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Hitachi Command Suite Tuning Manager

8.7

CLI Reference Guide

This document describes how to use the Hitachi Tuning Manager.

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Contents

Preface

This document describes how to use the Hitachi Tuning Manager.

This preface includes the following information:

Intended audience

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

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

Product version

This document revision applies to Tuning Manager v8.7 or later.

Release notes

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

Document organization

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

Chapter/Appendix	Description
Chapter 1, Overview on page 1-1	Describes an overview of the commands provided by the Tuning Manager server, Common Component, Performance Reporter, Collection Manager, and Agents.
Chapter 2, Main Console Commands on page 2-1	Describes an overview of the commands provided by the Main Console and how to use the commands.
Chapter 3, Common Component Commands on page 3-1	Describes an overview of the commands provided by Common Component and how to use the commands.
Chapter 4, Performance Reporter Commands on page 4-1	Describes an overview of the commands provided by Performance Reporter and how to use the commands.
Chapter 5, Collection Manager Commands and Agent Commands on page 5-1	Describes an overview of the commands provided by Collection Manager and the Agent and describes how to use the commands.
Chapter 6, Command for Executing Tuning	Describes an overview of the command for executing Tuning Manager API and describes how to use the command.

Chapter/Appendix	Description
Manager API on page 6-1	
Appendix A, Examples of using commands on page A-1	Provides examples of how to use the command to output reports in CSV format, and how to use the `htm-csv-convert` command to convert the output CSV file to another file format.
Appendix B, Version Compatibility Between the Program and Data Model on page B-1	Describes the version relationships among Agents, data models, and alarm tables.
Appendix C, Specifying a Service ID on page C-1	Describes the service ID components of the Tuning Manager series programs.
Appendix D, Specifying a Service Key on page D-1	Lists the service keys of the Tuning Manager series programs.
Appendix E, Specifying an Alarm Table on page E-1	Lists the names of the alarm tables in the solution set.
Acronyms and Abbreviations on page Acronyms-1	Defines the acronyms and abbreviations used in this document.

Related documents

The following Hitachi referenced documents are also available for download from the Hitachi Vantara Support Connect: https://knowledge.hitachivantara.com/Documents.

- *Hitachi Command Suite Tuning Manager Agent Administration Guide*, MK-92HC013
- *Hitachi Command Suite Tuning Manager Server Administration Guide*, MK-92HC021
- *Hitachi Command Suite Tuning Manager User Guide*, MK-92HC022
- *Hitachi Command Suite Tuning Manager API Reference Guide*, MK-92HC218
- *Hitachi Command Suite Tuning Manager Hardware Reports Reference*, MK-95HC111
- *Hitachi Command Suite Tuning Manager Operating System Reports Reference*, MK-95HC112
- *Hitachi Command Suite Tuning Manager Messages*, MK-95HC114
- *Hitachi Command Suite Tuning Manager Installation Guide*, MK-96HC141

Document conventions

This document uses the following typographic conventions:

Convention	Description
Bold	• Indicates text in a window, including window titles, menus, menu options, buttons, fields, and labels. Example: Click **OK**. • Indicates a emphasized words in list items.
Italic	• Indicates a document title or emphasized words in text. • Indicates a variable, which is a placeholder for actual text provided by the user or for output by the system. Example: `pairdisplay -g group` (For exceptions to this convention for variables, see the entry for angle brackets.)
`Monospace`	Indicates text that is displayed on screen or entered by the user. Example: `pairdisplay -g oradb`
< > angled brackets	Indicates a variable in the following scenarios: • Variables are not clearly separated from the surrounding text or from other variables. Example: `Status-<report-name><file-version>.csv` • Variables in headings.
[ ] square brackets	Indicates optional values. Example: [a | b] indicates that you can choose a, b, or nothing.
{ } braces	Indicates required or expected values. Example: { a | b } indicates that you must choose either a or b.
| vertical bar	Indicates that you have a choice between two or more options or arguments. Examples: [a | b] indicates that you can choose a, b, or nothing. { a | b } indicates that you must choose either a or b.

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

Icon	Label	Description
	Note	Calls attention to important or additional information.
	Tip	Provides helpful information, guidelines, or suggestions for performing tasks more effectively.
	Caution	Warns the user of adverse conditions and/or consequences (for example, disruptive operations, data loss, or a system crash).
	WARNING	Warns the user of a hazardous situation which, if not avoided, could result in death or serious injury.

Conventions for storage capacity values

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

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

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

Logical capacity unit	Value
1 block	512 bytes
1 cylinder	Mainframe: 870 KB Open-systems: • OPEN-V: 960 KB • Others: 720 KB
1 KB	1,024 (2^{10}) bytes
1 MB	1,024 KB or $1{,}024^2$ bytes
1 GB	1,024 MB or $1{,}024^3$ bytes
1 TB	1,024 GB or $1{,}024^4$ bytes
1 PB	1,024 TB or $1{,}024^5$ bytes
1 EB	1,024 PB or $1{,}024^6$ bytes

Accessing product documentation

Product documentation is available on Hitachi Vantara Support Connect: https://knowledge.hitachivantara.com/Documents. Check this site for the most current documentation, including important updates that may have been made after the release of the product.

Getting help

Hitachi Vantara Support Connect is the destination for technical support of products and solutions sold by Hitachi Vantara. To contact technical support,

log on to Hitachi Vantara Support Connect for contact information: https://support.hitachivantara.com/en_us/contact-us.html.

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

Comments

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

Thank you!

1

Overview

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

Main Console Commands of the Tuning Manager Server

You can use Tuning Manager server commands from the command line interface (CLI) to access Tuning Manager server 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 scripting tools that can be used to invoke the CLI programs. Scripts and other programs enable you to automatically report and collect Tuning Manager server data. (For example, scheduled execution of scripts, and customized reports by parsing and manipulating results)

For details about Tuning Manager server commands, see Chapter 2, Main Console Commands on page 2-1.

Common Component Commands

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

For details about the Common Component commands, see Chapter 3, Common Component Commands on page 3-1.

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 Performance database.

For details about the Performance Reporter commands, see Chapter 4, Performance Reporter Commands on page 4-1.

Collection Manager and Agents Commands

Collection Manager and Agents 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, Collection Manager Commands and Agent Commands on page 5-1.

Command for executing Tuning Manager API functions

The Tuning Manager API can be executed via commands from hosts on which Device Manager is installed.

For details on the commands for executing Tuning Manager API functions, see "Chapter 6, Command for Executing Tuning Manager API on page 6-1".

Understanding the Command Syntax

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

Following is the command specification format:

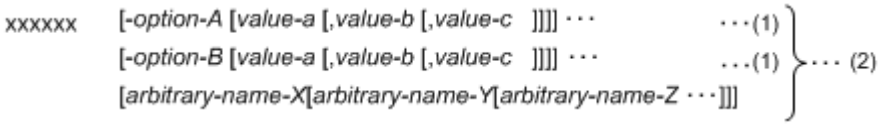


Figure 1-1 Command Format

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

Symbols used in command syntax explanations

Table 1-1 Symbols Used in Command Syntax Explanations on page 1-3 shows the symbols used for explaining the command syntax.

Table 1-1 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. ***Example:*** `[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:*** `A B. . .` means that `B` may be specified multiple times following `A`.

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.

Default installation directories

The following tables show the default installation directories for the Tuning Manager series programs.

Table 1-2 Windows Server 2008 and Windows Server 2012 default installation folders

System component	Default installation folder
Hitachi Command Suite	`%SystemDrive%\Program Files\HiCommand`
Tuning Manager server	`%SystemDrive%\Program Files\HiCommand\TuningManager`
Common Component	`%SystemDrive%\Program Files\HiCommand\Base64`
Performance Reporter	`%SystemDrive%\Program Files\HiCommand\TuningManager \PerformanceReporter`
Collection Manager	`%SystemDrive%\Program Files (x86)\HiCommand \TuningManager\jp1pc`
Agent	`%SystemDrive%\Program Files (x86)\HiCommand \TuningManager\jp1pc`

Table 1-3 Solaris, HP-UX, and AIX default installation directories

System component	Default installation folder
Agent	`/opt/jp1pc`

Table 1-4 Linux default installation directories

System component	Default installation folder
Hitachi Command Suite	`/opt/HiCommand`
Tuning Manager server	`/opt/HiCommand/TuningManager`
Common Component	`/opt/HiCommand/Base64`
Performance Reporter	`/opt/HiCommand/TuningManager/PerformanceReporter`
Collection Manager	`/opt/jp1pc`

System component	Default installation folder
Agent	/opt/jp1pc

Locating Storage Directories

This section describes the location of the commands provided by Tuning Manager series programs for each component.

Location of the Main Console Commands

In Windows: *Tuning-Manager-server-installation-folder*\bin\

In Linux: *Tuning-Manager-server-installation-directory*/bin/

Location of the Common Component Commands

In Windows: *Common-Component-installation-folder*\bin\

In Linux: *Common-Component-installation-directory*/bin/

Location of the Performance Reporter Commands

In Windows: *Tuning-Manager-server-installation-folder**PerformanceReporter*\tools\

In Linux: *Tuning-Manager-server-installation-directory*/PerformanceReporter/tools/

Location of the Collection Manager or Agent Commands

When both Collection Manager and Agent are installed on the host

In Windows: *Collection-Manager-installation-folder*\tools\

In UNIX: /opt/jp1pc/tools/

The commands specific to Agent for Platform are stored in the following directory:

In Windows: *Collection-Manager-installation-folder*\agtt\agent\

In UNIX: /opt/jp1pc/agtu/agent/

The commands specific to Tuning Manager API are stored in the following directory:

In Windows: *Collection-Manager-installation-folder*\htnm\bin\

In UNIX: /opt/jp1pc/htnm/bin/

When only Agent is installed on the host

In Windows: *Agent-installation-folder*\tools\

In UNIX: /opt/jp1pc/tools/

The commands specific to Agent for Platform are stored in the following directory:

In Windows: *Agent-for-Platform-installation-folder*\agtt\agent\

In UNIX: /opt/jp1pc/agtu/agent/

The commands specific to Tuning Manager API are stored in the following directory:

In Windows: *Agent-installation-folder*\htnm\bin\

In UNIX: /opt/jp1pc/htnm/bin/

Storage destination of the command for executing Tuning Manager API functions

In Windows: *Hitachi-Command-Suite-installation-folder*\DeviceManager\HiCommandServer\tools\htmrest\

In Linux: *Hitachi-Command-Suite-installation-directory*/HiCommandServer/tools/htmrest/

Command Execution When Windows Server 2008 or Windows Server 2012 Is Used

If the UAC function is enabled in Windows Server 2008 or Windows Server 2012, we recommend that you execute Tuning Manager series commands from a command prompt that is run by an administrator or from the Administrator Console. For details, see the overview of installation for Tuning Manager series programs in the *Tuning Manager Installation Guide*.

2

Main Console Commands

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

Reviewing the Tuning Manager Server Commands

The Tuning Manager server provides two types of commands, report commands and administrative commands.

- Report commands, for displaying the size and performance of resources. For details, see Report Commands on page 2-2.
- Administrative commands, for executing the operations required for system management. For details, see Administrative Commands on page 2-10.

Note that the command for converting the format of the reports that are output to CSV files is explained as a report command.

Report Commands

Notes: Table 2-1 Main Console Report Commands on page 2-2 lists the report commands provided by the Main Console of the Tuning Manager server.

Note: If any of the following conditions are met, it might take a long time to execute a Main Console report command or the command might end in an error:

- Polling processing is being performed.
- Two or more commands (for example, the `jpcrpt` command) are being executed.
- An attempt to display a report is being made in Main Console.

Before executing a Main Console report command, make sure that these operations are not being performed.
Also, if you want to acquire only performance information, use the `jpcrpt` command.
For details about this command, see Chapter 4, Performance Reporter Commands on page 4-1.

Table 2-1 Main Console Report Commands

Command Name	Description	Execution Permission		Related Section
		Windows	Linux	
`htm-servers`	Shows a list of servers to be monitored with their resource IDs, and capacity and performance metrics that are summarized for each server.	Administrators	root user	htm-servers on page 2-18
`htm-filesystems`	Shows a list of resource IDs and capacities for each file system on the specified server.	Administrators	root user	htm-filesystems on page 2-18

Command Name	Description	Execution Permission		Related Section
		Windows	Linux	
htm-devicefiles	Shows a list of resource IDs and performance metrics for each device file on the specified server.	Administrators	root user	htm-devicefiles on page 2-18
htm-storage	Shows the total capacity of each storage system to be monitored.	Administrators	root user	htm-storage on page 2-18
htm-subsystems	Shows a list of storage systems to be monitored with their resource IDs, and capacity and performance metrics.	Administrators	root user	htm-subsystems on page 2-19
htm-slprs	Shows a list of SLPRs in the specified storage system with their resource IDs and capacities summarized for each SLPR. The storage systems that can be specified for this command are as follows: • Universal Storage Platform V/VM series	Administrators	root user	htm-slprs on page 2-19
htm-clprs	Shows a list of CLPRs used for the specified storage system or SLPR, together with the resource ID, capacity, and performance metrics for each CLPR. The storage systems that can be specified for this command are as follows: • HUS100 series • Hitachi AMS2000/AMS/WMS/SMS series • VSP Gx00 models • VSP Fx00 models • VSP Nx00 models • HUS VM • VSP 5000 series • VSP G1000 • VSP G1500 • VSP F1500 • Virtual Storage Platform series • Universal Storage Platform V/VM series	Administrators	root user	htm-clprs on page 2-19

Command Name	Description	Execution Permission		Related Section
		Windows	Linux	
htm-processors	Shows a list of processors in the specified storage system, together with the resource ID and performance metrics for each processor. The storage systems that can be specified for this command are as follows: • HUS100 series • Hitachi AMS2000/AMS/WMS/SMS series	Administrators	root user	htm-processors on page 2-20
htm-ports	Shows a list of ports for the specified storage system or SLPR, together with the resource ID and performance metrics for each port.	Administrators	root user	htm-ports on page 2-20
htm-chps	Shows a list of CHPs in the specified storage system, together with the resource ID and performance metrics for each CHP. The storage systems that can be specified for this command are as follows: • Universal Storage Platform V/VM series	Administrators	root user	htm-chps on page 2-20
htm-arraygroups	Shows a list of parity groups in the specified storage system or SLPR, together with the resource ID, capacity, and performance metrics for each parity group.	Administrators	root user	htm-arraygroups on page 2-20
htm-logicaldisks	Shows a list of logical disks in the specified storage system or SLPR, together with the resource ID and performance metrics for each logical disk.	Administrators	root user	htm-logicaldisks on page 2-21
htm-dppools	Shows a list of Dynamic Provisioning pools in the specified storage system, together with the resource ID and capacity for each pool. The storage systems that can be specified for this command are as follows: • VSP Gx00 models • VSP Fx00 models • VSP Nx00 models	Administrators	root user	htm-dppools on page 2-21

Command Name	Description	Execution Permission		Related Section
		Windows	Linux	
	• HUS VM • VSP 5000 series • VSP G1000 • VSP G1500 • VSP F1500 • Virtual Storage Platform series • Universal Storage Platform V/VM series			
htm-drives	Shows a list of drives in the specified storage system, together with the resource ID, capacity, and performance metrics for each drive. The storage systems that can be specified for this command are as follows: • HUS100 series • Hitachi AMS2000/AMS/WMS/SMS series	Administrators	root user	htm-drives on page 2-21
htm-dkps	Shows a list of DKPs in the specified storage system, together with the resource ID and performance metrics for each DKP. The storage systems that can be specified for this command are as follows: • Universal Storage Platform V/VM series	Administrators	root user	htm-dkps on page 2-22
htm-switches	Shows a list of SAN switches to be monitored, together with the resource ID and performance metrics for each switch.	Administrators	root user	htm-switches on page 2-22
htm-switchports	Shows a list of ports for the specified SAN switch, together with the resource ID and performance metrics for each port.	Administrators	root user	htm-switchports on page 2-22
htm-oracle	Shows a list of Oracle database servers to be monitored with the total capacity.	Administrators	root user	htm-oracle on page 2-23
htm-instances	Shows a list of Oracle instances to be monitored, together with the resource ID	Administrators	root user	htm-instances on page 2-23

Command Name	Description	Execution Permission		Related Section
		Windows	Linux	
	and capacities for each instance.			
htm-tablespaces	Shows a list of Oracle tablespaces in the specified instance, together with the resource ID, and capacity and performance metrics for each tablespace.	Administrators	root user	htm-tablespaces on page 2-23
htm-datafiles	Shows a list of Oracle data files in the specified tablespace, together with the resource ID, and capacity and performance metrics for each data file.	Administrators	root user	htm-datafiles on page 2-23
htm-datastores	Shows a list of datastores, together with the resource ID and capacities for each datastore.	Administrators	root user	htm-datastores on page 2-24
htm-mps	Shows a list of microprocessors used in the specified storage system, together with the resource ID and performance metrics for each microprocessor. The storage systems that can be specified for this command are as follows: • VSP Gx00 models • VSP Fx00 models • VSP Nx00 models • HUS VM • VSP 5000 series • VSP G1000 • VSP G1500 • VSP F1500 • Virtual Storage Platform series	Administrators	root user	htm-mps on page 2-24
htm-mpbs	Shows a list of MP Blades in the specified storage system, together with the resource ID and performance metrics for each MP Blade or MP Unit. The storage systems that can be specified for this command are as follows: • VSP Gx00 models • VSP Fx00 models	Administrators	root user	htm-mpbs on page 2-24

Command Name	Description	Execution Permission		Related Section
		Windows	Linux	
	• VSP Nx00 models • HUS VM • VSP 5000 series • VSP G1000 • VSP G1500 • VSP F1500 • Virtual Storage Platform series			

`htm-hostgroups`	Shows a list that summarizes performance information about the LDEVs related to the host groups belonging to the specified storage system.
	Notes on the use of this command:
	• Do not perform duplicate execution of this command. Also, do not execute this command with other commands at the same time.
	• When this command is executed, a temporary file is output. The free disk space required to output a temporary file is as follows:
	  ◦ When the number of LDEVs is 16,384 or less per storage system:
	  About 1 GB of free disk space is required.
	  ◦ When the number of LDEVs is more than 16,384 per storage system:
	  About 4 GB of free disk space is required.
	For details about the destination where a temporary file is output by default and how to change the output destination, see the section that describes the `cli.workDir` property of `user.properties` in
		Administrators	root user	htm-hostgroups on page 2-25

Command Name	Description	Execution Permission		Related Section
		Windows	Linux	
	Tuning Manager Server Administration Guide. • The following shows the formulas for estimating disk space required for reports output by this command. ○ When omitting the `-dt` option: `749 bytes *` *number-of-host-groups* `*` *number-of-times-to-be-output*[#] ○ When specifying the `-dt` option: (`749 bytes *` *number-of-host-groups* `+ 1,494 bytes x` *number-of-LDEVs* `x` *number-of-related-host-groups-per-LDEV*) `*` *number-of-times-to-be-output*[#] # The number of times to be output is determined by the settings for the `-s` option, the `-e` option, and the `-o` option. For example, if `-s` is `2013/01/01/10`, `-e` is `2013/01/01/12`, and `-o` is `HOURLY`, the number of times to be output is 3.			
`htm-csv-convert`	Converts exported CSV files to a format that can easily serve as source data for graphs in common spreadsheet software. The result of this conversion is output to a CSV file. Note the following when using this command: • The command must be executed on a computer that has Tuning Manager server installed.	Administrators	root user	htm-csv-convert on page 2-25

Command Name	Description	Execution Permission		Related Section
		Windows	Linux	
	However, you do not need to be logged in to Tuning Manager server to execute the command. • The following formula estimates the disk space used by the CSV files that are output by the `htm-csv-convert` command (the result is in bytes). However, a minimum of 50 MB of disk space is required. *number-of-resources*#1 - *per-data-point*#2 * *number-of-selected-metrics* * (*number-of-data-points*#2 + 1) * 30#3 #1 *number-of-resources* indicates the number of lines in the CSV file that have the same date and time. #2 *data-point* indicates a line to be output to the output file. #3 30 indicates the number of characters per field. *Example:* In this example, disk space used is estimated for the following conditions. ○ Input file: The output result of the `htm-hostgroups` command (when the `-dt` option is specified to output the performance data of each LDEV associated with the host group) ○ Number of LDEVs per data point: 2,048			

Command Name	Description	Execution Permission		Related Section
		Windows	Linux	
	◦ Number of columns specified as data columns: 2 (Random Read IOPS and Random Write IOPS) ◦ Number of data points: every minute for one day (1,440 [= 60 {minutes} * 24 [hours]) 2,048 * 2 * (1,440 + 1) * 30 = 177,070,080 This means that approximately 170 MB of disk space will be used. • You can execute this command multiple times, or execute other report display commands at the same time, without any problems. • You cannot specify a space character or tab character at the beginning or end of each option that you can specify for this command.			

Administrative Commands

Table 2-2 Main Console Administrative Commands on page 2-10 lists the administrative commands provided by the Main Console of the Tuning Manager server. For details about using these commands, see the *Tuning Manager Server Administration Guide*.

Table 2-2 Main Console Administrative Commands

Command Name	Description	Execution Permission		Related Section
		Windows	Linux	
htm-db-setup	Increases the total Tuning Manager server database capacity.	Administrators	root user	htm-db-setup on page 2-25
htm-db-status	Displays information about the Tuning Manager server database capacity (such as used and total capacity) and the location of the database files.	Administrators	root user	htm-db-status on page 2-27

Command Name	Description	Execution Permission		Related Section
		Windows	Linux	
`htm-dvm-setup`	Sets information about the connection destination Device Manager into the Tuning Manager server database. Also, displays the information about the connection destination Device Manager that is currently set.	Administrators	root user	htm-dvm-setup on page 2-28
`htm-dump`	Collects the following maintenance information: • Installation log for the Tuning Manager server • Maintenance information for Main Console • Maintenance information for Tuning Manager server REST API Component	Administrators	root user	htm-dump on page 2-29
`htm-getlogs`	Collects the following maintenance information: • Installation log for the Tuning Manager server • Maintenance information for Main Console • Maintenance information for Tuning Manager server REST API Component • Maintenance information for Performance Reporter • Maintenance information for Collection Manager • Maintenance information for Agents Note that this command does not collect data in the Performance databases on Agents. To collect that data, use the `jpcras` command (with the `all all` option specified).	Administrators	root user	htm-getlogs on page 2-30

Understanding the Command Line Format

To execute a command line program:

1. Log into the server running the Tuning Manager server.
2. Change to the directory that contains the Tuning Manager server commands. The directories are as follows:

- In Windows: *Tuning-Manager-server-installation-folder*\bin\
- In Linux: *Tuning-Manager-server-installation-directory*/bin/

For the default installation folder of the Tuning Manager server, see the *Tuning Manager Installation Guide*.

3. Type the desired CLI command.

Example:

```
/opt/HiCommand/TuningManager/bin/htm-servers --user myUser1 --
password myPassword -- start_date 2008/05/30/15/00 --end_date
2008/05/30/17/00 --period HOURLY
```

Command 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. Note that some commands require case-sensitivity depending on what option is specified. For details, see the description for each command.
  - 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.
- You can capture the output of command line programs to files by using the redirect function to specify an output destination at the command line:

  Example:

  ```
  htm-servers --user myUser1 --password myPassword --start_date
  2008/05/30/15/00 --end_date 2008/05/30/17/00 --period HOURLY >
  serv.txt
  ```

- Each time you invoke a command line program, specify the Tuning Manager server login ID and password.
- Some commands require a resource ID parameter for the parent resource.

  Example: In this example, the command displays port resource IDs and a performance list for storage systems or SLPRs:

  ```
  htm-ports SS_350  --user myUser1 --password myPassword --
  start_date 2008/05/30/15/00 --end_date 2008/05/30/17/00 --period
  HOURLY
  ```

- Specify the following option when CLIs are to be executed in an environment where the port used by the Tuning Manager server has been changed from the default setting of 22015 to another value (for example, an environment where SSL is enabled.)

  `--port` *port-number*

  Example:

```
htm-storage --user myUser1 --password myPassword --start_date
2008/05/30/15/00 -- end_date 2008/05/30/17/00 --period HOURLY --
port 22016
```

- In an environment where SSL is enabled and the default port 22015 is closed, you need to set the `cli.report.protocol` and `cli.report.host` properties in the `user.properties` file. For details about the `user.properties` file, see the *Tuning Manager Server Administration Guide*.
- Specifying user ID and password at the command line requires passing them as clear, unencrypted strings.

Working with Reporting Resource IDs

Table 2-3 Commands Requiring a Resource ID on page 2-13 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	Related Section
Server	SV_	htm-filesystems	htm-filesystems on page 2-18
		htm-devicefiles	htm-devicefiles on page 2-18
Storage System	SS_	htm-slprs	htm-slprs on page 2-19
		htm-clprs	htm-clprs on page 2-19
		htm-ports	htm-ports on page 2-20
		htm-arraygroups	htm-arraygroups on page 2-20
		htm-logicaldisks	htm-logicaldisks on page 2-21
		htm-processors	htm-processors on page 2-20
		htm-chps	htm-chps on page 2-20
		htm-dppools	htm-dppools on page 2-21
		htm-drives	htm-drives on page 2-21
		htm-dkps	htm-dkps on page 2-22

Parent Resource	Resource Prefix	Command Name	Related Section
		htm-mps	htm-mps on page 2-24
		htm-mpbs	htm-mpbs on page 2-24
		htm-hostgroups	htm-hostgroups on page 2-25
SLPR	SLPR_	htm-clprs	htm-clprs on page 2-19
		htm-ports	htm-ports on page 2-20
		htm-arraygroups	htm-arraygroups on page 2-20
		htm-logicaldisks	htm-logicaldisks on page 2-21
Switches	SW_	htm-switchports	htm-switchports on page 2-22
Oracle Instance	OI_	htm-tablespaces	htm-tablespaces on page 2-23
Oracle Table	OT_	htm-datafiles	htm-datafiles on page 2-23

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

Example: In this example, the command displays information about a file system whose resource ID is `SV_350`:

```
htm-filesystems SV_350 -u orionadmin -w orion -s 2008/05/29/15/00 -
e 2008/05/30/15/00 -o HOURLY
```

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 server-related resources:

- Execute `htm-servers` (htm-servers on page 2-18) to obtain a list of server resource IDs. This provides the server resource ID for obtaining detailed information on file systems and device files.

For storage system-related resources:

- Execute `htm-subsystems` (htm-subsystems on page 2-19) to obtain a list of storage system resource IDs. These storage system resource IDs

can be used to obtain detailed information on ports, parity groups, logical disks, and other items.

- Execute `htm-slprs` (htm-slprs on page 2-19) to obtain a list of SLPR resource IDs. This provides the storage system resource ID for obtaining detailed information on ports, parity groups, logical disks, and CLPRs.

For SAN switch-related resources:

- Execute `htm-switches` (htm-switches on page 2-22) to obtain a list of switch resource IDs. This provides the switch resource ID for obtaining detailed information on switch ports.

For Oracle-related resources:

- Execute `htm-instances` (htm-instances on page 2-23) 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` (htm-tablespaces on page 2-23) to obtain a list of Oracle tablespace resource IDs. This provides the resource ID for obtaining detailed information on data files.

Using Report Commands

This section explains the things you should know before using report commands.

Examples of Executing Report Commands

The following are examples of executing Main Console report commands.

Example 1:

The following is an example of executing the `htm-storage` command to check the capacity information related to all monitored storage systems.

```
htm-storage -u system -w manager -s 2008/04/28/10/44 -e
2008/04/28/10/44 -o HOURLY
```

Execution results

```
"Date/Time","Number of Subsystems","Open-Allocated
Capacity(MB)","Open-Unallocated Capacity(MB)","Mainframe-Unspecified
Capacity(MB)"
"2008-04-28 10:00","1","2300102.62","7857966.01","0.00"
```

Example 2:

The following is an example of executing the `htm-subsystems` command to check the performance and capacity information related to each monitored storage system.

```
htm-subsystems -u system -w manager -s 2008/04/28/10/00 -e
2008/04/28/10/00 -o HOURLY
```

Execution results

```
"Date/Time","Resource ID","Subsystem","Type","Write Pending
Rate","Max Write Pending Rate","Cache Rate","Cache
Usage(MB)","Configured Capacity(MB)","Open-Allocated
Capacity(MB)","Open-Unallocated Capacity(MB)","Mainframe-Unspecified
Capacity(MB)","Number of LDEVs"
"2008-04-28
10:00","SS_350","USP_V@10.208.115.221","USP_V","0%","0%","0%","0.00",
"11029033.32","2300102.62","7857966.01","0.00","5410"
```

Components of Data Output by Executing Report Commands

As shown below, the components of output data are common to all reporting commands (except for the `htm-storage` command).

```
"Date/Time","Resource ID","attribute-name","attribute-
name","attribute-name",...,"attribute-name"
"data-date-and-time","resource-ID","attribute-value","attribute-
value","attribute-value",...,"attribute-value"
"data-date-and-time","resource-ID","attribute-value","attribute-
value","attribute-value",...,"attribute-value"
"data-date-and-time","resource-ID","attribute-value","attribute-
value","attribute-value",...,"attribute-value"
```

Note: : For the `htm-storage` command, resource IDs components are not output because there is only one resource to be displayed.

Return Values of Report Commands

The following table shows the return values for executing Main Console report commands.

Table 2-4 Return Values for Executing Report Commands

Return Value	Meaning
0	Normal termination
10	Abnormal termination due to Main Console being in the busy status. This return code implies that the command will terminate normally if it is re-executed while Main Console is not in the busy status.
255	Abnormal termination

The following table shows the return values for executing the command that converts the format of reports that were output as CSV files.

Table 2-5 Return Values for Executing the `htm-csv-convert` Command

Return value	Meaning
0	Normal termination
11	A file with the same name as the output file exists.

Return value	Meaning
12	The output-destination directory does not exist.
Other	Abnormal termination

Correspondence Table for Differences Between CLI and GUI Terms

Some of terms (attribute names) that are output to reports are different according to whether they are output by the GUI or by the CLI. The following table shows the correspondence of the differing terms.

Table 2-6 Differences between GUI and CLI Terms

Name Output by the GUI	Name Output by the CLI
Storage System	Subsystem
Storage Systems	Subsystems
External Storage System	External Subsystem
Number of Storage Systems	Number of Subsystems
Parity Group	Array Group
Parity Groups	Array Groups
External Parity Group	External Array Group
Number of Parity Groups	Number of Array Groups
Host Group	HostStorageDomain
Host Groups	HSDs
Number of Host Groups	Number of HSDs
Drive Type	Disk Type
Drive Size	Disk Size
Drive Read Queue Length	Disk Read Queue Length
Drive Write Queue Length	Disk Write Queue Length
Drive Queue Length	Disk Queue Length
Storage System Configuration	Array Configuration

List of Commands

Report Commands

The following gives an overview of the Main Console report commands. For details about the arguments of each command, see Command Arguments on page 2-31.

htm-servers

Format

```
htm-servers      { -u | --user } user-ID
                 { -w | --password } password
                 [ { { -s | --start_date } start-date
                 { -e | --end_date } end-date
                 | { -d | --date } specific-date } ]
                 [ { -o | --period }
                 { YEARLY | MONTHLY | WEEKLY | DAILY |
                   HOURLY | MINUTELY } ]
                 [ -h | --help ]
                 [ --port port-number ]
                 [ --csv ]
```

htm-filesystems

Format

```
htm-filesystems  SV_resource-ID
                 { -u | --user } user-ID
                 { -w | --password } password
                 [ { { -s | --start_date } start-date
                 { -e | --end_date } end-date
                 | { -d | --date } specific-date } ]
                 [ { -o | --period }
                 { YEARLY | MONTHLY | WEEKLY | DAILY |
                   HOURLY | MINUTELY } ]
                 [ -h | --help ]
                 [ --port port-number ]
                 [ --csv ]
```

htm-devicefiles

Format

```
htm-devicefiles  SV_resource-ID
                 { -u | --user } user-ID
                 { -w | --password } password
                 [ { { -s | --start_date } start-date
                 { -e | --end_date } end-date
                 | { -d | --date } specific-date } ]
                 [ { -o | --period }
                 { YEARLY | MONTHLY | WEEKLY | DAILY |
                   HOURLY | MINUTELY } ]
                 [ -h | --help ]
                 [ --port port-number ]
                 [ --csv ]
```

htm-storage

Format

```
htm-storage      { -u | --user } user-ID
                 { -w | --password } password
                 [ { { -s | --start_date } start-date
                 { -e | --end_date } end-date
```

```
| { -d | --date } specific-date } ]
[ { -o | --period }
{ YEARLY | MONTHLY | WEEKLY | DAILY |
  HOURLY | MINUTELY } ]
[ -h | --help ]
[ --port port-number ]
[ --csv ]
```

htm-subsystems

Format

```
htm-subsystems    { -u | --user } user-ID
                  { -w | --password } password
                  [ { { -s | --start_date } start-date
                  { -e | --end_date } end-date
                  | { -d | --date } specific-date } ]
                  [ { -o | --period }
                  { YEARLY | MONTHLY | WEEKLY | DAILY |
                    HOURLY | MINUTELY } ]
                  [ -h | --help ]
                  [ --port port-number ]
                  [ --csv ]
```

htm-slprs

Format

```
htm-slprs         SS_resource-ID
                  { -u | --user } user-ID
                  { -w | --password } password
                  [ { { -s | --start_date } start-date
                  { -e | --end_date } end-date
                  | { -d | --date } specific-date } ]
                  [ { -o | --period }
                  { YEARLY | MONTHLY | WEEKLY | DAILY |
                    HOURLY | MINUTELY } ]
                  [ -h | --help ]
                  [ --port port-number ]
                  [ --csv ]
```

htm-clprs

Format

```
htm-clprs         { SS_resource-ID | SLPR_resource-ID }
                  { -u | --user } user-ID
                  { -w | --password } password
                  [ { { -s | --start_date } start-date
                  { -e | --end_date } end-date
                  | { -d | --date } specific-date } ]
                  [ { -o | --period }
                  { YEARLY | MONTHLY | WEEKLY | DAILY |
                    HOURLY | MINUTELY } ]
                  [ -h | --help ]
                  [ --port port-number ]
                  [ --csv ]
```

htm-processors

Format

```
htm-processors   SS_resource-ID
                 { -u | --user } user-ID
                 { -w | --password } password
                 [ { { -s | --start_date } start-date
                 { -e | --end_date } end-date
                 | { -d | --date } specific-date } ]
                 [ { -o | --period }
                 { YEARLY | MONTHLY | WEEKLY | DAILY |
                   HOURLY | MINUTELY } ]
                 [ -h | --help ]
                 [ --port port-number ]
                 [ --csv ]
```

htm-ports

Format

```
htm-ports        { SS_resource-ID | SLPR_resource-ID }
                 { -u | --user } user-ID
                 { -w | --password } password
                 [ { { -s | --start_date } start-date
                 { -e | --end_date } end-date
                 | { -d | --date } specific-date } ]
                 [ { -o | --period }
                 { YEARLY | MONTHLY | WEEKLY | DAILY |
                   HOURLY | MINUTELY } ]
                 [ -h | --help ]
                 [ --port port-number ]
                 [ --csv ]
```

htm-chps

Format

```
htm-chps         SS_resource-ID
                 { -u | --user } user-ID
                 { -w | --password } password
                 [ { { -s | --start_date } start-date
                 { -e | --end_date } end-date
                 | { -d | --date } specific-date } ]
                 [ { -o | --period }
                 { YEARLY | MONTHLY | WEEKLY | DAILY |
                   HOURLY | MINUTELY } ]
                 [ -h | --help ]
                 [ --port port-number ]
                 [ --csv ]
```

htm-arraygroups

Format

```
htm-arraygroups  { SS_resource-ID | SLPR_resource-ID }
                 { -u | --user } user-ID
                 { -w | --password } password
```

```
[ { { -s | --start_date } start-date
{ -e | --end_date } end-date
| { -d | --date } specific-date } ]
[ { -o | --period }
{ YEARLY | MONTHLY | WEEKLY | DAILY |
  HOURLY | MINUTELY } ]
[ -h | --help ]
[ --port port-number ]
[ --csv ]
```

htm-logicaldisks

Format

```
htm-logicaldisks { SS_resource-ID | SLPR_resource-ID }
                 { -u | --user } user-ID
                 { -w | --password } password
                 [ { { -s | --start_date } start-date
                 { -e | --end_date } end-date
                 | { -d | --date } specific-date } ]
                 [ { -o | --period }
                 { YEARLY | MONTHLY | WEEKLY | DAILY |
                   HOURLY | MINUTELY } ]
                 [ -h | --help ]
                 [ --port port-number ]
                 [ --csv ]
                 [ { -l | --label } label ]
```

htm-dppools

Format

```
htm-dppools      SS_resource-ID
                 { -u | --user } user-ID
                 { -w | --password } password
                 [ { { -s | --start_date } start-date
                 { -e | --end_date } end-date
                 | { -d | --date } specific-date } ]
                 [ { -o | --period }
                 { YEARLY | MONTHLY | WEEKLY | DAILY |
                   HOURLY | MINUTELY } ]
                 [ -h | --help ]
                 [ --port port-number ]
                 [ --csv ]
```

htm-drives

Format

```
htm-drives       SS_resource-ID
                 { -u | --user } user-ID
                 { -w | --password } password
                 [ { { -s | --start_date } start-date
                 { -e | --end_date } end-date
                 | { -d | --date } specific-date } ]
                 [ { -o | --period }
                 { YEARLY | MONTHLY | WEEKLY | DAILY |
```

```
  HOURLY | MINUTELY } ]
[ -h | --help ]
[ --port port-number ]
[ --csv ]
```

htm-dkps

Format

```
htm-dkps          SS_resource-ID
                  { -u | --user } user-ID
                  { -w | --password } password
                  [ { { -s | --start_date } start-date
                  { -e | --end_date } end-date
                  | { -d | --date } specific-date } ]
                  [ { -o | --period }
                  { YEARLY | MONTHLY | WEEKLY | DAILY |
                    HOURLY | MINUTELY } ]
                  [ -h | --help ]
                  [ --port port-number ]
                  [ --csv ]
```

htm-switches

Format

```
htm-switches      { -u | --user } user-ID
                  { -w | --password } password
                  [ { { -s | --start_date } start-date
                  { -e | --end_date } end-date
                  | { -d | --date } specific-date } ]
                  [ { -o | --period }
                  { YEARLY | MONTHLY | WEEKLY | DAILY |
                    HOURLY | MINUTELY } ]
                  [ -h | --help ]
                  [ --port port-number ]
                  [ --csv ]
```

htm-switchports

Format

```
htm-switchports   SW_resource-ID
                  { -u | --user } user-ID
                  { -w | --password } password
                  [ { { -s | --start_date } start-date
                  { -e | --end_date } end-date
                  | { -d | --date } specific-date } ]
                  [ { -o | --period }
                  { YEARLY | MONTHLY | WEEKLY | DAILY |
                    HOURLY | MINUTELY } ]
                  [ -h | --help ]
                  [ --port port-number ]
                  [ --csv ]
```

htm-oracle

Format

```
htm-oracle      { -u | --user } user-ID
                { -w | --password } password
                [ { { -s | --start_date } start-date
                { -e | --end_date } end-date
                | { -d | --date } specific-date } ]
                [ { -o | --period }
                { YEARLY | MONTHLY | WEEKLY | DAILY |
                  HOURLY | MINUTELY } ]
                [ -h | --help ]
                [ --port port-number ]
                [ --csv ]
```

htm-instances

Format

```
htm-instances   { -u | --user } user-ID
                { -w | --password } password
                [ { { -s | --start_date } start-date
                { -e | --end_date } end-date
                | { -d | --date } specific-date } ]
                [ { -o | --period }
                { YEARLY | MONTHLY | WEEKLY | DAILY |
                  HOURLY | MINUTELY } ]
                [ -h | --help ]
                [ --port port-number ]
                [ --csv ]
```

htm-tablespaces

Format

```
htm-tablespaces OI_resource-ID
                { -u | --user } user-ID
                { -w | --password } password
                [ { { -s | --start_date } start-date
                { -e | --end_date } end-date
                | { -d | --date } specific-date } ]
                [ { -o | --period }
                { YEARLY | MONTHLY | WEEKLY | DAILY |
                  HOURLY | MINUTELY } ]
                [ -h | --help ]
                [ --port port-number ]
                [ --csv ]
```

htm-datafiles

Format

```
htm-datafiles   OT_resource-ID
                { -u | --user } user-ID
                { -w | --password } password
                [ { { -s | --start_date } start-date
                { -e | --end_date } end-date
```

```
| { -d | --date } specific-date } ]
[ { -o | --period }
{ YEARLY | MONTHLY | WEEKLY | DAILY |
  HOURLY | MINUTELY } ]
[ -h | --help ]
[ --port port-number ]
[ --csv ]
```

htm-datastores

Format

```
htm-datastores   { -u | --user } user-ID
                 { -w | --password } password
                 [ { { -s | --start_date } start-date
                 { -e | --end_date } end-date
                 | { -d | --date } specific-date } ]
                 [ { -o | --period }
                 { YEARLY | MONTHLY | WEEKLY | DAILY |
                   HOURLY | MINUTELY } ]
                 [ -h | --help ]
                 [ --port port-number ]
                 [ --csv ]
```

htm-mps

Format

```
htm-mps          SS_resource-ID
                 { -u | --user } user-ID
                 { -w | --password } password
                 [ { { -s | --start_date } start-date
                 { -e | --end_date } end-date
                 | { -d | --date } specific-date } ]
                 [ { -o | --period }
                 { YEARLY | MONTHLY | WEEKLY | DAILY |
                   HOURLY | MINUTELY } ]
                 [ -h | --help ]
                 [ --port port-number ]
                 [ --csv ]
```

htm-mpbs

Format

```
htm-mpbs         SS_resource-ID
                 { -u | --user } user-ID
                 { -w | --password } password
                 [ { { -s | --start_date } start-date
                 { -e | --end_date } end-date
                 | { -d | --date } specific-date } ]
                 [ { -o | --period }
                 { YEARLY | MONTHLY | WEEKLY | DAILY |
                   HOURLY | MINUTELY } ]
                 [ -h | --help ]
                 [ --port port-number ]
```

```
                    [ --csv ]
```

htm-hostgroups

Format

```
htm-hostgroups    SS_resource-ID
                  { -u | --user } user-ID
                  { -w | --password } password
                  [ { { -s | --start_date } start-date
                  { -e | --end_date } end-date
                  | { -d | --date } specific-date } ]
                  [ { -o | --period }
                  { YEARLY | MONTHLY | WEEKLY | DAILY | HOURLY |
MINUTELY } ]
                  [ -h | --help ]
                  [ { -hg | --host_group } host-group-name ]
                  [ -dt | --detail ]
                  { -dd | --dest_dir } output-destination-directory-
for-the-report
                  { -fp | --file_prefix } prefix-of-the-output-file-
name
```

htm-csv-convert

Format

```
htm-csv-convert   [ -h | --help ]
                  { -i | --input_file } input-file-path
                  [ { -o | --output_file } output-file-path ]
                  [ { -dc | --date_column } column-number-of-date-
column ]
                  [ { -kc | --key_column } column-number-of-key-
column [, column-number-of-key-column ... ] ]
                  { -vc | --value_column } column-number-of-data-
column [, column-number-of-data-column ... ]
                  [ --date_format format-of-date-column ]
                  [ --date_separator date-separator-of-date-column ]
                  [ --input_characterCode input-file-encoding ]
                  [ --output_characterCode output-file-encoding ]
                  [ --column_limit number-of-columns-per-output-file ]
```

Administrative Commands

The following gives an overview of the Main Console administrative commands. For details about the arguments of each command, see Command Arguments on page 2-31.

htm-db-setup

Format

In Windows:

```
htm-db-setup        [{{ /s | /size } capacity-to-be-added
                    | [{ /a | /areapath } path-of-folder-for-Tuning-
Manager-server-database-files ]
                    | { /h | /help }}]
```

In Linux:

```
htm-db-setup        [{{ -s | --size } capacity-to-be-added
                    | [{ -a | --areapath } path-of-directory-for-
Tuning-Manager-server-database-files ]
                    | { -h | --help }}]
```

Function

For the command description, see Table 2-2 Main Console Administrative Commands on page 2-10.

Prerequisites

When executing the `htm-db-setup` command, make sure that the following prerequisites are satisfied:

- If any other Hitachi Command Suite products are installed on the host where the Tuning Manager server is installed, make sure that the services of the Tuning Manager server and other Hitachi Command Suite products are stopped.
- Make sure that this command is executed on the Tuning Manager server host.
- Make sure that no administrative commands of the Tuning Manager server (except `htm-db-setup`) are being executed.
- In a Windows environment, make sure that the following services are running.
  - `HiRDB/Embedded Edition _HD1`
  - `Application Experience`

Note:

- You cannot use this command to decrease the current total capacity of the Tuning Manager server database.
- We recommend that you use the `hcmds64backups` command to back up the database before executing this command. For details about how to back up the database, see the *Tuning Manager Server Administration Guide*.
- When the Tuning Manager server is operating in a cluster configuration, execute the command on the active node only.

Return Values

Table 2-7 Return Values for the htm-db-setup Command on page 2-27 describes the values returned when the `htm-db-setup` command is executed.

Table 2-7 Return Values for the htm-db-setup Command

Return Value	Meaning
0	Normal termination
100	Option syntax error
101	An invalid value was specified in the option.
111	The service of a Hitachi Command Suite product is running.
251	There is not enough unused capacity in the area for storing the Tuning Manager server database, the `areapath` option has been incorrectly specified, or the environment is invalid for the command
255	There is not enough unused capacity in the area for storing the Tuning Manager server database, the `areapath` option has been incorrectly specified, or the command has terminated abnormally

htm-db-status

Format

```
htm-db-status
```

Function

For the command description, see Table 2-2 Main Console Administrative Commands on page 2-10.

Prerequisites

When executing the `htm-db-status` command, make sure that the following prerequisites are satisfied:

- Make sure that this command is executed on the Tuning Manager server host.
- Make sure that there are no Tuning Manager administrative commands (except `htm-db-status`) being executed.

Return Values

Table 2-8 Return Values for the htm-db-status Command on page 2-27 describes the values returned when the `htm-db-status` command is executed.

Table 2-8 Return Values for the htm-db-status Command

Return Value	Meaning
0	Normal termination
255	Abnormal termination

htm-dvm-setup

Format

In Windows:

```
htm-dvm-setup       {[{ /d | /dvm } host-name-or-IP-address-of-
Device-Manager
                    [{ /n | /nameport} Device-Manager-port-number ]
                    [{ /s | /serviceport} port-number-for-connecting-
Tuning-Manager-to-Device-Manager ]
                    [{ /o | /os} OS-type ]
                    ]
                    | { /c | /local }
                    | { /l | /list }
                    | { /h | /help }}
```

In Linux:

```
htm-dvm-setup       {[{ -d | --dvm } host-name-or-IP-address-of-
Device-Manager
                    [{ -n | --nameport} Device-Manager-port-number ]
                    [{ -s | --serviceport} port-number-for-
connecting-Tuning-Manager-to-Device-Manager ]
                    [{ -o | --os} OS-type ]
                    ]
                    | { -c | --local }
                    | { -l | --list }
                    | { -h | --help }}
```

Function

The `htm-dvm-setup` command provides the following features:

- Registers a connection target Device Manager for the Tuning Manager server.
- Displays information about the already registered connection target Device Manager.

Use the `htm-dvm-setup` command for registration whether the connection target Device Manager is installed on a different host to that of the Tuning Manager server, or is installed on the same host. If the connection target Device Manager is installed on a different host, you also need to specify settings on the Device Manager host to make it possible to connect to the Tuning Manager server. For details about settings in Device Manager, see the *Hitachi Command Suite Installation and Configuration Guide*.

Prerequisites

When executing the `htm-dvm-setup` command, make sure that the following prerequisites are satisfied:

- Make sure that the Tuning Manager server services are not running.
- Make sure that this command is executed on the Tuning Manager server host.
- Make sure that no administrative commands of the Tuning Manager server (except `htm-dvm-setup`) are being executed.

- In a Windows environment, make sure that the HiRDB/Embedded Edition _HD1 service is running.
- Make sure that the Tuning Manager server database is running.

Return Values

Table 2-9 Return Values for the htm-dvm-setup Command on page 2-29 describes the values returned when the `htm-dvm-setup` command is executed.

Table 2-9 Return Values for the htm-dvm-setup Command

Return Value	Meaning
0	Normal termination
100	Option syntax error
101	An invalid value was specified in the option.
110	The Tuning Manager server database is not running.
111	A Tuning Manager server service is running.
255	Abnormal termination

htm-dump

Format

In Windows:

```
htm-dump          [{{ /d | /dirct } storage-folder
                  [{ /z | /zip }]
                  | { /h | /help }}]
```

In Linux:

```
htm-dump          [{{ -d | --dirct } storage-directory
                  [{ -z | --zip }]
                  | { -h | --help }}]
```

Function

For the command description, see Table 2-2 Main Console Administrative Commands on page 2-10.

Prerequisites

When executing the `htm-dump` command, make sure that the following prerequisite is satisfied:

- Make sure that this command is executed on the Tuning Manager server host.
- Make sure that no Tuning Manager server administrative commands (except `htm-dump`) are being executed.

Return Values

Table 2-10 Return Values for the htm-dump Command on page 2-30
describes the values returned when the `htm-dump` command is executed.

Table 2-10 Return Values for the htm-dump Command

Return Value	Meaning
0	Normal termination
100	Option syntax error
101	An invalid value was specified in the option.
255	Abnormal termination

htm-getlogs

Format

In Windows:

```
htm-getlogs       [{{ /d | /dirct } storage-folder
                  [{ /z | /zip }]
                  | { /h | /help }}]
```

In Linux:

```
htm-getlogs       [{{ -d | --dirct } storage-directory
                  [{ -z | --zip }]
                  | { -h | --help }}]
```

Function

For the command description, see Table 2-2 Main Console Administrative Commands on page 2-10.

Prerequisites

When executing the `htm-getlogs` command, make sure that the following prerequisites are satisfied:

- Make sure that this command is executed on the Tuning Manager server host.
- Make sure that no administrative commands of the Tuning Manager server (except `htm-getlogs`) are being executed.
- Make sure that all of the prerequisites for executing the `jpcras` command, the `jpcprras` command, and the `htm-dump` command are satisfied.

Return Values

Table 2-11 Return Values for the htm-getlogs Command on page 2-31
describes the values returned when the `htm-getlogs` command is executed.

Table 2-11 Return Values for the htm-getlogs Command

Return Value	Meaning
0	Normal termination
100	Option syntax error
101	An invalid value was specified in the option.
255	Abnormal termination

Command Arguments

-a (/a) or --areapath (/areapath)

Table 2-12 -a (/a) or --areapath (/areapath) Argument on page 2-31
describes the `-a` (`/a`) or `--areapath` (`/areapath`) argument.

Table 2-12 -a (/a) or --areapath (/areapath) Argument

Item	Details
Purpose	Specifies the directory that stores the Tuning Manager server database.
Required value	Path to the directory in which the Tuning Manager server database files are to be stored. Characters that can be entered for a path are as follows: • In Windows: `0` to `9`, `a` to `z`, `A` to `Z`, periods (`.`), underscores (`_`), parentheses, space characters, colons (`:`), and backslashes (`\`) • In Linux: `0` to `9`, `a` to `z`, `A` to `Z`, periods (`.`), underscores (`_`), and forward slashes (`/`)
Required/ optional	Required
Notes	• Specify the absolute path to the directory, using no more than 93 bytes. • Do not specify the root directory. • To specify a path containing spaces, enclose the path in double quotation marks ("). • You can specify a non-existent directory path. If part of the specified path is a non-existent directory, the directory, and any subdirectories, will be created. • You can use a colon (:) only for a Windows drive letter. • You cannot specify a path that consists of only space characters or periods (.). • You cannot specify a path in which the beginning or end of a directory name contains spaces or periods (.). For example, do not specify a path in which the last directory name is either a sequence of periods (such as `"C:\aaa\..... "`) or a combination of periods and spaces (such as `"C:\aaa\. . ."`).

Item	Details
	• The user executing the command must have read/write permissions for the specified directory. In Windows, SYSTEM user read/write permissions are also required. • In Windows, you cannot specify the following paths: - Network drive path - Path containing a reserved device name (`CON`, `AUX`, `PRN`, or `NUL`)

-c (/c) or --local (/local)

Table 2-13 -c (/c) or --local (/local) Argument on page 2-32 describes the `-c` (`/c`) or `--local` (`/local`) argument.

Table 2-13 -c (/c) or --local (/local) Argument

Item	Details
Purpose	Specifies the Device Manager, as a connection target, that is installed on the same host as the Tuning Manager server.
Required value	None
Required/ optional	Optional
Notes	If you specify this option when the Device Manager instance to be connected to has already been registered, all existing information about that Device Manager instance is overwritten by the new information.

--column_limit number-of-columns-per-output-file

Table 2-14 --column_limit number-of-columns-per-output-file Argument on page 2-32 describes the --column_limit *number-of-columns-per-output-file* argument.

Table 2-14 --column_limit number-of-columns-per-output-file Argument

Item	Details
Purpose	Specifies the number of columns to output per file, not including the date column.
Required value	The number of columns.
Required/ optional	Optional
Notes	• Specify a number of columns from 1 to 2147483647. • You cannot specify a value that is less than the number of column numbers specified in the `-vc` option. • If you omit this argument, either the value specified for the `columnLimit` property in the CSV report format conversion properties file or the default value is used.

Item	Details
	For details about the CSV report format conversion properties file (htmCsvConvert.properties), see *Tuning Manager Agent Administration Guide*.

--csv

Table 2-15 --csv Argument on page 2-33 describes the `--csv` argument.

Table 2-15 --csv Argument

Item	Details
Purpose	Outputs the result in CSV format.
Required value	None
Required/ optional	Optional
Notes	This option is provided for compatibility with earlier versions. The output result does not change regardless of whether you specify this option.

-d (/d) or --dirct (/dirct)

Table 2-16 -d (/d) or --dirct (/dirct) Argument on page 2-33 describes the `-d` (`/d`) or `--dirct` (`/dirct`) argument.

