleshooting/Real-Time"
       read-only="FALSE">
      <product-id>T3.0</product-id>
      <report-type type="realtime-single-agent"/>
      <record id="PD_PDI">
         <fields>
            <field table="false"
                   list="false"
                   graph="false">INSTANCE</field>
            <field table="true"
                   list="false"
                   graph="false">ID_PROCESS</field>
            <field table="false"
                   list="false"
                   graph="true">PCT_PROCESSOR_TIME</field>
         </fields>
      </record>
      <realtime-indication-settings
         specify-when-displayed="false"
         indicate-delta-value="false">
         <refresh-interval do-not-refresh-automatically="false"
                   initial-value="30"
                   minimum-value="10" />
         <display-by-ranking field="PCT_PROCESSOR_TIME"
                   display-number="10"
                   in-descending-order="false" />
      </realtime-indication-settings>
      <view-type>
         <graph-properties show-areas-of-missing-data="false"
                series-direction="BY_COLUMN">
```

```
          <graph-type>BAR</graph-type>
          <axis-labels>
             <x-axis>Program(PID)</x-axis>
             <y-axis>CPU %</y-axis>
          </axis-labels>
          <data-label>
             <data-label1>INSTANCE</data-label1>
             <data-label2>ID_PROCESS</data-label2>
          </data-label>
        </graph-properties>
      </view-type>
    </report-definition>
  </report-definitions>
</pr-cli-parameters>
<!-- CPU Usage - Top 10 Processes Report definition complete -->
```

Figure 4.8 Sample Parameter File for Real-time Reports

Figure 4.9 shows the DTD file (rdef_create_params.dtd) defining the parameter entries.

```
<!ENTITY    % BOOL_VALUE       "(true|false|TRUE|FALSE)">
<!ENTITY    % COND_CHILD       "(expression|or|and)">
<!ELEMENT   pr-cli-parameters   (report-definitions)>
<!ATTLIST   pr-cli-parameters
            ver                 (0100)                  #REQUIRED>
<!ELEMENT   report-definitions  (report-definition+)>
<!ELEMENT   report-definition(product-id,
            report-type,
            record,
            (indication-settings?|realtime-indication-settings?),
            view-type?,
            drilldown?)>
<!ATTLIST   report-definition
            name                CDATA               #REQUIRED
            parent-folder       CDATA               #REQUIRED
            id                  CDATA               #IMPLIED
            read-only           %BOOL_VALUE;       "FALSE">
<!ELEMENT   product-id          (#PCDATA)>
<!ELEMENT   report-type         EMPTY>
<!ATTLIST   report-type
            type                (historical-multiple-agents |
                                 HISTORICAL-MULTIPLE-AGENTS |
                                 historical-single-agent    |
                                 HISTORICAL-SINGLE-AGENT)    |
                                 realtime- single-agent     |
                                 REALTIME-SINGLE-AGENT)
                                 #REQUIRED>
<!ELEMENT   record              (fields,condition-expression?)>
<!ATTLIST   record
            id                  CDATA               #REQUIRED>
<!ELEMENT   fields              (field+)>
<!ELEMENT   field               (#PCDATA)>
<!ATTLIST   field
            table               %BOOL_VALUE;      "FALSE"
            list                %BOOL_VALUE;      "FALSE"
            graph               %BOOL_VALUE;      "FALSE"
            display-name        CDATA               #IMPLIED>
<!ELEMENT   condition-expression %COND_CHILD;>
<!ELEMENT   expression          (#PCDATA)
<!ATTLIST   expression
            specify-when-displayed  %BOOL_VALUE;      "FALSE">
<!ELEMENT   and                 (%COND_CHILD;,%COND_CHILD;)>
<!ELEMENT   or                  (%COND_CHILD;,%COND_CHILD;)>
<!ELEMENT   indication-settings
                    (date-range?,report-interval?,peak-time?)>
<!ATTLIST   indication-settings
            specify-when-displayed  %BOOL_VALUE;      #IMPLIED
```

```
            maximum-number-of-records            NMTOKEN   #IMPLIED>
<!ELEMENT   date-range           (#PCDATA)>
<!ELEMENT   report-interval      (#PCDATA)>
<!ELEMENT   peak-time            (#PCDATA)>
<!ELEMENT   realtime-indication-settings
            (refresh-interval?,display-by-ranking?)>
<!ATTLIST   realtime-indication-settings
            specify-when-displayed  %BOOL_VALUE;      "FALSE"
            indicate-delta-value    %BOOL_VALUE;      "TRUE">
<!ELEMENT   refresh-interval EMPTY>
<!ATTLIST   refresh-interval
              do-not-refresh-automatically   %BOOL_VALUE;  "FALSE"
            initial-value           NMTOKEN   #IMPLIED
            minimum-value           NMTOKEN   #IMPLIED>
<!ELEMENT   display-by-ranking EMPTY>
<!ATTLIST   display-by-ranking
              field                   CDATA     #REQUIRED
              display-number          NMTOKEN   #IMPLIED
             in-descending-order     %BOOL_VALUE;      "FALSE">
<!ELEMENT   view-type            (display-key?,graph-properties?)>
<!ELEMENT   display-key          (#PCDATA)>
<!ATTLIST   display-key
            in-descending-order  %BOOL_VALUE;           "FALSE">
<!ELEMENT   graph-properties
                      (graph-type?,axis-labels?,data-label?)>
<!ATTLIST   graph-properties
            series-direction
            (by_row|by_column|BY_ROW|BY_COLUMN) "BY_ROW"
            show-areas-of-missing-data  %BOOL_VALUE;       "FALSE">
<!ELEMENT   graph-type           (#PCDATA)>
<!ELEMENT   axis-labels          (x-axis?,y-axis?)>
<!ELEMENT   x-axis               (#PCDATA)>
<!ELEMENT   y-axis               (#PCDATA)>
<!ELEMENT   data-label           (data-label1?,data-label2?)>
<!ELEMENT   data-label1          (#PCDATA)>
<!ELEMENT   data-label2          (#PCDATA)>
<!ELEMENT   drilldown
           (report-drilldown?,field-drilldown?)>
<!ELEMENT   report-drilldown     (ref-report*)>
<!ELEMENT   ref-report EMPTY>
<!ATTLIST   ref-report
            pathname             CDATA            #REQUIRED>
<!ELEMENT   field-drilldown      (ref-field*)>
<!ELEMENT   ref-field
            (ref-report,condition-expression?)>
<!ATTLIST   ref-field
            id                   CDATA            #REQUIRED>
```

Figure 4.9 Sample DTD (rdef_create_params.dtd) File Defining Parameter Entries

Notes:

- When an exception occurs during repeated registration of multiple report definitions, the command will stop the registration of that definition. If there are other definitions, it will go on to register those definitions.
- See the individual Agent manuals for the records, field names, and field data types that can be defined. You can specify at most two elements under the **<and>** and **<or>** tags of the **<condition-expression>** tag.

Figure 4.10 is an example of a <and> and <or> tags.

```
<and>
   <expression>formula-1</expression>
   <or>
      <expression> formula-2</expression>
      <or>
         <expression> formula-3</expression>
         <or>
            <expression> formula-4</expression>
            <expression> formula-5</expression>
         </or>
      </or>
   </or>
</and>
```

Figure 4.10 Sample <and> and <or> Tags

Figure 4.11 is an example of an <expression> tag.

```
<expression>SEGMENTS_RETRANSMITTED&gt;"100"</expression>
<expression>RECORD_TIME&gt;"31 05 2003 11:22:33"</expression>
```

Figure 4.11 Sample <expression> Tag

A report definition is created by applying the default values for the parameters that were not specified. You need to confirm the parameters of the report definition, specify that parameter file and execute the output command.

If you specify **Line**, **AREA**, or **STACKED_AREA** as the **graph-type**, you may not specify multiple instances and fields or a **display-key**.

An historical report (single agent) can handle only a single instance.

Table 4.44, Table 4.45, and Table 4.46 show the combinations of record attributes and fields that can be specified for historical and real-time reports.

Table 4.44 Parameter Combinations That Can Be Specified for Historical Reports

Report Type	Record Type	Field Data Type	Peak Time	Table	List	Graph	Display-Key
History (Single Agent) Report	Single instance	string	No	Yes	Yes	No	Yes
		char	No	Yes	Yes	No	Yes
		time_t	No	Yes	Yes	No	Yes
		timeval	No	Yes	Yes	Yes	Yes
		utime	No	Yes	Yes	Yes	Yes
		float	Yes	Yes	Yes	Yes	Yes
		ulong	Yes	Yes	Yes	Yes	Yes
		short	Yes	Yes	Yes	Yes	Yes
		double	Yes	Yes	Yes	Yes	Yes
		long	Yes	Yes	Yes	Yes	Yes
	Multiple instance	string	No	Yes	Yes	No	Yes
		char	No	Yes	Yes	No	Yes
		time_t	No	Yes	Yes	No	Yes
		timeval	No	Yes	Yes	Yes	Yes
		utime	No	Yes	Yes	Yes	Yes
		float	No	Yes	Yes	Yes	Yes
		ulong	No	Yes	Yes	Yes	Yes
		short	No	Yes	Yes	Yes	Yes
		double	No	Yes	Yes	Yes	Yes
		long	No	Yes	Yes	Yes	Yes
History (Multiple Agent) Report	Single instance	string	No	Yes	Yes	No	No
		char	No	Yes	Yes	No	No
		time_t	No	Yes	Yes	No	No
		timeval	No	Yes	Yes	Yes	No
		utime	No	Yes	Yes	Yes	No
		float	Yes	Yes	Yes	Yes	No
		ulong	Yes	Yes	Yes	Yes	No
		short	Yes	Yes	Yes	Yes	No
		double	Yes	Yes	Yes	Yes	No
		long	Yes	Yes	Yes	Yes	No

Table 4.45 Parameter Combinations That Can Be Specified for Real-time Reports

Report Type	Record Type	Field Data Type	Display by Ranking	Field Display Format			
				Table	List	Graph	Display-Key
Real-time (single agent) report	Single instance	string	No	Yes	Yes	No	Yes
		char	No	Yes	Yes	No	Yes
		time_t	No	Yes	Yes	No	Yes
		timeval	No	Yes	Yes	Yes	Yes
		utime	No	Yes	Yes	Yes	Yes
		float	No	Yes	Yes	Yes	Yes
		ulong	No	Yes	Yes	Yes	Yes
		short	No	Yes	Yes	Yes	Yes
		double	No	Yes	Yes	Yes	Yes
		long	No	Yes	Yes	Yes	Yes
	Multiple instances	string	No	Yes	Yes	No	Yes
		char	No	Yes	Yes	No	Yes
		time_t	No	Yes	Yes	No	Yes
		timeval	Yes	Yes	Yes	Yes	Yes
		utime	Yes	Yes	Yes	Yes	Yes
		float	Yes	Yes	Yes	Yes	Yes
		ulong	Yes	Yes	Yes	Yes	Yes
		short	Yes	Yes	Yes	Yes	Yes
		double	Yes	Yes	Yes	Yes	Yes
		long	Yes	Yes	Yes	Yes	Yes

Table 4.46 Allowable Record Attribute and Field Combinations

Report Type	Record Attribute	Single Field	Multiple Fields
History (single agent) report	Single instance	Yes	Yes
	Multiple instances	Yes	No
History (multiple agent) report	Single instance	Yes	No
Real-time (single agent) report	Single instance	Yes	Yes
	Multiple instances	Yes	No

Table 4.47 and Table 4.48 show the filter conditions that can be specified by the **time_t** field.

Table 4.47 Filter Condition Set By time_t field: Set In Record

Specify-When -Displayed Set	Conditional Expression	Time_t Type Field (except Date, Time field)	Date Field in time_t Type Field	Time Field in time_t Type Field
TRUE	Value	Yes	Yes	Yes
	Omission	Yes	Yes	Yes
FALSE	Value	No	No	Yes
	Omission	No	No	No

Table 4.48 Filter Condition Set By time_t field: Set In Ref-Field

Specify-When -Displayed Set	Conditional Expression	Time_t Type Field (except Date, Time field)	Date Field in time_t Type Field	Time Field in time_t Type Field
TRUE	Field ID	No	No	No
	Value	No	No	Yes
	Omission	Yes	Yes	Yes
FALSE	Field ID	Yes	Yes	Yes
	Value	No	No	Yes
	Omission	No	No	No

Delta values for real-time reports differ depending on each field of each record collected by the Agent. For information about whether delta values are collected in delta values and record fields, see the chapter explaining records (listing the fields for each record) in the manual of each Agent.

Table 4.49 lists the display conditions and contents of delta values for real-time reports. In this table, "Yes" means delta values are collected and "No" means delta values are not collected. Depending on the Agent, there may be some items that do not match those in the table. For details, check the manual of each Agent.

Table 4.49 Display Conditions of Delta Values for Real-time Reports

indicate-delta-value attribute in **realtime-indication-settings**	Delta Attribute for Each Field	Contents Displayed
TRUE	Yes	The difference in performance data between that collected previously and that collected recently
	No	Recently collected values
FALSE	Yes	The cumulative value of performance data since collection started
	No	Recently collected values

Table 4.50 lists fields that cannot be specified in real-time reports.

Table 4.50 Fields that Cannot Be Specified for Real-time Reports

Name in Performance Reporter	Manager Name	Description
Agent Host	DEVICEID	Instance name [*host name*] or host name
Agent Instance	PROD_INST	Instance name of the Agent
Agent Type	PROD_ID	Product ID of the Agent (1-byte identifier)
Date	DATE	Record creation date (GMT)
Date and Time	DATETIME	Combination of the Date and Time fields
Drawer Type	DRAWER_TYPE	Drawer type as summarized in the PI database
GMT Offset	GMD_ADJUST	Difference (in seconds) between Greenwich Mean Time and local time
Time	TIME	Record creation date (GMT)
xxxx (Total)	*xxxx*_TOTAL	For a PI record, the total value calculated when data was summarized
*xxx*x_TOTAL_SEC (Total)	*xxxx*_TOTAL_SEC	The total value during the data aggregation period
*xxxx*_HI (Max)	*xxxx*_HI	The maximum value during the data aggregation period
*xxxx*_LO (Min)	*xxxx*_LO	The minimum value during the data aggregation period
*xxxx*_OV (OV)	*xxxx*_OV	The number of times an overflow occurred during the data aggregation period

Usage Example

In the following example, the command registers a new parameter file (rdef_create.xml) that contains the contents of report definitions:

```
jpcrdef  create  rdef_create.xml
```

Output Example

Figure 4.12 shows the standard output when three report definitions and two report definition directories were specified, but two of the report definitions caused an error.

```
jpcrdef create connected to vserv01 at 20 03 2003 15:00:55.282
create result OK  : report-definition-directory-path1/report-definition-name1
create result OK  : report-definition-directory-path2/report-definition-name2
create result ERR : report-definition-directory-path3
error-cause
jpcrdef create disconnected at 20 03 2003 15:01:06.2
```

Figure 4.12 Sample Output to Standard Output File (jpcrdef create rdef_create.xml)

4.4.1.3 jpcrdef delete

Format

```
jpcrdef delete      [ -y ]
                    [ -mx maximum-heap-size ]
                    [ -ms initial-heap-size ]
                    input-file
```

Function

The jpcrdef delete command connects to Collection Manager, and deletes the specified report definition(s). If you specify a report definition directory, that will delete all report definitions or directories within that directory. The report definitions and report definition directories of the deletion target are obtained from the XML-format parameter file specified as a command line argument. You can specify multiple report definitions in a single parameter file, thereby deleting multiple report definitions in a batch.

Return Values

See Table 4.10.

Parameter file format

Table 4.51 report-definitions

Type	Description
Definition	Root tag of the report definition information
Value that can be specified	None
Omission	Not allowed
Attributes	None
Element	pr-cli-parameters
Subelements	report-definition

Table 4.52 report-definition

Type	Description	
Definition	Specifies one report definition	
Value that can be specified	None	
Omission	Not allowed	
Attributes	name	Specify the report definition name in 1 to 64 characters (not 1 to 64 bytes). Replace \ with \\, and / with \. If the name attribute is omitted, that will delete the report definition directory specified in the parent-folder attribute and any lower-level subdirectories or files. Specify the report name without spaces, because a space character is specified before and after the report definition name.
	parent-folder	Specifies the directory where the report definition of the name attribute is stored. Specify a directory name consisting of 1 to 64 characters (not 1 to 64 bytes). Specify the name from the root directory, using / as a separator. Specify a path by using / separator symbols from the upper level directory name. Replace \ with \\, and / with \. Specify the report name without spaces, because a space character is specified before and after the report definition name. Omitting the name attribute will delete the report definition directory specified in the parent-folder attribute, as well as any lower-level subdirectories or files. Omitting this attribute will result in an error.
	id	Ignored even if specified.
	read-only	If set to TRUE, the report definition deletion will be cancelled and the next report-definition attribute will be processed. If set to FALSE or omitted, the report definition is deleted.
Element	report-definitions	
Subelements	product-id	Ignored even if specified.
	report-type	
	Record	
	indication-settings	
	view-type	
	Drilldown	

Figure 4.13 shows an example of a parameter file.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE pr-cli-parameters SYSTEM "rdef_delete_params.dtd">
<pr-cli-parameters ver="0100">
   <report-definitions>
        <report-definition name="Workload Status (Multi-Agent)"
                parent-folder="/UserReport"/>
      <report-definition name="daily report"
                parent-folder="/UserReport"
                read-only="FALSE"/>
      <report-definition name=""
                parent-folder="/UserReport/report1"/>
   </report-definitions>
</pr-cli-parameters>
```

Figure 4.13 Sample Parameter File (jpcrdef delete)

Figure 4.14 shows the DTD (rdef_delete_params.dtd) for the parameter file.

```
<!ENTITY     % BOOL_VALUE     "(true|false|TRUE|FALSE)">
<!ELEMENT pr-cli-parameters    (report-definitions)>
<!ATTLIST pr-cli-parameters
          ver                  (0100)                #REQUIRED>
<!ELEMENT report-definitions   (report-definition+)>
<!ELEMENT report-definition    ANY>
<!ATTLIST report-definition
          name                 CDATA                 #IMPLIED
          parent-folder        CDATA                 #REQUIRED
          id                   CDATA                 #IMPLIED
          read-only            %BOOL_VALUE;          "FALSE">
```

Figure 4.14 Sample DTD (rdef_delete_params.dtd) File Defining the Parameter Entries

Notes:

- You cannot delete report definitions and report definition directories for a solution set.
- If you specify report definition directories or report definitions that do not exist, no error will result and the system will respond with a successful deletion.
- If you specify a report definition directory for deletion and deletion of one of the lower level definitions or directories fails, the program will skip the processing for that report definition directory, and proceed to another report definition or report definition directory processing specified in the parameter file.
- If you specify multiple report definitions or report definition directories for deletion and an error occurs while one of the definitions or directories is being deleted, the program will cancel that processing and continue to process another report definition or report definition directory.

Usage Example

In the following example, the command deletes report definitions in the parameter file **rdef_del02.xml**. The command requests confirmation before deletion.

```
jpcrdef  delete  rdef_del02.xml
```

Output Example

Figure 4.15 shows the output to the standard output when ten report definitions and five report definition directories were specified, but three of the report definitions caused an error:

```
jpcrdef delete connected to vserv01 at 20 03 2003 15:00:55.282
delete result OK  : report-definition-directory-path1/report-definition-name11
delete result OK  : report-definition-directory-path2/report-definition-name21
delete result ERR : report-definition-directory-path3
          Skipped : report-definition-directory-path3/report-definition-name31
error-cause
              OK  : report-definition-directory-path3/report-definition-name32
          Skipped : report-definition-directory-path3/report-definition-name33
error-cause
              OK  : report-definition-directory-path3/report-definition-name34
              OK  : report-definition-directory-path3/report-definition-name35
delete result ERR : report-definition-directory-path4/report-definition-name41
error-cause
delete result OK  : report-definition-directory-path5
              OK  : report-definition-directory-path5/report-definition-name51
              OK  : report-definition-directory-path5/report-definition-name52
jpcrdef delete disconnected at 20 03 2003 15:01:06.2
```

Figure 4.15 Sample Standard Output (jpcrdef delete)

In the preceding example, ten report definitions and five report definition directories were specified. However, three report definitions remain because they could not be deleted for the report definition directory path 3:

- report-definition-directory-path3/report-definition-name-31
- report-definition-directory-path3/report-definition-name-33
- report-definition-directory-path4/report-definition-name-41

4.4.1.4 jpcasrec output

Format

```
jpcasrec output     [ -mx maximum-heap-size ]
                    [ -ms initial-heap-size ]
                    -o output-file
                    service-ID
```

Function

The jpcasrec output command outputs definition information related to Store database recording methods in XML format. Output files can be specified as jpcasrec update command input files.

Return Values

See Table 4.10.

Usage Example

The command outputs the definition information related to the recording method of the Store database of the Agent whose service ID is TA1host11. The command outputs the information to the parameter file asrec_output.xm1.

```
jpcasrec  output  -o asrec_output.xml  TA1host1
```

Output Example

Figure 4.16 shows the standard output format. Execution results are displayed for service IDs specified in the arguments (OK or ERR).

```
jpcasrec output connected to hostname at dd MM yyyy HH:MM:SS.mmm
output result  OK  : TA1host1
jpcasrec output disconnected at dd MM yyyy HH:MM:SS.mmm
```

Figure 4.16 Sample Standard Output (jpcasrec output)

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE pr-cli-parameters SYSTEM "asrec_params.dtd">
<pr-cli-parameters ver="0100">
<agent-store-db-record-definition>
    <service id="TA1host1">
        <record id="PD_CIND">
            <!-- Description : Content Index Detail -->
            <log>Yes</log>
            <collection-interval>600</collection-interval>
            <collection-offset>0</collection-offset>
            <logif>
             <and>
              <or>
                <expression>RECORD_TIME&lt;"01:23:45"</expression>
                <expression>INTERVAL&lt;"2000"</expression>
              </or>
              <expression>INSTANCE&lt;"INST"</expression>
              </and>
            </logif>
        </record>
```

```
        <record id="PD_CINF">
            <!-- Description : Content Index Filter Detail -->
            <log>No</log>
            <collection-interval>60</collection-interval>
            <collection-offset>0</collection-offset>
            <logif> </logif>
        </record>
        <record id="PD_DEV">
            <!-- Description : Devices Detail -->
            <log>Yes</log>
            <collection-interval>480</collection-interval>
            <collection-offset>60</collection-offset>
            <logif> </logif>
        </record>
          :
          :
          :
    </service>
</agent-store-db-record-definition>
</pr-cli-parameters>
```

Figure 4.17 Sample DTD (jpcasrec output) File Defining Parameter Entries

4.4.1.5 jpcasrec update

Format

```
jpcasrec update     [ -mx maximum-heap-size ]
                    [ -ms initial-heap-size ]
                    input-file
```

Function

The jpcasrec update command connects to an Agent and modifies the defined information recording methods of the Store database. The information to be modified is in an XML-format parameter file specified as a command-line argument. You can specify multiple Store database definitions in a single parameter file, and modify them all at once.

Return Values

See Table 4.10.

Parameter file format

Table 4.53 agent-store-db-record-definition

Type	Explanation
Definition	Root tag for changing the Store database recording method
Value that can be specified	None
Omission	Not allowed
Attributes	None
Element	pr-cli-parameters
Subelements	service (Multiple specifications are possible.)

Table 4.54 service

Type	Explanation
Definition	Specifies the service that identifies the Agent.
Value that can be specified	None
Omission	Not allowed
Attributes	Id (Service ID, 4 - 258 characters. In the first position, specifies the product ID of the Agent. For information about the product ID, see the manual for each Agent. In the second position, specify A (Agent).
Element	agent-store-db-record-definition
Subelements	record (Multiple specifications are possible.)

Table 4.55 record

Type	Explanation
Definition	Specify the record ID to modify.
Value that can be specified	None
Omission	Not allowed
Attributes	id (Record ID, 1- 8 characters.) Specify the record ID indicated in individual Agent manuals.
Element	Service
Subelements (Can be specified only once for each record, and can be omitted.)	log
	collection-interval
	collection-offset
	logif

Note: When a subelement is omitted, the corresponding item is not updated. When the subelement is specified, specify it in the order above.

Table 4.56 log

Type	Explanation
Definition	Specifies whether to collect performance data to be stored in the Store database.
Value that can be specified	Alphabetical characters. Yes: Collect data (however, if Collection Interval is set to 0, performance data is not collected). No: Do not collect data. Not case-sensitive
Omission	Allowed (When omitted, the log is not updated.)
Attributes	None
Element	Record
Subelements	None

Table 4.57 collection-interval

Type	Explanation
Definition	Specifies performance data collection interval in seconds.
Value that can be specified	The following numerical characters: ▪ 0 ▪ A value from 60 to 3,600 that is a multiple of 60, and is also a whole divisor of 3,600 ▪ A value from 3,600 to 86,400 that is a multiple of 3,600, and is also a whole divisor of 86,400 If a value other than those described above is specified, performance data might not be stored properly. If 0 is set, performance data will not be collected.
Omission	Allowed (When omitted, collection-interval is not updated.)
Attributes	None
Element	Record
Subelements	None

Table 4.58 collection-offset

Type	Explanation
Definition	Specifies the offset value in seconds used to shift the start time for collecting performance data for each record.
Value that can be specified	Numerical characters 0 - 32767 (However, you also need to specify the value according to the conditions specified in Collection Interval.)
Omission	Allowed (When omitted, collection-offset is not updated.)
Attributes	None
Element	Record
Subelements	None

Table 4.59 logif

Type	Explanation
Definition	Specifies the criteria for recording performance data in the Store database.
Value that can be specified	None
Omission	Allowed (When omitted, logif is not updated.)
Attributes	delete If “yes” is specified, any subelement specification is ignored, and the registered expression is deleted. When this attribute is omitted, criteria are registered in accordance with the subelement specification.)
Element	Record

Type	Explanation
Subelements	expression (More than one may be specified; can be omitted.)
	and (Used to specify multiple instances of expression when more than one exists; can be omitted.)
	or (Used to specify multiple instances of expression when more than one exists; can be omitted.)

Table 4.60 expression

Type	Explanation
Definition	Specifies the criteria for recording performance data in the Store database.
Value that can be specified	General formatting rules: Specify the conditional expression using the format **fieldcondition"value"**. Do not use a space to delimit the field, condition and value. Do not specify a field on the right hand side. If you specify expression attributes, the format is a binary (two operand) operator that specifies two expression attributes by enclosing them with logical operator (and or or) tags. You can nest binary operators, but you cannot specify polynomial (multiple operand) operations. If you use = or Not = other than in a condition, place a \ immediately before the character. If you use \ specify \\. **Field** Use the Manager name to specify a field included in a record. For information about the Manager name, see the explanation of records in each Agent manual. condition = indicates that the value of the field and "value" are equivalent. < indicates that the value of the field is smaller than "value". <= indicates that the value of the field is smaller than or equal to "value". > indicates that the value of the field is larger than "value". >= indicates that the value of the field is larger than or equal to "value". <> indicates that the value of the field and "value" is different. For XML notation, use "<" for "<" and ">" for ">". In the case of a character string field, comparison is done in ascending order of ASCII codes. **value** Use the field format written in individual Agent manuals. You can specify values in the following ranges: Character: sets the specification value as is. Integer: sets a value within the range of values allowed for Integer.) Decimal: sets a value within the range of values allowed for Double. When the number of digits after the decimal point is more than four, the number is rounded to the fourth digit using IEEE754 specifications. See *Note.* Date (Time is fixed at `HH:mm:ss`.) You cannot specify control characters or any of the following characters: comma (,), period (.) < > = ‘‘.
Omission	Not allowed
Attributes	None
Element	Logif
	And
	Or
Subelements	None

Note: IEEE754 specifies the method for rounding numbers as follows: Compare the distance of the two nearest approximate values from the number to be rounded and round to the nearest. When the distances of the two nearest approximate values from the number to be rounded are the same, represent the two approximate values as binary digits and round to the nearest approximate value that has "0" in the lowest digit.

Table 4.61 and

Type	Explanation
Definition	Specifies a logical AND operation on the items specified in expression.
Value that can be specified	None
Omission	Allowed
Attributes	None
Element	Logif
	And
	Or
Subelements	expression: Can be specified more than once; can be omitted.
	and: Used to specify multiple instances of expression when more than one exists. Can be omitted.
	or: (Used to specify multiple instances of expression when more than one exists. Can be omitted.)

Table 4.62 or

Type	Explanation
Definition	Specifies a logical OR operation on the items specified in expression.
Value that can be specified	None
Omission	Allowed
Attributes	None
Element	Logif
	And
	Or
Subelements	expression (More than one can be specified. This setting can be omitted.)
	and (Used to specify multiple expressions when more than one exists. This setting can be omitted.)
	or (Used to specify multiple expressions when more than one exists. This setting can be omitted.)

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE pr-cli-parameters SYSTEM "asrec_params.dtd">
<pr-cli-parameters ver="0100">
<agent-store-db-record-definition>
    <service id="TA1host1">
        <record id="PD_CIND">
            <log>Yes</log>
            <collection-interval>60</collection-interval>
            <collection-offset>0</collection-offset>
            <logif>
               <and>
                 <and>
                   <expression>RECORD_TIME="10:26:50"</expression>
                   <expression>UNIQUE_KEYS&gt;="40"</expression>
                 </and>
                 <or>
                   <expression>INSTANCE="abc"</expression>
                   <expression>INSTANCE="xyz"</expression>
                 </or>
               </and>
            </logif>
        </record>
        <record id="PD_CINF">
            <log>Yes</log>
            <collection-interval>300</collection-interval>
            <collection-offset>10</collection-offset>
            <logif delete="yes"/>
        </record>
        <record id="PD_DEV">
            <log>No</log>
        </record>
    </service>
</agent-store-db-record-definition>
</pr-cli-parameters>
```

Figure 4.18 Sample Parameter File (jpcasrec update)

```
<!ELEMENT pr-cli-parameters
                  (agent-store-db-record-definition)>
<!ATTLIST pr-cli-parameters    ver (0100) #REQUIRED>
<!ELEMENT agent-store-db-record-definition      (service+)>
<!ELEMENT service              (record+)>
<!ATTLIST service              id CDATA #REQUIRED>
<!ELEMENT record               (log?, collection-interval?,
                                collection-offset?, logif?)>
<!ATTLIST record               id CDATA #REQUIRED>
<!ELEMENT log                  (#PCDATA)>
<!ELEMENT collection-interval  (#PCDATA)>
<!ELEMENT collection-offset    (#PCDATA)>
<!ELEMENT logif                (expression| and| or)?>
<!ATTLIST logif                delete CDATA #IMPLIED>
<!ELEMENT expression           (#PCDATA)>
<!ELEMENT and                  ((expression| or| and),
                                   (expression| or| and))>
<!ELEMENT or                   ((expression| or| and),
                                   (expression| or| and))>
```

Figure 4.19 Sample DTD (jpcasrec update) File Defining the Parameter Entries

Notes:

- To set up the specified values of each tag, follow the notes in Setup for collecting performance data in each Agent manual.
- For the service IDs, record IDs, file names for each record ID, and range of values that can be specified, see the manual for each Agent.
- Different parameters can be modified for the service ID and the record ID. For specific information, see the manual for each Agent.
- Some records are handled by SyncCollectionWith, depending on the specified service IDs and record IDs. In such instances, neither collection-interval nor collection-offset can be specified. For specific information, see the manual for each Agent.
- If the specified service ID is not an agent product, an error will result.
- If the same service ID is specified multiple times, an error will result.
- If the same record ID is specified multiple times, an error will result.
- If a definition registration fails while multiple Store database recording method definitions are being registered in succession for each service ID unit, the command will cancel the registration of the failed definition and register other service ID units if there are any.
- No more than two elements can be specified under the <and> and <or> tags of the <logif> tag.

```
<and>
   <expression>formula-1</expression>
   <or>
      <expression> formula-2</expression>
      <or>
         <expression> formula-3</expression>
         <or>
            <expression> formula-4</expression>
            <expression> formula-5</expression>
         </or>
      </or>
   </or>
</and>
```

Figure 4.20 Sample Use of <and> and <or>Tags

```
<expression>SEGMENTS_RETRANSMITTED&gt;”100”</expression>
<expression>RECORD_TIME&gt;”11:22:33”</expression>
```

Figure 4.21 Sample Coding for <expression> Tag

Usage Example

In the following example, the command specifies the parameter file (`asrec_update.xml`) that contains the definitions related to the recording method of the Store database:

```
jpcasrec  update  asrec_update.xml
```

Output Example

Figure 4.22 shows the format of the standard output format when three service IDs are specified, and one results in an error. Execution results are displayed for each service ID that is specified in a service tag (OK or ERR).

```
jpcasrec update connected to hostname at dd MM yyyy HH:MM:SS.mmm
update result  OK  : TA1host1
update result  OK  : TA1host2
update result  ERR : TA1host3
jpcasrec update disconnected at dd MM yyyy HH:MM:SS.mmm
```

Figure 4.22 Sample Standard Output (jpcasrec update)

4.4.1.6 jpcaspsv output

Format

```
jpcaspsv output     [ -mx maximum-heap-size ]
                    [ -ms initial-heap-size ]
                    -o output-file
                    service-ID
```

Function

The jpcaspsv output command connects to the Agent, obtains definition information regarding the data retention conditions of the Store database, and outputs the obtained information in XML format. Output files can be specified as jpcaspsv update command input files.

Return Values

See Table 4.10.

Note: For the specifiable range of service IDs and record IDs, see the manual for each Agent. Non-updateable definition information is output to the output file as a comment.

Usage Example

In the following example, the command outputs definition information related to the recording method of the Store database for the Agent whose service ID is TS1host1. The command outputs this information to the parameter file aspsv_output.xml:

```
jpcaspsv  output  -o aspsv_output.xml  TS1host1
```

Output Example

Detailed information regarding command processing is output to the standard output, standard error output, and trace log file.

Figure 4.23 shows an example of output to the standard output. Execution results are displayed for service IDs specified in the arguments (OK or ERR).

```
jpcaspsv output connected to hostname at dd MM yyyy HH:MM:SS.mmm
output result  OK  : TS1host1
jpcaspsv output disconnected at dd MM yyyy HH:MM:SS.mmm
```

Figure 4.23 Sample Standard Output (jpcaspsv output)

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE pr-cli-parameters SYSTEM "aspsv_params.dtd">
<pr-cli-parameters>
<agent-store-db-preserve-definition>
    <service id="TS1host1">
        <product-interval>
            <minute-drawer>month</minute-drawer>
            <hour-drawer>month</hour-drawer>
            <day-drawer>month</day-drawer>
            <week-drawer>month</week-drawer>
            <month-drawer>month</month-drawer>
            <!-- year-drawer : Year -->
        </product-interval>
        <product-detail>
            <detail-record id="PD" max-rec="20000"/>
            <detail-record id="PD_THRD" max-rec="20000"/>
            <detail-record id="PD_ADRS" max-rec="20000"/>
            <detail-record id="PD_PDI" max-rec="20000"/>
            <detail-record id="PD_PEND" max-rec="20000"/>
            <detail-record id="PD_THD" max-rec="20000"/>
            <detail-record id="PD_IMAG" max-rec="20000"/>
            <detail-record id="PD_PAGF" max-rec="20000"/>
            <detail-record id="PD_CINF" max-rec="20000"/>
            <detail-record id="PD_CIND" max-rec="20000"/>
            <detail-record id="PD_GEND" max-rec="20000"/>
            <detail-record id="PD_SVC" max-rec="20000"/>
            <detail-record id="PD_DEV" max-rec="20000"/>
            <detail-record id="PD_ELOG" max-rec="20000"/>
        </product-detail>
        <product-log>
            <log-record id="PL" max-rec="20000"/>
            <log-record id="RM" max-rec="20000"/>
        </product-log>
    </service>
</agent-store-db-preserve-definition>
</pr-cli-parameters>
```

Figure 4.24 Sample DTD (jpcaspsv output) File Defining Parameter Entries

4.4.1.7 jpcaspsv update

Format

```
jpcaspsv update     [ -mx maximum-heap-size ]
                    [ -ms initial-heap-size ]
                    input-file
```

Function

The jpcaspsv update command connects to the Agent and modifies definition information regarding the data retention conditions of the Store database. This definition information to be modified is obtained from the XML-format parameter file specified as the command line argument.

Return Values

See Table 4.10.

Parameter file format

Table 4.63 agent-store-db-preserve-definition

Type	Explanation
Definition	Root tag for definition information regarding the store database retention conditions of the Store database
Value that can be specified	None
Omission	Not allowed
Attributes	None
Element	pr-cli-parameters
Subelements	service (Can be specified multiple times.)

Table 4.64 service

Type	Explanation
Definition	Specifies the service that identifies the Agent.
Value that can be specified	None
Omission	Not allowed
Attributes	Id (service ID; 4 - 258 characters). In the first position, specify any character except P (Collection Manager). In the first position, specifies the product ID of the Agent. For information about the product ID, see the manual for each Agent. In the second position, specify S (Agent Store).
Element	agent-store-db-preserve-definition
Subelements (When the sub-element is specified, specify it in the order shown)	product-interval (Can be specified only once for each service. This setting can be omitted.)
	product-detail (Can be specified only once for each service. This setting can be omitted.)
	product-log (Can be specified only once for each service. This setting can be omitted.)

Table 4.65 product-interval

Type	Explanation
Definition	Specifies the PI record data retention period.
Value that can be specified	None
Omission	Allowed (When omitted, product-interval is not modified.)
Attributes	None
Element	Service
Subelements (When the sub-element is specified, specify it in the order shown)	minute-drawer (Can be specified only once for each product-interval. This setting can be omitted.)
	hour-drawer (Can be specified only once for each product-interval. This setting can be omitted.)
	day-drawer (Can be specified only once for each product-interval. This setting can be omitted.)
	week-drawer (Can be specified only once for each product-interval. This setting can be omitted.)
	month-drawer (Can be specified only once for each product-interval. This setting can be omitted.)

Table 4.66 minute-drawer

Type	Explanation
Definition	Specifies the data retention period of PI records in minutes.
Value that can be specified	Specified in alphanumeric characters (not case sensitive). The following values may be specified: minute: 1 minute hour: 1 hour day: 1 day n days: n days (n must be a number from 2 to 6.) week: 1 week month: 1 month year: 1 year
Omission	Allowed (When omitted, minute-drawer is not updated.)
Attributes	None
Element	product-interval
Subelements	None

Table 4.67 hour-drawer

Type	Explanation
Definition	Specifies the data retention period of PI records in hours.
Value that can be specified	Specified in alphanumeric characters (not case sensitive). The following values may be specified: hour: 1 hour day: 1 day n days: n days (n must be a number from 2 to 6.) week: 1 week month: 1 month year: 1 year
Omission	Allowed (When omitted, hour-drawer is not modified.)
Attributes	None
Element	product-interval
Subelements	None

Table 4.68 day-drawer

Type	Explanation
Definition	Specifies the data retention period of PI records in hours.
Value that can be specified	Specified in alphanumeric characters (not case sensitive). The following values may be specified: day: 1 day n days: n days (n must be a number from 2 to 6.) week: 1 week month: 1 month year: 1 year
Omission	Allowed (When omitted, hour-drawer is not modified.)
Attributes	None
Element	product-interval
Subelements	None

Table 4.69 week-drawer

Type	Explanation
Definition	Specifies the data retention period of PI records in hours.
Value that can be specified	Specified in alphanumeric characters (not case sensitive). The following values may be specified: week: 1 week month: 1 month year: 1 year
Omission	Allowed (When omitted, hour-drawer is not modified.)
Attributes	None

Type	Explanation
Element	product-interval
Subelements	None

Table 4.70 month-drawer

Type	Explanation
Definition	Specifies the data retention period of PI records in hours.
Value that can be specified	Specified in alphanumeric characters (not case sensitive). The following values may be specified: month: 1 month year: 1 year
Omission	Allowed (When omitted, hour-drawer is not modified.)
Attributes	None
Element	product-interval
Subelements	None

Table 4.71 product-detail

Type	Explanation
Definition	Specifies the number of PD records retained.
Value that can be specified	None
Omission	Allowed (When omitted, product-detail is not modified.)
Attributes	None
Element	Service
Subelements	detail-record (Can be specified only once for each PD record. This setting can be omitted.)

Table 4.72 detail-record

Type	Explanation
Definition	Specifies the maximum number of PD records that can be retained.
Value that can be specified	None
Omission	Allowed (When omitted, detail-record is not modified.)
Attributes	id (PD record ID ; cannot be omitted.)
	max-rec (0 - 2147483647; cannot be omitted.)
Element	product-detail
Subelements	None

Table 4.73 product-log

Type	Explanation
Definition	Specifies the upper limit of the number of PL records that can be retained.
Value that can be specified	None
Omission	Allowed (When omitted, product-log is not modified.)
Attributes	None
Element	Service
Subelements	log-record (Can be specified only once. This setting can be omitted.)

Table 4.74 log-record

Type	Explanation
Definition	Specifies the upper limit of the number of PL records that can be retained.
Value that can be specified	None
Omission	Allowed (When omitted, log-record is not modified.)
Attributes	id (PL record ID; cannot be omitted.)
	max-rec (0 - 2147483647; cannot be omitted.)
Element	product-log
Subelements	None

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE pr-cli-parameters SYSTEM "aspsv_params.dtd">
<pr-cli-parameters ver="0100">
<agent-store-db-preserve-definition>
    <service id="TS1host1">
        <product-interval>
            <minute-drawer>day</minute-drawer>
            <hour-drawer>day</hour-drawer>
            <day-drawer>week</day-drawer>
            <week-drawer>month</week-drawer>
            <month-drawer>year</month-drawer>
            <!-- year-drawer : Year -->
        </product-interval>
        <product-detail>
            <detail-record id="PD" max-rec="30000"/>
            <detail-record id="PD_THRD" max-rec="30000"/>
            <detail-record id="PD_ADRS" max-rec="30000"/>
            <detail-record id="PD_PDI" max-rec="30000"/>
            <detail-record id="PD_PEND" max-rec="30000"/>
        </product-detail>
        <product-log>
            <log-record id="PL" max-rec="30000"/>
            <log-record id="RM" max-rec="30000"/>
        </product-log>
    </service>
</agent-store-db-preserve-definition>
</pr-cli-parameters>
```

Figure 4.25 Sample Parameter File (jpcaspsv update)

```
<!ELEMENT pr-cli-parameters
                  (agent-store-db-preserve-definition)>
<!ATTLIST pr-cli-parameters     ver (0100) #REQUIRED>
<!ELEMENT agent-store-db-preserve-definition  (service+)>
<!ELEMENT service               (product-interval?,
                                 product-detail?,
                                 product-log?)>
<!ATTLIST service               id CDATA #REQUIRED>
<!ELEMENT product-interval      (minute-drawer?, hour-drawer?,
                                 day-drawer?, week-drawer?,
                                 month-drawer?)>
<!ELEMENT minute-drawer         (#PCDATA)>
<!ELEMENT hour-drawer           (#PCDATA)>
<!ELEMENT day-drawer            (#PCDATA)>
<!ELEMENT week-drawer           (#PCDATA)>
<!ELEMENT month-drawer          (#PCDATA)>
<!ELEMENT product-detail        (detail-record*)>
<!ELEMENT detail-record         EMPTY>
<!ATTLIST detail-record         id CDATA #REQUIRED>
<!ATTLIST detail-record         max-rec CDATA #REQUIRED>
<!ELEMENT product-log           (log-record*)>
<!ELEMENT log-record            EMPTY>
<!ATTLIST log-record            id CDATA #REQUIRED>
<!ATTLIST log-record            max-rec CDATA #REQUIRED>
```

Figure 4.26 Sample DTD (jpcaspsv update) File Defining Parameter Entries

Notes:

- To set up the specified values of each tag, follow the notes in Setup for collecting performance data in each Agent manual.
- For the service IDs and record IDs that can be specified, see the manual for each Agent.
  - If the specified service ID is not the product of an agent, an error will result.
  - If the same service ID is specified multiple times, an error will result.
  - If the same record ID is specified multiple times, an error will result.
- If registration of a definition fails while multiple definitions for the data retention conditions of the Store database are being registered in succession, this command will cancel the registration of that definition but will register the other definitions, if there are any.
- Designation of the data retention period from minute-drawer to month-drawer is different for each unit. Data retention periods are unrelated to one another.

Usage Example

In the following example, the command specifies the parameter file `aspsv_update.xml` that contains the definition information related to the storage conditions of the Store database.

```
jpcaspsv  update  aspsv_update.xml
```

Output Example

Figure 4.27 shows the standard output format if three service IDs are specified and an error occurs in one. Execution results are displayed for each service ID that is specified in a service tag (OK or ERR).

```
jpcaspsv update connected to hostname at dd MM yyyy HH:MM:SS.mmm
update result  OK  : TS1host1
update result  OK  : TS1host2
update result  ERR : TS1host3
jpcaspsv update disconnected at dd MM yyyy HH:MM:SS.mmm
```

Figure 4.27 Sample DTD (jpcaspsv update)

4.4.1.8 jpcrpt

Format

```
jpcrpt              -o output-file
                    [ -mx maximum-heap-size ]
                    [ -ms initial-heap-size ]
                    [ -y ]
                    [ -rc number-of-updates ]
                    [ -ri update-interval ]
                    [ -dateformat date-format-pattern-name ]
                    [ -dateseparator date-format-separator-name ]
                    [ -exportseparator date-format-separator-name-for-report-output ]
                    input-file
```

Function

The jpcrpt command outputs a report to a file using the CSV format. The output definitions are obtained from the XML-format parameter file that is specified as a command line argument. In the parameter file, you can specify the report to be output and the items in the Show options window.

You can specify one report in each parameter file. When you specify a real-time report, the update interval and other arguments are optional. However, if you specify the same option twice, an error occurs.

Return values

Table 4.75 Return Values

Return Value	Meaning
0	Normal end
1	The command line format, option is invalid, and option value format are invalid.
4	An option error occurred in the command line. The range of the `-rc` or `-ri` option is invalid.
5	The DTD file is not compatible, so the parameters cannot be interpreted.
6	The value specified in the DTD file is invalid.

Return Value	Meaning
10	The value specified in the input file is invalid.
21	An access error occurred in the output file.
80	The user is prevents overwriting.
100	An initialization error occurred due to an invalid environment.
200	Memory is insufficient.
202	An access error occurred in the input file.
220	An access error occurred in the Manager.
222	A connection to the Manager failed.
223	A communication processing error occurred.
224	An agent-connection error occurred.
255	An unexpected error occurred.

Parameter File Format

Table 4.76 launch-report

Type	Explanation
Definition	Specifies the combination of a report definition and an agent.
Value that can be specified	None
Omission	Not allowed
Attributes	None
Element	`pr-cli-parameters`
Subelements	`agent`
	`report-definition`

Table 4.77 agent

Type	Explanation
Definition	Specifies a single agent that collects the performance data to be output in a report.
Value that can be specified	Specify an agent ID. For the first digit, specify the product ID of the desired agent. For details about product IDs, see the documentation of the applicable Agent. For the second digit, specify `A` (for Agent Collector). If you specify a non-existent agent ID or an agent ID with multiple product IDs, an error occurs. When you specify multiple agent IDs, the first agent ID takes precedence. If you specify multiple agent IDs when the report type specified for `report-definition` does not allow multiple agents, an error occurs.
Omission	Not allowed
Attributes	None
Element	`launch-report`

Type	Explanation
Subelements	None

Table 4.78 report-definition

Type	Explanation	
Definition	Specifies a report definition for the report to be output. An error occurs in the following cases: ▪ The product ID of the specified agent differs from the product ID defined in the specified report definition. ▪ The data model version of the specified agent is older than the data model version in the report definition.	
Value that can be specified	None	
Omission	Not allowed	
Attributes	`name`	Specify the target report definition name using 1 to 64 characters (not 1 to 64 bytes). If \ or / is included in the report definition name, replace it with \\ or \/ respectively. If a non-existent report definition name is specified, an error occurs.
	`parent-folder`	Specify the parent directory containing the report definition specified with the `name` attribute using a directory path. A directory path begins with / and it is appropriately delimited using / from the top-level directory name. When you specify the root directory, specify only /. When a directory name contains \ or /, replace it with \\ or \/ respectively. If a non-existent directory is specified, an error occurs. If no parent directory is specified, an error occurs. If the directory path name ends with \ or /, an error does not occur.
Element	`launch-report`	
Subelements	`launch-options`	

Table 4.79 launch-options

Type	Explanation
Definition	Specifies the conditions to acquire a report.
Value that can be specified	None
Omission	Allowed (when omitted, nothing is set.)
Attributes	None
Element	`report-definition`
Subelements	`indication-settings`
	`realtime-indication-settings`
	`expression-values`

Table 4.80 indication-settings

Type	Explanation	
Definition	Specifies the following values: ▪ Report acquisition interval ▪ Report interval ▪ Start date and time ▪ End date and time ▪ Peak time ▪ Maximum number of records An error occurs if this tag is specified when the report type specified in the record definition is a real-time report (single agent).	
Value that can be specified	None	
Omission	Allowed (report definition value are applied, including subelements.)	
Attributes	`maximum-number-of-records`	Specify an integer between 1 and 2,147,483,647 for the maximum number of records in the report to be acquired. The specifiable maximum is the value specified for `maxFetchCount` between `<command>` tags in `config.xml`. If you specify a value greater than the maximum, the value of `maxFetchCount` is applied. If the value of `maxFetchCount` between `<command>` tags in `config.xml` is smaller than the value specified in the report definition, the value of `maxFetchCount` is applied. When no value is specified, the value in the report definition is used.
Element	`launch-options`	
Subelements	`date-range`	
	`start-time`	
	`end-time`	
	`report-interval`	
	`peak-time`	

Table 4.81 date-range

Type	Explanation
Definition	Specifies the period for acquiring performance data in a report.
Value that can be specified	The following values can be specified (not case sensitive): ▪ For the last 1 hour: `WITHIN_THE_PAST_HOUR` ▪ For the last day (24 hours): `WITHIN_THE_PAST_24_HOURS` ▪ For the last 7 days: `WITHIN_THE_PAST_7_DAYS` ▪ For the last month: `WITHIN_THE_PAST_MONTH` ▪ For the last year: `WITHIN_THE_PAST_YEAR` ▪ To specify the period when the report is displayed: `SPECIFY_WHEN_DISPLAYED`

Type	Explanation
Omission	Allowed (report definition value are applied.)
Attributes	None
Element	`indication-settings`
Subelements	None

Table 4.82 report-interval

Type	Explanation
Definition	Specifies the report interval.
Value that can be specified	The following values can be specified (not case sensitive): ▪ In units of minutes: `MINUTE` ▪ In units of hours: `HOUR` ▪ In units of days (24 hours): `DAY` ▪ In units of weeks: `WEEK` ▪ In units of months: `MONTH` ▪ In units of years: `YEAR` An error occurs if this tag is specified when the record specified in the report definition is not a PI record.
Omission	Allowed (report definition value are applied.)
Attributes	None
Element	`indication-settings`
Subelements	None

Table 4.83 start-time

Type	Explanation
Definition	Specifies the start date and time.
Value that can be specified	Specify the date and time using the format specified for `report-interval`. For reports that cannot specify `report-interval`, specify the format to be used when `MINUTE` is specified. An error occurs in the following cases: ▪ The specified value is invalid. ▪ The format is invalid. ▪ The specified value is greater than `end-time`. ▪ The specified year is 1970 or earlier, or 2036 or later.
Omission	Depends on the combination of the values specified for `date-range` and `end-time`. For details, see *Notes* in this section.
Attributes	None
Element	`indication-settings`
Subelements	None

Table 4.84 end-time

Type	Explanation
Definition	Specifies the end date and time.
Value that can be specified	Specify the end date and time using the format specified for `report-interval`. For reports that cannot specify `report-interval`, specify the format to be used when `MINUTE` is specified. An error occurs in the following cases: ▪ The specified value is invalid. ▪ The format is invalid. ▪ The specified value is smaller than `start-time`. ▪ The specified year is 1970 or before or 2036 or later.
Omission	Depends on the combination of the values specified for `date-range` and `start-time`. For details, see *Notes* in this section.
Attributes	None
Element	`indication-settings`
Subelements	None

Table 4.85 peak-time

Type	Explanation
Definition	Specifies the peak time.
Value that can be specified	Specify the field ID for which you want to specify the peak time. When you specify `NONE`, the field ID specified in the report definition is invalid. An error occurs if you specify this tag when the report definition matches one of the following cases: ▪ The record is not a PI record. ▪ The record is a multi-instance record. ▪ `report-interval` is not `HOUR`.
Omission	Allowed (report definition value are applied.)
Attributes	None
Element	`indication-settings`
Subelements	None

Table 4.86 realtime-indication-settings

Type	Explanation
Definition	Specifies the ranking of fields in a real-time report. This tag can be specified when the report type in the report definition is real-time report (single agent). An error occurs for other cases.
Value that can be specified	None
Omission	Allowed (report definition value are applied, including subelements.)

Type	Explanation	
Attributes	indicate-delta-value	Specify TRUE to acquire fields as delta values. Otherwise, specify FALSE. When this tag is omitted, report definition values are applied.
Element	launch-options	
Subelements	display-by-ranking	

Table 4.87 display-by-ranking

Type	Explanation	
Definition	Specifies the fields to be acquired for ranking, the number of fields to be acquired, and whether to align fields in descending order. An error occurs if the record in the report definition is a single-instance report.	
Value that can be specified	None	
Omission	Allowed (report definition value are applied, including subelements.)	
Attributes	field	Specify the IDs of the fields to be acquired for ranking. If you do not acquire fields for ranking, specify NONE (not case sensitive). If you omit this attribute, an error occurs.
	display-number	Specify an integer between 1 and 100 as the number of fields to be acquired for ranking. If you specify a value outside this range, an error occurs. If you specify display-number when the field attribute is NONE, an error occurs. If you omit display-number when the field attribute is specified, the report definition value is used when the field attribute is specified in the report definition. In other cases, 10 is applied.
	in-descending-order	Specify whether to sort the field IDs used as the criterion for ranking in descending or ascending order. The fields of the number specified in the display-number attribute are acquired from the top. Specify TRUE to sort in ascending order, or FALSE to sort in descending order. If in-descending-order is specified when the field attribute is NONE, an error occurs. If in-descending-order is omitted when the field attribute is specified, the report definition value is used when the field attribute is specified in the report definition. In other cases, NONE is applied. If the field attribute is not specified, in-descending-order is FALSE.
Element	realtime-indication-settings	
Subelements	None	

Table 4.88 expression-values

Type	Explanation
Definition	Specifies at least one condition expression. If this tag is specified for a report that does not contain the condition expression set for `Specify when displayed`, an error occurs.
Value that can be specified	None
Omission	Allowed (when omitted, nothing is set.)
Attributes	None
Element	`launch-options`
Subelements	`expression-value`

Table 4.89 expression-value

Type	Explanation	
Definition	Specifies a value in a condition expression.	
Value that can be specified	Specify a value in the expression on the line that is specified using the `pos` attribute. For the date field, an error occurs if the `date-format` tag is not specified.	
Omission	Allowed (except when `expression-values` is specified.)	
Attributes	`pos`	Specify an integer starting with 0 as the appearance sequence of the simple expression set with `Specify when displayed` in the condition expression. The appearance sequence matches the display sequence of the condition expression displayed in the Show options window. The `pos` value of the first condition expression in the Show options window is 0 and the `pos` value of the third condition expression is 2. The specifiable range is from 0 to the number of simple expressions set with `Specify when displayed` minus 1. If you omit `pos` in the first `expression-value` tag, 0 is applied. If you omit `pos` in the second or later `expression-value` tag, the value of the previous `pos` plus 1 is applied. You can specify the same value for `pos` more than once. In this case, the last value specified is valid. If you specify a value outside the range, an error occurs.
Element	`expression-values`	
Subelements	None	

Figure 4.28 shows an example of a parameter file. Figure 4.29 shows the DTD file defining the parameter entries.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE pr-cli-parameters SYSTEM "rpt_params.dtd">
<pr-cli-parameters ver="0100">
  <launch-report>
     <agent>TA1htmprsvr</agent>
     <agent>TA1admin</agent>
     <report-definition name="CPU Trend"
      parent-folder="/Windows/Operating System/Monthly Trend">
        <launch-options>
         <indication-settings maximum-number-of-records="1440">
              <report-interval>HOUR</report-interval>
              <start-time>2003 12 30 12:00</start-time>
              <end-time>2003 12 31 12:00</end-time>
              <peak-time>PCT_TOTAL_USER_TIME</peak-time>
         </indication-settings>
           <expression-values>
             <expression-value pos="2">100</expression-value>
             <expression-value>TA1htmprsvr</expression-value>
           </expression-values>
        </launch-options>
    </report-definition>
  </launch-report>
 </pr-cli-parameters>
```

Figure 4.28 Example of a Parameter File

```
<!ENTITY     % BOOL_VALUE      "(true|false|TRUE|FALSE)">
<!ELEMENT    pr-cli-parameters  (launch-report)>
<!ATTLIST    pr-cli-parameters
             ver                (0100)              #REQUIRED>
<!ELEMENT    launch-report      (agent+, report-definition)>
<!ELEMENT    agent              (#PCDATA)>
<!ELEMENT    report-definition      (launch-options?)>
<!ATTLIST    report-definition
             name             CDATA               # REQUIRED
             parent-folder   CDATA               #REQUIRED>
<!ELEMENT    launch-options     ((indication-settings? |
                                realtime-indication-settings?),
                                expression-values?)>
<!ELEMENT    indication-settings    (date-range?,
                                  report-interval?,
                                  start-time?,
                                  end-time?,
                                  peak-time?)>
<!ATTLIST    indication-settings
             maximum-number-of-records   NMTOKEN     #IMPLIED>
<!ELEMENT    date-range         (#PCDATA)>
<!ELEMENT    report-interval    (#PCDATA)>
<!ELEMENT    start-time         (#PCDATA)>
<!ELEMENT    end-time           (#PCDATA)>
<!ELEMENT    peak-time          (#PCDATA)>
<!ELEMENT    realtime-indication-settings
               (display-by-ranking?)>
<!ATTLIST    realtime-indication-settings
             indicate-delta-value    %BOOL_VALUE;     #IMPLIED>
<!ELEMENT    display-by-ranking     EMPTY>
<!ATTLIST    display-by-ranking
             field               CDATA               #REQUIRED
             display-number      NMTOKEN             #IMPLIED
             in-descending-order %BOOL_VALUE;        #IMPLIED>
<!ELEMENT    expression-values    (expression-value+)>
<!ELEMENT    expression-value     (#PCDATA)
<!ATTLIST    expression-value
             pos                 NMTOKEN             # IMPLIED >
```

Figure 4.29 DTD File Defining the Parameter Entries

Notes:

- The jpcrpt command does not handle reports that are bookmarked.
- If output processing fails during the output of a report, the system stops the processing.
- If an initial value is set for Specify when displayed for the filter expression in the report definition, the initial value is used regardless of the specification in the parameter file. If no initial value is specified, the value set in the parameter file is used. Therefore, if the applicable parameter is not set, an error occurs.
- Table 4.90 lists the restrictions on the combinations of `date-range`, `start-time`, and `end-time`.

Table 4.90 Combinations of date-range, start-time, and end-time

Specification in the Parameter File			Setting when Report is Executed		
date-range	**start-time**	**end-time**	**date-range**	**start-time**	**end-time**
No	No	No	Value of the report definition	Value calculated from `end-time` (see *Note* 1)	Server time when the report is executed
No	Yes	No	`SPECIFY_WHEN_DISPLAYED`	Value specified in the parameter file	See Table 4.91 (see *Note* 2)
No	No	Yes	`SPECIFY_WHEN_DISPLAYED`	See Table 4.91 (see *Note* 1)	Value specified in the parameter file
No	Yes	Yes	`SPECIFY_WHEN_DISPLAYED`	Value specified in the parameter file	Value specified in the parameter file
Yes	No	No	Value specified in the parameter file	See Table 4.91 (see *Note* 1)	Server time when the report is executed
Yes	Yes	No	`SPECIFY_WHEN_DISPLAYED`	Value specified in the parameter file	See Table 4.91 (see *Note* 2)
Yes	No	Yes	`SPECIFY_WHEN_DISPLAYED`	See Table 4.91 (see *Note* 1)	Value specified in the parameter file
Yes	Yes	Yes	Error		

Note 1: For details about how to calculate, see the *Value of start-time* column in the following table. However, when **date-range** is **SPECIFY_WHEN_DISPLAYED**, the value set for **report-interval** is used for calculation.

Note 2: For details about how to calculate, see the *Value of end-time* column in the following table. However, when **date-range** is **SPECIFY_WHEN_DISPLAYED**, the value set for **report-interval** is used for calculation.

Table 4.91 Calculating start-time and end-time

date-range	report-interval	Value of start-time	Value of end-time
WITHIN_THE_PAST_HOUR	Minute	Date and time determined by subtracting 1 hour from end-time	Date and time determined by adding 1 hour to start-time
WITHIN_THE_PAST_24HOUR	Hour	Date and time determined by subtracting 1 day from end-time	Date and time determined by adding 1 day to start-time
WITHIN_THE_PAST_7DAYS	Day	Date and time determined by subtracting 7 days from end-time	Date and time determined by adding 7 days to start-time
WITHIN_THE_PAST_MONTH	Week	Date and time determined by subtracting 1 month from end-time (see *Note* 1)	Date and time determined by adding 1 month to start-time (see *Note* 1)
WITHIN_THE_PAST_YEAR	Month	Date and time determined by subtracting 1 year from end-time (see *Note* 2)	Date and time determined by adding 1 year to start-time (see *Note* 3)
	Year		

Note 1: If the calculated date does not exist, the previous date is applied. If the previous date does not exist, the system goes back to an existing date. Leap years are accounted for in the calculation.

Note 2: When February 29 in a leap year is specified, February 28 in the previous year is applied.

Note 3: If the calculated date is February 29 in a leap year, February 28 in the previous year is applied.

Usage example

The following example shows how to execute the command to output the parameter file (param.xml) describing the definition for report output to a file (output.csv):

```
jpcrpt -o output.csv –y param.xml
```

Output example

The details about command processing are output to the standard output, standard error output, and trace log files. For details about the log specifications, see section Figure 4.30.

The following shows the standard output format. The result of report output specified using arguments is indicated (OK or ERR).