Table 2-16 -d (/d) or --dirct (/dirct) Argument

Item	Details
Purpose	Specifies the path of the storage directory for the collected maintenance information.
Required value	Absolute path of the storage directory for the maintenance information.
Required/ optional	Required
Notes	• As the directory path, you can enter all printable ASCII characters (0x20 to 0x7E) except the following special characters: 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 (\) as a file separator. In UNIX, you can use the forward slash (/) as a file separator. In Windows, you can use a colon (:) as a Windows drive letter. If the specified directory does not exist, a new directory will be created automatically. • Do not specify the root directory. • To specify an existing directory, the directory must be empty.

Item	Details
	• You cannot specify a path that consists of only spaces or periods (.). • You cannot specify a path in which the beginning or end of a directory name contains spaces or periods (.). • The user executing the command must have read/write permissions for the specified directory. • A directory on a network (a path that begins with \\) cannot be specified. • In Windows, you cannot specify a path containing a reserved device name (CON, AUX, PRN, or NUL).

-d (/d) or --dvm (/dvm)

Table 2-17 -d (/d) or --dvm (/dvm) Argument on page 2-34 describes the -d (/d) or --dvm (/dvm) argument.

Table 2-17 -d (/d) or --dvm (/dvm) Argument

Item	Details
Purpose	Specifies the host name or IP address of the host on which Device Manager is installed (the Device Manager host). The specified host name or IP address is used when linking the Tuning Manager server with Device Manager.
Required value	When you specify a host name, that name must satisfy the following conditions: • The host name can be resolved to an IPv4 address. • The host name must be from 1 to 128 bytes. • The host name must be specified by using only the following ASCII characters: A to Z, a to z, 0 to 9, and periods (.) • If the Device Manager to be connected is operating in a cluster configuration, the host name must be a logical host name. When you specify an IP address, that address must satisfy the following conditions: • The IP address is an IPv4 address. • If the Device Manager to be connected is operating in a cluster configuration, the IP address must be a logical IP address.
Required/ optional	Optional If you execute the htm-dvm-setup command with any of the following options specified, this argument must be specified: • The nameport option • The serviceport option • The os option
Notes	If this option is specified, you must execute the htmsetup command on the Device Manager host.

Item	Details
	Also note that, if you specify this option when the Device Manager instance to be connected to has already been registered, all existing information about that Device Manager instance is overwritten by the new information.

-d specific-date/time or --date specific-date/time

Table 2-18 -d specific-date/time or --date specific-date/time Argument on page 2-35 describes the `-d` *specific-date/time* or `--date` *specific-date/time* argument.

Table 2-18 -d specific-date/time or --date specific-date/time Argument

Item	Details
Purpose	Specifies, in local time, a specific date/time value for calculating capacity or performance.
Required value	The data format that can be specified for *specific-date/time* differs depending on the value of *date/time-format* specified for the `-o` or `--period` option. The following shows the *date/time-format* values and their corresponding data formats: `YEARLY`: *YYYY* `MONTHLY`: *YYYY*/*MM* `WEEKLY`: *YYYY*/*MM*/*DD* `DAILY`: *YYYY*/*MM*/*DD* `HOURLY`: *YYYY*/*MM*/*DD*/*hh*`[/00]` `MINUTELY`: *YYYY*/*MM*/*DD*/*hh*/*mm* The meanings of the elements of *YYYY*/*MM*/*DD*/*hh*/*mm* are as follows: • *YYYY*: The year as a four digit number • *MM*: The month (an integer from `01` to `12` (where `01` represents January and `12` represents December)) • *DD*: The day (an integer from `01` to `31`) • *hh*: The hour (an integer from `00` to `23`, using a 24-hour clock)
Required/ optional	Optional
Notes	You cannot specify this option with the `-s`, `--start_date`, `-e`, or `--end_date` option.

--date_format format-of-date-column

Table 2-19 --date_format format-of-date-column Argument on page 2-36 describes the --date_format *format-of-date-column* argument.

Table 2-19 --date_format format-of-date-column Argument

Item	Details
Purpose	Specifies the format of the date column in the input file.
Required value	You can specify the following date formats. This item is not case sensitive. • ddMMyyyy • MMddyyyy • yyyyMMdd
Required/ optional	Optional *Note:* Check if the format of the date column in the input file differs from the default value, and, if so, specify required. For details about the default value for the date format, see the `dateFormat` property in the CSV report format conversion properties file.
Notes	If you omit this argument, either the value specified for the `dateFormat` property in the CSV report format conversion properties file or the default value is used. For details about the CSV report format conversion properties file (htmCsvConvert.properties), see *Tuning Manager Agent Administration Guide*.

--date_separator date-separator-of-date-column

Table 2-20 --date_separator date-separator-of-date-column Argument on page 2-36 describes the --date_separator *date-separator-of-date-column* argument.

Table 2-20 --date_separator date-separator-of-date-column Argument

Item	Details
Purpose	Specifies the date separator to assign to the date column in the output file.
Required value	You can specify the following date separators. This item is not case sensitive. • a slash • a hyphen
Required/ optional	Optional
Notes	If you omit this argument, either the value specified for the `dateSeparator` property in the CSV report format conversion properties file or the default value is used. For details about the CSV report format conversion properties file (htmCsvConvert.properties), see *Tuning Manager Agent Administration Guide*.

-dc column-number-of-date-column or --date_column column-number-of-date-column

Table 2-21 -dc column-number-of-date-column or --date_column column-number-of-date-column Argument on page 2-37 describes the -dc *column-number-of-date-column* or --date_column *column-number-of-date-column* argument.

Table 2-21 -dc column-number-of-date-column or --date_column column-number-of-date-column Argument

Item	Details
Purpose	Specifies the column number of the date column in the input file.
Required value	Column number
Required/ optional	Optional
Notes	• Specify a column number from 1 to 2147483647. If you omit this argument, `1` is used. • The column number you specify must not be specified in the `-kc` or `-vc` arguments.

-dd output-destination-directory-for-the-report or --dest_dir output-destination-directory-for-the-report

Table 2-22 -dd output-destination-directory-for-the-report or --dest_dir output-destination-directory-for-the-report Argument on page 2-37 describes the `-dd` *output-destination-directory-for-the-report* or `--dest_dir` *output-destination-directory-for-the-report* argument.

Table 2-22 -dd output-destination-directory-for-the-report or --dest_dir output-destination-directory-for-the-report Argument

Item	Details
Purpose	Specifies the directory to which the report file is output.
Required value	Absolute path of the directory to which the report is output
Required/ optional	Required
Notes	• A character string in the range from 1 byte to 128 bytes can be specified for the value. • The following characters can be used to specify the value: For Windows: a to z, A to Z, 0 to 9, spaces and the following special characters: ! # $ % & ' ( ) + , - . ; = @ [ ] ^ _ ` { } ~ In addition, a backslash (\) and colon (:) can be specified as a delimiter of a path. For Linux:

Item	Details
	a to z, A to Z, 0 to 9, spaces and the following special characters: ! " # $ % & ' ( ) * + , - . : ; < = > ? @ [\ ] ^ _ ` { | } ~ In addition, a forward slash (/) can be specified as a delimiter of a path. • You cannot specify a non-existing directory, or a directory in which a file with the same name already exists. • The following access permissions must be granted for the specified directory: For Windows: Full-control access permissions are required for the Administrator user. For Linux: Read, write, and execute permissions are required for the root user. • You cannot specify network directories whose paths begin with \\.

-dt or --detail

Table 2-23 -dt or --detail Argument on page 2-38 describes the `-dt` or `--detail` argument.

Table 2-23 -dt or --detail Argument

Item	Details
Purpose	Specify these arguments when you want to output performance information about each LDEV related to the host groups, in addition to the summarized performance information about LDEVs for each host group.
Required value	None
Required/ optional	Optional
Notes	None

-e end-date/time or --end_date end-date/time

Table 2-24 -e end-date/time or --end_date end-date/time Argument on page 2-38 describes the `-e` *end-date/time* or `--end_date` *end-date/time* argument.

Table 2-24 -e end-date/time or --end_date end-date/time Argument

Item	Details
Purpose	Specifies, in local time, an end date/time value for calculating capacity or performance.

Item	Details
Required value	The data format that can be specified for *end-date/time* differs depending on the value of *date/time-format* specified for the `-o` or `--period` option. The following shows the *date/time-format* values and their corresponding data formats: `YEARLY`: *YYYY* `MONTHLY`: *YYYY*/*MM* `WEEKLY`: *YYYY*/*MM*/*DD* `DAILY`: *YYYY*/*MM*/*DD* `HOURLY`: *YYYY*/*MM*/*DD*/*hh*`[/00]` `MINUTELY`: *YYYY*/*MM*/*DD*/*hh*/*mm* The meanings of the elements of *YYYY*/*MM*/*DD*/*hh*/*mm* are as follows: • *YYYY*: The year as a four digit number • *MM*: The month (an integer from `01` to `12` (where `01` represents January and `12` represents December)) • *DD*: The day (an integer from `01` to `31`) • *hh*: The hour (an integer from `00` to `23`, using a 24-hour clock) • *mm*: The minute (an integer from `00` to `59`) ***Note:*** In an environment where the local time differs by minutes from GMT (for example, GMT + 5:30), you can specify the period using the `Hourly` format, specifying a number other than `00` in *mm*. In this case, the Tuning Manager server converts the specified end date/time to GMT and outputs data for the hourly level contained within that GMT period. For example, if you execute the command in an environment where the local time is GMT + 5:30, specifying `6:00` as the start date/time and `8:00` as the end date/time, the Tuning Manager server will output hourly data contained with the GMT period 0:30 to 2:30 (that is, two sets of hourly data, for 1:00 and for 2:00).
Required/ optional	Optional
Notes	• If you specify the `-e` or `--end_date` option, you also need to specify the `-s` or `--start_date` option. • You cannot specify this option with the `-d` or `--date` option. • If the entered end date/time includes a time period after the last polling time, only performance information is displayed. "No data" is shown for the capacity information.

FB_resource-ID

Table 2-25 FB_resource-ID Argument on page 2-40 describes the `FB_`*resource-ID* argument.

Table 2-25 FB_resource-ID Argument

Item	Details
Purpose	Specifies parent resource ID.
Required value	Valid ID with `FB_` prefix.
Required/ optional	Required
Notes	For more information, see Working with Reporting Resource IDs on page 2-13.

-fp prefix-of-the-output-file-name or --file_prefix prefix-of-the-output-file-name

Table 2-26 -fp prefix-of-the-output-file-name or --file_prefix prefix-of-the-output-file-name Argument on page 2-40 describes the `-fp` *prefix-of-the-output-file-name* or `--file_prefix` *prefix-of-the-output-file-name* argument.

Table 2-26 -fp prefix-of-the-output-file-name or --file_prefix prefix-of-the-output-file-name Argument

Item	Details
Purpose	Specifies the prefix added to the report file names. The report file names are as follows: Performance information about host groups *prefix-of-the-output-file-name*_HG.csv Performance information about LDEVs *prefix-of-the-output-file-name*_LDEV.csv
Required value	Prefix of the output file name
Required/ optional	Required
Notes	• A character string in the range from 1 byte to 64 bytes can be specified for the value. • The following characters can be used to specify the value: For Windows: a to z, A to Z, 0 to 9, spaces and the following special characters: ! # $ % & ' ( ) + , - . ; = @ [ ] ^ _ ` { } ~ For Linux: a to z, A to Z, 0 to 9, spaces and the following special characters: ! " # $ % & ' ( ) * + , - . : ; < = > ? @ [ \ ] ^ _ ` { | } ~

-h (/h) or --help (/help)

Table 2-27 -h (/h) or --help (/help) Argument on page 2-41 describes the `-h` (`/h`) or `--help` (`/help`) argument.

Table 2-27 -h (/h) or --help (/help) Argument

Item	Details
Purpose	Displays parameters to this command and other usage information.
Required value	None
Required/ optional	Optional
Notes	Displays the command options and usage when no option is specified for the command in question. If the `help` option and any other options are specified at the same time, those other options are invalid.

-hg host-group-name or --host_group host-group-name

Table 2-28 -hg host-group-name or --host_group host-group-name Argument on page 2-41 describes the `-hg` *host-group-name* or `--host_group` *host-group-name* argument.

Table 2-28 -hg host-group-name or --host_group host-group-name Argument

Item	Details
Purpose	Specifies a specific host group for which performance information is output.
Required value	Host group name
Required/ optional	Optional
Notes	• A character string in the range from 1 byte to 255 bytes can be specified for the value. This item is case sensitive. • The following characters can be used to specify the value: a to z, A to Z, 0 to 9, spaces and the following special characters: ! # $ % & ' ( ) + - . = @ [ ] ^ _ ` { } ~ • Wildcard characters can be used to specify the directory name. The following characters can be used as a wildcard: o *: Indicates any character string of 0 or more characters. o ?: Indicates any one character.

-i input-file-path or --input_file input-file-path

Table 2-29 -i input-file-path or --input_file input-file-path Argument on page 2-42 describes the -i *input-file-path* or --input_file *input-file-path* argument.

Table 2-29 -i input-file-path or --input_file input-file-path Argument

Item	Details
Purpose	Specifies either the absolute path of the input file name or its relative path from the command execution directory.
Required value	Absolute or relative path including the CSV file name
Required/ optional	Required
Notes	• For details about the CSV files that you can specify as input files, see the *Tuning Manager Agent Administration Guide*. • The following access permissions must be granted for the specified file: In Windows: Read permission is required for the Administrator user. In Linux: Read permission is required for the root user. • You cannot specify file shortcuts. • File paths must conform to the specifications of the operating system.

--input_characterCode input-file-encoding

Table 2-30 --input_characterCode input-file-encoding Argument on page 2-42 describes the --input_characterCode *input-file-encoding* argument.

Table 2-30 --input_characterCode input-file-encoding Argument

Item	Details
Purpose	Specifies the encoding of the input file.
Required value	You can specify the following character codes. This item is not case sensitive. • US-ASCII • windows-1252 • ISO-8859-1 • UTF-8 • UTF-16 • UTF-16BE • UTF-16LE • Shift_JIS • EUC-JP • EUC-JP-LINUX • MS932 *Note:*

Item	Details
	To use a CSV file that has encoding other than the default, use either this option or the CSV report format conversion properties file (htmCsvConvert.properties) to specify the character code.
Required/ optional	Optional
Notes	If you omit this argument, either the value specified for the `inputCharacterCode` property in the CSV report format conversion properties file or the default value is used. For details about the CSV report format conversion properties file (htmCsvConvert.properties), see *Tuning Manager Agent Administration Guide*.

-kc column-number-of-key-column or --key_column column-number-of-key-column

Table 2-31 -kc column-number-of-key-column or --key_column column-number-of-key-column Argument on page 2-43 describes the -kc *column-number-of-key-column* or --key_column *column-number-of-key-column* argument.

Table 2-31 -kc column-number-of-key-column or --key_column column-number-of-key-column Argument

Item	Details
Purpose	Specifies the column numbers of columns that are to be interpreted as key columns.
Required value	Column number
Required/ optional	Optional
Notes	• You can specify multiple values separated by commas. You can specify a maximum of 10 column numbers. Do not specify the same column number more than once. Data will be output to the CSV file in the order of the keys specified in this argument. • Specify column numbers from 1 to 2147483647. If you omit this argument, `2` is used. • The column numbers you specify must not be specified in the `-dc` or `-vc` arguments.

-l (/l) or --list (/list)

Table 2-32 -l (/l) or --list (/list) Argument on page 2-44 describes the `-l` (`/l`) or `--list` (`/list`) argument.

Table 2-32 -l (/l) or --list (/list) Argument

Item	Details
Purpose	Displays information about the connection target Device Manager that is registered in the Tuning Manager server database.
Required value	None
Required/optional	Optional
Notes	None

-l label or --label label

Table 2-33 -l label or --label label Argument on page 2-44 describes the `-l` *label* or `--label` *label* argument.

Table 2-33 -l label or --label label Argument

Item	Details
Purpose	Specifies an LDEV by label.
Required value	Label
Required/optional	Optional
Notes	None

-n (/n) or --nameport (/nameport)

Table 2-34 -n (/n) or --nameport (/nameport) Argument on page 2-44 describes the `-n` (`/n`) or `--nameport` (`/nameport`) argument.

Table 2-34 -n (/n) or --nameport (/nameport) Argument

Item	Details
Purpose	Specifies the port number (specified in `pd_name_port`) used by HiRDB on the Device Manager host.
Required value	The specifiable range of values is `5001` to `65535`. When the option is omitted, `22032` is set.
Required/ optional	Optional
Notes	For details about the port number used by HiRDB on the host where Device Manager is installed, see the *Hitachi Command Suite Installation and Configuration Guide*.

-o (/o) or --os (/os)

Table 2-35 -o (/o) or --os (/os) Argument on page 2-45 describes the `-o` (`/o`) or `--os` (`/os`) argument.

Table 2-35 -o (/o) or --os (/os) Argument

Item	Details
Purpose	Specifies the type of the OS of the Device Manager host.
Required value	In Windows, or Linux: `pc` If this option is omitted, the same OS as that of the Tuning Manager server host will be specified.
Required/ optional	Optional
Notes	None

-o output-file-path or --output_file output-file-path

Table 2-36 -o output-file-path or --output_file output-file-path Argument on page 2-45 describes the -o *output-file-path* or --output_file *output-file-path* argument.

Table 2-36 -o output-file-path or --output_file output-file-path Argument

Item	Details
Purpose	Specifies either the absolute path of the output file name or its relative path from the command execution directory.
Required value	Absolute or relative path including the CSV file name
Required/ optional	Optional
Notes	• You cannot specify a directory that does not exist, or a directory in which a file with the same name already exists. • The following access permissions must be granted for the specified directory: In Windows: Full-control access permissions are required for the Administrator user. In Linux: Read and write permissions are required for the root user. • File paths must conform to the specifications of the operating system. • For details about the output file specifications, such as in cases when the specification is omitted, see *Tuning Manager Agent Administration Guide*.

-o date-format or --period date-format

Table 2-37 -o date-format or --period date-format Argument on page 2-46 describes the `-o` *date-format* or `--period` *date-format* argument.

Table 2-37 -o date-format or --period date-format Argument

Item	Details
Purpose	Specifies the time interval for displaying data as a report.
Required value	For *date-format*, specify one of the following values: • `YEARLY` Reports data on a yearly basis. • `MONTHLY` Reports data on a monthly basis. • `WEEKLY` Reports data on a weekly basis. • `DAILY` Reports data on a daily basis. • `HOURLY` Reports data on an hourly basis. • `MINUTELY` Reports data by the minute.
Required/ optional	Optional
Notes	• If you omit the `-o` or `--period` option, `HOURLY` is assumed. • If you omit both the `-e` or `--end_date` option and the `-o` or `--period` option, the Tuning Manager server assumes that `MINUTELY` is specified. The Tuning Manager server uses the current server time as the value of the `-e` or `--end_date` option.

OI_resource-ID

Table 2-38 OI_resource-ID Argument on page 2-46 describes the `OI_`*resource-ID* argument.

Table 2-38 OI_resource-ID Argument

Item	Details
Purpose	Specifies parent resource ID.
Required value	Valid ID with `OI_` prefix.
Required/ optional	Required
Notes	For more information, see Working with Reporting Resource IDs on page 2-13.

OT_resource-ID

Table 2-39 OT_resource-ID Argument on page 2-47 describes the `OT_`*resource-ID* argument.

Table 2-39 OT_resource-ID Argument

Item	Details
Purpose	Specifies parent resource ID.
Required value	Valid ID with `OT_` prefix.
Required/ optional	Required
Notes	For more information, see Working with Reporting Resource IDs on page 2-13.

--output_characterCode output-file-encoding

Table 2-40 --output_characterCode output-file-encoding Argument on page 2-47 describes the --output_characterCode *output-file-encoding* argument.

Table 2-40 --output_characterCode output-file-encoding Argument

Item	Details
Purpose	Specifies the character encoding of the output files.
Required value	You can specify the following character codes. This item is not case sensitive. • US-ASCII • windows-1252 • ISO-8859-1 • UTF-8 • UTF-16 • UTF-16BE • UTF-16LE • Shift_JIS • EUC-JP • EUC-JP-LINUX • MS932
Required/ optional	Optional
Notes	If you omit this argument, either the value specified for the `outputCharacterCode` property in the CSV report format conversion properties file or the default value is used. For details about the CSV report format conversion properties file (htmCsvConvert.properties), see *Tuning Manager Agent Administration Guide*.

-s (/s) or --serviceport (/serviceport)

Table 2-41 -s (/s) or --serviceport (/serviceport) Argument on page 2-48 describes the `-s` (`/s`) or `--serviceport` (`/serviceport`) argument.

Table 2-41 -s (/s) or --serviceport (/serviceport) Argument

Item	Details
Purpose	Specifies the port number (specified in the `htmsetup` command) used for connecting HiRDB on the Device Manager host with HiRDB on the Tuning Manager server host.
Required value	The specifiable range of values is `5001` to `65535`. When the option is omitted, `24230` is set.
Required/ optional	Optional
Notes	For details about the port number used for connecting HiRDB on the Device Manager host with HiRDB on the Tuning Manager server host and the `htmsetup` command, see the *Hitachi Command Suite Installation and Configuration Guide*.

-s (/s) or --size (/size)

Table 2-42 -s (/s) or --size (/size) Argument on page 2-48 describes the `-s` (`/s`) or `--size` (`/size`) argument.

Table 2-42 -s (/s) or --size (/size) Argument

Item	Details
Purpose	Expands the size of the Tuning Manager server database.
Required value	Specify the size you want to add to the current total database size. You can specify any multiple of 2, from `2` to `30`. The maximum size of the Tuning Manager server database is 32 GB. Since the initial size of the database after installation is 2 GB, the maximum value you can specify is `30`.
Required/ optional	Required
Notes	None

-s start-date/time or --start_date start-date/time

Table 2-43 -s start-date/time or --start_date start-date/time Argument on page 2-48 describes the `-s` *start-date/time* or `--start_date` *start-date/time* argument.

Table 2-43 -s start-date/time or --start_date start-date/time Argument

Item	Details
Purpose	Specifies, in local time, a start date/time value for calculating capacity or performance.
Required value	The data format that can be specified for *start-date/time* differs depending on the value of *date/time-format* specified for the `-o` or `--period` option.

Item	Details
	The following shows the *date/time-format* values and their corresponding data formats: `YEARLY`: *YYYY* `MONTHLY`: *YYYY*/*MM* `WEEKLY`: *YYYY*/*MM*/*DD* `DAILY`: *YYYY*/*MM*/*DD* `HOURLY`: *YYYY*/*MM*/*DD*/*hh*`[/00]` `MINUTELY`: *YYYY*/*MM*/*DD*/*hh*/*mm* The meanings of the elements of *YYYY*/*MM*/*DD*/*hh*/*mm* are as follows: • *YYYY*: The year as a four digit number • *MM*: The month (an integer from `01` to `12` (where `01` represents January and `12` represents December)) • *DD*: The day (an integer from `01` to `31`) • *hh*: The hour (an integer from `00` to `23`, using a 24-hour clock) • *mm*: The minute (an integer from `00` to `59`) ***Note:*** In an environment where the local time differs by minutes from GMT (for example, GMT + 5:30), you can specify the period using the `Hourly` format, specifying a number other than `00` in *mm*. In this case, the Tuning Manager server converts the specified start date/time to GMT and outputs data for the hourly level contained within that GMT period. For example, if you execute the command in an environment where the local time is GMT + 5:30, specifying `6:00` as the start date/time and `8:00` as the end date/time, the Tuning Manager server will output hourly data contained with the GMT period 0:30 to 2:30 (that is, two sets of hourly data, for 1:00 and for 2:00).
Required/ optional	Optional
Notes	• If you specify the `-s` or `--start_date` option, you also need to specify the `-e` or `--end_date` option. • You cannot specify this option with the `-d` or `--date` option.

SLPR_resource-ID

Table 2-44 SLPR_resource-ID Argument on page 2-49 describes the `SLPR_`*resource-ID* argument.

Table 2-44 SLPR_resource-ID Argument

Item	Details
Purpose	Specifies parent resource ID.
Required value	Valid ID with `SLPR_` prefix.

Item	Details
Required/ optional	Required
Notes	For more information, see Working with Reporting Resource IDs on page 2-13.

SN_resource-ID

Table 2-45 SN_resource-ID Argument on page 2-50 describes the `SN_`*resource-ID* argument.

Table 2-45 SN_resource-ID Argument

Item	Details
Purpose	Specifies parent resource ID.
Required value	Valid ID with `SN_`prefix.
Required/ optional	Required
Notes	For more information, see Working with Reporting Resource IDs on page 2-13.

SS_resource-ID

Table 2-46 SS_resource-ID Argument on page 2-50 describes the `SS_`*resource-ID* argument.

Table 2-46 SS_resource-ID Argument

Item	Details
Purpose	Specifies parent resource ID.
Required value	Valid ID with `SS_` prefix.
Required/ optional	Required

Notes	• For the `htm-slprs` command, specify the resource ID of one of the following storage systems. If you execute the command with the resource ID of any other storage system specified, an error is displayed.
	  ◦ Universal Storage Platform V/VM series
	• For the `htm-clprs` command, specify the resource ID of one of the following storage systems. If you execute the command with the resource ID of any other storage system specified, an error is displayed.
	  ◦ HUS100 series
	  ◦ Hitachi AMS2000/AMS/WMS/SMS series
	  ◦ VSP Gx00 models

Item	Details
	○ VSP Fx00 models ○ VSP Nx00 models ○ HUS VM ○ VSP 5000 series ○ VSP G1000 ○ VSP G1500 ○ VSP F1500 ○ Virtual Storage Platform series ○ Universal Storage Platform V/VM series • For the `htm-processors` command and the `htm-drives` command, specify the resource ID of one of the following storage systems. If you execute the command with the resource ID of any other storage system specified, an error is displayed. ○ HUS100 series ○ Hitachi AMS2000/AMS/WMS/SMS series • For the `htm-chps` command and the `htm-dkps` command, specify the resource ID of one of the following storage systems. If you execute the command with the resource ID of any other storage system specified, an error is displayed. ○ Universal Storage Platform V/VM series • For the `htm-dppools` command, specify the resource ID of one of the following storage systems. If you execute the command with the resource ID of any other storage system specified, an error is displayed. ○ VSP Gx00 models ○ VSP Fx00 models ○ VSP Nx00 models ○ HUS VM ○ VSP 5000 series ○ VSP G1000 ○ VSP G1500 ○ VSP F1500 ○ Virtual Storage Platform series ○ Universal Storage Platform V/VM series • For the `htm-mps` command and the `htm-mpbs` command, specify the resource ID of one of the following storage systems. If you execute the command with the resource ID of any other storage system specified, an error is displayed. ○ VSP Gx00 models ○ VSP Fx00 models ○ VSP Nx00 models ○ HUS VM ○ VSP 5000 series ○ VSP G1000 ○ VSP G1500

Item	Details
	◦ VSP F1500 ◦ Virtual Storage Platform series • For more information, see Working with Reporting Resource IDs on page 2-13.

SV_resource-ID

Table 2-47 SV_resource-ID Argument on page 2-52 describes the `SV_`*resource-ID* argument.

Table 2-47 SV_resource-ID Argument

Item	Details
Purpose	Specifies parent resource ID
Required value	Valid ID with `SV_` prefix.
Required/ optional	Required
Notes	For more information, see Working with Reporting Resource IDs on page 2-13.

SW_resource-ID

Table 2-48 SW_resource-ID Argument on page 2-52 describes the `SW_`*resource-ID* argument.

Table 2-48 SW_resource-ID Argument

Item	Details
Purpose	Specifies parent resource ID.
Required value	Valid ID with `SW_` prefix.
Required/ optional	Required
Notes	For more information, see Working with Reporting Resource IDs on page 2-13.

--port (/port)

Table 2-49 --port (/port) Argument on page 2-52 describes the `--port` (`/port`) argument.

Table 2-49 --port (/port) Argument

Item	Details
Purpose	Specifies the port number for the Tuning Manager server.

Item	Details
Required value	The port number to be used by the Tuning Manager server
Required/ optional	Optional
Notes	If you specify a port number other than `22015` for the `Listen` port number, such as when enabling SSL mode, for example, you must specify the `--port` (`/port`) *port-number* argument when executing a CLI command to set the port number for the HBase 64 Storage Mgmt Web Service. If the `--port` option is omitted, the port number specified in the `user.properties` file will be used. For details about this file, see the *Tuning Manager Server Administration Guide*.

-u or --user

Table 2-50 -u or --user Argument on page 2-53 describes the `-u` or `--user` argument.

Table 2-50 -u or --user Argument

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

-vc column-number-of-data-column or --value_column column-number-of-data-column

Table 2-51 -vc column-number-of-data-column or --value_column column-number-of-data-column Argument on page 2-53 describes the -vc *column-number-of-data-column* or --value_column *column-number-of-data-column* argument.

Table 2-51 -vc column-number-of-data-column or --value_column column-number-of-data-column Argument

Item	Details
Purpose	Specifies the column numbers of columns that are to be interpreted as data columns.
Required value	Column numbers
Required/ optional	Required
Notes	• You can specify multiple values separated by commas.

Item	Details
	You can specify a maximum of 50 column numbers. Do not specify the same column number more than once. Data will be output to the CSV file in the order of the key columns. • Specify column numbers from 1 to 2147483647. • The column numbers you specify must not be specified in the `-dc` or `-kc` arguments.

-w or --password

Table 2-52 -w or --password Argument on page 2-54 describes the `-w` or `--password` argument.

Table 2-52 -w or --password Argument

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

-z (/z) or --zip (/zip)

Table 2-53 z (/z) or --zip (/zip) Argument on page 2-54 describes the `-z` (`/z`) or `--zip` (`/zip`) argument.

Table 2-53 z (/z) or --zip (/zip) Argument

Item	Details
Purpose	Archives the collected maintenance information as a zip file.
Required value	None
Required/ optional	Optional
Notes	The archive file will be created with the name `HTM.zip`. If the size of the archive file to be created exceeds 2 GB, the file will not be created. The collected maintenance information will be deleted when the archive file is created.

3

Common Component Commands

This chapter provides an overview of Common Component commands and describes how to use these commands.

Overview

Table 3-1 Common Component Commands on page 3-2 lists and describes the commands provided by Common Component.

Table 3-1 Common Component Commands

Command Name	Description	Related Section
hcmds64backups	Backs up data of Hitachi Command Suite products.	hcmds64backups on page 3-3
hcmds64banner	Enables or disables Warning Banner messages.	hcmds64banner on page 3-5
hcmds64chgjdk	Sets Oracle JDK as the JDK to be used.	hcmds64chgjdk on page 3-6
hcmds64chgurl	Updates access information (URL information) for starting applications. The information is stored in the repository provided by Common Component.	hcmds64chgurl on page 3-7
hcmds64db	Restores backup data of Hitachi Command Suite products.	hcmds64db on page 3-8
hcmds64dbclustersetup	Re-creates the HiRDB database. This command is used for setting up a cluster environment.	hcmds64dbclustersetup on page 3-10
hcmds64dbrepair	Forcibly deletes and re-creates all HiRDB databases that have been set up, and then recovers the database by using the backup data that was exported via the `hcmds64dbtrans` command.	hcmds64dbrepair on page 3-13
hcmds64dbsrv	Starts or stops HiRDB.	hcmds64dbsrv on page 3-15
hcmds64dbtrans	Imports or exports the HiRDB database.	hcmds64dbtrans on page 3-15
hcmds64fwcancel	Registers exceptions so that Windows Firewall does not block communication between the Web server and HiRDB.	hcmds64fwcancel on page 3-19
hcmds64getlogs	Collects maintenance information when a problem occurs.	hcmds64getlogs on page 3-20
hcmds64intg	Deletes authentication data from the repository provided by Common Component.	hcmds64intg on page 3-21

Command Name	Description	Related Section
hcmds64link	Registers or deletes Web application links that are required to start necessary applications from Web Client.	hcmds64link on page 3-23
hcmds64prmset	Specifies the host name and port number of the server that manages user accounts.	hcmds64prmset on page 3-25
hcmds64srv	Starts or stops Hitachi Command Suite products and HiRDB. This command is also used to check their operating status.	hcmds64srv on page 3-27
hcmds64unlockaccount	Unlocks a user account.	hcmds64unlockaccount on page 3-28

List of Commands

The following describes the overview of the commands. For details on the arguments of each command, see Reviewing Command Arguments on page 3-30.

Note the following points that are common to Common Component commands:

- Log in as a user with Administrator permissions in Windows or with root permissions in Linux.
- The entire command line, including the command name, must not exceed 255 characters.

hcmds64backups

Format

In Windows:

```
hcmds64backups        /dir folder-name
                      [/auto]
```

In Linux:

```
hcmds64backups        -dir directory-name
                      [-auto]
```

Function

This command backs up data of Hitachi Command Suite products, and stores the backup data into the directory specified with the `dir` option. This command does not create archives for the acquired backup data.

Note:

- Do not run more than one `hcmds64backups` command simultaneously.
- When Hitachi Command Suite products are used in a cluster environment, always execute the `hcmds64backups` command on the active node.
- Make sure that no files exist in the directory specified with the `dir` option. If files exist, delete them, and then execute the `hcmds64backups` command. Note that, if the specified directory does not exist, the `hcmds64backups` command will create the directory.
- For the directory specified for the `dir` option, the following amount of unused capacity is required at maximum: `(`*total-capacity-used-by-the-databases-of-the-Hitachi-Command-Suite-products-installed-on-the-same-host* `+ 4.6 GB) * 2`

  To check how much of the Tuning Manager server database is used, use the `htm-db-status` command. For details about this command, see htm-db-status on page 2-27.

  If other Hitachi Command Suite products are installed on the same host as the Tuning Manager server, see the manuals for those products and check how much of their databases is used.
- In Windows, if a folder name includes one or more spaces, the folder name must be enclosed by double quotation marks (").
- After you execute the `hcmds64backups` command with the `auto` option specified, the Hitachi Command Suite products and HiRDB automatically start.
- Before you execute the `hcmds64backups` command without the `auto` option specified, stop the Hitachi Command Suite products and start HiRDB.

Return Values

Table 3-2 Return Values for the hcmds64backups Command on page 3-4 describes the values returned from the `hcmds64backups` command.

Table 3-2 Return Values for the hcmds64backups Command

Return Value	Meaning
0	Normal termination
1	Parameter error
2	Abnormal termination
233 (See ***Note***)	Processing to restart HiRDB has been interrupted.
234 (See ***Note***)	The HiRDB services are stopped or do not exist.
235 (See ***Note***)	HiRDB is not initialized.

Return Value	Meaning
237 (See ***Note***)	Failed to start the Tuning Manager server or HiRDB
238 (See ***Note***)	Failed to stop the Tuning Manager server or HiRDB
239 (See ***Note***)	Failed to start HiRDB
240 (See ***Note***)	Failed to stop HiRDB

Note: The return values are output only when the `auto` option is specified.

hcmds64banner

Format

In Windows:

```
hcmds64banner          {{ /add /file file-name }| /delete }
                       [ /locale locale-name ]
```

In Linux:

```
hcmds64banner          {{ -add -file file-name }| -delete }
                       [ -locale locale-name ]
```

Function

This command enables and disables Warning Banner messages.

Specify the message settings to be paired with each locale. If you set new messages for the locale for which other messages have already been set, the new messages overwrite the existing messages. If you execute the `hcmds64banner` command without specifying the locale, the messages you specify will be set for the default locale. 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 when disabling messages, the messages for the default locale will be disabled.

Note: Messages are enabled and disabled for each machine.

Return Values

Table 3-3 Return Values for the hcmds64banner Command on page 3-6
describes the values returned from the `hcmds64banner` command.

Table 3-3 Return Values for the hcmds64banner Command

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

The result of the `hcmds64banner` command execution is also output to the `hcmds64banner`*n*`.log` file. This file is stored in the following directories:

- In Windows: *Installation-folder-for-Common-Component*`\log\hcmds64banner`*n*`.log`
- In Linux: `/var/`*Installation-directory-for-Common-Component*`/log/hcmds64banner`*n*`.log`

hcmds64chgjdk

Format

In Windows and Linux:
`hcmds64chgjdk`

Function

This command sets Oracle JDK as the JDK to be used.

To use Oracle JDK, after the Tuning Manager server is installed, execute the `hcmds64chgjdk` command.

Before setting the JDK to be used, make sure that the following conditions are met:

- The OS is Windows Server 2008, Windows Server 2012, or Linux.

  If the OS is Windows Server 2008, the install destination file system of the Hitachi Command Suite product is NTFS.

  If the OS is Windows Server 2012, the install destination file system of the Hitachi Command Suite product is NTFS or ReFS.
- When any other Hitachi Command Suite product is installed on the host on which the Tuning Manager server is installed, all products support Oracle JDK.

  To determine whether a product supports Oracle JDK, see the documentation for that product.

Notes:

  - Before executing the `hcmds64chgjdk` command, stop the services of the Hitachi Command Suite product.

- If Oracle JDK is overwritten or updated, execute the `hcmds64chgjdk` command again.
- To remove Oracle JDK, execute the `hcmds64chgjdk` command, and then choose **Bundling Java Development Kit**.
- To continue using the certificate that was in use before the JDK was set, re-import the certificate. For details on how to import a certificate, see the *Hitachi Command Suite Installation and Configuration Guide*.

Return Values

Table 3-4 Return Values for the hcmds64chgjdk Command on page 3-7
describes the values returned by the `hcmds64chgjdk` command.

Table 3-4 Return Values for the hcmds64chgjdk Command

Return Value	Meaning
0	Normal termination
1	Normal termination (no changes made).
249	An incorrect value has been entered.
250	The JDK cannot be used.
252	A symbolic link could not be created.
255	Abnormal termination.

hcmds64chgurl

Format

In Windows:

```
hcmds64chgurl    { /print
                 | /list
                 | /change URL-before-the-change URL-after-the-change
                 | /change URL-after-the-change /type product—name }
```

In Linux:

```
hcmds64chgurl    { -print
                 | -list
                 | -change URL-before-the-change URL-after-the-change
                 | -change URL-after-the-change -type product—name }
```

Function

This command updates access information (URL information) used for starting applications. The information is stored in the repository supplied by the Common Component database.

Note: The `print` and `list` options display the same information in different format. We recommend that you use the `list` option because it outputs more readable results.

Return Values

Table 3-5 Return Values for the hcmds64chgurl Command on page 3-8 describes the values returned from the `hcmds64chgurl` command.

Table 3-5 Return Values for the hcmds64chgurl Command

Return Value	Meaning
0	Normal termination
1	Parameter error
2	No URL has been registered.
253	Failed to restore the database
254	Failed to back up the database
255	Abnormal termination

Error information will be output to the following log files. The same messages output to the command line might be output to the log files because messages are output to the log files depending on the log level.

- Log file
  In Windows:
  Common-Component-installation-folder`\log\Hcmds64ChangeURL`*n*`.log`
  In Linux:
  `/var/`*Common-Component-installation-directory*`/log/Hcmds64ChangeURL`*n*`.log`

Examples:

In this example, the command updates the URL information:

```
hcmds64chgurl -change "http://[1234:5678::1234:0:0:9abc]:22015"
"http://[aaaa:1111:2222:3333:4444:5555:6666:7777]"
The URL was changed from "http://[1234:5678::1234:0:0:9abc]:22015"
to "http://[aaaa:1111:2222:3333:4444:5555:6666:7777]".
```

hcmds64db

Format

In Windows:

```
hcmds64db        /restore [backup-file-name]
                 /type {TuningManager | ALL}
                [/auto]
```

In Linux:

```
hcmds64db        -restore [backup-file-name]
                 -type {TuningManager | ALL}
                [-auto]
```

Function

This command restores backup data of Hitachi Command Suite products.

Note:

- Before restoring the database, be sure to confirm that the following information about the Tuning Manager server host is the same as it was when the backup was taken. If the following are not the same, the database cannot be restored.

  - Types, versions, and revisions of the installed Hitachi Command Suite products

  - Installation location for each Hitachi Command Suite product, Common Component, each Hitachi Command Suite product database, and Common Component database

  - The IP address and host name of the machines
- When Hitachi Command Suite products are used in a cluster environment, always execute the `hcmds64db` command on the active node.
- When you execute the `hcmds64db` command for restoring the database, a temporary file is created. Before restoring the database, make sure that:

  - You have write permission to the backup file directory

  - The backup file directory has as much free space as the size of the existing backup files
- In Windows, if a file name includes one or more spaces, the file name must be enclosed by double quotation marks (").
- If you specify `TuningManager` for the `type` option, only the Tuning Manager server data is restored. If you specify `ALL` for the `type` option, the data of all installed Hitachi Command Suite products is restored.
- After you execute the `hcmds64db` command with the `auto` option specified, the Hitachi Command Suite products and HiRDB automatically stop.
- Before you execute the `hcmds64db` command without the `auto` option specified, stop the Hitachi Command Suite products and HiRDB.

Return Values

Table 3-6 Return Values for the hcmds64db Command on page 3-9
describes the values returned from the `hcmds64db` command.

Table 3-6 Return Values for the hcmds64db Command

Return Value	Meaning
0	Normal termination

Return Value	Meaning
233 (See ***Note***)	Processing to restart HiRDB has been interrupted.
234 (See ***Note***)	The HiRDB services are stopped or do not exist.
235 (See ***Note***)	HiRDB is not initialized.
237 (See ***Note***)	Failed to start the Tuning Manager server or HiRDB
238 (See ***Note***)	Failed to stop the Tuning Manager server or HiRDB
239 (See ***Note***)	Failed to start HiRDB
240 (See ***Note***)	Failed to stop HiRDB
255	Abnormal termination

Note: The return values are output only when the `auto` option is specified.

hcmds64dbclustersetup

Format

In Windows:

```
hcmds64dbclustersetup [/createcluster | /removecluster]
                      /databasepath database-re-creation-destination-folder-on-the-shared-disk
                      /exportpath exported-data-storage-folder-on-a-local-disk
                      [/auto]
```

In Linux:

```
hcmds64dbclustersetup [-createcluster | -removecluster]
                      -databasepath database-re-creation-destination-directory-on-the-shared-disk
                      -exportpath exported-data-storage-directory-on-a-local-disk
                      [-auto]
```

Function

The `hcmds64dbclustersetup` command is used to set up a cluster environment.

This command backs up the data stored in a HiRDB database to the exported data storage directory on a local disk, and then re-creates the database for a cluster environment in the specified directory. This command exports all of

the data stored in a HiRDB database, re-creates the database in the specified directory, and then imports the exported data into that new database.

Note:

- In the Tuning Manager server, you cannot use the `hcmds64dbclustersetup` command with the `removecluster` option specified to migrate a cluster environment to a non-cluster environment. For details about how to migrate a cluster environment to a non-cluster environment, see the *Tuning Manager Installation Guide*.
- Do not run more than one `hcmds64dbclustersetup` command simultaneously. Do not run the `hcmds64dbclustersetup` command and the `hcmds64getlogs` command at the same time.
- Do not disconnect the shared drive from the active node until the command execution terminates normally.
- If the command execution terminated abnormally, do not restart the server.
- If databases for products that use the 32-bit Hitachi Command Suite Common Component (Hitachi File Services Manager and Hitachi Storage Navigator Modular 2) have been created on the shared disk, you must specify a different directory for the `databasepath` option.
- Executing the `hcmds64dbclustersetup` command returns the port number used by HiRDB to the default value (`22032`). If the port number has been set to a value other than the default value, set the port number again after executing this command.
- The capacity required for *database-re-creation-destination-directory-on-the-shared-disk* can be calculated as follows:

  required-capacity = database-capacity-for-Common-Component + database-capacity-for-all-Hitachi-Command-Suite-products-installed-on-the-host-of-the-Tuning-Manager-server (including the Tuning Manager server database)

  When performing an upgrade installation from version 7 or earlier:

  required-capacity = database-capacity-for-Common-Component + database-capacity-for-all-Hitachi-Command-Suite-products-installed-on-the-host-of-the-Tuning-Manager-server (including the Tuning Manager server database) + 0.7 GB
- Before you execute the `hcmds64dbclustersetup` command with the `createcluster` option specified, empty or delete the directory you want to specify in the `exportpath` option.
- Before you execute the `hcmds64dbclustersetup` command with the `createcluster` option specified, create a cluster control file.

  Items to be specified in the cluster control file:

  `mode=`: Specify `online` for an active node. Specify `standby` for a standby node.

  `virtualhost=`: Specify a logical host name.

  `onlinehost=`: Specify the host name of the active node.

  `standbyhost=`: Specify the host name of the standby node.

Notes:

- You cannot specify a host name in IP address format.

- The specified logical host name must be associated with a valid IP address and must be accessible.

Location in which the cluster control file will be stored:

In Windows:

Common-Component-installation-folder`\conf\cluster.conf`

In Linux:

Common-Component-installation-directory`/conf/cluster.conf`

- For a standby node, specify the same directory for *database-re-creation-destination-directory-on-the-shared-disk* as the directory that is specified for the active node.
- Before you execute the `hcmds64dbclustersetup` command without the `auto` option specified, stop the services of Hitachi Command Suite products and start HiRDB.
- After the `hcmds64dbclustersetup` command is executed, the directory specified in the `exportpath` option cannot be deleted.

Return Values

Table 3-7 Return Values for the hcmds64dbclustersetup Command on page 3-12 describes the values returned from the `hcmds64dbclustersetup` command.

Table 3-7 Return Values for the hcmds64dbclustersetup Command

Return Value	Meaning
0	Normal termination
233 (See ***Note***)	Processing to restart HiRDB has been interrupted.
234 (See ***Note***)	HiRDB services are stopped or do not exist.
235 (See ***Note***)	HiRDB is not initialized.
237 (See ***Note***)	Failed to start the services of Hitachi Command Suite products or HiRDB
238 (See ***Note***)	Failed to stop the services of Hitachi Command Suite products or HiRDB
239 (See ***Note***)	Failed to start HiRDB
240 (See ***Note***)	Failed to stop HiRDB
247	The cluster control file does not exist.
248	The contents of the cluster control file are not correct.
249	Failed to re-create the database
250	Failed to import data
251	Failed to export data

Return Value	Meaning
252	HiRDB is not stopped.
253	HiRDB is not initialized.
254	The option specification is invalid.
255	Failed

Note: The return values are output only when the command is executed with the `auto` option specified.

The result of the `hcmds64dbclustersetup` command execution is also output to the `hcmds64dbclustersetup`*n*`.log` file.

The log file is stored in the following location:

In Windows:

Common-Component-installation-folder`\log\hcmds64dbclustersetup`*n*`.log`

In Linux:

Common-Component-installation-directory`/log/hcmds64dbclustersetup`*n*`.log`

hcmds64dbrepair

Format

In Windows:

```
hcmds64dbrepair        /trans backup-data
```

In Linux:

```
hcmds64dbrepair        -trans backup-data
```

Function

This command forcibly deletes and re-creates all HiRDB databases that have been set up, and then recovers the database by using the backup data that was exported via the `hcmds64dbtrans` command.

Note:

- For normal operation, use the `hcmds64db` command or the `hcmds64dbtrans` command rather than the `hcmds64dbrepair` command. Use the `hcmds64dbrepair` command only when a database cannot be recovered by using the `hcmds64db` command or the `hcmds64dbtrans` command (due to the database being corrupted).

- When the Tuning Manager server is running in a cluster configuration, execute the command on only the active node.
- When a management server is used to restore a database, the management server must have the same types, versions, and revisions of Hitachi Command Suite products installed as when the management server was used to export the database.
- Before you execute the `hcmds64dbrepair` command, stop the Hitachi Command Suite products and HiRDB.
- The directory below is used as an area for providing enough space to expand backup data. Allocate the necessary amount of space for expanding the backup data.

  In Windows:

  common-component-installation-folder`\tmp`

  In Linux:

  `/var/`*common-component-installation-directory*`/tmp`
- After the `hcmds64dbrepair` command is executed, the password for the SYSTEM user built-in account returns to its default value. Change the password as necessary.

Return Values

Table 3-8 Return Values for the hcmds64dbrepair Command on page 3-14
describes the values returned by the `hcmds64dbrepair` command.

Table 3-8 Return Values for the hcmds64dbrepair Command

Return Value	Meaning
0	Normal termination
1	An argument is invalid.
245	Failed to import the database.
246	The definition file is invalid.
247	Failed to delete the Hitachi Command Suite information from the database.
248	Failed to stop the services or the database.
249	The command could not be executed because the node is a standby node.
250	The backup data is invalid (a file is missing or an attempt to expand the archive file failed).
251	Processing was canceled because either the product or product version used to back up the data is different from the product or product version used to attempt to recover the data.
252	The database could not be set up.
253	The HiRDB service could not be started.
254	The database could not be re-created because HiRDB is not set up.

Return Value	Meaning
255	Abnormal termination (internal error)

hcmds64dbsrv

Format

In Windows:

```
hcmds64dbsrv          {/start | /stop}
```

In Linux:

```
hcmds64dbsrv          {-start | -stop}
```

Function

This command starts or stops HiRDB.

Return Values

Table 3-9 Return values for the hcmds64dbsrv Command on page 3-15
describes the values returned from the `hcmds64dbsrv` command.

Table 3-9 Return values for the hcmds64dbsrv Command

Return Value	Meaning
0	Normal termination
254	HiRDB is not initialized.
255	Failed

The result of the `hcmds64dbsrv` command execution is also output to the `hcmds64dbsrv`*n*`.log` file.

The log file is stored in the following location:

In Windows:

Common-Component-installation-folder`\log\hcmds64dbsrv`*n*`.log`

In Linux:

`/var/`*Common-Component-installation-directory*`/log/hcmds64dbsrv`*n*`.log`

hcmds64dbtrans

Format

In Windows:

```
hcmds64dbtrans     { /export /workpath work-folder
                   /file archive-file-name
                   | /import
                   /type { product-name | ALL }
                   /workpath work-folder
                   [ /file archive-file-name ]}
                   [ /auto ]
```

In Linux:

```
hcmds64dbtrans     { -export -workpath work-directory
                   -file archive-file-name
                   | -import
                   -type { product-name | ALL }
                   -workpath work-directory
                   [ -file archive-file-name ]}
                   [ -auto ]
```

Function

This command imports or exports the HiRDB database.

Note:

- Do not run more than one `hcmds64dbtrans` command simultaneously.
- The database of a Hitachi Command Suite product that is not installed on the migration destination server cannot be migrated. Install all necessary Hitachi Command Suite products on the migration destination server.
- If the version of any Hitachi Command Suite product installed on the migration destination server is earlier than the version of the same product on the migration source server, the database cannot be migrated. On the migration destination server, install Hitachi Command Suite products whose versions are the same as or higher than the ones on the migration source server.
- If there is user information on the migration destination server, this user information will be replaced with the user information from the migration source server. Therefore, do not perform a migration to a machine on which user information for Hitachi Command Suite products already exists.
- You cannot perform migration to integrate the Hitachi Command Suite products that were running on multiple management servers on to one management server because user information will be overwritten with each successive migration.
- To export the databases of Hitachi Command Suite products, a directory for temporarily storing the database information, and a directory for storing the archive file are required. Each of these directories requires more capacity than the total size of the following two directories:

  - The directory storing the databases of the installed Hitachi Command Suite products

  - The directory storing the Common Component database (excluding the `SYS` directory and the directories beneath it)
- If there is insufficient disk space for the directory where the archive file is to be created and you attempt to create an archive file by specifying the

file option of the hcmds64dbtrans command when you export the database, creation of the archive file fails. In this case, instead of the archive file, manually send (to the migration destination) the database information that is collected when you export the database.

- Before you execute the hcmds64dbtrans command without the auto option specified, stop the services of Hitachi Command Suite products and start HiRDB.
- If you specify TuningManager for the type option and execute the command, only the Tuning Manager server data is imported. If you specify ALL for the type option and execute the command, the data of all the installed Hitachi Command Suite products is imported.
- If you do not specify the file option when importing data into a HiRDB database, the file data in the work directory specified by the workpath option is imported.
- After you execute the hcmds64dbtrans command with both the import and auto options specified, the services of Hitachi Command Suite products and HiRDB automatically stop.
- After you execute the hcmds64dbtrans command with both the export and auto options specified, the services of Hitachi Command Suite products and HiRDB automatically start.

Return Values

Table 3-10 Return Values for the hcmds64dbtrans Command with the export Option Specified on page 3-17 describes the values returned from the hcmds64dbtrans command with the export option specified.

Table 3-10 Return Values for the hcmds64dbtrans Command with the export Option Specified

Return Value	Meaning
0	Normal termination
1	Failed to acquire the product version.
2	HiRDB is not running.
3	Failed to archive the file.
4	The work directory is not empty.
5	Archive cannot be performed because the total capacity of HiRDB exceeds 2 GB.
233 (See ***Note***)	Processing to restart HiRDB has been interrupted.
234 (See ***Note***)	The HiRDB services are stopped or do not exist.
235 (See ***Note***)	HiRDB is not initialized.

Return Value	Meaning
237 (See ***Note***)	Failed to start the Hitachi Command Suite products or HiRDB
238 (See ***Note***)	Failed to stop the Hitachi Command Suite products or HiRDB
239 (See ***Note***)	Failed to start HiRDB
240 (See ***Note***)	Failed to stop HiRDB
255	Abnormal termination

Note: The return values are output only when the `auto` option is specified.

Table 3-11 Return Values for the hcmds64dbtrans Command with the import Option Specified on page 3-18 describes the values returned from the `hcmds64dbtrans` command with the `import` option specified.

Table 3-11 Return Values for the hcmds64dbtrans Command with the import Option Specified

Return Value	Meaning
0	Normal termination
1	Failed to acquire the product version.
2	HiRDB is not running.
3	Failed to extract the archive file.
4	The work directory is not empty.
5	The specified product does not exist in the archive file.
6	The specified product is not installed.
7	A product of a version that cannot be imported exists.
8	The data to be imported does not exist in the work directory. Alternatively, the data to be imported is not in the correct format.
9	An attempt was made to import the data on the secondary server to the primary server.
10	An attempt was made to import the data on the primary server to the secondary server.
11	An attempt was made to import data to a database that is in use.
233 (See ***Note***)	Processing to restart HiRDB has been interrupted.
234 (See ***Note***)	The HiRDB services are stopped or do not exist.