```
jpcrpt connected to hostname at dd MM yyyy HH:MM:SS.mmm
result  OK  : report-definition-directory-path/report-definition-name@agent-ID
jpcrpt disconnected at dd MM yyyy HH:MM:SS.mmm
```

Figure 4.30 Example of Successful Output to the Standard Output

Output file

Table 4.92 describes the information to be output to the data header in the output file by the command.

Table 4.92 Information to Be Output to the Data Header

Data Header Item	Information to be Output
`Report:`	Full path of *report name*
`Agents:`	The Agent name
`Date Format:`	Date format and separator
`Command:`	Output in the order specified by the option
Empty line	None
Column header	Field column header

Figure 4.31 shows an example of file output by the command. When no data is acquired or the Agent is stopped, the data section is not output and only the data header is output.

```
Report: /Windows/Troubleshooting/RecentPast/System Overview
Agents: TA1htmprsvr
Date Format: pattern-yyyyMMdd,slash
Command:jpcrpt  -input C:\ProgramFiles\Hitachi\jp1pcwebopt\param.xml,
        -o C:\ProgramFiles\Hitachi\jp1pcwebopt\output.csv,-y

Agent Host,Agent Instance,Date and Time,CPU %,User CPU %,
Privileged CPU %,Processor Queue Length,Context Switches/sec,
               % Total Interrupt Time,System Calls/sec
htmprsvr,htmprsvr,2004/08/10 09:00:00,10.910626,8.917643,
                1.9929985,4,825.3214,0.040342055,3351.263
htmprsvr,htmprsvr,2004/08/10 10:00:00,10.646775,9.116808,
                1.5356027,5,778.178,0.009959743,3238.7776
htmprsvr,htmprsvr,2004/08/10 11:00:00,11.603203,9.505386,
                2.0978165,3,809.5369,0.036344547,3257.031
htmprsvr,htmprsvr,2004/08/10 12:00:00,2.2210534,0.8610586,
                1.3599948,2,744.3879,0.0121342335,3597.5398
htmprsvr,htmprsvr,2004/08/10 13:00:00,2.2657635,1.1398388,
                1.1259354,3,675.37067,0.024730453,2883.5593
htmprsvr,htmprsvr,2004/08/10 14:00:00,10.394524,8.527414,
                1.8726714,4,817.1143,0.009072154,3453.1233
```

Figure 4.31 Example of File Output

4.4.1.9 jpcprras

Format

```
jpcprras          directory-name
```

Function

The jpcprras command extracts Performance Reporter data. Use this command if an error occurs during Performance Reporter execution. Data obtained by this command is stored in the specified directory. If an error occurs, data other than the data obtained by this command must be obtained.

Return Values

Table 4.93 Return Values (directory-name)

Return Value	Meaning
0	jpcprras succeeded.
1	An argument is invalid.
2	The user does not have administrator permission.
3	An error occurred during writing.
4	The output directory does not exist.
5	The output directory is not empty.
7	Memory has become insufficient.
8	An unexpected error occurred.
9	The `pregetinfo.exe` file was not found.

Notes:

- If multiple jpcprras commands are executed at the same time from different prompts, information is not acquired normally. Do not execute multiple jpcprras commands at the same time.
- If Performance Reporter is running in a cluster system, execute the jpcprras command on all the nodes in the cluster system.
- Specify the arguments in the order specified in the subsection Format.
- Specify only one argument. Specifying multiple arguments will cause an error. An error also occurs if the argument is not specified.
- Specify an existing directory. An error occurs if a directory does not exist.
- For directory-name, do not specify the Performance Reporter installation-destination directory.
- Do not specify a directory name that exceeds the maximum path length of the operating system. Files will not be copied or created.
- For directory-name, specify an empty directory that does not contain any file or subdirectory.

- Confirm that adequate free disk space exists. To estimate the amount of free disk space required, you need to check the amount of disk space required by each product.
- If an error occurs during the collection of a file, either the file being collected or the directory will remain. Should this occur, delete the remaining file or directory as necessary.

Usage example

In the following example, the command collects all materials on the UNIX host and stores them in the `/tmp/prras` directory:

```
jpcprras  /tmp/prras
```

4.4.2 Administrative Commands

4.4.2.1 jpcpragtsetup

Format

```
jpcpragtsetup
```

Function

The jpcpragtsetup command loads into the Performance Reporter execution environment the Agent icons displayed in the Performance Reporter windows and description files of the records and fields displayed in the **Description** window. Execute this command if you have connected a new Agent to Collection Manager or if you have used the **hcmdsweb** command of the Common component to register the Web service of Performance Reporter.

Before you execute this command, copy the Agent archive file of the Agent you want to set up in the Performance Reporter environment to the setup directory below the Performance Reporter installation-destination directory. Note that you must restart the Performance Reporter service after you execute this command.

Return Values

Table 4.94 Return Values (jpcpragtsetup)

Return Value	Meaning
0	All processing for archive files has terminated normally.
1	No `setup` directory or `descriptions` directory exists.
2	The user does not have administrator permission.
3	An error occurred during processing archive-file.
4	The copy destination directory for the `image` file does not exist.
5	The file for processing does not exist.
6	An argument is invalid.

Return Value	Meaning
7	Memory has become insufficient.
8	An unexpected error occurred.
9	The `pregetinfo.exe` file was not found.

4.4.3 Alerting Commands

4.4.3.1 jpcahprp output

Format

```
jpcahprp output     [ -mx maximum-heap-size ]
                    [ -ms initial-heap-size ]
                    -o output-file
                    service-ID
```

Function

The jpcahprp output command outputs definition information of a specified Action Handler to a file in XML format.

Return Values

See Table 4.95.

Output Example

Detailed information about command processing is output to the standard output, standard error output, and trace log file. The file contents output to the standard output consist of a header, information indicating the result, and a footer.

When the command is executed:

```
output result [OK|ERR] : service-ID
{cause-of-error}
```

Legend:

{ }: The item that is put in these brackets is output with conditions.

[OK|ERR]: Displays either `OK` (successful) or `ERR` (error) as the result.

service-ID: Indicates the service ID.

shows an example of the standard output.

```
jpcahprp output connected to vserv01 at 10 08 2004 15:00:55.282
output result  OK   :  PH1host1
jpcahprp output disconnected at 10 08 2004 15:01:06.362
```

Figure 4.32 Sample Standard Output

Figure 4.33 shows an example of file output by this command. All blanks are displayed as spaces.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE pr-cli-parameters SYSTEM "act_params.dtd">
<pr-cli-parameters ver="0100">
<action-handler-definition>
<service id="PH1host1">
<capabilities>
<email>No</email>
<script>Yes</script>
</capabilities>
<mail>
<smtp-host>localhost</smtp-host>
<smtp-sender>PerformanceManagement</smtp-sender>
<mail-subject>%SCS: %PTS %AIS on %HNS</mail-subject>
</mail>
</service>
</action-handler-definition>
</pr-cli-parameters>
```

Figure 4.33 Example of File Output

This output file can be read by the Action Handler definition information change command by adjusting its format to the parameter file format (for the Action Handle definition information change command). Note that no indent (no space) is inserted before each tag in the output file.

Help Output Option

Figure 4.37 shows an example of Help for the `jpcahprp output` command.

4.4.3.2 jpcahprp update

Format

```
jpcahprp update     [ -mx maximum-heap-size ]
                    [ -ms initial-heap-size ]
                    input-file
```

Function

The jpcahprp update command modifies Action Handler definition information. The definition information to be modified is obtained from the XML-formatted parameter file that is specified as an argument on the command line.

Return Values

See Table 4.95.

Table 4.95 Return Values of the jpcahprp Command

Return Value	Meaning
0	Normal termination. All the Action Handler definitions specified in the parameter file have been updated.
1	Error in command line syntax. There is an invalid option, or the format of the option value is incorrect.

Return Value	Meaning
4	Command line option error. An invalid service ID was specified.
5	The parameters could not be interpreted, because they are not compatible with the DTD.
6	Error in DTD specification. An invalid DTD was specified.
10	Error in one or more input files. An attempt to update one or more definition information failed because an invalid value was specified in the input file.
21	An output file access error occurred.
100	An initial error due to the invalid environment
200	A memory error occurred.
202	An input file access error occurred.
220	Manager access error
222	An attempt to connect to Manager failed.
223	Communication processing error
255	An unexpected error occurred.

Parameter file format

Table 4.96 action-handler-definition

Type	Description
Definition	`Root tag for Action Handler definition information`
Value that can be specified	`None`
Omission	`Not allowed`
Attributes	`None`
Element	`pr-cli-parameters`
Subelements	`service (multiple instances can be specified)`

Table 4.97 service

Type		Description
Definition	Specifies the service that identifies the Action Handler.	
Value that can be specified	None	
Omission	Not allowed	
Attributes	id	Service ID (4-258 single-byte characters) Specify `P` in the first position and `H` in the second position. ▪ An error occurs if the service ID does not begin with `PH`. ▪ An error occurs if the specified service does not exist. ▪ If the same ID is specified more than once, the Service ID specified in the former line is overwritten by the one in the latter line.

Type	Description
Element	action-handler-definition
Subelements	capabilities
	mail

Table 4.98 capabilities

Type	Description
Definition	Tag indicating whether the action must be executed.
Value that can be specified	None
Omission	The information about whether the action must be executed is not updated.
Attributes	None
Element	service
Subelements	email
	script

Table 4.99 mail

Type	Description
Definition	Tag for e-mail definition information
Value that can be specified	None
Omission	E-mail definition information is not updated.
Attributes	None
Element	service
Subelements	smtp-host
	smtp-sender
	mail-subject

Table 4.100 email

Type	Description
Definition	Specifies whether e-mail can be sent.
Value that can be specified	Single-byte characters: Yes: Send email. No: Do not send email. If a value other than the above values is specified, an error occurs. Note that these values are not case sensitive.
Omission	The information about whether e-mail can be sent is not updated. If omitted the first time the information is defined, No (default value) is assumed.

Type	Description
Attributes	None
Element	capabilities
Subelements	None

Table 4.101 script

Type	Description
Definition	Specifies whether scripts can be executed.
Value that can be specified	Single-byte characters: `Yes`: Execute scripts. `No`: Do not execute scripts. If a value other than the above values is specified, an error occurs. Note that these values are not case sensitive.
Omission	The information about whether scripts can be executed is not updated. If omitted the first time the information is defined, `Yes` (default value) is assumed.
Attributes	None
Element	capabilities
Subelements	None

Table 4.102 smtp-host

Type	Description
Definition	Specifies the host name or IP address of the SMTP server to be used for sending email.
Value that can be specified	A single-byte character string consisting of up to 100 bytes. An error message is displayed if a character string that exceeds 100 bytes is entered. If only "" (empty strings) and spaces (single-byte or double-byte) are specified, each of all these character strings will be replaced with "" (an empty string).
Omission	The SMTP server remains unchanged. If omitted the first time the information is defined, `localhost` (default value) is assumed.
Attributes	None
Element	mail
Subelements	None

Table 4.103 smtp-sender

Type	Description
Definition	Specifies the email sender.
Value that can be specified	A single-byte character string consisting of up to 100 bytes. An error message is displayed if a character string that exceeds 100 bytes is entered. If only "" (empty strings) and spaces (single-byte or double-byte) are specified, each of all these character strings will be replaced with "" (an empty string).

Type	Description
Omission	The email sender does not change. If omitted the first time the information is defined, `PerformanceManagement` (default value) is assumed.
Attributes	None
Element	mail
Subelements	None

Table 4.104 mail-subject

Type	Description
Definition	Specifies the email title.
Value that can be specified	Single- or double-byte characters consisting of up to 100 bytes. An error message is displayed if a character string that exceeds 100 bytes is entered. If only "" (empty strings) and spaces (single-byte or double-byte) are specified, each of all these character strings will be replaced with "" (an empty string).
Omission	The email title remains unchanged. If omitted the first time the information is defined, `%SCS: %PTS %AIS on %HNS` (default value) is assumed. The following variables can be used in the parameters: ▪ `%AIS`: Alarm name set for Alarm name. ▪ `%ANS`: Agent name bound to the alarm table. ▪ `%CVS[n][.p]`: Measurement value for performance data: n: Location (order) of the condition expression when multiple condition expressions are defined. If 0 or a value greater than the actual number of condition expressions is specified, the measurement value for the field specified in the first condition expression is displayed. p: Number of decimal places to be displayed (the value is rounded off). ▪ `%HNS`: Name of the host where the agent to which the alarm table was bound was running. ▪ `%MTS`: Message text set in Message text. ▪ `%PTS`: Product name set in Product. ▪ `%SCS`: Status of alarm resulting in message output. ▪ `%SCT`: System time at the host where the agent for which alarm evaluation took place was running.
Attributes	None
Element	mail
Subelements	None

Figure 4.34 shows a specification example of a parameter file. Figure 4.35 shows DTD for the parameter file. All blanks are displayed as spaces.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE pr-cli-parameters SYSTEM "act_params.dtd">
<pr-cli-parameters ver="0100">
<action-handler-definition>
    <service id="PH1host1">
        <capabilities>
            <email>Yes</email>
            <script>Yes</script>
            </capabilities>
        <mail>
            <smtp-host>host1</smtp-host>
            <smtp-sender>sendername</smtp-sender>
            <mail-subject>subject</mail-subject>
        </mail>
    </service>
</action-handler-definition>
</pr-cli-parameters>
```

Figure 4.34 Specification Example of Parameter File

```
<!ELEMENT pr-cli-parameters (action-handler-definition)>
<!ATTLIST pr-cli-parameters ver (0100) #REQUIRED>
<!ELEMENT action-handler-definition (service+)>
<!ELEMENT service (capabilities?, mail?)>
<!ATTLIST service id CDATA #REQUIRED>
<!ELEMENT capabilities (email?, script?)>
<!ELEMENT email (#PCDATA)>
<!ELEMENT script (#PCDATA)>
<!ELEMENT mail (smtp-host?, smtp-sender?, mail-subject?)>
<!ELEMENT smtp-host (#PCDATA)>
<!ELEMENT smtp-sender (#PCDATA)>
<!ELEMENT mail-subject (#PCDATA)>
```

Figure 4.35 DTD for Parameter File

Usage Example

Detailed information regarding command processing is output to the standard output, standard error output, and trace log file. The file contents output to the standard output consist of a header, information indicating the result, and a footer.

When the command is executed:

```
update result [OK|ERR] : service-ID
{cause-of-error}
```

Legend:

{ }: The item that is put in these brackets is output with conditions.

[OK|ERR]: Displays either OK (successful) or ERR (error) as the result.

service-ID: Indicates the service ID.

Figure 4.36 shows an example of the standard output when two service IDs are specified and one was successful while the other resulted in an error.

Execution results are displayed for each service ID (`PH1host1`, `PH1host2`) that is specified in a `service` tag.

```
jpcahprp update connected to vserv01 at 10 08 2004 15:00:55.282
update result  OK : PH1host1
update result ERR : PH1host2
cause-of-error
jpcahprp update disconnected at 10 08 2004 15:01:06.362
```

Figure 4.36 Sample Standard Output

Note: If multiple service IDs have been defined and the definition change processing fails for one of them, the command cancels the definition change processing. If there is a definition for another service ID, the command changes that definition.

Help Output Option

Figure 4.37 shows an example of Help for `jpcahprp`. All blanks are displayed as spaces.

```
c:¥> jpcahprp -h
Usage: jpcahprp <subcmd> [ <option>... ] {<parameter file>|<service id>}
    <subcmd> Mandatory. Specify one of subcommands listed below:
        update          Updates Action Handler definition(s)
        output          Outputs Action Handler definition(s)
    <option> Specify optionals after each extention listed below.
        -o <outputfile>  Output file is required only if <subcmd> is 'output'
        -mx             Specify maximum heap size from 1 up to 1024 by MB
                        Example: -mx 64. Default for both is 64MB.
        -ms             Specify minimum heap size. from 1 up to 1024 by MB
                        Example: -ms 32. Default for both is 32MB.
    <parameter file>    Specify parameter file
                        Parameter file is required only if <subcmd> is 'update'
    <service id>         Specify service id.
                        Service id is required only if <subcmd> is 'output'
```

Figure 4.37 Example of Help

4.4.3.3 jpctgprp output

Format

```
jpctgprp output     [ -mx maximum-heap-size ]
                    [ -ms initial-heap-size ]
                    -o output-file
                    service-ID
```

Function

The jpctgprp output command collects Trap Generator definition information and outputs it to a file in XML format.

Return Values

See Table 4.105.

Output Example

Detailed information about command processing is output to the standard output, standard error output, and trace log file. The file contents output to the standard output consist of a header, information indicating the result, and a footer.

When the command is executed:

```
output destination result [OK|ERR] : service-ID
{cause-of-error}
```

Legend:

{ }: The item that is put in these brackets is output with conditions.

[OK|ERR]: Displays either OK (successful) or ERR (error) as the result.

service-ID: Indicates the service ID.

Figure 4.38 and Figure 4.39 show an example of the standard output. The output result is displayed (OK or ERR) for each SNMP host specified in snmp-host.

```
jpctgprp output connected to vserv01 at 10 08 2004 15:00:55.282
output destination result  OK : PC4host1
jpctgprp output disconnected at 10 08 2004 15:01:06.362
```

Figure 4.38 Standard Output Example (success)

```
jpctgprp output connected to vserv01 at 10 08 2004 15:00:55.282
output destination result ERR : PC4host1
cause-of-error
jpctgprp output disconnected at 10 08 2004 15:01:06.362
```

Figure 4.39 Standard Output Example (failure)

Figure 4.40 shows an example of the output by this command.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE pr-cli-parameters SYSTEM "trap_params.dtd">
<pr-cli-parameters ver="0100">
<trap-generator-definition>
<service id="PC4host1">
<trap-destinations>
<trap-destination snmp-host="host1">
<snmp-retrycount>1</snmp-retrycount>
<snmp-retryinterval>5</snmp-retryinterval>
<snmp-trapport>162</snmp-trapport>
<snmp-enabled>Yes</snmp-enabled>
</trap-destination>
</trap-destinations>
</service>
</trap-generator-definition>
</pr-cli-parameters>
```

Figure 4.40 Output Example

This output file can be read by the Trap Generator definition information addition/change command by adjusting its format to the parameter file format (for the Trap Generator definition information addition/change command). Note that no indent (no space) is inserted before each tag in the output file.

Help Output Option

For an example of Help for the jpctgprp output command, see Figure 4.44.

4.4.3.4 jpctgprp create

Format

```
jpctgprp create     [ -mx maximum-heap-size ]
                    [ -ms initial-heap-size ]
                    input-file
```

Function

The jpctgprp create command adds an SNMP host name to Trap Generator definition information. The definition is obtained from the XML-format parameter file, which is specified as a command line argument. You can specify multiple SNMP host names in a single parameter file, thereby registering multiple SNMP host names in a batch.

Return Values

Table 4.105 describes the return value.

Table 4.105 Return Value (jpctgprp)

Return Value	Meaning
0	Normal termination. All the trap destination definition information specified in the parameter file has been updated.
1	Error in the command line format There is an invalid option, or the format of the option value is incorrect.
4	Command line option error. An invalid service ID was specified.
5	The parameters could not be interpreted, because they are not compatible with the DTD.
6	Error in DTD specification. An invalid DTD was specified.
10	Error in one or more input files. An attempt to update the information of one or more definitions failed because an invalid value was specified in the input file.
21	An output file access error occurred.
100	An initial error due to the invalid environment
200	A memory error occurred.
202	An input file access error occurred.
220	Manager access error
222	An attempt to connect to Manager failed.
223	Communication processing error
255	An unexpected error occurred.

Parameter file format

Table 4.106 trap-generator-definition

Type	Description
Definition	Root tag of the Trap Generator definition information
Value that can be specified	None
Omission	Not allowed
Attributes	None
Element	pr-cli-parameters
Subelements	service

Table 4.107 service

Type		Description
Definition	Specifies the service ID that identifies Trap Generator.	
Value that can be specified	None	
Omission	Not allowed	
Attributes	id	The service ID (4-258 single-byte characters) Specify P in the first position and C in the second position. ▪ An error occurs if a service ID that does not start with PC is specified. ▪ An error occurs if a service that does not exist is specified. ▪ An error occurs if an existing service ID starts with PC but the service does not belong to Trap Generator.
Element	trap-generator-definition	
Subelements	trap-destinations	

Table 4.108 trap-destinations

Type	Description
Definition	Specifies a list of SNMP transmission targets.
Value that can be specified	None
Omission	Not allowed
Attributes	None
Element	service
Subelements	trap-destination

Table 4.109 trap-destinations

Type	Description	
Definition	Specifies the SNMP transmission target.	
Value that can be specified	None	
Omission	Settings for the SNMP transmission target is not created or updated.	
Attributes	snmp-host	A maximum of 75 single-byte characters. ▪ If the entered character string exceeds 75 bytes, an error message is displayed. ▪ If the host name cannot be resolved, an error message is displayed. If the same host name has already been defined, it is overwritten. ▪ If the same host name is specified more than once, the host name specified in the former line is overwritten by the one in the latter line.
Element	trap-destinations	
Subelements [Note]	snmp-retrycount	
	snmp-retryinterval	
	snmp-trapport	
	snmp-enabled	

Note: If you specify child elements, they must be specified in the order shown above.

Table 4.110 snmp-retrycount

Type	Description
Definition	Specifies the SNMP trap transmission count.
Value that can be specified	The permitted value is an integer in the range 1 to 32,767. If the specified value is outside this range or is not a numeric value, an error message is displayed.
Omission	`snmp-retrycount` is not updated. If omitted the first time, the information is defined, and 1 (default value) is set.
Attributes	None
Element	trap-destinations
Subelements	None

Table 4.111 snmp-retryinterval

Type	Description
Definition	Specifies the interval (in seconds) at which SNMP traps are retransmitted.
Value that can be specified	The permitted value is an integer in the range 1 to 32,767. If the specified value is outside this range or is not a numeric value, an error message is displayed.
Omission	`snmp-retryinterval` is not updated. If omitted the first time, the information is defined, and 5 (default value) is set.

Type	Description
Attributes	None
Element	trap-destinations
Subelements	None

Table 4.112 snmp-trapport

Type	Description
Definition	Specifies the target port number to which SNMP traps are to be transmitted.
Value that can be specified	The permitted value is an integer in the range 1 to 32,767. If the specified value is outside this range or is not a numeric value, an error message is displayed.
Omission	`snmp-trapport` is not updated. If omitted the first time, the information is defined, and 162 (default value) is set.
Attributes	None
Element	trap-destinations
Subelements	None

Table 4.113 snmp-enabled

Type	Description
Definition	Specifies whether or not SNMP traps can be transmitted.
Value that can be specified	The following single-byte alphabetic characters can be specified: `Yes`: Sends SNMP traps. `No`: Does not send SNMP traps. This value is not case sensitive.
Omission	`snmp-enabled` is not updated. If omitted the first time, the information is defined, and Yes (default value) is set.
Attributes	None
Element	trap-destinations
Subelements	None

Figure 4.41 shows a specification example of a parameter file. Figure 4.42 shows DTD for the parameter file. All blanks are displayed as spaces.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE pr-cli-parameters SYSTEM "trap_params.dtd">
<pr-cli-parameters ver="0100">
<trap-generator-definition>
        <service id="PC1host1">
            <trap-destinations>
                <trap-destination snmp-host="host1">
                    <snmp-retrycount>1</snmp-retrycount>
                    <snmp-retryinterval>5</snmp-retryinterval>
                    <snmp-trapport>162</snmp-trapport>
                    <snmp-enabled>Yes</snmp-enabled>
                </trap-destination>
            </trap-destinations>
        </service>
</trap-generator-definition>
</pr-cli-parameters>
```

Figure 4.41 Coding Example of the Parameter File

```
<!ELEMENT pr-cli-parameters (trap-generator-definition)>
<!ATTLIST pr-cli-parameters ver (0100) #REQUIRED>
<!ELEMENT trap-generator-definition (service)>
<!ELEMENT service (trap-destinations)>
<!ATTLIST service id CDATA #REQUIRED>
<!ELEMENT trap-destinations (trap-destination*)>
<!ELEMENT trap-destination (snmp-retrycount?, snmp-retryinterval?, snmp-trapport?, snmp-
enabled?)>
<!ATTLIST trap-destination snmp-host CDATA #REQUIRED>
<!ELEMENT snmp-retrycount (#PCDATA)>
<!ELEMENT snmp-retryinterval (#PCDATA)>
<!ELEMENT snmp-trapport (#PCDATA)>
<!ELEMENT snmp-enabled (#PCDATA)>
```

Figure 4.42 DTD for the Parameter File

Output Example

Detailed information about command processing is output to the standard output, standard error output, and trace log file. The file contents output to the standard output consist of a header, information indicating the result, and a footer.

When the command is executed:

```
[create|update] destination result [OK|ERR] : snmp-host
{cause-of-error}
```

Legend:

{ }: The item that is put in these brackets is output with conditions.

[OK|ERR]: Displays either OK (successful) or ERR (error) as the result.

snmp-host: Displays the value set for snmp-host.

Figure 4.43 shows an example of the standard output when two snmp host names are specified and one was successful while the other resulted in an error. The update result is displayed for each snmp host specified in `snmp-host`.

```
jpctgprp create connected to vserv01 at 10 08 2004 15:00:55.282
create definition result  OK : snmp-host1
create definition result ERR : snmp-host2
{cause-of-error}
update definition result OK  : snmp-host3
jpctgprp create disconnected at 10 08 2004 15:01:06.362
```

Figure 4.43 Sample Standard Output

Note: If multiple host names are specified and definition information additions or updates fail during consecutive addition or update operations, the command cancels the definition information additions or updates. If there is other definition information to be processed, the command adds or updates it.

Help Output Option

Figure 4.44 shows an example of Help for `jpctgprp`. All blanks are displayed as spaces.

```
c:¥> jpctgprp -h
Usage: jpctgprp <subcmd> [ <option>... ] {<parameter file>|<service id>}
    <subcmd> Mandatory. Specify one of subcommands listed below:
        create          Creates Trap Generator definition(s)
        delete          Deletes Trap Generator definition(s)
        output          Outputs Trap Generator definition(s)
    <option> Specify optionals after each extention listed below.
        -o <outputfile> Output file is required only if <subcmd> is 'output'
        -mx             Specify maximum heap size from 1 up to 1024 by MB
                        Example: -mx 64. Default for both is 64MB.
        -ms             Specify minimum heap size. from 1 up to 1024 by MB
                        Example: -ms 32. Default for both is 32MB.
        -y              Only used 'delete' <subcmd>. Assume a yes response to
                        all questions asked by jpctgprp.
    <parameter file>    Specify parameter file
                        Parameter file is required if <subcmd> is 'update' or 'delete'
    <service id>        Specify service id.
                        Service id is required only if <subcmd> is 'output'
```

Figure 4.44 Example of Help

4.4.3.5 jpctgprp delete

Format

```
jpctgprp delete     [ -mx maximum-heap-size ]
                    [ -ms initial-heap-size ]
                    [ -y ]
                    input-file
```

Function

The jpctgprp delete command deletes an SNMP host name from Trap Generator definition information. The definition to be deleted is obtained from the XML-format parameter file that is specified as a command line argument. You can specify multiple SNMP host names in a single parameter file, thereby deleting multiple SNMP host names in a batch.

Return Values

See Table 4.105.

Parameter file format

Table 4.114 trap-generator-definition

Type	Description
Definition	Root tag of the Trap Generator definition information
Value that can be specified	None
Omission	Not allowed
Attributes	None
Element	pr-cli-parameters
Subelements	service

Table 4.115 service

Type	Description	
Definition	Specifies the service ID that identifies Trap Generator.	
Value that can be specified	None	
Omission	Not allowed	
Attributes	id	The service ID (4-258 single-byte characters) Specify P in the first position and C in the second position. ▪ An error occurs if a service ID that does not start with PC is specified. ▪ An error occurs if a service that does not exist is specified. ▪ An error occurs if an existing service ID starts with PC but the service does not belong to Trap Generator.
Element	trap-generator-definition	
Subelements	trap-destinations	

Table 4.116 trap-destinations

Type	Description
Definition	Specifies a list of SNMP transmission targets.
Value that can be specified	None
Omission	Not allowed
Attributes	None
Element	service
Subelements	trap-destination

Table 4.117 trap-destination

Type	Description	
Definition	Specifies the SNMP transmission target.	
Value that can be specified	None	
Omission	The SNMP transmission target is not deleted.	
Attributes	snmp-host	A maximum of 75 single-byte characters. ▪ If the entered character string exceeds 75 bytes, an error message is displayed. ▪ If a registered host name cannot be resolved, the host name is deleted. ▪ If the specified host name has already been deleted, an error results.
Element	trap-destinations	
Subelements	snmp-retrycount (ignored if specified)	
	snmp-retryinterval (ignored if specified)	
	snmp-trapport (ignored if specified)	
	snmp-enabled (ignored if specified)	

Note: If you specify child elements, they must be specified in the order shown above.

Figure 4.45 shows a specification example of a parameter file. Figure 4-40 shows DTD for the parameter file.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE pr-cli-parameters SYSTEM "trap_params.dtd">
<pr-cli-parameters ver="0100">
<trap-generator-definition>
        <service id="PC1host1">
            <trap-destinations>
                <trap-destination snmp-host="host1"/>
                <trap-destination snmp-host="host2"/>
            </trap-destinations>
        </service>
</trap-generator-definition>
</pr-cli-parameters>
```

Figure 4.45 Specification Example of Parameter File

Output Example

Detailed information about command processing is output to the standard output, standard error output, and trace log file. The file contents output to the standard output consist of a header, information indicating the result, and a footer.

Deletion confirmation message

```
Do you really want to delete the trap destination  "{0}"?[y/n]
```

Legend:

{0}: Outputs the value set for snmp-host.

When the command is executed:

```
delete destination result [OK|ERR] : snmp-host
{cause-of-error}
```

Legend:

{ }: The item that is put in these brackets is output with conditions.