Return Value	Meaning
235 (See ***Note***)	HiRDB is not initialized.
237 (See ***Note***)	Failed to start the Hitachi Command Suite products or HiRDB
238 (See ***Note***)	Failed to stop the Hitachi Command Suite products or HiRDB
239 (See ***Note***)	Failed to start HiRDB
240 (See ***Note***)	Failed to stop HiRDB
255	Abnormal termination

Note: The return values are output only when the `auto` option is specified.

The information about the failures is output to the log files shown below. Various messages are output to the following log file depending on the log level, so some log levels might output the same message to the command line.

- Log file

In Windows:

Common-Component-installation-folder`\log\hcmds64dbtrans`*n*`.log`

In Linux:

`/var/`*Common-Component-installation-directory*`/log/hcmds64dbtrans`*n*`.log`

hcmds64fwcancel

Format

In Windows:

```
hcmds64fwcancel
```

In Linux:

```
None
```

Function

This command registers exceptions so that Windows Firewall does not block communication between the Web server and HiRDB.

Return Values

There are no return values for the `hcmds64fwcancel` command. Because the command does not output log data, there is no way to determine whether the command terminated normally. If necessary, make sure that the exceptions have been registered correctly in Windows Firewall.

hcmds64getlogs

Format

In Windows:

```
hcmds64getlogs        /dir folder-name
                      [/types product-name[ product-name ...] ]
                      [ /arc archive-file-name ]
                      [/logtypes log-file-type[ log-file-type ...]]
```

In Linux:

```
hcmds64getlogs        -dir directory-name
                      [-types product-name[ product-name ...]]
                      [ -arc archive-file-name ]
                      [-logtypes log-file-type[ log-file-type ...]]
```

Function

The `hcmds64getlogs` command is used to collect maintenance information when a problem occurs. The command collects log files for Hitachi Command Suite products and stores them in an archive file.

We recommend that you use the `hcmds64getlogs` command without specifying a product name or a log file type to collect all maintenance information.

Note:

- If the KAPM05318-I or KAPM05319-E message is not output after the `hcmds64getlogs` command is executed, the command did not complete because sufficient unused capacity was not available for the directory specified in the `dir` option. Free up sufficient capacity in the directory, and then re-execute the `hcmds64getlogs` command.
- The maximum length of a path that can be specified with the `dir` option is 41 bytes.

  For the maximum length of a path that can be specified to collect log files for a product other than the Tuning Manager server, see the applicable manual for that product.
- When you execute the `hcmds64getlogs` 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 `hcmds64getlogs` 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 execute multiple `hcmds64getlogs` commands at the same time.
- If you are using the Tuning Manager server in a cluster configuration, execute the `hcmds64getlogs` command on both the active node and the standby node.
- If you specify the same option more than once, the first specified value is applied.
- Data in the Agent's Performance database is not subject to collection. To collect that data, use the `jpcras` command (with the `all all` option specified).

Return Values

Table 3-12 Return Values for the hcmds64getlogs Command on page 3-21
describes the values returned from the `hcmds64getlogs` command.

Table 3-12 Return Values for the hcmds64getlogs Command

Return Value	Meaning
0	Normal termination
1	Parameter error
2	Abnormal termination

Examples:

- In this example, the command collects maintenance information about Hitachi Command Suite products and stores it in an archive file named `hicmd_log`:

  In Windows:

  ```
  hcmds64getlogs /dir desired-folder /arc hicmd_log
  ```

  In Linux:

  ```
  hcmds64getlogs -dir desired-directory -arc hicmd_log
  ```

- In this example, the command collects maintenance information about the Tuning Manager server only:

  In Windows:

  ```
  hcmds64getlogs /dir desired-folder /types TuningManager
  ```

  In Linux:

  ```
  hcmds64getlogs -dir desired-directory -types TuningManager
  ```

hcmds64intg

Format

In Windows:

```
hcmds64intg        { /delete
                   { /type product-name }
                   | /print
                   | /primary }
```

```
                    /user user-ID
                    /pass password
```

In Linux:

```
hcmds64intg         { -delete
                    { -type product-name }
                    | -print
                    | -primary }
                    -user user-ID
                    -pass password
```

Function

This command deletes authentication data that is registered in the repository provided by Common Component. Also, this command displays the address of the server in which authentication data is registered and product names.

Note:

- If you execute the command without the `user` option, you will be prompted to specify a user ID.
- If you execute the command without the `pass` option, you will be prompted to specify a password.

Return Values

Table 3-13 Return Values for the hcmds64intg Command on page 3-22 describes the values returned from the `hcmds64intg` command.

Table 3-13 Return Values for the hcmds64intg Command

Return Value	Meaning
0	Normal termination
1	The authentication data has already been deleted.
2	The authentication data has been registered in the server on which the command was executed.
3	The authentication data has not been registered in the server on which the command was executed.
4	The authentication data has not been registered in the server on which the command was executed. Also, an authentication error has occurred in the server in which the authentication data is registered.
253	An authentication error has occurred in the server in which the authentication data is registered.
254	Failed to communicate with the server in which the authentication data is registered.
255	Abnormal termination

The information about the failures is output to the log files shown below. Various messages are output to the following log file depending on the log

level, so some log levels might output the same message to the command line.

Log file

In Windows:

Common-Component-installation-folder\log\hcmds64intg*n*.log

In Linux:

/var/*Common-Component-installation-directory*/log/hcmds64intg*n*.log

hcmds64link

Format

In Windows:

```
hcmds64link          { /add | /delete } /file user-specified-
application-file
                     /user user-ID /pass password
```

In Linux:

```
hcmds64link          { -add | -delete } -file user-specified-
application-file
                     -user user-ID -pass password
```

Function

This command registers or deletes a Web application link to be invoked from Web Client.

Note: After registering an application link for starting the application, do not delete the user specified application file because the hcmds64link command uses this file. If you delete the file, you cannot delete the registered application link.

Return Values

Table 3-14 Return Values for the hcmds64link Command on page 3-23 describes the values returned from the hcmds64link command.

Table 3-14 Return Values for the hcmds64link Command

Return Value	Meaning
0	Normal termination
255	Abnormal termination

Error information will be output to the following files. Note that same messages output to the command line might be output to the log files because messages are output to the log files depending on the log level.

Log file

In Windows:

Common-Component-installation-folder\log\hcmds64link*n*.log

In Linux:

/var/*Common-Component-installation-directory*/log/hcmds64link*n*.log

User specified application file

A coding example for the user specified application file is as follows:

Note: Use only ASCII characters when writing the user specified application file. Also note that control codes other than the carriage return (CR) or line feed (LF) cannot be used.

```
@TOOL-LINK
@NAME SampleApp
@URL http://SampleApp/index.html
@DISPLAYNAME SampleApplication
@DISPLAYORDER 1
@ICONURL http://SampleApp/graphic/icon.gif
@TOOL-END
```

Items specified in the user specified application file are as follows:

- @TOOL-LINK: A start key. The information between the start key and end key is the specified settings. This item is required.
- @NAME: Information used for a registering key. Specify a unique name. This item is required. A maximum of 256 bytes alphanumeric characters can be specified.
- @URL: A URL invoked from Web Client. The maximum length of the URL is 256 bytes. You cannot use an IPv6 address. In an IPv6 environment, specify the host name.
- @DISPLAYNAME: A name displayed in the link dialogue box when you choose **Start** and then **Link** in the global tasks bar area of Web Client. If this item is not specified, the name specified for @NAME will be displayed. A maximum of 80 Unicode characters from code point U+10000 to U +10FFFF can be specified.
- @DISPLAYORDER: An order to display links in the link dialogue box when you choose **Start** and then **Link** in the global tasks bar area of Web Client. The application with a smaller number will be displayed in ascending order. If this item is not specified, the name specified for @NAME will be displayed instead. A value from -2147483648 to 2147483647 can be specified for this item.
- @ICONURL: A URL for an icon displayed next to the link. The maximum length of this URL is 256 bytes. You cannot use an IPv6 address. In an IPv6 environment, specify the host name.
- @TOOL-END: An end key. This item is required.

Examples:

- In this example, the command adds an application link:

```
hcmds64link -add -file /opt/SampleLink.txt -user system -pass
manager
```

- In this example, the command deletes an application link:
```
hcmds64link -delete -file /opt/SampleLink.txt -user system -
pass manager
```

hcmds64prmset

Format

When setting, as a secondary server, a server on which Tuning Manager server is installed or when changing the settings for connections with the primary server

In Windows:

```
hcmds64prmset   {
                 /host host-name-or-IP-address |
                 {/port port-number(non-SSL) |
                  /sslport port-number(SSL) [/sslprotocol#] [/
ciphers#]}
                }
                [/check]
```

In Linux:

```
hcmds64prmset   {
                 -host host-name-or-IP-address |
                 {-port port-number(non-SSL) |
                  -sslport port-number(SSL)[-sslprotocol#] [-
ciphers#]}
                }
                [-check]
```

#:

Do not use this option.

When setting a server, on which Tuning Manager server is installed, as a primary server

In Windows:

```
hcmds64prmset   /setprimary
```

In Linux:

```
hcmds64prmset   -setprimary
```

When displaying information about a server on which Tuning Manager server is installed

In Windows:

```
hcmds64prmset   /print
```

In Linux:

```
hcmds64prmset  -print
```

Function

This command registers the host name and port number of the server that manages user accounts.

Reference note:

If the Tuning Manager server and Device Manager are installed on separate servers, the following names might be used to distinguish these servers:

Server on which Device Manager is installed: *primary-server* or *server-that-manages-user-accounts*

Server on which the Tuning Manager server is installed: *secondary-server*

If you execute the `hcmds64prmset` command, the Common Component property file (`hsso.conf`) is updated.

If you execute the `hcmds64prmset` command with the `print` option specified, the currently registered information is displayed.

Note:

- User accounts are managed by Common Component on a server where Device Manager has been installed. In the `host` option, specify the host name or IP address of the server on which Device Manager has been installed.
- After executing the `hcmds64prmset` command, restart the server on which the Tuning Manager server has been installed.
- If the Tuning Manager server and Device Manager have been installed on the same server, specify the `setprimary` option.

Return Values

Table 3-15 Return Values for the hcmds64prmset Command on page 3-26 describes the values returned from the `hcmds64prmset` command.

Table 3-15 Return Values for the hcmds64prmset Command

Return Value	Meaning
0	Normal termination
255	Failed

The result of `hcmds64prmset` command execution is also output to the `hcmds64prmset`*n*`.log` file.

The log file is stored in the following location:

In Windows:

Common-Component-installation-folder\log\hcmds64prmset*n*.log

In Linux:

/var/*Common-Component-installation-directory*/log/hcmds64prmset*n*.log

Note on specifying an IPv6 address in the host option

To specify an IPv6 address in the host option, you must enclose the IP address in square brackets. Colons in the specified IP address are escaped by using \ when the IP address is registered in the hsso.hostname key of the hsso.conf file.

For example, if you specify [fe80::20a:e4ff:fe97:1741%6] in the host option, [fe80\:\:20a\:e4ff\:fe97\:1741%6] is registered in the hsso.hostname key.

hcmds64srv

Format

In Windows:

```
hcmds64srv   {/start | /stop | /check | /status}
             [/server service-name]
```

When checking the status of the Hitachi Command Suite services:

```
hcmds64srv   /statusall
```

When changing the method for starting services:

```
hcmds64srv   /starttype startup-type
             {/server service-name | /all}
```

In Linux:

```
hcmds64srv   {-start | -stop | -check | -status}
             [-server service-name]
```

When checking the status of the Hitachi Command Suite services:

```
hcmds64srv   -statusall
```

When changing the method for starting services:

```
hcmds64srv   -starttype startup-type
             {-server service-name | -all}
```

Function

This command starts or stops Hitachi Command Suite products and HiRDB. This command is also used to check their operating status.

Note:

- For the server option, specify TuningManager. If you omit the server option, the command is executed for all the installed Hitachi Command Suite products.

- If you omit the `server` option and specify the `check` option or the `status` option, the return value becomes `0` when all the installed services have stopped, and becomes `1` when any of the installed services are running.
- If you stop all services one by one, the Web server and HiRDB do not automatically stop. To stop the Web server and HiRDB, stop them without the `server` option specified.
- The `starttype` option specifies how to start services, which is specified in the `server` option. For automatic startup, specify `auto` for *startup-type*. For manual startup, specify `manual` for *startup-type*.

Return Values

Table 3-16 Return Values for the hcmds64srv Command with the start and stop Options Specified on page 3-28 describes the values returned from the `hcmds64srv` command with the `start` and `stop` options specified.

Table 3-16 Return Values for the hcmds64srv Command with the start and stop Options Specified

Return Value	Meaning
0	Normal termination
1	• Started, when the `start` option is specified • Stopped, when the `stop` option is specified
255	Failed

Table 3-17 Return Values for the hcmds64srv Command with the check, status, and statusall Options Specified on page 3-28 describes the values returned from the `hcmds64srv` command with the `check`, `status`, and `statusall` options specified.

Table 3-17 Return Values for the hcmds64srv Command with the check, status, and statusall Options Specified

Return Value	Meaning
0	Not started
1	Started
255	Failed

hcmds64unlockaccount

Format

In Windows:

```
hcmds64unlockaccount  /user user-ID /pass password
```

In Linux:

```
hcmds64unlockaccount  -user user-ID -pass password
```

Function

This command unlocks a user account.

Note:

- The `hcmds64unlockaccount` command is able to unlock only user accounts that have the User Management permission.
- Execute the `hcmds64unlockaccount` command on a host on which Device Manager has been installed (the host on which the user account authentication data is registered).
- Note that you cannot use the `hcmds64unlockaccount` command to unlock an account for which no password is set. To unlock such an account, set a password for it. For details on how to set a password, see the *Tuning Manager Server Administration Guide*.
- If you execute the command without the `user` option, you will be prompted to specify a user ID.
- If you execute the command without the `pass` option, you will be prompted to specify a password.

Return Values

Table 3-18 Return Values for the hcmds64unlockaccount Command on page 3-29 describes the values returned from the `hcmds64unlockaccount` command.

Table 3-18 Return Values for the hcmds64unlockaccount Command

Return Value	Meaning
0	Normal termination
251	Authentication error (Failed login)
252	Authentication error (No User Management permission)
253	Failed to communicate with the authentication server
254	The command was executed on a host on which Device Manager has not been installed.
255	Failed

The result of `hcmds64unlockaccount` command execution is also output to the `hcmds64unlockaccount`*n*`.log`.

The log file is stored in the following location:

In Windows:

Common-Component-installation-folder`\log\hcmds64unlockaccount`*n*`.log`

In Linux:

/var/*Common-Component-installation-directory*/log/
hcmds64unlockaccount*n*.log

Reviewing Command Arguments

-add (/add)

Table 3-19 -add (/add) Argument on page 3-30 describes the -add (/add) argument.

Table 3-19 -add (/add) Argument

Item	Details
Purpose	For the hcmds64banner command: Enables Warning Banner messages. For the hcmds64link command: Registers Web applications.
Required value	None
Required/ optional	Required (at registration)
Notes	None

-all (/all)

Table 3-20 -all (/all) Argument on page 3-30 describes the -all (/all) argument.

Table 3-20 -all (/all) Argument

Item	Details
Purpose	When the all option is specified, the command is executed for all the installed Hitachi Command Suite services.
Required value	None
Required/ optional	Optional
Notes	None

-arc (/arc) archive-file-name

Table 3-21 -arc (/arc) Argument on page 3-31 describes the -arc (/arc) argument.

Table 3-21 -arc (/arc) Argument

Item	Details
Purpose	Specifies the name of the archive file that will be created.
Required value	If you do not specify the `arc` option, the default file name is `HiCommand_log_64`.
Required/ optional	Optional
Notes	• When the archive files are output, each of them will have an extension corresponding to the type of each archive file (`.jar`, `.hdb.jar`, `.db.jar`, or `.csv.jar`). The archive files are output under the directory specified in the `dir` option. • For the `arc` option, do not use a character that the OS does not permit for a file name. • To specify archive files, you can use the printable ASCII characters (code 0x20-7E) except the following: `\ / : , ; * ? " < > | $ % & ' ` `. In Linux, you cannot specify a space character.

-auto (/auto)

Table 3-22 auto (/auto) Argument on page 3-31 describes the `-auto` (`/auto`) argument.

Table 3-22 auto (/auto) Argument

Item	Details
Purpose	Automatically starts or stops Hitachi Command Suite products and HiRDB.
Required value	None
Required/ optional	Optional
Notes	None

-change (/change)

Table 3-23 -change (/change) Argument on page 3-31 describes the `-change` (`/change`) argument.

Table 3-23 -change (/change) Argument

Item	Details
Purpose	Overwrites the current registered URL information with the new URL information.
Required value	Specify the currently registered URL and the new URL. If you use the `type` option with this option, specify only the new URL.

Item	Details
Required/ optional	Optional. Required when updating the URL information.
Notes	• If the entire command line including the command name exceeds 255 characters, specify the IP address instead of the host name included in the URL. • A URL to be specified must be a complete URL including protocol and port information. The URL to be specified can also be enclosed with double quotation marks ("). • When you use IPv6 addresses, enclose them with square brackets ([ ]).

-check (/check)

Table 3-24 -check (/check) Argument on page 3-32 describes the `-check` (`/check`) argument.

Table 3-24 -check (/check) Argument

Item	Details
Purpose	• For the `hcmds64prmset` command: Checks the connection to the server that manages user accounts. • For the `hcmds64srv` command: Checks the operating status of the service specified in the `server` option and of HiRDB.
Required value	None
Required/ optional	• For the `hcmds64prmset` command: Optional • For the `hcmds64srv` command: Required
Notes	None

-createcluster (/createcluster)

Table 3-25 -createcluster (/createcluster) Argument on page 3-32 describes the `-createcluster` (`/createcluster`) argument.

Table 3-25 -createcluster (/createcluster) Argument

Item	Details
Purpose	Migrates from a non-cluster environment to a cluster environment.
Required value	None
Required/ optional	Optional

Item	Details
Notes	Before you execute the `hcmds64dbclustersetup` command with this option specified, you must create a cluster control file (`cluster.conf`).

-databasepath (/databasepath)

Table 3-26 -databasepath (/databasepath) Argument on page 3-33
describes the `-databasepath` (`/databasepath`) argument.

Table 3-26 -databasepath (/databasepath) Argument

Item	Details
Purpose	Specifies the directory in which the database used in a cluster environment is to be re-created.
Required value	Absolute path to the directory in which the database is to be re-created that is on the shared disk
Required/ optional	Required

Notes	• You can use the following characters to specify directory names in the path:
	`a` to `z`, `A` to `Z`, `0` to `9`, `_` , `.`
	• You can use the path separators shown below in the path. Note that you cannot specify a path separator at the end of the path:
	In Windows:
	`\`, `:`, `/`
	In Linux:
	`/`
	• You can specify a maximum of 63 bytes for the path.
	• You cannot specify a path that does not exist.
	• If databases for products that use the 32-bit Hitachi Command Suite Common Component (Hitachi File Services Manager and Hitachi Storage Navigator Modular 2) have been created on the shared disk, you must specify a different directory for the databasepath option.

-delete (/delete)

Table 3-27 -delete (/delete) Argument on page 3-33 describes the `-delete` (`/delete`) argument.

Table 3-27 -delete (/delete) Argument

Item	Details
Purpose	For the `hcmds64banner` command: Disables Warning Banner messages.

Item	Details
	For the `hcmds64link` command: Deletes the Web application. For the `hcmds64intg` command: Deletes the authentication data.
Required value	None
Required/ optional	Required (for deleting the registration)
Notes	For the `hcmds64intg` command: Required for deleting the authentication data.

-dir (/dir) directory-name

Table 3-28 -dir (/dir) Argument on page 3-34 describes the `-dir` (`/dir`) argument.

Table 3-28 -dir (/dir) Argument

Item	Details
Purpose	Specifies the name of the directory in which the collected log files or backup data will be stored.
Required value	• For *directory-name*, only the name of a directory on a local disk can be specified. If the directory has already been created, empty the directory. • To specify directory names, you can use the printable ASCII characters (code 0x20-7E) except the following: `\ / : , ; * ? " < > | $ % & ' `.`
Required/ optional	Required
Notes	• In Windows, you can use a backslash (\), colon (:), or forward slash (/) as a file separator. Note that you cannot use a file separator at the end of paths. • In Linux, you can use only a forward slash (`/`) as a file separator. Note that you cannot use a file separator at the end of a path. • In Windows, to specify a space character in a path name, enclose the path name in double quotation marks ("). In Linux, you cannot specify a space character in a path name. • For *directory-name*, do not use a character that is not permitted by the Operating System. • If you omit the `types` option or specify `TuningManager` for the `types` option when you execute the `hcmds64getlogs` command, the following restrictions are added to the directory that can be specified as the `dir` option value. - You cannot specify the root directory. - The user who executes the command must have read or write permissions for the specified directory.

Item	Details
	- In Windows, you cannot specify a path that contains any reserved device name (such as CON, AUX, PRN, and NUL). - In Windows, you cannot use a forward slash (/) as a file separator.

-export (/export)

Table 3-29 -export (/export) Argument on page 3-35 describes the -export (/export) argument.

Table 3-29 -export (/export) Argument

Item	Details
Purpose	Outputs data from HiRDB.
Required value	None
Required/ optional	Required
Notes	None

-exportpath (/exportpath)

Table 3-30 -exportpath (/exportpath) Argument on page 3-35 describes the -exportpath (/exportpath) argument.

Table 3-30 -exportpath (/exportpath) Argument

Item	Details
Purpose	Specifies the directory in which exported data of the database before migration is to be stored.
Required value	Absolute path to the directory in which exported data is to be stored that is on the local disk
Required/ optional	Required
Notes	• You can use the following characters to specify directory names in the path: a to z, A to Z, 0 to 9, _ , . • You can use the following path separators in the path: In Windows: \, :, / In Linux: / • You can specify a maximum of 63 bytes for the path.

-file (/file) archive-file-name

Table 3-31 -file (/file) archive-file-name Argument on page 3-36 describes the `-file` (`/file`) *archive-file-name* argument.

Table 3-31 -file (/file) archive-file-name Argument

Item	Details
Purpose	Specifies the archive file name.
Required value	Archive file name
Required/ optional	Required when you specify the `export` option. Optional when you specify the `import` option.
Notes	None

-file (/file) user-specified-application-file

Table 3-32 -file (/file) user-specified-application-file Argument on page 3-36 describes the `-file` (`/file`) *user-specified-application-file* argument.

Table 3-32 -file (/file) user-specified-application-file Argument

Item	Details
Purpose	Specifies the configuration file in which an application to be registered is specified as an argument.
Required value	Configuration file name
Required/ optional	Required
Notes	None

-file (/file) file-name

Table 3-33 -file (/file) Argument on page 3-36 describes the `-file` (`/file`) argument.

Table 3-33 -file (/file) Argument

Item	Details
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

Item	Details
	accent mark (`). In Windows, you can use the backslash (\), colon (:), and forward slash (/) as file separators. In Linux, you can use the forward slash (/) as a file separator.
Required/ optional	Required
Notes	Paragraph characters in the specified file are deleted.

-host(/host)

Table 3-34 -host (/host) Argument on page 3-37 describes the `-host` (`/host`) argument.

Table 3-34 -host (/host) Argument

Item	Details
Purpose	Specifies the host name of the server that manages user accounts.
Required value	Host name or IP address of the server on which Device Manager has been installed. However, if you are using SSL to connect a client and a host that has Tuning Manager server installed, specify the same value as the common name (CN) of the server certificate.
Required/ optional	Required
Notes	• If the entire command line including the command name exceeds 255 characters, specify the IP address instead of the host name. • User accounts are managed by Common Component on a server where Device Manager has been installed. • This option can also be specified with the `port` or `sslport` options.

-import (/import)

Table 3-35 -import (/import) Argument on page 3-37 describes the `-import` (`/import`) argument.

Table 3-35 -import (/import) Argument

Item	Details
Purpose	Registers data to HiRDB.
Required value	None
Required/ optional	Required
Notes	None

-list (/list)

Table 3-36 -list (/list) Argument on page 3-38 describes the `-list` (`/list`) argument.

Table 3-36 -list (/list) Argument

Item	Details
Purpose	Displays a list of URLs and programs currently specified.
Required value	None
Required/ optional	For the `hcmds64chgurl` command: Optional
Notes	None

-locale (/locale) locale-name

Table 3-37 -locale (/locale) Argument on page 3-38 describes the `-locale` (`/locale`) argument.

Table 3-37 -locale (/locale) Argument

Item	Details
Purpose	Specifies the target locale as the argument.
Required value	`en` for English, `ja` for Japanese.
Required/ optional	Optional
Notes	If you do not specify this option, the default locale for the server on which Common Component has been installed will be specified.

-logtypes (/logtypes) log-file-type

Table 3-38 -logtypes (/logtypes) Argument on page 3-38 describes the `-logtypes` (`/logtypes`) argument.

Table 3-38 -logtypes (/logtypes) Argument

Item	Details
Purpose	Specifies the types of the log files to be collected if only specific types of log files can be collected for some reason such as a failure.
Required value	`log`, `db`, or `csv`
Required/ optional	Optional
Notes	• When specifying multiple types, separate the types with a space. If the `logtypes` option is not specified, all types of log files are collected.

Item	Details
	• Table 3-39 Values that can be specified in the logtypes option and the archive files that will be created on page 3-39 shows the log file types that can be specified in the `logtypes` option and the archive files that will be created. • If you specify both the `types` option and the `logtypes` option, always specify `log` in the `logtypes` option.

Table 3-39 Values that can be specified in the logtypes option and the archive files that will be created

Value of the `logtypes` option	Archive files that will be created			
	***archive-file-name*`.jar`**	***archive-file-name*`.hdb.jar`**	***archive-file-name*`.db.jar`**	***archive-file-name*`.csv.jar`**
`log`	Created	Created	--	--
`db`	--	--	Created	--
`csv`	--	--	--	Created

-pass (/pass)

Table 3-40 -pass (/pass) Argument on page 3-39 describes the `-pass` (`/pass`) argument.

Table 3-40 -pass (/pass) Argument

Item	Details
Purpose	For the `hcmds64link` command: Specifies the password of the user ID that is used when registering or deleting the application link defined by a user. For the `hcmds64intg` command: Specifies the password of the account that has the Admin (user management) permission. For the `hcmds64unlockaccount` command: Specifies the password of the user account to be unlocked.
Required value	Password
Required/ optional	For the `hcmds64link` command: Required For commands other than the `hcmds64link` command: Optional If you execute a command without specifying this option, you will be prompted to specify a password.
Notes	None

-port (/port)

Table 3-41 -port (/port) Argument on page 3-40 describes the `-port (/port)` argument.

Table 3-41 -port (/port) Argument

Item	Details
Purpose	Specifies the port number (non-SSL) of the HBase 64 Storage Mgmt Web Service of the server that manages user accounts.
Required value	Port number (non-SSL) of the HBase 64 Storage Mgmt Web Service of the server on which Device Manager has been installed.
Required/ optional	Required
Notes	• User accounts are managed by Common Component on a server where Device Manager has been installed. • This option can also be specified with the `host` option.

-primary (/primary)

Table 3-42 -primary (/primary) Argument on page 3-40 describes the `-primary (/primary)` argument.

Table 3-42 -primary (/primary) Argument

Item	Details
Purpose	Displays the host name or IP address of the server in which the authentication data is registered.
Required value	None
Required/ optional	Optional
Notes	None

-print (/print)

Table 3-43 -print (/print) Argument on page 3-40 describes the `-print (/print)` argument.

Table 3-43 -print (/print) Argument

Item	Details
Purpose	For the `hcmds64intg` command: Displays information about the registered Hitachi Command Suite product. For the `hcmds64prmset` command: Displays information about the server that manages user accounts.

Item	Details
	For the `hcmds64chgurl` command: Displays a list of URLs and programs that are currently registered.
Required value	None
Required/ optional	Optional This argument is required when displaying the registered product names.
Notes	For the `hcmds64intg` command: If you execute the `hcmds64intg` command with this option specified, the following information is displayed: • Host name or IP address of the server in which the authentication data is registered. • Registered product names. For the `hcmds64prmset` command: If you execute the `hcmds64prmset` command with this option specified, the following information is displayed: • Role of the server that executes the command (primary server or secondary server) • Host name or IP address of the server that manages user accounts. • Port number of the server that manages user accounts.

-removecluster (/removecluster)

Table 3-44 -removecluster (/removecluster) Argument on page 3-41
describes the `-removecluster` (`/removecluster`) argument.

Table 3-44 -removecluster (/removecluster) Argument

Item	Details
Purpose	Migrates from a cluster environment to a non-cluster environment.
Required value	None
Required/ optional	Optional
Notes	In the Tuning Manager server, you cannot use the `hcmds64dbclustersetup` command with the `removecluster` option specified to migrate a cluster environment to a non-cluster environment. For details about how to migrate a cluster environment to a non-cluster environment, see the *Tuning Manager Installation Guide*.

-restore (/restore) [backup-file-name]

Table 3-45 -restore (/restore) Argument on page 3-42 describes the `-restore` (`/restore`) argument.

Table 3-45 -restore (/restore) Argument

Item	Details
Purpose	Specifies the storage destination of backup data of Hitachi Command Suite products.
Required value	Name of the file that has been backed up by the `hcmds64backups` command
Required/ optional	Required *backup-file-name* can be omitted.
Notes	If *backup-file-name* is omitted, the following file is specified: *directory-specified-when-the-hcmds64backups-command-is-executed*`/database/backup.hdb`

-server (/server) service-name

Table 3-46 -server (/server) Argument on page 3-42 describes the `-server` (`/server`) argument.

Table 3-46 -server (/server) Argument

Item	Details
Purpose	Specifies the Hitachi Command Suite service name.
Required value	`TuningManager`
Required/ optional	Optional
Notes	None

-setprimary(/setprimary)

Table 3-47 -setprimary(/setprimary) Argument on page 3-42 describes the `-setprimary` (`/setprimary`) argument.

Table 3-47 -setprimary(/setprimary) Argument

Item	Details
Purpose	Changes the server that executes the command to the primary server.
Required value	None
Required/ optional	Required
Notes	None

-sslport (/sslport)

Table 3-48 -sslport (/sslport) Argument on page 3-43 describes the -sslport (/sslport) argument.

Table 3-48 -sslport (/sslport) Argument

Item	Details
Purpose	Specifies the port number (SSL) of the HBase 64 Storage Mgmt Web Service of the server that manages user accounts.
Required value	Port number (SSL) of the HBase 64 Storage Mgmt Web Service of the server on which Device Manager is installed.
Required/ optional	Required
Notes	• User accounts are managed by Common Component on a server on which Device Manager is installed. • This option can also be specified with the host option.

-start (/start)

Table 3-49 -start (/start) Argument on page 3-43 describes the -start (/start) argument.

Table 3-49 -start (/start) Argument

Item	Details
Purpose	For the hcmds64srv command: Starts HiRDB and the service specified with the server option. For the hcmds64dbsrv command: Starts HiRDB.
Required value	None
Required/ optional	Required
Notes	None

-starttype (/starttype) startup-type

Table 3-50 -starttype (/starttype) Argument on page 3-44 describes the -starttype (/starttype) argument.

Table 3-50 -starttype (/starttype) Argument

Item	Details
Purpose	Specifies the startup type of the service specified with the `server` option. If the `all` option is specified, the startup type is applied to all the installed Hitachi Command Suite services.
Required value	• Automatic startup: `auto` • Manual startup: `manual`
Required/ optional	Required
Notes	None

-status (/status)

Table 3-51 -status (/status) Argument on page 3-44 describes the `-status` (`/status`) argument.

Table 3-51 -status (/status) Argument

Item	Details
Purpose	Checks the operating statuses of the service specified with the `server` option and of HiRDB.
Required value	None
Required/ optional	Required
Notes	None

-statusall (/statusall)

Table 3-52 -statusall (/statusall) Argument on page 3-44 describes the `-statusall` (`/statusall`) argument.

Table 3-52 -statusall (/statusall) Argument

Item	Details
Purpose	Checks the operating status of the service specified in the `server` option, the HiRDB operating status, and whether the services of the Hitachi Command Suite registered with the Common Component are active.
Required value	None
Required/ optional	Optional
Notes	None

-stop (/stop)

Table 3-53 -stop (/stop) Argument on page 3-45 describes the -stop (/stop) argument.

Table 3-53 -stop (/stop) Argument

Item	Details
Purpose	For the hcmds64srv command: Stops HiRDB and the service specified with the server option. For the hcmds64dbsrv command: Stops HiRDB.
Required value	None
Required/ optional	Required
Notes	None

-trans (/trans) backup-data

Table 3-54 -trans (/trans) Argument on page 3-45 describes the -trans (/trans) argument.

Table 3-54 -trans (/trans) Argument

Item	Details
Purpose	Specifies backup data that was exported by using the hcmds64dbtrans command.
Required value	Specify either the work directory to be specified for the workpath option of the hcmds64dbtrans command or specify the archive file name to be specified for the file option.
Required/ optional	Required
Notes	None

-type (/type) product-name

Table 3-55 -type (/type) Argument on page 3-45 describes the -type (/type) argument.

Table 3-55 -type (/type) Argument

Item	Details
Purpose	Specifies the name of the target product.
Required value	When the target product is the Tuning Manager server: TuningManager

Item	Details
	When the target product is Performance Reporter: `PerformanceReporter`
Required/ optional	Optional • Required for the `hcmds64db` command. • Required for the `hcmds64dbtrans` command to import information. • Required for the `hcmds64intg` command to delete information.
Notes	If you omit the `type` option for the `hcmds64chgurl` command, URLs for all products that are installed on the same host will be changed.

-types (/types) product-name

Table 3-56 -types (/types) Argument on page 3-46 describes the `-types` (`/types`) argument.

Table 3-56 -types (/types) Argument

Item	Details
Purpose	Specifies the names of products for which log files are to be collected if only log files for specific products can be collected for some reason, such as a failure.
Required value	To collect log files for the Tuning Manager server, specify `TuningManager` as a product name.
Required/ optional	Optional
Notes	When specifying multiple product names, separate the names with a space. If the `types` option is not specified, log files for all the products registered in Common Component are collected. If a product (Hitachi File Services Manager or Hitachi Storage Navigator Modular 2) that uses 32-bit Common Component is installed on the same host, log files for the product are also collected. If you specify both the `types` option and the `logtypes` option, always specify `log` in the `logtypes` option.

-user (/user)

Table 3-57 -user (/user) Argument on page 3-46 describes the `-user` (`/user`) argument.

Table 3-57 -user (/user) Argument

Item	Details
Purpose	Specifies the user ID for connecting to the server in which the authentication data is registered.

Item	Details
Required value	User ID of a user who has Admin (user management) permission
Required/ optional	For the `hcmds64intg`, `hcmds64ldapuser`, `hcmds64radiussecret` and `hcmds64unlockaccount` commands: Optional For commands other than the above commands: Required If you execute a command without specifying this option, you will be prompted to specify a user ID.
Notes	None

-user (/user) user-ID

Table 3-58 -user (/user) Argument on page 3-47 describes the `-user (/user)` argument.

Table 3-58 -user (/user) Argument

Item	Details
Purpose	Specifies the user ID that is used for registering or deleting an application link defined by a user.
Required value	User ID of a user who has the Admin (application management) permission
Required/ optional	Required
Notes	None

-workpath (/workpath)

Table 3-59 -workpath (/workpath) Argument on page 3-47 describes the `-workpath (/workpath)` argument.

Table 3-59 -workpath (/workpath) Argument

Item	Details
Purpose	Specifies the directory that is temporarily used for exporting or importing.
Required value	Work directory name
Required/ optional	Required
Notes	If you specify the `file` option, specify an empty directory for the work directory. If you do not specify the `file` option, the data stored in the work directory will be imported.

4

Performance Reporter Commands

This chapter describes the commands and syntax used for defining Performance Reporter reports and for recording and saving the Performance database. Command formats and syntax are the same in Windows, and Linux.

In Windows, enter commands from the command prompt. In Linux, execute commands from the control terminal.

Reviewing Performance Reporter Commands

Table 4-1 Performance Reporter Commands on page 4-2 lists the commands provided by Performance Reporter.

Table 4-1 Performance Reporter Commands

Command Name	Description	Required User Access		Related Section
		Windows	Linux	
jpcrdef output	Outputs existing report definition information.	Member of the Administrators group	root user	jpcrdef output on page 4-11
jpcrdef create	Registers new report definitions.	Member of the Administrators group	root user	jpcrdef create on page 4-15
jpcrdef delete	Deletes existing report definitions.	Member of the Administrators group	root user	jpcrdef delete on page 4-44
jpcasrec output	Outputs method of report definition information in the Performance database.	Member of the Administrators group	root user	jpcasrec output on page 4-47
jpcasrec update	Changes definition information of Performance database recording methods.	Member of the Administrators group	root user	jpcasrec update on page 4-49
jpcaspsv output[#1]	Outputs definition information of data retention in the Store database.	Member of the Administrators group	root user	jpcaspsv output on page 4-57
jpcaspsv update[#1]	Changes definition of data retention in the Store database.	Member of the Administrators group	root user	jpcaspsv update on page 4-60
jpcrpt	Outputs the report to CSV or HTML files.	Member of the Administrators group	root user	jpcrpt on

Command Name	Description	Required User Access		Related Section
		Windows	Linux	
				page 4-74
jpcprras	Extracts Performance Reporter materials.	Member of the Administrators group	root user	jpcprras on page 4-103
jpcpragtsetup	Sets the Agent icon.	Member of the Administrators group	root user	jpcpragtsetup on page 4-104
jpcahprp output	Outputs definition information for a specified Action Handler to a file in XML format.	Member of the Administrators group	root user	jpcahprp output on page 4-105
jpcahprp update	Modifies Action Handler definition information.	Member of the Administrators group	root user	jpcahprp update on page 4-107
jpctgprp output	Collects Trap Generator definition information and outputs it to a file in XML format.	Member of the Administrators group	root user	jpctgprp output on page 4-115
jpctgprp create	Adds an SNMP host name to Trap Generator definition information.	Member of the Administrators group	root user	jpctgprp create on page 4-116
jpctgprp delete	Deletes an SNMP host name from Trap Generator definition information.	Member of the Administrators group	root user	jpctgprp delete on page 4-122

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.

Note: ***1:*** This command cannot be used for Hybrid Store operations.

Understanding the Command Line Format

Prerequisites

The prerequisites for executing commands are as follows:

- Collection Manager must be operating during command execution.
- When commands related to the Performance database and commands for outputting reports are executed, the corresponding Agent must be operating.
- Make sure that <logging>, and <vsa> are specified in the file `config.xml`. These tags are required. If these items are not specified, code them by referring to the examples for the initialization settings file in the *Tuning Manager Server Administration Guide*.
- To execute a command that specifies a parameter file as the argument, you must create the parameter file to be specified in advance.

  For details about how to create a parameter file, see Creating a Parameter File on page 4-4. For details about the parameters to be specified in the parameter file, see the *Parameter file format* subsection of each command.

Creating a Parameter File

An XML-file parameter can be specified in a command argument. The following describes how to create parameter files to be specified in commands:

Notes before creating parameter files

Before creating a parameter file, check the definition name of the target report and the path of the directory that stores the definition name.

You can check this information by using the report window of Performance Reporter. For details on how to display the report window, see the sections that describe displaying reports in *Tuning Manager Server User Guide*.

The following examples show the correspondence between the information to be checked in the window and the information to be set in the parameter file.

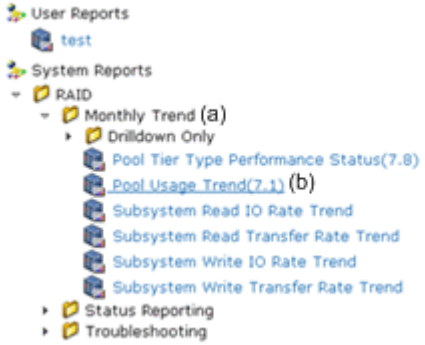


Figure 4-1 Example of the correspondence between the information in the report window and the settings of the parameter file (window)

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE pr-cli-parameters SYSTEM "rpt_params.dtd">
<pr-cli-parameters ver="0200">
  <launch-report>
    <agent>DAIRAID700 53040[vmst1vm02]</agent>
    <report-definition name="Pool Usage Trend(7.1)" parent-folder="/RAID/Monthly Trend">
      <launch-options>
        <indication-settings maximum-number-of-records="1440">
          <report-interval>HOUR</report-interval>
          <start-time>2007 08 10 12:00</start-time>
          <end-time>2007 08 11 12:00</end-time>
        </indication-settings>
      </launch-options>
      <html-output>
        <show-graph>
          <graph-options zoom-scale = "100">
            <show-grid/>
            <vertical-axis minvalue="0" maxvalue="100"/>
          </graph-options>
        </show-graph>
        <show-table/>
      </html-output>
    </report-definition>
  </launch-report>
</pr-cli-parameters>
```

(b) (a)

Figure 4-2 Example of the correspondence between the information in the report window and the settings of the parameter file (the parameter file for the jpcrpt command)

For more information, also refer to the *Sample Parameter File* subsection of each command.

Parameter file format

The following describes the parameter file format to be specified for command arguments:

- 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.
  Table 4-2 pr-cli-parameters on page 4-6 explains the pr-cli-parameters.
  For parameters that specify tags other than the **<pr-cli-parameters>** tag, see *Parameter file format* of each command.

Table 4-2 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 Table 4-5 DTD Files Supported by the Commands on page 4-9.
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 Performance 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.
	launch-registration-report	Root tag for the definition information of the registered report output
	launch-combination-bookmark	Root tag for the definition information of the combination report output
	action-handler-definition	Root tag for Action Handler definition information
	trap-generator-definition	Root tag for Trap Generator definition information

- 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 control 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. However, you do not have to specify the path of the directory that stores the DTD file.

  The following is an example of the DOCTYPE declaration:

  <!DOCTYPE pr-cli-parameters SYSTEM "DTD-file-name">
- 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 (/).

  For root directory **/**, specify `Bookmarks` for registered reports and combination reports, and specify `User Reports` and `System Reports` for other reports.
- A parameter file error occurs if a value is specified that is outside of the range contained in the subsection Parameter file format.
- Save the created parameter file with the encoding that is specified in the XML declaration.

Command Output Format

Detailed information regarding command processing is output to the standard output, standard error output, and the trace log file. Table 4-3 Detailed Output Destinations on page 4-7 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 settings file (`config.xml`): *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 **jpcrpt** command outputs the following file to the log output directory specified in `config.xml`:

Item	Output Destination
	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. 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.

The following example 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.

Example Output of the Execution Result

```
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
```

Table 4-4 Detailed Output Results on page 4-8 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

Item	Output Destination
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.

DTD files supported by commands

Table 4-5 DTD Files Supported by the Commands on page 4-9 lists the DTD files that are supported by the commands.

Table 4-5 DTD Files Supported by the Commands

Command Name	DTD File Name	DTD File Compatible Versions
jpcrdef output	rdef_output_params.dtd	0100
jpcrdef create	rdef_create_params.dtd	0100, 0110
	rdef_params.dtd	0100, 0110
jpcrdef delete	rdef_delete_params.dtd	0100
jpcasrec update	asrec_params.dtd	0100
jpcasrec output		
jpcaspsv update	aspsv_params.dtd	0100, 0110
jpcaspsv output		
jpcrpt	rpt_params.dtd	0100, 0110, 0200
jpcahprp update	act_params.dtd	0100
jpcahprp output		
jpctgprp create	trap_params.dtd	0100
jpctgprp delete		
jpctgprp output		

Viewing Performance Reporter Command 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.

Sample Help Output (jpcrdef -h)

```
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'
         -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
```

Executing Commands Simultaneously

Table 4-6 Executing Commands Simultaneously on page 4-10 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 4-6 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 (see ***Note***)	No
jpcahprp	output	No	No
	update		

Command	Subcommand	Concurrent Execution	Parallel Execution
jpctgprp	output	No	No
	create		
	delete		

Note: If you execute multiple `jpcrpt` commands simultaneously for the same Agent or if you execute a `jpcrpt` command for the Agent whose report is displayed, processing is not performed until the previous report output request has been completed.
Also, you can execute a maximum of 5 processes of the `jpcrpt` command simultaneously (although it is possible to execute 6 or more processes, part of the log data might be lost). Even when executing 5 or fewer processes, the `jpcrpt` command might end abnormally due to insufficient memory because this command uses a large amount of memory. Therefore, if you need to output multiple reports, we recommend that you execute the command sequentially.

List of Commands

The following describes the overview of the commands of Performance Reporter. For details on the arguments of each command, see Reviewing Command Arguments on page 4-125.

Reporting Commands

jpcrdef output

Format

```
jpcrdef output      -o output-file
                    [ -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 4-9 Performance Reporter Return Values on page 4-15.

Parameter file format

Table 4-7 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 4-8 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	

Type	Description	
Subelements	product-id	Ignored even if specified.
	report-type	
	Record	
	indication-settings	
	view-type	
	Drilldown	

The following example shows a sample parameter file.

Sample Parameter File (jpcrdef Output)

```
<?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="/MyReport"/>
      <report-definition name="CPU Usage Top 10 Processes"
                parent-folder="/MyReport" read-only="FALSE"/>
      <report-definition
                parent-folder="/Windows/Operating System"/>
   </report-definitions>
</pr-cli-parameters>
```

The following example shows the DTD file (`rdef_output_params.dtd`) for the parameter file.

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

```
<!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">
```

Note:

- 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

The following example shows a standard output when ten report definitions and five report definition directories were specified, but three of the report definitions caused an error:

Sample Standard Output (jpcrdef Output)

```
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
```

The output parameter file can be specified as the input file when a report definition is generated. 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 jpcrdef create on page 4-15.

jpcrdef create

Format

```
jpcrdef create      [ -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 4-9 Performance Reporter Return Values on page 4-15 describes the return values.

Table 4-9 Performance Reporter Return Values

Return Value	Meaning
0	Normal end
1	Error in the command line format.
2	The OS user does not have execution permission for the command.
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.
11	Authentication of Collection Manager failed, or the user specified for authentication does not have execution permission.
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 4-10 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 4-11 report-definition

Type	Description	
Definition	Specifies one report definition	
Value that can be specified	None	
Omission	Not allowed	
Attributes	name	Specifies 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. Space characters specified before or after the report definition name are deleted when the name is registered.
	parent-folder	Specifies the directory in which to store the report definition for the name attribute. 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.

Type	Description
Element	Report-definitions
Subelements	product-id
	report-type
	Record
	indication-settings
	realtime-indication-settings
	view-type
	Drilldown

Table 4-12 product-id

Type	Description
Definition	Type of product for which report information is collected
Value that can be specified	Specifies the product code with the data model version added to the product ID. The product ID is an uppercase letter that identifies the Agent product. 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 C, Specifying a Service ID on page C-1. For the data model versions of the Agents, see Appendix B, Version Compatibility Between the Program and Data Model on page B-1. Agent for RAID version 8.0 with a product ID of D and a data model version of 8.6 has the product code of D8.6. 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.
Omission	Not allowed
Attributes	None
Element	report-definition
Subelements	None

Table 4-13 report-type

Type	Description
Definition	Specifies the report type.
Value that can be specified	None

Type	Description	
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 4-14 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 Allowable Record Attribute and Field Combinations on page 4-41).
Element	report-definition	
Subelements	Fields	
	condition-expression	

Table 4-15 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 4-16 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 Fields that Cannot Be Specified for Real-time Reports on page 4-43).	
Omission	Not allowed	
Attributes	table	To display a table, set this to TRUE, and set all others to FALSE. If you omit this attribute, it is set to FALSE.
	list	To display a list, set this to TRUE, and set all others to FALSE. If you omit this attribute, it is set to FALSE.
	graph	To display a graph, set this to TRUE, and set all others to FALSE. If you omit this attribute, it is set to FALSE. If TRUE is specified in the case of a text format field, an error occurs.
	display-name	Specify a user display name consisting of no more than 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 4-17 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

Type	Description
Subelements	And
	Or
	Expression

Table 4-18 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 details about the Manager name, see the explanation for records in the *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*. *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 ">". For a character string field, values are evaluated in ascending order of the ASCII codes (case sensitive). ["*value*"] Specify the value to be compared by enclosing the value in double quotation marks ("). You can specify integer or fractional values, or up to 2,048 bytes of double-byte and single-byte characters. 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. If you specify a character string, you can use wildcard characters. The wildcard characters that you can use are as follows: • *: Represents any character string consisting of zero or more characters. • ?: Represents any one character. • \: Handles the following asterisk (*), question mark (?), or backslash (\) as a normal character, not a wildcard character.

Type	Description
	For example, when `\*` is specified, the character is handled as an asterisk character (*).[#1] In addition, you cannot specify control characters, parentheses ((,)), square brackets ([,]), angle brackets (<, >), equal signs (=), double quotation marks ("), or single-byte spaces. Specify values according to the field format written in the following manuals: • *Tuning Manager Hardware Reports Reference* • *Tuning Manager Operating System Reports Reference* 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[#2] 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. *["Value"] or field:* • *When specifying a value on the right side:* For details about the value to be specified, see the sentence beginning with *["Value"]* written above in this table: • *When specifying a field on the right side:* Specify the field ID of a record, a DATETIME field or a key field. For details about the key fields, see the *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*.
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.
Element	condition-expression
	And

Type	Description
	Or
Subelements	None

Note: Do not specify more than 100 filter condition expressions. For details, see the *Tuning Manager User Guide*.

Note: ***1:***If a character string that contains a wildcard character is specified after a backslash (\) as a value, the condition is determined to be true if the value completely matches the character string stored in the specified field. For example, if `\*abc` is specified as the value, the condition is determined to be true whether `\*abc` or `*abc` is stored in the target field.

Note: ***2:***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 4-19 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 4-20 or

Type	Description
Definition	Specifies a logical OR operation on the items specified in expression.

Type	Description
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
Subelements	Expression
	And
	Or

Table 4-21 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 4-22 date-range

Type	Description
Definition	Specifies the report display period.

Type	Description
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 4-23 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 4-24 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.

Type	Description
Omission	Allowed (When omitted, the field in peak-time is not set.)
Attributes	None
Element	indication-settings
Subelements	None

Table 4-25 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`.
	`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 Display Conditions of Delta Values for Real-time Reports on page 4-42.
Element	`report-definition`	
Subelements	`refresh-interval display-by-ranking`	

Table 4-26 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

Type	Description	
		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 4-27 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 Parameter Combinations

Type	Description	
		that Can Be Specified for Real-time Reports on page 4-40.
	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 4-28 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 4-29 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 4-30 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 target to be reported is multiple lines of records or 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 4-31 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

Type	Description
Omission	Allowed (When omitted, graph-type is COLUMN.)
Attributes	None
Element	graph-properties
Subelements	None

Table 4-32 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 4-33 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 4-34 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

Type	Description
Element	axis-labels
Subelements	None

Table 4-35 data-label

Type	Description
Definition	Specifies the label display field. If you specify **single instance** for a record, **historical-single-agen**t 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 4-36 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 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

Type	Description
	• The RECORD_TIME field For a multi-instance record: • The field ID specified in the fields tag • The RECORD_TIME field • The unique key field of the record For details about the key fields, see the *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*.
Omission	Allowed (When omitted, data label 1 will not be set.)
Attributes	None
Element	data-label
Subelements	None

Table 4-37 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 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 key field of the record

Type	Description
	For details about the key fields, see the *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*.
Omission	Allowed (When omitted, data label 2 will not be set.)
Attributes	None
Element	data-label
Subelements	None

Table 4-38 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
Subelements	report-drilldown
	field-drilldown

Table 4-39 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 4-40 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.)

Type	Description
Attributes	**id** Specifies the field ID corresponding to the record specified in record. An error will occur if you use the same ID to specify the elements of ref-field more than once or omit this attribute.
Element	field-drilldown
Subelements	ref-report
	condition-expression

Table 4-41 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
	ref-bookmark

Table 4-42 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

Table 4-43 ref-bookmark

Type	Description	
Definition	Specifies a bookmark or a combination bookmark.	
Value that can be specified	None	
Omission	Allowed (When omitted, a drilldown target report will not be set.)	
Attributes	`pathname`	The folder path and the bookmark name are specified in *folder-path*`/`*bookmark-name* format. For *folder-path*, specify folder names starting from the root folder, and delimit each folder name by using a forward slash (`/`). If a folder name contains `\` or `/`, replace it with `\\` or `\/`, respectively. Example: To specify `CPU Trend` in the `My Bookmark` folder under the root folder: `/My Bookmark/CPU Trend` When multiple levels exist, specify a folder path by using folder names separated by `/` (for example, `/Folder1/Folder2...`). The folder name and bookmark can include 1 to 64 characters (not bytes). If a non-existent bookmark is specified, an error occurs. Note that the validity of the bookmark itself, such as the associated report definitions and Agents, is not checked.
Element	`report-drilldown`	
Subelements	None	

Note: When specifying this tag, set the `ver` attribute of `pr-cli-parameters` to `0110`.

The following example shows how to define a parameter file for a historical report.

Sample Parameter File (jpcrdef create) for Historical Reports

```
<?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 -->
```

The following example shows how to define a parameter file for a real-time report.

Sample Parameter File 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 -->
```

The following example shows the DTD file (`rdef_create_params.dtd`) that defines the parameter entries.

Sample DTD (rdef_create_params.dtd) File Defining 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|0110)             #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|ref-bookmark)*>
<!ELEMENT   ref-report EMPTY>
<!ATTLIST   ref-report
            pathname             CDATA            #REQUIRED>
<!ELEMENT   ref-bookmark EMPTY>
<!ATTLIST   ref-bookmark
            pathname           CDATA            #REQUIRED>
<!ELEMENT   field-drilldown      (ref-field*)>
<!ELEMENT   ref-field
            (ref-report,condition-expression?)>
<!ATTLIST   ref-field
            id                   CDATA            #REQUIRED>
```

Note:

- When registering a report that has the same name as the one that is already registered, an error occurs. If you want to register a report with the same name, you must delete the report by using the `jpcrdef delete` command.
- 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.
- Only report definitions that have been defined by the time the command is executed can be specified for a drilldown report. If an attempt is made to specify a report definition that does not exist, the KAVJK0125-E message is displayed and the operation fails.
- 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.

The following example shows how to specify the `<and>` and `<or>` tags.

Sample <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>
```

The following example shows how to specify the `<expression>` tag.