[OK|ERR]: Displays either OK (successful) or ERR (error) as the result.

snmp-host: Outputs the value set for snmp-host.

Figure 4.46 shows an example of the standard output. The deletion result is displayed (OK or ERR) for each SNMP host specified in snmp-host.

```
jpctgprp delete connected to vserv01 at 10 08 2004 15:00:55.282
delete destination result  OK : host1
delete destination result ERR : host2
cause-of-error
jpctgprp delete disconnected at 10 08 2004 15:01:06.362
```

Figure 4.46 Sample Standard Output

Note: While multiple host names and IP addresses are being deleted, if any one of the consecutive deletion operations fails, the command cancels the deletion of the applicable definition. The command then deletes any other host name and IP address.

Help Output Option

For an example of Help for jpctgprp, see Figure 4.44.

4.5 Reviewing Command Arguments

4.5.1 -mx maximum-heap-size argument

-mx maximum-heap-size specifies the maximum heap size of java.exe in MB. The default is 64MB, and the maximum depends on your system configuration. The specified value must meet the following conditions:

- An integer from 1 to 1024
- The value of **-mx** must be greater than or equal to the value of **-ms**

4.5.2 -ms initial-heap-size argument

-ms initial-heap-size specifies the initial heap size of java.exe in MB. The default is 32MB. The specified value must meet the following conditions:

- An integer from 1 to 1024
- The value of **-mx** must be greater than or equal to the value of **-ms**

4.5.3 –dateformat argument

-dateformat represents the date format corresponding to the specified pattern name and determines the formats for date described in <expression> tag in the input file. The date format pattern names that you can specify are:

- **pattern-ddMMyyyy**
- **pattern-MMddyyyy**
- **pattern-yyyyMMdd**

4.5.4 –dateseparator argument

-date separator represents the separator strings corresponding to the specified separator name and determines the formats for the separator described in <expression> tag in the input file. The separator names of the date format that you can specify are:

- `space`
- `slash`
- `hyphen`
- `period`

4.5.5 –rc argument

-rc specifies the number of updates to be output when a real-time report is output several times based on the update interval. You can specify a value between 1 and 2,147,483,647 as the number of updates. If you do not specify a value, 1 is applied. If you specify a value outside the range, an error occurs. The value is ignored if it is specified for a historical report.

4.5.6 –ri argument

Use the **-ri** argument to change the update interval specified in the report definitions of real-time reporting. Specify a value between the minimum update interval defined for the report and 3,600 seconds. If you do not specify a value, the initial update interval defined for the report is used. If you specify a value outside the range, an error occurs. The value is ignored if it is specified for a historical report.

4.5.7 –exportseparator argument

-exportseparator specifies the separator corresponding to the date format separator name that is used when a report is output. The specification of this option takes precedence over the specification of **-dateseparator**. The following separators can be specified for date formats. If you do not specify a separator, the value specified in **config.xml** is applied.

- space
- slash
- hyphen
- period

4.5.8 input-file argument

The `jpcrdef create`, `jpcrdef delete`, `jpcrdef output`, `jpcasrec update`, `jpcaspsv update`, and `jpcrpt` commands specify a parameter file in XML format in order to output reports. The `jpcahprp update` command specifies a parameter file for deleting the Trap Generator definition information. The `jpctgprp delete` command specifies a parameter file for changing the Action Handler definition information.

input-file specifies the XML-format parameter file for creating a new report. This parameter file is created according to the parameter file format of each command. To specify the file, you can use an absolute file path name, relative file path name, or file name. The relative file path name and file name are based on the current directory.

4.5.9 –y argument

For the `jpcrdef delete` **command**

When this option is specified, a deletion confirmation message will not be output. When omitted, a deletion confirmation message will be output for each <report-definition>. You respond with either **y** or **Y** to delete. If you respond with a value other than **y** or **Y**, the deletion does not execute and the deletion confirmation message for the next <report-definition> is output.

For the `jpcrpt` **command**

Indicates whether to output a confirmation message when the output destination file name specified in the **-o** option is specified twice.

When you specify this option, no overwrite confirmation message is output and the existing file is overwritten. If you omit this option, an overwrite confirmation message is output. When you return **y** or **Y** for the overwrite confirmation message, the existing file is overwritten. If you return a value other than **y** or **Y**, the system cancels processing.

For the `jpctgprp delete` **command**

When this option is specified, a deletion confirmation message will not be output. When this option is omitted, a deletion confirmation message will be output for each <snmp-host>, in which case you respond with either **y** or **Y** to delete. If you respond with a value other than **y** or **Y**, the deletion does not execute and the deletion confirmation message for the next <snmp-host> is output.

4.5.10 –o argument

-o is the output file that is specified after the options, and is required. You can specify either an absolute file path name, relative file path name, or a file name. The relative file path name and file name are based on the current directory. If you specify an existing file, the file will be overwritten. If the specified directory does not exist, an error occurs.

4.5.11 service-ID argument

For the `jpcasrec output` and `jpcaspsv output` commands

service-ID specifies the service ID that indicates the agent for which information is to be displayed. You cannot use wildcard characters. Following are the conditions for the specified ID value:

- Any character from 4 to 258
- Specifies the product ID of the Agent in the first position. For information about the product ID, see the manual for each Agent.
- In the second position, specify '`A`' (Agent Collector) or '`S`' (Agent Store)

For the `jpcahprp output` command

service-ID specifies the service ID that indicates Action Handler for which information is to be displayed. You cannot use wildcard characters. The following conditions are for the specified ID value:

- Any character from 4 to 258
- The first character specifies `P`.
- The second character specifies `H`.

An error occurs if the specified service ID does not start with `PH` or if a nonexistent service is specified.

For the `jpctgprp output` command

service-ID specifies the service ID that indicates Trap Generator for output.

- Any character from 4 to 258
- The first character specifies `P`.
- The second character specifies `C`.

An error occurs if the specified service ID does not start with `PC` or if a nonexistent service is specified.

4.5.12 directory-name argument

- specifies the directory where obtained materials are stored.
- If the directory includes a space, enclose the directory in quotation marks (“ “). When quotation marks (“ “) are not used, the characters up to the space are assumed for the directory.
- When the following symbols are specified, enclose them in quotation marks (“ “) to prevent them from being analyzed in the shell:

  & ^ `
- Directory names of removable media such as floppy disks cannot be specified in this option.

Chapter 5 Performing Commands from Collection Manager and the Agent

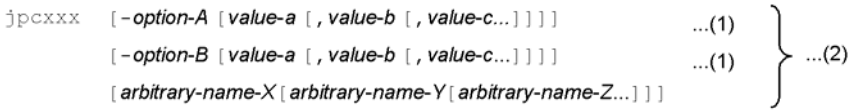
This chapter describes the commands of Collection Manager and the Agent. The description format and syntax rules for commands of Tuning Manager series programs are the same for both Windows and UNIX. In Windows, a command is executed from the command prompt. In UNIX, a command is executed from a control terminal.

- Overview (see section 5.1)
- List of Commands (see section 5.2)
- Reviewing Command Arguments (see section 5.3)

5.1 Overview

This section explains the format of command explanations, including the command specification method and the symbols used in explaining the command syntax.

The command specification format is shown as follows:



Items indicated by (1) and (2) are called options and arguments, respectively.

Symbols used in command syntax explanations

Table 5.1 shows the symbols used for explaining the command syntax.

Table 5.1 Symbols Used in Command Syntax Explanations

Symbol	Meaning and example
| (vertical bar)	Indicates that one of the items separated by the vertical bars can be selected. Example: A|B|C means A, or B, or C.
{ } (curly brackets)	Indicates that one of the items surrounded by this symbol must be selected. The items are separated by a vertical bar (|). Example: {A|B|C} means that A, or B, or C must be specified.
[ ] (square brackets)	Indicates that the enclosed items are optional, and may be omitted. Examples: [A] means that A may be specified as needed. (A may be omitted if not required.) [B|C] means that B or C may be specified as needed. (Both B and C may be omitted if not required.)
. . . (ellipsis)	Indicates that the item preceding this symbol can be repeatedly specified. To specify multiple items, a space character is used as a delimiter. Example: AB. . . means that B may be specified multiple times following A.
_ (underline)	Indicates the default value that is used by the system if all of the items surrounded by square brackets are omitted. Example: [A|B] means that the system will use A if neither A nor B is specified.

About wildcard characters

When executing a command, you can use the following wildcard characters to specify multiple services or host names:

- `*`: Indicates a character string of zero or more arbitrary characters.
- `?`: Indicates a single arbitrary character.

When specifying a wildcard character in UNIX, surround it with double quotation marks (`"`), as in `"*"`, so that it will not be analyzed by the shell.

Precaution common to all commands

Before you execute a command, you must move to the directory that contains the command. For details about the directory that contains the command you want to execute, see the explanation of that command.

5.2 List of Commands

Table 5.2 lists the commands of Collection Manager and Agent. Sections following the table give detailed explanations of individual commands, in alphabetic order.

For details on the arguments of each command, see section 5.3.

Table 5.2 Commands of Collection Manager and the Agent

Command name	Description	Host where the command can be executed	User authorized to execute the command		See
			In Windows	In UNIX	
jpcagtsetup	Executes the additional setup of a new Agent.(Note 1)	Tuning Manager	Member of the Administrators group	root user	5.2.1
jpcalarm active	Activates an alarm that is inactive.	Tuning Manager	Member of the Administrators group	root user	5.2.2
jpcalarm bind	Binds a defined alarm table to an agent.	Tuning Manager	Member of the Administrators group	root user	5.2.3
jpcalarm check	Checks the syntax of a created alarm definition file; also, uses the contents of the definition file to check the set-up status of the agents that are required.	Tuning Manager	Member of the Administrators group	root user	5.2.4
jpcalarm copy	Copies an alarm table or an alarm.	Tuning Manager	Member of the Administrators group	root user	5.2.5
jpcalarm delete	Deletes an alarm table or an alarm.	Tuning Manager	Member of the Administrators group	root user	5.2.6
jpcalarm export	Exports alarm table or alarm definition information to a specified file.	Tuning Manager	Member of the Administrators group	root user	5.2.7
jpcalarm import	Imports definition information for an alarm table or an alarm from a specified file.	Tuning Manager	Member of the Administrators group	root user	5.2.8
jpcalarm inactive	Inactivates an alarm that is active.	Tuning Manager	Member of the Administrators group	root user	5.2.9

Command name	Description	Host where the command can be executed	User authorized to execute the command		See
			In Windows	In UNIX	
jpcalarm list	Displays alarm table definition information or binding information.	Tuning Manager	Member of the Administrators group	root user	5.2.10
jpcalarm unbind	Releases the binding of an alarm table to agents.	Tuning Manager	Member of the Administrators group	root user	5.2.11
jpcctrl backup	Creates the file used to save the data stored in the Master Store service or Agent Store service database.(Note 1)	▪ Tuning Manager ▪ Agent	▪ Member of the Administrators group ▪ Member of the Backup Operators group	root user	5.2.12
jpcctrl clear	Deletes the data stored in the Master Store service or Agent Store service database.(Note 1)	Tuning Manager	▪ Member of the Administrators group ▪ Member of the Backup Operators group	root user	5.2.13
jpcctrl delete	Deletes the service information of the agent registered in a Tuning Manager series program.(Note 1)	Tuning Manager	▪ Member of the Administrators group ▪ Member of the Backup Operators group	root user	5.2.14
jpcctrl dump	Exports the data stored in the Master Store service or Agent Store service database to a text file.(Note 1)	▪ Tuning Manager ▪ Agent	Anyone	Anyone	5.2.15
jpcctrl list	Displays the service structure and status of a Tuning Manager series program.(Note 1)	▪ Tuning Manager ▪ Agent	Anyone	Anyone	5.2.16
jpcctrl register	Re-registers in a Tuning Manager-series program the service information of a Tuning Manager series program that has been deleted.(Note 1)	Tuning Manager	▪ Member of the Administrators group ▪ Member of the Backup Operators group	root user	5.2.17

Command name	Description	Host where the command can be executed	User authorized to execute the command		See
			In Windows	In UNIX	
jpchasetup create	Creates a logical host environment for a Tuning Manager series program.(Note 1)	▪ Tuning Manager ▪ Agent	Member of the Administrators group	root user	5.2.18
jpchasetup delete	Deletes a logical host environment for a Tuning Manager series program.(Note 1)	▪ Tuning Manager ▪ Agent	Member of the Administrators group	root user	5.2.19
jpchasetup export	Exports the settings of the logical host environment for a Tuning Manager series program to a file.(Note 1)	▪ Tuning Manager ▪ Agent	Member of the Administrators group	root user	5.2.20
jpchasetup import	Imports the logical-host environment information file of a Tuning Manager series program to the standby node.(Note 1)	▪ Tuning Manager ▪ Agent	Member of the Administrators group	root user	5.2.21
jpchasetup list	Displays the settings of the logical host environment for a Tuning Manager series program.(Note 1)	▪ Tuning Manager ▪ Agent	Member of the Administrators group	root user	5.2.22
jpcinslist	Displays the names of instances that have been set up for an Agent that can start multiple instances on one host.(Note 1)	Agent	Anyone	Anyone	5.2.23
jpcinssetup	Creates and updates an instance environment for an Agent that can start a set of multiple services on one host.(Note 1)	Agent	Member of the Administrators group	root user	5.2.24
jpcinsunsetup	Deletes an instance environment for an Agent that can start a set of multiple services on one host.(Note 1)	Agent	Member of the Administrators group	root user	5.2.25
jpcnsconfig port	Sets and displays the port number that is used with a Tuning Manager series program.(Note 1)	▪ Tuning Manager ▪ Agent	Member of the Administrators group	root user	5.2.26
jpcnshostname	Lets you display, specify, or change the host name of the connection-target Tuning Manager (Name Server service).(Note 1)	▪ Tuning Manager ▪ Agent	Member of the Administrators group(Note 2)	root user(Note 2)	5.2.27
jpcras	Collects information about Collection Manager, Agent, and the operating system.(Note 1)	▪ Tuning Manager ▪ Agent	Member of the Administrators group	root user	5.2.28

Command name	Description	Host where the command can be executed	User authorized to execute the command		See
			In Windows	In UNIX	
jpcresto	Restores the data in the Master Store service or Agent Store service database that was saved using the `jpcctrl backup` command.(Note 1)	▪ Tuning Manager ▪ Agent	▪ Member of the Administrators group ▪ Member of the Backup Operators group	root user	5.2.29
jpcstart	Starts the service of a Tuning Manager series program at the local host.(Note 1)	▪ Tuning Manager ▪ Agent	▪ Member of the Administrators group	root user	5.2.30
jpcstop	Stops the service of a Tuning Manager series program at the local host.(Note 1)	▪ Tuning Manager ▪ Agent	▪ Member of the Administrators group	root user	5.2.31
jpcstsetup disable	Disables the status management function.	▪ Tuning Manager ▪ Agent	▪ Member of the Administrators group	root user	5.2.32
jpcstsetup display	Displays the status of the status management function.	▪ Tuning Manager ▪ Agent	▪ Member of the Administrators group	root user	5.2.33
jpcstsetup enable	Enables the status management function.	▪ Tuning Manager ▪ Agent	▪ Member of the Administrators group	root user	5.2.34
jpctdchkinst	Performs the following three tasks: ▪ Verify the instance information settings. ▪ Check that one or more storage subsystems can be connected using the instance information settings. ▪ Display information on the properties of the connected storage subsystems.	▪ Agent for RAID	▪ Member of the Administrators group	root users	5.2.35
jpctdlistraid	Lists the command devices that are open to the host on which the command is executed.	▪ Agent for RAID	▪ Member of the Administrators group	root users	5.2.36
jpctminfo	Displays product information of Tuning Manager series programs installed on the host.	▪ Tuning Manager ▪ Agent	Anyone	root user	5.2.37

Note **1**: If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.

Note **2**: Anyone can display the host name of the connection-target Tuning Manager (Name Server service).

Storage directory

Windows: *installation-directory*\tools\

UNIX: /opt/jp1pc/tools/

5.2.1 jpcagtsetup

Format

```
jpcagtsetup   service-key
```

Function

The jpcagtsetup command registers Agent information with Tuning Manager when adding a new Agent into a Tuning Manager series system.

Execute this command in the following case:

- When Tuning Manager is installed on a separate host from the Agent, and the Agent being added is a newer version than Tuning Manager

When a logical host is set for Tuning Manager, information about the new Agent will be registered with the set logical host and physical host.

Notes:

- Before you execute this command, make sure that the setup file of the new Agent for which you want to add information is copied to either of the following directories on the host where the command will be executed:
  - Windows: *installation-folder*\setup\
  - UNIX: /opt/jp1pc/setup/

  If the additional setup for a new Agent is to be executed at a host that is different from the host in which the new Agent was installed, copy the setup files for the new Agent to the corresponding directories at the execution host beforehand. When using FTP to copy (transfer) files between a Windows host and a UNIX host, use the binary mode.
- Before you execute this command, stop all the Tuning Manager services that are running on the local host. If you execute this command without stopping the services, the command tries to stop the services. However, if the services cannot be stopped completely, the command results in an error. If this occurs, make sure that the services have completely stopped, and then re-execute the command. After the setup has been finished, manually start the services.

  To check the service activation status, execute the jpcctrl list command.
- The execution information for this command is output to the common message log for the physical hosts even when the setup target is a logical host.

– If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.

Return values

Table 5.3 Return Values (jpcagtsetup)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
2	There is no execution permission for the command.
4	The service on the local host has not been stopped.
10	The command is executing in another session.
11	The user cancelled the processing (entered N in response to the query).
100	The operating environment for the Tuning Manager series programs is invalid.
101	The port number could not be acquired.
200	A memory shortage occurred.
210	A disk space shortage occurred.
211	A file or directory cannot be accessed.
222	An error occurred during communication processing (IP address acquisition failed).
230	Execution of an internal command failed.
255	An unexpected error occurred.

Example of usage

In this example, the command sets up a new Agent for Oracle:

```
jpcagtsetup agto
```

5.2.2 jpcalarm active

Format

```
jpcalarm active     -key  service-key
                    -table alarm-table-name
                    -alarm alarm-name
```

Function

The jpcalarm active command activates an alarm that is inactive. This command activates alarms individually. You cannot batch activate all alarms in an alarm table.

Notes:

- For details about how to set and use alarms, see the *HiCommand Tuning Manager Agent Administration Guide*.
- This command cannot be executed if any Name Server, Master Manager, or View Server service is stopped.
- If the specified alarm is already active, the command terminates normally.
- If a character string specified in an argument contains two-byte characters, the language environment for the shell that executes the `jpcalarm` command must be Japanese (Shift JIS or EUC encoding) and match the language environment used when Tuning Manager starts. Before you execute the command, check the language environment for the shell and the language environment used when Tuning Manager starts.

Return values

Table 5.4 Return Values (jpcalarm active)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
2	The user does not have execution permission for the command.
3	A Name Server, Master Manager, or View Server service is not running.
4	Another setup command is executing on the same machine.
5	The specified Agent has not been set up.
6	The specified alarm table or alarm was not found.
11	The user cancelled the processing.
100	The operating environment of the Tuning Manager series programs is invalid.
200	A memory shortage occurred.
222	A communication error occurred.
223	A communication timeout error occurred.

Return values	Meaning
255	An unexpected error occurred.

Usage example 1

In this example, the command activates the `Disk Service Time` alarm defined in the `PFM UNIX Solution Alarms 7.50` solution set of Agent for Platform (UNIX):

```
jpcalarm active -key agtu -table "PFM UNIX Solution Alarms 7.50" -alarm "Disk Service
Time"
```

Usage example 2

In this example, the command activates the `alarm1` alarm defined in the `alarmtable1` alarm table of Agent for Platform (UNIX):

```
jpcalarm active -key agtu -table alarmtable1 -alarm alarm1
```

5.2.3 jpcalarm bind

Format

```
jpcalarm bind     -key service-key
                  -table alarm-table-name
                  -id service-ID
```

Function

The jpcalarm bind command binds a defined alarm table to an agent.

If you execute this command on an agent to which another alarm table is already bound, the existing binding is cancelled and the specified alarm table is bound when the command executes.

Notes:

- For details about how to set and use alarms, see the *HiCommand Tuning Manager Agent Administration Guide*.
- For details about the service ID, see Appendix B.
- This command cannot be executed if any Name Server, Master Manager, or View Server service is stopped.
- If the data model version of Agent is smaller than the data model version of the alarm table, you cannot bind the alarm table to Agent. If you specify an alarm table of a data model version that cannot be bound, this command ends with an error.
- If a character string specified in an argument contains two-byte characters, the language environment for the shell that executes the `jpcalarm` command must be Japanese (Shift JIS or EUC encoding) and match the language environment used when Tuning Manager starts. Before you execute the command, check the language environment for the shell and the language environment used when Tuning Manager starts.

Return values

Table 5.5 Return Values (jpcalarm active)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
2	The user does not have execution permission for the command.
3	A Name Server, Master Manager, or View Server service is not running. It is also possible that there is no agent that corresponds to the specified service ID.
4	Another setup command is executing on the same machine.
5	The specified Agent has not been set up.
6	The specified alarm table could not be found or cannot be bound to the agent because of the data model version.
11	The user cancelled the processing.
100	The operating environment of the Tuning Manager series programs is invalid.
200	A memory shortage occurred.
222	A communication error occurred.
223	A communication timeout error occurred.
255	An unexpected error occurred.

Examples of usage

Usage example 1

In this example, the command binds the `PFM UNIX Solution Alarms 7.50` solution set of Agent for Platform (UNIX) to an agent on the host named host01 (service ID: `UA1host01`):

```
jpcalarm bind -key agtu -table "PFM UNIX Solution Alarms 7.50" -id UA1host01
```

Usage example 2

In this example, the command binds the `alarmtable1` alarm table of Agent for Platform (UNIX) to all agents on hosts whose host name begins with `host`.

```
jpcalarm bind -key agtu -table alarmtable1 -id "UA1host*"
```

5.2.4 jpcalarm check

Format

```
jpcalarm check    -f name-of-alarm-definition-file
                  [ -syntax ]
```

Function

The `jpcalarm check` command checks the syntax of a created alarm definition file and the set-up status of the definition (whether the specified records and fields are supported) and Agents that are required.

To check the set-up status of the definition and Agents, the Name Server, Master Manager, and View Server services must be running. To check only the definition syntax without checking the set-up status of the definition or Agents, specify the `-syntax` option. You can specify the `-syntax` option even when a Name Server, Master Manager, or View Server service is stopped.

If errors are found in the syntax or the definition contents of the alarm definition file, error messages are output, indicating the text and line number of each error found in the file. A separate error message is output for each error.

Notes:

- For details about how to set and use alarms, see the *HiCommand Tuning Manager Agent Administration Guide*.
- To check the set-up status of the definition and Agents, the Name Server, Master Manager, and View Server services must be running. To check only the syntax without checking the set-up status of the definition or Agents, specify the `-syntax` option. You can specify the `-syntax` option even when a Name Server, Master Manager, or View Server service is stopped.
- If you specify two-byte characters in the file name, the shell in which you execute this command must be in a Japanese character environment (Shift JIS or EUC character codes). Before executing this command, check the shell's character environment.
- A maximum of 50 alarms can be defined in a single alarm table, including previously defined alarms. When you check the validity of the definition contents of an alarm definition file, this command does not check whether the total number of alarms exceeds 50.

Return values

Table 5.6 Return Values (jpcalarm check)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.

Return values	Meaning
2	The user does not have execution permission for the command.
3	A Name Server, Master Manager, or View Server service is not running (when the `-syntax` option is not specified).
4	Another setup command is executing on the same machine.
6	A definition in the alarm definition file is invalid.
11	The user cancelled the processing.
100	The operating environment of the Tuning Manager series programs is invalid.
200	A memory shortage occurred.
211	The alarm definition file cannot be accessed.
222	A communication error occurred.
223	A communication timeout error occurred.
255	An unexpected error occurred.

Examples of usage

Usage example 1

In this example, the command checks the validity of the syntax and definition contents of the `alarmtest1.cfg` alarm definition file stored in the `/tmp` directory:

```
jpcalarm check -f /tmp/alarmtest1.cfg
```

Usage example 2

In this example, the command checks only the validity of syntax in the `alarmtest2.cfg` alarm definition file stored in the `/tmp` directory:

```
jpcalarm check -f /tmp/alarmtest2.cfg -syntax
```

5.2.5 jpcalarm copy

Format

```
jpcalarm copy    -key service-key
                 -table name-of-copy-source-alarm-table
                 [ -alarm name-of-copy-source-alarm ]
                 -name name-of-copy-destination-alarm-table-or-alarm
```

Function

The jpcalarm copy command copies an alarm table or an alarm.

Table 5.7 shows the alarm table or alarm that is copied depending on the specification of the `-table` and `-alarm` options.

Table 5.7 Alarm Table or Alarm That Is Copied Depending on Option Specifications

Option specification	Copied information

-table	-alarm	
Specified	Not specified	The alarm table specified by the `-table` option is copied. All the alarms in the alarm table are copied.
Specified	Specified	The alarm specified by the `-alarm` option in the alarm table specified by the `-table` option is copied.

Notes:

- For details about how to set and use alarms, see the *HiCommand Tuning Manager Agent Administration Guide*.
- This command cannot be executed if any Name Server, Master Manager, or View Server service is stopped.
- If you use the `-alarm` option to specify an alarm to be copied, the specified alarm is copied within the original alarm table. You cannot copy the alarm to a different alarm table.
- A maximum of 50 alarms can be saved in a single alarm table.
- If a character string specified in an argument contains two-byte characters, the language environment for the shell that executes the `jpcalarm` command must be Japanese (Shift JIS or EUC encoding) and match the language environment used when Tuning Manager starts. Before you execute the command, check the language environment for the shell and the language environment used when Tuning Manager starts.

Return values

Table 5.8 Return Values (jpcalarm copy)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
2	The user does not have execution permission for the command.
3	A Name Server, Master Manager, or View Server service is not running.
4	Another setup command is executing on the same machine.
5	The specified Agent has not been set up.
6	The specified alarm table or alarm was not found.
11	The user cancelled the processing.
100	The operating environment of the Tuning Manager series programs is invalid.
200	A memory shortage occurred.
211	The alarm table specified at the copy destination cannot be edited.
222	A communication error occurred.
223	A communication timeout error occurred.

Return values	Meaning
255	An unexpected error occurred.

Examples of usage

Usage example 1

In this example, the command copies the PFM UNIX Solution Alarms 7.50 solution set of Agent for Platform (UNIX) to an alarm table named alarmtable1:

```
jpcalarm copy -key agtu -table "PFM UNIX Solution Alarms 7.50" -name alarmtable1
```

Usage example 2

In this example, the command copies the alarm1 alarm in the alarmtable1 alarm table of Agent for Platform (UNIX) to an alarm named alarm2:

```
jpcalarm copy -key agtu -table alarmtable1 -alarm alarm1 -name alarm2
```

5.2.6 jpcalarm delete

Format

```
jpcalarm delete    -key service-key
                   -table alarm-table-name
                   [ -alarm alarm-name ]
                   [ -y ]
```

Function

The jpcalarm delete command deletes an alarm table or an alarm. Table 5.9 shows the alarm table or alarm that is deleted depending on the specification of the -table and -alarm options.

Table 5.9 Alarm Table or Alarm That Is Deleted Depending on Option Specifications

Option specification		Deleted information
-table	-alarm	
Specified	Not specified	The alarm table specified by the -table alarm is deleted, including all alarms defined in that alarm table.
Specified	Specified	Only the alarm specified by the -alarm option is deleted.

Notes:

- You cannot delete a solution set (alarm table whose name begins with PFM).
- For details about how to set and use alarms, see the *HiCommand Tuning Manager Agent Administration Guide*.
- This command cannot be executed if any Name Server, Master Manager, or View Server service is stopped.

– If a character string specified in an argument contains two-byte characters, the language environment for the shell that executes the `jpcalarm` command must be Japanese (Shift JIS or EUC encoding) and match the language environment used when Tuning Manager starts. Before you execute the command, check the language environment for the shell and the language environment used when Tuning Manager starts.

Return values

Table 5.10 Return Values (jpcalarm delete)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
2	The user does not have execution permission for the command.
3	A Name Server, Master Manager, or View Server service is not running.
4	Another setup command is executing on the same machine.
5	The specified Agent has not been set up.
6	The specified alarm table or alarm was not found.
11	The user cancelled the processing.
100	The operating environment of the Tuning Manager series programs is invalid.
200	A memory shortage occurred.
211	An attempt to delete an alarm table or alarm failed.
222	A communication error occurred.
223	A communication timeout error occurred.
255	An unexpected error occurred.

Examples of usage

Usage example 1

In this example, the command deletes the `alarmtable1` alarm table defined in Agent for Platform (UNIX):

```
jpcalarm delete -key agtu -table alarmtable1
```

Usage example 2

In this example, the command deletes the `alarm1` alarm defined in the `alarmtable1` alarm table of Agent for Platform (UNIX) without confirmation:

```
jpcalarm delete -key agtu -table alarmtable1 -alarm alarm1 -y
```

5.2.7 jpcalarm export

Format

```
jpcalarm export    -f name-of-export-destination-file
                  { -key service-key
                  [ -table alarm-table-name [-alarm alarm-name ]]|
                   -template }
                  [ -y|-n ]
```

Function

The `jpcalarm export` command exports alarm definition information to a specified file.

The alarm definition information is exported preserving the syntax of the alarm definition file. For details about the syntax of an alarm definition file, see the *HiCommand Tuning Manager Agent Administration Guide*.

The following table describes the alarm definition information that is exported depending on the specification of the `-key`, `-table`, and `-alarm` options.

Table 5.11 Information That Is Exported Depending on Option Specifications

Option specification			Exported information
-key	-table	-alarm	
Specified	Not specified	Not specified	All alarm definition information in the alarm tables defined for the agent specified by the -key option is exported.
Specified	Specified	Not specified	All definition information for the alarms in the alarm table specified by the -table option is exported.
Specified	Specified	Specified	Only the definition information for the alarm specified by the -alarm option is exported.

Alternatively, you can specify the `-template` option to output a template file that includes all the labels in the alarm definition file.

Notes:

- For details about how to set and use alarms, see the *HiCommand Tuning Manager Agent Administration Guide*.
- When you specify the `-key`, `-table`, or `-alarm` option to export existing alarm definition information, Tuning Manager (Name Server, Master Manager, and View Server services) must be running. However, Tuning Manager does not have to be running when you specify the `-template` option to output a template.
- An agent solution set might include alarms in which the condition defined for the abnormal value differs from the condition defined for the warning value. In such cases, the warning value conditions take precedence when the solution set is exported.

For example, suppose a conditional expression is defined as `BBB>=90` for the abnormal value of a particular alarm, and `BBB>80` is defined for the warning value. When you export this alarm definition, the greater-than sign (`>`) in the warning value condition will be output to the alarm definition file, as follows:

```
[[Alarm Condition Expressions]]
Condition=BBB>90,80
```

For details about the settings of conditions for abnormal and warning values in a solution set, see the documentation for the applicable agent.