Sample <expression> Tag

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

- For details about the records, field names, and field data types that can be defined, see the *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*.
- 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 Parameter Combinations that Can Be Specified for Historical Reports on page 4-39, Table 4-45 Parameter Combinations that Can Be Specified for Real-time Reports on page 4-40, and Table 4-46 Allowable Record Attribute and Field Combinations on page 4-41 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

Report Type	Record Type	Field Data Type	Peak Time	Table	List	Graph	Display -Key
	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	Displa y-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

Report Type	Record Type	Field Data Type	Display by Ranking	Field Display Format			
				Table	List	Graph	Display-Key
		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 Filter Condition Set By time_t field: Set In Record on page 4-41 and Table 4-48 Filter Condition Set By time_t field: Set In Ref-Field on page 4-42 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 details 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 *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*.

Table 4-49 Display Conditions of Delta Values for Real-time Reports on page 4-42 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 might be some items that do not match those in the table. For details, see the *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*.

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 Fields that Cannot Be Specified for Real-time Reports on page 4-43 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
*xxxx*_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

The following example shows a standard output when an error occurs for one of three reports defined.

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

```
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/report-
definition-name3
```

```
error-cause
jpcrdef create disconnected at 20 03 2003 15:01:06.2
```

jpcrdef delete

Format

```
jpcrdef delete      [ -y ]
                    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. Multiple report definitions or report definition directories can be specified and batch deleted in a single parameter file.

Return Values

See Table 4-9 Performance Reporter Return Values on page 4-15.

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

Type	Description	
		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	

The following example shows how to specify a parameter file.

Sample Parameter File (jpcrdef delete)

```
<?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="/MyReport"/>
      <report-definition name="daily report"
                 parent-folder="/MyReport"
                 read-only="FALSE"/>
      <report-definition name=""
                 parent-folder="/MyReport/report1"/>
   </report-definitions>
</pr-cli-parameters>
```

The following example shows the DTD file (`rdef_delete_params.dtd`) that defines parameter entries.

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

```
<!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">
```

Note:

- 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

The following example shows a standard output when ten report definitions and five report definition directories were specified, but three of the report definitions caused an error:

Sample Standard Output (jpcrdef delete)

```
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
```

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

jpcasrec output

Format

```
jpcasrec output     -o output-file
                    service-ID
```

Function

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

Return Values

See Table 4-9 Performance Reporter Return Values on page 4-15.

Usage Example

The command outputs the definition information related to the recording method of the Performance 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

The example below shows a standard output. Execution results are displayed for service IDs specified in the arguments (OK or ERR).

Sample Standard Output (jpcasrec output)

```
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
```

Sample DTD (jpcasrec output) File Defining Parameter Entries

```
<?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>
```

jpcasrec update

Format

```
jpcasrec update     input-file
```

Function

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

Return Values

See Table 4-9 Performance Reporter Return Values on page 4-15.

Parameter file format

Table 4-53 agent-store-db-record-definition

Type	Explanation
Definition	Root tag for changing the Performance 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 details about the product ID, see Appendix C, Specifying a Service ID on page C-1. 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 described in the *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*.
Element	Service
Subelements (When a subelement is omitted, the corresponding item is not updated. When the sub-element is specified, specify it in the order above.)	log (Can be specified only once for each record, and can be omitted.)
	collection-interval (Can be specified only once for each record, and can be omitted.)
	collection-offset (Can be specified only once for each record, and can be omitted.)
	logif (Can be specified only once for each record, and can be omitted.)

Table 4-56 log

Type	Explanation
Definition	Specifies whether to collect performance data to be stored in the Performance 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 ***Note*:** To display, on the Tuning Manager server, the performance data collected by the Agent, you need to specify, for this tag, a value that satisfies both of the following conditions: • Specification condition required by the Agent • Specification condition required by the Tuning Manager server For details about the specification condition required by the Agent, see the chapter that describes the format of record explanations in the *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*. For details about the specification condition required by the Tuning Manager server, see the chapter that describes preparing for polling in the *Tuning Manager Server Administration Guide*.
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. ***Note*:** To display, on the Tuning Manager server, the performance data collected by the Agent, you need to specify, for this tag, a value that satisfies both of the following conditions: • Specification condition required by the Agent • Specification condition required by the Tuning Manager server For details about the specification condition required by the Agent, see the chapter that describes the format of record explanations in the *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*. For details about the specification condition required by the Tuning Manager server, see the chapter that describes preparing for polling in the *Tuning Manager Server Administration Guide*.
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.) ***Note*:** To display, on the Tuning Manager server, the performance data collected by the Agent, you need to specify, for this tag, a value that satisfies both of the following conditions: • Specification condition required by the Agent • Specification condition required by the Tuning Manager server For details about the specification condition required by the Agent, see the chapter that describes the format of record explanations in the *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*.

Type	Explanation
	For details about the specification condition required by the Tuning Manager server, see the chapter that describes preparing for polling in the *Tuning Manager Server Administration Guide*.
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 Performance database.
Value that can be specified	None ***Note*:** To display, on the Tuning Manager server, the performance data collected by the Agent, you need to specify, for this tag, a value that satisfies both of the following conditions: • Specification condition required by the Agent • Specification condition required by the Tuning Manager server For details about the specification condition required by the Agent, see the chapter that describes the format of record explanations in the *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*. For details about the specification condition required by the Tuning Manager server, see the chapter that describes preparing for polling in the *Tuning Manager Server Administration Guide*.
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
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 Performance database.

Type	Explanation
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 operands) 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 details about the Manager name, see the explanation for records in the *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*. *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 ">". For a character string field, values are evaluated in ascending order of the ASCII codes (case sensitive). *value* Use the field format described in the *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*. 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#1. See ***Note.*** Date (Time is fixed at `HH:mm:ss`.) You cannot specify control characters or any of the following characters: **comma (,), period (.) < > = ''**. If you specify a character string, you can use wildcard characters. The wildcard characters that you can use are as follows: • `*`: Represents any character string consisting of zero or more characters. • `?`: Represents any one character.

Type	Explanation
	• \: Handles the following asterisk (*), question mark (?), or backslash (\) as a normal character, not a wildcard character. For example, when * is specified, the character is handled as an asterisk character (*).#2
Omission	Not allowed
Attributes	None
Element	Logif
	And
	Or
Subelements	None

Note: ***1:***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.

Note: ***2:***If a character string that contains a wildcard character is specified after a backslash (\) as a value, the condition is determined to be true if the value completely matches the character string stored in the specified field. For example, if *abc is specified as the value, the condition is determined to be true whether *abc or *abc is stored in the target field.

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.)

Sample Parameter File (jpcasrec update)

```
<?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>
```

Sample DTD (jpcasrec update) File Defining the Parameter Entries

```
<!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))>
```

Note:

- To set up the specified values of each tag, see the explanation for records in the *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*.
- For details about the service IDs, record IDs, field names for each record ID, and range of values that can be specified, see Appendix C, Specifying a Service ID on page C-1, and the *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*.
- Different parameters can be modified for the service ID and the record ID. For details, see Appendix C, Specifying a Service ID on page C-1, and the *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*.
- 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 details, see Appendix C, Specifying a Service ID on page C-1, and the *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*.
- 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 Performance 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.

Sample Coding for the <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>
```

Sample Coding for the <expression> Tag

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

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 Performance database:

```
jpcasrec  update  asrec_update.xml
```

Output Example

The example below shows the standard output when three service IDs are specified and an error occurs for one of those service IDs. Execution results are displayed for each service ID that is specified in a service tag (OK or ERR).

Sample Standard Output (jpcasrec update)

```
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
```

jpcaspsv output

Format

```
jpcaspsv output     -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 4-9 Performance Reporter Return Values on page 4-15.

Note:

- When the Agent is used with Hybrid Store, this command cannot be used.
- For details about the service IDs that can be specified, see Appendix C, Specifying a Service ID on page C-1. 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.

The example below shows a standard output. Execution results are displayed for service IDs specified in the arguments (OK or ERR).

Sample Standard Output (jpcaspsv output)

```
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
```

Output file

The content of the output file differs depending on whether the Store database version is 1.0 or 2.0. Specifically, the output immediately under the service tag varies as shown in the following table.

Table 4-63 Difference in the Output Content Depending on Whether the Store Database Version Is 1.0 or 2.0

Tag immediately below Service	When the Store database version is 1.0	When the Store database version is 2.0
product-interval	Output	Not output

Tag immediately below Service	When the Store database version is 1.0	When the Store database version is 2.0
product-detail	Output	Not output
product-log	Output	Not output
ex-product-interval	Not output	Output
ex-product-detail	Not output	Output
ex-product-log	Not output	Output

Two output examples are shown below. The first example shows an output file when the Store database version is 1.0, and the second example shows an output file when the Store database version is 2.0.

Output File Example (When the Store Database Version Is 1.0)

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE pr-cli-parameters SYSTEM "aspsv_params.dtd">
<pr-cli- parameters ver="0110">
<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>
```

Output File Example (When the Store Database Version Is 2.0)

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE pr-cli-parameters SYSTEM "aspsv_params.dtd">
<pr-cli-parameters ver="0110">
<agent-store-db-preserve-definition>
    <service id="TS1host1">
        <ex-product-interval>
            <ex-interval-record id="PI">
                <minute-drawer-days period="10"/>
                <hour-drawer-days period="10"/>
                <day-drawer-weeks period="10"/>
                <week-drawer-weeks period="10"/>
                <month-drawer-months period="10"/>
                <!-- year-drawer-years period="10" -->
            </ex-interval-record>
            <ex-interval-record id="PI_LOGD">
                <minute-drawer-days period="10"/>
                <hour-drawer-days period="10"/>
                <day-drawer-weeks period="10"/>
                <week-drawer-weeks period="10"/>
                <month-drawer-months period="10"/>
                <!-- year-drawer-years period="10" -->
            </ex-interval-record>
        </ex-product-interval>
        <ex-product-detail>
            <ex-detail-record id="PD" period="10"/>
            <ex-detail-record id="PD_THRD" period="10"/>
            <ex-detail-record id="PD_ADRS" period="10"/>
            <ex-detail-record id="PD_PDI" period="10"/>
            <ex-detail-record id="PD_PEND" period="10"/>
        </ex-product-detail>
        <ex-product-log>
            <ex-log-record id="PL" period="10"/>
            <ex-log-record id="RM" period="10"/>
        </ex-product-log>
    </service>
</agent-store-db-preserve-definition>
</pr-cli-parameters>
```

jpcaspsv update

Format

```
jpcaspsv update     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 4-9 Performance Reporter Return Values on page 4-15.

Note: When the Agent is used with Hybrid Store, this command cannot be used.

Parameter file format

Table 4-64 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 4-65 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 details about product IDs, see Appendix C, Specifying a Service ID on page C-1. 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.)
	ex-product-interval (Can be specified only once for each service. This setting can be omitted.)
	ex-product-detail (Can be specified only once for each service. This setting can be omitted.)
	ex-product-log (Can be specified only once for each service. This setting can be omitted.)

Table 4-66 product-interval

Type	Explanation
Definition	Specifies the PI record data retention period. Store database version 1.0 is a prerequisite for the target Store database.
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 4-67 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 4-68 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 4-69 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 4-70 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

Type	Explanation
	year: 1 year
Omission	Allowed (When omitted, hour-drawer is not modified.)
Attributes	None
Element	product-interval
Subelements	None

Table 4-71 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 4-72 product-detail

Type	Explanation
Definition	Specifies the number of PD records retained. Store database version 1.0 is a prerequisite for the target Store database.
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 4-73 detail-record

Type	Explanation
Definition	Specifies the maximum number of PD records that can be retained.
Value that can be specified	None

Type	Explanation
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 4-74 product-log

Type	Explanation
Definition	Specifies the upper limit of the number of PL records that can be retained. Store database version 1.0 is a prerequisite for the target Store database.
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 for each PL record. This setting can be omitted.)

Table 4-75 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

Table 4-76 ex-product-interval

Type	Explanation
Definition	Specifies the PI record data retention period. Store database version 2.0 is a prerequisite for the target Store database.

Type	Explanation	
Value that can be specified	None	
Omission	Allowed	When omitted, `ex-product-interval` is not modified.
Attributes	None	
Element	service	
Subelements	ex-interval-record (Can be specified only once for each PI record. This setting can be omitted.)	

Note: When specifying this tag, set the `ver` attribute of `pr-cli-parameters` to `0110`.

Table 4-77 ex-interval-record

Type	Explanation	
Definition	Specifies the PI record data retention period.	
Value that can be specified	None	
Omission	Allowed	When omitted, `ex-interval-record` is not modified.
Attributes	`id`	PI record ID (Cannot be omitted.) For details about the PI record ID, see the chapter that explains records in the *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*.
Element	ex-product-interval	
Subelements (When the sub-element is specified, specify it in the order shown)	minute-drawer-days (Can be specified only once for each `ex-interval-record`. This setting can be omitted.)	
	hour-drawer-days (Can be specified only once for each `ex-interval-record`. This setting can be omitted.)	
	day-drawer-weeks (Can be specified only once for each `ex-interval-record`. This setting can be omitted.)	
	week-drawer-weeks (Can be specified only once for each `ex-interval-record`. This setting can be omitted.)	
	month-drawer-months (Can be specified only once for each `ex-interval-record`. This setting can be omitted.)	

Table 4-78 minute-drawer-days

Type	Explanation
Definition	Specifies the PI record data retention period in minutes.

Type	Explanation	
	Specify the value as a number of days. The maximum value that can be specified is 366 days (equivalent to 1 year).	
Value that can be specified	None	
Omission	Allowed	When omitted, `minute-drawer-days` is not modified.
Attributes	period	0-366 (Cannot be omitted.)
Element	ex-interval-record	
Subelements	None	

Table 4-79 hour-drawer-days

Type	Explanation	
Definition	Specifies the PI record data retention period in hours. Specify the value as a number of days. The maximum value that can be specified is 366 days (equivalent to 1 year).	
Value that can be specified	None	
Omission	Allowed	When omitted, `hour-drawer-days` is not modified.
Attributes	period	0-366 (Cannot be omitted.)
Element	ex-interval-record	
Subelements	None	

Table 4-80 day-drawer-weeks

Type	Explanation	
Definition	Specifies the PI record data retention period in days. Specify the value as a number of weeks. The maximum value that can be specified is 522 weeks (equivalent to 10 years).	
Value that can be specified	None	
Omission	Allowed	When omitted, `day-drawer-weeks` is not modified.
Attributes	period	0-522 (Cannot be omitted.)
Element	ex-interval-record	
Subelements	None	

Table 4-81 week-drawer-weeks

Type	Explanation
Definition	Specifies the PI record data retention period in weeks.

Type	Explanation	
	Specify the value as a number of weeks. The maximum value that can be specified is 522 weeks (equivalent to 10 years).	
Value that can be specified	None	
Omission	Allowed	When omitted, `week-drawer-weeks` is not modified.
Attributes	period	0-522 (Cannot be omitted.)
Element	ex-interval-record	
Subelements	None	

Table 4-82 month-drawer-months

Type	Explanation	
Definition	Specifies the PI record data retention period in months. Specify the value as a number of months. The maximum value that can be specified is 120 months (equivalent to 10 years).	
Value that can be specified	None	
Omission	Allowed	When omitted, `month-drawer-months` is not modified.
Attributes	period	0-120 (Cannot be omitted.)
Element	ex-interval-record	
Subelements	None	

Table 4-83 ex-product-detail

Type	Explanation	
Definition	Specifies the PD record data retention period. Store database version 2.0 is a prerequisite for the target Store database.	
Value that can be specified	None	
Omission	Allowed	When omitted, `ex-product-detail` is not modified.
Attributes	None	
Element	service	
Subelements	ex-detail-record (Can be specified only once for each PD record. This setting can be omitted.)	

Note: When specifying this tag, set the `ver` attribute of `pr-cli-parameters` to `0110`.

Table 4-84 ex-detail-record

Type	Explanation	
Definition	Specifies the PD record data retention period. Specify the value as a number of days. The maximum value that can be specified is 366 days (equivalent to 1 year).	
Value that can be specified	None	
Omission	Allowed	When omitted, `ex-detail-record` is not modified.
Attributes	id	PD record ID (Cannot be omitted.) For details about the PD record ID, see the chapter that explains records in the *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*.
	period	0-366 (Cannot be omitted.)
Element	ex-product-detail	
Subelements	None	

Table 4-85 ex-product-log

Type	Explanation	
Definition	Specifies the PL record data retention period. Store database version 2.0 is a prerequisite for the target Store database.	
Value that can be specified	None	
Omission	Allowed	When omitted, `ex-product-log` is not modified.
Attributes	None	
Element	service	
Subelements	ex-log-record (Can be specified only once for each PL record. This setting can be omitted.)	

Note: When specifying this tag, set the `ver` attribute of `pr-cli-parameters` to `0110`.

Table 4-86 ex-log-record

Type	Explanation
Definition	Specifies the PL record data retention period. Specify the value as a number of days. The maximum value that can be specified is 366 days (equivalent to 1 year).
Value that can be specified	None

Type	Explanation	
Omission	Allowed	When omitted, `ex-log-record` is not modified.
Attributes	id	PL record ID (Cannot be omitted.) For details about the PL record ID, see the chapter that explains records in the *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*.
	period	0-366 (Cannot be omitted.)
Element	ex-product-log	
Subelements	None	

The following example shows coding in a parameter file:

Coding Example of a Parameter File (When the Store Database Version Is 1.0)

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE pr-cli-parameters SYSTEM "aspsv_params.dtd">
<pr-cli-parameters ver="0110">
<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>
```

Coding Example of a Parameter File (When the Store Database Version Is 2.0)

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE pr-cli-parameters SYSTEM "aspsv_params.dtd">
<pr-cli-parameters ver="0110">
<agent-store-db-preserve-definition>
    <service id="TS1host1">
        <ex-product-interval>
```

```
            <ex-interval-record id="PI">
                <minute-drawer-days period="10"/>
                <hour-drawer-days period="10"/>
                <day-drawer-weeks period="10"/>
                <week-drawer-weeks period="10"/>
                <month-drawer-months period="10"/>
            </ex-interval-record>
            <ex-interval-record id="PI_LOGD">
                <minute-drawer-days period="10"/>
                <hour-drawer-days period="10"/>
                <day-drawer-weeks period="10"/>
                <week-drawer-weeks period="10"/>
                <month-drawer-months period="10"/>
            </ex-interval-record>
        </ex-product-interval>
        <ex-product-detail>
            <ex-detail-record id="PD" period="10"/>
            <ex-detail-record id="PD_THRD" period="10"/>
            <ex-detail-record id="PD_ADRS" period="10"/>
            <ex-detail-record id="PD_PDI" period="10"/>
            <ex-detail-record id="PD_PEND" period="10"/>
        </ex-product-detail>
        <ex-product-log>
            <ex-log-record id="PL" period="10"/>
            <ex-log-record id="RM" period="10"/>
        </ex-product-log>
    </service>
</agent-store-db-preserve-definition>
</pr-cli-parameters>
```

The following example shows coding in a DTD file defining parameter entries:

Coding Example of a DTD File Defining Parameter Entries

```
<!ELEMENT pr-cli-parameters     (agent-store-db-preserve-definition)>
<!ATTLIST pr-cli-parameters     ver (0100|0110) #REQUIRED>
<!ELEMENT agent-store-db-preserve-definition  (service+)>
<!ELEMENT service               (product-interval?, product-detail?,
product-log?,
                                ex-product-interval?, ex-product-
detail?, ex-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>
<!ELEMENT ex-product-interval   (ex-interval-record*)>
<!ELEMENT ex-interval-record    (minute-drawer-days?, hour-drawer-
```

```
days?,
                                    day-drawer-weeks?, week-drawer-
weeks?, month-drawer-months?)>
<!ATTLIST ex-interval-record    id CDATA #REQUIRED>
<!ELEMENT minute-drawer-days  EMPTY>
<!ATTLIST minute-drawer-days    period CDATA #REQUIRED>
<!ELEMENT hour-drawer-days    EMPTY>
<!ATTLIST hour-drawer-days      period CDATA #REQUIRED>
<!ELEMENT day-drawer-weeks     EMPTY>
<!ATTLIST day-drawer-weeks       period CDATA #REQUIRED>
<!ELEMENT week-drawer-weeks    EMPTY>
<!ATTLIST week-drawer-weeks      period CDATA #REQUIRED>
<!ELEMENT month-drawer-months   EMPTY>
<!ATTLIST month-drawer-months     period CDATA #REQUIRED>
<!ELEMENT ex-product-detail     (ex-detail-record*)>
<!ELEMENT ex-detail-record      EMPTY>
<!ATTLIST ex-detail-record      id CDATA #REQUIRED>
<!ATTLIST ex-detail-record      period CDATA #REQUIRED>
<!ELEMENT ex-product-log        (ex-log-record*)>
<!ELEMENT ex-log-record         EMPTY>
<!ATTLIST ex-log-record         id CDATA #REQUIRED>
<!ATTLIST ex-log-record         period CDATA #REQUIRED>
```

Note:

- For details about the values specified for each tag, see the notes that describe how to set up the performance data recording method in the *Tuning Manager Agent Administration Guide*.
- For details about the service IDs and record IDs that can be specified, see Appendix C, Specifying a Service ID on page C-1.

  – 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.
- If the Store database version is 1.0, the `ex-product-interval`, `ex-product-detail`, and `ex-product-log` tags are ignored. If the Store database version is 2.0, the `product-interval`, `product-detail`, and `product-log` tags are ignored. Table 4-87 Differences in Processing Between Store Database Versions 1.0 and 2.0 on page 4-73 shows the differences in processing between Store database versions 1.0 and 2.0.
- If the `ex-product-interval`, `ex-product-detail`, or `ex-product-log` tag is used in a parameter file for which the `ver` attribute of the `pr-cli-parameters` tag is `0100`, updating of the target service results in an error. Table 4-88 Differences in Processing Between ver Attributes of the pr-cli-parameters Tag on page 4-73 shows the differences in processing between `ver` attributes of the `pr-cli-parameters` tag.

Table 4-87 Differences in Processing Between Store Database Versions 1.0 and 2.0

Tag Immediately Under the service Tag	When Store Database Version Is 1.0	When Store Database Version Is 2.0
product-interval	Valid	Invalid
product-detail	Valid	Invalid
product-log	Valid	Invalid
ex-product-interval	Invalid	Valid
ex-product-detail	Invalid	Valid
ex-product-log	Invalid	Valid

Table 4-88 Differences in Processing Between ver Attributes of the pr-cli-parameters Tag

Tag Immediately Under the service Tag	When the ver Attribute is 0100	When the ver Attribute is 0110
product-interval	Normal	Normal
product-detail	Normal	Normal
product-log	Normal	Normal
ex-product-interval	Error	Normal
ex-product-detail	Error	Normal
ex-product-log	Error	Normal

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

The example below shows a standard output format when three service IDs are specified and one resulted in error. Execution results are displayed for each service ID that is specified in a service tag (OK or ERR).

Sample DTD (jpcaspsv update)

```
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
```

Format

```
jpcrpt                -o output-file
                      [ -mx maximum-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 in CSV format or HTML 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. To output a file in HTML format, you must specify the `html-output` tag in the input file.

You can specify one report in one parameter file. When the report to be output is a real-time report and you output it in CSV format, data is added at the end of the output file for the number of updates specified in the `rc` option at the update interval specified in the `ri` option. When you output a report in HTML format, an HTML file is output with the latest data available at the time that the command is executed. After the HTML file is output, data is not updated. When you specify that the report is to be output in HTML format, the `rc` option and the `ri` option are ignored if specified.

If you output a report containing a large amount of data in HTML format, there may not be enough memory and the report may not be displayed. In such cases, calculate the amount of memory necessary for outputting the data in HTML format using the `jpcrpt` command, and expand the heap size for Java if necessary and redisplay the report. For estimating the amount of memory necessary for outputting the data in HTML format using the `jpcrpt` command, see the *Tuning Manager Agent Administration Guide*.

If you specify multiple Agents for a single-Agent report, an error occurs.

Return values

Table 4-89 Return Values

Return Value	Meaning
0	Normal end
1	The command line format, option is invalid, and option value format are invalid.

Return Value	Meaning
2	The OS user does not have execution permission for the command.
4	An option error occurred in the command line. The range of the `-rc` or `-ri` option is invalid.
5	A parameter cannot be interpreted due to nonconformance with the DTD.
6	The value specified in the DTD file is invalid.
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 4-90 launch-report

Type	Explanation
Definition	Specifies the combination of report definitions and Agents for output of a report.
Value that can be specified	None
Omission	Allowed (`launch-report`, `launch-registration-report`, or `launch-combination-bookmark` must be specified.)
Attributes	None
Element	pr-cli-parameters
Subelements	agent (The element can be specified more than once.)
	report-definition

Table 4-91 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 a service ID of the Agent's Agent Collector service. For the first digit, specify the product ID of the desired Agent. For details about product IDs, see Appendix C, Specifying a Service ID on page C-1. For the second digit, specify `A` (for Agent Collector). If you specify a non-existent service ID or a service ID with multiple product IDs, an error occurs. When you specify multiple service IDs, the first service ID takes precedence. If you specify multiple service 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`
Subelements	None

Table 4-92 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. An error will occur if this is omitted.
	`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.

Type	Explanation
Element	`launch-report`
Subelements	`launch-options` (Can be specified only once per `report-definition` or can be omitted.)
	`html-output` (Can be specified only once per `report-definition` or can be omitted.)

Table 4-93 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`, `registration-report-definition`
Subelements	`indication-settings` (Can be specified only once per `launch-options` or can be omitted.)
	`realtime-indication-settings` (Can be specified only once per `launch-options` or can be omitted.)
	`expression-values` (Can be specified only once per `launch-options` or can be omitted.)

Table 4-94 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.

Type	Explanation	
		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` (Can be specified only once per `indication-settings` or can be omitted.)	
	`report-interval` (Can be specified only once per `indication-settings` or can be omitted.)	
	`start-time` (Can be specified only once per `indication-settings` or can be omitted.)	
	`end-time` (Can be specified only once per `indication-settings` or can be omitted.)	
	`peak-time` (Can be specified only once per `indication-settings` or can be omitted.)	

Table 4-95 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`
Omission	Allowed (report definition value are applied.)
Attributes	None
Element	`indication-settings`, `combination-indication-settings`
Subelements	None

Table 4-96 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` If you specify this parameter when you output a report or a registered report, and the records in the report definition are not PI records, an error occurs. If you specify this parameter for a combination report, no error occurs and only the PI records of the records to be output reference this value. When `peak time` is set in the report definition, `peak time` is invalidated for any value you specify other than `HOUR`.
Omission	Allowed (report definition value are applied.)
Attributes	None
Element	`indication-settings`, `combination-indication-settings`
Subelements	None

Table 4-97 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. For details on the format, see Table 4-122 Input Formats for start-time, end-time, and baseline-start-time on page 4-100. Example 1 If you specify `pattern-yyyyMMdd` for the `-dateformat` argument, `space` for the `-dateseparator` argument, and `MINUTE` for `report-interval`, then `start-time` is specified in the *YYYYΔMMΔDDΔhh:mm* format (YYYY = year, MM = month, DD = day, hh = hour, mm = minute). Example 2 If you specify `pattern-yyyyMMdd` for the `-dateformat` argument, `slash` for the `-dateseparator` argument, and `MINUTE` for `report-interval`, then `start-time` is specified in the *YYYY/MM/DDΔhh:mm* format (YYYY = year, MM = month, DD = day, hh = hour, mm = minute). Example 3

Type	Explanation
	If you specify pattern-yyyyMMdd for the -dateformat argument, hyphen for the -dateseparator argument, and MINUTE for report-interval, then start-time is specified in the *YYYY-MM-DDΔhh:mm* format (YYYY = year, MM = month, DD = day, hh = hour, mm = minute). Example 4 If you specify pattern-yyyyMMdd for the -dateformat argument, period for the -dateseparator argument, and MINUTE for report-interval, then start-time is specified in the *YYYY.MM.DDΔhh:mm* format (YYYY = year, MM = month, DD = day, hh = hour, mm = minute). 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, combination-indication-settings
Subelements	None

Table 4-98 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. For details on the format, see Table 4-122 Input Formats for start-time, end-time, and baseline-start-time on page 4-100. Example 1 If you specify pattern-yyyyMMdd for the -dateformat argument, space for the -dateseparator argument, and MINUTE for report-interval, then end-time is specified in the *YYYYΔMMΔDDΔhh:mm* format (YYYY = year, MM = month, DD = day, hh = hour, mm = minute). Example 2 If you specify pattern-yyyyMMdd for the -dateformat argument, slash for the -dateseparator argument, and MINUTE for report-interval, then end-time is specified in the *YYYY/MM/DDΔhh:mm* format (YYYY = year, MM = month, DD = day, hh = hour, mm = minute). Example 3

Type	Explanation
	If you specify `pattern-yyyyMMdd` for the `-dateformat` argument, `hyphen` for the `-dateseparator` argument, and `MINUTE` for `report-interval`, then `end-time` is specified in the *YYYY-MM-DDΔhh:mm* format (YYYY = year, MM = month, DD = day, hh = hour, mm = minute). Example 4 If you specify `pattern-yyyyMMdd` for the `-dateformat` argument, `period` for the `-dateseparator` argument, and `MINUTE` for `report-interval`, then `end-time` is specified in the *YYYY.MM.DDΔhh:mm* format (YYYY = year, MM = month, DD = day, hh = hour, mm = minute). 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`, `combination-indication-settings`
Subelements	None

Table 4-99 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 4-100 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.)	
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` (Can be specified only once per `realtime-indication-settings` or can be omitted.)	

Table 4-101 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.

Type	Explanation	
	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 4-102 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 (Can be specified more than once.)

Table 4-103 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. You can specify integer or fractional values, or up to 2,048 bytes of single-byte characters.

Type	Explanation	
	If you specify a character string, you can use wildcard characters. An asterisk (*), which represents all messages, is set as the wildcard by default. The wildcard characters that you can use are as follows: • `*`: Represents any character string consisting of zero or more characters. • `?`: Represents any one character. • `\`: Handles the following asterisk (*), question mark (?), or backslash (\) as a normal character, not a wildcard character. For example, when `\*` is specified, the character is handled as an asterisk character (*).#	
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	

Note: If a character string that contains a wildcard character is specified after a backslash (\) as a value, the condition is determined to be true if the value completely matches the character string stored in the specified field. For example, if `\*abc` is specified as the value, the condition is determined to be true whether `\*abc` or `*abc` is stored in the target field.

Table 4-104 html-output

Type	Explanation
Definition	Outputs a report in HTML format. For details on report formats, see *Output file* later in this section.

Type	Explanation
	A report in HTML format can show data in the following formats. Use the subelements to specify the display format. • Graph • Table If you do not specify any subelements, only the report definition name in the header is output.
Value that can be specified	None
Omission	When omitted, reports are output in CSV format.
Attributes	None
Element	`report-definition`, `registration-report-definition`
Subelements (see ***Note***)	`show-graph` (Can be specified only once per `html-output` or can be omitted.)
	`show-table` (Can be specified only once per `html-output` or can be omitted.)

Note:

- If you specify subelements, specify them in the order listed above.
- When specifying this tag, set the `ver` attribute of `pr-cli-parameters` to `0110` or a larger value.

Table 4-105 show-graph

Type	Explanation
Definition	Displays graphs in the report to be output. To display graphs, set graph display in the report definition and specify this tag. No error occurs if the report definition is invalid or the tag is invalid. However, no graph is displayed in the report. Use the subelement to specify the graph options in the report. If you do not specify a subelement, graphs are displayed with the default settings.
Value that can be specified	None
Omission	When omitted, no graph is displayed in the report.
Attributes	None
Element	`html-output`
Subelement	`graph-options` (Can be specified only once per `show-graph` or can be omitted.)

Table 4-106 graph-options

Type	Explanation	
Definition	Changes the settings of the graph options. Depending on the specified subelement, you can change the settings of the following items: • Display in 3D • Display of grids • Manual setting of the maximum and minimum values of the vertical axis	
Value that can be specified	None	
Omission	When omitted, 3D display is disabled, grids are not displayed, and the maximum and minimum values of the vertical axis are automatically set.	
Attributes	`zoom-scale`	Specify the magnification of graphs. You can select 100, 200, 400, 600, or 800. If you specify an invalid value or omit this attribute, an error occurs.
Element	`show-graph`	
Subelements (see ***Note***)	`show-3d` (Can be specified only once per `graph-options` or can be omitted.)	
	`show-grid` (Can be specified only once per `graph-options` or can be omitted.)	
	`vertical-axis` (Can be specified only once per `graph-options` or can be omitted.)	

Note: If you specify subelements, specify them in the order listed above.

Table 4-107 show-3d

Type	Explanation
Definition	Displays graphs in 3D. However, an error occurs if the graph type is line or area (stacked area).
Value that can be specified	None
Omission	When omitted, graphs are displayed in 2D.
Attributes	None
Element	`graph-options`
Subelement	None

Table 4-108 show-grid

Type	Explanation
Definition	Displays grids in graphs. However, an error occurs if the graph type is pie graph.
Value that can be specified	None
Omission	When omitted, grids are not displayed.
Attributes	None
Element	`graph-options`
Subelement	None

Table 4-109 vertical-axis

Type	Explanation	
Definition	Specifies the range of the vertical axis in a graph displayed in a report. However, an error occurs if the graph type is pie graph.	
Value that can be specified	None	
Omission	When omitted, the range of the vertical axis is automatically set based on the data in the graph.	
Attributes	`minvalue`	Use a real number to specify the minimum value for the vertical axis. You can specify a value from -1.797E308 to 1.797E308. If you omit this attribute or `minvalue` is greater than `maxvalue`, an error occurs.
	`maxvalue`	Use a real number to specify the maximum value for the vertical axis. You can specify a value from -1.797E308 to 1.797E308. If you omit this attribute or `minvalue` is greater than `maxvalue`, an error occurs.
Element	`graph-options`	
Subelement	None	

Table 4-110 show-table

Type	Explanation
Definition	Displays tables in the report to be output. To display tables, set table display in the report definition and specify this tag. No error occurs if the report definition is invalid or this tag is invalid. However, no table is displayed in the report.
Value that can be specified	None
Omission	When omitted, no table is displayed in the report.

Type	Explanation
Attributes	None
Element	`html-output`
Subelement	None

Table 4-111 launch-registration-report

Type	Explanation
Definition	Specifies a registered report under a bookmark (including combination bookmarks) in the Bookmarks tree.
Value that can be specified	None
Omission	Allowed (`launch-report`, `launch-registration-report`, or `launch-combination-bookmark` must be specified.)
Attributes	None
Element	`pr-cli-parameters`
Subelement	`registration-report-definition`

Note: When specifying this tag, set the `ver` attribute of `pr-cli-parameters` to `0200`.

Table 4-112 registration-report-definition

Type	Explanation	
Definition	Specifies one registered report to be output.	
Value that can be specified	None	
Omission	Allowed (Cannot be omitted when `launch-registration-report` is specified.)	
Attributes	`bookmark-name`	Specify the name of the bookmark (including a combination bookmark) storing the registered report to be output to a file. If the bookmark name contains `\` or `/`, specify it as `\\` or `\/`, respectively. If you specify a nonexistent bookmark, or if you omit this attribute, an error occurs.
	`report-name`	Specify the name of the registered report to be output to a file. To include `\` or `/` in the report name, specify it as `\\`or `\/`, respectively. If you specify a registered report that does not exist in the bookmark specified in the `bookmark-name` attribute or if you omit this attribute, an error occurs. ***Note*:** If multiple registered reports that have the same name are defined under the same

Type	Explanation	
		bookmark, the command outputs the registered report whose information it acquires first.
	`bookmark-parent-folder`	Use a directory path to specify the parent directory of the bookmark specified in the `bookmark-name` attribute. The directory path must begin with `/` and the directory names must be delimited by using `/` from the upper level directory name. If you want to specify the root directory, specify `/` only. If the directory name contains `\` or `/`, specify it as `\\` or `\/`, respectively. If you specify a nonexistent directory or if you omit this attribute, an error occurs.
Element	`launch-registration-report`	
Subelements (see ***Note***)	`launch-options` (Can be specified only once per `registration-report-definition` or can be omitted.)	
	`html-output` (Can be specified only once per `registration-report-definition` or can be omitted.)	

Note: If you specify subelements, specify them in the order listed above.

Table 4-113 launch-combination-bookmark

Type	Explanation
Definition	Specifies a combination bookmark in the Bookmarks tree.
Value that can be specified	None
Omission	Allowed (`launch-report`, `launch-registration-report`, or `launch-combination-bookmark` must be specified.)
Attributes	None
Element	`pr-cli-parameters`
Subelement	`combination-definition`

Note: When specifying this tag, set the `ver` attribute of `pr-cli-parameters` to `0200`.

Table 4-114 combination-definition

Type	Explanation
Definition	Specifies one combination bookmark that is to be output as a report.
Value that can be specified	None

Type	Explanation	
Omission	Allowed (Cannot be omitted when `launch-combination-bookmark` is specified.)	
Attributes	`bookmark-name`	Specify the name of the combination bookmark whose registered report is to be output to a file. When the bookmark name contains `\` or `/`, specify it as `\\` or `\/`, respectively. If you specify a nonexistent bookmark or a bookmark that is not a combination bookmark or if you omit this attribute, an error occurs.
	`bookmark-parent-folder`	Use a directory path to specify the parent directory of the bookmark specified in the `bookmark-name` attribute. The directory path must begin with `/` and the directory names must be delimited by using `/` from the upper level directory name. If you want to specify the root directory, specify `/` only. If the directory name contains `\` or `/`, specify it as `\\` or `\/`, respectively. If you specify a nonexistent directory or if you omit this attribute, an error occurs.
Element	`launch-combination-bookmark`	
Subelements (see ***Note***)	`combination-options` (Can be specified only once per `combination-definition` or can be omitted.)	
	`combination-graph-options` (Can be specified only once per `combination-definition` or can be omitted.)	

Note: If you specify subelements, specify them in the order listed above.

Table 4-115 combination-options

Type	Explanation
Definition	Specifies options for outputting a combination report. Use subelements to specify the options.
Value that can be specified	None
Omission	When omitted, display options for the combination report are not set.
Attributes	None
Element	`combination-definition`
Subelements (see ***Note***)	`combination-indication-settings` (Can be specified only once per `combination-options` or can be omitted.)
	`baseline-indication-settings` (Can be specified only once per `combination-options` or can be omitted.)

Note: If you specify subelements, specify them in the order listed above.

Table 4-116 combination-graph-options

Type	Explanation	
Definition	Changes the settings for the graph options used to output a combination report.	
Value that can be specified	None	
Omission	When omitted, the magnification of graphs is assumed to be 100 %.	
Attributes	`zoom-scale`	Specify the magnification of graphs. You can select 100, 200, 400, 600, or 800 to specify the percentage by which the original graph is magnified and displayed. If you specify an invalid value or omit this attribute, an error occurs.
Element	`combination-definition`	
Subelements	None	

Table 4-117 combination-indication-settings

Type	Explanation
Definition	Specifies the report acquisition period, report interval, start time, and end time for a combination report.
Value that can be specified	None
Omission	When omitted, the values in the report definition are applied including the values that are specified using the subelements.
Attributes	None
Element	`combination-options`
Subelements	`date-range` (Can be specified only once per `combination-indication-settings` or can be omitted.)
	`report-interval` (Can be specified only once per `combination-indication-settings` or can be omitted.)
	`start-time` (Can be specified only once per `combination-indication-settings` or can be omitted.)
	`end-time` (Can be specified only once per `combination-indication-settings` or can be omitted.)

Table 4-118 baseline-indication-settings

Type	Explanation
Definition	Specifies the display start position for the baseline in a combination report. Use the subelement to specify the position.
Value that can be specified	None
Omission	When omitted, the default setting (start date and time of the report) is used as the start position for the baseline.
Attributes	None
Element	`combination-options`
Subelement	`baseline-start-time`

Table 4-119 baseline-start-time

Type	Explanation
Definition	Specifies the display start position for the baseline in a combination report.
Value that can be specified	Use the format specified in `report-interval` to specify the position. For reports for which `report-interval` cannot be specified, specify the display start position in the format to be applied when `MINUTE` is specified for `report-interval`. For details about formats, see Table 4-122 Input Formats for start-time, end-time, and baseline-start-time on page 4-100. Example 1 If you specify `pattern-yyyyMMdd` for the `-dateformat` argument, `space` for the `-dateseparator` argument, and `MINUTE` for `report-interval`, then `baseline-start-time` is specified in the *YYYYΔMMΔDDΔhh:mm* format (YYYY = year, MM = month, DD = day, hh = hour, mm = minute). Example 2 If you specify `pattern-yyyyMMdd` for the `-dateformat` argument, `slash` for the `-dateseparator` argument, and `MINUTE` for `report-interval`, then `baseline-start-time` is specified in the *YYYY/MM/DDΔhh:mm* format (YYYY = year, MM = month, DD = day, hh = hour, mm = minute). Example 3 If you specify `pattern-yyyyMMdd` for the `-dateformat` argument, `hyphen` for the `-dateseparator` argument, and `MINUTE` for `report-interval`, then `baseline-start-time` is specified in the *YYYY-MM-DDΔhh:mm* format (YYYY = year, MM = month, DD = day, hh = hour, mm = minute). Example 4 If you specify `pattern-yyyyMMdd` for the `-dateformat` argument, `period` for the `-dateseparator` argument, and `MINUTE` for `report-interval`, then `baseline-start-time` is specified in the *YYYY.MM.DDΔhh:mm* format (YYYY = year, MM = month, DD = day, hh = hour, mm = minute).

Type	Explanation
	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 before 1970 or after 2036.
Omission	Allowed (The default settings (start date and time of the report) are set if you omit this item.)
Attribute	None
Element	`baseline-indication-settings`
Subelement	None

The examples below show how to specify a parameter file. Parameter file samples are stored in the following directories. Use the samples as templates for writing parameter files.

In Windows:

Tuning-Manager-server-installation-folder`\PerformanceReporter\sample\conf`

In Linux:

Tuning-Manager-server-installation-directory`/PerformanceReporter/sample/conf`

Parameter File Example (for Outputting Reports Other Than Registered Reports and Combination Reports

Name of the parameter file sample: `jpcrpt-parameters.xml`

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE pr-cli-parameters SYSTEM "rpt_params.dtd">
<pr-cli-parameters ver="0200">
  <launch-report>
    <agent>TA1htmprsvr</agent>
    <agent>TA1admin</agent>
    <report-definition name=" Memory Paging Status (Multi-Agent)"
parent-folder=" /Windows/Operating System/Status Reporting/Daily
Trend">
      <launch-options>
        <indication-settings maximum-number-of-records="1440">
          <report-interval>HOUR</report-interval>
          <start-time>2007 08 10 12:00</start-time>
          <end-time>2007 08 11 12:00</end-time>
        </indication-settings>
      </launch-options>
      <html-output>
        <show-graph>
          <graph-options zoom-scale = "100">
            <show-grid/>
            <vertical-axis minvalue="0" maxvalue="100"/>
          </graph-options>
        </show-graph>
```

```
        <show-table/>
      </html-output>
    </report-definition>
  </launch-report>
</pr-cli-parameters>
```

Parameter File Example (for Outputting Registered Reports)

Name of the parameter file sample: `jpcrpt-parameters-for-registration-report.xml`

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE pr-cli-parameters SYSTEM "rpt_params.dtd">
<pr-cli-parameters ver="0200">
  <launch-registration-report>
    <registration-report-definition report-name="CPU Usage@TA1host01"
      bookmark-name="CPU Usage"
      bookmark-parent-folder="/">
      <launch-options>
        <indication-settings maximum-number-of-records="1440">
          <date-range>WITHIN_THE_PAST_24_HOURS</date-range>
          <report-interval>HOUR</report-interval>
        </indication-settings>
      </launch-options>
      <html-output>
        <show-graph>
          <graph-options zoom-scale = "100">
            <show-grid/>
            <vertical-axis minvalue="0" maxvalue="100"/>
          </graph-options>
        </show-graph>
      <show-table/>
      </html-output>
    </registration-report-definition>
  </launch-registration-report>
</pr-cli-parameters>
```

Parameter File Example (for Outputting Combination Reports)

Name of the parameter file sample: `jpcrpt-parameters-for-combination-report.xml`

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE pr-cli-parameters SYSTEM "rpt_params.dtd">
<pr-cli-parameters ver="0200">
  <launch-combination-bookmark>
    <combination-definition bookmark-name="CPU Usage with Baseline"
bookmark-parent-folder="/">
      <combination-options><combination-indication-settings>
        <date-range>WITHIN_THE_PAST_24_HOURS</date-range>
        <report-interval>HOUR</report-interval>
      </combination-indication-settings>
     </combination-options>
     <combination-graph-options zoom-scale="100" />
   </combination-definition>
  </launch-combination-bookmark>
</pr-cli-parameters>
```

The following example shows how to specify the DTD file (`rpt_params.dtd`) for defining the parameter entries.

DTD File (rpt_params.dtd) Defining the Parameter Entries

```
<!ENTITY     % BOOL_VALUE          "(true|false|TRUE|FALSE)">
<!ENTITY     % ZOOM_VALUE           "(100|200|400|600|800)">
<!ELEMENT    pr-cli-parameters     (launch-report | launch-
registration-report |
                                    launch-combination-bookmark)>
<!ATTLIST    pr-cli-parameters
             ver                   (0100 | 0110 | 0200)    #REQUIRED>
<!ELEMENT    launch-report         (agent+, report-definition)>
<!ELEMENT    agent                 (#PCDATA)>
<!ELEMENT    report-definition     (launch-options?, html-output?)>
<!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>
<!ELEMENT    html-output     (show-graph? , show-table?)>
<!ELEMENT    show-graph      ( graph-options?)>
<!ELEMENT    show-table            EMPTY>
<!ELEMENT    graph-options      (show-3d?, show-grid?, vertical-
axis?)>
<!ATTLIST    graph-options
             zoom-scale            %ZOOM_VALUE;
#IMPLIED>
<!ELEMENT    show-3d             EMPTY>
<!ELEMENT    show-grid             EMPTY>
<!ELEMENT    vertical-axis        EMPTY>
<!ATTLIST    vertical-axis
             minvalue           NMTOKEN                   #REQUIRED
```

```
            maxvalue            NMTOKEN
#REQUIRED>
<!ELEMENT    launch-registration-report        (registration-report-
definition)>
<!ELEMENT    registration-report-definition    (launch-options?,
html-output?)>
<!ATTLIST    registration-report-definition
             bookmark-name                CDATA            #REQUIRED
             report-name                  CDATA            #REQUIRED
             bookmark-parent-folder       CDATA            #REQUIRED>
<!ELEMENT    launch-combination-bookmark       (combination-
definition)>
<!ELEMENT    combination-definition            (combination-options?,
                                                combination-graph-
options?)>
<!ATTLIST    combination-definition
             bookmark-name                CDATA            #REQUIRED
             bookmark-parent-folder       CDATA            #REQUIRED>
<!ELEMENT    combination-options               (combination-
indication-settings?,
                                                baseline-indication-
settings?)>
<!ELEMENT    combination-graph-options  EMPTY>
<!ATTLIST    combination-graph-options
             zoom-scale                  %ZOOM_VALUE;      #IMPLIED>
<!ELEMENT    combination-indication-settings   (date-range?,
                                                report-interval?,
                                                start-time?,
                                                end-time?)>
<!ELEMENT    baseline-indication-settings     (baseline-start-time?)>
<!ELEMENT    baseline-start-time              (#PCDATA)>
```

Note:

- When outputting multiple reports, if an error occurs during the output of one of the reports, the system skips that processing and continues outputting the other reports. However, if a configuration error is found in the parameter file, instead of skipping the processing, the system ends it immediately.
- If you output a report in HTML format in which many records are displayed, the View Server service might finish due to a memory shortage. If you want to prevent this, enable the memory usage reduction function and then estimate the amount of memory required to execute the command.

  For details about the memory usage reduction function, see the *Tuning Manager User Guide*. The memory usage reduction function is set in the initialization settings file (`config.xml`). For details about the settings in the initialization settings file (`config.xml`), see the chapter that describes the initialization settings file for Performance Reporter in the *Tuning Manager Server Administration Guide*.

  For details about how to estimate the amount of memory required to use the `jpcrpt` command to output a report in HTML format, see the appendix section of *Tuning Manager Agent Administration Guide*.
- If a report in HTML format is output when the memory usage reduction function is enabled, a directory is created in the following directory and a

report cache file is stored in that directory every time a command is executed:

For Windows:

Tuning-Manager-server-installation-folder`\PerformanceReporter\reportcache\cmd`

For Linux:

Tuning-Manager-server-installation-directory`/PerformanceReporter/reportcache/cmd`

When you stop the execution of this command (for example, by using the `Ctrl+C` key), the report cache file is not automatically deleted. Therefore, manually delete the file after the command finishes. Note that if execution of this command is duplicated, the report cache file to be deleted cannot be identified. Therefore, make sure that all `jpcrpt` command executions have finished when you delete a report cache file.

- If all agents specified for a report have stopped when the memory usage reduction function is enabled, the KAVJK0305-E message is output and command processing is interrupted. In this case, an HTML file is not output. Make sure that the agents are running, and then re-execute the command.
- If you output a combination report when the memory usage reduction function is enabled, and if one of the following errors occurs in one of the reports contained in the combination report, command processing is interrupted and an HTML file is not output:

  - Communication error when communicating with Collection Manager
  - Report cache file I/O error
  - Unexpected error

  In this case, identify the cause using the output error message, and then take appropriate countermeasures.
- If both of the following conditions are met, the KAVJK2512-E message is output and processing is interrupted due to the possibility of a memory shortage:

  - The memory usage reduction function is enabled.
  - The number of data items in a report that is output as a graph exceeds the upper limit.

  In this case, review the report definition, decrease the number of data items to be output in graphs, and then re-execute the command.

  For details about the upper limit of the number of the data items output in graphs, see *Tuning Manager User Guide*.
- 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 4-120 Combinations of date-range, start-time, and end-time on page 4-98 lists the restrictions on the combinations of `date-range`, `start-time`, and `end-time`.

Table 4-120 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 4-121 Calculating start-time and end-time on page 4-99 (see ***Note 2***)
No	No	Yes	`SPECIFY_WHEN_DISPLAYED`	See Table 4-121 Calculating start-time and end-time on page 4-99 (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 4-121 Calculating start-time and end-time on page 4-99 (see ***Note 1***)	Server time when the report is executed
Yes	Yes	No	`SPECIFY_WHEN_DISPLAYED`	Value specified in the parameter file	See Table 4-121 Calculating start-time and end-time on page 4-99 (see ***Note 2***)
Yes	No	Yes	`SPECIFY_WHEN_DISPLAYED`	See Table 4-121 Calculating start-time and end-time on page 4-99 (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 4-121 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 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.	Date and time determined by adding 1 month to start-time 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.
WITHIN_THE_PAST_YEAR	Month Year	Date and time determined by subtracting 1 year from end-time If February 29 in a leap year is specified for end-time, February 28 in the previous year is applied.	Date and time determined by adding 1 year to start-time If February 29 in a leap year is specified for start-time, February 28 in the next year is applied.

- The following table lists the input formats for start-time, end-time, and baseline-start-time:

Table 4-122 Input Formats for start-time, end-time, and baseline-start-time

report-interval	Date Format (see *Note*)		
	[*ddΔMMΔyyyy*]	[*MMΔddΔyyyy*]	[*yyyyΔMMΔdd*]
MINUTE	[*ddΔMMΔyyyyΔHH:mm*]	[*MMΔddΔyyyyΔHH:mm*]	[*yyyyΔMMΔddΔHH:mm*]
HOUR	[*ddΔMMΔyyyyΔHH:*00]	[*MMΔddΔyyyyΔHH:*00]	[*yyyyΔMMΔddΔHH:*00]
DAY	[*ddΔMMΔyyyy*]	[*MMΔddΔyyyy*]	[*yyyyΔMMΔdd*]
WEEK	[*ddΔMMΔyyyy*]	[*MMΔddΔyyyy*]	[*yyyyΔMMΔdd*]
MONTH	[*MMΔyyyy*]	[*MMΔyyyy*]	[*yyyyΔMM*]
YEAR	[*yyyy*]	[*yyyy*]	[*yyyy*]

Note: The date format is determined based on the values set in the initialization settings file (`config.xml`) or the `-dateformat` and `-dateseparator` command line arguments. In the above table, Δ represents a space by default. When you specify `slash`, `hyphen`, or `period` as the separator name in the date format, the Δ separator is replaced by a slash (/), a hyphen (-), or a period (.).

- Note the following if outputting a real-time report:

  An error occurs if Collection Manager or Agent is stopped when you make a connection for the first time to output the report.

  A timeout does not occur if the service on the connection destination stops during the output of the report.

  If this command stops during execution, forcibly terminate the process.
- Each time you execute this command, the system accesses the View Server service. If execution of this command is duplicated, or this command is executed continuously, the memory of the View Server service might not be released on time. As a result, the command execution might fail. If execution of this command fails because of duplicated or continuous execution, use `sleep` to adjust the execution intervals.

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. The example below shows a

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

Example of Successful Output to the Standard Output

```
jpcrpt connected to hostname at dd MM yyyy HH:MM:SS.mmm
result  OK  : report-definition-directory-path/report-definition-
name@the service ID of the Agent's Agent Collector service
jpcrpt disconnected at dd MM yyyy HH:MM:SS.mmm
```

Output file

Outputting the contents of a report in CSV format

Table 4-123 Information to Be Output to the Data Header on page 4-101
describes the information to be output to the data header in the output file by the command.

Table 4-123 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 This is the schema name of the field. However, if *Display name* has been set for the field during definition, that *Display name* is displayed. For details, see the description of how to define report display formats in the *Tuning Manager User Guide*.

The example below shows an 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.

Example of Output File When the Contents of a Report Are Output in CSV Format

```
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
```

Outputting the contents of a report in HTML format

A report in HTML format is composed of three parts: a report header area, a graph area, and a table area. Table 4-124 Content and Display Conditions for Each Part (When Output by a Command) on page 4-102 lists, for each type of report or bookmark, the information displayed in each part and the conditions under which the part is displayed.

Table 4-124 Content and Display Conditions for Each Part (When Output by a Command)

Part	Subject of Output Operation		
	Report	Registered Report	Combination Bookmark
Report header area	Displays the report name, Agent name (see ***Note 1***), date format, and command line, in a colon-separated format.	Displays the report name, Agent name (see ***Note 1***), date format, and command line, in a colon-separated format.	Displays the bookmark name, date format, and command line, in a colon-separated format.
Graph area	The same image of the graph is displayed as appears in the report window. This part is displayed when graph display is enabled in the report definition and the `show-graph` tag is specified in the input file.	The same image of the graph is displayed as appears in the report window. This part is displayed when graph display is enabled in the report definition for the registered report and the `show-graph` tag is specified in the input file.	The same image of the graph is displayed as appears in the report window for the combination report.
Table area	All data is displayed on one page in table format. (see ***Note 2***) This part is displayed when table display is enabled in the report definition and the `show-table` tag is specified in the input file.	All data is displayed on one page in table format. (see ***Note 2***) This part is displayed when table display is enabled in the report definition for the registered report and the `show-table` tag is specified in the input file.	Not displayed (combination reports do not include output in table format)

Note: *1:* When more than one Agent name is specified, the names are separated by commas.

Note: *2:* The columns appear in the table in the order in which they are defined in the report definition, with the exception of the Date and Time field. When the Date and Time field is not defined, it is added at the left of the table. When defined, the Date and Time field appears only once in the order in which it is defined in the report definition.

If there are no items in the data set or the Agent(s) are stopped, only the report header area is output.

The HTML is output in UTF-8 encoding, ignoring the character set and linefeed code settings in the section of the `config.xml` file that describes the export format.

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 4-125 Return Values (directory-name)

Return Value	Meaning
0	jpcprras succeeded.
1	An argument is invalid.
2	The OS user does not have execution permission for the command.
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.
255	• An attempt to open the registry key has failed. • An attempt to acquire the Performance Reporter installation path has failed.

Return Value	Meaning
	• An attempt to use CreateProcess to start a batch file has failed because, for example, the batch file does not exist. • An error occurred in signal. • An error occurred in GetExitCodeProcess.

Note:

- 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.
- An error 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.
- Make sure that the directory specified by *directory-name* has at least 2 GB of unused capacity.
- Make sure that the installation folder for Common Component has at least 770 MB of unused capacity.
- 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
```

Administrative Commands

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.

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 4-126 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 OS user does not have execution permission for the command.
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.
7	Memory has become insufficient.
8	An unexpected error occurred.
9	The `pregetinfo.exe` file was not found.

Alerting Commands

jpcahprp output

Format

```
jpcahprp output     -o output-file
                    service-ID
```

Function

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

In version 6.0 or later, you can edit the definition information of Action Handler from the Performance Reporter GUI. This command remains for

compatibility, but information about properties that have been extended in version 6.0 or later is not displayed.

Return Values

See Table 4-127 Return Values of the jpcahprp Command on page 4-107.

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.

The following example shows a standard output.

Sample 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
```

The example below shows a file output by this command. All blanks are displayed as spaces.

Example of File Output

```
<?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>
```

This output file can be adjusted to match the parameter file format of the command that modifies Action Handler definition information, which allows

input by that command. Note that no indent (no space) is inserted before each tag in the output file.

Help Output Option

For an example of sample Help output by the `jpcahprp` command, see jpcahprp update on page 4-107.

jpcahprp update

Format

```
jpcahprp update     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.

In version 6.0 or later, you can edit the definition information of Action Handler from the Performance Reporter GUI. This command remains for compatibility, but information about properties that have been extended in version 6.0 or later cannot be changed.

Return Values

See Table 4-127 Return Values of the jpcahprp Command on page 4-107.

Table 4-127 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.
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.

Return Value	Meaning
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 4-128 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 4-129 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 ID 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.
Element	action-handler-definition	
Subelements	capabilities	
	mail	

Table 4-130 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 4-131 mail

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

Table 4-132 email

Type	Description
Definition	Specifies whether email 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 email can be sent is not updated. If omitted the first time the information is defined, `No` (default value) is assumed.
Attributes	None
Element	capabilities

Type	Description
Subelements	None

Table 4-133 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 4-134 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 no more than 128 bytes. An error message is displayed if a character string that exceeds 128 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 4-135 smtp-sender

Type	Description
Definition	Specifies the email sender.

Type	Description
Value that can be specified	A single-byte character string consisting of no more than 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 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 4-136 mail-subject

Type	Description
Definition	Specifies the email title.
Value that can be specified	Single- or double-byte characters consisting of no more than 100 bytes. An error message is displayed if a character string that exceeds 100 bytes is entered. Note that, when the parameters are used, the specified value might exceed 100 bytes after the variables in the parameters are replaced. However, in this case the value will be applied to the email title. 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 (see ***Note1***, ***Note 2***, and ***Note3***) : n (see ***Note 4***): 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 (see ***Note 4***): When field values are converted to integer or decimal-place values: Specify the number of decimal places to be displayed (the value is rounded off). When measurement values in fields are converted into character strings (including cases where a measurement value in a field is converted into the character string `<OK>`, at recovery of an alarm status to Normal):

Type	Description
	From the character strings created by separating measurement values with single byte spaces, specify the location of the character string to be displayed. To specify the location, set a value of 1 or more. If you specify 0, the measurement value is displayed without any change. If you specify a value greater than the number of character strings separated by single byte spaces, the character string to be displayed is replaced with a 0-byte character string (an empty string). The order of evaluations differs depending on the settings for alarm condition expressions. If you specify two or more instances of the same field in an alarm condition expression, the variable %CVS takes the value of the first instance of the field. For details on the evaluation order and on situations where the same field is repeated, see the explanation for the alarm condition expression settings in the *Tuning Manager User Guide*. • %HNS: Name of the host where the Agent to which the alarm table was bound was running. • %MTS: Message text set in **Message text** (see ***Note 5***). • %PTS: Product name set in **Product**. • %SCS: Status of alarm resulting in message output. One of the following statuses is output: OK: Output when the status is Normal. WARNING: Output when the status is Warning. EXCEPTION: Output when the status is Abnormal. • %SCT: System time at the host where the Agent for which alarm evaluation took place was running.
Attributes	None
Element	mail
Subelements	None

Note: *1 :*If the alarm status has changed from Abnormal or Warning to Normal in an alarm definition using multi-instance records, a measurement value that satisfies the conditional expression does not exist. Accordingly, the character string <OK> is set for the %CVS variable. However, if you specify a number greater than or equal to 2 as p in the %CVS [n][.p] variable, an empty string is set.
If the function for outputting a measurement value when the alarm status has been recovered to Normal is enabled, the variable %CVS is replaced with the name of the record instance that triggered the alarm. Note that, for records whose number of instances might change, the variable %CVS is replaced with (N/A) because the instance that triggered the alarm might not exist when the alarm status is recovered. To enable the function for outputting a measurement value when the alarm status has been recovered to Normal, specify 1 for Alarm Message Mode in the jpccomm.ini file. For

details about how to edit this file, see the *Tuning Manager Agent Administration Guide*.

Note: *2 :*The maximum length of a character string that can be expanded by the variable `%CVS` is 79 bytes.
If multiple alarm condition expressions are defined, the maximum of the character string length obtained by using the formula below is also 79 bytes.
(*total-number-of-characters-converted-by-condition-expression*) + (*number-of-alarm-condition-expressions* - 1 byte)

Note: *3 :*If a character string replaced by the variable `%CVS` contains a vertical bar (`|`), the part after the vertical bar is discarded.

Note: *4 :*Only a maximum of five digits can be specified for the value. If you specify six or more digits, only the first five digits are used and displayed in the message of the alarm notification.

Note: *5 :*If the alarm status has changed from Abnormal or Warning to Normal in an alarm definition using multi-instance records, the values of all instances are in the normal range. In such cases, the variable `%MTS` is replaced with an empty string because the value that triggered the event issuance cannot be identified.
If the function for outputting a measurement value when the alarm status has been recovered to Normal is enabled, the variable `%MTS` is replaced by a user-set value. To enable this function, specify `1` for `Alarm Message Mode` in the `jpccomm.ini` file. For details about how to edit this file, see the *Tuning Manager Agent Administration Guide*.
When **Alarm monitoring the existence of values** is selected in the alarm definition, the collected data does not contain the values specified for condition expressions when the alarm is reported. Therefore, if this is selected and the function for outputting a measurement value when the alarm status recovers to Normal is enabled, the value of the `%CVS` variable is replaced with `N/A`. If this is selected and the function is disabled, the value of the `%CVS` variable is replaced with an empty string even if the `%CVS` variable is specified in a message text or in `Mail Subject`.

An example of how to specify a parameter file and the DTD for the parameter file are shown below. All blanks are displayed as spaces.

Example of Specifying a Parameter File

```
<?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>
```

DTD for 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)>
```

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.

The example below shows a standard output format 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.

Sample Standard Output

```
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
```

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

The example below shows a sample Help output by the `jpcahprp` command. All blanks are displayed as spaces.

Example of Help

```
Tuning-Manager-server-installation-folder\PerformanceReporter\tools
\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 extension listed below.
        -o <outputfile>  Output file is required only if <subcmd> is
'output'
    <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'
```

jpctgprp output

Format

```
jpctgprp output     -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 4-137 Return Value (jpctgprp) on page 4-117.

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.

The examples below show standard outputs. The output result is displayed (OK or ERR) for each SNMP host specified in `snmp-host`.

Standard Output Example (success)

```
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
```

Standard Output Example (failure)

```
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
```

The following example shows outputs by this command.

Output File Example

```
<?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>
```

This output file can be adjusted to match the parameter file format of the commands that add and change Trap Generator definition information, which allows input by these two commands. Note that no indent (no space) is inserted before each tag in the output file.

Help Output Option

For an example of Help output by the `jpctgprp` command, see jpctgprp create on page 4-116.

jpctgprp create

Format

`jpctgprp create` *input-file*

Function

The jpctgprp create command adds an SNMP host name to Trap Generator definition information. The definition information to be changed is obtained

from the XML parameter file 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 4-137 Return Value (jpctgprp) on page 4-117 describes the return value.

Table 4-137 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 4-138 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

Type	Description
Element	pr-cli-parameters
Subelements	service

Table 4-139 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 ID 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 4-140 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 4-141 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.

Type	Description	
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 (If you specify child elements, they must be specified in the order shown above.)	snmp-retrycount	
	snmp-retryinterval	
	snmp-trapport	
	snmp-enabled	

Table 4-142 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. Note that `1` (the default) is set when this value is omitted for the first definition.
Attributes	None
Element	trap-destinations
Subelements	None

Table 4-143 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. Note that `5` (the default) is set when this value is omitted for the first definition.
Attributes	None
Element	trap-destinations

Type	Description
Subelements	None

Table 4-144 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. Note that `162` (the default) is set when this value is omitted for the first definition.
Attributes	None
Element	trap-destinations
Subelements	None

Table 4-145 snmp-enabled

Type	Description
Definition	Specifies whether 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. Note that `Yes` (the default) is set when this value is omitted for the first definition.
Attributes	None
Element	trap-destinations
Subelements	None

Note: `trap-destination-snmp-hostFQDN` is not supported.

An example of how to specify a parameter file and the DTD for the parameter file are shown below. All blanks are displayed as spaces.

Coding Example of 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">
                    <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>
```

DTD for 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)>
```

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.

The example below shows a standard output format 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.

Sample Standard Output

```
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
```

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

The example below shows a sample Help file output by the `jpctgprp` command. All blanks are displayed as spaces.

Example of Help

```
Tuning-Manager-server-installation-folder\PerformanceReporter\tools
\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 extension listed below.
        -o <outputfile> Output file is required only if <subcmd> is
'output'
        -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'
```

jpctgprp delete

Format

```
jpctgprp delete     [ -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 4-137 Return Value (jpctgprp) on page 4-117.

Parameter file format

Table 4-146 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 4-147 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 4-148 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

Type	Description
Subelements	trap-destination

Table 4-149 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 (If you specify child elements, they must be specified in the order shown above.)	snmp-retrycount (ignored if specified)	
	snmp-retryinterval (ignored if specified)	
	snmp-trapport (ignored if specified)	
	snmp-enabled (ignored if specified)	

The example below shows how to define a parameter file. For details about the DTD for the parameter file, see jpctgprp create on page 4-116.

Example of Specifying a 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>
```

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`.

The example below shows a standard output. The deletion result is displayed (`OK` or `ERR`) for each SNMP host specified in `snmp-host`.

Sample Standard Output

```
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
```

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 output by the `jpctgprp` command, see jpctgprp create on page 4-116.

Reviewing Command Arguments

-dateformat argument

Format: -dateformat *date-format-pattern-name*

`-dateformat` specifies the name of the date format pattern that is used to identify the format of dates specified in the `<expression-value>`, `<start-time>`, `<end-time>`, and `<baseline-start-time>` tags in the input file. The specified date format pattern is also used to determine the date format in the output file. The date format pattern names that you can specify are:

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

-dateseparator argument

Format: -dateseparator *date-format-separator-name*

`-dateseparator` specifies the character string that is used to identify the format of date separators specified in the `<expression-value>`, `<start-time>`, `<end-time>`, and `<baseline-start-time>` tags in the input file. The specified date format separator is also used to determine the format of date separators in the output file. The separator names of the date format that you can specify are:

- space
- slash
- hyphen
- period

-rc argument

Format: -rc *number-of-updates-to-be-output*

-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. If you specify this option for historical reports or HTML output, the option is ignored.

-ri argument

Format: -ri *update-interval*

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. If you specify this option for historical reports or HTML output, the option is ignored.

-exportseparator argument

Format: -exportseparator *date-format-separator-name-used-when-a-report-is-output*

-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

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.

-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.

-o argument

For the jpcrdef output, jpcasrec output, jpcaspsv output, jpcprras, jpcahprp output, and jpctgprp output commands

-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.

For the jpcrpt command

-o is a required option that specifies the name of the file to which the report is to be output. If you do not specify an output file name, an error occurs. Also, do not include ASCII characters other than the following in the name of the output file:

`# % < > & \`

Note that other unusable characters might exist, depending on the output destination file system.

For *output-file-name*, you can specify an absolute file path name, a relative file path name, or a file name. For path names other than the full file path name, the current directory is the base. If the specified directory does not exist, an error occurs. If the same file is specified more than once, the system follows the specification of the `-y` option.

As shown in Table 4-150 Difference in File Names Depending on the Output Format and Specified File Name on page 4-128, the output file name differs depending on the output format of the report and the specified file name. For CSV format, if the specified file name does not have an extension, the output file name also does not have an extension. For HTML format, the output file name has extensions `htm` and `png` (graph images) regardless of whether the specified file name has an extension.

Table 4-150 Difference in File Names Depending on the Output Format and Specified File Name

Output Format	Specified File Name	Output File Name
CSV	`output`	`output`
	`output.csv` (recommended)	`output.csv`
HTML	`output` (recommended)	`output.htm`
		`output.png`
	`output.htm`	`output.htm.htm`
		`output.htm.png`

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 details about product IDs, see Appendix C, Specifying a Service ID on page C-1.
- 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 ID 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 ID is specified.

directory-name argument

- Specifies the directory where obtained materials are stored. For the directory name, you can use one-byte alphanumeric characters, spaces, and the following symbols:
  : / \
- 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.
- Directory names of removable media such as floppy disks cannot be specified in this option.

-mx argument (-mx maximum heap size)

Format:`-mx` *maximum-heap-size*

Specifies the maximum heap size for Java in MB. The maximum heap size can be specified as an integer in the range from 1 to 2147483647. The default value is 128. When a value outside the valid range is specified, an error occurs. The maximum size that can be set depends on the system.

If the KAVJK0401-E message is output and the command abnormally terminates because there is not enough memory, specify this option to increase the maximum heap size to a size larger than the default (128MB).

5

Collection Manager Commands and Agent Commands

This chapter describes the commands of Collection Manager and Agents. 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.

List of Commands

Table 5-1 Commands of Collection Manager and Agents on page 5-2 lists the commands of Collection Manager and Agents. Sections following the table give detailed explanations of individual commands, in alphabetic order.

For details about the command arguments, see Reviewing Command Arguments on page 5-172.

Note:

- Commands are executed from the command line according to the conventions of the OS. Command arguments are case-sensitive.
- If the product name display function is enabled, a product name will be displayed in the command execution results instead of a service key. For details about the product name display function, see the *Tuning Manager Agent Administration Guide*.
- Do not specify an empty directory under the Tuning Manager series installation directory as the output destination of command execution results.
- Certain precautions apply to the use of the `host` and `lhost` options when executing `jpcctrl` commands such as `jpcctrl backup` and `jpcctrl dump`. For details, see Notes on specifying the host or lhost option with the jpcctrl command on page 5-212.

Table 5-1 Commands of Collection Manager and Agents

Command Name	Description	Host where the Command Can Be Executed	User Authorized to Execute the Command		Related Section
			Windows	UNIX	
`jpcagtsetup`	Executes the additional setup of a new Agent. (See ***Note 1***.)	Tuning Manager server	Member of the Administrators group (See ***Note 2***.)	root user	jpcagtsetup on page 5-13
`jpcalarm active`	Activates an alarm that is inactive.	Tuning Manager server	Member of the Administrators group	root user	jpcalarm active on page 5-15
`jpcalarm bind`	Binds a defined alarm table to an Agent.	Tuning Manager server	Member of the Administrators group	root user	jpcalarm bind on page 5-17
`jpcalarm check`	Checks the syntax of a created alarm definition file; also,	Tuning Manager server	Member of the	root user	jpcalarm check

Command Name	Description	Host where the Command Can Be Executed	User Authorized to Execute the Command		Related Section
			Windows	UNIX	
	uses the contents of the definition file to check the set-up status of the Agents that are required.		Administrators group		on page 5-20
jpcalarm copy	Copies an alarm table or an alarm.	Tuning Manager server	Member of the Administrators group	root user	jpcalarm copy on page 5-22
jpcalarm delete	Deletes an alarm table or an alarm.	Tuning Manager server	Member of the Administrators group	root user	jpcalarm delete on page 5-24
jpcalarm export	Exports alarm table or alarm definition information to a specified file.	Tuning Manager server	Member of the Administrators group	root user	jpcalarm export on page 5-27
jpcalarm import	Imports an alarm table or alarm definition information from the specified file.	Tuning Manager server	Member of the Administrators group	root user	jpcalarm import on page 5-33
jpcalarm inactive	Inactivates an alarm that is active.	Tuning Manager server	Member of the Administrators group	root user	jpcalarm inactive on page 5-36
jpcalarm list	Displays alarm table definition information or binding information.	Tuning Manager server	Member of the Administrators group	root user	jpcalarm list on page 5-38
jpcalarm unapplied	Displays the alarm application status of agents.	Tuning Manager server	Member of the Administrators group	root user	jpcalarm unapplied on page 5-42

Command Name	Description	Host where the Command Can Be Executed	User Authorized to Execute the Command		Related Section
			Windows	UNIX	
`jpcalarm unbind`	Releases the binding of an alarm table to Agents.	Tuning Manager server	Member of the Administrators group	root user	jpcalarm unbind on page 5-44
`jpcappcvt`	Converts the application definition for version 6.4 or earlier (setting for collecting the operating status of applications) to the application definition for version 7.0 or later (setting for collecting the operating status of processes).	Agent for Platform	Member of the Administrators group	root user	jpcappcvt on page 5-46
`jpcconf host hostmode`	Updates or displays the method used to acquire the physical host name of a Tuning Manager series program host.	• Tuning Manager server • Agent	Member of the Administrators group (See ***Note 2***.)	root user	jpcconf host hostmode on page 5-49
`jpcconf host hostname`	Changes the monitoring host name information of a host in the operating environment for a Tuning Manager series program.	• Tuning Manager server • Agent	Member of the Administrators group (See ***Note 2***.)	root user	jpcconf host hostname on page 5-52
`jpcconf prodname disable`	Disables the product name display function.	• Tuning Manager server • Agent	Member of the Administrators group (See ***Note 2***.)	root user	jpcconf prodname disable on page 5-56
`jpcconf prodname display`	Displays the product name display function settings.	• Tuning Manager server • Agent	Member of the Administrators group (See ***Note 2***.)	root user	jpcconf prodname display on page 5-57
`jpcconf prodname enable`	Enables the product name display function.	• Tuning Manager server • Agent	Member of the Administrators group	root user	jpcconf prodname enable on

Command Name	Description	Host where the Command Can Be Executed	User Authorized to Execute the Command		Related Section
			Windows	UNIX	
			(See ***Note 2***.)		page 5-59
`jpcctrl backup` (See ***Note 3***.)	Creates the file used to save the data stored in the Master Store service or Agent Store service database. (See ***Note 1***.)	• Tuning Manager server • Agent	Member of the Administrators group Member of the Backup Operators group (See ***Note 4***.)	root user	jpcctrl backup on page 5-60
`jpcctrl clear`	Deletes the data stored in the Master Store service or Agent Store service database. (See ***Note 1***.)	Tuning Manager server	Member of the Administrators group Member of the Backup Operators group (See ***Note 4***.)	root user	jpcctrl clear on page 5-67
`jpcctrl delete`	Deletes the service information of the Agent registered in a Tuning Manager series program. (See ***Note 1***.)	Tuning Manager server	Member of the Administrators group Member of the Backup Operators group (See ***Note 4***.)	root user	jpcctrl delete on page 5-69
`jpcctrl dump` (See ***Note 3***.)	Exports the data stored in the Master Store service or Agent Store service database to a text file. (See ***Note 1***.)	• Tuning Manager server • Agent	Anyone	Anyone	jpcctrl dump on page 5-71
`jpcctrl list`	Displays the configurations and statuses of Collection Manager and Agent services. (See ***Note 1***.)	• Tuning Manager server • Agent	Anyone	Anyone	jpcctrl list on page 5-76
`jpcdbctrl config` (See ***Note 3***.)	Changes and displays the Store service settings.	• Tuning Manager server • Agent	Member of the Administrators group	root user	jpcdbctrl config on page 5-81

Command Name	Description	Host where the Command Can Be Executed	User Authorized to Execute the Command		Related Section
			Windows	UNIX	
`jpcdbctrl display`	• Displays information about the Store service or backup data. • Checks the type of the Performance database.	• Tuning Manager server • Agent	Member of the Administrators group (See ***Note 2***.)	root user	jpcdbctrl display on page 5-82
`jpcdbctrl dmconvert` (See ***Note 3***.)	Converts the data model of the backup data.	• Tuning Manager server • Agent	Member of the Administrators group	root user	jpcdbctrl dmconvert on page 5-85
`jpcdbctrl import` (See ***Note 3***.)	Imports backup data into the Store database.	• Tuning Manager server • Agent	Member of the Administrators group	root user	jpcdbctrl import on page 5-88
`jpcdbctrl setup` (See ***Note 3***.)	Sets up Store database version 2.0 functionality (for the Agent Store service).	• Tuning Manager server • Agent	Member of the Administrators group	root user	jpcdbctrl setup on page 5-89
`jpcdbctrl unsetup` (See ***Note 3***.)	Returns the Store database version from 2.0 to 1.0.	• Tuning Manager server • Agent	Member of the Administrators group	root user	jpcdbctrl unsetup on page 5-92
`jpchasetup create`	Creates a logical host environment for a Tuning Manager series program. (See ***Note 1***.)	• Tuning Manager server • Agent	Member of the Administrators group	root user	jpchasetup create on page 5-93
`jpchasetup delete`	Deletes a logical host environment for a Tuning Manager series program. (See ***Note 1***.)	• Tuning Manager server • Agent	Member of the Administrators group	root user	jpchasetup delete on page 5-95
`jpchasetup export`	Exports the settings of the logical host environment for a Tuning Manager series	• Tuning Manager server • Agent	Member of the Administrators group	root user	jpchasetup export on page 5-96

Command Name	Description	Host where the Command Can Be Executed	User Authorized to Execute the Command		Related Section
			Windows	UNIX	
	program to a file. (See ***Note 1***.)				
`jpchasetup import`	Imports the logical-host environment information file of a Tuning Manager series program to the standby node. (See ***Note 1***.)	• Tuning Manager server • Agent	Member of the Administrators group	root user	jpchasetup import on page 5-97
`jpchasetup list`	Displays the settings of the logical host environment for a Tuning Manager series program. (See ***Note 1***.)	• Tuning Manager server • Agent	Member of the Administrators group	root user	jpchasetup list on page 5-98
`jpciniupdate`	Updates the values of the settings in a definition file.	• Tuning Manager server • Agent	Member of the Administrators group	root user	jpciniupdate on page 5-99
`jpcinslist`	Displays the names of instances already set up for a multi-instance Agent. (See ***Note 1***.)	Agent	Anyone	Anyone	jpcinslist on page 5-100
`jpcinssetup`	Creates or updates an instance environment for a multi-instance Agent. (See ***Note 1***.)	Agent	Member of the Administrators group	root user	jpcinssetup on page 5-101
`jpcinsunsetup`	Deletes an instance environment for a multi-instance Agent. (See ***Note 1***.)	Agent	Member of the Administrators group	root user	jpcinsunsetup on page 5-103
`jpcnsconfig port`	Sets and displays the port number that is used with a Tuning Manager series program. (See ***Note 1***.)	• Tuning Manager server • Agent	Member of the Administrators group (See ***Note 2***.)	root user	jpcnsconfig port on page 5-105
`jpcnshostname`	Lets you display, specify, or change the host name of the connection-target Tuning Manager server (Name Server service). (See ***Note 1***.)	• Tuning Manager server • Agent	Member of the Administrators group (See ***Notes 2*** and ***5***.)	root user (See ***Note 5***.)	jpcnshostname on page 5-108

Command Name	Description	Host where the Command Can Be Executed	User Authorized to Execute the Command		Related Section
			Windows	UNIX	
jpcras	Collects information about Collection Manager, Agents, and the operating system. (See ***Note 1***.)	• Tuning Manager server • Agent	Member of the Administrators group (See ***Note 2***.)	root user	jpcras on page 5-110
jpcresto (See ***Note 3***.)	Restores the data in the Master Store service or Agent Store service database that was saved using the jpcctrl backup command. (See ***Note 1***.)	• Tuning Manager server • Agent	Member of the Administrators group Member of the Backup Operators group (See ***Note 4***.)	root user	jpcresto on page 5-113
jpcstart	Starts the service of a Tuning Manager series program at the local host. (See ***Note 1***.)	• Tuning Manager server • Agent	Member of the Administrators group (See ***Note 2***.)	root user	jpcstart on page 5-115
jpcstop	Stops the service of a Tuning Manager series program at the local host. (See ***Note 1***.)	• Tuning Manager server • Agent	Member of the Administrators group (See ***Note 2***.)	root user	jpcstop on page 5-117
jpcstsetup disable	Disables the status management function.	• Tuning Manager server • Agent	Member of the Administrators group (See ***Note 2***.)	root user	jpcstsetup disable on page 5-119
jpcstsetup display	Displays the status of the status management function.	• Tuning Manager server • Agent	Member of the Administrators group (See ***Note 2***.)	root user	jpcstsetup display on page 5-121
jpcstsetup enable	Enables the status management function.	• Tuning Manager server • Agent	Member of the Administrators group (See ***Note 2***.)	root user	jpcstsetup enable on page 5-121

Command Name	Description	Host where the Command Can Be Executed	User Authorized to Execute the Command		Related Section
			Windows	UNIX	
`jpcstsetup hcdisable`	Disables the health check function.	Tuning Manager server	Member of the Administrators group	root user	jpcstsetup hcdisable on page 5-122
`jpcstsetup hcdisplay`	Displays the status of the health check function.	Tuning Manager server	Member of the Administrators group	root user	jpcstsetup hcdisplay on page 5-124
`jpcstsetup hcenable`	Enables the health check function.	Tuning Manager server	Member of the Administrators group	root user	jpcstsetup hcenable on page 5-125
`jpctdchkinst`	Performs the following three tasks: • Checks the instance information settings. • Checks whether one or more storage systems can be connected to by using the instance information settings. • Displays information on the properties of the connected storage systems.	Agent for RAID	Member of the Administrators group (See ***Note 2***.)	root user	jpctdchkinst on page 5-126
`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 (See ***Note 2***.)	root user	jpctdlistraid on page 5-137
`jpctdraidperf`	Obtains performance data, in seconds, for the monitored storage systems.	Agent for RAID	Member of the Administrators group	root user	jpctdraidperf on page 5-140

Command Name	Description	Host where the Command Can Be Executed	User Authorized to Execute the Command		Related Section
			Windows	UNIX	
			(See ***Note 2***.)		
`jpctdrefresh`	Updates the configuration information of the storage system.	Agent for RAID	Member of the Administrators group (See ***Note 2***.)	root user	jpctdrefresh on page 5-147
`jpctminfo`	Displays product information of Tuning Manager series programs installed on the host.	• Tuning Manager server • Agent	Anyone	Anyone	jpctminfo on page 5-148
`jpctool config alarmsync`	Applies alarm information to services whose alarm application status is `Failed` (failed to be applied) or `Uncertain` (status unknown).	Tuning Manager server	Member of the Administrators group	root user	jpctool config alarmsync on page 5-150
`jpctwchkinst`	Performs the following three tasks: • Checks whether the connection-target SMI Agent can be connected to by using the instance information settings. • Displays the configuration information of monitored fabrics and switches. • Displays the time that it takes to collect all the configuration information of monitored fabrics.	Agent for SAN Switch	Member of the Administrators group (See ***Note 2***.)	root user	jpctwchkinst on page 5-151
`htmhsmigrate`	Migrates the Performance database from Store to Hybrid Store.	• Agent for RAID (See ***Note 3***.) • Agent for NAS	Administrator (See ***Note 2***.)	root user	htmhsmigrate on page 5-154

Command Name	Description	Host where the Command Can Be Executed	User Authorized to Execute the Command		Related Section
			Windows	UNIX	
		(See ***Note 3***.)			
htmhsconvert	Converts the performance data accumulated during Agent for RAID operations when the Store database is used, into Hybrid Store data format.	• Agent for RAID (See ***Note 3***.) • Agent for NAS (See ***Note 3***.)	Administrator (See ***Note 2***.)	root user	htmhsconvert on page 5-156
htmhsconvert32	Converts the performance data accumulated during Agent for RAID operations when the Store database is used, into Hybrid Store data format.	• Agent for RAID (See ***Note 3***.) • Agent for NAS (See ***Note 3***.)	Administrator (See ***Note 2***.)	root user	htmhsconvert32 on page 5-158
htmhsbackup	Backs up the performance data and definition information of Agent for RAID operation when Hybrid Store is used.	• Agent for RAID (See ***Note 6***.) • Agent for NAS (See ***Note 6***.)	Administrator (See ***Note 2***.)	root user	htmhsbackup on page 5-159
htmhsrestore	Restores the performance data and definition information that was backed up by the htmhsbackup command.	• Agent for RAID (See ***Note 6***.) • Agent for NAS (See ***Note 6***.)	Administrator (See ***Note 2***.)	root user	htmhsrestore on page 5-160
htmhschgmem	Changes the maximum memory size used by Tuning Manager -	• Agent for RAID (See	Administrator (See ***Note 2***.)	root user	htmhschgmem on

Command Name	Description	Host where the Command Can Be Executed	User Authorized to Execute the Command		Related Section
			Windows	UNIX	
	Agent REST Application Service.	***Note 6***.) • Agent for NAS (See ***Note 6***.)			page 5-163
htmrestctrl	Specifies whether to enable or disable the use of the Tuning Manager API.	Agent for RAID (See ***Note 3***.)	Member of the Administrators group (See ***Note 2***.)	root user	htmrestctrl on page 5-164
htmsrv	Starts and stops the services (Tuning Manager - Agent REST Web Service and Tuning Manager - Agent REST Application Service) of Tuning Manager Agent REST API Component, checks whether the services are running, and changes the startup type of the services. This command can also start and stop Collection Manager and Agent services, and check whether the services are running.	• Agent for RAID (See ***Note 6***, ***Note 7***.) • Agent for NAS (See ***Note 6***.)	Member of the Administrators group (See ***Note 2***.)	root user	htmsrv on page 5-166
htmssltool	Creates a private key and a certificate signing request (CSR) for an Agent host.	• Agent for RAID (See ***Note 6***, ***Note 7***.) • Agent for NAS (See ***Note 6***.)	Member of the Administrators group (See ***Note 2***.)	root user	htmssltool on page 5-168
htmchgjdk	Allows you to switch the JDK that is used by Tuning Manager Agent REST API Component for each Agent host.	• Agent for RAID (See ***Note 6***, ***Note 7***.)	Member of the Administrators group (See ***Note 2***.)	root user	htmchgjdk on page 5-169

Command Name	Description	Host where the Command Can Be Executed	User Authorized to Execute the Command		Related Section
			Windows	UNIX	
	This command can also be used to check the JDK used by Tuning Manager Agent REST API Component.	• Agent for NAS (See ***Note 6***.)			
`htmpwencoder`	Encodes a password when SMTP authentication is performed.	• Agent for RAID (See ***Note 6***, ***Note 7***.) • Agent for NAS (See ***Note 6***.)	Member of the Administrators group (See ***Note 2***.)	root user	htmpwencoder on page 5-171

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:***If Windows UAC is enabled, execute the command from the Administrator Console.

Note: ***3:***Cannot be executed when Hybrid Store is used.

Note: ***4:***In Windows Server 2008 or Windows Server 2012, users who belong to the Backup Operators group can execute this command.

Note: ***5:***There are no restrictions on displaying the host name of the connection-target Tuning Manager server (Name Server service).

Note: ***6:***Can be executed when Hybrid Store is used.

Note: ***7:***Can be executed when Agent for RAID is used with a Store database and use of the Tuning Manager API is enabled.

jpcagtsetup

Format

`jpcagtsetup` *`service-key`*

Function

The `jpcagtsetup` command registers Agent information into a Tuning Manager server when a new Agent is added into a Tuning Manager series system.

Execute this command in the following case:

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

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

Note:

- 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 Tuning Manager server 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 5-2 Return Values (jpcagtsetup)

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.
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	Memory is insufficient.
210	There is not enough unused capacity on the drive.
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.

Usage Example

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

```
jpcagtsetup agto
```

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.

Note:

- Multiple instances of this command cannot be executed at the same time.

- For details about how to set and use alarms, see the *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 the Tuning Manager server starts. Before you execute the command, check the language environment for the shell and the language environment used when the Tuning Manager server starts.
- When the Tuning Manager server runs on a logical host, execute the command on the active node.
- If this command is executed while either of the following commands is being executed on the same machine (see *Note*), no processing is performed and return code 4 is output:
  - `jpcagtsetup`
  - `jpcalarm`
  - `jpcctrl backup`
  - `jpcctrl clear`
  - `jpcctrl dump`
  - `jpcdbctrl dmconvert`
  - `jpcdbctrl import`
  - `jpchasetup`
  - `jpcinssetup`
  - `jpcinsunsetup`
  - `jpcnshostname`
  - `jpcresto`
  - `jpcstart`
  - `jpcstop`
  - `jpcstsetup`
  - `jpc_start` (This command is used to start the OS.)
  - `jpc_stop` (This command is used to stop the OS.)

  Note: This applies even when the (physical or logical) hosts the commands are executed on are different.

Return Values

Table 5-3 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 command was not executed on the Tuning Manager server host. Alternatively, an Agent to be bound by the alarm 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.
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
```

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.

Note:

- Multiple instances of this command cannot be executed at the same time.
- For details about how to set and use alarms, see the *Tuning Manager Agent Administration Guide*.
- For details about the service ID, see Appendix C, Specifying a Service ID on page C-1.
- This command cannot be executed if any Name Server, Master Manager, or View Server service is stopped.
- If the data model version of the Agent is smaller than the data model version of the alarm table, you cannot bind the alarm table to the 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 the Tuning Manager server starts. Before you execute the command, check the language environment for the shell and the language environment used when the Tuning Manager server starts.
- When the Tuning Manager server runs on a logical host, execute the command on the active node.
- If this command is executed while either of the following commands is being executed on the same machine (see *Note*), no processing is performed and return code 4 is output:
  - `jpcagtsetup`
  - `jpcalarm`
  - `jpcctrl backup`
  - `jpcctrl clear`
  - `jpcctrl dump`
  - `jpcdbctrl dmconvert`
  - `jpcdbctrl import`
  - `jpchasetup`
  - `jpcinssetup`
  - `jpcinsunsetup`
  - `jpcnshostname`
  - `jpcresto`
  - `jpcstart`
  - `jpcstop`

- jpcstsetup
- jpc_start (This command is used to start the OS.)
- jpc_stop (This command is used to stop the OS.)

Note: This applies even when the (physical or logical) hosts the commands are executed on are different.

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. 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 command was not executed on the Tuning Manager server host. Alternatively, an Agent to be bound by the alarm 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.

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*"
```

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. When the `-syntax` option is specified, this function can be executed even when the Name Server service, Master Manager service, 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.

Note:

- Multiple instances of this command cannot be executed at the same time.
- For details about how to set and use alarms, see the *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. When the `-syntax` option is specified, this function can be executed even when the Name Server service, Master Manager service, 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 encoding). Before executing this command, check the shell's character environment.
- A maximum of 250 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 make sure that the total number of alarms has not exceeded 250.
- If this command is executed while either of the following commands is being executed on the same machine (see *Note*), no processing is performed and return code 4 is output:
  - `jpcagtsetup`
  - `jpcalarm`
  - `jpcctrl backup`
  - `jpcctrl clear`

- jpcctrl dump
- jpcdbctrl dmconvert
- jpcdbctrl import
- jpchasetup
- jpcinssetup
- jpcinsunsetup
- jpcnshostname
- jpcresto
- jpcstart
- jpcstop
- jpcstsetup
- jpc_start (This command is used to start the OS.)
- jpc_stop (This command is used to stop the OS.)

Note: This applies even when the (physical or logical) hosts the commands are executed on are different.

Return Values

Table 5-5 Return Values (jpcalarm check)

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 (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.

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
```

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 5-6 Alarm Table or Alarm that Is Copied Depending on Option Specifications on page 5-22 shows the alarm table or alarm that is copied depending on the specification of the `-table` and `-alarm` options.

Table 5-6 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.

Note:

- Multiple instances of this command cannot be executed at the same time.
- For details about how to set and use alarms, see the *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 250 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 the Tuning Manager server starts. Before you execute the command, check the language environment for the shell and the language environment used when the Tuning Manager server starts.
- If this command is executed while either of the following commands is being executed on the same machine (see *Note*), no processing is performed and return code 4 is output:

  - `jpcagtsetup`
  - `jpcalarm`
  - `jpcctrl backup`
  - `jpcctrl clear`
  - `jpcctrl dump`
  - `jpcdbctrl dmconvert`
  - `jpcdbctrl import`
  - `jpchasetup`
  - `jpcinssetup`
  - `jpcinsunsetup`
  - `jpcnshostname`
  - `jpcresto`
  - `jpcstart`
  - `jpcstop`
  - `jpcstsetup`
  - `jpc_start` (This command is used to start the OS.)
  - `jpc_stop` (This command is used to stop the OS.)

  Note: This applies even when the (physical or logical) hosts the commands are executed on are different.

Return Values

Table 5-7 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.

Return Values	Meaning
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 command was not executed on the Tuning Manager server host. Alternatively, an Agent to be bound by the alarm 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. The number of alarms exceeded the maximum number of alarms that can be defined in the alarm table.
222	A communication error occurred.
223	A communication timeout error occurred.
255	An unexpected error occurred.

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
```

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 5-8 Alarm Table or Alarm that Is Deleted Depending on Option Specifications

on page 5-25 shows the alarm table or alarm that is deleted depending on the specification of the `-table` and `-alarm` options.

Table 5-8 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.

Note:

- You cannot delete a solution set (alarm table whose name begins with `PFM`).
- Multiple instances of this command cannot be executed at the same time.
- For details about how to set and use alarms, see the *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 the Tuning Manager server starts. Before you execute the command, check the language environment for the shell and the language environment used when the Tuning Manager server starts.
- If this command is executed while either of the following commands is being executed on the same machine (see *Note*), no processing is performed and return code 4 is output:
  - `jpcagtsetup`
  - `jpcalarm`
  - `jpcctrl backup`
  - `jpcctrl clear`
  - `jpcctrl dump`
  - `jpcdbctrl dmconvert`
  - `jpcdbctrl import`
  - `jpchasetup`
  - `jpcinssetup`
  - `jpcinsunsetup`
  - `jpcnshostname`
  - `jpcresto`
  - `jpcstart`

- jpcstop
- jpcstsetup
- jpc_start (This command is used to start the OS.)
- jpc_stop (This command is used to stop the OS.)

Note: This applies even when the (physical or logical) hosts the commands are executed on are different.

Return Values

Table 5-9 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 command was not executed on the Tuning Manager server host. Alternatively, an Agent to be bound by the alarm 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.

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
```

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 *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 5-10 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.

Note:

- Multiple instances of this command cannot be executed at the same time.
- For details about how to set and use alarms, see the *Tuning Manager Agent Administration Guide*.
- When you specify the `-key`, `-table`, or `-alarm` option to export existing alarm definition information, the Tuning Manager server (Name Server, Master Manager, and View Server services) must be running. However, the Tuning Manager server 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 *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*.

- Although you can successfully export an alarm table that contains more than 250 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 250. If you export an alarm table containing more than 250 alarm definitions, you must split the resulting alarm definition file into multiple files, each containing no more than 250 alarm definitions, before you import the alarm definitions.

  For example, when the `-key` option is specified and the alarm definition information for alarm tables `AlarmTable1` (245 alarms) and `AlarmTable2` (10 alarms) bound to the Agent are exported, alarm definition information for a total of 255 alarms in alarm tables `AlarmTable1` and `AlarmTable2` are exported to the alarm definition file. However, because up to only 250 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 250 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 the Tuning Manager server starts. Before you execute the command, check the language environment for the shell and the language environment used when the Tuning Manager server 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 encoding). Before executing this command, check the shell's character environment.
- When the Tuning Manager server runs on a logical host, execute the command on the active node.
- If this command is executed while either of the following commands is being executed on the same machine (see *Note*), no processing is performed and return code 4 is output:
  - `jpcagtsetup`
  - `jpcalarm`
  - `jpcctrl backup`
  - `jpcctrl clear`

- jpcctrl dump
- jpcdbctrl dmconvert
- jpcdbctrl import
- jpchasetup
- jpcinssetup
- jpcinsunsetup
- jpcnshostname
- jpcresto
- jpcstart
- jpcstop
- jpcstsetup
- jpc_start (This command is used to start the OS.)
- jpc_stop (This command is used to stop the OS.)

Note: This applies even when the (physical or logical) hosts the commands are executed on are different.

- The character encoding of the alarm definition file and the value of the Alarm Definition File Code label in the alarm definition file are determined according to the value of the LANG environment variable for the shell that is used to execute the command. If the alarm definitions to be exported contain non-ASCII characters, check the value of the LANG environment variable in the shell before executing this command.

  The tables below show, for each OS, the character encoding and the value of the Alarm Definition File Code label for each value of the LANG environment variable.

  If the value of the LANG environment variable is not shown in the tables below, the command assumes that the LANG environment variable is set to C.

Table 5-11 Correspondence between the value of the LANG environment variable, the character encoding, and the value of the Alarm Definition File Code label (Windows)

Language	Value of the LANG environment variable	Character encoding	Value of the Alarm Definition File Code label
Japanese	--	Shift_JIS (SJIS)	Shift_JIS
English	--	ASCII	C

Legend:

--: Not applicable.

Table 5-12 Correspondence between the value of the LANG environment variable, the character encoding, and the value of the Alarm Definition File Code label (AIX)

Language	Value of the LANG environment variable	Character encoding	Value of the Alarm Definition File Code label
Japanese	• ja_JP • ja_JP.IBM-eucJP	EUC	EUC-JP
	• Ja_JP • Ja_JP.IBM-932	Shift_JIS (SJIS)	Shift_JIS
	• JA_JP.UTF-8	UTF-8	UTF-8
English	C	ASCII	C

Table 5-13 Correspondence between the value of the LANG environment variable, the character encoding, and the value of the Alarm Definition File Code label (Linux)

Language	Value of the LANG environment variable	Character encoding	Value of the Alarm Definition File Code label
Japanese	• ja_JP.UTF-8 • ja_JP.utf8	UTF-8	UTF-8
English	C	ASCII	C

Return Values

Table 5-14 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 command was not executed on the Tuning Manager server host. Alternatively, an Agent to be bound by the alarm 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.
11	The user cancelled the processing.
100	The operating environment of the Tuning Manager series programs is invalid.

Return Values	Meaning
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.

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 Example 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 Example 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 Example 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
#Regular Alarm=Y
#Evaluate All Data=N
#Monitoring Regularly=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=
```

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, the error message shown below 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 5-15 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.)
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.

Note:

- Multiple instances of this command cannot be executed at the same time.
- For details about how to set and use alarms, see the *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 250 alarms can be defined in a single alarm table, including previously defined alarms. Even when 250 or fewer alarms are defined in the alarm definition file, an error will occur if the total number of alarms already defined exceeds 250.
- 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 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 the Tuning Manager server starts. Before you execute the command, check the language environment for the shell and the language environment used when the Tuning Manager server starts.
- When the Tuning Manager server runs on a logical host, execute the command on the active node.
- If this command is executed while either of the following commands is being executed on the same machine (see *Note*), no processing is performed and return code 4 is output:

  - `jpcagtsetup`
  - `jpcalarm`
  - `jpcctrl backup`
  - `jpcctrl clear`
  - `jpcctrl dump`
  - `jpcdbctrl dmconvert`
  - `jpcdbctrl import`
  - `jpchasetup`
  - `jpcinssetup`
  - `jpcinsunsetup`
  - `jpcnshostname`
  - `jpcresto`
  - `jpcstart`
  - `jpcstop`
  - `jpcstsetup`
  - `jpc_start` (This command is used to start the OS.)
  - `jpc_stop` (This command is used to stop the OS.)

  Note: This applies even when the (physical or logical) hosts the commands are executed on are different.

Return Values

Table 5-16 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. The number of alarms exceeded the maximum number of alarms that can be defined in the alarm table.
222	A communication error occurred.
223	A communication timeout error occurred.
255	An unexpected error occurred.

Usage Example

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
```

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. It does so one alarm at a time. (You cannot inactivate all alarms in an alarm table at once in a batch.)

Note:

- Multiple instances of this command cannot be executed at the same time.
- For details about how to set and use alarms, see the *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 the Tuning Manager server starts. Before you execute the command, check the language environment for the shell and the language environment used when the Tuning Manager server starts.
- When the Tuning Manager server runs on a logical host, execute the command on the active node.
- If this command is executed while either of the following commands is being executed on the same machine (see *Note*), no processing is performed and return code 4 is output:

  - `jpcagtsetup`
  - `jpcalarm`
  - `jpcctrl backup`
  - `jpcctrl clear`
  - `jpcctrl dump`
  - `jpcdbctrl dmconvert`
  - `jpcdbctrl import`
  - `jpchasetup`
  - `jpcinssetup`
  - `jpcinsunsetup`
  - `jpcnshostname`
  - `jpcresto`
  - `jpcstart`
  - `jpcstop`
  - `jpcstsetup`
  - `jpc_start` (This command is used to start the OS.)
  - `jpc_stop` (This command is used to stop the OS.)

  Note: This applies even when the (physical or logical) hosts the commands are executed on are different.

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 command was not executed on the Tuning Manager server host. Alternatively, an Agent to be bound by the alarm 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.
255	An unexpected error occurred.

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
```

jpcalarm list

Format

```
jpcalarm list   {-key service-key
                [ -table alarm-table-name ]| -id service-ID}
```

Function

The `jpcalarm list` command displays the definition information or binding information of alarm tables and alarms.

Table 5-18 Information that Is Displayed Depending on Option Specifications on page 5-39 shows the information that is displayed depending on the specification of the `-key` and `-table` options.

Table 5-18 Information that Is Displayed Depending on Option Specifications

Option Specification			Displayed Information
-key	-table	-id	
Specified	Not 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	Not 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`) and a list of Agents to which the alarm table is bound.
Not specified	Not specified	Specified	A list of alarm tables that are bound by Agent is displayed.

Note:

- Multiple instances of this command cannot be executed at the same time.
- For details about how to set and use alarms, see the *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 the Tuning Manager server starts. Before you execute the command, check the language environment for the shell and the language environment used when the Tuning Manager server 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 the Tuning Manager server starts. Before you execute the command, check the language environment for the shell and the language environment used when the Tuning Manager server starts.
- If this command is executed while either of the following commands is being executed on the same machine (see *Note*), no processing is performed and return code 4 is output:

- jpcagtsetup
- jpcalarm
- jpcctrl backup
- jpcctrl clear
- jpcctrl dump
- jpcdbctrl dmconvert
- jpcdbctrl import
- jpchasetup
- jpcinssetup
- jpcinsunsetup
- jpcnshostname
- jpcresto
- jpcstart
- jpcstop
- jpcstsetup
- jpc_start (This command is used to start the OS.)
- jpc_stop (This command is used to stop the OS.)

Note: This applies even when the (physical or logical) hosts the commands are executed on are different.

Return Values

Table 5-19 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 command was not executed on the Tuning Manager server host. Alternatively, an Agent to be bound by the alarm 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 5-20 Information that Is Displayed When the jpcalarm list Command Is Executed on page 5-41 shows the information that is displayed by executing the `jpcalarm list` command

Table 5-20 Information that Is Displayed When the jpcalarm list Command Is Executed

Displayed Information	Information Displayed by Specified Options			Explanation
	-key	-key and -table	-id	
Product ID	Yes	Yes	No	Displays the product ID, which includes the Agent type. For details about the product ID of each Agent, see Appendix C, Specifying a Service ID on page C-1.
DataModelVersion	No	Yes	No	Displays the version of the data model.
Alarm Table Name	Yes	Yes	No	Displays the name of the alarm table.
Alarm Name	No	Yes	No	Displays the names of the alarms and their statuses: `active`: Alarm is enabled. `inactive`: Alarm is disabled.
The Bound Agent	No	Yes	No	Displays the service IDs of the Agents to which the alarm table is bound.
Service ID	No	No	YES	Displays the service ID
Bound Alarm Table Name	No	No	YES	Displays the name of the alarm table that is bound

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 Example 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 Example 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
```

Usage Example 3

Assume that the `PFM UNIX Solution Alarms 6.70` solution set and the user-defined alarm table `alarmtable1` are bound to `hostA`.

In this situation, the following shows an example of executing this command to display a list of alarm tables that are bound to `hostA`:

```
jpcalarm list -id UA1hostA
```

Output Example 3

```
Service ID:UA1hostA
Bound Alarm Table Name:
   alarmtable1
   PFM UNIX Solution Alarms 6.70
```

jpcalarm unapplied

Format

```
jpcalarm unapplied
```

Function

The `jpcalarm unapplied` command displays the alarm application status of agents. It displays services (Agent Collector services and Action Handler

services) whose alarm application status is `Waiting` (waiting to be applied), `Failed` (failed to be applied), `Uncertain` (status unknown), `Incompatible` (not supported), and `Inactive` (stopped). The command does not display services for which application of alarm information has been successfully completed.

Note:

- Multiple instances of this command cannot be executed concurrently.
- This command cannot be executed if the Master Manager service is not running.
- This command cannot be executed on a standby node in a logical host environment.
- If a service that has been deleted appears in the execution results, execute the command `jpctool config alarmsync` to apply the latest alarm information, and then re-execute the command `jpcalarm unapplied`.

Return Values

Return values from 80 to 83 depend on the alarm application status of the services, except for the status `Inactive`, which does not affect the return value.

Table 5-21 Return Values (jpcalarm unapplied)

Return Values	Meaning
0	The command terminated normally (no services are `Incompatible`, `Failed`, `Waiting`, or `Uncertain`).
1	An argument specification is invalid.
2	The user does not have execution permission for the command.
3	The Master Manager service is not running.
4	A startup or termination command, or other setup command, has been executed on the same machine.
5	The command was executed on a host that is not the Tuning Manager server host.
80	There is at least one service with an alarm application status of `Uncertain`, and no service with a status of `Incompatible`, `Failed`, or `Waiting`.
81	There is at least one service with an alarm application status of `Waiting`, and no service with a status of `Incompatible` or `Failed`.
82	There is at least one service with an alarm application status of `Failed`, and no service with a status of `Incompatible`.
83	There is at least one action handler with an alarm application status of `Incompatible`.

Return Values	Meaning
200	A memory shortage occurred.
221	An attempt to acquire the alarm application status from the Master Manager service failed.
222	An error occurred during communication processing.
255	An unexpected error occurred.

Displayed Information

The information that is displayed by executing the `jpcalarm unapplied` command is explained as follows:

Table 5-22 Information that Is Displayed When the jpcalarm unapplied Command Is Executed

Output Information	Explanation
Host Name	This column displays the name of the host running the service.
ServiceID	This column displays the service ID of the Agent Collector or Action Handler. The product name is not shown even if the product name display functionality is enabled.
Service Name	This column displays the name of the service. The product name is not shown even if the product name display functionality is enabled.
Status	This column displays the alarm application status of the service.

Usage Example

This example displays the alarm application status in Windows.

```
>jpcalarm unapplied
Host Name     ServiceID                Service Name        Status
---------     ---------                ------------        ------
hostB         PH1hostB                 Action Handler      Inactive
hostC         TA1hostC                 Agent Collector     Waiting
KAVE06200-I Display processing of the alarm application state ended
normally.
```

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.