- Although you can successfully export an alarm table that contains more than 50 alarm definitions, you cannot import such a file as is, because the maximum number of alarms that can be defined in an alarm definition file is 50. If you export an alarm table containing more than 50 alarm definitions, you must split the resulting alarm definition file into multiple files, each containing no more than 50 alarm definitions, before you import the alarm definitions.

  For example, if you want to export alarm definition information of AlarmTable1 (which contains 45 alarms) and AlarmTable2 (which contains 10 alarms), alarm definition information of 55 alarms, which are the sum of the alarms contained in the two tables, is to be exported to the alarm definition file. However, since up to only 50 alarm definitions can be entered into an alarm definition file, you need to decrease the number of alarm definitions in the alarm definition file to 50 or less.
- If the alarm definition information to be exported contains two-byte characters, the language environment for the shell that executes the `jpcalarm` command must be Japanese (Shift JIS or EUC encoding) and match the language environment used when Tuning Manager starts. Before you execute the command, check the language environment for the shell and the language environment used when Tuning Manager starts.
- If you specify two-byte characters in the file name, the shell in which you execute this command must be in a Japanese character environment (Shift JIS or EUC character encoding). Before executing this command, check the shell's character environment.

Return values

Table 5.12 Return Values (jpcalarm export)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
2	The user does not have execution permission for the command.
3	A Name Server, Master Manager, or View Server service is not running.
4	Another setup command is executing on the same machine.
5	The specified Agent has not been set up.
6	The specified alarm table or alarm does not exist. It is also possible that the alarm definition does not exist in the Agent of the specified service key.

Return values	Meaning
11	The user cancelled the processing.
100	The operating environment of the Tuning Manager series programs is invalid.
200	A memory shortage occurred.
211	The export destination file cannot be accessed.
222	A communication error occurred.
223	A communication timeout error occurred.
255	An unexpected error occurred.

Examples of usage

Usage example 1

Assume that an alarm table named `alarmtable1` is defined by Agent for Platform (UNIX), in addition to the solution set. Also assume that an alarm named `alarm1` is defined in the `alarmtable1` alarm table.

For this case, the following shows an example of executing this command to export all the alarm definitions defined by Agent for Platform (UNIX) to a file named `alarmtable1.cfg` in the `/tmp` directory:

```
jpcalarm export -f /tmp/alarmtable1.cfg -key agtu
```

Output result 1 (`alarmtable1.cfg`)

```
Alarm Definition File Version=0001
Alarm Definition File Code=EUC-JP

[Alarm Data]
[[General]]
Product=U3.0
Alarm Table Name="PFM UNIX Solution Alarms 7.50"
Alarm Name="Disk Service Time"
Message Text="Average disk service time is %CVS secs"
Check Value Exist=N
   :
[Alarm Data]
[[General]]
Product=U4.0
Alarm Table Name=alarmtable1
Alarm Name=alarm1
Message Text=
Check Value Exist=N
   :
```

Usage example 2

In this example, the command exports the `Disk Service Time` alarm definition from among the alarms defined by Agent for Platform (UNIX) in the `PFM UNIX Solution Alarms 7.50` solution set to a file named `alarm2.cfg` in the `/tmp` directory:

```
jpcalarm export -f /tmp/alarm2.cfg -key agtu -table "PFM UNIX Solution Alarms 7.50" -
alarm "Disk Service Time"
```

Output result 2 (alarm2.cfg)

```
Alarm Definition File Version=0001
Alarm Definition File Code=EUC-JP

[Alarm Data]
[[General]]
Product=U3.0
Alarm Table Name="PFM UNIX Solution Alarms 7.50"
Alarm Name="Disk Service Time"
Message Text="Average disk service time is %CVS secs"
Check Value Exist=N
   :
```

Usage example 3

In this example, the command outputs an alarm definition file template to a file named template3.cfg in the /tmp directory:

```
jpcalarm export -f /tmp/template3.cfg -template
```

Output result 3 (template3.cfg)

```
#Alarm Definition File Version=0001
#Alarm Definition File Code=

#[Alarm Data]
#[[General]]
#Product=
#Alarm Table Name=
#Alarm Name=
#Message Text=
#Check Value Exist=N

#[[Advanced Setting]]
#Active Alarm=Y
#Regulary Alarm=Y
#Evaluate All Data=N
#Monitoring Regulary=N
#Monitoring Time=
#Damping=N
#Damping Count=

#[[Check Value Exist]]
#Record=
#Field=
#Value=

#[[Alarm Condition Expressions]]
#Condition=

#[[Actions]]
#Report=
#E-mail=Abnormal,Warning,Normal
#Command=Abnormal,Warning,Normal
#SNMP=Abnormal,Warning,Normal
#JP1 Event=N

#[[Action Definition E-mail]]
#E-mail Address=
#Action Handler=
#[[[Message Text]]]
#Date: %SCT
#Host: %HNS
#
#Product: %PTS
#Agent: %ANS
#
```

```
#Alarm: %AIS (%ATS)
#State: %SCS
#
#Message: %MTS
#[[Action Definition Command]]
#Command Name=
#Action Handler=

#[[[Message Text]]]
#
#[[Action Definition JP1 Event]]
#Event ID=
#Action Handler=
#Message=%MTS
#Switch Alarm Level=Y
#Exec Logical Host=
```

5.2.8 jpcalarm import

Format

```
jpcalarm import   -f name-of-alarm-definition-file
                  [ -y|-n ]
```

Function

The `jpcalarm import` command imports alarm definition information from a specified file, and defines and updates alarm tables and alarms.

Definition information is imported one alarm at a time. If more than one alarm is defined in the alarm definition file, definition importing will continue even if import of a particular alarm definition terminates abnormally. When errors occur during import of multiple alarm definitions, the return value that is set is for the last error that occurred.

Before importing definition information, this command checks the validity of the syntax and definition contents of the alarm definition file. If errors are found in the syntax or the file's definition contents, an error message is output, indicating only the line number and text of the first error that was detected.

KAVE05305-E Alarm definition file is incorrect (error=*cause-of-error*, line=*line-number*)

Table 5.13 Causes and Description of the Errors

Cause of the error (output text)	Meaning
The specified entry is invalid	A label or section that cannot be used for a definition file is specified.
The specified value is invalid	A value specification is invalid.
The syntax is invalid	The syntax of a definition in the definition file is invalid.
The entry (*label-or-section-name-that-should-be-specified*) is not specified	A necessary value (label or section) is not specified.
The specified product is invalid	A product specified in the alarm definition is invalid. (The product ID or data model of a product that has not been set up is specified.)

Cause of the error (output text)	Meaning
The specified field is not defined	A record or record field that cannot be used for the specified product is specified in the alarm definition.
The specified report is not defined	A report that is not defined for the specified product is specified in the alarm definition.
The specified action handler is not defined	An action handler that does not exist at the action execution target[Note 1] is specified.
The specified Action Handler does not have capability	An action handler whose action capabilities[Note 2] are not set at the action execution target is specified.
A character- code is invalid	A character code in the alarm definition file is invalid.
The specified definition is too many	The specified number of alarm definitions exceeds the maximum.
Total length of Abnormal condition definition is too long	The abnormal condition statement in the alarm definition exceeds the maximum length.
Total length of Warning condition definition is too long	The warning condition statement in the alarm definition exceeds the maximum length.

Note 1

You need to check specifiable action handlers beforehand by using the `jpcctrl list` command.

Note 2

You cannot set capabilities for action handlers by using the `jpcalarm import` command.

Notes:

- For details about how to set and use alarms, see the *HiCommand Tuning Manager Agent Administration Guide*.
- This command cannot be executed if any Name Server, Master Manager, or View Server service is stopped.
- A maximum of 50 alarms can be defined in a single alarm table, including previously defined alarms. When you check the validity of the definition contents of an alarm definition file, this command does not check whether the number of alarms exceeds 50.
- If you specify two-byte characters in the file name, the shell in which you execute this command must be in a Japanese character environment (Shift JIS or EUC character encoding). Before executing this command, check the shell's character environment.
- If a read-only alarm table (an alarm table whose name begins with `PFM`) is defined in the alarm definition file, an error occurs and its alarm definitions are not overwritten even if the `-y` option is specified.
- If the alarm definition information to be imported contains two-byte characters, the language environment for the shell that executes the jpcalarm command must be Japanese (Shift JIS or EUC encoding) and match the language environment used when Tuning Manager starts. Before you execute the command, check the language environment for the shell and the language environment used when Tuning Manager starts.

Return values

Table 5.14 Return Values (jpcalarm import)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
2	The user does not have execution permission for the command.
3	A Name Server, Master Manager, or View Server service is not running.
4	Another setup command is executing on the same machine.
6	A definition in the alarm definition file is invalid.
11	The user cancelled the processing.
100	The operating environment of the Tuning Manager series programs is invalid.
200	A memory shortage occurred.
211	The alarm definition file cannot be accessed. It is also possible that an attempt to define or update an alarm failed because the alarm is being updated.
222	A communication error occurred.
223	A communication timeout error occurred.
255	An unexpected error occurred.

Example of usage

In this example, the command imports the `alarmtest1.cfg` alarm definition file that is stored in the `/tmp` directory:

```
jpcalarm import -f /tmp/alarmtest1.cfg
```

5.2.9 jpcalarm inactive

Format

```
jpcalarm inactive     -key service-key
                      -table alarm-table-name
                      -alarm alarm-name
```

Function

The jpcalarm inactive command inactivates an alarm that is active.

This command inactivates one alarm at a time. You cannot inactivate all alarms in an alarm table at once in a batch.

Notes:

- For details about how to set and use alarms, see the *HiCommand Tuning Manager Agent Administration Guide*.
- This command cannot be executed if any Name Server, Master Manager, or View Server service is stopped.
- If a character string specified in an argument contains two-byte characters, the language environment for the shell that executes the `jpcalarm` command must be Japanese (Shift JIS or EUC encoding) and match the language environment used when Tuning Manager starts. Before you execute the command, check the language environment for the shell and the language environment used when Tuning Manager starts.

Return values

Table 5.15 Return Values (jpcalarm inactive)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
2	The user does not have execution permission for the command.
3	A Name Server, Master Manager, or View Server service is not running.
4	Another setup command is executing on the same machine.
5	The specified Agent has not been set up.
6	The specified alarm table or alarm was not found.
11	The user cancelled the processing.
100	The operating environment of the Tuning Manager series programs is invalid.
200	A memory shortage occurred.
222	A communication error occurred.
223	A communication timeout error occurred.

Return values	Meaning
255	An unexpected error occurred.

Examples of usage

Usage example 1

In this example, the command inactivates the `Disk Service Time` alarm defined by the `PFM UNIX Solution Alarms 7.50` solution set of Agent for Platform (UNIX):

```
jpcalarm inactive -key agtu -table "PFM UNIX Solution Alarms 7.50" -alarm "Disk Service
Time"
```

Usage example 2

In this example, the command inactivates the `alarm1` alarm defined in the `alarmtable1` alarm table of Agent for Platform (UNIX):

```
jpcalarm inactive -key agtu -table alarmtable1 -alarm alarm1
```

5.2.10 jpcalarm list

Format

```
jpcalarm list   -key service-key
                [ -table alarm-table-name ]
```

Function

The `jpcalarm list` command displays the definition information or binding information of alarm tables and alarms.

Table 5.16 shows the information that is displayed depending on the specification of the `-key` and `-table` options.

Table 5.16 Information That Is Displayed Depending on Option Specifications

Option specification		Displayed information
-key	-table	
Specified	Not specified	A list of alarm table names defined by the agent specified by the `-key` option is displayed. The individual alarm names are not displayed.
Specified	Specified	A list of alarm names defined in the alarm table specified by the `-table` option is displayed, together with each alarm's status (`active`/`inactive`); a list of agents to which the alarm table is bound is also displayed.

Notes:

- For details about how to set and use alarms, see the *HiCommand Tuning Manager Agent Administration Guide*.
- This command cannot be executed if any Name Server, Master Manager, or View Server service is stopped.

- If a character string specified in an argument contains two-byte characters, the language environment for the shell that executes the `jpcalarm` command must be Japanese (Shift JIS or EUC encoding) and match the language environment used when Tuning Manager starts. Before you execute the command, check the language environment for the shell and the language environment used when Tuning Manager starts.
- If the alarm definition information to be displayed contains two-byte characters, the language environment for the shell that executes the `jpcalarm` command must be Japanese (Shift JIS or EUC encoding) and match the language environment used when Tuning Manager starts. Before you execute the command, check the language environment for the shell and the language environment used when Tuning Manager starts.

Return values

Table 5.17 Return Values (jpcalarm inactive)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
2	The user does not have execution permission for the command.
3	A Name Server, Master Manager, or View Server service is not running.
4	Another setup command is executing on the same machine.
5	The specified Agent has not been set up.
6	The specified alarm table could not be found.
11	The user cancelled the processing.
100	The operating environment of the Tuning Manager series programs is invalid.
200	A memory shortage occurred.
222	A communication error occurred.
223	A communication timeout error occurred.
255	An unexpected error occurred.

Displayed information

Table 5.18 shows the information that is displayed by executing the jpcalarm list command

Table 5.18 Information That Is Displayed When the jpcalarm list Command Is Executed

No.	Displayed information	Information displayed by specified options		Explanation
		-key	-key and -table	
1	Product ID	Yes	Yes	Displays the product ID, which includes the agent type. For details about the product ID of each agent, see Appendix B.
2	DataModelVersion	No	Yes	Displays the version of the data model.
3	Alarm Table Name	Yes	Yes	Displays the name of the alarm table.
4	Alarm Name	No	Yes	Displays the names of the alarms and their statuses: ▪ `active`: Alarm is enabled. ▪ `inactive`: Alarm is disabled.
5	The Bound Agent	No	Yes	Displays the service IDs of the agents to which the alarm table is bound.

Examples of usage

Usage example 1

Assume that an alarm table named `alarmtable1` is defined by Agent for Platform (UNIX), in addition to the solution set.

For this case, the following shows an example of executing this command to display a list of alarm tables defined by Agent for Platform (UNIX):

```
jpcalarm list -key agtu
```

Output result 1

```
Product ID:U
Alarm Table Name:
  alarmtable1
  PFM UNIX Solution Alarms 7.50
```

Usage example 2

Assume that the `PFM UNIX Solution Alarms 7.50` solution set defined by Agent for Platform (UNIX) is bound to hosts `hostA` and `hostB`.

For this case, the following shows an example of executing this command to display a list of alarms defined in the `PFM UNIX Solution Alarms 7.50` solution set of Agent for Platform (UNIX), as well as a list of agents to which this solution set is bound:

```
jpcalarm list -key agtu -table "PFM UNIX Solution Alarms 7.50"
```

Output result 2

```
Product ID:U
DataModelVersion:6.0
Alarm Table Name:PFM UNIX Solution Alarms 7.50
Alarm Name:
  Disk Service Time   [active]
  I/O Wait Time       [active]
  Kernel CPU          [active]
  Pagescans           [active]
  Run Queue           [active]
  Swap Outs           [active]
  User CPU            [active]

The Bound Agent:
  UA1hostA
  UA1hostB
```

5.2.11 jpcalarm unbind

Format

```
jpcalarm unbind     -key service-key
                    -table alarm-table-name
                    -id service-ID
```

Function

The jpcalarm unbind command releases the binding of an alarm table to agents.

Notes:

- For details about how to set and use alarms, see the *HiCommand Tuning Manager Agent Administration Guide*.
- For details about the service ID, see Appendix B.
- This command cannot be executed if any Name Server, Master Manager, or View Server service is stopped.
- If a character string specified in an argument contains two-byte characters, the language environment for the shell that executes the `jpcalarm` command must be Japanese (Shift JIS or EUC encoding) and match the language environment used when Tuning Manager starts. Before you execute the command, check the language environment for the shell and the language environment used when Tuning Manager starts.

Return values

Table 5.19 Return Values (jpcalarm unbind)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
2	The user does not have execution permission for the command.
3	A Name Server, Master Manager, or View Server service is not running. Another possibility is that there is no agent that corresponds to the specified service ID.
4	Another setup command is executing on the same machine.
5	The specified Agent has not been set up.
6	The specified alarm table could not be found.
11	The user cancelled the processing.
100	The operating environment of the Tuning Manager series programs is invalid.
200	A memory shortage occurred.
222	A communication error occurred.
223	A communication timeout error occurred.
255	An unexpected error occurred.

Usage example 1

In this example, the command releases the binding of the `PFM UNIX Solution Alarms 7.50` solution set of Agent for Platform (UNIX) to the agent on the host named `host1` (service ID: `UA1host01`):

```
jpcalarm unbind -key agtu -table "PFM UNIX Solution Alarms 7.50" -id UA1host01
```

Usage example 2

Assume that an alarm table named `alarmtable1` of Agent for Platform (UNIX) is bound to the agents on all hosts whose name begins with `host`.

For this case, the following shows an example of executing this command to release all bindings of the `alarmtable1` alarm table:

```
jpcalarm unbind -key agtu -table alarmtable1 -id "UA1host*"
```

5.2.12 jpcctrl backup

Format

```
jpcctrl backup     service-id
                   [host=host-name]
                   [lhost=logical-host-name]
                   [-direct]
                   [-alone]
```

Function

The jpcctrl backup command creates a backup file for the data stored in the Master Store service or Agent Store service database.

The default execution of this command creates the following backup files:

- To back up the data stored in the Master Store service database:
  - Windows: *installation-folder*\mgr\store\backup*generation-number*(Note 1)*database-id*(Note 2).db
  - UNIX: /opt/jp1pc/mgr/store/backup/*generation-number*(Note 1)/*database-id*(Note 2).db
- To back up the data stored in the Agent Store service database:
  - Windows: *installation-folder**xxxx*(Note 3)\store[*instance-name*] (Note 4)\backup*generation-number*(Note 1)*database-id*(Note 2).db
  - UNIX: /opt/jp1pc/*xxxx*(Note 3)/store[/*instance-name*] (Note 4)/backup/*generation-number*(Note 1)/*database-id*(Note 2).db

Note **1**: Generation numbers begin with 01. The maximum value for the generation number is the value specified in Backup Save of the jpcsto.ini file. The default maximum generation number is 05.

Note **2**: The database IDs are shown as follows:

- PI: Agent Store service database for records of the PI record type
- PD: Agent Store service database for records of the PD record type
- PL: Agent Store service database for records of the PL record type (for Agent for Platform (UNIX) only)
- PA: Master Store service database

Note **3**: *xxxx* indicates the service key of each Agent. For details about service keys, see Appendix C.

Note **4**: For an Agent that monitors an application program that can start a set of multiple services at the same host, there are directories with instance names.

Notes:

- Arguments must be specified in the order that they appear in the explanation. If they are specified in some other order, they will not be recognized correctly.
- This command cannot be executed in the following cases:

  - The Name Server service, Master Manager service, specified Master Store service, or specified Agent Store service has stopped.
  - The data in the database of the specified Master Store service or the specified Agent Store service is currently being saved.
  - The data in the database of the specified Master Store service or the specified Agent Store service is currently being exported.

- If you want to simultaneously execute the jpcctrl backup command or jpcctrl dump command, specify the `-direct` option or `-alone` option. If one of these options is not specified, these commands cannot be executed. If you want to perform backup processing or export processing multiple times, wait for the executing processing to finish before performing the next processing. If you want to execute the jpcctrl backup command or jpcctrl dump command without specifying the `-direct` option or `-alone` option, it is recommended that these commands be executed from a single host only.
- In the jpcctrl command, you can specify a wildcard character for the service ID or the `host` option. If you want to simultaneously perform backup processing or export processing for more than one agent, execute the command by specifying a wildcard for the service ID or the `host` option.

  (Example 1) Executing the jpcctrl backup command for more than one agent:

  In this example, the command creates backup files for all the agents of Agent for Platform (Windows):

  ```
  jpcctrl backup "TS*" host="*"
  ```

  (Example 2) Executing the jpcctrl dump command for more than one host:

  In this example, the command exports the data contained in the Processor Overview (`PI_PCSR`) records from all the Agent for Platform (Windows) hosts, within the time range of 0:00 GMT on July 1, 2006 to 0:00 GMT on September 30, 2006, to the file `PI.out`:

  ```
  jpcctrl dump "TS*" host="*" 2006/07/01 00:00 2006/09/30 00:00
  PI.out PI PCSR
  ```

- To execute this command, you temporarily need, on the backup-destination disk, free space twice the size of the backup data. Before executing the command, make sure that there is sufficient free space on the backup-destination disk.
- If the volume of data to be saved is large, saving may take time.
- Performance Reporter cannot display the historical report from an Agent Store service database that is being backed up. After backup is finished, display the historical report again.
- If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.

Return values

Table 5.20 Return Values (jpcctrl backup)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
2	There is no execution permission for the command.
3	One or more of the specified services are not active.
5	Tuning Manager is not installed.
7	The specified service ID is not of the Agent Store service or Master Store service.
100	The operating environment for the Tuning Manager series programs is invalid.
101	The Name Server service, Master Manager service, Master Store service, or the operation target service is not active.
102	The specified logical host has not been set up.
104	The specified Master Store service or Agent Store service is either being saved or exported.
200	A memory shortage occurred.
210	A disk space shortage occurred.
211	A backup file or a directory cannot be accessed.
220	The host name specified for the service configuration information file is invalid.
222	A communication error occurred.
223	A timeout occurred during communication.
255	An unexpected error occurred.

Example of usage 1

In this example, the command saves all data from a host named `host02`:

```
jpcctrl backup ?S* host=host02
```

Example of usage 2

In this example, the command saves all data from a host named `agt01` in the logical host (host name: `jp1-ha1`) environment:

```
jpcctrl backup ?S* host=agt01 lhost=jp1-ha1
```

Usage example 3

In this example, the command is executed, with the `-alone` and `-direct` options specified, on the `lhost02` host running Agent for Oracle (Windows) in a logical environment.

```
jpcctrl backup OS* lhost=lhost02  -alone
jpcctrl backup OS* lhost=lhost02  -direct
```

5.2.13 jpcctrl clear

Format

```
jpcctrl clear   service-id
                [host=host-name]
                [lhost=logical-host-name]
                database-id
```

Function

The jpcctrl clear command deletes the data stored in the Master Store service or Agent Store service database.

Notes:

- Arguments must be specified in the order that they appear in the explanation. If they are specified in some other order, they will not be recognized correctly.
- This command cannot be executed if the Name Server service, Master Manager service, specified Master Store service, or specified Agent Store service has stopped.
- If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.

Return values

Table 5.21 Return Values (jpcctrl clear)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
2	There is no execution permission for the command.
3	One or more of the specified services are not active.
5	Tuning Manager is not installed.
7	The specified service ID is not of the Agent Store service or Master Store service.
100	The operating environment for the Tuning Manager series programs is invalid.
101	The Name Server service, Master Manager service, Master Store service, or the operation target service is not active.
102	The specified logical host has not been set up.
200	A memory shortage occurred.
220	The host name specified for the service configuration information file is invalid.
222	A communication error occurred.
255	An unexpected error occurred.

Example of usage 1

In this example, the command erases all data from host `host01`:

```
jpcctrl clear ?S* host=host01 *
```

Example of usage 2

In this example, the command erases the Store data of Agent for Platform (UNIX) from host `host03`. This example assumes that Tuning Manager to which Agent for Platform (UNIX) belongs is in the logical host environment (`host01`):

```
jpcctrl clear "US*" host=host03 lhost=host01 *
```

5.2.14 jpcctrl delete

Format

```
jpcctrl delete    service-id
                  [host=host-name]
                  [lhost=logical-host-name]
```

Function

The jpcctrl delete command deletes the service information of the agent registered in a Tuning Manager series program. Use this command to delete the service information of a product that has been uninstalled.

Note: The service information of the Name Server service, Master Manager service, Master Store service, and Status Server service cannot be deleted.

Notes:

- Arguments must be specified in the order that they appear in the explanation. If they are specified in some other order, they will not be recognized correctly.
- When you execute this command, the Tuning Manager host first communicates with the Agent host to check the running status of the agent. Therefore, the command cannot delete the service information for the agent if the connection cannot be established (for example, because the LAN cable is not connected to the Agent host). Before executing the command, make sure that the Tuning Manager host and the Agent host are connected.
- Service information cannot be deleted unless the Name Server service and Master Manager service are active. If the specified service is active, its service information cannot be deleted.
- If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.
- If you delete the Action Handler service, the action specified for the alarms using the Action Handler service cannot be executed.

Return values

Table 5.22 Return Values (jpcctrl delete)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
2	There is no execution permission for the command.
3	The specified service is not registered.
4	The specified service has not been stopped.
5	Tuning Manager is not installed.
7	The specified service ID belongs to the Name Server service, Master Manager service, Master Store service, or Status Server service.
100	The operating environment for the Tuning Manager series programs is invalid.
101	The Name Server service or Master Manager service is not active.
102	The specified logical host has not been set up.
200	A memory shortage occurred.
220	The host name specified for the service configuration information file is invalid.
222	A communication error occurred.
255	An unexpected error occurred.

Example of usage 1

In this example, the command deletes the Agent for Platform (Windows) service information that remains after Agent for Platform (Windows) is uninstalled from host02:

```
jpcctrl delete T* host=host02
```

Example of usage 2

In this example, the command deletes the Agent for Platform (UNIX) service information from host03. This example assumes that Tuning Manager to which Agent for Platform (UNIX) belongs is in the logical host environment (host01):

```
jpcctrl delete "U*" host=host03 lhost=host01
```

5.2.15 jpcctrl dump

Format

```
jpcctrl dump     service-id
                 [host=host-name]
                 [lhost=logical-host-name]
                 start-time
                 end-time
                 export-file-name
                 database-id
                 record-id
                [-localtime]
                [proxy={y|n}]
                [-direct]
                [-alone]
```

Function

The jpcctrl dump command exports the data stored in the Master Store service or Agent Store service database to a text file. Exporting is executed for each database.

The default execution of this command creates export files in the following directories:

- When data stored in the Master Store service database is exported:
  - Windows: *installation-folder*\mgr\store\dump\
  - UNIX: /opt/jp1pc/mgr/store/dump/
- When data stored in the Agent Store service database is exported:
  - Windows: *installation-folder**xxxx*(Note 1)\store[*instance-name*](Note 2)\dump\
  - UNIX: /opt/jp1pc/*xxxx*(Note 1)/store[/*instance-name*](Note 2)/dump/

Note 1: *xxxx* indicates the service key of each Agent. For details about service keys, see Appendix C.

Note 2: For an Agent that monitors an application program that can start a set of multiple services at the same host, there are directories with instance names.

The export file is created using the file name specified in *export-file-name*.

Information that is output to an export file

The following types of information are output to an export file:

- Product information
- Field name
- Data

For more information on the fields, see the chapter explaining records (a list of record field) in the Agent manual. Fields that are not explained in the Agent manual are those that are used in internal processing.

Notes:

- Arguments must be specified in the order that they appear in the explanation. If they are specified in some other order, they will not be recognized correctly.
- This command cannot be executed in the following cases:

  - The Name Server service, Master Manager service, specified Master Store service, or specified Agent Store service has stopped.
  - The data in the database of the specified Master Store service or the specified Agent Store service is currently being saved.
  - The data in the database of the specified Master Store service or the specified Agent Store service is currently being exported.
- If you want to simultaneously execute the jpcctrl backup command or jpcctrl dump command, specify the `-direct` option or `-alone` option. If one of these options is not specified, these commands cannot be executed. If you want to perform backup processing or export processing multiple times, wait for the executing processing to finish before performing the next processing. If you want to execute the jpcctrl backup command or jpcctrl dump command without specifying the `-direct` option or `-alone` option, it is recommended that these commands be executed from a single host only.
- In the jpcctrl command, you can specify a wildcard character for the service ID or the `host` option. If you want to simultaneously perform backup processing or export processing for more than one agent, execute the command by specifying a wildcard for the service ID or the `host` option.

  (Example 1) Executing the jpcctrl backup command for more than one agent:

  In this example, the command creates backup files for all the agents of Agent for Platform (Windows):

  ```
  jpcctrl backup "TS*" host="*"
  ```

  (Example 2) Executing the jpcctrl dump command for more than one host:

  In this example, the command exports the data contained in the Processor Overview (`PI_PCSR`) records from all the Agent for Platform (Windows) hosts, within the time range of 0:00 GMT on July 1, 2006 to 0:00 GMT on September 30, 2006, to the file `PI.out`:

  ```
  jpcctrl dump "TS*" host="*" 2006/07/01 00:00 2006/09/30 00:00
  PI.out PI PCSR
  ```
- After the command has been executed, if the command is re-executed for the same Master Store service or Agent Store service specifying the same export file, the output result is overwritten.
- If the volume of data to be exported is large, exporting may take time.
- To execute this command, you temporarily need, on the export-destination disk, free space twice the size of the database to be exported. Before executing the command, make sure that there is sufficient free space on the export-destination disk.
- If message `KAVE05234-E` is output, it indicates that processing of a massive amount of data took too long, resulting in a timeout. If this message is displayed often, take one of the following actions:
  - Narrow the time interval specified by *start-time* and *end-time* of the jpcctrl dump command to reduce the data to be exported.
  - Specify a specific record ID, rather than a wildcard character, for the record ID specified in the options of the jpcctrl dump command.

- If message KAVE05234-E is output when the jpcctrl dump command is executed on multiple hosts, execute the command with the direct or -alone option specified.
- Performance Reporter cannot display the historical report from an Agent Store service database that is being exported. After exporting is finished, display the historical report again.
- Pieces of data, such as the field name to be output to an export file, are delimited using a vertical bar (|). Consequently, if the data to be output contains a field name containing a vertical bar (|), it cannot be differentiated from the delimiter. Therefore, do not use a vertical bar (|) in a field name when exporting data by executing the jpcctrl dump command.
- If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.

Return values

Table 5.23 Return Values (jpcctrl dump)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
3	One or more of the specified services are not active.
7	The specified service ID is not of the Agent Store service or Master Store service.
100	The operating environment for the Tuning Manager series programs is invalid.
101	The Name Server service, Master Manager service, Master Store service, or the operation target service is not active.
102	The specified logical host has not been set up.
104	The specified Master Store service or Agent Store service is either being saved or exported.
200	A memory shortage occurred.
210	A disk space shortage occurred.
211	An export file or folder cannot be accessed.
220	The host name specified for the service configuration information file is invalid.
222	A communication error occurred.
223	A timeout occurred during communication.
255	An unexpected error occurred.

Example of usage 1

In this example, the command exports the data that is contained in the Processor Overview (`PI_PCSR`) record on the Agent for Platform (Windows) host `host02`, and is within the time range of 2:00 a.m. (GMT) on July 25, 2006 to 2:59 p.m. (GMT) on July 26, 2006, to the file `pcsr.out`:

```
jpcctrl dump TS* host=host02 2006/07/25 02:00 2006/07/26 14:59
pcsr.out PI PCSR
```

Example of usage 2

In this example, the command with the `-alone` and `-direct` options specified exports the data that is contained in the Instance (`PI_PDI`) record on the Agent for Oracle (Windows) host `lhost02` in the logical environment, within the time range of 2:00 a.m. (GMT) on July 25, 2006, to 2:59 p.m. (GMT) on July 26, 2006, to the file `pcsr.out`:

```
jpcctrl dump OS* lhost=lhost02 2006/07/25 02:00 2006/07/26 14:59
pcsr.out PD PDI -alone
```

```
jpcctrl dump OS* lhost=lhost02 2006/07/25 02:00 2006/07/26 14:59
pcsr.out PD PDI -direct
```

Output example

Product information, field names, and data are output to an export file as shown below.

A vertical bar (|) is used as the delimiter between the field names and between pieces of data.

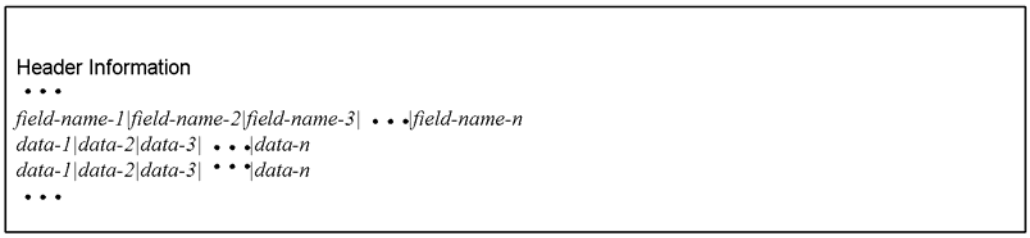


Figure 5.1 jpcctrl dump Export File

An output example follows:

```
Host Name: host01
Agent Name: host01
Product ID: E
Performance Management Version: 07-00
Product Datamodel Version: 04.000
Table Name: Product Detail.FSC
PD_FSC_DATE|PD_FSC_DATE_F|PD_FSC_DATETIME|PD_FSC_DEVICE_NAME|PD_FSC_DEVICEID|PD_FSC_
DEVICEID_F|PD_FSC_DISK_GROUP_NAME|PD_FSC_DRAWER_COUNT|PD_FSC_DRAWER_COUNT_F|PD_FSC_D
RAWER_TYPE|PD_FSC_DRAWER_TYPE_F|PD_FSC_FILE_SYSTEM_NAME|PD_FSC_GMT_ADJUST|PD_FSC_INP
UT_RECORD_TYPE|PD_FSC_INST_SEQ|PD_FSC_INTERVAL|PD_FSC_LDEV_NUMBER|PD_FSC_LU_NUMBER|P
D_FSC_NODE_WWN|PD_FSC_P_PAR_S_VOLUME|PD_FSC_PORT_ID|PD_FSC_PORT_NAME|PD_FSC_PORT_WWN
|PD_FSC_PROD_INST|PD_FSC_PROD_INST_F|PD_FSC_PRODID|PD_FSC_PRODID_F|PD_FSC_PRODUCT_ID
|PD_FSC_PRODUCT_NAME|PD_FSC_RAID_GROUP_NUMBER|PD_FSC_RAID_ID|PD_FSC_RAID_LEVEL|PD_FS
C_RECORD_TIME|PD_FSC_RECORD_TYPE|PD_FSC_RECORD_TYPE_F|PD_FSC_SERIAL_NUMBER|PD_FSC_SE
VERITY|PD_FSC_SEVERITY_F|PD_FSC_TARGET_ID|PD_FSC_TIME|PD_FSC_TIME_F|PD_FSC_UNIT_ID|P
D_FSC_UOW_INST|PD_FSC_UOW_INST_F|PD_FSC_UOWID|PD_FSC_UOWID_F|PD_FSC_VENDOR_ID

2003/06/20|2003/06/20|2003/06/20,14:00:02|0|host01|host01||0|0|m|m|C:|09:00:00E
GMT|FSC|0|3601||0||||||host01|host01|E|E|AVVA07-
0||||0|1056117602|FSC|FSC||0|0|0|14:00:02|14:00:02|0||||||C35L040
2003/06/20|2003/06/20|2003/06/20,14:00:02|0|host01|host01||0|0|m|m|D:|09:00:00E
GMT|FSC|0|3601||0||||||host01|host01|E|E|AVVA07-
0||||0|1056117602|FSC|FSC||0|0|0|14:00:02|14:00:02|0||||||C35L040
2003/06/20|2003/06/20|2003/06/20,15:00:01|0|host01|host01||0|0|m|m|C:|09:00:00E
GMT|FSC|0|3599||0||||||host01|host01|E|E|AVVA07-
0||||0|1056121201|FSC|FSC||0|0|0|15:00:01|15:00:01|0||||||C35L040
2003/06/20|2003/06/20|2003/06/20,15:00:01|0|host01|host01||0|0|m|m|D:|09:00:00E
GMT|FSC|0|3599||0||||||host01|host01|E|E|AVVA07-
0||||0|1056121201|FSC|FSC||0|0|0|15:00:01|15:00:01|0
```

Figure 5.2 jpcctrl dump Export File

5.2.16 jpcctrl list

Format

```
jpcctrl list    service-id
                [host=host-name]
                [lhost=logical-host-name]
                [proxy={y|n}]
                [-stat]
```

Function

The jpcctrl list command displays the service configuration and status of a Tuning Manager series program.

Notes:

- The service of a Tuning Manager series program that has never been activated is not displayed even if this command is executed. The service that has not been launched since the host name was changed is not displayed either.
- Arguments must be specified in the order that they appear in the explanation. If they are specified in some other order, they will not be recognized correctly.
- If the Name Server service and Master Manager service are not active, the structure and status of the service of hosts other than the local host cannot be displayed. Tuning Manager is not used as a proxy even when `proxy=y` is specified.
- If you execute the jpcctrl list command immediately after a service of a Tuning Manager series program is started, even if the process of the service is active, the status of the service might be displayed as `Inactive`. If this happens, either startup processing is being performed for the service, or the service is temporarily running in the standalone mode because it is waiting for a connection to be established to Tuning Manager. If Tuning Manager has already been started, wait for a while, and then check the status of the service by using the jpcctrl list command.
- After uninstalling Tuning Manager, if you reinstall it on the same machine and execute the jpcctrl list command, two instances of the Trap Generator services might be displayed. If this happens, start the Collection Manager service, and then delete the Trap Generator service that has an `Inactive` status by using the jpcctrl delete command.
- If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.
- If the `-stat` option is not specified, the Status Server service of the remote host is not displayed.
- If the status management function is disabled, the Status Server service is not displayed.

Return values

Table 5.24 Return Values (jpcctrl list)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
3	The specified service is not registered.
100	The operating environment for the Tuning Manager series programs is invalid.
101	The Name Server service is not active.
102	The specified logical host has not been set up.
200	A memory shortage occurred.
220	The host name specified for the service configuration information file is invalid.
222	A communication error occurred.
255	An unexpected error occurred.

Displayed information

The information that is displayed by executing the jpcctrl list command is explained as follows:

Table 5.25 Information That Is Displayed When the jpcctrl list Command Is Executed

Output information	Explanation
Host Name	Indicates the name of the host where the service is running.
Service ID	Indicates a service ID.
Service Name	Indicates a service name.
PID	Service's process ID ▪ When the version does not support the status management function: PID is displayed only when `Status` is `Active`. ▪ When the version supports the status management function: PID is displayed when `Status` is `Active`, `Busy`, `S Active`, `S Busy`, `Starting`, or `Stopping`.
Port	Communication port number being used by the service ▪ When the version does not support the status management function: The port number is displayed only when `Status` is `Active`. ▪ When the version supports the status management function: The port number is displayed when `Status` is `Active`, `Busy`, `S Active`, or `S Busy`.

Output information	Explanation
Status	Service status ▪ Statuses displayed when the version that does not support the status management function, or when the function is supported but not enabled: `Active`: Active. `Inactive`: Unable to establish communication, or the connection has stopped. `Comm Err`: Communication is possible, but there is no response `Timeout`: Communication timed out `Error`: An error other than a communication timeout occurred.. For details, see the common message log. *Note*: If the status management function is enabled on the same host as a version that supports the function, the status is displayed with an asterisk (`*`) appended to the end. ▪ Statuses displayed when the status management function is enabled on a version that supports this function: `Active`: The service is waiting for a request. `Inactive`: The service has stopped. `Starting`: The service is starting. `Busy`: The service is processing a request. `S Active`: The service is waiting for a request. (stand-alone mode) `S Busy`: The service is processing a request. (stand-alone mode) `Stopping`: The service is stopping. ▪ Statuses displayed when the status server service has stopped. Same as those displayed when the version does not support the status management function.

Example of usage

Example of usage 1

In this example, the command displays a list of services of all Tuning Manager series programs in the system:

```
jpcctrl list * host=*
```

Example of usage 2

In this example, the command displays a list of services of the host `host02` of the Agent for Platform (Windows):

```
jpcctrl list * host=host02
```

Example of usage 3

In this example, the command displays the structure and status of services in the logical host (host name: `jp1-ha1`) environment:

```
jpcctrl list * lhost=jp1-ha1
```

Output example

```
Host Name      ServiceID          Service Name       PID      Port     Status
---------      ---------          ------------       -------- -------- --------

host01          PN1001             Name Server        1592     22285    Active
host01          PM1001             Master Manager     1888     1139     Active
host01          PS1001             Master Store       2000     1143     Active
host01          PE1001             Correlator         1996     1148     Active
host01          PC3host01          Trap Generator     836      1149     Active
host01          PP1host01          View Server        1664     1158     Active
host01          PH1host01          Action Handler     468      1165     Active
host01          DS1Thunder01[host01] Agent Store        1368     1187     Active
host01          DA1Thunder01[host01] Agent Collector    1716     1472     Active
host01          TS1host01          Agent Store        1404     1172     Active
host01          TA1host01          Agent Collector    1844     1174     Active
host01          ES1host01          Agent Store        2028     1199     Active
host01          EA1host01          Agent Collector    2120     1484     Active
```

Example of the output when the jpcctrl list command is executed on a version that does not support the status management function, or the version supports the status management function but the function is not enabled on a host.

```
Host Name      ServiceID          Service Name       PID      Port     Status
---------      ---------          ------------       -------- -------- ---------
host01          PN1001             Status Server      483      8206     Busy
host01          PN1001             Name Server        484      8204     Busy
host01          PM1001             Master Manager     1388     1104     Active
host01          PS1001             Master Store       632      1109     Active
host01          PE1001             Correlator         1420     1114     Active
host01          PC1host01          Trap Generator     1468     1134     Active
host01          PP1host01          View Server        1504              Starting
host01          PH1host01          Action Handler     872      1116     Active
host01          TA1host01          Agent Collector                      Inactive*
host01          TS1host01          Agent Store                          Inactive*
host02          PH1host02          Action Handler                       Inactive*
host02          TA1host02          Agent Collector    51       1053     Active*
host02          TS1host02          Agent Store        250      1057     Active*
host03          PH1host03          Action Handler                       Inactive
host03          TA1host03          Agent Collector    51       1053     S Busy
host03          TS1host03          Agent Store        250      1057     S Active
KAVE06021-W The detailed information cannot be displayed because Status Server is not
running. (host=host02)
KAVE06003-I List processing of the service information terminated normally.
```

Example of the output when the jpcctrl list command is executed on a version that supports the status management function and the function is enabled on the host.

5.2.17 jpcctrl register

Format

```
jpcctrl register    service-id
                    [host=host-name]
                    [lhost=logical-host-name]
```

Function

The jpcctrl register command re-registers, in Tuning Manager, the service information of a Tuning Manager series program that has been deleted.

Normally, the jpcctrl delete command, which deletes service information, cannot delete service information that is active. However, that service information is deleted if the activation status of that service cannot be verified for some reason such as a communication error. If active service information has been inadvertently deleted for some reason such as a communication error, that service information can be re-registered using the jpcctrl register command after the communication error has been corrected.

Notes:

- Arguments must be specified in the order that they appear in the explanation. If they are specified in some other order, they will not be recognized correctly.
- This command cannot be executed if the Name Server service, Master Manager service, and the specified service are stopped.
- If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.
- Service information for the Name Server service and the Status Server service cannot be registered.

Return values

Table 5.26 Return Values (jpcctrl register)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
2	There is no execution permission for the command.
3	One or more of the specified services are not active.
5	Tuning Manager is not installed.
7	The specified service ID belongs to the Name Server service or Status Server service.
100	The operating environment for the Tuning Manager series programs is invalid.
101	The Name Server service, Master Manager service, or the operation target service is not active.
102	The specified logical host has not been set up.

Return values	Meaning
200	A memory shortage occurred.
220	The host name specified for the service configuration information file is invalid.
222	A communication error occurred.
255	An unexpected error occurred.

Example of usage

In this example, the command re-registers the service information of all Tuning Manager series programs of the host `host03`:

```
jpcctrl register * host=host03
```

5.2.18 jpchasetup create

Format

```
jpchasetup create   service-key
                    -lhost logical-host-name
                   [-d environment-directory-name]
```

Function

The jpchasetup create command creates the logical host environment for the Tuning Manager series programs.

Executing this command sets up the logical host environment.

You can execute this command only with a Tuning Manager series program that supports logical host operation. Tuning Manager supports logical host operation. For details about using an Agent on a logical host, see the chapter that explains cluster systems in the *HiCommand Tuning Manager Agent Administration Guide*.

Notes:

- Since this command creates the files of a logical host environment in a shared disk, you must place the shared disk online (in UNIX, mount it) and then execute this command. If the shared disk is not accessible, this command fails. The request to create a logical host environment is canceled and the logical host environment is not created.
- Before executing this command, terminate all the services of the Tuning Manager series programs running on the physical host of the node and all logical hosts.
- In a Windows environment, access privileges for the `jp1pc` directory created under an environment directory and files of the logical host environment are inherited from the upper level directory.
- If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.

Return values

Table 5.27 Return Values (jpchasetup create)

Return values	Meaning
0	The command terminated normally.
Other than 0	The command terminated abnormally.

Example of usage

In this example, the command sets up the Agent's logical host environment with the name `jp1-ha1` in the `S:\jp1` environment directory:

```
jpchasetup create agto -lhost jp1-ha1 -d S:\jp1
```

5.2.19 jpchasetup delete

Format

```
jpchasetup delete   service-key
                    -lhost logical-host-name
```

Function

The jpchasetup delete command deletes the logical host environment for Tuning Manager series programs.

You can execute this command only with a Tuning Manager series program that supports logical host operation. Tuning Manager supports logical host operation. For details about using an Agent on a logical host, see the chapter that explains cluster systems in the *HiCommand Tuning Manager Agent Administration Guide*.

Notes:

- Since this command deletes the files of a logical host environment on a shared disk, you must place the shared disk online (in UNIX, mount it) and then execute this command. If the shared disk is not accessible, this command deletes only the logical host settings and Windows service.
- Before executing this command, terminate all the services of the Tuning Manager series programs running on the physical host of the node and all logical hosts.
- If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.

Return values

Table 5.28 Return Values (jpchasetup delete)

Return values	Meaning
0	The command terminated normally.
Other than 0	The command terminated abnormally.

Example of usage

In this example, the command deletes the Agent's logical host environment with the logical host name `jp1-ha1`, and specifies the logical host's environment definition file name `jp1-ha1.conf`:

```
jpchasetup delete agto -lhost jp1-ha1
```

5.2.20 jpchasetup export

Format

```
jpchasetup export   -f logical-host's-environment-definition-file-name
```

Function

The jpchasetup export command exports the settings of the logical host environment for Tuning Manager series programs to the specified file.

You can execute this command only with a Tuning Manager series program that supports logical host operation. Tuning Manager supports logical host operation. For details about using an Agent on a logical host, see the chapter that explains cluster systems in the *HiCommand Tuning Manager Agent Administration Guide*.

Notes:

- This command is executed so that the executing node and standby node in the cluster system can run in the same environment. After you perform either of the following operations, execute this command on the executing node to export the settings of the logical host environment:
  - Set up or reconfigure the logical host environment
  - Delete the logical host environment
- If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.

Return values

Table 5.29 Return Values (jpchasetup export)

Return values	Meaning
0	The command terminated normally.
Other than 0	The command terminated abnormally.

Example of usage

In this example, the command exports the settings of the logical host environment to the `jp1-ha1.conf` file:

```
jpchasetup export -f jp1-ha1.conf
```

5.2.21 jpchasetup import

Format

```
jpchasetup import   -f logical-host's-environment-definition-file-name
```

Function

The jpchasetup import command imports the contents of a logical host's environment definition file that was exported on the executing node, into the standby node.

You can execute this command only with a Tuning Manager series program that supports logical host operation. Tuning Manager supports logical host operation. For details about using an Agent on a logical host, see the chapter that explains cluster systems in the *HiCommand Tuning Manager Agent Administration Guide*.

Notes:

- This command is executed so that the executing node and standby node in the cluster system can run in the same environment. After you perform either of the following operations, execute this command on the standby node to import the settings of the logical host environment:
  - Set up or reconfigure the logical host environment on the executing node
  - Delete the logical host environment on the executing node

  If an environment definition file for which the logical host environment has been deleted is imported by executing this command, the differences between the imported environment settings and the existing environment settings are deleted from the logical host settings on the executing node.
- If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.

Return values

Table 5.30 Return Values (jpchasetup import)

Return values	Meaning
0	The command terminated normally.
Other than 0	The command terminated abnormally.

Example of usage

In this example, the command imports the contents of the logical host's environment definition file (`jp1-ha1.conf`) exported on the executing node:

```
jpchasetup import -f jp1-ha1.conf
```

5.2.22 jpchasetup list

Format

```
jpchasetup list   service-key
                    [-lhost logical-host-name]
```

Function

The jpchasetup list command displays a list of the settings of the logical host environment for Tuning Manager series programs.

You can execute this command only with a Tuning Manager series program that supports logical host operation. Tuning Manager supports logical host operation. For details about using an Agent on a logical host, see the chapter that explains cluster systems in the *HiCommand Tuning Manager Agent Administration Guide*.

Notes:

- This command can display the settings of logical hosts even when executed on the standby node or when the shared disk is inaccessible.
- If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.

Return values

Table 5.31 Return Values (jpchasetup list)

Return values	Meaning
0	The command terminated normally.
Other than 0	The command terminated abnormally.

Example of usage

In this example, the command lists the logical hosts that have been set up:

```
jpchasetup list all
```

An example of output from this command is as follows:

```
Logical Host Name  Key    Environment Directory                [Instance Name]
------------------ ------ ------------------------------------ ---------------
lhost1             agtd   "H:\HTM\jp1pc"                        Thunder01

lhost2             agtd   "H:\HTM2\jp1pc"                       Lightning01

KAVE05136-I The logical host startup information listing ended normally.
```

Figure 5.3 jpchasetup Command Output Example

5.2.23 jpcinslist

Format

```
jpcinslist   service-key
               [-lhost logical-host-name]
```

Function

The jpcinslist command displays the names of the instances that have been set up for an Agent that can start multiple instances on one host.

Notes:

- If the specified Agent does not have an instance environment, nothing is output, even if this command is executed.
- If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.

Return values

Table 5.32 Return Values (jpcinslist)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
5	The specified service is not installed.
10	The command is executing in another session.
100	The operating environment for the Tuning Manager series programs is invalid.
102	The specified logical host has not been set up.

Return values	Meaning
200	A memory shortage occurred.
210	A disk space shortage occurred.
211	A file or directory cannot be accessed.
230	Execution of an internal command failed.
255	An unexpected error occurred.

Example of usage

In this example, the command outputs the instance names of Agent for Oracle:

```
jpcinslist agto
```

If there are instances named SDA and SDC, the following is output:

```
SDA
SDC
```

Figure 5.4 jpcinslist Command Output Example

5.2.24 jpcinssetup

Format

```
jpcinssetup     service-key
               [-lhost logical-host-name]
                -inst instance-name
```

Function

The jpcinssetup command creates and updates an instance environment for an Agent that can start multiple instances on one host. For an Agent that can start an instance, execution of this command is required.

Executing this command creates and updates the following directories that contain files, such as the setup file for the instance environment, and creates and updates the setup file for the instance environment:

- Windows:
  - *installation-folder**xxxx*(Note 1)\agent*instance-name*\
  - *installation-folder**xxxx*(Note 1)\store*instance-name*\
- UNIX:
  - /opt/jp1pc/*xxxx*(Note 1)/store/*instance-name*/
  - /opt/jp1pc/*xxxx*(Note 1)/agent/*instance-name*/

Note 1: *xxxx* indicates the service key of each Agent. For details about service keys, see Appendix C.

Notes:

- The arguments must be specified in the order in which they appear in the *Format* subsection.
- If the service with the specified instance name is active when you want to update the instance environment, stop the service and then execute this command. After the update processing finishes, manually start the service.
- If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.

Return values

Table 5.33 Return Values (jpcinssetup)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
2	There is no execution permission for the command.
4	The specified service has not been stopped.
5	The specified service is not installed.
10	The command is executing in another session.
11	The user cancelled the processing (entered N in response to the query).
100	The operating environment for the Tuning Manager series programs is invalid.
101	The port number could not be acquired.
102	The specified logical host has not been set up.
200	A memory shortage occurred.
210	A disk space shortage occurred.
211	A file or directory cannot be accessed.
222	An error occurred during communication processing (IP address acquisition failed).
230	Execution of an internal command failed.
231	Registration of a Windows service failed (applicable to the Windows versions only).
255	An unexpected error occurred.

Example of usage

In this example, the command creates an instance execution environment named SDC:

```
jpcinssetup agto -inst SDC
```

5.2.25 jpcinsunsetup

Format

```
jpcinsunsetup     service-key
                 [-lhost logical-host-name]
                  -inst instance-name
```

Function

The jpcinsunsetup command deletes the instance environment of an Agent that can start multiple instances on one host.

Executing this command deletes the following directories that contain, among other things, the setup file for the instance environment:

- Windows:
  - *installation-folder**xxxx*(Note)\agent*instance-name*\
  - *installation-folder**xxxx*(Note)\store*instance-name*\
- UNIX:
  - /opt/jp1pc/*xxxx*(Note)/store/*instance-name*/
  - /opt/jp1pc/*xxxx*(Note)/agent/*instance-name*/

Note: *xxxx* indicates the service key of each Agent. For details about service keys, see Appendix C.

Notes:

- The arguments must be specified in the order that they appear under the *Format* subsection.
- If the service with the specified instance name is active, the command first stops this service and then deletes its instance environment.
- If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.

Return values

Table 5.34 Return Values (jpcinsunsetup)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
2	There is no execution permission for the command.
4	The specified service is not stopped.
5	The specified service is not installed.
10	The command is executing in another session.
11	The user cancelled the processing (entered N in response to the query).

Return values	Meaning
100	The operating environment for the Tuning Manager series programs is invalid.
101	The port number could not be acquired.
102	The specified instance was not found.
200	A memory shortage occurred.
210	A disk space shortage occurred.
211	A file or directory cannot be accessed.
222	An error occurred during communication processing (IP address acquisition failed).
230	Execution of an internal command failed.
232	Deletion of the Windows service failed (applicable to the Windows versions only).
255	An unexpected error occurred.

Example of usage

In this example, the command deletes an instance execution environment named SDC:

```
jpcinsunsetup agto -inst SDC
```

5.2.26 jpcnsconfig port

Format

```
jpcnsconfig port     {list|define}
                         service-key
                         -lhost logical-host-name
                        [-inst instance-name]
```

Function

The jpcnsconfig port command sets and displays the port number that is used with programs of the Tuning Manager series.

Because the port numbers are automatically assigned to the programs of the Tuning Manager series each time the services are restarted, the current port number may not be the same as the one assigned in the previous session, except for the port numbers listed:

Table 5.35 Port Number Assigned by Service

Service name	Parameter	Port number	Use
Name Server	jp1pcnsvr	22285	Used when a service communicates with the Name Server service.
Status Server	jp1pcstatsvr	22350	Used to check the status of the Status Server service.

Service name	Parameter	Port number	Use
View Server (between the Performance Reporter and View Server service)	`jp1pcvsvr`	22286	Used to log into Tuning Manager or to operate the Performance Reporter.

Use this command to set a port number other than those listed. To allow communication though a firewall between Tuning Manager and Agent, you need to set the port number to a fixed value. For details about the settings for allowing communication through a firewall between Tuning Manager and Agent, see the *HiCommand Tuning Manager Agent Administration Guide*.

Notes:

- If a program of the Tuning Manager series is active when you want to set its port number, terminate the service first and then execute this command. When you finish setting the port number, start the service manually. You do not need to stop the service to display its port number.
- If you terminate this command using the **Ctrl + C** keys during execution, the port number is not set correctly. In this case, set the port number again and re-execute the command.
- To avoid confusion during operation, unify the combination of port numbers and service names throughout the entire Tuning Manager series system.
- This command automatically edits the `services` file of the operating system.
- This command edits only the local `services` file at the host where the command is executed. In UNIX, if you are managing the `services` file using NIS or NIS+, manually apply the port number added to the local `services` file to the NIS server.
- When you enter the port number, the command displays the value that is contained in the `services` file at the host where the command is executed. In an NIS or NIS+ environment, if the port number information managed by the NIS server does not match the information in the `services` file of the NIS client, the displayed information may not be the actual value used by the service.
- If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.

Return values

Table 5.36 Return Values (jpcnsconfig port)

Return values	Meaning
`0`	The command terminated normally.
`1`	An argument specification is invalid.
`2`	There is no execution permission for the command.
`4`	The specified service is not stopped.
`5`	The specified service key was not found.

Return values	Meaning
7	The service ID assigned to the logical host was not found.
10	The command is executing.
11	The user cancelled the processing (entered N in response to the query).
100	The operating environment for the Tuning Manager series programs is invalid.
101	The port number could not be acquired.
102	The specified instance was not found.
106	The port number has not been registered in the services file.
200	A memory shortage occurred.
210	A disk space shortage occurred.
211	The file cannot be accessed.
222	An error occurred during communication processing (IP address acquisition failed).
224	There is no port number that can be set in the services file.
230	Execution of an internal command failed.
255	An unexpected error occurred.

Example of usage

Example of usage 1

In this example, the command sets the port numbers for all Tuning Manager series programs to a fixed value:

```
jpcnsconfig port define all
```

Example of usage 2

In this example, the command displays the information about the port numbers of all Tuning Manager series programs:

```
jpcnsconfig port list all
```

The following shows an example of output:

```
Component        ServiceID          Services        Port     Host Name
---------------- ------------------ --------------- -------- ----------------
Name Server      PN1001             jp1pcnsvr       22285    host01
Master Manager   PM1001             <undef>         <undef>  host01
Master Store     PS1001             <undef>         <undef>  host01
Correlator       PE1001             <undef>         <undef>  host01
Trap Generator   PC2host01          <undef>         <undef>  host01
View Server      PP1host01          <undef>         <undef>  host01
View                                jp1pcvsvr       22286    host01
Action Handler   PH1host01          <undef>         <undef>  host01
Agent Store      TS1host01          <undef>         <undef>  host01
Agent Collector  TA1host01          <undef>         <undef>  host01
Agent Store      DS1Thunder01[host01] <undef>          <undef>  host01
Agent Collector  DA1Thunder01[host01] <undef>          <undef>  host01
Agent Store      ES1host01          <undef>         <undef>  host01
Agent Collector  EA1host01          <undef>         <undef>  host01
```

Figure 5.5 jpcnsconfig Command Output Example

5.2.27 jpcnshostname

Format

```
jpcnshostname    [-s host-name|-u]
                   [-lhost logical-host-name]
```

Function

The jpcnshostname command can display, specify, or change the host name of the connection-target Tuning Manager (Name Server service).

When the `-s` option is not specified, the command displays the host name of the connection-target Tuning Manager. When the `-s` option is specified, the command can change the Tuning Manager host.

When the `-lhost` option is specified, the command can change the Tuning Manager host in a logical host environment.

Notes:

- If you configure or change the Tuning Manager host, execute this command after stopping all the services of the Tuning Manager series program on the applicable host. After a host name has been set up, manually start the service.
- If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.

Return values

Table 5.37 Return Values (jpcnshostname)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.

Return values	Meaning
2	There is no execution permission for the command.
4	The service on the executing host is not stopped.
10	The command is executing in another session.
11	The user cancelled the processing (entered N in response to the query).
100	The operating environment for the Tuning Manager series programs is invalid.
101	The port number could not be acquired.
102	The specified logical host has not been set up.
200	A memory shortage occurred.
210	A disk space shortage occurred.
211	A file or directory cannot be accessed.
222	An error occurred during communication processing (IP address acquisition failed).
230	Execution of an internal command failed.
255	An unexpected error occurred.

Example of usage

Example of usage 1

In this example, the command displays the host of the connection-target Tuning Manager:

```
jpcnshostname
```

Example of usage 2

In this example, the command changes the host of the connection-target Tuning Manager to hostmgr:

```
jpcnshostname -s hostmgr
```

5.2.28 jpcras

Format

```
jpcras    directory-name
          service-key
          [all|data|dump]
          [lhost=logical-host-name]
          [inst=instance-name]
```

Function

The jpcras command collects information about Collection Manager, Agent, and the OS. You can use this command when a problem occurs on Collection Manager or Agent.

Information can be collected only for the host on which this command is executed or for the logical host specified in the `lhost` option. The collected information is stored in the specified directory. In UNIX, the collected information is compressed by the `tar` command and the `compress` command. However, because the information is not compressed in Windows, manually compress it as needed.

When a problem occurs, there is other necessary information besides the information that can be collected using this command. For details about the type of information that must be collected when a problem occurs, see the *HiCommand Tuning Manager Agent Administration Guide*.

Notes:

- Before executing this command, move to the directory that contains the command.
- Depending on the size of the file to be collected or network environment being used, it might take a long time for the command to finish executing.
- When you execute this command, you cannot collect the materials on a system in which the syslog file is configured to be output to a location other than the default path and file. In this case, collect the materials by other means.
- The arguments must be specified in the order that they appear under *Format* in this explanation.
- In *directory-name*, do not specify a relative path.
- In *directory-name*, do not specify the installation folder for programs of the Tuning Manager series.
- In *directory-name*, specify an empty directory that does not contain any files or directories.
- Make sure that there is ample disk space available. For estimating the available disk space, use the amount of disk space each product is using.
- If this command is executed when there is a memory shortage or insufficient free disk space, an OS message may be output. However, if the message `KAVE06010-I The collection of maintenance information ended normally` has been output, the maintenance information has been correctly collected, and therefore the OS message can be ignored.