Note:

- Multiple instances of this command cannot be executed at the same time.
- For details about how to set and use alarms, see the *Tuning Manager Agent Administration Guide*.
- For details about the service ID, see Appendix C, Specifying a Service ID on page C-1.
- 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 the Tuning Manager server starts. Before you execute the command, check the language environment for the shell and the language environment used when the Tuning Manager server starts.
- When the Tuning Manager server runs on a logical host, execute the command on the active node.
- If this command is executed while either of the following commands is being executed on the same machine (see *Note*), no processing is performed and return code 4 is output:

  - `jpcagtsetup`
  - `jpcalarm`
  - `jpcctrl backup`
  - `jpcctrl clear`
  - `jpcctrl dump`
  - `jpcdbctrl dmconvert`
  - `jpcdbctrl import`
  - `jpchasetup`
  - `jpcinssetup`
  - `jpcinsunsetup`
  - `jpcnshostname`
  - `jpcresto`
  - `jpcstart`
  - `jpcstop`
  - `jpcstsetup`
  - `jpc_start` (This command is used to start the OS.)
  - `jpc_stop` (This command is used to stop the OS.)

  Note: This applies even when the (physical or logical) hosts the commands are executed on are different.

Return Values

Table 5-23 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 command was not executed on the Tuning Manager server host. Alternatively, an Agent to be bound by the alarm 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*"
```

jpcappcvt

Format

```
jpcappcvt     [-n]
```

Function

The jpcappcvt command converts the application definition for version 6.4 or earlier (setting for collecting the operating status of applications) to the application definition for version 7.0 or later (setting for collecting the operating status of processes).

Notes:

- If the -n option is not specified, the command is executed in interactive mode. (The user must respond to messages displayed by the command.)
- After this command has been executed, the new settings take effect automatically. You do not need to restart the Agent Collector service.
- The application definition for versions 6.4 and earlier is not altered. Instead, a new application definition is created that contains converted definitions for version 7.0 or later.
- If the application definition for version 7.0 or later already exists when the command is executed, the KAVF10806-Q or KAVF11606-Q message is output to confirm whether the existing settings can be overwritten. If this command is executed in non-interactive mode, no message is output, and the existing settings are forcibly overwritten.
- The Application Summary (PD_APP) record is used when information is collected to determine whether applications are operating, and the Application Process Detail (PD_APPD) and Application Summary Extension (PD_APP2) records are used when information is collected to determine whether processes are operating. Thus, they use different ways to collect process information, so the values displayed in the fields will be different even after this command is executed.

  If the values in the following fields are different from the values in the fields of the corresponding Application Summary (PD_APP) record, make sure that the monitoring conditions are properly set:

  Application Process Detail (PD_APPD) record

  - Monitoring Count field
  - Monitoring Status field

  Application Summary Extension (PD_APP2) record

  - Application Status field
  - Application Exist field

  The following table shows the correspondence between the fields of the Application Summary (PD_APP) record and the fields of the Application Process Detail (PD_APPD) and Application Summary Extension (PD_APP2) records.

Table 5-24 Correspondence Between the Fields of the Application Summary (PD_APP) Record and the Fields of the Application Process Detail (PD_APPD) and Application Summary Extension (PD_APP2) Records

Fields of the Application Summary (PD_APP) record	Fields of the Application Process Detail (PD_APPD) record	Fields of the Application Summary Extension (PD_APP2) record
Application Name	Application Name	Application Name
Application Status	--	Application Status
Application Exist	--	Application Exist
Process*XX* Count#1	Monitoring Count	--
Process*XX* Range#1	• Monitoring Min • Monitoring Max	--
Process*XX* Status#1	Monitoring Status	--
Process*XX* Kind#1	Monitoring Field	--
Process*XX* Name#1	Monitoring Condition	--
Virtual Env ID#2	--	Virtual Env ID

Legend:

--: The relevant field does not exist.

#1

XX is a number in the range from 01 to 15 that corresponds to the value in the Monitoring Label field (Monitoring*XX*) of the Application Process Detail (PD_APPD) records.

#2

Indicates a field that exists only when Agent for Platform (UNIX) is used.

Table 5-25 Return Values (jpcappcvt)

Return Values	Meaning
0	The command terminated normally.
Other than 0	The command terminated abnormally.

Usage Example

In the following example, the command is executed in interactive mode:

```
 C:\Program Files\Hitachi\jp1pc\agtt\agent\jpcappcvt.exe
KAVF11600-Q Do you want to start conversion? (Y/N) y
KAVF11606-Q Settings for collecting the operating status of the
processes of versions 09-10 and later already exist. Do you want to
```

```
overwrite these settings? (Y/N) y
KAVF11601-I Conversion of the settings was successful.
```

jpcconf host hostmode

Format

- Format 1

```
jpcconf host hostmode    -mode {uname|hostname|alias -aliasname
alias-name}
                         -d backup-directory
                        [-dbconvert {convert|delete}]
```

- Format 2

```
jpcconf host hostmode     -display
```

Function

The following describes the `jpcconf host hostmode` command for each format.

Format 1

Format 1 changes the method used to acquire a monitoring host name in a physical host environment. When the command is executed, all definition and performance information are updated.

Format 2

Format 2 displays the method used to acquire a monitoring host name and the acquired host name.

Notes:

- To execute the `jpcconf host hostmode` command, the versions of the Tuning Manager series programs on the actual host where the command is executed must satisfy the following conditions:

  For an Agent host, one or more Agents of v6.3 or later are needed.

  If you install Agents whose version is earlier than v6.3, you must first return to the settings in which the monitoring host name setting function is not used. The following describes how to return the settings for each OS.

  — In Windows:

  Execute the `jpcconf host hostmode -mode hostname -d d:\backup` command. (see ***Note.***)

  — In UNIX:

  Execute the `jpcconf host hostmode -mode uname -d /home/backup` command. (see ***Note.***)

  Note:

  You can specify any directory for the backup.

- Before you execute the `jpcconf host hostmode` command in Format 1, make sure that no Collection Manager and Agent services are running on the specified host.
- As a guideline, the directory specified for the `-d` option of the `jpcconf host hostmode` command must have enough unused capacity on the drive to accommodate the total size of the Performance database for the Agent on the specified host and for the database located under the import directory. However, if the directory that contains the Performance database, the directory that contains the import directory, or both directories have been changed, then you must estimate the required disk capacity based on the capacity of the database or databases under the changed directory or directories.
- Do not execute any other commands during the execution of the `jpcconf host hostmode` command. Doing so might cause the execution of the `jpcconf host hostmode` command or the other command to fail.
- If the execution of the `jpcconf host hostmode` command fails on an Agent that is running in the Store database with the KAVE05183-E message, perform the following procedure to resolve the problem:

  a. Check the last message, and then remove the cause of the error.

  b. Check if the KAVE05172-I message was output when the execution of the `jpcconf host hostmode` command failed.

  If the KAVE05172-I message was output, restore the data that was backed up in the backup directories to the backup-source directories.

  The backup data contains the data listed in the table below. Restore all of the data in the backup directories to the backup-source directories.

  Note that, for a Windows environment, replace all instances of `/` with `\`.

Table 5-26 Backup Data that Needs To Be Restored (When the jpcconf host hostmode Command Is Executed)

Category	Backup-Source Directory	Backup Directory
Store database	Store directory for each Agent	For a multi-instance Agent: *backup-directory*`/agt?`[#1]`/`*instance*`/store` For a single-instance Agent: *backup-directory*`/agt?`[#1]`/store`
Definition file	*installation-directory*`/jpcns.ini`	*backup-directory*`/jpcns.ini`
	installation-directory`/jpcns_backup.ini`	*backup-directory*`/jpcns_backup.ini`
	installation-directory`/jpccomm.ini`	*backup-directory*`/jpccomm.ini`

Category	Backup-Source Directory	Backup Directory
	installation-directory/agt?[#1]/agent/agtlist.ini[#2]	*backup-directory*/agt?[#1]/agent/agtlist.ini[#2]
	installation-directory/agt?[#1]/store/stolist.ini[#2]	*backup-directory*/agt?[#1]/store/stolist.ini[#2]
	installation-directory/bin/statsvr/restart.ini	*backup-directory*/bin/statsvr/restart.ini
	installation-directory/sys/jp1sysEvent.ini	*backup-directory*/sys/jp1sysEvent.ini

#1

agt? is the Agent service key. For details about Agent service keys, see Appendix D, Specifying a Service Key on page D-1.

#2

Required only for a multi-instance Agent.

c. Execute the `jpcconf host hostmode` command again.

Return Values

Table 5-27 Return Values (jpcconf host hostmode)

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.
4	The Collection Manager or Agent service on the target host is running.
10	The command is being executed.
11	A user or the system terminated processing.
100	The environment for the Tuning Manager series programs is invalid.
102	The specified logical host has not been set up.
200	There is not enough memory.
210	There is not enough unused capacity on the drive.
211	A file or directory cannot be accessed.
220	The host name specified for the service configuration information file is invalid.
222	A communication error occurred.
223	Communication processing timed out.
255	An unexpected error occurred.

Usage Example 1

In this example, the command changes the method for acquiring monitoring host names to the method that uses the `hostname` command.

```
jpcconf host hostmode -mode hostname -d d:\backup -dbconvert convert
```

Usage Example 2

In this example, the command changes the method for acquiring monitoring host names to the method that uses an alias name.

```
jpcconf host hostmode -mode alias -aliasname aliasA -d d:\backup -
dbconvert convert
```

Usage Example 3

In this example, the command displays the method used to acquire monitoring host names and the acquired host name of the specified host. `hostmode` indicates the method used to acquire monitoring host names, `hostname` indicates the monitoring host name of the specified host, and `aliasname` indicates the alias name of the specified host.

```
jpcconf host hostmode -display
```

Display Example

- In this example, the command indicates that the `hostname` command is used to acquire monitoring host names.

  ```
  hostmode  : hostname
  hostname  : hostA
  ```

- In this example, the command indicates that the alias name is used for monitoring host names.

  ```
  hostmode  : alias
  aliasname : aliasA
  ```

jpcconf host hostname

Format

```
jpcconf host hostname    [-lhost logical-host-name] -newhost new-
host-name
                           -d backup-directory
                          [-dbconvert {convert|delete}]
```

Function

The `jpcconf host hostname` command changes a monitoring host name in a Tuning Manager series system. To change the real host name, you must first use this command to change the monitoring host name, and then change the real host name. You can change the monitoring host name of a physical host or a logical host.

This command does not change the method used to change the monitoring host name. When this command is executed, all definition and performance information are updated.

Notes:

- To execute the `jpcconf host hostname` command, the versions of the Tuning Manager series programs on the actual host where the command is executed must satisfy the following conditions:

  For the Agent host:

  - At least one Agent whose version is 6.3 or later must be installed.
- Before you execute the `jpcconf host hostname` command, make sure that no Collection Manager and Agent services are running on the specified host.
- As a guideline, the directory specified for the `-d` option of the `jpcconf host hostname` command must have enough unused capacity on the drive to accommodate the total size of the Performance database for the Agent on the specified host and for the database located under the import directory. However, if the directory that contains the Performance database, the directory that contains the import directory, or both directories have been changed, then you must estimate the required disk capacity based on the capacity of the database or databases under the changed directory or directories.
- Do not execute any other commands during the execution of the `jpcconf host hostname` command. Doing so might cause the execution of the `jpcconf host hostname` command or the other command to fail.
- If the execution of the `jpcconf host hostname` command fails on an Agent that is running in the Store database with the KAVE05181-E or KAVE05182-E message, perform the following procedure to resolve the problem:

  a. Check the last message, and then remove the cause of the error.

  b. Check if the KAVE05172-I message was output when the execution of the `jpcconf host hostname` command failed.

  If the KAVE05172-I message was output, restore the data that was backed up in the backup directories to the backup-source directories.

  The backup data contains the data listed in the table below. Restore all of the data in the backup directories to the backup-source directories.

  Note that, for a Windows environment, replace all instances of `/` with `\`.

Table 5-28 Backup Data that Needs To Be Restored (When the Changing of the Physical Host Name Failed)

Category	Backup-Source Directory	Backup Directory
Store database	Store directory for each Agent	For a multi-instance Agent:

Category	Backup-Source Directory	Backup Directory
		backup-directory/agt?[#1]/*instance*/store For a single-instance Agent: *backup-directory*/agt?[#1]/store
Definition file	*installation-directory*/jpcns.ini	*backup-directory*/jpcns.ini
	installation-directory/jpcns_backup.ini	*backup-directory*/jpcns_backup.ini
	installation-directory/jpccomm.ini	*backup-directory*/jpccomm.ini
	installation-directory/agt?[#1]/agent/agtlist.ini[#2]	*backup-directory*/agt?[#1]/agent/agtlist.ini[#2]
	installation-directory/agt?[#1]/store/stolist.ini[#2]	*backup-directory*/agt?[#1]/store/stolist.ini[#2]
	installation-directory/bin/statsvr/restart.ini	*backup-directory*/bin/statsvr/restart.ini
	installation-directory/sys/jp1sysEvent.ini	*backup-directory*/sys/jp1sysEvent.ini

#1

agt? is the Agent service key. For details about Agent service keys, see Appendix D, Specifying a Service Key on page D-1.

#2

Required only for a multi-instance Agent.

Table 5-29 Backup Data that Needs To Be Restored (When the Changing of the Logical Host Name Failed)

Category	Backup-Source Directory	Backup Directory
Performance database	Store directory for each Agent	For a multi-instance Agent: *backup-directory*/agt?[#1]/*instance*/store For a single-instance Agent: *backup-directory*/agt?[#1]/store
Definition file	*environment-directory*/jp1pc/jpcns.ini	*backup-directory*/jpcns.ini
	environment-directory/jp1pc/jpcns_backup.ini	*backup-directory*/jpcns_backup.ini
	environment-directory/jp1pc/jpccomm.ini	*backup-directory*/jpccomm.ini

Category	Backup-Source Directory	Backup Directory
	environment-directory/jp1pc/agt?[#1]/agent/agtlist.ini[#2]	*backup-directory*/agt?[#1]/agent/agtlist.ini[#2]
	environment-directory/jp1pc/agt?[#1]/store/stolist.ini[#2]	*backup-directory*/agt?[#1]/store/stolist.ini[#2]
	environment-directory/jp1pc/bin/statsvr/restart.ini	*backup-directory*/bin/statsvr/restart.ini
	environment-directory/jp1pc/sys/jp1sysEvent.ini	*backup-directory*/sys/jp1sysEvent.ini

#1

agt? is the Agent service key. For details about Agent service keys, see Appendix D, Specifying a Service Key on page D-1.

#2

Required only for a multi-instance Agent.

c. Execute the jpcconf host hostname command again.

Return Values

Table 5-30 Return Values (jpcconf host hostname)

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.
4	The Collection Manager or Agent service on the target host is running.
10	The command is being executed.
11	A user or the system terminated processing.
100	The environment for the Tuning Manager series programs is invalid.
102	The specified logical host has not been set up.
200	There is not enough memory.
210	There is not enough unused capacity on the drive.
211	A file or directory cannot be accessed.
220	The host name specified for the service configuration information file is invalid.
222	A communication error occurred.

Return Values	Meaning
223	Communication processing timed out.
255	An unexpected error occurred.

Usage Example 1

In this example, the command changes the physical host name to `hostB`.

```
jpcconf host hostname -newhost hostB -d d:\backup
```

Usage Example 2

In this example, the command changes the logical host name from `lhostA` to `lhostB`.

```
jpcconf host hostname -lhost lhostA -newhost lhostB -d d:\backup -
dbconvert delete
```

Output Example

The following shows an example of the standard output when a backup has been successfully deleted.

Example of standard output

```
KAVE05166-I The host name will now be changed.
KAVE05172-I The host information was successfully backed up.
KAVE05174-I The backup of host information was successfully
deleted.
KAVE05167-I The host name was successfully changed.
```

The following shows an example of the standard output when an attempt to delete a backup fails.

Example of standard output

```
KAVE05166-I The host name will now be changed.
KAVE05172-I The host information was successfully backed up.
KAVE05175-W An attempt to delete the backup of host information
has failed.
KAVE05167-I The host name was successfully changed.
```

jpcconf prodname disable

Format

```
jpcconf prodname disable     [-lhost logical-host-name]
```

Function

The `jpcconf prodname disable` command disables product name display functionality. If the functionality is already disabled, this command terminates normally.

Note:

- To execute the `jpcconf prodname disable` command, the versions of the Tuning Manager series programs on the actual host where the command is executed must satisfy the following conditions:

  For the Agent host:

  - At least one Agent whose version is 6.3 or later must be installed.
- When this is executed on a logical host environment, the logical host environment does not need to be exported or imported.
- If a logical host environment is created after this is executed on a physical host environment, the physical host environment settings are carried over to the logical host.

Return Values

Table 5-31 Return Values (jpcconf prodname disable)

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.
4	The Collection Manager or Agent service on the target host is running.
10	The command is being executed.
100	The environment for the Tuning Manager series programs is invalid.
102	The specified logical host has not been set up.
200	There is not enough memory.
210	There is not enough unused capacity on the drive.
211	A file or directory cannot be accessed.
255	An unexpected error occurred.

Usage Example

This example disables product name display functionality for logical host lhost1.

```
jpcconf prodname disable -lhost lhost1
```

jpcconf prodname display

Format

```
jpcconf prodname display     [-lhost logical-host-name]
```

Function

The `jpcconf prodname display` command displays settings for product name display functionality.

Note: To execute the `jpcconf prodname display` command, the versions of the Tuning Manager series programs on the actual host where the command is executed must satisfy the following conditions:

- For the Tuning Manager server host:
  - Tuning Manager 6.3 or later must be installed.
- For the Agent host:
  - At least one Agent whose version is 6.3 or later must be installed.

Return Values

Table 5-32 Return Values (jpcconf prodname display)

Return Values	Meaning
0	The command terminated normally (when product name display functionality is disabled).
1	An argument specification is invalid.
2	The user does not have execution permission for the command.
10	The command is being executed.
100	The environment for the Tuning Manager series programs is invalid.
102	The specified logical host has not been set up.
200	There is not enough memory.
210	There is not enough unused capacity on the drive.
211	A file or directory cannot be accessed.
254	Command terminated normally (when product name display functionality is enabled).
255	An unexpected error occurred.

Usage Example

This example checks the current settings for product name display functionality on the physical host.

```
jpcconf prodname display
```

Output Example

- When product name display functionality is currently enabled:

  ```
  available
  ```

- When product name display functionality is currently disabled:

```
unavailable
```

jpcconf prodname enable

Format

```
jpcconf prodname enable     [-lhost logical-host-name]
```

Function

The `jpcconf prodname enable` command enables product name display functionality. If the functionality is already enabled, this command terminates normally.

Note:

- To execute the `jpcconf prodname enable` command, the versions of the Tuning Manager series programs on the actual host where the command is executed must satisfy the following conditions:

  For the Agent host:

  - At least one Agent whose version is 6.3 or later must be installed.
- When this is executed on a logical host environment, the logical host environment does not need to be exported or imported.
- If a logical host environment is created after this is executed on a physical host environment, the physical host environment settings are carried over to the logical host.

Return Values

Table 5-33 Return Values (jpcconf prodname enable)

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.
4	The Collection Manager or Agent service on the target host is running.
10	The command is being executed.
100	The environment for the Tuning Manager series programs is invalid.
102	The specified logical host has not been set up.
200	There is not enough memory.
210	There is not enough unused capacity on the drive.
211	A file or directory cannot be accessed.
255	An unexpected error occurred.

Usage Example

This example enables product name display functionality on a physical host.

```
jpcconf prodname enable
```

jpcctrl backup

Format

```
jpcctrl backup     service-id
                   [host=host-name]
                   [lhost=logical-host-name]
                   [-d directory]
                   [-partial startday, endday
                   [, [dbid][,[recname][,[drawer]]]]]
                   [-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:

For full backups:

- 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 when the Store database version is 1.0:
  - 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`
- To back up the data stored in the Agent Store service database when the Store database version is 2.0:
  In Windows, the following files are backed up in *installation-folder*`\`*xxxx*(Note 3)`\store[\`*instance-name*`]`(Note 4)`\backup\`*generation-number*(Note 1):
  - `STPI\`*summarization-unit*`\`*year*`\`*date*`\`*generation-number*(Note 5)`\`*record-name*(Note 6)`.DB`
  - `STPI\`*summarization-unit*`\`*year*`\`*date*`\`*generation-number*(Note 5)`\`*record-name*(Note 6)`.IDX`

- STPD*year**date**generation-number*(Note 5)*record-name*(Note 6).DB
- STPD*year**date**generation-number*(Note 5)*record-name*(Note 6).IDX
- STPL*year**date**generation-number*(Note 5)*record-name*(Note 6).DB
- STPL*year**date**generation-number*(Note 5)*record-name*(Note 6).IDX
- STAM.DB
- STAM.IDX
- STDC.DB
- STDC.IDX
- STDM.DB
- STDM.IDX
- STPA.DB
- STPA.IDX
- STPH.DB
- STPH.IDX
- STPT.DB
- STPT.IDX
- jpcsto.ini
- STDICT.DAT
- STRULES.DAT

In UNIX, the following files are backed up in /opt/jp1pc/*xxxx*(Note 3)/store[/*instance-name*](Note 4)/backup/*generation-number*(Note 1):

- STPI/*summarization-unit*/*year*/*date*/*generation-number*(Note 5)/*record-name*(Note 6).DB
- STPI/*summarization-unit*/*year*/*date*/*generation-number*(Note 5)/*record-name*(Note 6).IDX
- STPD/*year*/*date*/*generation-number*(Note 5)/*record-name*(Note 6).DB
- STPD/*year*/*date*/*generation-number*(Note 5)/*record-name*(Note 6).IDX
- STPL/*year*/*date*/*generation-number*(Note 5)/*record-name*(Note 6).DB
- STPL/*year*/*date*/*generation-number*(Note 5)/*record-name*(Note 6).IDX
- STAM.DB
- STAM.IDX
- STDC.DB
- STDC.IDX
- STDM.DB
- STDM.IDX
- STPA.DB
- STPA.IDX

- STPH.DB
- STPH.IDX
- STPT.DB
- STPT.IDX
- jpcsto.ini
- STDICT.DAT
- STRULES.DAT

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`. However, when a backup directory is specified directly by the Tuning Manager server, no generation number directory is created. The backup data is written directly into the specified directory.

Note: ***2:***The database IDs are shown as follows:

- PI: The Agent Store service database for records of the PI record type
- PD: The Agent Store service database for records of the PD record type
- PL: The Agent Store service database for records of the PL record type (for Agent for Platform (UNIX) only)
- PA: The Master Store service database

Note: ***3:****xxxx* indicates the service key of each Agent. For details about service keys, see Appendix D, Specifying a Service Key on page D-1.

Note: ***4:***For a multi-instance Agent, directories named *instance-name* exist.

Note: ***5:***Either `001` or `002` is assigned.

Note: ***6:***Agent record names such as `PI_LOGD`, `PD_PDI`, and `PL_MESS`.

For partial backup (Store database version 2.0 only):

- To partially back up the data stored in the Agent Store service database:
  If you specify the `-partial` option and a target record, the following files are backed up:
  In Windows, the following files are backed up in *installation-folder*`\`*xxxx*(Note 1)`\store\`*instance-name*(Note 2)`\partial`:
  - `STPI\`*summarization-unit*`\`*year*`\`*date*`\`*generation-number*(Note 3)`\`*record-name*(Note 4)`.DB`
  - `STPI\`*summarization-unit*`\`*year*`\`*date*`\`*generation-number*(Note 3)`\`*record-name*(Note 4)`.IDX`

- STPD*year**date**generation-number*(Note 3)*record-name*(Note 4).DB
- STPD*year**date**generation-number*(Note 3)*record-name*(Note 4).IDX
- STPL*year**date**generation-number*(Note 3)*record-name*(Note 4).DB
- STPL*year**date**generation-number*(Note 3)*record-name*(Note 4).IDX
- STAM.DB
- STAM.IDX
- STDC.DB
- STDC.IDX
- STDM.DB
- STDM.IDX
- STPA.DB
- STPA.IDX
- STPH.DB
- STPH.IDX
- STPT.DB
- STPT.IDX
- jpcsto.ini
- STDICT.DAT
- STRULES.DAT

In UNIX, the following files are backed up in /opt/jp1pc/*xxxx*(Note 1)/store/*instance-name*(Note 2)/partial:

- STPI/*summarization-unit*/*year*/*date*/*generation-number*(Note 3)/*record-name*(Note 4).DB
- STPI/*summarization-unit*/*year*/*date*/*generation-number*(Note 3)/*record-name*(Note 4).IDX
- STPD/*year*/*date*/*generation-number*(Note 3)/*record-name*(Note 4).DB
- STPD/*year*/*date*/*generation-number*(Note 3)/*record-name*(Note 4).IDX
- STPL/*year*/*date*/*generation-number*(Note 3)/*record-name*(Note 4).DB
- STPL/*year*/*date*/*generation-number*(Note 3)/*record-name*(Note 4).IDX
- STAM.DB
- STAM.IDX
- STDC.DB
- STDC.IDX
- STDM.DB
- STDM.IDX
- STPA.DB
- STPA.IDX

- STPH.DB
- STPH.IDX
- STPT.DB
- STPT.IDX
- jpcsto.ini
- STDICT.DAT
- STRULES.DAT

Note: ***1:****xxxx* indicates the service key of an Agent. For details about service keys, see Appendix D, Specifying a Service Key on page D-1.

Note: ***2:***For a multi-instance Agent, there are directories that have instance names.

Note: ***3:***Either `001` or `002` is assigned.

Note: ***4:***Agent record names such as `PI_LOGD`, `PD_PDI`, and `PL_MESS`.

Note:

- 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:

  - When the Agent of the Agent Store service that you want to specify is running Hybrid Store.

  Note that when multiple Agent Store services are specified, the backup processing of an Agent that is running Hybrid Store is skipped, but the backup processing of an Agent that is running a Store database is executed.

  - 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.
- To simultaneously execute the `jpcctrl backup` command from multiple hosts, specify the `-direct` option or the `-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 without specifying the `-direct` option or the `-alone` option, we recommend that you execute the command from a single host instead of from multiple hosts.

- In the `jpcctrl backup` 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 : Executing the `jpcctrl backup` command for more than one host:

  In this example, the command creates backup files for all the hosts running Agent for Platform (Windows):

  ```
  jpcctrl backup "TS*" host="*"
  ```

  Note that, when specifying the `-d` option, you cannot use a wildcard character to specify the service ID. If you specify a wildcard character for the service ID and omit the `-d` option, backup files are created in the backup directory in the Store directory contained in each Agent directory.
- To execute this command, you temporarily need unused capacity twice the size of the backup data available on the backup-destination drive. Before executing the command, make sure that this capacity is available.
- If the volume of data to be saved is large, saving might 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.
- When using the `-d` option to specify a backup directory, do not use the same backup directory in a different service key or instance, and do not specify an import directory. Doing so might damage the backup data.
- If you execute the `jpcctrl backup` command for Agent for RAID while it is connecting to the Tuning Manager server, the command might fail and the `KAVE05234-E` message will be output. In this case, execute the `jpcctrl backup` command with the `-alone` option specified.
- For the same Master Store service or Agent Store service, if you execute the `jpcctrl backup` command and the following processing at the same time, an error might occur:

  - `jpcctrl backup` command
  - `jpcctrl clear` command
  - `jpcctrl dump` command
  - `jpcdbctrl import` command
  - `jpcresto` command
  - Storing data of the Agent Store service
  - Displaying the historical report

  If an error occurs, execute the `jpcctrl backup` command again.
- This command cannot be executed between hosts that have different IP types.

Return Values

Table 5-34 Return Values (jpcctrl backup)

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	One or more of the specified services are not active.
5	The Tuning Manager server is not installed.
7	The specified service ID is not of the Agent Store service or Master Store service.
12	One or more specified services do not support this function.
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	Memory is insufficient.
210	There is not enough unused capacity on the drive.
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 communication timeout error occurred.
255	An unexpected error occurred.

Usage Example 1

In this example, the command saves all data from a host named `host02`:

```
jpcctrl backup ?S* host=host02
```

Usage Example 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 in a logical environment.

```
jpcctrl backup OS* lhost=lhost02  -alone
jpcctrl backup OS* lhost=lhost02  -direct
```

Usage Example 4

In this example, the command backs up all Agent Store service data on logical host `jp1-ha1` when the Tuning Manager server is on a physical host in an environment in which the Agent is on a logical host (host name: `jp1-ha1`):

```
jpcctrl backup "?S*" host=jp1-ha1
```

Usage Example 5

In this example, the command backs up all Agent Store service data on logical host `jp1-ha1` when the Tuning Manager server is on a logical host (host name: `jp1-ha2`) in an environment in which the Agent is on a logical host (host name: `jp1-ha1`):

```
jpcctrl backup "?S*" host=jp1-ha1 lhost=jp1-ha2
```

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 Store database of the Master Store service or Agent Store service.

Note:

- When an Agent of the Agent Store service that you want to specify is running Hybrid Store, execute this command for the Store database before migration.
- 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 5-35 Return Values (jpcctrl clear)

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	One or more of the specified services are not active.
5	The Tuning Manager server 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.

Usage Example 1

In this example, the command erases all data from host `host01`:

```
jpcctrl clear ?S* host=host01 *
```

Usage Example 2

In this example, the command erases the data of the PI record type of Agent for Platform (UNIX) from host `host03`. This example assumes that the Tuning Manager server to which Agent for Platform (UNIX) belongs is in the logical host environment (`host01`):

```
jpcctrl clear "US*" host=host03 lhost=host01 PI
```

Usage Example 3

In this example, the command deletes all Agent Store service data on logical host `jp1-ha1` when the Tuning Manager server is on a physical host in an environment in which the Agent is on a logical host (host name: `jp1-ha1`):

```
jpcctrl clear "?S*" host=jp1-ha1
```

Usage Example 4

In this example, the command deletes all Agent Store service data on logical host `jp1-ha1` when the Tuning Manager server is on a logical host (host name: `jp1-ha2`) in an environment in which the Agent is on a logical host (host name: `jp1-ha1`):

```
jpcctrl clear "?S*" host=jp1-ha1 lhost=jp1-ha2
```

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 removed.

Note: The service information of the Name Server service, Master Manager service, Master Store service, and Status Server service cannot be deleted.

Note:

- 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 server 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 server 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.
- If you delete the service information of an Agent to which alarm tables are bound, make sure that you unbind all the alarm tables before starting the deletion.

Return Values

Table 5-36 Return Values (jpcctrl 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	The specified service is not registered.
4	The specified service has not been stopped.
5	The Tuning Manager server 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.

Usage Example 1

In this example, the command deletes the Agent for Platform (Windows) service information that remains after Agent for Platform (Windows) is removed from `host02`:

```
jpcctrl delete T* host=host02
```

Usage Example 2

In this example, the command deletes the Agent for Platform (UNIX) service information from `host03`. This example assumes that the Tuning Manager server to which Agent for Platform (UNIX) belongs is in the logical host environment (`host01`):

```
jpcctrl delete "U*" host=host03 lhost=host01
```

Usage Example 3

In this example, the command deletes all service information for Agents on logical host `jp1-ha1` when the Tuning Manager server is on a physical host in an environment in which the Agent is on a logical host (host name: `jp1-ha1`):

```
jpcctrl delete "?S*" host=jp1-ha1
```

Usage Example 4

In this example, the command deletes all service information for Agents on logical host `jp1-ha1` when the Tuning Manager server is on a logical host (host name: `jp1-ha2`) in an environment in which the Agent is on a logical host (host name: `jp1-ha1`):

```
jpcctrl delete "?S*" host=jp1-ha1 lhost=jp1-ha2
```

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 D, Specifying a Service Key on page D-1.

Note: *2:*For a multi-instance Agent, there are directories that have 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 *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*.Fields that are not explained in these manuals are those that are used in internal processing.

Note:

- 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:

  - When the Agent of the Agent Store service that you want to specify is running Hybrid Store.

  Note that when multiple Agent Store services are specified, the export processing of an Agent that is running Hybrid Store is skipped, but the export processing of an Agent that is running a Store database is executed.

  - 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.
- To simultaneously execute the `jpcctrl dump` command from multiple hosts, specify the `-direct` option or the `-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 dump` command without specifying the `-direct` option or the `-alone` option, we recommend that you execute the command from a single host instead of from multiple hosts.
- In the `jpcctrl dump` 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 : 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 hosts running Agent

for Platform (Windows), 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 might take time.
- To execute this command, you temporarily need, on the export-destination disk, unused capacity twice the size of the database to be exported. Before executing the command, make sure that this capacity is available.
- You cannot export the data for a temporary file (created when this command is executed) that exceeds 2 GB. If the temporary file exceeds 2 GB, you need to divide the period for exporting or the records to be exported before exporting.
- 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.
- If you execute the `jpcctrl dump` command for Agent for RAID while it is connecting to the Tuning Manager server, the command might fail and the `KAVE05234-E` message will be output. In this case, execute the `jpcctrl dump` command with the `-alone` option specified.
- The contents of an export file are not sorted by date or field value. When using user-defined programs or other similar methods to process an export file, sort the contents of the export file as necessary.

- To execute this command between hosts that have different IP types, you need to use the Tuning Manager server as a proxy. Specify `y` for the `proxy` option, and then execute the command. If `y` is not specified for the `proxy` option, you cannot export data by executing this command.
- This command cannot be executed with the `-direct` option specified between hosts that have different IP types.

Return Values

Table 5-37 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	Memory is insufficient.
210	There is not enough unused capacity on the drive.
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 communication timeout error occurred.
255	An unexpected error occurred.

Usage Example 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
```

Usage Example 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 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.

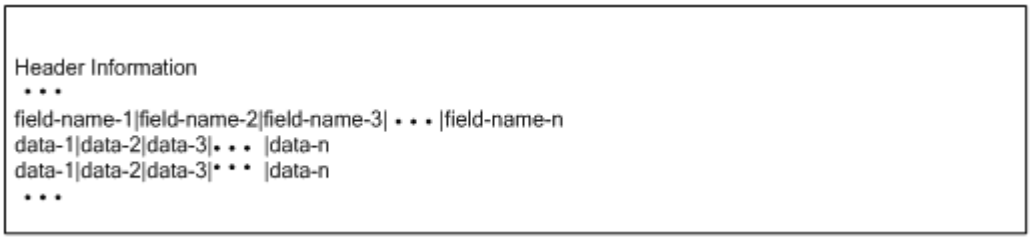


Figure 5-1 jpcctrl dump Export File

An output example is as follows:

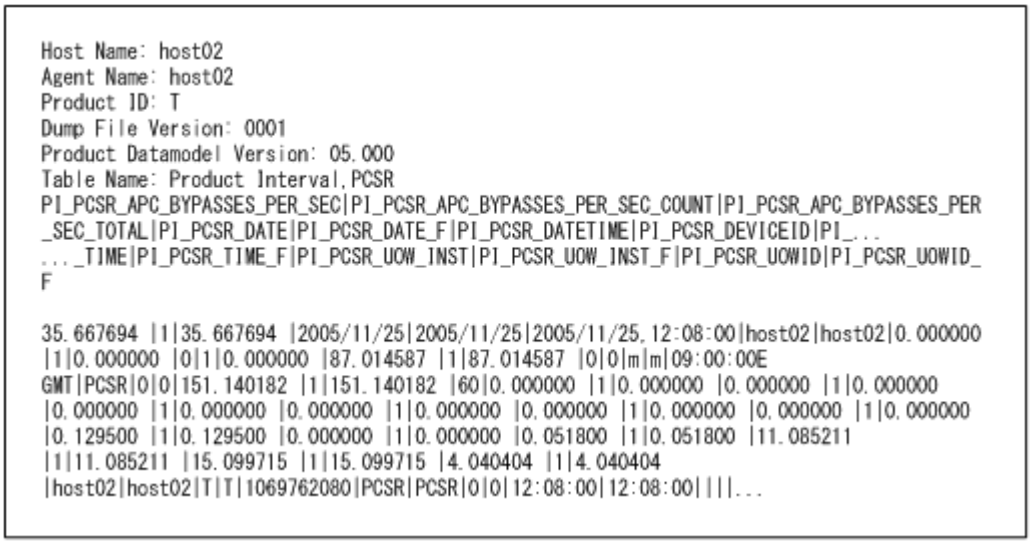


Figure 5-2 jpcctrl dump Command Output Example

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. The Tuning Manager server 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 the Tuning Manager server. If the Tuning Manager server has already been started, wait for a while, and then check the status of the service by using the `jpcctrl list` command.
- After removing a Tuning Manager server, if you reinstall it on the same machine and execute the `jpcctrl list` command, two instances of the Trap Generator service 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.

- If service information is not deleted after performing either of the following operations, the corresponding services might be displayed when the `jpcctrl list` command is executed:
  - Remove an Agent.
  - Delete an Agent instance environment.

  The following table shows the conditions under which the services are displayed.

Table 5-38 Conditions Under Which Services Are Displayed

Conditions When the `jpcctrl list` Command Is Executed		Deletion of Service Information	
Display-Target Host	**-stat Option**	**Not Deleted**	**Deleted**
Local host	--	Service not displayed.	Service not displayed.
Remote host	Specified	Service not displayed.	Service not displayed.
	Not specified	Service displayed.	Service not displayed.

- If service information has been deleted but the Agent has not been removed or the Agent instance environment has not been deleted, corresponding services might be displayed when the `jpcctrl list` command is executed. The following table shows the conditions under which the services are displayed.

Table 5-39 Conditions Under Which Services Are Displayed (When the Service Information Is Deleted)

Conditions When the `jpcctrl list` Command Is Executed		Agent Removal or Deletion of the Agent Instance Environment	
Display-Target Host	**-stat Option**	**Not Removed or Deleted**	**Removed or Deleted**
Local host	--	Service displayed.	Service not displayed.
Remote host	Specified	Service displayed.	Service not displayed.
	Not specified	Service not displayed.	Service not displayed.

- To execute this command between hosts that have different IP types, you need to use the Tuning Manager server as a proxy. Specify `y` for the `proxy` option, and then execute this command. If you execute the command without specifying `y` for the `proxy` option, `Inactive` is displayed.
- This command cannot be executed with the `-stat` option specified between hosts that have different IP types.

Return Values

Table 5-40 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 5-41 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 Note that if the status management function is enabled, the PID is displayed if `Status` is `Active`, `Busy`, `S Active`, `S Busy`, `Starting`, or `Stopping`.
Port	Communication port number being used by the service Note that if the status management function is enabled, the port number is displayed if `Status` is `Active`, `Busy`, `S Active`, or `S Busy`.
Status	Service status • Service statuses displayed when the status management function is enabled:[Note] `Active`: The service is waiting for a request.

Output Information	Explanation
	`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 (standalone mode). `S Busy`: The service is processing a request (standalone mode). `Stopping`: The service is stopping. Note The displayed service statuses are different from the above in the following cases: - The Status Server service has stopped. - The Status Server service is running but the status management function cannot recognize the service status correctly. In this case, you must restart the service to allow the service to recognize the status correctly. The service statuses displayed when one of the above conditions exists are as follows: `Active*`: Active `Inactive*`: Communication cannot be established, 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. • Service statuses displayed when the status management function is disabled: `Active`: Active `Inactive`: Communication cannot be established, 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.

Usage Example 1

In this example, the command displays a list of services of all Tuning Manager series programs in the system:

```
jpcctrl list * host=*
```

Usage Example 2

In this example, the command displays a list of services of the host `host02` of Agent for Platform (Windows):

```
jpcctrl list * host=host02
```

Usage Example 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         DS1instance01[host01] Agent Store       1368     1187     Active
host01         DA1instance01[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
```

This is an example of the `jpcctrl list` command's output when it is executed on a host on which the status management function is disabled:

```
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.
```

This is an example of the `jpcctrl list` command's output when it is executed on a host on which the status management function is enabled:

jpcdbctrl config

Format

```
jpcdbctrl config -key service-key
                 [-inst instance-name]
                 [-lhost logical-host-name]
                 [{-sd|-bd|-bs|-pbd|-dd|-id} setting-value [-move]]
```

Function

The `jpcctrl config` command changes and displays the Store service settings. You can use this command to change the storage directory for the Agent Store service database, or the maximum generation number when backing up the Store database.

To change the settings of the Store service, specify `{-sd|-bd|-bs|-pbd|-dd|-id}` *settings*. If the specification of `{-sd|-bd|-bs|-pbd|-dd|-id}` *settings* is omitted, the setting information of the Store service is displayed.

The following information is displayed:

- `StoreDir`: Displays the Store directory. This is the value that is set in `Store Dir` of the `jpcsto.ini` file.
- `BackupDir`: Displays the backup directory. This is the value that is set in `Backup Dir` of the `jpcsto.ini` file.
- `BackupSave`: Displays the maximum generation number of the backup directory. This is the value that is set in `Backup Save` of the `jpcsto.ini` file.
- `PartialBackupDir`: Displays the partial backup directory. This is the value that is set in `Partial Backup Dir` of the `jpcsto.ini` file. If `Partial Backup Dir` is not found in the `jpcsto.ini` file, a hyphen (`-`) is displayed.
- `DumpDir`: Displays the dump directory. This is the value that is set in `Dump Dir` of the `jpcsto.ini` file.
- `ImportDir`: Displays the import directory. This is the value that is set in `Import Dir` of the `jpcsto.ini` file. If `Import Dir` is not found in the `jpcsto.ini` file, a hyphen (`-`) is displayed.

Note:

- When the Agent that you want to specify by using a service key is running Hybrid Store, this command cannot be executed.
- To change Store service settings, the Agent service specified by the service key must be stopped. However, the Agent service specified by the service key does not have to be stopped to display the Store service settings.

Return Values

Table 5-42 Return Values (jpcdbctrl config)

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.
4	The specified service is not stopped.
5	The specified Agent is not installed.
12	The version of the specified Store service is not subject to import.
28	The target agent is running Hybrid Store.
100	The environment of the Tuning Manager series is invalid.
102	The specified logical host or instance has not been set up.
200	Memory is insufficient.
210	There is not enough unused capacity on the drive.
211	A file or directory cannot be accessed.
255	An unexpected error occurred.

Usage Example 1

In this example, the command changes the settings of Store service information.

```
 jpcdbctrl config -key agtt -sd d:\store
KAVE05856-I Processing to update the configuration information of
the Store database ended normally. (servicekey=agtt, label=Store Dir)
```

Usage Example 2

In this example, the command displays the Store service information.

```
 jpcdbctrl config -key agtd -inst inst1
Store Dir           : .
Backup Dir          : ./backup
Backup Save         : 5
Partial Backup Dir  : ./partial
Dump Dir            : ./dump
Import Dir          : ./import
KAVE05858-I Displaying Store database configuration information
ended normally. (servicekey=agtd, inst=inst1)
```

jpcdbctrl display

Format

- Format 1

```
jpcdbctrl display  [-key service-key [-inst instance-name]]
                   [-lhost logical-host-name]
```

- Format 2

```
jpcdbctrl display   -d backup-directory
```

Function

The `jpcdbctrl display` command displays information about the Store service or backup data.

The functional differences between Formats 1 and 2 are described below. Format 1 displays information about the Store service. Format 2 displays information about the specified backup data. The following shows the information displayed in each format.

Format 1

Displayed Information	Description
`Key`	The service key of the Agent is displayed.
`Instance Name`	For a multi-instance Agent, an instance name is displayed. For a single-instance Agent, "" (an empty character string) is displayed.
`DataModel Ver`	The data model version of the Store service is displayed.
`Store Ver`	For a Store database, the Store database version is displayed. For Hybrid Store, `ExtendedDB` is displayed.

If the information to be displayed is shorter than the sizes shown below, the remainder of the field is filled with single-byte spaces.

- Service key: 6 bytes
- Instance name: 15 bytes
- Data model version: 14 bytes
- Store database version: 9 bytes

Format 2

Displayed Information	Description
`Key`	The service key of the Agent is displayed.
`DataModel Ver`	If the Store database version is 1.0, a hyphen (-) is displayed. If the Store database version is 2.0 or the database is Hybrid Store, the data model version of the specified backup data is displayed.
`Store Ver`	If the specified backup data is in a Store database, the Store database version is displayed. If the database is Hybrid Store, `ExtendedDB` is displayed.

If the information to be displayed is shorter than the sizes shown below, the remainder of the field is filled with single-byte spaces.

- Service key: 6 bytes
- Data model version: 14 bytes
- Store database version: 9 bytes

Note: If you use this command to display the Store service information on a standby node in a logical host environment, a list of instances can be acquired, but a hyphen (–) is displayed for the Store database version and data model version.

Return Values

Table 5-43 Return Values (jpcdbctrl display)

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	The specified service is not active.
5	The specified Agent is not installed.
100	The environment of the Tuning Manager series is invalid.
102	The specified logical host or instance has not been set up.
104	The specified Store service is either being backed up or exported.
200	Memory is insufficient.
210	There is not enough unused capacity on the drive.
211	A file or a directory cannot be accessed.
254	The command terminated normally, and the Store database version is 1.0 in one or more of the specified services.
255	An unexpected error occurred.

Usage Example 1

In this example, information about all of the services located in the physical host is displayed.

```
 jpcdbctrl display
Key    Instance Name   DataModel Ver  Store Ver
------ --------------- -------------- ---------
agtd   inst1           7.1            2.0
agtd   inst2           7.1            1.0
agtd   inst3           7.1            2.0
agtt                   7.0            1.0
agtu                   -              1.0
```

Note: `agtd` indicates a multi-instance Agent version 5.7, `agtt` indicates a single-instance Agent version 5.7, and `agtu` indicates a single-instance Agent version 5.5.

Usage Example 2

In this example, information about the backup directory of Store database version 1.0 is displayed.

```
 jpcdbctrl display -d "d:\backup01"
Key    DataModel Ver  Store Ver
------ -------------- ---------
agtd   -              1.0
```

Usage Example 3

In this example, information about the backup directory of Store database version 2.0 is displayed.

```
 jpcdbctrl display -d "d:\backup02"
Key    DataModel Ver  Store Ver
------ -------------- ---------
agtd   7.8            2.0
```

Usage Example 4

In this example, information about the backup directory of Hybrid Store is displayed.

```
 jpcdbctrl display -d "d:\backup03"
Key    DataModel Ver  Store Ver
------ -------------- ---------
agtd   8.8            ExtendedDB
```

jpcdbctrl dmconvert

Format

`jpcdbctrl dmconvert -d` *backup-directory*

Function

The `jpcdbctrl dmconvert` command converts the data model of the backup data. After the conversion, the data model version of the backup data becomes the same as the data model version of the currently installed Agent.

Notes:

- When the Agent is used with Hybrid Store, this command cannot be used.
- The data model version cannot be downgraded.
- The `jpcdbctrl dmconvert` command can be executed only when the Store database version of the backup data to be specified in the `-d` option is 2.0.

- If an Agent having the same product ID as the backup data is not installed, an error occurs.
- If the data model version of the backup data is newer than that of the installed Agent, an error occurs.
- The backup data must be data that was created when the Store database version was 2.0.
- To execute this command, the unused capacity in the directory specified in the `-d` option of the `jpcdbctrl dmconvert` command must be at least twice the size of the files that will be converted. The capacity is estimated based on the total size of the database specified for the `-d` option. For example, if the total size of the database specified for the `-d` option is 100 MB, secure 200 MB or more of free space on the disk before you execute the command.
- If the execution of the `jpcdbctrl dmconvert` command fails with the KAVE05849-E message, perform the procedure below to resolve the problem. The `jpcdbctrl dmconvert` command acquires internal backup data. You will need to delete the backup data or restore the data from a backup depending on the situation.

  a. Check if the KAVE05801-I message was output.

     If the KAVE05801-I message was output:

     Unnecessary backup data might still be in the backup directory. Check the backup directory and delete any unnecessary data.

     If the KAVE05801-I message was not output:

     Perform the remaining steps to resolve the problem.

  b. Check the last message, and then remove the cause of the error.

  c. If the backup directory contains backup data for the Store database, restore the data to the backup-source directory.

     Before you restore data, ensure that you are not using a Tuning Manager series program command or service to perform any operation on, or view, the Store database for the backup directories.

     The method of restoring the Store database data varies depending on whether the KAVE05800-I message was output. Check if the KAVE05800-I message was output, and then restore the data to the backup-source directory as described below.

     If the KAVE05800-I message was output:

     Delete the `STPI`, `STPD`, and `STPL` directories in the backup-source directory, and then copy the backup files and directories to overwrite the backup-source directory. If the backup-source directory contains files, overwrite them with backup data.

     If the KAVE05800-I message was not output:

     Copy the backup files and directories to overwrite the backup-source directory without deleting the `STPI`, `STPD`, and `STPL` directories. If the backup-source directory contains files or directories, overwrite them with backup data.

d. If the backup directory contains a backup of the definition files, rename the backup files before restoring the data to the backup-source directories.

   If the backup-source directory contains definition files, delete them before restoring data.

e. Re-execute the `jpcdbctrl dmconvert` command.

The table below lists the backup data acquired by the `jpcdbctrl dmconvert` command, and the backup directories.

Note: For a Windows environment, replace all instances of `/` with `\`.

Table 5-44 Backup Data Acquired by the jpcdbctrl dmconvert Command and Backup Directories

Category	Backup-source directory	Backup directory
Store database	*backup-directory*	*backup-directory*`/cvtwork`
Definition file	*backup-directory*`/jpcsto.ini`	*backup-directory*`/jpcsto.ini.bak`
	backup-directory`/STDICT.DAT`	*backup-directory*`/STDICT.DAT.bak`
	backup-directory`/STRULES.DAT`	*backup-directory*`/STRULES.DAT.bak`

Return Values

Table 5-45 Return Values (jpcdbctrl dmconvert)

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.
4	The Store service is active, or another command is accessing the Store directory.
5	The specified Agent is not installed.
28	The target agent is running Hybrid Store.
100	The environment of the Tuning Manager series is invalid.
102	The specified logical host or instance has not been set up.
200	Memory is insufficient.
210	There is not enough unused capacity on the drive.
211	A file or a directory cannot be accessed.
230	An attempt to execute an internal command has failed.
255	An unexpected error occurred.

jpcdbctrl import

Format

- Format 1

```
jpcdbctrl import    -key service-key
                    [-inst instance-name]
                    [-lhost logical-host-name]
                    [-force]
                    -d backup-directory
                    [-add]
```

- Format 2

```
jpcdbctrl import    -key service-key
                    [-inst instance-name]
                    [-lhost logical-host-name]
                    [-force]
                    -clear
```

Function

The `jpcdbctrl import` command imports the backup data into the Store database.

This command can be used only when the database of the target Store service is a version 2.0 Store database.

Note:

- If the product IDs or data model versions between the specified Store service and the specified backup directory are different, an error occurs.
- When data files are overwritten or deleted by executing the `jpcdbctrl import` command, the confirmation message shown below is usually displayed. If you enter `y` or `Y`, processing continues. However, if the `-force` option is specified, processing continues without displaying the message.

  ```
  KAVE05874-Q If you continue the processing, the import data
  will be initialized. Do you want to continue? (Y/N)
  ```

Return Values

Table 5-46 Return Values (jpcdbctrl 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	The specified service is not active.
5	The specified Agent is not installed.

Return Values	Meaning
12	The version of the specified Store service is not subject to import.
28	The specified Agent is running Hybrid Store.
100	The environment of the Tuning Manager series is invalid.
102	The specified logical host or instance has not been set up.
104	The specified Store service is either being backed up or exported.
200	Memory is insufficient.
210	There is not enough unused capacity on the drive.
211	A file or a directory cannot be accessed.
222	A communication error occurred.
255	An unexpected error occurred.

jpcdbctrl setup

Format

```
jpcdbctrl setup     -key service-key
                    [-inst instance-name]
                    [-lhost logical-host-name]
```

Function

The `jpcdbctrl setup` command converts the Store database from version 1.0 to version 2.0. This setup command converts the Store database data to the format of Store database version 2.0, and executes the following processing:

- Converts the setting of the retention period to the extended format.
  For a PI database, the value is converted to the value corresponding to the retention period before conversion as shown in the table below.

Note that the specification unit for the retention period is constant throughout a database or grouping class.

Retention Period Before Conversion	Retention Period After Conversion				
	Summarization Unit				
	Minute (unit: days)	Hour (unit: days)	Day (unit: weeks)	Week (unit: weeks)	Month (unit: months)
1 minute	1	--	--	--	--
1 hour	1	1	--	--	--
1 day	1	1	1	--	--

Retention Period Before Conversion	Retention Period After Conversion				
	Summarization Unit				
	Minute (unit: days)	Hour (unit: days)	Day (unit: weeks)	Week (unit: weeks)	Month (unit: months)
2 days	2	2	1	--	--
3 days	3	3	1	--	--
4 days	4	4	1	--	--
5 days	5	5	1	--	--
6 days	6	6	1	--	--
1 week	7	7	1	1	--
1 month	31	31	5	5	1
1 year	366	366	54	54	12

Legend:

--: This item cannot be specified.

For the retention periods for the PD and PL databases, the default value of the retention period that has been set for each Agent record will be set.

For details about the default value of the retention period for records of the PD record type and PL record type in each Agent, see the Appendix in the *Tuning Manager Installation Guide*.

- The following directories are created:

OS Type	Agent Type	Directories to Be Created	Explanation
Windows	Single instance Agent	*installation-folder**xxxx*\store\partial (see ***Note***)	Default partial backup folder
		*installation-folder**xxxx*\store\import (see ***Note***)	Default import folder
	Multi instance Agent	• On physical hosts: *installation-folder**xxxx*\store*instance-name*\partial (see ***Note***) • On logical hosts: *environment-directory*\jp1pc*xxxx*\store*instance-name*\partial (see ***Note***)	Default partial backup folder
		• On physical hosts: *installation-folder**xxxx*\store*instance-name*\import	Default import folder

OS Type	Agent Type	Directories to Be Created	Explanation
		(see ***Note***) • On logical hosts: *environment-directory*\jp1pc*xxxx*\store*instance-name*\import (see ***Note***)	
UNIX	Single instance Agent	/opt/jp1pc/*xxxx*/store/partial (see ***Note***)	Default partial backup directory
		/opt/jp1pc/*xxxx*/store/import (see ***Note***)	Default import directory
	Multi instance Agent	• On physical hosts: /opt/jp1pc/*xxxx*/store/*instance-name*/partial (see ***Note***) • On logical hosts: *environment-directory*/jp1pc/*xxxx*/store/*instance-name*/partial (see ***Note***)	Default partial backup directory
		• On physical hosts: /opt/jp1pc/*xxxx*/store/*instance-name*/import (see ***Note***) • On logical hosts: *environment-directory*/jp1pc/*xxxx*/store/*instance-name*/import (see ***Note***)	Default import directory

Note: *xxxx* indicates the service key of each Agent. For details about these service keys, see Appendix D, Specifying a Service Key on page D-1.