- If the message `KAVE05035-E The collection of maintenance information ended abnormally` is output, follow the OS message to check the available memory and free disk space.
- The message is output only in English.
- If the message `KAVE05213-E The system environment is incorrect` is output, collect the file list stored in the installation directory of programs of the Tuning Manager series, in addition to the collected maintenance information.
- If an error occurs during file collection, the file or directory that was being collected remains in the following directory. In this case, delete these remaining files or directories as needed.
  - Windows:

    Folder specified in *directory-name*
  - UNIX:

    Directory specified in *directory-name*`/jpcwk*`
- If you want to collect database information in a Windows environment, stop the Store service that is the collection target. If this Store service is active, you cannot collect information from database files.
- If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.
- If you want to collect the maintenance information of the logical host specified by the `lhost` option, mount the shared disk specified by the environment directory (or place it online).
- Before you collect the information by specifying `all` in the Windows environment, stop all services.

Return values

Table 5.38 Return Values (jpcras)

Return values	Meaning
`0`	The command terminated normally.
`1`	An argument specification is invalid.
`2`	There is no execution permission for the command.
`100`	The operating environment for the Tuning Manager series programs is invalid.
`102`	The specified logical host or instance has not been set up.
`105`	The current directory is not the directory that contains the `jpcras` command.
`210`	A disk space shortage occurred.
`211`	The collection target directory cannot be accessed.
`255`	An unexpected error occurred.

Example of usage

Example of usage 1

In this example, the command collects all information in a UNIX host and stores the collected information in a directory named /tmp/jp1pc:

```
jpcras /tmp/jp1pc all all
```

Example of usage 2

In this example, the command collects the dump information of the Agent for Platform (UNIX) in a UNIX host and stores it in a folder named /tmp/jp1pc:

```
jpcras /tmp/jp1pc agtu dump
```

5.2.29 jpcresto

Format

```
jpcresto    service-key
            directory-name
           [lhost=logical-host-name]
           [inst=instance-name]
```

Function

The jpcresto command restores the data in the Master Store service or Agent Store service database that was saved using the jpcctrl backup command.

Data can be restored only if the data to be restored has been saved in the host in which the restoration will be executed.

Notes:

- Before restoration, stop the Collection Manager or Agent service at the restoration destination.
- The arguments must be specified in the order that they appear under *Format* in this explanation.
- When the restoration is executed, the existing data is deleted.
- After restoration, the database indexes are rebuilt during service start, and as a result, the restart may take time.
- This command can restore a database only when the data model version of the database is the same as the database from which backup data was created with the jpcctrl backup command.
- This command can restore a database only when you specify the same service key as that of the data backed up with the jpcctrl backup command.
- If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.

Return values

Table 5.39 Return Values (jpcresto)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
2	There is no execution permission for the command.
4	A command was executed while the Master Store service, Agent Store service, or jpcresto command was accessing the Store database.
5	The specified service is not installed.
6	A backup file or a directory does not exist.
100	The operating environment for the Tuning Manager series programs is invalid.
102	The specified logical host or instance has not been set up.
210	A disk space shortage occurred.
211	A backup file or a directory cannot be accessed.
212	Index creation failed.
255	An unexpected error occurred.

Example of usage

In this example, the command restores the data of the Agent Store service database in the Agent for Platform (Windows) that has been saved in the default location:

```
jpcresto agtt "c:\program files\hitachi\jp1pc\agtt\store\backup\01"
```

5.2.30 jpcstart

Format

```
jpcstart    service-key
            [lhost=logical-host-name]
            [inst=instance-name]
```

Function

The jpcstart command starts the services of Collection Manager and the Agent at the local host. The services of Collection Manager and the Agent at a remote host cannot be started.

To check the status of the services of Collection Manager and the Agent, use the jpcctrl list command. The jpcstart command cannot be executed in duplicate or simultaneously with the jpcstop command.

Notes:

- If the Collection Manager service is not active, the following Agents and services cannot be started.
  - Agent installed on the same host where Tuning Manager is installed.
  - Action Handler service of the host where Tuning Manager or an Agent is installed
  - Agent whose version is 01-00 or 01-01

  When an agent, whose version is 03-00 or later, is installed on a host other than the host where Tuning Manager is installed, the Agent starts in standalone mode.
- The arguments must be specified in the order that they appear under *Format* in this explanation.
- If command execution returns the return value 103, it indicates that the monitoring of the process for starting the services of Collection Manager and the Agent timed out. Wait for a short while and re-execute the jpcstart command. If this phenomenon occurs frequently, collect the maintenance information and contact the system administrator. For details about how to collect the maintenance information, see the *HiCommand Tuning Manager Agent Administration Guide*.
- If command execution returns the return value 212, this indicates that index creation has failed for either the Master Store service database or Agent store service database. Make sure that there is sufficient disk space available. If there is sufficient disk space, and re-execution of the jpcstart command does not resolve this error, collect maintenance information and contact the system administrator. For details about how to collect maintenance information, see the *HiCommand Tuning Manager Agent Administration Guide*.
- If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.
- When the status management function is enabled and the service of the specified service key is a version that supports the status management function, if the Status Server service has not already started, it is started first. However, if the status management function is disabled, the Status Server service does not start.
- If `stat` is specified for the service key when the status management function is disabled, the following message is output and command execution terminates:
  `KAVE06023-E The specified processing cannot be executed because the status management function is not available.`

Return values

Table 5.40 Return Values (jpcstart)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
2	There is no execution permission for the command.

Return values	Meaning
4	Either the specified service is already active, or a command was executed while the Master Store service, Agent Store service, or another command was accessing the Store database.
5	The specified service is not installed.
10	The command is executing in another session.
100	The operating environment for the Tuning Manager series programs is invalid.
101	The Collection Manager service is not active.
102	The specified logical host or instance has not been set up.
103	Monitoring of start processing timed out.
107	Processing to start or stop the service was executed from another process such as Windows service control manager.
212	Index creation failed.
255	An unexpected error occurred.

Example of usage

Example of usage 1

In this example, the command starts all services of Collection Manager and the Agent:

```
jpcstart all
```

Example of usage 2

In this example, the command starts the service of an instance named `oracleA` in Agent for Oracle:

```
jpcstart agto inst=oracleA
```

5.2.31 jpcstop

Format

```
jpcstop     service-key
            [lhost=logical-host-name]
            [inst=instance-name]
            [kill=immediate]
```

Function

The jpcstop command stops the services of Collection Manager and the Agent at the local host. The services of Collection Manager and the Agent at a remote host cannot be stopped.

To check the status of the services of Collection Manager and the Agent, use the jpcctrl list command. The jpcstop command cannot be executed in duplicate or simultaneously with the jpcstart command.

Notes:

- The arguments must be specified in the order that they appear under *Format* in this explanation.
- If command execution returns the return value 103, it indicates that the monitoring of the process for stopping the services of Collection Manager and the Agent timed out. Wait for a short while and re-execute the jpcstop command. If this phenomenon occurs frequently, collect the maintenance information and contact the system administrator. For details about how to collect the maintenance information, see the *HiCommand Tuning Manager Agent Administration Guide*.
- When you attempt to stop the Agent service on a host where Tuning Manager is installed, the Collection Manager service will also stop if you specify the service key `all`. Specify the service key of the service to be stopped individually on a host where Tuning Manager is installed.
- If the jpcstop command is executed to stop the service of a Tuning Manager series product, even if the **Ctrl + C** keys or a signal is used to terminate this command, the service will continue performing the stop processing if the stop request has already started. In such a case, if you execute the jpcstop command to try to stop the service, the message `KAVE05034-E A service could not stop` might be displayed. Check whether the service has stopped by referencing the common message log, and then execute `jpcstop` command again.
- If an executing command is terminated by the **Ctrl + C** keys or by a signal, identifiable return values will not be returned. In this case, ignore the return values.
- If the host supports the status management function, the Status Server service cannot be stopped unless `all` or `stat` is specified for the service key.
- If the `-lhost` option is specified when `all` is specified for the service key, the Status Server service cannot be stopped.

– When the status management function is enabled on a logical host and a command is executed with the `all` or `stat` option specified, if one or more services (of versions that support the status management function) that relies on the Status Server on the logical host are running, the following message is output and the return value 108 is returned: `KAVE06022-I Status Server will not be stopped because a service that relies on Status Server is running.`

Return values

Table 5.41 Return Values (jpcstop)

Return values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
2	There is no execution permission for the command.
3	The specified service is already stopped.
5	The specified service is not installed.
10	The command is executing in another session.
100	The operating environment for the Tuning Manager series programs is invalid.
102	The specified logical host or instance has not been set up.
103	Monitoring of stop processing timed out.
107	Processing to start or stop the service was executed from another process such as Windows service control manager.
108	Status Server cannot be stopped because a service that relies on the Status Server service is running.
255	An unexpected error occurred.

Example of usage

Example of usage 1

In this example, the command stops all services of Collection Manager and the Agent:

```
jpcstop all
```

Example of usage 2

In this example, the command stops the service of an instance named `oracleA` in Agent for Oracle:

```
jpcstop agto inst=oracleA
```

5.2.32 jpcstsetup disable

Format

```
jpcstsetup disable
```

Function

The jpcstsetup disable command disables the status management function.

Notes:

- This command cannot be executed if any service of the Tuning Manager series is running on a physical host or a logical host.
- When this command is executed, processing to start or stop a service is not performed automatically.
- This command updates information for the physical host and all of the logical hosts.

Return values

Table 5.42 Return Values (jpcstsetup disable)

Return values	Meaning
0	The command ended normally.
1	An argument specification is invalid.
2	Execution permissions are lacking for the command.
4	A service of either the physical host or a logical host has not stopped.
11	A user or system terminated processing.
100	The Tuning Manager series environment is invalid.
200	Memory is insufficient.
211	A file or directory cannot be accessed.
230	An attempt to execute an internal command has failed.
231	An attempt to register the Status Server service has failed. (Only in Windows)
232	An attempt to delete the Status Server service has failed. (Only in Windows)
233	An attempt to set up service dependency has failed. (Only in Windows)
234	An attempt to rollback processing has failed.

Example of usage

In this example, the command disables the status management function:

```
jpcstsetup disable
```

5.2.33 jpcstsetup display

Format

```
jpcstsetup display
```

Function

The jpcstsetup command displays the status of the status management function.

Return values

Table 5.43 Return Values (jpcstsetup display)

Return values	Meaning
0	The status management function is disabled.
1	An argument specification is invalid.
2	Execution permissions are lacking for the command.
11	A user or system terminated processing.
100	The Tuning Manager series environment is invalid.
254	The status management function is enabled.

Example of usage

In this example, the command displays the status of the status management function.

```
jpcstsetup display
```

Output example

– When the status management function is enabled:

```
available
```

– When the status management function is disabled:

```
unavailable
```

5.2.34 jpcstsetup enable

Format

```
jpcstsetup enable
```

Function

The jpcstsetup enable command enables the status management function.

Notes:

- This command cannot be executed if any service of the Tuning Manager series is running on a physical host or a logical host.
- When this command is executed, processing to start or stop a service is not performed automatically.
- This command updates information for the physical host and all of the logical hosts.

Return values

Table 5.44 Return Values (jpcstsetup enable)

Return values	Meaning
0	The command ended normally.
1	An argument specification is invalid.
2	Execution permissions are lacking for the command.
4	A service of either the physical host or a logical host has not stopped.
11	A user or system terminated processing.
100	The Tuning Manager series environment is invalid.
200	Memory is insufficient.
211	A file or directory cannot be accessed.
230	An attempt to execute an internal command has failed.
231	An attempt to register the Status Server service has failed. (Only in Windows)
232	An attempt to delete the Status Server service has failed. (Only in Windows)
233	An attempt to set up service dependency has failed. (Only in Windows)
234	An attempt to rollback processing has failed.

Example of usage

In this example, the command enables the status management function:

```
jpcstsetup enable
```

5.2.35 jpctdchkinst

Format

```
jpctdchkinst     -inst instance-name
                [-lhost logical-host-name]
```

Function

The jpctdchkinst command verifies the instance information set for an Agent for RAID instance. You can check the following by using the instance information obtained by executing this command:

- Whether a connection to a storage subsystem monitored by Agent for RAID can be established
- Information on properties of storage subsystems to which Agent for RAID is connected

Table 5.45 shows items that you can verify by executing the command.

Table 5.45 Instance Information Verification Items

Storage model monitored by the instance to be verified	Verification
▪ Lightning 9900 Series ▪ Lightning 9900V Series ▪ TagmaStore USP	Whether the device specified for `Command Device File Name` exists
	Whether the device specified for `Command Device File Name` is one of the following storage subsystems: ▪ Lightning 9900 Series ▪ Lightning 9900V Series ▪ TagmaStore USP
	Whether the device specified for `Command Device File Name` is a command device
▪ Thunder 9200 ▪ Thunder 9500V Series ▪ TagmaStore AMS/WMS series	Whether you can communicate with the subsystem controller specified for `IP Address or Host Name (Controller 0)` and `IP Address or Host Name (Controller 1)`
	Whether the IP address or host name specified for `IP Address or Host Name (Controller 0)` is the IP address or host name of Controller 0
	Whether the IP address or host name specified for `IP Address or Host Name (Controller 1)` is the IP address or host name of Controller 1
	Whether both the IP address or host name specified for `IP Address or Host Name (Controller 0)` and the IP address or host name specified for `IP Address or Host Name (Controller 1)` belong to the same storage subsystem
	Whether a value is specified both for `IP Address or Host Name (Controller 0)` and for `IP Address or Host Name (Controller 1)` if the monitored storage subsystem is in a dual-controller configuration
	Whether the device definition information file (`utlprm.inf`) is in the correct directory if `Array Unit Name` is specified
	Whether the specified unit name exists in the device definition information file (`utlprm.inf`) if `Array Unit Name` is specified
	Whether you can log in to the storage subsystem using the specified user ID and password

Storage model monitored by the instance to be verified	Verification
All storage models	Whether a connection to the storage subsystem can be established based on the instance information settings

Return values

Table 5.46 Return Values (jpctdchkinst)

Return values	Meaning
`0`	The command terminated normally.
`16`	The command terminated normally (with a verification error).
`255`	The command terminated abnormally.

Displayed information

The following table shows the instance information settings and verification result output by the jpctdchkinst command. The instance information and verification result information are output to the standard output or the standard error output.

Table 5.47 Information That Is Displayed When the jpctdchkinst Command Is Executed

Output information	Explanation
`Instance parameters`	Displays the instance information settings and their values.
`Check result`	Displays the results of instance information verification. If the command finds no error, it outputs a message KAVF18850-I. If the command encounters an error, it outputs an error message corresponding to the error.
`Monitored storage subsystem Information`	Displays information on the properties of the storage subsystems that are connected using the instance information settings. This information is output only when `Check result` indicates that no error was found. The following property information is output: ▪ Product Name ▪ Serial Number ▪ Firmware Version ▪ Monitored SLPR Number (See *Note 1*) *Note 1:* This information is output only when the storage subsystem is a TagmaStore USP.

Output information	Explanation
`Storage subsystem performance monitoring settings`	Displays the settings related to performance information collection that is effective on the storage subsystem. Of collection settings supported by the DAMP GUI, the command outputs the following items that will determine whether Agent for RAID metrics can be obtained: ▪ Port ▪ RAID Group ▪ Logical Unit ▪ Cache ▪ Processor *Note:* This information is output only when `Check result` indicates that no error was found and the storage subsystem is a TagmaStore AMS/WMS series or Thunder 9500V Series model.

Example

Example 1

This example shows the command execution result when the instance has been set up correctly.

(This example assumes that the storage subsystem is TagmaStore USP.)

```
jpctdchkinst –inst USP14009
KAVF18800-I The verification of the agent instance settings will now start. (instance
name=USP14009)
[Instance parameters]
Storage Model : Lightning/USP
Command Device File Name : /dev/rdsk/c0t1d2s2
Unassigned Open Volume Monitoring : N
Mainframe Volume Monitoring : N
[Check result]
KAVF18850-I No error was found during verification of the agent instance setting.
[Monitored storage subsystem information]
PRODUCT  : USP
SERIAL   : 14009
FIRMWARE : 50-04-00/20
SLPR     : 0
KAVF18801-I The verification of the agent instance settings will now end.
```

Example 2

This example shows the command execution result when the instance has been set up correctly.

(This example assumes that the storage subsystem is TagmaStore AMS500.)

```
jpctdchkinst –inst AMS75010005
KAVF18800-I The verification of the agent instance settings will now start. (instance
name= AMS75010005)
[Instance parameters]
Storage Model : Thunder/AMS
IP Address or Host Name (Controller 0) : 10.208.11.106
IP Address or Host Name (Controller 1) : 10.208.11.107
Array Unit Name :
user ID : htmuser
[Check result]
KAVF18850-I No error was found during verification of the agent instance setting.
[Monitored storage subsystem information]
PRODUCT  : AMS500
SERIAL   : 75010005
FIRMWARE : 0760/A
[Storage subsystem performance monitoring settings]
Port      : Enable
RG/LU     : Enable
Cache     : Enable
Processor : Enable
KAVF18801-I The verification of the agent instance settings will now end.
```

Example 3

This example shows the command execution result when the disk drive, which is not a command device, is specified as the instance information.

(This example assumes that the storage subsystem is TagmaStore USP.)

```
jpctdchkinst –inst USP14009
KAVF18800-I The verification of the agent instance settings will now start. (instance
name=USP14009)
[Instance parameters]
Storage Model : Lightning/USP
Command Device File Name : /dev/rdsk/c0t1d2s2
Unassigned Open Volume Monitoring : N
Mainframe Volume Monitoring : N
[Check result]
KAVF18852-E The device set by the agent instance parameter is not a command device.
(parameter name=Command Device File Name, parameter value=/dev/rdsk/c0t1d2s2)
KAVF18801-I The verification of the agent instance settings will now end.
```

5.2.36 jpctdlistraid

Format

```
jpctdlistraid
```

Function

The jpctdlistraid command lists the command devices that are open to a host on which Agent for RAID is installed. The command outputs the following information:

- Storage subsystem model name
- Serial number
- CU: LDEV number
- SLPR number
- Port name (PORT)
- Device file name
- Volume GUID (only for Windows)

Note: When executed, this command will not output command device information if the storage model is a TagmaStore AMS/WMS series, Thunder 9500V series, or Thunder 9200 series model.

Notes:

- For a storage subsystem that does not support SLPR functions, the command always outputs "" (a null string) in the SLPR number column.
- If two or more partitions exist on a command device disk in a Windows environment (Windows 2000 or later), a record is generated for each partition.

Return values

Table 5.48 Return Values (jpctdlistraid)

Return values	Meaning
0	The command terminated normally.
4	The command terminated normally (with a partial error).
255	The command terminated abnormally.

Displayed information

The table below describes the command device information output when the jpctdlistraid command is executed. The command device information is output to the standard output.

Table 5.49 Information That Is Displayed When the jpctdlistraid Command Is Executed

Output information	Explanation
PRODUCT	Indicates the storage subsystem's model name.
SERIAL	Indicates the serial number.
LDEV	Indicates the CU: LDEV number.
SLPR	Indicates the SLPR number.
PORT	Indicates the port name.
DEVICE_FILE	Indicates the device file path name.
VOLUME_GUID (See *Note 1*)	Indicates the volume GUID.

Note 1: VOLUME_GUID will not be output in UNIX.

Example

Example 1

This example shows the command execution result when only one command device of a storage subsystem is open.

(This example assumes that the storage subsystem is TagmaStore USP (Windows 2000).)

```
jpctdlistraid
KAVF18700-I The detection of the monitorable storage subsystem has begun.
"PRODUCT"    ,"SERIAL" ,"LDEV" ,"SLPR","PORT" ,"DEVICE_FILE"       ,"VOLUME_GUID"
"USP"        ,"14053"  ,"01:23","0"   ,"CL1-
A","\\.\PhysicalDrive4","\\?\Volume{2fa19e04-66d0-11d8-9540-806d6172696f}"
KAVF18701-I The detection of the monitorable storage subsystem has ended.
```

Example 2

This example shows the command execution result when one command device of each of two storage subsystems is open.

(This example assumes that the storage subsystems are a Lightning 9900V Series model and TagmaStore USP (Solaris).)

```
jpctdlistraid
KAVF18700-I The detection of the monitorable storage subsystem has begun.
"PRODUCT"        ,"SERIAL" ,"LDEV" ,"SLPR","PORT" ,"DEVICE_FILE"
"USP"            ,"14053"  ,"01:1F","0"   ,"CL1-B","/dev/rdsk/c0t1d2s2"
"Lightning 9980V","31168"  ,"00:2A",""    ,"CL2-F","/dev/rdsk/c0t2d1s2"
KAVF18701-I The detection of the monitorable storage subsystem has ended.
```

5.2.37 jpctminfo

Format

```
jpctminfo     service-key
               [-p]
```

Function

The jpctminfo command displays product information of Tuning Manager series programs installed on the host. Use this command to confirm version and patch history information.

This command displays product information of Tuning Manager series programs for version 4.0 or later.

Example

Example of usage 1

In this example, the command displays version information of Agent for Oracle:

```
jpctminfo agto
```

Output example 1

```
PRODUCT  HiCommand Tuning Manager - Agent for Oracle
VERSION  5.0.0-00(05-00-00)
```

Example of usage 2

In this example, the command displays version information and patch history information of Agent for Oracle:

```
jpctminfo agto -p
```

Output example 2

If any patches have been applied, the patch versions and installed dates are displayed as follows:

```
PRODUCT  HiCommand Tuning Manager - Agent for Oracle
VERSION  5.0.0-02(05-00-02)
PATCH    DATE
050001   2005/10/31
050002   2005/11/30
```

If no patch has been applied, a message is displayed as follows to indicate that there is no patch installation history:

```
PRODUCT  HiCommand Tuning Manager - Agent for Oracle
VERSION  5.0.0-00(05-00-00)
KAVF24903-I There is no patch history information.
```

5.3 Reviewing Command Arguments

5.3.1 –alarm alarm-name

Specifies an alarm name in the following cases:

- For inactivating a named alarm that is active
- For deleting a named alarm
- For exporting the alarm definition information of a named alarm (in this case, the `-template` option cannot be specified at the same time)
- For activating a named alarm that is inactive

If you specify a named alarm that is already active, the command terminates normally.

If you specify a named alarm that is already inactive, the command terminates normally.

You can use 1 to 20 bytes of two-byte characters, one-byte alphanumeric characters, one-byte spaces, and the following one-byte symbols to specify alarm-name:

```
% - ( ) _ . / @ [ ]
```

If alarm-name includes any one-byte space, you must enclose the entire string in one-byte double quotation marks (`"`). If applicable, you must also precede any one-byte symbol with an escape character.

Note: You cannot use wildcard characters.

5.3.2 -alarm name-of-copy-source-alarm

Specifies the name of an alarm to be copied.

You can use 1 to 20 bytes of two-byte characters, one-byte alphanumeric characters, one-byte spaces, and the following one-byte symbols to specify name-of-copy-source-alarm:

```
% - ( ) _ . / @ [ ]
```

If name-of-copy-source-alarm includes any one-byte space, you must enclose the entire string in one-byte double quotation marks (`"`). If applicable, you must also precede any one-byte symbol with an escape character.

Note: You cannot use wildcard characters.

This option cannot be specified if a solution set (an alarm table whose name begins with `PFM`) is specified by the `-table` option.

5.3.3 [all|data|dump]

Selects the information to be collected. Different information is collected depending on the option specified. Normally, specify `all`. Table 5.50 shows the options that can be specified and the information that is collected for each OS.

Table 5.50 Information Collected by the jpcras Command (in Windows)

Information to be collected		Option			
		all	data	dump	Omitted
System log		Y	--	--	Y
Common message log		Y	--	--	Y
Service configuration information		Y	--	--	Y
Process information		Y	--	--	Y
Version information		Y	--	--	Y
System file		Y	--	--	Y
Database information		Y	Y	--	Y(Note)
OS information	System information	Y	--	--	Y
	Network status	Y	--	--	Y
	Host name	Y	--	--	Y
Dump information		Y	--	Y	--

Legend

Y: Collects information.

--: Does not collect information.

Note: If you do not choose any of the options, the command will not collect information from the View Server service or Agent Store service database.

Table 5.51 Information Collected by the jpcras Command (in UNIX)

Information collected	Option			
	all	data	dump	Omitted
System log	Y	--	--	Y
Common message log	Y	--	--	Y
Service configuration information	Y	--	--	Y
Process information	Y	--	--	Y
Version information	Y	--	--	Y
System file	Y	--	--	Y
Database information	Y	Y	--	Y(Note)

Information collected		Option			
		all	data	dump	Omitted
OS information	Patch information	Y	--	--	Y
	Kernel information	Y	--	--	Y
	Version information	Y	--	--	Y
	Network status	Y	--	--	Y
	Environment variables	Y	--	--	Y
	Host name	Y	--	--	Y
Dump information		Y	--	Y	--

Legend

Y: Collects information.

--: Does not collect information.

Note: If you do not choose any of the options, the command will not collect information from the View Server service or Agent Store service database.

For details about the information to be collected, see the *HiCommand Tuning Manager Agent Administration Guide*.

5.3.4 –alone

Performs processing(Note) for the Master Store service database or the Agent Store service database on the local host.

However, this option cannot be used to perform processing(Note) for the Master Store service database or the Agent Store service database on a different host.

When specifying this option, you can perform processing(Note) even when Tuning Manager is not running. You can also perform processing(Note) on Agent hosts (hosts other than the Tuning Manager host).

Note that you cannot specify this option together with the `proxy`, `-direct`, or `host` option.

Note: "Processing" indicates backup processing for `jpcctrl backup`, and export processing for `jpcctrl dump`.

5.3.5 -d environment-directory-name

Specifies the directory in which you want to create the logical host execution environment. *environment-directory-name* is the name of the directory for containing the files that constitute the logical host environment. You must specify the name of a directory that exists on a shared disk managed by cluster software so that the standby system can inherit the files. If you specify a directory that does not exist on a shared disk managed by cluster software, the command does not create any logical host environment. Always specify this item when you create a new logical host environment. You can omit this item when you add a service in an existing logical host environment.

You can use from 1 to 80 bytes of one-byte alphanumeric characters or symbols to specify the name, excluding the following symbols:

```
; , * ? ' " < > |
```

A blank space cannot be specified in a UNIX environment. If you want to specify an environment directory name including a blank space in a Windows environment, surround the name with quotation marks (").

Note that you must use an absolute pathname, not a relative pathname.

When the command is executed, the command creates the `jp1pc` directory under the specified directory, and creates the files of the logical host environment.

You can specify only one environment directory for one logical host. If you want to set up more than one Tuning Manager series program service on the same logical host, use the same directory.

5.3.6 database-id

Specifies the database ID of the database that contains data to be processed(Note). The specifiable database IDs are as follows:

- PI: Agent Store service database for records of the PI record type
- PD: Agent Store service database for records of the PD record type
- PL: Agent Store service database for records of the PI record type (for Agent for Platform (UNIX) only)
- PA: Master Store service database

Note: This indicates deletion processing for `jpcctrl clear`, and export processing for the `jpcctrl dump` command.

5.3.7 define

Specifies a port number.

The permitted port number is any number in the range from 1024 to 65535 that is not in use in the system. If you do not specify a port number, the system uses the port number assigned by programs of the Tuning Manager series. If you press the return key without specifying a port number, the system uses the displayed port number.

Use the port number assigned by programs of the Tuning Manager series unless the same port number is already used in the system. For details about the port number assigned by programs of the Tuning Manager series, see the *HiCommand Tuning Manager Agent Administration Guide*.

The port number that you specify must be selected from port numbers that are not already in use on the same device. If a service of the Tuning Manager series programs exists on both the logical host and the physical host of the same device, you must assign a unique port number for each host.

To not specify the port number (so that the port number is automatically assigned each time a service is restarted), enter a value of `0`. For the following services, the following port numbers are specified:

Table 5.52 Service and Port Number of define

Service name	Parameter	Port number
Name Server	`jp1pcnsvr`	22285
Status Server	`jp1pcstatsvr`	22350
View Server (between the Performance Reporter and View Server service)	`jp1pcvsvr`	22286

5.3.8 -direct

Performs processing(Note) for the Master Store service database or the Agent Store service database without going through the Master Manager service.

When you specify this option, you can perform processing on Agent hosts (hosts other than the Tuning Manager host), but the Name Server service and the Master Manager service must be running.

In addition, the host on which the command is to be executed must be able to communicate directly with the target Store service.

Note that you cannot specify this option together with the `proxy`, or `-alone` option.

Note: "Processing" indicates backup processing for `jpcctrl backup`, and export processing for `jpcctrl dump`.

5.3.9 directory-name

Specifies the name of the directory for storing the collected information. You can use from 1 to 127 bytes of one-byte alphanumeric characters or symbols to specify the name. A relative path cannot be used. The use of an absolute path is mandatory. You cannot use the following symbols:

```
; , * ? ' " < > |
```

When specifying a space character, surround it with double quotation marks (`"`). When specifying any of the following symbols, surround it with double quotation marks (`"`), as in `"^"`, so that it is not analyzed by the shell or the command prompt.

```
& ^ `
```

Do not specify the installation directory of programs of the Tuning Manager series in *directory-name*.

The name of a directory in a removable medium, such as a floppy disk, cannot be specified in this argument.

In UNIX, a file for the collected information is created under the name `jpcras`*YYMMDD*(Note 1)`.tar.Z` in the folder specified by this option.

In Windows, a file for the collected information is copied uncompressed to the folder specified by this option.

Note 1: *YYMMDD* indicates the file creation date, where:

- *YY*

  Indicates the last two digits of the year.

- *MM*

  Indicates the month. A value from 01 to 12 is used.

- *DD*

  Indicates the day. A value from 01 to 31 is used.

5.3.10 end-time

Specifies the end time for the data to be exported. Use a *YYYY/MM/DD hh:mm* format, where:

YYYY Specifies the year. A value from 1970 to 2035 may be specified.

MM Specifies the month. A value from 01 to 12 may be specified.

DD Specifies the day. A value from 01 to 31 may be specified.

hh Specifies the hour. A value from 00 to 23 may be specified.

mm Specifies the minute. A value from 00 to 59 may be specified.

You can specify an end time from `1970/01/01 00:00` to `2035/12/31 23:59` GMT. When you do not specify the `-localtime` option, the end time you specify is used as is as GMT time. Therefore, you can specify an end time from `1970/01/01 00:00` to `2035/12/31 23:59`. When you specify the `-localtime` option, you must specify an end time in GMT within the range shown on the left. For example, if the local time is Japanese standard time (GMT + 9), the range is from `1970/01/01 09:00` to `2036/01/01 08:59`.

The end time must be after than the start time.

5.3.11 export-file-name

Specifies an export file name. You can use from 1 to 31 bytes of one-byte alphanumeric characters or symbols to specify the file name, excluding its directory name. However, you cannot use the following symbols or a space character:

```
/ \ : ; , * ? ' " < > |
```

When specifying any of the following symbols, surround it with double quotation marks (`"`), as in `"^"`, so that it is not analyzed by the shell or the command prompt:

```
& ^ `
```

If a file name already exists, its content is overwritten.