Note:

- When the Agent is used with Hybrid Store, this command cannot be used.
- It is recommended that you back up the data before executing the `jpcdbctrl setup` command.
- To execute the `jpcdbctrl setup` command (that is, before command execution), there must be unused capacity as large as the disk capacity occupied by the Store database.
- Executing the `jpcdbctrl setup` command extends the data format of the PI, PD, and PL databases.
- After the setup, you must set a retention period. If you execute the `jpcdbctrl setup` command to convert the Store database from version

1.0 to version 2.0, the default value will be set for the retention period for the Store database. After the setup finishes, check the value and set a retention period suitable for the operating environment.

Return Values

Table 5-47 Return Values (jpcdbctrl setup)

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.
4	The specified service has not been stopped.
5	The specified Agent is not installed.
10	The command is being executed.
11	The user cancelled the processing.
12	The version of the specified Store service is not subject to setup.
28	The specified Agent is running Hybrid Store.
100	The environment of the Tuning Manager series is invalid.
102	The specified logical host or instance has not been set up.
200	Memory is insufficient.
210	There is not enough unused capacity on the drive.
211	A file or a directory cannot be accessed.
255	An unexpected error occurred.

jpcdbctrl unsetup

Format

```
jpcdbctrl unsetup   -key service-key
                    [-inst instance-name]
                    [-lhost logical-host-name]
                    [-force]
```

Function

The `jpcdbctrl unsetup` command returns the Store database version from 2.0 to 1.0.

Note:

- When the Agent is used with Hybrid Store, this command cannot be used.

- Because executing the `jpcdbctrl unsetup` command initializes data, the confirmation message shown below is usually displayed if any data exists. If you enter `Y` or `y`, processing continues. However, if the `-force` option is specified, processing continues without displaying the message.

  ```
  KAVE05873-Q If you continue the processing, the Store database
  will be initialized. Do you want to continue? (Y/N)
  ```

- The import directory is not deleted.

Return Values

Table 5-48 Return Values (jpcdbctrl unsetup)

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.
4	The specified service has not been stopped.
5	The specified Agent is not installed.
10	The command is being executed.
11	The user cancelled the processing.
12	The version of the specified Store service is not subject to unsetup.
28	The specified Agent is running Hybrid Store.
100	The environment of the Tuning Manager series is invalid.
102	The specified logical host or instance has not been set up.
200	Memory is insufficient.
210	There is not enough unused capacity on the drive.
211	A file or a directory cannot be accessed.
255	An unexpected error occurred.

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 servers support logical host operation. For details about using an Agent on a logical host, see the chapter that explains cluster systems in the *Tuning Manager Agent Administration Guide*.

Note:

- Because 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.
- When you create a logical host environment for a Tuning Manager server, the health check function of the Tuning Manager server in the logical host environment is disabled (default) regardless of the setting of the health check function (enabled or disabled) specified for the Tuning Manager server in the physical host environment. If you want to use the health check function of the Tuning Manager server in the logical host environment, you must set up the health check function again for that environment.
- When the monitoring host name setting function is enabled (`1` or `2` is set for `Get Host Mode` in `Common Section` in the `jpccomm.ini` file), you cannot specify a logical host name that is the same as the monitoring host name.

Return Values

Table 5-49 Return Values (jpchasetup create)

Return Values	Meaning
`0`	The command terminated normally.
Other than `0`	The command terminated abnormally.

Usage Example

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
```

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 servers support logical host operation. For details about using an Agent on a logical host, see the chapter that explains cluster systems in the *Tuning Manager Agent Administration Guide*.

Note:

- Because 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.
- When you delete the logical host environment of a Tuning Manager server, the setting of the health check function (enabled or disabled) of the Tuning Manager server in the physical host environment inherits the setting that existed before the logical host environment was created.

Return Values

Table 5-50 Return Values (jpchasetup delete)

Return Values	Meaning
`0`	The command terminated normally.
Other than `0`	The command terminated abnormally.

Usage Example

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
```

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 servers support logical host operation. For details about using an Agent on a logical host, see the chapter that explains cluster systems in the *Tuning Manager Agent Administration Guide*.

Note:

- This command is executed so that the active 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 active 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.
- You do not need to stop the Collection Manager and Agent services on the logical host when executing this command.

Return Values

Table 5-51 Return Values (jpchasetup export)

Return Values	Meaning
`0`	The command terminated normally.
Other than `0`	The command terminated abnormally.

Usage Example

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
```

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 active node, into the standby node.

You can execute this command only with a Tuning Manager series program that supports logical host operation. Tuning Manager servers support logical host operation. For details about using an Agent on a logical host, see the chapter that explains cluster systems in the *Tuning Manager Agent Administration Guide*.

Note:

- This command is executed so that the active 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 active node
  - Delete the logical host environment on the active 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 active 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.
- If you want to use the health check function, you must enable the status management function of the host that imports the definition file for the logical host environment.
- When the monitoring host name setting function is enabled (`1` or `2` is set for `Get Host Mode` in `Common Section` in the `jpccomm.ini` file), you cannot specify a logical host name that is the same as the monitoring host name.
- Before executing this command, stop the Collection Manager and Agent services on the logical host.

Return Values

Table 5-52 Return Values (jpchasetup import)

Return Values	Meaning
0	The command terminated normally.
Other than 0	The command terminated abnormally.

Usage Example

In this example, the command imports the contents of the logical host's environment definition file (jp1-ha1.conf) exported on the active node:

```
jpchasetup import -f jp1-ha1.conf
```

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 servers support logical host operation. For details about using an Agent on a logical host, see the chapter that explains cluster systems in the *Tuning Manager Agent Administration Guide*.

Note:

- 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 5-53 Return Values (jpchasetup list)

Return Values	Meaning
0	The command terminated normally.
Other than 0	The command terminated abnormally.

Usage Example

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"                       instance01

lhost2             agtd   "H:¥HTM2¥jp1pc"                      instance02

KAVE05136-I The logical host startup information listing ended normally.
```

Figure 5-3 jpchasetup Command Output Example

jpciniupdate

Format

```
jpciniupdate      -i update-target-definition-file-name
                  -u update-contents-file-name
```

Function

The `jpciniupdate` command updates the values of the settings in the following definition files:

- `jpccomm.ini`
- `jpcsto.ini`

You can create a file in advance that contains the values of the updates to the settings, and then execute the `jpciniupdate` command to apply the updates to the settings in the specified definition file.

If the definition file to be updated and the file containing the updates have the same section names and label names, this command updates the values of the settings in the definition file. If section names and label names are not found in the definition file, they are added and the values are set. Caution is required because the updates are performed as specified, regardless of whether the new values of the settings are valid.

Note:

- If command execution is interrupted by pressing the **Ctrl + C** keys or by a signal, a predefined return value is not returned. Therefore, you should ignore the return value when the command was interrupted by the **Ctrl + C** keys or by a signal.
- When specifying the update contents in a UNIX environment, before using double-byte characters, make sure the language environment (LANG environment variable) matches the language environment in which the Tuning Manager series is running.

Return Values

Table 5-54 Return Values (jpciniupdate)

Return Values	Meaning
0	The command terminated normally.
1	The command terminated abnormally.

Usage Example

This example updates `jpccomm.ini` on a physical host in a UNIX environment.

```
# ./jpciniupdate  -i  /opt/jp1pc/jpccomm.ini  -u  /tmp/
jpccomm.ini.update
KAVE05850-I The update processing of the files ended normally.
```

jpcinslist

Format

```
jpcinslist   service-key
              [-lhost logical-host-name]
```

Function

The `jpcinslist` command displays the names of instances already set up for a multi-instance Agent.

Note:

- 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 5-55 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.

Return Values	Meaning
100	The operating environment for the Tuning Manager series programs is invalid.
102	The specified logical host has not been set up.
200	Memory is insufficient.
210	There is not enough unused capacity on the drive.
211	A file or directory cannot be accessed.
230	Execution of an internal command failed.
255	An unexpected error occurred.

Usage Example 1

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

Usage Example 2

In this example, the command outputs the name of the Agent for Oracle instance of the logical host (host name: jp1-ha1):

```
jpcinslist agto -lhost jp1-ha1
```

jpcinssetup

Format

```
jpcinssetup     service-key
               [-lhost logical-host-name]
                -inst instance-name
```

Function

The jpcinssetup command creates or updates an instance environment for a multi-instance Agent. For an Agent that can start an instance, execution of this command is required.

Executing this command creates or updates the following directories that contain files, such as the setup file for the instance environment, and creates or updates the setup file for the instance environment:

- Windows:
  - On physical hosts:
    *installation-folder**xxxx*\agent*instance-name* (see ***Note***)
    *installation-folder**xxxx*\store*instance-name* (see ***Note***)
  - On logical hosts:
    environment-directory\jp1pc*xxxx*\agent*instance-name* (see ***Note***)
    environment-directory\jp1pc*xxxx*\store*instance-name* (see ***Note***)
- UNIX:
  - On physical hosts:
    /opt/jp1pc/*xxxx*/agent/*instance-name* (see ***Note***)
    /opt/jp1pc/*xxxx*/store/*instance-name* (see ***Note***)
  - On logical hosts:
    environment-directory/jp1pc/*xxxx*/agent/*instance-name* (see ***Note***)
    environment-directory/jp1pc/*xxxx*/store/*instance-name* (see ***Note***)

Note: *xxxx* indicates the service key of each Agent. For details about these service keys, see Appendix D, Specifying a Service Key on page D-1.

Note:

- 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 5-56 Return Values (jpcinssetup)

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.
4	The specified service has not been stopped.
5	The specified service is not installed.
10	The command is executing in another session.

Return Values	Meaning
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	Memory is insufficient.
210	There is not enough unused capacity on the drive.
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.

Usage Example

In this example, the command creates an instance execution environment named SDC:

```
jpcinssetup agto -inst SDC
```

jpcinsunsetup

Format

```
jpcinsunsetup     service-key
                 [-lhost logical-host-name]
                  -inst instance-name
```

Function

The jpcinsunsetup command deletes an instance environment for a multi-instance Agent.

Executing this command deletes the following directories that contain, among other things, the setup file for the instance environment:

- Windows:
  - On physical hosts:
    *installation-folder**xxxx*\agent*instance-name* (see ***Note***)
    *installation-folder**xxxx*\store*instance-name* (see ***Note***)
  - On logical hosts:

environment-directory\jp1pc*xxxx*\agent*instance-name* (see ***Note***)
environment-directory\jp1pc*xxxx*\store*instance-name* (see ***Note***)

- UNIX:
  - On physical hosts:
    /opt/jp1pc/*xxxx*/agent/*instance-name* (see ***Note***)
    /opt/jp1pc/*xxxx*/store/*instance-name* (see ***Note***)
  - On logical hosts:
    environment-directory/jp1pc/*xxxx*/agent/*instance-name* (see ***Note***)
    environment-directory/jp1pc/*xxxx*/store/*instance-name* (see ***Note***)

Note: *xxxx* indicates the service key of each Agent. For details about these service keys, see Appendix D, Specifying a Service Key on page D-1.

Note:

- 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.
- Alarm tables bound to an Agent are not unbound when the Agent instance environment is deleted. If you delete the instance environment of an Agent to which alarm tables are bound, unbind all the alarm tables before starting the deletion.

Return Values

Table 5-57 Return Values (jpcinsunsetup)

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.
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).
100	The operating environment for the Tuning Manager series programs is invalid.
101	The port number could not be acquired.

Return Values	Meaning
102	The specified instance was not found.
200	Memory is insufficient.
210	There is not enough unused capacity on the drive.
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.

Usage Example

In this example, the command deletes an instance execution environment named SDC:

```
jpcinsunsetup agto -inst SDC
```

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 other than the following used by services or programs in the Tuning Manager series are automatically allocated when a service restarts, a port number other than those listed can be used before restart.

Table 5-58 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.

Service Name	Parameter	Port Number	Use
Status Server	jp1pcstatsvr	22350	Used to check the status of the Status Server service.
View (between Main Console and the View Server service, and between Performance Reporter and the View Server service)	jp1pcvsvr	22286	Used to log into the Tuning Manager server or to operate Performance Reporter.
View Server (used for sending an event or a report from an Agent to a Tuning Manager server or from an Agent to Performance Reporter)	jp1pcvsvr2	20276	Used when sending an event or a report from an Agent to a Tuning Manager server or from an Agent to Performance Reporter.

Use this command to set a port number other than those listed. To allow communication through a firewall between a Tuning Manager server and an Agent, you need to set the port number to a fixed value. For details about the settings for allowing communication through a firewall between a Tuning Manager server and an Agent, see the Appendix in the *Tuning Manager Agent Administration Guide*.

Note:

- When setting the port number and starting the service for the Tuning Manager series program, stop the service before executing 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.
- The port numbers set for the Name Server service and the Status Server service must be the same for all hosts in the Tuning Manager series system. For services for other Tuning Manager series programs, to avoid conflicts during operation, ensure that port numbers and service names are consistent 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 might 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 5-59 Return Values (jpcnsconfig port)

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.
4	The specified service is not stopped.
5	The specified service key was not found.
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	Memory is insufficient.
210	There is not enough unused capacity on the drive.
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.

Usage Example 1

In this example, the command sets the port numbers for all Tuning Manager series program services to a fixed value:

```
jpcnsconfig port define all
```

Usage Example 2

In this example, the command displays information about the port numbers for all Tuning Manager series program services:

```
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      DS1instance01[host01] <undef>        <undef>  host01
Agent Collector  DA1instance01[host01] <undef>        <undef>  host01
Agent Store      ES1host01          <undef>        <undef>  host01
Agent Collector  EA1host01          <undef>        <undef>  host01
```

Figure 5-5 jpcnsconfig Command Output Example

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 server (Name Server service).

When the `-s` option or `-u` option is not specified, the command displays the host name of the connection-target Tuning Manager server. When the `-s` option or `-u` option is specified, the command can change the Tuning Manager server host.

When the `-lhost` option is specified, the command can change the Tuning Manager server host in a logical host environment.

Note:

- If you configure or change the Tuning Manager server 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.
- If two or more host names are set for a Collection Manager host, the Collection Manager being connected to must be as follows:

  - If the real host name is being used for a monitoring host name of Collection Manager:

  For Windows systems: a host name checked by executing the `hostname` command

  For UNIX systems: a host name checked by executing the `uname -n` command

  - If an alias name is being used for a monitoring host name of Collection Manager:

  An alias name that has been set

Return Values

Table 5-60 Return Values (jpcnshostname)

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.
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	Memory is insufficient.
210	There is not enough unused capacity on the drive.
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.

Usage Example 1

In this example, the command displays the connection-target Tuning Manager server host:

```
jpcnshostname
```

Usage Example 2

In this example, the command changes the connection-target Tuning Manager server host to `hostmgr`:

```
jpcnshostname -s hostmgr
```

Usage Example 3

In this example, the command displays the connection-target Tuning Manager server host of the logical host (host name: `jp1-ha1`):

```
jpcnshostname -lhost jp1-ha1
```

Usage Example 4

In this example, the command changes the connection-target Tuning Manager server host of the logical host (host name: `jp1-ha1`) to `hostmgr`:

```
jpcnshostname -s hostmgr -lhost jp1-ha1
```

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, Agents, and the OS. You can use this command when a problem occurs on Collection Manager or Agents.

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 first compressed by using the `tar` command, and is then compressed further by using the `compress` or `gzip` 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 *Tuning Manager Agent Administration Guide*.

Note:

- Before executing this command, move to the directory that contains the command.

- When collecting information from the Agent Store service database with the `all` or `data` option specified, there is no need to stop the target service.
- When collecting database information in the Windows environment, there is no need to stop the collection-target Master Store service. Therefore, you can collect information even from a database whose Store service cannot be stopped because of an operational requirement. However, depending on the collection timing, the database files might be incomplete in some cases.
- If `1` is specified for the environment variable `JPC_COLIMPORT`, you can collect the database files located under the import directory of the Store service.
- If the database is Hybrid Store or Store database version 2.0, execute both of the commands below to collect information about resources other than the database, and then collect the error data. If the database is Hybrid Store or Store database version 2.0, increases the size of the database, and as a result, data collection might take longer, which can cause the start of an error investigation to be delayed.

  - `jpcras` *directory-name* `all`

  - `jpcras` *directory-name* `all dump`

  If the size of the database is not large, you can collect data including the database by executing the following command:

  - `jpcras` *directory-name* `all all`
- Executing this command collects the database of the Store service. However, the database located under the import directory is not collected. To collect the database located under the import directory, specify `1` for the environment variable `JPC_COLIMPORT`.
- 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 enough unused capacity is available on the drive. To estimate the amount of unused capacity that is needed, estimate the amount of used capacity for each product.
- If this command is executed when there is a memory shortage or insufficient unused capacity on the drive, an OS message might 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 unused capacity on the drive.
- 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 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).
- To execute the jpcras command in a UNIX environment, make sure that the following conditions for the required disk capacity are satisfied:

  - The unused capacity in the directory specified by the jpcras command is at least double the size of the data that will be collected.

  - The /tmp or /var/tmp directory will be used for tar command processing. Note that which directory is used depends on the OS environment.

  The following is an execution example of the jpcras command:

  ```
  jpcras /usr/ras all all
  ```

  For example, if the size of the data that will be collected by the jpcras command is 100 MB, the /usr/ras directory must have at least 200 MB of unused capacity. In addition, the /tmp or /var/tmp directory will temporarily require at least 100 MB of unused capacity to process the tar command.

Return Values

Table 5-61 Return Values (jpcras)

Return Values	Meaning
0	The command terminated normally.

Return Values	Meaning
1	An argument specification is invalid.
2	The user does not have 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	There is not enough unused capacity on the drive.
211	The collection target directory cannot be accessed.
255	An unexpected error occurred.

Usage Example 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
```

Usage Example 2

In this example, the command collects the dump information of Agent for Platform (UNIX) in a UNIX host and stores it in a folder named /tmp/jp1pc:

```
jpcras /tmp/jp1pc agtu dump
```

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.

Agent Store service data can be restored only if the versions of the Store databases are the same.

Note:

- When the Agent is used with Hybrid Store, this command cannot be used.
- 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 might 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.
- When the Store database version is 1.0, the indexes are rebuilt. When the Store database version is 2.0, the indexes are not rebuilt because the backup file contains the IDX file.

Return Values

Table 5-62 Return Values (jpcresto)

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.
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.
28	The specified Agent is running Hybrid Store.
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	There is not enough unused capacity on the drive.
211	A backup file or a directory cannot be accessed.
212	Index creation failed.

Return Values	Meaning
255	An unexpected error occurred.

Usage Example 1

In this example, the command restores the data of the Agent Store service database in Agent for Platform (Windows) that has been saved in the default location:

```
jpcresto agtt "c:\program files\hicommand\tuningmanager\jp1pc\agtt
\store\backup\01"
```

Usage Example 2

In this example, the command restores the data for the Agent for Oracle instance named `inst1` on the logical host (host name: `jp1-ha1`), from `/opt/jp1pc/agto/store/inst1/backup/01`:

```
jpcresto agto /opt/jp1pc/agto/store/inst1/backup/01 lhost=jp1-ha1
inst=inst1
```

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.

When the services to be started include the Collection Manager service and the health check function is enabled on the Tuning Manager server host on which you execute the command, the health check agent also starts as part of the Collection Manager service. Note that you cannot specify `agt0` as the service key.

Note:

- If the Collection Manager service is not active, the following Agents and services cannot be started.

  - Agent installed on the same host where a Tuning Manager server is installed.

- Action Handler service of a host where a Tuning Manager server or an Agent is installed.

  Note that, if an Agent is installed on a host where a Tuning Manager server is not installed, the Agent starts in standalone mode.

- The arguments must be specified in the order that they appear under *Format* in this explanation.
- If the command is executed and returns a value of `103`, it indicates that monitoring for the startup of the Tuning Manager series program service 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 *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 unused capacity available on the drive. If there is sufficient unused capacity, 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 *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.
- If the status management function is enabled on the host, the Status Server service is started first unless it has already started. 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.`
- Do not execute this command simultaneously while you are starting or stopping a service from the cluster software or the service control manager. Doing so might cause the starting or stopping of the service to not terminate normally.

Return Values

Table 5-63 Return Values (jpcstart)

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.

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 Performance 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.

Usage Example 1

In this example, the command starts all services of Collection Manager and the Agent:

```
jpcstart all
```

Usage Example 2

In this example, the command starts the service of an instance named `oracleA` in Agent for Oracle:

```
jpcstart agto inst=oracleA
```

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.

When the services to be stopped include the Collection Manager service and the health check function is enabled on the Tuning Manager server host on which you execute the command, the health check agent also stops as part of the Collection Manager service. Note that you cannot specify `agt0` as the service key.

Note:

- 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 *Tuning Manager Agent Administration Guide*.
- When you attempt to stop the Agent service on a host where a Tuning Manager server 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 a Tuning Manager server 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. Make sure that 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.
- The Status Server service does not stop 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.
- The command with the `all` or `stat` option specified for the service key might be executed on the physical host when the status management function is enabled. In this case, if one or more services that relies on the Status Server is running on the logical host, the following message is output and the value 108 is returned: `KAVE06022-I Status Server will not be stopped because a service that relies on Status Server is running`.

- Do not execute this command simultaneously while you are starting or stopping a service from the cluster software or the service control manager. Doing so might cause the starting or stopping of the service to not terminate normally.

Return Values

Table 5-64 Return Values (jpcstop)

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	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.

Usage Example 1

In this example, the command stops all services of Collection Manager and the Agent:

```
jpcstop all
```

Usage Example 2

In this example, the command stops the service of an instance named `oracleA` in Agent for Oracle:

```
jpcstop agto inst=oracleA
```

jpcstsetup disable

Format

```
jpcstsetup disable
```

Function

The `jpcstsetup disable` command disables the status management function.

Note:

- 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.
- You cannot disable the status management function when the health check function is enabled on the physical host or in a logical host environment.

Return Values

Table 5-65 Return Values (jpcstsetup disable)

Return Values	Meaning
0	The command ended normally.
1	An argument specification is invalid.
2	The user does not have execution permission 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.
101	A function dependent on the status management function is enabled.
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.

Usage Example

In this example, the command disables the status management function:

```
jpcstsetup disable
```

jpcstsetup display

Format

```
jpcstsetup display
```

Function

The `jpcstsetup display` command displays the status of the status management function.

Return Values

Table 5-66 Return Values (jpcstsetup display)

Return Values	Meaning
0	The status management function is disabled.
1	An argument specification is invalid.
2	The user does not have execution permission 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.

Usage Example

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
  ```

jpcstsetup enable

Format

```
jpcstsetup enable
```

Function

The `jpcstsetup enable` command enables the status management function.

Note:

- 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 5-67 Return Values (jpcstsetup enable)

Return Values	Meaning
0	The command ended normally.
1	An argument specification is invalid.
2	The user does not have execution permission 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.

Usage Example

In this example, the command enables the status management function:

```
jpcstsetup enable
```

jpcstsetup hcdisable

Format

```
jpcstsetup hcdisable
```

Function

The `jpcstsetup hcdisable` command disables the health check function. When a logical host environment has been created for the Tuning Manager server, the command disables the health check function of the Tuning Manager server in the logical host environment.

Note:

- You cannot execute this command if any service of the Tuning Manager series programs is running on the physical host or a logical host.
- If you have disabled the health check function, the health check agent does not start when the Tuning Manager server starts.
- If you disable the health check function for the Tuning Manager server in a logical host environment, you need to use the `jpchasetup export` command to export the definition of the logical host environment and use the `jpchasetup import` command to import the definition to the standby host.

Return Values

Table 5-68 Return Values (jpcstsetup hcdisable)

Return Values	Meaning
0	The command ended normally.
1	An argument is specified incorrectly.
2	The user does not have execution permission for the command.
4	The services on the Tuning Manager server host have not stopped.
5	The command was executed on a host that is not the Tuning Manager server host.
10	The command is being executed.
11	Processing was canceled by the user or the system.
100	The environment for the Tuning Manager series is invalid.
200	A memory shortage occurred.
211	The file or directory cannot be accessed.
230	Execution of an internal command failed.
231	Registration of a health check agent service failed (Windows only).
232	Deletion of a health check agent service failed (Windows only).
233	Setting up dependencies among services failed (Windows only).
234	Rollback of the processing failed.
255	An unexpected error occurred.

Usage Example

In this example, the command disables the health check function:

```
jpcstsetup hcdisable
```

jpcstsetup hcdisplay

Format

```
jpcstsetup hcdisplay
```

Function

The `jpcstsetup hcdisplay` command displays the status of the health check function. When a logical host environment is created for the Tuning Manager server, the command displays the status of the health check function of the Tuning Manager server in a logical host environment.

Return Values

Table 5-69 Return Values (jpcstsetup hcdisplay)

Return Values	Meaning
0	The command ended normally (the health check function is disabled).
1	An argument is specified incorrectly.
2	The user does not have execution permission for the command.
5	The command is executed on a host that is not the Tuning Manager server host.
10	The command is being executed.
11	Processing was canceled by the user or the system.
100	The environment for the Tuning Manager series is invalid.
211	The file or directory cannot be accessed (the command was executed on the standby node).
254	The command terminated normally (the health check function is enabled).
255	An unexpected error occurred.

Usage Example

In this example, the command displays the status of the health check function:

```
jpcstsetup hcdisplay
```

Output Examples

- When the health check function is enabled:

  ```
  available
  ```

- When the health check function is disabled:
  `unavailable`

jpcstsetup hcenable

Format

```
jpcstsetup hcenable
```

Function

The `jpcstsetup hcenable` command enables the health check function. When a logical host environment has been created for the Tuning Manager server, the command enables the health check function of the Tuning Manager server in the logical host environment.

Note:

- You cannot execute this command if a service of the Tuning Manager series is running on the physical host or a logical host.
- You cannot enable the health check function when the status management function is not enabled on the physical host on which you execute the command.
- If you enable the health check function, the health check agent starts at the same time that the Tuning Manager server starts.
- When you enable the health check function for the Tuning Manager server in a logical host environment, you need to use the `jpchasetup export` command to export the definition of the logical host environment and use the `jpchasetup import` command to import the definition to the standby host.

Return Values

Table 5-70 Return Values (jpcstsetup hcenable)

Return Values	Meaning
0	The command ended normally.
1	An argument is specified incorrectly.
2	The user does not have execution permission for the command.
4	The services on the Tuning Manager server host have not stopped.
5	The command is executed on a host that is not the Tuning Manager server host.
10	The command is being executed.
11	Processing was canceled by the user or the system.
100	The Tuning Manager series environment is invalid.

Return Values	Meaning
101	The status management function is not enabled.
200	A memory shortage occurred.
211	The file or directory cannot be accessed.
230	Execution of an internal command failed.
231	Registration of a health check agent service failed (Windows only).
232	Deletion of a health check agent service failed (Windows only).
233	Setting up dependencies among services failed (Windows only).
234	Rollback of the processing failed.
255	An unexpected error occurred.

Usage Example

In this example, the command enables the health check function:

```
jpcstsetup hcenable
```

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 system monitored by Agent for RAID can be established
- Information on properties of storage systems to which Agent for RAID is connected

Table 5-71 Instance Information Verification Items on page 5-126 shows items that you can check by executing the command.

Table 5-71 Instance Information Verification Items

Storage System Monitored by the Instance to Be Verified	Verification
• VSP Gx00 models	Whether the device specified for `Command Device File Name` exists

Storage System Monitored by the Instance to Be Verified	Verification
• VSP Fx00 models • VSP Nx00 models • HUS VM • VSP 5000 series • VSP G1000 • VSP G1500 • VSP F1500 • Virtual Storage Platform Series • Universal Storage Platform V/VM Series	Whether the device specified for `Command Device File Name` is one of the following storage systems: • VSP Gx00 models • VSP Fx00 models • VSP Nx00 models • HUS VM • VSP 5000 series • VSP G1000 • VSP G1500 • VSP F1500 • Virtual Storage Platform Series • Universal Storage Platform V/VM Series
	Whether the device specified for `Command Device File Name` is a command device
• HUS100 series • Hitachi AMS2000/AMS/WMS/SMS series	Whether you can communicate with the storage system 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 system
	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 system 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 system using the specified user ID and password
	Whether you can communicate with the storage system by using the communication method set for `Secure Port function`
All storage systems	Whether a connection to the storage system can be established based on the instance information settings

Storage System Monitored by the Instance to Be Verified	Verification
	Whether a storage system be monitored for an instance is a supported storage system

When the Storage Model monitored by the instance to be verified is VSP Gx00 models, VSP Fx00 models, VSP Nx00 models, HUS VM, VSP 5000 series, VSP G1000, G1500, VSP F1500, or Virtual Storage Platform series, if the performance data is set to be collected by using a TCP/IP connection, the item indicated in Table 5-72 Items to be verified for instance information (when the performance data is set to be collected by using a TCP/IP connection) on page 5-128 is also verified.

Table 5-72 Items to be verified for instance information (when the performance data is set to be collected by using a TCP/IP connection)

Storage System Monitored by the Instance to Be Verified	Verification
• VSP Gx00 models • VSP Fx00 models • VSP Nx00 models	Whether communication can be established with the storage system specified as the connection destination in `Storage IP Address or Host Name` and `SVP Port No`
	Whether you can log in to the storage system by using the value specified in `Storage User ID` and `Storage Password`
	Whether the storage system specified as the connection destination in `Storage IP Address or Host Name` and `SVP Port No` is a storage model specified in `Details of storage model`
	Whether the storage system specified as the connection destination in `Storage IP Address or Host Name` and `SVP Port No` uses a serial number specified in `Serial No`
	Whether the storage system specified for the device in `Command Device File Name` and the storage system specified as the connection destination in `Storage IP Address or Host Name` and `SVP Port No` are the same storage system
• HUS VM • VSP 5000 series • VSP G1000 • VSP G1500 • VSP F1500 • Virtual Storage Platform series	Whether communication can be established with the storage system specified as the connection destination in `Storage IP Address or Host Name`
	Whether you can log in to the storage system by using the value specified in `Storage User ID` and `Storage Password`
	Whether the storage system specified as the connection destination in `Storage IP Address or Host Name` is a storage model specified in `Details of storage model`
	Whether the storage system specified for the device in `Command Device File Name` and the storage system

Storage System Monitored by the Instance to Be Verified	Verification
	specified as the connection destination in `Storage IP Address or Host Name` are the same storage system

Note

- If the settings to collect performance data by using TCP/IP connection in VSP Gx00 models, VSP Fx00 models, VSP Nx00 models, HUS VM, VSP 5000 series, and VSP G1000, G1500, VSP F1500 and in Virtual Storage Platform series are set, and if the instance information is verified while Agent Collector itself is running, the restore will fail.
- If the monitored storage system is a VSP G1000, in v8.5 or later, the value displayed for `Details of storage model` will be `VSP G1000 G1500 F1500`.

Return Values

Table 5-73 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 5-74 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 KAVF18815-I, KAVF18816-I or KAVF18850-I . If the command encounters an error, it outputs an error message corresponding to the error.

Output Information	Explanation
`Monitored storage system Information`	Displays information on the properties of the storage systems 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 (See ***Note 3***) • Serial Number (See ***Note 1***) • Firmware Version • Monitored SLPR Number (See ***Note 2***) ***Note 1:*** For monitored Hitachi SMS storage systems, the value stored in the `Serial Number` field will be the array ID. For details about array IDs, see the pertinent Hitachi SMS series manual. ***Note 2:*** This information is output only when a Universal Storage Platform V/VM series storage system is monitored. ***Note 3:***If the monitored storage system is a VSP Nx00 models, the value displayed for `Product Name` will be `VSP G400 G600`, `VSP G800`, `VSP F400 F600` or `VSP F800`.
`Storage system performance monitoring settings`	Displays the settings related to performance information collection that is effective on the storage system. Alternatively, of the collection settings that are supported by Storage Navigator Modular, the command outputs the following items that determine whether Agent for RAID metrics can be obtained: • Port • RAID Group • Logical Unit • Cache • Processor • Drive Opr ***Note:*** This information is output only when `Check result` indicates that no error was found for an HUS100 series, or a Hitachi AMS2000/AMS/WMS/SMS series storage system.

The usage examples of when the monitored storage system is VSP Gx00 models, VSP Fx00 models, VSP Nx00 models, HUS VM, VSP 5000 series, VSP G1000, G1500, VSP F1500, Virtual Storage Platform series or Universal Storage Platform V/VM series are shown in usage examples.

Usage Example 1

In this example, the command is executed when a device other than a command device is specified in the instance information.

(In this example, the storage system is a VSP G1000, and the storage system information is set to be collected by using the command device.)

```
jpctdchkinst -inst VSP14009
KAVF18800-I The verification of the agent instance settings will now
start. (instance name=VSP14009)
[Instance parameters]
```

```
Storage Model : VSP 5000 series/VSP G1000 G1500 F1500/VSP/USP V/VSP
Gx00 Fx00/HUS VM
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.
```

Usage Example 2

This example shows the result of command execution when the instance is set up correctly in a storage system that does not support the SLPR function.

(In this example, the target storage system is Virtual Storage Platform, and the storage system information is set to be collected by using the command device.)

```
jpctdchkinst –inst VSP
KAVF18800-I The verification of the agent instance settings will now
start. (instance name=VSP)
[Instance parameters]
Storage Model : VSP 5000 series/VSP G1000 G1500 F1500/VSP/USP V/VSP
Gx00 Fx00/HUS VM
Command Device File Name : /dev/rdsk/c0t1d2s2
Unassigned Open Volume Monitoring : N
Mainframe Volume Monitoring : N
[Check result]
KAVF18814-I The instance is configured not to use a TCP/IP
connection to collect performance data.
KAVF18815-I No error was found during verification of the collection
of performance data by using a command device.
[Monitored storage system information]
PRODUCT  : VSP
SERIAL   : 53037
FIRMWARE : 70-01-00/00
KAVF18801-I The verification of the agent instance settings will now
end.
```

Usage Example 3

This example shows the command execution result when the instance has been set up correctly.

(In this example, the target storage system is VSP G1000, and the storage system information is set to be collected by using the command device.)

```
jpctdchkinst -inst VSP_G1000_1
KAVF18800-I The verification of the agent instance settings will now
start. (instance name=VSP_G1000_1)
[Instance parameters]
Storage Model : VSP 5000 series/VSP G1000 G1500 F1500/VSP/USP V/VSP
Gx00 Fx00/HUS VM
Command Device File Name :  \\.\PhysicalDrive0
Unassigned Open Volume Monitoring : N
Mainframe Volume Monitoring : N
[Check result]
KAVF18814-I The instance is configured not to use a TCP/IP
```

```
connection to collect performance data.
KAVF18815-I No error was found during verification of the collection
of performance data by using a command device.
[Monitored storage system information]
PRODUCT   : VSP G1000
SERIAL      : 10051
FIRMWARE : 70-06-20/00
KAVF18801-I The verification of the agent instance settings will now
end.
```

Usage Example 4

This example shows the command execution result when the instance has been set up correctly.

(In this example, the storage system is VSP G1000, and the storage system information is set to be collected by using a TCP/IP connection only.)

```
jpctdchkinst -inst VSP_G1000_1
KAVF18800-I The verification of the agent instance settings will now
start. (instance name=VSP_G1000_1)
[Instance parameters]
Storage Model : VSP 5000 series/VSP G1000 G1500 F1500/VSP/USP V/VSP
Gx00 Fx00/HUS VM
Storage IP Address or Host Name : VSP_G1000_1
Storage User ID : user
Java VM Heap Memory : 1GB
Details of storage model : VSP G1000 G1500 F1500
SVP Port No : 1099
Serial No : 492017
SVP HTTPS Port No : 443
[Check result]
KAVF18813-I The instance is configured not to use a command device
to collect performance data.
KAVF18816-I No error was found during verification of the collection
of performance data over a TCP/IP connection.
[Monitored storage system information]
PRODUCT   : VSP G1000
SERIAL      : 10051
FIRMWARE : 70-06-20/00
KAVF18801-I The verification of the agent instance settings will now
end.
```

Usage Example 5

This example shows the command execution result when the instance has been set up correctly.

(In this example, the storage system is VSP G1000, and the storage system information is set to be collected by using the command device and a TCP/IP connection.)

```
jpctdchkinst -inst VSP_G1000_1
KAVF18800-I The verification of the agent instance settings will now
start. (instance name=VSP_G1000_1)
[Instance parameters]
Storage Model : VSP 5000 series/VSP G1000 G1500 F1500/VSP/USP V/VSP
Gx00 Fx00/HUS VM
Command Device File Name : \\.\PhysicalDrive0
Unassigned Open Volume Monitoring : N
Mainframe Volume Monitoring : N
```

```
Storage IP Address or Host Name : VSP_G1000_1
Storage User ID : user
Java VM Heap Memory : 1GB
Details of storage model : VSP G1000 G1500 F1500
SVP Port No : 1099
Serial No : 492017
SVP HTTPS Port No : 443
[Check result]
KAVF18815-I No error was found during verification of the collection
of performance data by using a command device.
KAVF18816-I No error was found during verification of the collection
of performance data over a TCP/IP connection.
[Monitored storage system information]
PRODUCT   : VSP G1000
SERIAL      : 10051
FIRMWARE : 70-06-20/00
KAVF18801-I The verification of the agent instance settings will now
end.
```

Usage Example 6

This example shows the command execution result when part of the instance has been set up correctly.

(In this example, the storage system is VSP G1000, and the storage system information is set to be collected by using the command device and a TCP/IP connection, but only the setting for using the command device succeeded.)

```
jpctdchkinst -inst VSP_G1000_1
KAVF18800-I The verification of the agent instance settings will now
start. (instance name=VSP_G1000_1)
[Instance parameters]
Storage Model : VSP 5000 series/VSP G1000 G1500 F1500/VSP/USP V/VSP
Gx00 Fx00/HUS VM
Command Device File Name : \\.\PhysicalDrive0
Unassigned Open Volume Monitoring : N
Mainframe Volume Monitoring : N
Storage IP Address or Host Name : VSP_G1000_1
Storage User ID : user
Java VM Heap Memory : 1GB
Details of storage model :VSP G1000 G1500 F1500
SVP Port No : 1099
Serial No : 492017
SVP HTTPS Port No : 443
[Check result]
KAVF18815-I No error was found during verification of the collection
of performance data by using a command device.
KAVF18818-E An error was found during verification of the collection
of performance data over a TCP/IP connection.
KAVF18822-E The monitor switch of the performance monitor of the
storage navigator is disabled.(user=user)
[Monitored storage system information]
PRODUCT   : VSP G1000
SERIAL      : 10051
FIRMWARE : 70-06-20/00
KAVF18801-I The verification of the agent instance settings will now
end.
```

Usage Example 7

This example shows the command execution result when part of the instance has been set up correctly.

(In this example, the storage system is VSP G1000, and the storage system information is set to be collected by using the command device and a TCP/IP connection, but only the setting for using the TCP/IP connection succeeded.)

```
jpctdchkinst -inst VSP_G1000_1
KAVF18800-I The verification of the agent instance settings will now
start. (instance name=VSP_G1000_1)
[Instance parameters]
Storage Model : VSP 5000 series/VSP G1000 G1500 F1500/VSP/USP V/VSP
Gx00 Fx00/HUS VM
Command Device File Name : \\.\PhysicalDrive0
Unassigned Open Volume Monitoring : N
Mainframe Volume Monitoring : N
Storage IP Address or Host Name : VSP_G1000_1
Storage User ID : user
Java VM Heap Memory : 1GB
Details of storage model : VSP G1000 G1500 F1500
SVP Port No : 1099
Serial No : 492017
SVP HTTPS Port No : 443
[Check result]
KAVF18817-E An error was found during verification of the collection
of performance data by using a command device.
KAVF18851-E An attempt to access the device set by the agent
instance parameter has failed. (parameter name=Command Device File
Name, parameter value=\\.\PhysicalDrive0)
KAVF18816-I No error was found during verification of the collection
of performance data over a TCP/IP connection.
[Monitored storage system information]
PRODUCT   : VSP G1000
SERIAL      : 10051
FIRMWARE : 70-06-20/00
KAVF18801-I The verification of the agent instance settings will now
end.
```

Usage Example 8

This example shows the command execution result when the instance has not been set up correctly.

(In this example, the storage system is VSP G1000, and the storage system information is set to be collected by using the command device and a TCP/IP connection, but both settings failed.)

```
jpctdchkinst -inst VSP_G1000_1
KAVF18800-I The verification of the agent instance settings will now
start. (instance name=VSP_G1000_1)
[Instance parameters]
Storage Model : VSP 5000 series/VSP G1000 G1500 F1500/VSP/USP V/VSP
Gx00 Fx00/HUS VM
Command Device File Name : \\.\PhysicalDrive0
Unassigned Open Volume Monitoring : N
Mainframe Volume Monitoring : N
Storage IP Address or Host Name : VSP_G1000_1
Storage User ID : user
Java VM Heap Memory : 1GB
Details of storage model : VSP G1000 G1500 F1500
SVP Port No : 1099
```

```
Serial No : 492017
SVP HTTPS Port No : 443
[Check result]
KAVF18817-E An error was found during verification of the collection
of performance data by using a command device.
KAVF18851-E An attempt to access the device set by the agent
instance parameter has failed. (parameter name=Command Device File
Name, parameter value=\\.\PhysicalDrive0)
KAVF18818-E An error was found during verification of the collection
of performance data over a TCP/IP connection.
KAVF18822-E Failed to log in to the storage system. (user=user)
KAVF18801-I The verification of the agent instance settings will now
end.
```

Usage Example 9

This example shows the command execution result when the instance has not been set up correctly.

(In this example, when the storage system is VSP G1000, and the storage system information is set to be collected by using the command device and a TCP/IP connection, but different storage systems are set in both settings.)

```
jpctdchkinst -inst VSP_G1000_1
KAVF18800-I The verification of the agent instance settings will now
start. (instance name=VSP_G1000_1)
[Instance parameters]
Storage Model : VSP 5000 series/VSP G1000 G1500 F1500/VSP/USP V/VSP
Gx00 Fx00/HUS VM
Command Device File Name : \\.\PhysicalDrive0
Unassigned Open Volume Monitoring : N
Mainframe Volume Monitoring : N
Storage IP Address or Host Name : VSP_G1000_1
Storage User ID : user
Java VM Heap Memory : 1GB
Details of storage model : VSP G1000 G1500 F1500
SVP Port No : 1099
Serial No : 492017
SVP HTTPS Port No : 443
[Check result]
KAVF18825-E The storage systems of the command device connection
destination and TCP/IP connection destination are different.
KAVF18801-I The verification of the agent instance settings will now
end.
```

Usage Example 10

This example shows the command execution result when the instance has not been set up correctly.

(In this example, the storage system is VSP G1000, and a TCP/IP connection is set to be used when the Store database is used as the Performance database.)

```
jpctdchkinst -inst VSP_G1000_1
KAVF18800-I The verification of the agent instance settings will now
start. (instance name=VSP_G1000_1)
[Instance parameters]
Storage Model : VSP 5000 series/VSP G1000 G1500 F1500/VSP/USP V/VSP
Gx00 Fx00/HUS VM
Storage IP Address or Host Name : VSP_G1000_1
```

```
Storage User ID : htmuser
Java VM Heap Memory : 2GB
Details of storage model : VSP G1000 G1500 F1500
SVP Port No : 1099
SVP HTTPS Port No : 443
[Check result]
AVF18826-E Collection of performance data over a TCP/IP connection
is enabled only when Hybrid Store is used.
KAVF18801-I The verification of the agent instance settings will now
end.
```

Usage Example 11

This example shows the command execution result when the instance has not been set up correctly.

(In this example, the storage system is VSP G1000, and the storage system information is set to be collected by using the command device and a TCP/IP connection when the Store database is used as the Performance database.)

```
jpctdchkinst -inst VSP_G1000_1
KAVF18800-I The verification of the agent instance settings will now
start. (instance name=HM700_2)
[Instance parameters]
Storage Model : VSP 5000 series/VSP G1000 G1500 F1500/VSP/USP V/VSP
Gx00 Fx00/HUS VM
Command Device File Name : \\.\PhysicalDrive0
Unassigned Open Volume Monitoring : N
Mainframe Volume Monitoring : N
Storage IP Address or Host Name : 10.197.73.216
Storage User ID : htmuser
Java VM Heap Memory : 2GB
Details of storage model : VSP G1000 G1500 F1500
SVP Port No : 1099
SVP HTTPS Port No : 443
[Check result]
KAVF18826-E Collection of performance data over a TCP/IP connection
is enabled only when Hybrid Store is used.
KAVF18801-I The verification of the agent instance settings will now
end.
```

The usage examples of when the monitored storage system is HUS100 series or Hitachi AMS2000/AMS/WMS/SMS series are shown in the usage examples.

Usage Example 12

This example shows the command execution result when the instance has been set up correctly.

(In this example, the storage system is a Hitachi AMS500.)

```
jpctdchkinst -inst AMS75010005
KAVF18800-I The verification of the agent instance settings will now
start. (instance name= AMS75010005)
[Instance parameters]
Storage Model : HUS100/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
Secure Port function? : N
```

```
[Check result]
KAVF18850-I No error was found during verification of the agent
instance setting.
[Monitored storage system information]
PRODUCT  : AMS500
SERIAL   : 75010005
FIRMWARE : 0760/A
[Storage system performance monitoring settings]
Port      : Enable
RG/LU     : Enable
Cache     : Enable
Processor : Enable
Drive Opr : Enable
KAVF18801-I The verification of the agent instance settings will now
end.
```

Usage Example 13

This example shows the command execution result when an attempt to communicate securely with Controller 0 on a storage system has failed.

(In this example, the storage system is a Hitachi AMS500.)

```
jpctdchkinst -inst AMS75010012
KAVF18800-I The verification of the agent instance settings will now
start. (instance name= AMS75010012)
[Instance parameters]
Storage Model : HUS100/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
Secure Port function? : Y
[Check result]
KAVF18856-E An attempt to use an agent instance parameter to access
the system has failed. (parameter name= IP Address or Host Name
(Controller0), parameter value=10.208.11.106, errno=60000)
KAVF18880-E Possible error causes are as followings:
-The specified IP address or host name of the target storage system
is incorrect.
-The target storage system does not support the secure port function.
-The target storage system is inactive.
-A communication error has occurred.
-The port number of the target storage system is incorrect.
KAVF18801-I The verification of the agent instance settings will now
end.
```

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 system model name
- Serial number
- Logical device 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 for the following storage systems:

- Storage systems that are not supported by Agent for RAID
- HUS100 series
- Hitachi AMS2000/AMS/WMS/SMS series

If virtual IDs are set for VSP Gx00 models, VSP Fx00 models, VSP Nx00 models, HUS VM, VSP 5000 series, VSP G1000, G1500, VSP F1500, or Virtual Storage Platform command devices, information is not output to the list of command devices.

Note:

- For a storage system 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, a record is generated for each partition.

Return Values

Table 5-75 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 that is output when the `jpctdlistraid` command is executed. The command device information is output to the standard output.

Table 5-76 Information that Is Displayed When the jpctdlistraid Command Is Executed

Output Information	Explanation
PRODUCT (See ***Note 2***)	Indicates the storage system's model name.
SERIAL	Indicates the serial number.
LDEV	Indicates the logical device 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.

Note: *2:* If the monitored storage system is a VSP Nx00 models, the value displayed for PRODUCT will be VSP G400 G600, VSP G800, VSP F400 F600 or VSP F800.

Usage Example 1

This example shows the command execution result when only one command device of a storage system is open.

(In this example, the storage system is a VSP G1000 (Linux).)

```
jpctdlistraid
KAVF18700-I The detection of the monitorable storage system has
begun.
"PRODUCT"    ,"SERIAL" ,"LDEV"    ,"SLPR","PORT" ,"DEVICE_FILE"
"VSP G1000"  ,"10182"  ,"00:18:EF","""    ,"CL1-A","\\.
\PhysicalDrive4"
KAVF18701-I The detection of the monitorable storage system has
ended.
```

Usage Example 2

This example shows the command execution result when one command device of each of two storage system is open.

(In this example, the storage systems are a Virtual Storage Platform series model and a VSP G1000 (Linux).)

```
jpctdlistraid
KAVF18700-I The detection of the monitorable storage system has
begun.
"PRODUCT"  ,"SERIAL" ,"LDEV"    ,"SLPR","PORT" ,"DEVICE_FILE"
"VSP G1000","10182"  ,"00:18:EF","""    ,"CL1-B","/dev/rdsk/c0t1d2s2"
"VSP"      ,"31168"  ,"00:01:2A","""    ,"CL2-F","/dev/rdsk/c0t2d1s2"
KAVF18701-I The detection of the monitorable storage system has
ended.
```

Usage Example 3

This example shows the command execution result when none of the command devices of storage systems supported by Agent for RAID are open.

```
jpctdlistraid
KAVF18700-I The detection of the monitorable storage system has
begun.
"PRODUCT"        ,"SERIAL" ,"LDEV" ,"SLPR","PORT" ,"DEVICE_FILE"
KAVF18701-I The detection of the monitorable storage system has
ended.
KAVF18710-W No storage system that can be monitored exists.
```

jpctdraidperf

Format (When manually executing the command)

```
jpctdraidperf       -inst instance-name
                   [-lhost logical-host-name]
                   [-interval collection-interval-in-seconds]
                   [-time collection-time-in-seconds]
                   [-output CSV-file-output-destination-directory]
                   [-ldev LDEV-number]
```

Format (When automatically executing the command by using the alarm definition)

```
jpctdraidperf       -agentname agent-name
                   [-interval collection-interval-in-seconds]
                   [-time collection-time-in-seconds]
                   [-output CSV-file-output-destination-directory]
                   [-ldev LDEV-number]
```

Function

The `jpctdraidperf` command obtains performance data of the monitored storage systems, in seconds, and outputs the data to a file in CSV format. By executing the command once, the performance data of the following resources will be output to separate files:

- LDEV performance data (If the target LDEV is specified in the option or in the file for specifying LDEVs for which performance data is to be obtained in seconds (`raidperf_ldevlist.conf`)): LDEV
- Processor performance data: MP
- Activity-rate ranking information for each processor allocated to an MP blade: MPRANK
- Port performance information: PORT

For details about the files to be output, see Output File on page 5-144.

Tip: The `Write Response Rate` alarm is provided as an alarm for a solution set. This alarm monitors the average processing time for each LDEV write operation request. Copy this alarm, and then set the `jpctdraidperf` command as an action to be executed. When the average processing time reaches the threshold, the `jpctdraidperf` command is executed

automatically. For details about the `Write Response Rate` alarm, see *Tuning Manager Hardware Reports Reference*.
In addition, by using the `htm-csv-convert` command, you can convert the output CSV format file to a format that allows you to use spreadsheet software to easily create graphs. For details about how to convert the file format by using the `htm-csv-convert` command, see the section that describes CSV report format conversion in the *Tuning Manager Agent Administration Guide*.

This command can obtain performance data of the following storage systems:

- VSP Gx00 models
- VSP Fx00 models
- VSP Nx00 models
- HUS VM
- VSP 5000 series
- VSP G1000
- VSP G1500
- VSP F1500
- Virtual Storage Platform Series
- Universal Storage Platform V/VM Series

However, you cannot use the `jpctdraidperf` command to collect the performance data that can be collected by using a TCP/IP connection,

Caution: Executing the `jpctdraidperf` command temporarily takes exclusive use of the resources of the storage systems, such as MP blades and MP units, on the LU path because of Agent for RAID accessing the command device. Pay attention to the following when executing the command because if the load is high, I/O capacity might be affected.

- The duration in which the MP blades and MP units are used exclusively depends on the number of LDEVs for which the data will be obtained, and on the collection interval. Therefore, keep the number of LDEVs to the minimum.
- Because a small collection interval increases the load on the MP blade and MP unit, specify an appropriate collection interval by using the command option, and then execute the command.

If the load problem on the MP blade or MP unit still persists, consider allocating the command device that Agent for RAID accesses to other MP blades or MP units.

OSs on which the command can be executed:

Windows and Linux

Memory requirements and disk amount that is used exclusively

The following indicates the estimated memory requirements and the disk amount that is used exclusively for each CSV file output when the `jpctdraidperf` command is executed.

- Memory requirements (memory requirements of the `raidperf` process when the `jpctdraidperf` command is executed):

Table 5-77 Memory requirements of the raidperf process

Storage system to be monitored	Memory requirements (unit: megabyte)	
	Windows	Linux
VSP Gx00 models	10	20
VSP Fx00 models		
VSP Nx00 models		
HUS VM		
VSP 5000 series		
VSP G1000		
VSP G1500		
VSP F1500		
Virtual Storage Platform series		
Universal Storage Platform V/VM series		

- Estimate of the disk amount that is used exclusively for the CSV file output for each of the resources

Table 5-78 Estimate of the disk amount that is used exclusively for the CSV output file of each of the resources

Resource name	Estimate of the output file size (unit: kilobytes)
LDEV (LDEV performance information)	`0.11 * number-of-LDEVs-to-be-obtained * collected-time (seconds) / collection-interval (seconds)`
MP (processor performance information)	`0.06 * number-of-existing-MPs-in-storage-system * collected-time (seconds) / collection-interval (seconds)`
MPRANK (availability rate ranking information for each processor that is allocated for MP blade)	`0.22 * number-of-existing-MPs-in-storage-system * collected-time (seconds) / collection-interval (seconds)`[#] # The value used in the estimate differs depending on the collected interval when the command is executed. ○ If the specified collection interval is 4 seconds or less: Data will be obtained at 5-second intervals.