5.3.12 -f name-of-alarm-definition-file

Specifies a file name in the following cases:

- For checking an alarm definition file
- For importing an alarm definition file

You can use either a relative path or absolute path to specify the file name.

You can use two-byte characters, one-byte alphanumeric characters, one-byte spaces, and the following one-byte symbols to specify *name-of-alarm-definition-file*:

```
% - ( ) _ . / @ [ ]
```

If *name-of-alarm-definition-file* includes any one-byte space, you must enclose the entire string in one-byte double quotation marks (`"`). If applicable, you must also precede any one-byte symbol with an escape character.

5.3.13 -f name-of-export-destination-file

Specifies a name for the file to be created at the location to which alarm definition information is being exported. You can use either a relative path or absolute path to specify the file name.

You can use two-byte characters, one-byte alphanumeric characters, one-byte spaces, and the following one-byte symbols to specify *name-of-export-destination-file*:

```
% - ( ) _ . / @ [ ]
```

If *name-of-export-destination-file* includes any one-byte space, you must enclose the entire string in one-byte double quotation marks ("). If applicable, you must also precede any one-byte symbol with an escape character.

5.3.14 -f logical-host's-environment-definition-file-name

Specifies the name of a file to which you want to export the settings of the logical host environment. When specifying a blank space, surround it with quotation marks (").

5.3.15 host=host-name

Specifies the name of the host on which the Master Store service or Agent Store service is running.

This argument is used for the following purpose:

- For `jpcctrl backup`, the argument is used to back up the data on a particular host.
- For `jpcctrl clear`, the argument is used to delete the data on a particular host.
- For `jpcctrl delete`, the argument is used to delete the service information of a particular host.
- For `jpcctrl dump`, the argument is used to export the data from a particular host.
- For `jpcctrl list`, the argument is used to display the service structure and status of a Tuning Manager series program that runs on a particular host.
- For `jpcctrl register`, the argument is used to re-register the service information of a particular host.

You can use from 1 to 32 bytes of one-byte alphanumeric characters. You cannot use a space character. If you omit this argument, the local host is assumed. When the `lhost` option is specified, the local host is a logical host.

You can also use a wildcard character to specify multiple host names. In this case, even if an error occurs during processing for one of the specified services, processing will continue for the remaining services. If an error occurred in more than one service, the command returns the return value for the last error.

5.3.16 -id service-ID

Specifies the service ID of the agent's Agent Collector service in the following cases:

- For binding an alarm table
- For releasing the binding of an alarm table

You can use 1 to 258 bytes to specify *service-ID*.

If you specify the service ID of the Agent Collector service to which the alarm table specified in the `-table` option is not bound, the command terminates with an error.

You can also use wildcard characters to specify multiple service IDs. In this case, even if an error occurs during processing for one of the specified Agent Collector services, processing continues for the remaining Agent Collector services. If an error occurs on more than one Agent Collector service, the command sets the return value for the last error that occurred.

5.3.17 -inst instance-name

For the `jpcinssetup` command:

Specify the instance name for which you want to create or update an execution environment. Use 1 to 32 bytes of one-byte alphanumeric characters.

For the `jpcinsunsetup` command:

Specify the instance name for which you want to delete an execution environment. Use 1 to 32 bytes of one-byte alphanumeric characters.

For the `jpcnsconfig port` command:

Specify the instance name if you want to configure the port number for a specific instance. This option is available only for agents that have the instance environment. Use 1 to 32 bytes of one-byte alphanumeric characters.

For the `jpctdchkinst` command:

Specify the instance name of the Agent for RAID instance for which you want to verify the instance information.

You cannot omit this argument. If you specify a nonexistent instance name for this argument, an error message is output and execution of the command stops.

5.3.18 inst=instance-name

For the `jpcras` command:

Specify the instance name if you want to acquire information for a specific instance. This option is valid only when you specify an agent that has the instance environment for the service key. Use 1 to 32 bytes of one-byte alphanumeric characters.

For the `jpcresto` command:

Specify the instance name if you want to restore a database for a specific instance. This option is valid only when you specify an agent that has the instance environment for the service key. Use 1 to 32 bytes of one-byte alphanumeric characters.

For the `jpcstart` command:

Specify the instance name if you want to start the service for a specific instance. This option is valid only for the services of agents that have the instance environment. For other services, this option is ignored. Use 1 to 32 bytes of one-byte alphanumeric characters.

For the `jpcstop` command:

Specify the instance name if you want to stop the service for a specific instance. This option is valid only for the services of agents that have the instance environment. For other services, this option is ignored. Use 1 to 32 bytes of one-byte alphanumeric characters.

5.3.19 -key service-key

Specifies a service key for an agent, when:

- activating an alarm definition
- binding an alarm table
- copying an alarm table or an alarm
- deleting an alarm table or an alarm
- exporting an alarm table or alarm definition information (in this case, the `-template` option cannot be specified at the same time)
- inactivating an alarm definition
- displaying definition information or binding information for an alarm table
- releasing the binding of an alarm table

You can specify only agent service keys in this argument. For details about agent service keys, see Appendix C.

5.3.20 kill=immediate

Forcibly stops processes operating in a cluster configuration. When `all` is specified in *service-key*, all processes operating in a host stop. When *service-key* is not `all`, all the processes for the specified service stop. Note, however, that you cannot use this together with the `inst` option to stop processes by individual instance.

5.3.21 -lhost logical-host-name

Specifies the logical host name as follows:

- For `jpchasetup create`, the name of the logical host you want to create.
- For `jpchasetup delete`, the name of the logical host you want to delete.
- For `jpchasetup list`, the name of the logical host you want to display. You can omit this option.
- For `jpcinslist`, the name of the logical host for which you want to display the instance environment.
- For `jpcinssetup`, the name of the logical host for which you want to add an instance environment.
- For `jpcinsunsetup`, the name of the logical host for which you want to delete the instance environment.
- For `jpcnsconfig port`, the name of the logical host, when you want to set the port number for a logical environment.
- For `jpcnshostname`, the host name of the logical host environment where the connection-target Tuning Manager host is displayed, set, or changed.

- For `jpctdchkinst`, the host name when you want to verify the instance information set up for the logical host.

You can use 1 to 32 bytes of one-byte alphanumeric characters to specify the name.

You cannot specify `localhost`, an IP address, or a host name that begins with a hyphen (`-`).

The specified logical host name is used as the host name when the Tuning Manager series program service on the logical host performs communication.

If you specify the name of the logical host that has not been set up, an error occurs. You can check the current logical host environment settings by using `jpchasetup list all`.

If you specify a logical host name, information is displayed only for the host. If you omit this option, information is displayed for all the logical hosts.

5.3.22 lhost=logical-host-name

Specifies the logical host name when you execute the command on the host in the logical host environment instead of the physical host environment. You can use 1 to 32 bytes of one-byte alphanumeric characters. You cannot use a space character.

If you omit this argument, the physical host is assumed. You cannot use a wildcard character.

5.3.23 list

Specifies the port number. When you specify this option, the information noted in Table 5.53 is displayed.

Table 5.53 Information That Is Displayed When the List Option Is Specified

Item	Description
`Component`	Service name. The displayed names indicate the following: ▪ `Status Server`: Indicates the Status Server service ▪ `Name Server`: Indicates the Name Server service ▪ `Master Manager`: Indicates the Master Manager service ▪ `Master Store`: Indicates the Master Store service ▪ `Correlator`: Indicates the Correlator service ▪ `Trap Generator`: Indicates the Trap Generator service ▪ `View Server`: Indicates the View Server service ▪ `View`: Indicates the View Server service (between the Performance Reporter and View Server service) ▪ `Action Handler`: Indicates the Action Handler service ▪ `Agent Store`: Indicates the Agent Store service ▪ `Agent Collector`: Indicates the Agent Collector service
`ServiceID`	Service ID
`Services`	Service name for the port number. If this information is undefined, `undef` is displayed.

Item	Description
Port	Port number. If this information is undefined, undef is displayed.
Host Name	Host name

5.3.24 -localtime

When this option is specified, the local time of the host where the command is executed is applied for the export start time and end time according to the time zone setting of the host.

When this option is not specified, GMT is used for the export start time and end time.

5.3.25 –name name-of-copy-destination-alarm-table-or-alarm

Specifies a name for the alarm table or alarm to be created at the copy destination.

You cannot specify an existing alarm table name or alarm name.

If the -table option is specified without the -alarm option, this argument specifies a name for the alarm table to be created at the copy destination. In this case, you cannot specify an alarm table name that starts with PFM. You can use 1 to 64 bytes of two-byte characters, one-byte alphanumeric characters, one-byte spaces, and the following one-byte symbols to specify *name-of-copy-destination-alarm-table-or-alarm*:

% - ( ) _ . / @ [ ]

If *name-of-copy-destination-alarm-table-or-alarm* includes any one-byte space, you must enclose the entire string in one-byte double quotation marks ("). If applicable, you must also precede any one-byte symbol with an escape character.

You cannot use wildcard characters.

If the -table and -alarm options are both specified, this argument specifies a name for the alarm to be created at the copy destination. In this case, you can use 1 to 20 bytes of two-byte characters, one-byte alphanumeric characters, one-byte spaces, and the following one-byte symbols to specify name-*of-copy-destination-alarm-table-or-alarm*:

% - ( ) _ . / @ [ ]

If *name-of-copy-destination-alarm-table-or-alarm* includes any one-byte space, you must enclose the entire string in one-byte double quotation marks ("). If applicable, you must also precede any one-byte symbol with an escape character.

You cannot use wildcard characters.

5.3.26 -p

Specifies to display product information with the patch history information.

5.3.27 proxy={y|n}

If you specify a remote host in `host` when you cannot directly communicate with Agent at the remote host, use this option to select whether to communicate with Agent via Tuning Manager as a proxy.

If you specify `y`, the command checks the status of the target Store service via Tuning Manager. Specify this option in situations such as when a firewall is enabled or when direct communication is not possible with the Store service.

If you specify `n`, the command checks the status of the target Store service without using Tuning Manager.

5.3.28 record-id

Specifies the record ID of the record to be exported. You can use from 1 to 4 bytes of one-byte alphanumeric characters to specify the record ID. You cannot use a space character. A wildcard character can also be used to specify multiple record IDs.

For example, to export the data in the Processor Overview (`PI_PCSR`) of the Agent for Platform (Windows), specify `PCSR`. For record IDs, see the chapter explaining records (a list of records) in the Agent manual.

If the specified record ID does not exist, an export file with a size of 0 is created, and the command is terminated normally.

5.3.29 -s host-name

Specifies the host name of the host of the connection-target Tuning Manager. You can use from 1 to 32 bytes of one-byte alphanumeric characters to specify the name. You cannot use IP addresses, space characters, or periods.

This argument can be executed at the Performance Reporter host or an Agent host.

If Tuning Manager has been installed at the local host, specifying this argument results in an error. If Tuning Manager has been installed in the Performance Reporter host or Agent host, the connection-target Tuning Manager is the Tuning Manager of the local host. The Tuning Manager host of a remote host cannot be specified as the connection-target Tuning Manager.

5.3.30 service-id

Specifies the service ID (whose second character is S) of the Master Store service or the Agent Store service. Use 1 to 258 bytes to specify the ID.

You can also use a wildcard character to specify multiple service IDs. In this case, even if an error occurs during processing for one of the specified services, processing will continue for the remaining services. If an error occurred in more than one service, the command returns the return value for the last error.

5.3.31 service-key

The following table lists commands and available service keys:

all: The services of all Tuning Manager series programs that have been installed on the node that support logical host operation

mgr: Collection Manager services

A service key of an Agent service: An Agent service

act: Action Handler service

stat: Status Server service of Tuning Manager or the Agent

agtd: Service key for Agent for RAID

agte: Service key for Agent for RAID Map and HTM Agent

agtt: Service key for Agent for Platform (Windows)

agtu: Service key for Agent for Platform (UNIX)

agtw: Service key for Agent for SAN Switch

agtn: Service key for Agent for Network Attached Storage

agto: Service key for Agent for Oracle

agtq: Service key for Agent for Microsoft SQL Server

agtz: Service key for Agent for Microsoft Exchange Server

agtr: Service key for Agent for DB2

Note: `agte` can be specified only for the `jpctminfo` command as the service key of HTM Agent. In addition, the service keys specifiable for the `jpctminfo` command are `agte`, `agtn`, `agto`, `agtq`, `agtd`, `agtw`, `agtr`, and `mgr`. If you specify an unsupported service key, the command results in an error.

Table 5.54 Commands and Service Keys to Be Specified

Command	Service key of
jpcagtsetup	The service of a new agent that you want to add
jpctminfo	The service of a Tuning Manager series program whose version you want to display
jpchasetup create	The Tuning Manager series program service for which you want to create a logical host environment
jpchasetup delete	The Tuning Manager series program service for which you want to delete a logical host environment
jpchasetup list	The Tuning Manager series program service whose logical host environment settings you want to display
jpcinslist	The service of the Agent whose instance names you want to output
jpcinssetup	The service of the Agent for which you want to create or update an execution environment
jpcinsunsetup	The service of the Agent for which you want to delete the execution environment
jpcnsconfig port	The services whose port number you want to display
jpcras	The services for which you want to collect information
jpcresto	The services of the data you want to restore
jpcstart	The services you want to start
jpcstop	The services you want to stop

For details on the service keys of Agent services, see Appendix C.

If you specify `mgr` or the service key of an Agent service for *service-key*, the command performs processing(Note 1) for the logical host environment for the Tuning Manager series program service corresponding to the specified service key.

If you specify `all` for *service-key*, the command performs processing(Note) for the logical host environment for all the Tuning Manager series programs that have been installed on the node and support logical host startup.

If you specify a service key for the service of a Tuning Manager series program that does not support logical host startup, the command results in an error. Note that if you execute this command, the logical host environment will be processed(Note) automatically so that one Action Handler service exists on each logical host.

The `jpcagtsetup` command is used to specify the service keys of new agents that you want to set up. Note that you can specify only the service keys of agents for which a setup file has been copied into the directory listed below. If you specify all in *service-key*, agents are set up for all setup files that have been copied into this directory.

- Windows: *installation-folder*`\setup\`
- UNIX: `/opt/jp1pc/setup/`

Note: This indicates creation processing for `jpchasetup create`, deletion processing for `jpchasetup delete`, and display processing for `jpchasetup list`.

5.3.32 start-time

Specifies the start time for the data to be exported. Use a *YYYY/MM/DD hh:mm* format, where:

YYYY Specifies the year. A value from 1970 to 2035 may be specified.

MM Specifies the month. A value from 01 to 12 may be specified.

DD Specifies the day. A value from 01 to 31 may be specified.

hh Specifies the hour. A value from 00 to 23 may be specified.

mm Specifies the minute. A value from 00 to 59 may be specified.

You can specify an end time from 1970/01/01 00:00 to 2035/12/31 23:59 GMT. When you do not specify the localtime option, the end time you specify is used as is as GMT time. Therefore, you can specify an end time from 1970/01/01 00:00 to 2035/12/31 23:59. When you specify the localtime option, you must specify an end time in GMT within the range shown on the left. For example, if the local time is Japanese standard time (GMT + 9), the range is from 1970/01/01 09:00 to 2036/01/01 08:59.

Note: The start time must be before the end time.

5.3.33 -stat

Displays the status obtained by performing direct communication with the Status Server service of the host specified in `host=`*host-name*. This option is specified to display remote host information when Tuning Manager is stopped. The status of the Status Server service for the remote host is also displayed.

When this option is specified, a wildcard character cannot be used to specify `host=`*host-name*. This option cannot be simultaneously specified with `proxy={y|n}`.

Note: This option cannot be used when the status management function is disabled.

5.3.34 –syntax

Specifies that the only processing to be performed is to check whether the syntax of an alarm definition file is correct.

5.3.35 -table alarm-table-name

Specifies the name of an alarm table, when:

- activating an alarm definition
- binding a named alarm table
- deleting a named alarm table
- exporting alarm definition information (in this case, the `-template` option cannot be specified at the same time)
- inactivating an alarm definition
- displaying alarm definition information
- deleting a named alarm table

You can use 1 to 64 bytes of two-byte characters, one-byte alphanumeric characters, one-byte spaces, and the following one-byte symbols to specify alarm-table-name:

```
% - ( ) _ . / @ [ ]
```

If *alarm-table-name* includes any one-byte space, you must enclose the entire string in one-byte double quotation marks (`"`). If applicable, you must also precede any one-byte symbol with an escape character.

Note: You cannot use wildcard characters.

5.3.36 -table name-of-copy-source-alarm-table

Specifies a name for the alarm table at the copy source.

You can use 1 to 64 bytes of two-byte characters, one-byte alphanumeric characters, one-byte spaces, and the following one-byte symbols to specify *name-of-copy-source-alarm-table*:

```
% - ( ) _ . / @ [ ]
```

If *name-of-copy-source-alarm-table* includes any one-byte space, you must enclose the entire string in one-byte double quotation marks (`"`). If applicable, you must also precede any one-byte symbol with an escape character.

Note: You cannot use wildcard characters.

5.3.37 –template

Specifies that the processing to be performed is to output a template for an alarm definition file.

You cannot specify this option together with the `-key`, `-table`, or `-alarm` options.

5.3.38 -u

Sets up the connection-target Tuning Manager at the local host.

5.3.39 –y

When you are deleting an alarm table or an alarm, this specifies whether the alarm table or alarm is to be forcibly deleted, without first asking for confirmation of the deletion.

If you specify `-y`, the alarm table or the alarm will be forcibly deleted.

If you omit this specification, a message is output asking you to confirm that you want to delete the alarm table or alarm.

5.3.40 -y|-n

Table 5.55 shows the action that results at the export or import destination when you specify -y or -n and the named alarm definition file already exists.

Table 5.55 Action That Results When You Specify -y or -n

Operation	Action that results from each specification		
	-y	-n	Omitted
Export	Forcibly overwrites the existing information.	Does not overwrite the existing information.	Outputs a message asking you to confirm that the existing information is to be overwritten.
Import	Forcibly updates the existing information.	Does not update the existing information.	Outputs a message asking you to confirm that the existing information is to be updated.

Appendix A. Program Version Compatibility with the Data Model Version

In addition to the product version, an Agent includes a data model version.

When you upgrade an Agent, the data model might also be automatically upgraded. However, because upward compatibility of the data model versions is maintained, newer version data models can use report and alarm definitions created in older versions.

lists version relationships among Agents, data models, and alarm tables.

Table A.1 Version Relationships Among Agents, Data Models, and Alarm Tables

Agent Name	Agent Version	Data Model Version	Version of Alarm Table in Solution Set
Agent for RAID	5.5	7.0	7.00
	5.1	7.0	7.00
	5.0	7.0	-
	4.1	6.0	-
	4.0	6.0	-
	3.5	5.0	-
	3.3	-	-
	3.2	4.0	-
	3.1	4.0	-
	3.0	4.0	-
Agent for RAID Map	5.5	4.0	-
	5.1	4.0	-
	5.0	4.0	-
	4.1	4.0	-
	4.0	4.0	-
	3.5	4.0	-
	3.3	-	-
	3.2	4.0	-
	3.0	4.0	-
Agent for Platform (Windows)	5.5	5.0	7.50
	5.1	5.0	7.50
	5.0	5.0	-

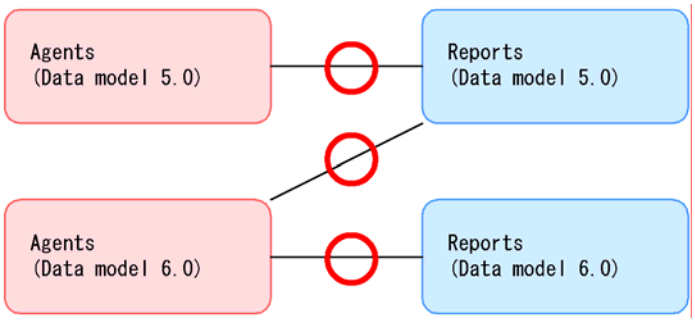
Agent Name	Agent Version	Data Model Version	Version of Alarm Table in Solution Set
Agent for Platform (Windows)	4.1	4.0	-
	4.0	4.0	-
	3.5	4.0	-
	3.3	-	-
	3.2	4.0	-
	3.0	4.0	-
Agent for Platform (UNIX)	5.5	5.1	7.50
	5.1	5.1	7.50
	5.0	5.1	-
		5.0	-
	4.1	5.0	-
	4.0	4.0	-
	3.5	4.0	-
	3.3	-	-
	3.2	4.0	-
	3.0	4.0	-
Agent for SAN Switch	5.5	5.0	7.00
	5.1	5.0	7.00
	5.0	5.0	-
	4.1	4.0	-
	4.0	4.0	-
	3.5	4.0	-
	3.3	-	-
	3.2	4.0	-
	3.0	4.0	-
Agent for NAS	5.0	5.0	7.00
	4.1	-	-
	4.0	5.0	-
	3.5	5.0	-
	3.3	-	-
	3.2	-	-
	3.0	4.0	-

Agent Name	Agent Version	Data Model Version	Version of Alarm Table in Solution Set
Agent for Oracle	5.5	5.0	8.00
	5.1	4.1	7.50
	5.0	4.0	-
	4.1	4.0	-
	4.0	4.0	-
	3.5	4.0	-
	3.3	-	-
	3.2	-	-
	3.0	4.0	-
Agent for Microsoft SQL Server	5.5	4.0	8.00
	5.1	3.1	7.50
	5.0	3.0	-
	4.1	3.0	-
	4.0	-	-
	3.5	3.0	-
	3.3	3.0	-
Agent for Microsoft Exchange Server	5.5	3.0	8.00
Agent for DB2	5.5	5.0	8.00
	5.1	5.0	8.00
	5.0	4.1	-
	4.1	3.0	-

The following sections describe compatibility across different versions, using an example of an environment where the data model versions 5.0 and 6.0 co-exist.

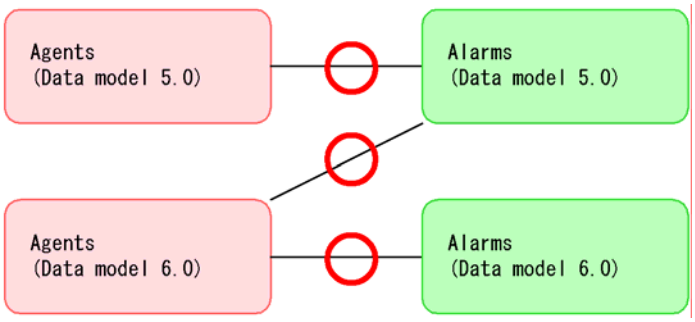
A.1 Displaying a Report

Reports that are defined with data model version 5.0 can be displayed from Agents defined with data model version 5.0 or 6.0. Reports that are defined with data model 6.0 can be displayed only with Agents defined with data model version 6.0.



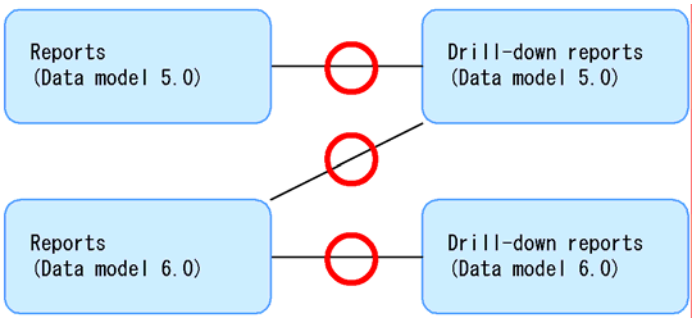
A.2 Binding an Alarm Table

Alarm tables that are defined with data model version 5.0 can be bound to Agents defined with data model version 5.0 or 6.0. Alarm tables that are defined with data model 6.0 can be bound only to Agents defined with data model version 6.0.



A.3 Associating a Drill-down Report with a Report

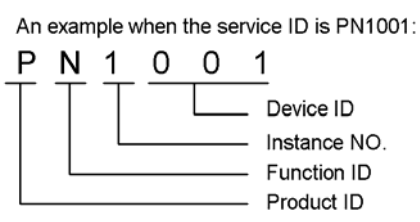
Drill-down reports that are defined with data model version 5.0 can be associated with reports defined with data model version 5.0 or 6.0. Drill-down reports that are defined with data model 6.0 can be associated only with reports defined with data model version 6.0.



Appendix B. Service ID

A unique ID is applied to each service of the Tuning Manager series programs. This ID is called a *service ID*. When checking the system configuration of Tuning Manager series programs using commands, or when saving performance data for individual Agents, commands are executed by specifying the service ID of the Tuning Manager series program.

A service ID consists of the following components:



The following describes the service ID components:

- **Product ID**: The product ID is a one-byte identifier that indicates the program product in the Tuning Manager series programs to which this service corresponds. The product ID for each product is listed in Table B.1.
- **Function ID**: The function ID is a one-byte identifier that indicates the function type of this service.

  Note: There is no function ID for the Performance Reporter service.

  Function IDs, their corresponding service names, and overviews of the function indicated by the function IDs are listed in Table B.2.
- **Instance No.**: The instance number is a one-byte identifier that indicates the management number that is used for internal processing.
- **Device ID**: The device ID consists of 1-255 bytes that indicate the location where this service is being run, such as the host in the Tuning Manager system. The device ID differs depending on the service.

  Note: There is no device ID for the Performance Reporter service.

  Table B.3 lists the service names and the corresponding device IDs.

Table B.1 Product ID

Product ID	Description
P	Product ID of Tuning Manager
D	Product ID of Agent for RAID
E	Product ID of Agent for RAID Map
T	Product ID of Agent for Platform (Windows)
U	Product ID of Agent for Platform (UNIX)

Product ID	Description
W	Product ID of Agent for SAN Switch
N	Product ID of Agent for NAS
O	Product ID of Agent for Oracle
Q	Product ID of Agent for Microsoft SQL Server
Z	Product ID of Agent for Microsoft Exchange Server
R	Product ID of Agent for DB2

Table B.2 Function IDs, Service Names, and Function Overview

Function ID	Service Name	Function Overview
N	Name Server	Internal function
M	Master Manager	Internal function
P	View Server	Internal function
E	Correlator	Internal function
C	Trap Generator	Internal function
H	Action Handler	Internal function
A	Agent Collector	Function that collects performance data
S	Master Store	Internal function
	Agent Store	Function that manages performance data
T	Status Server	Function that manages the status of a service

Table B.3 Service Name and Device ID

Service Name	Specified Device ID Contents
Name Server	Fixed at 001.
Master Manager	Fixed at 001.
Master Store	Fixed at 001.
View Server	Host name is specified.
Correlator	Fixed at 001.
Status Server	Host name is specified.
Trap Generator	Host name is specified.
Action Handler	Host name is specified.
Agent Collector	Host name is specified for a non-instance configuration. *instance-name*[*host-name*] is specified for an instance configuration.
Agent Store	Host name is specified for a non-instance configuration. *instance-name*[*host-name*] is specified for an instance configuration.

Examples:

- **Service ID for the Name Server service**: For the Name Server service, the product ID is specified as `P`, function ID as `N`, and device ID as `001`. The following is the service ID when the instance number is `1`: `PN1001`
- **Service ID for the View Server service**: For the View Server service, the product ID is specified as `P`, function ID as `P`, and device ID as *host-name*. The following is the service ID when the instance number is `1` and host name is `host01`: `PP1host01`
- **Service ID for the Agent Store service** (for a non-instance configuration): For the Agent Store service of Agent for Platform (Windows), the product ID is specified as `T`, function ID as `S`, and the device ID as *host-name*. The following is the service ID when the instance number is `1` and host name is `host02`: `TS1host02`
- **Service ID for the Agent Store service** (for an instance configuration): For the Agent Store service of Agent for Oracle, the product ID is specified as `O`, function ID as `S`, and the device ID as *instance-name*`[`*host-name*`]`. The following is the service ID when the instance number is `1`, instance name is `oracleA`, and host name is `host03`: `OS1oracleA[host03]`

Appendix C. Service Key

To start or terminate each service of the Tuning Manager series programs, you execute a command specifying an identifier called a service key. Table C.1 lists the service keys.

Table C.1 Service Keys

Service Key	Meaning
all	Indicates all the services of Tuning Manager and Agent.
mgr	Indicates the Collection Manager service.
act	Indicates the Action Handler service.
stat	Indicates the Status Server service.
agtd	Service key for Agent for RAID
agte	Service key for Agent for RAID Map and HTM Agent (See *Note*)
agtt	Service key for Agent for Platform (Windows)
agtu	Service key for Agent for Platform (UNIX)
agtw	Service key for Agent for SAN Switch
agtn	Service key for Agent for NAS
agto	Service key for Agent for Oracle
agtq	Service key for Agent for Microsoft SQL Server
agtz	Service key for Agent for Microsoft Exchange Server
agtr	Service key for Agent for DB2

Note: `agte` can be specified only for the `jpctminfo` command as a service key of HTM Agent.

Appendix D. Alarm Table

Agents provide alarms as part of the solution set. The alarms in the solution set are grouped by the alarm table for each agent. When you define alarms by using commands, you specify an alarm table for the alarm definition file. Table D.1 lists the names of the alarm tables in the solution set.

Table D.1 Alarm Tables

Agent	Alarm Table
Agent for RAID	PFM RAID Solution Alarms 7.00
Agent for Platform (Windows)	PFM Windows Solution Alarms 7.50
Agent for Platform (UNIX)	PFM UNIX Solution Alarms 7.50
Agent for SAN Switch	PFM SAN Switch Solution Alarms 7.00
Agent for NAS	PFM NAS Solution Alarms 7.00
Agent for Oracle	PFM Oracle Solution Alarms 8.00
Agent for Microsoft SQL Server	PFM SQL Solution Alarms 8.00
Agent for Microsoft Exchange Server	PFM MSExchange Solution Alarms 8.00
Agent for DB2	PFM DB2 Solution Alarms 8.00

Acronyms and Abbreviations

ASCII	American Standard Code for Information Interchange
CLI	Command Line Interface
CLPR	Cache Logical PaRtition
CPU	Central Processing Unit
CSV	Comma Separated Values
DTD	Document Type Definition
FS	file system
FTP	file transfer protocol
GUI	Graphical User Interface
GUID	Globally Unique IDentifier
HTM	HiCommand Tuning Manager
HTTP	HyperText Transfer Protocol
I/O	Input/Output
ID	identifier, identification
IP	Internet Protocol
LAN	Local Area Network
LDEV	Logical Device Unit
LU	Logical Unit
LUSE	Logical Unit Size Expansion
MB	megabyte
NAS	Network Attached Storage
OS	Operating System
RAID	redundant array of inexpensive disks
SAN	Storage Area Network
SLPR	Storage Logical PaRtition
SMTP	Simple Mail Transfer Protocol
SNMP	Simple Network Management Protocol
SQL	structured query language
SSL	Secure Socket Layer
SSO	Single Sign On
XML	Extensible Markup Language