Resource name	Estimate of the output file size (unit: kilobytes)
	○ If the specified collection interval is 5 seconds or more: Data will be obtained at the specified intervals.
PORT (Port performance information)	`0.06 * number-of-existing-ports-in-storage-system * collected-time (seconds) / collection-interval(seconds)`

Notes:

- Multiple instances of this command cannot be executed at the same time.
- While the command is being executed, do not change the time of the host (including changes for summer time). If you change the time, the command might not terminate normally.
- While the command is being executed, do not change or delete the instance, or install or uninstall Agent for RAID, because the command might not terminate normally.
- To use the `kill` command of Linux to stop the `jpctdraidperf` command, do not specify `SIGKILL` (`9`). If you specify `SIGKILL` (`9`) and then stop the `jpctdraidperf` command, manually delete the following files, which correspond to the instances stopped by the `kill` command:
  - Instance-name lock file

    `/opt/jp1pc/agtd/agent/___raidperf_`*logical-host-name_instance-name*
  - Instance-number lock file

    `/opt/jp1pc/agtd/agent/___raidperf_`*logical-host-name_instance-name_instance-number*
- Depending on the load status in the storage system operation, information might not be collected at the specified collection interval. If information often cannot be collected at the specified collection interval, extend the collection interval specified when executing the command.
- If an instance on a logical host in a cluster environment is specified and nodes are switched while the command is being executed, the command stops. If this occurs, re-execute the command after the nodes have been switched.
- The performance value of the LDEV resource in the results output by the command might be 0. This 0 indicates that the storage performance value has not changed since the previous collection time.
- When the target resource is an MPRANK CSV file, note the following:
  - When the storage system to be monitored is in the Universal Storage Platform V/VM series, only the data header information is output to the CSV file.
  - When the collected interval is specified as less than or equal to 4 seconds, the performance information sometimes cannot be obtained within the time specified as the collected interval. The performance

information is collected only when both of the following conditions are met. Note that when the collected interval is longer than or equal to 5 seconds, the performance information is output within the time specified as collected interval.

- Applies to the collected interval.

- Longer than 5 seconds have passed from the point when collection started, or from when the previous collection was made.

The following indicates the specified collected interval, and from which point the information will be obtained.

Specified collected interval (second)	Elapsed time (in seconds) and the point when performance information was obtained											
	1	2	3	4	5	6	7	8	9	10	11	12
1	N	N	N	N	Y	N	N	N	N	Y	N	N
2	n/a	N	n/a	N	n/a	Y	n/a	N	n/a	N	n/a	Y
3	n/a	n/a	N	n/a	n/a	Y	n/a	n/a	N	n/a	n/a	Y
4	n/a	n/a	n/a	N	n/a	n/a	n/a	Y	n/a	n/a	n/a	N

(Legend)

Y: The performance information is output to MPRANK CSV file when the time reaches the specified collection interval.

N: The time is reached by the specified collection interval, but the performance information is not output to MPRANK CSV file.

n/a: Other than the collection interval

Return Values

Table 5-79 Return Values (jpctdraidperf)

Return Values	Meaning
0	The command terminated normally.
4	LDEV numbers are not specified in the file `raidperf_ldevlist.conf`, which specifies the LDEVs for which performance data is to be obtained in seconds.
128	Log initialization failed.
255	The command terminated abnormally.

Output File

In the CSV file to be output by the `jpctdraidperf` command, performance data is output after the data header. The following table describes the data header information and the data section.

Table 5-80 Information output to the data header

Data header information	Output information
Target resource:	The resource name is output.
Instance name:	The instance name is output.
Host name:	The host name of the instance is output.
Collection start time:	The command execution start date and time (local time) is output in "yyyy mm dd hh:mm:ss" format.
Collection interval:	The collection interval is output.
Collection time:	The collection time is output.
Empty line	None
Column header	The data collection time and the field name for which the data is to be collected are output.

After the data header, the following performance information is output.

Table 5-81 Performance data to be output

Content of a line	Output information
Data section	The performance data that corresponds to each column header# is output. Lines are used to output only the collected data. In the data section, one record is output in one line. If the command was executed while the number of target LDEVs was 0, this line is not output.
Empty line	None

Note:

Information in the data section differs for each target resource. The following table describes details of the column header and the data section.

Table 5-82 Column header and data section when the target resource is an LDEV

Column header	Explanation for the data part
Date and time	Data acquisition time The command execution start date and time (the local time) is output in "yyyy mm dd hh:mm:ss" format.
LDEV Number	LDEV number specified in the `-ldev` option, or LDEV number defined in the LDEVs for which performance data is to be obtained in seconds. If the specified LDEV number does not exist, "(none)" is output at the end of the LDEV number. Example: 00:1A:F2 (none)

Column header	Explanation for the data part
	The LDEV number is judged that it does not exist in the following cases: • When the specified logical DKC number is other than "00". • When the LDEV number cannot be used in the storage system that is to be monitored. • When the performance information for the specified LDEV number does not exist.
Read I/O /sec	Each item of performance data corresponds to the Logical Device Summary (PI_LDS) record field. For details, see the manual *Tuning Manager Hardware Reports Reference*.
Write I/O /sec	
Read Xfer /sec	
Write Xfer /sec	
Read Response Rate	
Write Response Rate	

Table 5-83 Column header and data section when the target resource is MP

Column header	Explanation for the data part
Date and time	Data acquisition time For details, see Table 5-82 Column header and data section when the target resource is an LDEV on page 5-145.
Adaptor ID	Each item of performance data corresponds to the Processor Summary (PI_PRCS) record field. Depending on the storage systems, values for some fields cannot be obtained. For details, see the manual *Tuning Manager Hardware Reports Reference*.
Processor ID	
Processor Busy %	
Buffer IO Count	

Table 5-84 Column header and data section when the target resource is MPRANK

Column header	Explanation for the data part
Date and time	Data acquisition time For details, see Table 5-82 Column header and data section when the target resource is an LDEV on page 5-145.
MP Blade ID	Each item of performance data corresponds to the Utilization Per MP Blade Summary (PD_UMS) record field. Depending on the storage system, values for some fields cannot be obtained. For details, see the manual *Tuning Manager Hardware Reports Reference*.
Processor ID	
Usage Rank	
Processing Type	
Resource Type	

Column header	Explanation for the data part
Resource ID	
Resource Utilization	

Table 5-85 Column header and data section when the target resource is PORT

Column header	Explanation for the data part
Date and time	Data acquisition time For details, see Table 5-82 Column header and data section when the target resource is an LDEV on page 5-145.
Port Name	Each item of performance data corresponds to the Port Summary (PI_PTS) record field. For details, see the manual *Tuning Manager Hardware Reports Reference*.
Avg I/O /sec	
Avg Xfer /sec	

Restrictions on CSV output

- Each element in a row is enclosed in double quotation marks (").
- Except for the last element, each element in a row is followed by a comma (,).
- Each row is terminated by a new line character. The line feed code is `CR +LF` in Windows, and `LF` in UNIX.

jpctdrefresh

Format

```
jpctdrefresh        -inst instance-name
                    [-lhost logical-host-name]
```

Function

The `jpctdrefresh` command collects the configuration information of a storage system. This command can be used to collect the configuration information at a desired time.

The actual collection of configuration information is performed the next time a regular information collection of Agent for RAID occurs after the `jpctdrefresh` command is executed. For details, see the chapter explaining modification of performance data collection conditions in the *Tuning Manager Agent Administration Guide*.

Return Values

Table 5-86 Return Values (jpctdrefresh)

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.
100	The environment of the Tuning Manager series is invalid.
102	The specified logical host cannot be accessed.
105	The current directory is not the directory storing the jpctdrefresh command.
211	The specified instance cannot be accessed.

jpctminfo

Format

```
jpctminfo      service-key
                [-p]
```

Function

The jpctminfo command displays product information about an Agent installed on the executing host. Use this command to confirm version and patch history information.

When you want to check the version information of Agent for Server System, specify agte for *service-key*. Agent for Server System version information is displayed for PRODUCT. Common Component or Collection Manager, Agent for RAID Map, Agent for Platform, and Agent for Microsoft Exchange Server (for Windows) version and patch history information are displayed for COMPONENT.

If an Agent is not installed on the same host as the Tuning Manager server, Common Component version information is displayed for COMPONENT. If an Agent is installed on the same host as the Tuning Manager server, Collection Manager version information is displayed for COMPONENT.

Usage Example 1

In this example, the command displays version information of Agent for RAID:

```
jpctminfo agtd
```

Output Example 1

```
PRODUCT  Hitachi Tuning Manager - Agent for RAID
VERSION 7.1.1-00(07-11-00)
   COMPONENT Agent Common
   VERSION 7.1.1-00(07-11-00)
```

Usage Example 2

In this example, the command displays version information and patch history information of Agent for RAID:

```
jpctminfo agtd -p
```

Output Example 2

If any patches have been applied, the patch versions and installed dates are displayed as follows:

```
PRODUCT  Hitachi Tuning Manager - Agent for RAID
VERSION 7.1.1-02(07-11-02)
PATCH    DATE
071101   2011/05/15
071102   2011/06/13
   COMPONENT Agent Common
   VERSION 7.1.1-02(07-11-02)
```

If no patch has been applied, a message is displayed as follows to indicate that there is no patch installation history:

```
PRODUCT  Hitachi Tuning Manager - Agent for RAID
VERSION 7.1.1-00(07-11-00)
KAVF24903-I There is no patch history information.
   COMPONENT Agent Common
   VERSION 7.1.1-00(07-11-00)
```

Usage Example 3

In this example, the command obtains product information to check the version information of Agent for Server System:

```
jpctminfo agte -p
```

Output Example 3

If patches for Agent for RAID Map and Agent for Platform have been applied, but a patch for Agent for Microsoft Exchange Server has not been applied, the patch versions and installed dates are displayed as follows:

```
PRODUCT Hitachi Tuning Manager - Agent for Server System
VERSION 7.1.1-02(07-11-02)
   COMPONENT Agent Common
   VERSION 7.1.1-02(07-11-02)
   COMPONENT Agent for RAID Map
   VERSION 7.1.1-02(07-11-02)
   PATCH   DATE
   071101  2011/05/15
   071102  2011/06/13
   COMPONENT Agent for Platform
   VERSION 7.1.1-02(07-11-02)
   PATCH   DATE
   071101  2011/05/15
   071102  2010/06/13
   COMPONENT Agent for Microsoft(R) Exchange Server
   VERSION 7.1.1-00(07-11-00)
KAVF24903-I There is no patch history information.
```

jpctool config alarmsync

Format

```
jpctool config alarmsync    [-noprogress]
                            [-target alarm-application-status]
```

Function

The `jpctool config alarmsync` command applies alarm information to services whose alarm application status is `Failed` (failed to be applied) or `Uncertain` (status unknown). You can also target execution to only those services whose status is `Failed` (failed to be applied) or to only those services whose status is `Uncertain` (status unknown). After executing the `jpctool config alarmsync` command, execute the `jpcalarm unapplied` command to verify whether the alarm information was properly applied.

Note:

- Multiple instance of this command cannot be executed concurrently.
- This command cannot be used if the Collection Manager service (Master Manager and View Server services) is not running.
- This command cannot be executed on a standby node in a logical host environment.
- This command terminates successfully even when the alarm application status is not finalized as a result of executing the command.
- This command terminates successfully even when executed in a situation in which there is no service whose alarm application status is `Failed` (failed to be applied) or `Uncertain` (status unknown).
- If the Collection Manager service stops while this command is being executed, or if execution of this command is interrupted by a signal or by pressing **Ctrl + C**, this command stops executing. Re-execute the command to make sure the alarm information is correctly applied.
- If the system environment is large, it might take a long time to apply the alarm information. The required processing time can be estimated as follows:

  (number of Agent Collector services that are application targets) `* 4 +` (number of Action Handler services that are application targets) `* 2 + 300` seconds

  For example, in a situation where the number of Agent Collector services is `1,200` and the number of Action Handler services is `1,024`, the estimated processing time will be about `120` minutes.

Return Values

Table 5-87 Return Values (jpctool config alarmsync)

Return Values	Meaning
0	The command terminated normally.
1	The command line format is invalid.
2	The user does not have execution permission for the command.
5	The command was executed on a host that is not the Tuning Manager server host.
12	The command `jpctool config alarmsync` is currently executing.
101	The Master Manager service is not running.
200	A memory shortage occurred.
211	A file or directory cannot be accessed.
221	An attempt to acquire information on the alarm application status from the Master Manager service failed.
222	An error occurred during communication processing.
237	A timeout occurred while determining the results of applying the alarm information.
255	An unexpected error occurred.

Usage Example

```
>jpctool config alarmsync
KAVE06201-I Application processing of the alarm definition and
action definition will now start.
[50/50]
KAVE06205-I Processing of the application results judgment will now
start.
KAVE06206-I Processing of the application results judgment ended
normally.
KAVE06202-I Application processing of the alarm definition and
action definition ended normally.
```

jpctwchkinst

Format

```
jpctwchkinst     -inst instance-name
                [-lhost logical-host-name] [-ct] [-xl]
```

Function

The `jpctwchkinst` command verifies the instance information that has been set (and updated) for an instance of Agent for SAN Switch. By using the instance information obtained by executing this command, you can check the following:

- Whether a connection to the connection-target SMI Agent can be established by using the instance information that has been set for Agent for SAN Switch
- The configuration information of the fabrics and switches that Agent for SAN Switch monitors
- The time that it takes to collect all the configuration information of the fabrics that Agent for SAN Switch monitors

The `jpctwchkinst` command can be used when the connection target is one of the following:

- Brocade (Network Advisor SMI Agent)
- Brocade (DCFM SMI Agent)
- Brocade (SMI Agent for FOS)
- Cisco (DCNM-SAN SMI-S Agent)

Note

- This command cannot be executed for an instance of the Agent Collector service while the service is running. If the command is executed for an instance of the Agent Collector service while the service is running, the KAVF25146-E message is output, and execution of the command stops.
- The Agent Collector service of the instance that is the target of verification cannot start while this command is running. If the Agent Collector service of the instance that is the verification target starts while this command is running, the KAVF25144-E or KAVF25145-E message might be output, and execution of the command might stop.
- Multiple instances of this command cannot be executed at the same time. If multiple instances of this command are executed at the same time, the KAVF25144-E or KAVF25145-E message might be output, and execution of the command might stop.

Return Values

Table 5-88 Return values of the jpctwchkinst command

Return Values	Meaning
0	The command terminated normally.
16	The command terminated normally, but a verification error was detected.
255	The command terminated abnormally.

Displayed Information

The table below describes the command device information that is output when the `jpctwchkinst` command is executed. The command device information is output to the standard output.

Table 5-89 Information that Is Displayed When the jpctwchkinst Command Is Executed

Output Information	Explanation
[Version]	Indicates the version information of Agent for SAN Switch.
[Instance parameters]	Indicates the instance information settings and their values.
[agtw.properties parameters]	Indicates the settings in the agtw.properties file and their values.
[Exclude Switches]	Indicates the information on switches that are not monitored.
[Check result]	Indicates the results of verifying whether a connection to the connection-target SMI Agent can be established by using the instance information settings.
[Monitored switch information]	• The configuration information of monitored fabrics and switches is obtained from the connection-target SMI Agent, and a list of monitored switches is output. • The time required to collect the configuration information of all monitored fabrics is measured, and the recommended value for Collection Interval is output.

Usage Example

This example shows the command execution result (when -ct and -xl are specified) when the instance has been set up correctly and a connection with the target has been successfully established.

```
jpctwchkinst –inst AGTW_INST -ct -xl
KAVF25100-I The verification of the agent instance settings will now
start. (instance name=AGTW_INST)
[Version]
PRODUCT  Hitachi Tuning Manager - Agent for SAN Switch
VERSION  8.0.0-00(08-00-00)
[Instance parameters]
Connection Destination : Brocade(Network Advisor SMI Agent / DCFM
SMI Agent)
IP Address : xxx.xxx.xxx.xxx
Secure Communication : Y
Port Number : 5989
Login ID : username
Target Switch WWN : 100000051E8B917A
[agtw.properties parameters]
Java Path : C:\Program Files\Java\jdk1.8.0
Session Timeout : 600
[Exclude Switches]
Record Time,Switch WWN,Model Name,Firmware
05 12 2013 19:21:20,100000064E85925A,Brocade 5100,FOS 6.4.2
05 12 2013 19:21:20,100000014E76842B,Brocade 5100,FOS 6.4.2
[Check result]
KAVF25140-I A session with the SMI Agent has been established.
(instance name=AGTW_INST, address= xxx.xxx.xxx.xxx)
[Monitored switch information]
```

```
Record Time,Switch WWN,Model Name,Firmware
05 12 2013 19:21:20,100000051E8B917A,Brocade 5100,FOS 6.4.2
05 12 2013 19:21:20,1000080088609EF9,Brocade 5100,FOS 6.4.2

KAVF25113-I The verification of the information collection time will
now start. (instance name=AGTW_INST)
..............
KAVF25114-I The verification of the information collection time will
now end. (instance name=AGTW_INST, collection time=125)

KAVF25101-I The verification of the agent instance settings will now
end. (instance name=AGTW_INST)
```

htmhsmigrate

Format

```
htmhsmigrate execute     [-key service-key]
                         [-dir data-storage-directory-after-
migrating-to-Hybrid-Store]
```

Function

The `htmhsmigrate` command migrates the Performance database from a Store database to Hybrid Store.

Use this command to convert the existing performance data in the Store database into Hybrid Store data format, and migrate the data in a state in which Hybrid Store operations can be performed. This command is suitable for taking over all performance data simultaneously in an environment that meets Hybrid Store system requirements, such as for OS and disk capacity.

Note:

- If a database is migrated within the same host, and the data format is converted by using the `htmhsconvert` command, use the `htmhsmigrate` command so that Hybrid Store operations can be performed on the data.
- When executing the `htmhsmigrate` command, follow the descriptions of "Migrating the Store database to the Hybrid Store" in the *Tuning Manager Agent Administration Guide*.

Prerequisites

The prerequisites for executing the `htmhsmigrate` command to migrate the Performance database from a Store database to Hybrid Store are as follows:

- The services of the Tuning Manager Agent REST API component, Collection Manager, and Agent are stopped.
- The agents to be migrated are those of versions that support Hybrid Store.
- The Prerequisites on page 5-157 of htmhsconvert on page 5-156 are met because, when all performance data is migrated at once, this command also executes an operation that converts the data into a format to be used for Hybrid Store operations.

Notes:

If conversion of the performance data fails during processing, delete the data of the instance that failed to be converted, and then re-execute the command.

Return values

0	Normal termination
1	The specified option is invalid.
3	The command execution is disabled because Hybrid Store is used in Agent for RAID operation.
4	The following services of the agents to be migrated are running, or the start command, the stop command, or the setup command of the service is being executed: • Agent • Collection Manager • The Tuning Manager Agent REST API component
5	An instance of a Store database version 1.0 exists in the migration target.
10	The specified agent is not installed.
11	The migration of the specified agent finished normally, but agents that are being migrated exist.
12	Agents that can be migrated to Hybrid Store do not exist.
100	The `STDICT.DAT` file does not exist in the environment.
101	The migration failed due to either of the following reasons: • The agent that supports the Hybrid Store database does not exist. • The specification causes a non-supported configuration.
102	The specified directory does not exist.
103	The data to be migrated cannot be stored because the length of the path to the directory that stores the data to be migrated has exceeded the upper limit.
105	The directory is not specified as an absolute path.
106	The length of the specified path exceeds the upper limit.
110	There is not enough free space.
200	Migration failed because memory is insufficient.
210	Migration failed because a capacity shortage occurred during migration.
211	Migration failed because the file or directory cannot be accessed.
231	Migration failed because the data to be migrated is invalid.
232	Failed to inherit the settings because of one of the following reasons: • The file or directory cannot be accessed. • A value in the settings file of the merge target is invalid. • An unexpected error occurred.

233	Failed to delete the Store database.
234	Failed to enable the use of Tuning Manager API.
235	Failed to update the settings file.
236	Failed to update instance information.
254	Failed to set database migration for some of or all the agent instances.
255	An unexpected error occurred.

htmhsconvert

Format

Converting the performance data

```
htmhsconvert     {-all | -key service-key
                  -inst instance-name [-lhost logical-host-name]
                 | -from directory-for-storing-Store-database-backup-
data}
                 [-to directory-for-storing-data-after-format-
conversion]
                 [-rawstartdate YYYY/MM/DD | -rawlimitdays DD]
```

Deleting the Store database

```
htmhsconvert     {-all | -key service-key
                  -inst instance-name [-lhost logical-host-name]}
                 [-deletestore]
```

Function

The `htmhsconvert` command converts the performance data accumulated in Agent for RAID operation when the Store database is used into Hybrid Store data format.

Using this command is suitable when migrating only specified performance data in an environment that does not meet Hybrid Store system requirements, such as OS and disk capacity, or when migrating performance data to another host.

Note:

- If a database is migrated within the same host, after executing this command, use the `htmhsmigrate` command so that Hybrid Store operations can be performed on the data.

  If a database is migrated to another host, prepare the migration-target host so that Hybrid Store operations can be performed on the migrated data.
- When executing the `htmhsconvert` command, follow the descriptions of "Migrating the Store database to the Hybrid Store" in the *Tuning Manager Agent Administration Guide*.

Prerequisites

The prerequisites for using the `htmhsconvert` command to convert the data from the format used for Store database operations into the format used for Hybrid Store operations are as follows:

- The services of the Tuning Manager Agent REST API component, Collection Manager, and Agent of the agent to be converted are stopped.
- There is a storage directory for the converted data.
- The storage directory of converted data has free space equal to or greater than 1.2 times the size of the data to be converted.
- The data model version of the agent in the conversion data storage destination is the same as or later than the data model version of the agent to be converted.
- The Store database of the conversion target is version 2.0.
- The performance data to be converted is the data (excluding imported data) in the Store database that is being used, or the data backed up by using the `jpcctrl backup` command.
- The instance name of the conversion target matches the instance name of the conversion destination.
- If you migrate the performance data to a different host, execute conversion on the migration-source host. (You cannot copy the Store database to the migration destination and then perform conversion.)
- The `STDICT.DAT` file, which forms a pair with the data to be converted, exists.

Notes:

If conversion of the performance data fails during processing, delete the data of the instance that failed to be converted, and then re-execute the command.

Return values

0	Normal termination
1	The specified option is invalid.
2	You do not have permission to execute the command.
3	The command execution is disabled because no data exists on the instance of the specified agent.
4	The following instance services of the agent to be converted are running, or the start command, stop command, or setup command of the service is being executed: • Agent • Collection Manager
5	An instance of a Store database version 1.0 exists in the conversion target.

100	The `STDICT.DAT` file does not exist, or the specified logical host or instance does not exist.
101	The specified agent does not support Hybrid Store.
102	The specified directory does not exist.
103	The conversion data cannot be stored because the length of the path to the directory that stores the conversion data has exceeded the upper limit.
110	There is not enough free space.
200	Memory is insufficient.
210	A capacity shortage occurred during data conversion.
211	Data conversion failed because the file or directory cannot be accessed.
231	Data conversion failed because the data to be converted is invalid.
232	Failed to inherit the settings because of one of the following reasons: • The file or directory cannot be accessed. • A value in the settings file of the merge target is invalid. • An unexpected error occurred.
254	Failed to convert data on some of or all the agent instances.
255	An unexpected error occurred.

htmhsconvert32

Function

The `htmhsconvert32` command is used, if the Agent version is earlier than v8.5 and the Agent is used under specific conditions, to convert performance data that is accumulated while the Agent is operating with the Store database. The command converts the data to Hybrid Store data format. Details for other functionality are the same as for the `htmhsconvert` command.

For details about usage conditions and how to use the `htmhsconvert32` command, see the explanation of migration to the Hybrid Store in the *Tuning Manager Agent Administration Guide*. For details about the command, see htmhsconvert on page 5-156.

Notes:

The `htmhsconvert32` command is stored in the installation media. This command will not be stored into the prescribed installation directory like other agent commands even if installation is performed.

htmhsbackup

Format

```
htmhsbackup      -dir backup-data-output-directory
                [-key service-key [-inst instance-name]
                [-lhost logical-host-name]]
```

Function

The `htmhsbackup` command backs up the performance data and definition information when Hybrid Store is used in Agent for RAID operation. Backup is executed on the following bases:

- On a basis of agent host (all Agents that use Hybrid Store on the Agent host)
- On a basis of agent type (specific Agents that use Hybrid Store on the Agent host)
- On a basis of agent instance (specific instances of specific Agents that use Hybrid Store on the Agent host)

Prerequisites

The prerequisites for executing the `htmhsbackup` command to acquire backups are as follows:

- The Performance database on the Agent of the backup target is Hybrid Store. In addition, the Performance database is not in the process of being migrated to Hybrid Store.
- The agent of the backup target is v8.1.3 or a later version for Agent for RAID, and v8.2.1 or a later version for Agent for NAS.
- There is a output directory for the backup data.
- The backup data output directory has free space equal to or greater than the size of the data to be backed up.

Notes:

If a backup operation failed during the processing, manually delete the erroneous data, and then re-execute the command.

Return value

0	Normal termination
1	The specified option is invalid.
10	The specified agent is not installed.
100	The specified instance does not exist.
101	The backup failed due to one of the following reasons: • Agents that are being migrated to Hybrid Store exist on the host.

	• When the -key option is specified: The Performance database of the agent specified by the -key option is not Hybrid Store. • When specification of the -key option is omitted: The Performance databases of some of or all the agent are not Hybrid Store.
102	The specified directory does not exist.
103	Data exists in the specified directory.
105	The directory is not specified as an absolute path.
106	The length of the specified path exceeds the upper limit.
110	There is not enough free space.
111	The operating environment for the host is invalid.
200	Backup failed because memory is insufficient.
210	Backup failed because a capacity shortage occurred during backup.
211	Backup failed because the file or directory cannot be accessed.
254	Failed to back up data on some or all of the agent instances.
255	The value of the output directory set in the property is incorrect, or an unexpected error occurred.

htmhsrestore

Format

```
htmhsrestore     -dir storage-directory-of-the-backup-data-to-be-restored
                [-key service-key [-inst instance-name]
                [-lhost logical-host-name]]
```

Function

The htmhsrestore command restores performance data and definition information that was backed up by the htmhsbackup command.

- On a basis of agent host (all Agents that use Hybrid Store on the Agent host)
- On a basis of agent type (specific Agents that use Hybrid Store on the Agent host)
- On a basis of agent instance (specific instances of the specific Agents that use Hybrid Store on the Agent host)

Prerequisites

The prerequisites for executing the htmhsrestore command to restore data are as follows:

- The data to be restored is data that was backed up by using the `htmhsbackup` command.
- The services of the Tuning Manager Agent REST API component, Collection Manager, and Agent of the host to be restored are stopped.
- On the host to be restored, there are no Agents that are in the process of being migrated to Hybrid Store.
- The version and revision number of the host to be restored match the version and revision number of the host that was backed up.
- The output directory for Hybrid Store has free space equal to or greater than the size of the data to be restored.
- The instance name of the restoration target matches the instance name of the restoration destination.
- The OS of the host to be restored matches the OS of the host that was backed up.
- If the data is restored for each host or for each Agent type, the instances to be restored are those that are contained in the backup data and for which instance setup has already been performed on the restoration destination.

If you have changed the default output directory for Hybrid Store, consider the following conditions:

- The output directory for Hybrid Store exists.
- The path of the output directory for Hybrid Store is the same for the host to be backed up and the host to be restored.

Notes

- When the data is restored to a different host, if the output directory for Hybrid Store differs between the host to be backed up and the host to be restored, rewrite the output destination paths written in the properties files (`dbdataglobalconfig.ini` and `dbconfig.ini`), which set output destinations of the backup files for Hybrid Store, to the path of the restoration destination host, and then perform a restoration.
- The following provides notes on restoring data when the output directory for Hybrid Store has been changed from the default directory:
    - To restore the data backed up in an environment where the output destination for Hybrid Store has been changed in `dbdataglobalconfig.ini` by specifying the `-key` option:

      Set the same output destination for `dbdataglobalconfig.ini` of the backup source and the restoration destination. If the output destinations differ, the destination where the backup data will be located and the destination Hybrid Store accesses will not match, and the backup data will not be updated.
    - To restore the data backed up in an environment where the output destination for Hybrid Store has been changed in `dbdataglobalconfig.ini` without specifying the `-key` option:

dbdataglobalconfig.ini will be overwritten by the backup data. If Hybrid Store is already operating in the restoration destination, first match the output destination for dbdataglobalconfig.ini of the backup source to the output destination for dbdataglobalconfig.ini in the restoration destination environment that is already operating, and then perform a restore.

- To restore the data backed up in an environment where the output destination for Hybrid Store has been changed in dbdataglobalconfig.ini or in dbconfig.ini:

  Create in advance the output destination directory specified in dbdataglobalconfig.ini or dbconfig.ini, which is contained in the backup data. If the specified output destination directory does not exist, KATR10109-E and KATR13251-E will be output, and the restore will fail.

- See the section in the *Tuning Manager Agent Administration Guide* that describes restoration.

Return value

0	Normal termination
1	The specified option is invalid.
4	The following instance services for the agent to be restored are running, or the start command, stop command, or setup command of the service is being executed: • Agent • Collection Manager • The Tuning Manager Agent REST API component
10	The specified agent is not installed.
100	The specified instance does not exist.
101	The restoration failed due to one of the following reasons: • Agents that are being migrated to Hybrid Store exist on the host. • When the -key option is specified: The Performance database of the agent specified by the -key option is not Hybrid Store. • When specification of the -key option is omitted: The Performance database of some of or all the agent is not Hybrid Store.
102	The specified directory does not exist.
103	The instance name of the restoration destination does not match the instance name of the backup data.
104	The version and revision number of the restoration-destination agent do not match the version and revision number of agent of the backup data.
105	The directory is not specified as an absolute path.
106	The length of the specified path exceeds the upper limit.
110	There is not enough free space.

111	The operating environment for the host is invalid.
200	Restoration failed because memory is insufficient.
210	Restoration failed because a capacity shortage occurred during restoration.
211	Restoration failed because the file or directory cannot be accessed.
212	The necessary properties file does not exist in the specified directory, or the specified directory is empty. Alternatively, the value of the output directory set in the properties of the backup data is incorrect.
254	Restoration failed on some of or all the agent instances.
255	The value of the output directory set in the property is incorrect, or an unexpected error occurred.

htmhschgmem

Format

```
htmhschgmem {mx maximum-memory-size | status}
```

Function

The `htmhschgmem` command changes the maximum memory size used by Tuning Manager - Agent REST Application Service.

Prerequisites

The prerequisites for executing the `htmhschgmem` command to change the maximum memory size used by Tuning Manager - Agent REST Application Service are follows:

- An agent whose Performance database is Hybrid Store exists on the host where the command is to be executed.

  If the agent is Agent for RAID, the version of Agent for RAID is v8.1.4 or later.

Notes

- Changing of the maximum memory size used by Tuning Manager - Agent REST Application Service is enabled after the services of Tuning Manager Agent REST API Component are restarted.

Return value

0	Normal termination
10	The execution format is invalid.
247	Information about the path to the Agent installation directory cannot be obtained from the registry (in Windows).

251	The value specified by using the `mx` option for the maximum memory size (in megabytes) used for Tuning Manager - Agent REST Application Service is invalid.
	• Characters other than one-byte numeric characters are included in the value.
	• A value outside the valid range is specified. The specifiable values are as follows:
	  ◦ minimum value : 512
	  ◦ maximum value : 2147483647

252	When the `mx` option is specified: The `usrconf.cfg` file does not exist. When the `status` option is specified: The `usrconf.cfg` file does not exist, or the line for defining the maximum memory size does not exist in the `usrconf.cfg` file.
253	Failed to modify the file `usrconf.cfg`.
254	Failed to output the file `agtrestmemsize.dat`.
255	The command terminated abnormally.

htmrestctrl

Format

```
htmrestctrl     { on | off }
```

Function

The `htmrestctrl` command specifies whether to enable or disable the use of the Tuning Manager API on an Agent host that is running in the Store database.

If you want to use the API to collect performance data of one or more instances on an Agent host, you need to enable the use of the Tuning Manager API by using the `htmrestctrl` command.

To stop the use of the API, execute the `htmrestctrl` command to disable the use of the Tuning Manager API.

The following table describes the states that exist after use of the Tuning Manager API is enabled or disabled.

Table 5-90 States that exist after use of the Tuning Manager API is enabled or disabled

Item	When use of the Tuning Manager API is enabled	When use of the Tuning Manager API is disabled
File output setting	A performance data file is output.	No performance data file is output.

Item	When use of the Tuning Manager API is enabled	When use of the Tuning Manager API is disabled
Change of startup type of the service	The startup type of the services (Tuning Manager - Agent REST Web Service and Tuning Manager - Agent REST Application Service) of Tuning Manager Agent REST API Component is set to automatic.	The startup type of the services (Tuning Manager - Agent REST Web Service and Tuning Manager - Agent REST Application Service) of Tuning Manager Agent REST API Component is set to manual.
Starting and stopping of the service	The services (Tuning Manager - Agent REST Web Service and Tuning Manager - Agent REST Application Service) of Tuning Manager Agent REST API Component start. However, the Collection Manager and Agent services do not start.	The services (Tuning Manager - Agent REST Web Service and Tuning Manager - Agent REST Application Service) of Tuning Manager Agent REST API Component stop. However, the Collection Manager and Agent services do not stop.

Locating Storage Directories

When both Collection Manager and an Agent are installed on the host

- In Windows: *Collection-Manager-installation-folder*`\htnm\bin\`
- In UNIX: `/opt/jp1pc/htnm/bin/`

When only an Agent is installed on the host

- In Windows: *Agent-installation-folder*`\htnm\bin\`
- In UNIX: `/opt/jp1pc/htnm/bin/`

Return Values

Table 5-91 Return values of the htmrestctrl command

Return Values	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
3	The command cannot be used because Hybrid Store is used in Agent for RAID operation.
255	An unexpected error occurred.

Usage Example

In this example, the command specifies that use of the Tuning Manager API is to be enabled:

```
htmrestctrl on
```

Note:

- When the Agent is used with Hybrid Store, this command cannot be used.
  Note that if the Agent used in the Store database is switched to be used in Hybrid Store, and the use of the Tuning Manager API had already been enabled before switching, the Tuning Manager API is automatically enabled.
- Before enabling the use of the Tuning Manager API, check the usage status of the following ports, which are used by default:
  - 24221
  - 24222
  - 24223
  - 24224
  - 24225
  - 24226

  Make adjustments so that other programs do not use these ports. If other programs are using these ports, change the port number to be used as the default, or change the settings of those other programs.
  For details on how to change the port number to be used as the default, see the *Tuning Manager Agent Administration Guide*.
- The setting to enable or disable the use of the Tuning Manager API is retained even after an overwrite or upgrade installation of an Agent.

htmsrv

Format (when starting and stopping the service, and when checking whether the service is running)

```
htmsrv       { start | stop | status }
             { -all | -webservice | <CM-option>(Note) }
```

Note:

<CM-option> is an argument to be specified when you want to execute this command for a Collection Manager and Agent services. The arguments that can be specified for <CM-option> differ depending on the first argument specified. The arguments that can be specified for <CM-option> are as follows.

- If `start` is specified:

  ```
  -key service-key
  [-lhost logical-host-name]
  [-inst instance-name]
  ```

- If `stop` is specified:

  ```
  -key service-key
  [-lhost logical-host-name]
  [-inst instance-name]
  [-kill immediate]
  ```

- If `status` is specified:

Format 1:

```
-id service-ID
[-host host-name]
[-lhost logical-host-name]
[-proxy {y|n}]
[-stat]
```

Format 2:

```
-key service-key
[-lhost logical-host-name]
[-proxy {y|n}]
[-stat]
```

Format (when changing the startup type)

```
htmsrv        starttype
              { auto | manual } -webservice
```

Function

The `htmsrv` command starts and stops the services (Tuning Manager - Agent REST Web Service and Tuning Manager - Agent REST Application Service) of Tuning Manager Agent REST API Component, checks whether the services are running, and changes the startup type of the services. This command can also start and stop the Collection Manager and Agent services, and can check whether these services are running.

- `start`: Specify this to start a service.
- `stop`: Specify this to stop a service.
- `status`: Specify this to check whether a service is running.
- `starttype`: Specify this to specify the startup type of a service.

For details about the correspondence between the specified option and the relevant service, see the description of the option in Reviewing Command Arguments on page 5-172.

Locating Storage Directories

When both Collection Manager and an Agent are installed on the host

- In Windows: *Collection-Manager-installation-folder*`\htnm\bin\`
- In UNIX: `/opt/jp1pc/htnm/bin/`

When only an Agent is installed on the host

- In Windows: *Agent-installation-folder*`\htnm\bin\`
- In UNIX: `/opt/jp1pc/htnm/bin/`

Return Values

Table 5-92 Return values of the htmsrv command

Return Values	Meaning
0	If an option other than the `status` option was specified: The command terminated normally. If the `status` option was specified: The command terminated normally. (All the services to be checked are already running.)
1	If the `start` option was specified: The command terminated normally. (The specified service is already running.) If the `stop` option was specified: The command terminated normally. (The specified service is already stopped.) If the `status` option was specified: The command terminated normally. (All the services to be checked are already stopped.)
2	If the `status` option was specified: The command terminated normally. (Some of the services to be checked are already running, and some are already stopped.)
10	An argument specification is invalid.
255	An unexpected error occurred.

Usage Example

In this example, the command stops the services (Tuning Manager - Agent REST Web Service and Tuning Manager - Agent REST Application Service) of Tuning Manager Agent REST API Component:

```
htmsrv stop -webservice
```

htmssltool

Format

```
htmssltool      -key private-key-file
                -csr certificate-signing-request-file
                -cert self-signed-certificate-file
                -certtext contents-of-self-signed-certificate
               [-validity number-of-valid-days]
               [-dname DN]
               [-sigalg signature-algorithm-for-server-certificate-
for-RSA-cipher]
               [-keysize keysize-of-private-key-for-RSA-cipher]
               [-eccsigalg signature-algorithm-for-servercertificate-
for-elliptic-curve-cipher]
               [-ecckeysize keysize-of-private-key-for-elliptic-curve-
```

cipher]

Function

The `htmssltool` command creates for HTM - Agent a private key and a certificate signing request (CSR) for RSA ciphers and elliptic curve ciphers (ECC).

Locating Storage Directories

When both Collection Manager and an Agent are installed on the host

- In Windows: *Collection-Manager-installation-folder*`\htnm\bin\`
- In UNIX: `/opt/jp1pc/htnm/bin/`

When only an Agent is installed on the host

- In Windows: *Agent-installation-folder*`\htnm\bin\`
- In UNIX: `/opt/jp1pc/htnm/bin/`

Return Values

Table 5-93 Return values of the htmssltool command

Return Value	Meaning
0	The command terminated normally.
1	An argument specification is invalid.
250	Deletion of the Keystore failed.
251	Creation of the private key failed.
252	Creation of the self-signed certificate failed.
253	Creation of the CSR failed.
254	Creation of the self-signed certificate content file failed.
255	The setting of the path to JDK is incorrect, or an unexpected error occurred.

htmchgjdk

Format

```
htmchgjdk { jdkpath Oracle-JDK-installation-directory-name
          | default
          | status }
```

Function

The `htmchgjdk` command can switch the JDK used by Tuning Manager Agent REST API Component for each Agent host. This command can also be used to check the JDK used by Tuning Manager Agent REST API Component.

- `jdkpath` *`Oracle-JDK-installation-directory-name`*: Specify this to switch the JDK used by Tuning Manager Agent REST API Component to Oracle JDK.
- `default`: Specify this to switch the JDK used by Tuning Manager Agent REST API Component to the JDK bundled with Hitachi Command Suite products.
- `status`: Specify this to check the JDK used by Tuning Manager Agent REST API Component.

Locating Storage Directories

When both Collection Manager and an Agent are installed on the host

- In Windows: *Collection-Manager-installation-folder*`\htnm\bin\`
- In UNIX: `/opt/jp1pc/htnm/bin/`

When only an Agent is installed on the host

- In Windows: *Agent-installation-folder*`\htnm\bin\`
- In UNIX: `/opt/jp1pc/htnm/bin/`

Note:

- Switching of the JDK that is used by Tuning Manager Agent REST API Component is enabled after the services of Tuning Manager Agent REST API Component (Tuning Manager - Agent REST Web Service and Tuning Manager - Agent REST Application Service) are restarted.
- Switching of the JDK that is used by Tuning Manager Agent REST API Component remains enabled even after an overwrite or upgrade installation of an Agent.
- You cannot use a relative path to specify *Oracle-JDK-installation-directory-name*. Make sure that you specify the absolute path.

Return Values

Table 5-94 Return values of the htmchgjdk command

Return Value	Meaning
0	When an option other than `status` is specified: The command terminated normally. When the `status` option is specified:

Return Value	Meaning
	The command terminated normally. (The settings are set to use the JDK bundled with Hitachi Command Suite products.)
1	The command terminated normally. (The settings are set to use Oracle JDK.)
10	The specified command format is invalid.
247	Information about the path to the Agent installation directory cannot be obtained from the registry (in Windows).
248	The following file does not exist in the JDK that is bundled with Hitachi Command Suite products. In Windows: *Agent-installation-folder*\htnm\HBasePSB\hjdk\jdk\bin\java.exe In Linux: /opt/jp1pc/htnm/HBasePSB/hjdk/jdk/bin/java
249	Execution of the `java -version` command for the specified JDK failed.
250	Execution of the `java -version` command for the specified JDK was successful, but analysis of the specified JDK version failed.
251	The specified JDK is not supported.
252	The file `usrconf.cfg` does not exist.
253	Failed to modify the file `usrconf.cfg`.
254	The link destination of the symbolic link that points to the JDK installation directory cannot be obtained.
255	The command to create a symbolic link that points to the JDK installation directory failed.

htmpwencoder

Format

```
htmpwencoder
```

Function

The `htmpwencoder` command encodes the password to be used when SMTP authentication is performed.

You can use the encoded password when configuring the email delivery settings file for the alert function (`alertglobalconfig.ini`).

After the command is executed, if the password is entered, the encoded password will be output to the standard output file.

Prerequisites

The host that runs the command must run an OS on which the alert function is supported.

Note:

- Set the encoded password manually in the email delivery settings file (`alertglobalconfig.ini`) if the password is encoded by using this command.
- Messages related to this command are output to the message log that is used for the Tuning Manager API.

Return Values

Table 5-95 Return values of the htmpwencoder command

Return Value	Meaning
0	The command encoded the password successfully.
1	The command terminated without encoding the password because no password was entered.
255	The command failed to encode the password.

Reviewing Command Arguments

-add

Adds data to be imported. If you omit this option, all data will be imported.

-agentname *agent-name*

If you want to automatically execute the `jpctdraidperf` command by using an alarm, specify this argument. When the value reaches the threshold value and when the command executes from the alarm, the agent name of the monitoring target storage system will be set.

The format of the agent name is as shown below. < > indicates a variable. [ ] indicates a fixed value.

<product-ID><function-ID><instance-number><instance-name>[*host-name*]

Examples:DA1raid800inst[hostA]

-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 alarm names for alarm definition information (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 from 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.

-alarm *name-of-copy-source-alarm*

Specifies the name of an alarm to be copied.

You can use from 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.

-aliasname *alias-name*

Specifies an alias name. You can specify this option when `alias` is specified for the `-mode` option. You can use from 1 to 32 one-byte alphanumeric characters. You cannot specify `localhost`, an IP address, or the logical host name used for the device.

-all

For the `htmhsconvert` command:

All instances of the agents that support Hybrid Store are to be converted.

For the `htmsrv` command:

The following services are subject to checks of whether they are running or have stopped, and their running status:

- Tuning Manager Agent REST API component services
- Collection Manager services
- Agents services

[all|data|dump]

Selects the information to be collected. Different information is collected depending on the option specified. Normally, specify `all`. Table 5-96 Information Collected by the jpcras Command (in Windows) on page 5-174 and Table 5-97 Information Collected by the jpcras Command (in UNIX) on page 5-175 show the options that can be specified and the information that is collected for each OS.

Table 5-96 Information Collected by the jpcras Command (in Windows)

Collected Information		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	Windows Firewall information	Y	--	--	Y
	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. However, the command collects information from the Master Store service database, the Master Manager service database, and the Name Server service database.

Table 5-97 Information Collected by the jpcras Command (in UNIX)

Collected Information		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	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. However, the command collects information from the Master Store service database, the Master Manager service database, and the Name Server service database.

For details about the information to be collected, see the *Tuning Manager Agent Administration Guide*.

-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 the Tuning Manager server is not running. You can also perform processing(Note) on Agent hosts (hosts other than the Tuning Manager server 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`.

-cert

Specify the absolute path of the location to which a self-signed certificate will be output.

-certtext

Specify the absolute path of the location to which the contents of the self-signed certificate will be output in text format.

-clear

Clears data in the import directory.

-csr

Specify the absolute path of the location to which a certificate signing request will be output.

-ct

Specify this argument to output the time that it takes to collect the instance information.

-d *directory*

Specifies the directory to which data will be backed up. You must specify an existing directory. For *directory*, specify a directory that can be accessed with the following permissions:

- In Windows: System account
- In UNIX: Root user permission

When the Store database version is 1.0, the path must be no more than 127 bytes in length. When the Store database version is 2.0, the path must be no more than 214 bytes in length. Note that when the Store database version is

2.0, an absolute path or a relative path must be no more than 214 bytes in length. A relative path must be no more than 214 bytes in length when converted to an absolute path. The base directory for a relative path is the environment directory of the specified Store service.

If you use this option, the service for which this option is specified must be a single Store service of the local host. Therefore, you cannot specify a wildcard character for *service-ID* or `host=`*host-name*. Unlike using the BackupDir label of the `jpcsto.ini` file to specify a backup directory, a directory that has a generation number will not be created. The backup data will be written directly under the specified directory.

Note that if a file exists in the specified directory, this file will be overwritten.

-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.

-d *back-up-directory*

For the `jpcdbctrl display` commands:

Specifies the name of the backup directory to be processed by the functionality of Hybrid Store or a Store database version 2.0. You cannot use the following characters for the backup directory name:

```
; , * ? ' " < > |
```

To specify the directory name, use a relative path or absolute path that contains characters from any national language character set, providing that the path does not contain the above characters and that the path is in the range from 1 to 214 bytes. For a relative path, specify a path from the directory on which the command will be executed.

For the `jpcdbctrl dmconvert`, and `jpcdbctrl import` commands:

Specifies the name of the backup directory to be processed by the functionality of Store database version 2.0. You cannot use the following characters for the backup directory name:
`; , * ? ' " < > |`

To specify the directory name, use a relative path or absolute path that contains characters from any national language character set, providing that the path does not contain the above characters and that the path is in the range from 1 to 214 bytes. For a relative path, specify a path from the directory on which the command will be executed.

For the `jpcdbctrl import` command, specify, as the backup directory, a directory that can be accessed with the following permissions:

- In Windows: System account
- In UNIX: Root user permission

For the `jpcconf host hostmode` and `jpcconf host hostname` commands:

Specifies the directory to which data will be backed up. You must specify an existing directory. Note that you cannot use the following characters for the backup directory name:
`; , * ? ' " < > |`

You can use from 1 to 130 bytes of one-byte alphanumeric characters, symbols, or spaces to specify the directory name. If the directory name contains one or more spaces, you must enclose the entire name in one-byte double quotation marks (").

You cannot specify a directory that is under the directory containing the Performance database of the Agent Store.

database-id

Specifies the database ID of the database that contains data to be processed(Note). The specifiable database IDs are as follows:

- PI: The Agent Store service database for records of the PI record type
- PD: The Agent Store service database for records of the PD record type
- PL: The Agent Store service database for records of the PI record type (for Agent for Platform (UNIX) only)
- PA: The Master Store service database

Note: This indicates deletion processing for `jpcctrl clear`, and export processing for the `jpcctrl dump` command.

For the `jpcctrl clear` command, you can also use a wildcard character to specify multiple database IDs.

-dbconvert {convert|delete}

Specifies how to update the performance data. The default is `convert`.

If you specify `convert`, the host name information in the key field is converted to a new host name, and the data is updated.

If you specify `delete`, the Performance database is deleted and the data is not updated. However, information about event data managed by the Tuning Manager server will be updated.

default

Switches the JDK that is used by Tuning Manager Agent REST API Component to the JDK that is bundled with Hitachi Command Suite products

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 Appendix in the *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 5-98 Service and Port Number of define

Service Name	Parameter	Port number
Name Server	`jp1pcnsvr`	22285
Status Server	`jp1pcstatsvr`	22350
View (between Main Console and the View Server service, and between Performance Reporter and the View Server service)	`jp1pcvsvr`	22286

Service Name	Parameter	Port number
View Server (used for sending an event or a report from an Agent to a Tuning Manager server or from an Agent to Performance Reporter)	`jp1pcvsvr2`	20276

-deletestore

Specify this argument to delete the performance data in the Store database if `Transfer performance data after installation` is selected while executing the installer, or execution of the `htmhsconvert` command ended with an error.

-dir *backup-data-output-directory*

Specify the directory to which backup data is output. Specify the absolute path to the directory. The length of the path is between 1 and 80 bytes.

You can use single-byte alphanumeric characters, symbols, or spaces to specify the directory. You cannot use the following characters:

; , * ? ' " < > |

If the path contains a space character, enclose the space character with double quotation marks (").

Note that you cannot specify the following:

- Symbolic links
- Network drives
- Network directories

-dir *Storage-directory-of-the-backup-data-to-be-restored*

Specify the directory that stores the backup data to be restored. Specify the absolute path to the directory. The length of the path is between 1 and 80 bytes.

You can use single-byte alphanumeric characters, symbols, or spaces to specify the directory. You cannot use the following characters:

; , * ? ' " < > |

If the path contains a space character, enclose the space character with double quotation marks (").

Note that you cannot specify the following:

- Symbolic links
- Network drives
- Network directories

-dir *Storage-directory-of-the-data-after-migrating-to-Hybrid-Store*

Specify the directory that stores the data after migrating to Hybrid Store. If you specify the destination to store the data, the data migrated to Hybrid Store will be stored in the specified path for all instances. If you do not specify the output directory, the migrated data is output to the Store directory of each instance (the Store database storage directory that has been changed from the default directory).

Specify the absolute path to the directory. The length of the path is between 1 and 80 bytes.

You can use single-byte alphanumeric characters, symbols, or spaces to specify the directory. You cannot use the following characters:

; , * ? ' " < > |

If the path contains a space character, enclose the space character with double quotation marks (").

Note that you cannot specify the following:

- Symbolic links
- Network drives
- Network directories

-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 server 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`.

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 with the name `jpcras`*YYMMDD*[#]`.tar.Z` (for the `compress` command) or `jpcras`*YYMMDD*[#]`.tar.gz` (for the `gzip` command) in the directory specified for this option.

In Windows, a file for the collected information is copied uncompressed to the folder specified by this option.

Note: *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.

-display

Specify this option to display the method used to acquire a monitoring host name and the host name information.

-dname

Specify the DN to be included in the self-signed certificate and certificate signing request. If you execute the command without specifying this option, you will be prompted to specify the DN.

For details about DN, see the section that describes communication security settings in the *Hitachi Command Suite Administrator Guide*.

For CN (Common Name) contained in DN, specify the host name of the Agent host. (You can use the FQDN format to specify the host name.) When specifying the CN, note the following:

- To detect HTTP I/F information per Agent host
  Specify the host name that was specified for the following property in the `user.properties` file for the Tuning Manager server:
  `HostName` in the `rest.discovery.agent.host.`*`HostName`*`.host` property
- To detect HTTP I/F information for all Agent hosts
  Confirm that host names can be resolved by using either the `hosts` file on the Tuning Manager server or DNS.

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 the `-localtime` option is specified, the time in GMT must be within the previously stated range. 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.

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.

-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.

-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.

-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 (").

-force

Specifies that the command is forced to execute. If you omit this option, the command is not forced to execute.

-from *directory-for-storing-Store-database-backup-data*

Specify the directory to store the backup data of the Store database. If you omit this option, the storage directory is the Store directory of the Agent to be converted.

Specify the absolute path to the directory. The length of the path is between 1 and 80 bytes.

You can use single-byte alphanumeric characters, symbols, or spaces to specify the directory. You cannot use the following characters:

; , * ? ' " < > |

If the path contains a space character, enclose the space character with double quotation marks (").

Note that you cannot specify the following:

- Symbolic links
- Network drives
- Network directories

-host *host-name*

Specify this to check the running status of a service of a specific host.

You can use from 1 to 32 bytes of one-byte alphanumeric characters. You cannot use a space character. If you omit this option, the local host is assumed.

You can also use wildcard characters to specify multiple host names.

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. This option creates the files to export on the specified 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.

You can use from 1 to 128 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. Note that you cannot use a wildcard character when specifying the `-d` option for the `jpcctrl backup` command.

-i *update-target-definition-file-name*

Specifies the path of the definition file to be updated.

The following definition files can be specified as update targets:

- `jpccomm.ini`
- `jpcsto.ini`

Note the following points when specifying the names of the definition files to be updated:

- In UNIX, file names that include single-byte spaces must be enclosed in double quotation marks ("), and symbols must be escaped as necessary.
- Specify a path of from 1 to 255 bytes that points to a file that exists. Wildcard characters are not permitted.
- You can specify absolute or relative file path names. In the case of a relative file path, specify the path from the current directory at the time of command execution.

-id *service-ID*

Specifies the service ID of the Collection Manager or Agent's service in the following cases:

- For binding an alarm table
- For releasing the binding of an alarm table
- For displaying the list of alarm tables that are bound by Agent
- For checking the status of a service of Collection Manager or Agents

You can use from 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.

In cases other than when displaying a list of alarm tables bound to the Agents, 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.

When you display the list of alarm tables that are bound by an Agent, you cannot use wildcard characters (asterisks (*) and question marks (?)).

-inst *instance-name*

- For the `htmhsbackup` command:

  This command is enabled if the `-key` option is specified. Specify the instance name. If you omit this option, all instances of the agent specified by the `-key` option are to be backed up.
- For the `htmhsrestore` command:

  This command is enabled if the `-key` option is specified. Specify the instance name. If you omit this option, all instances of the agent specified by the `-key` option are to be restored.
- For the `htmhsconvert` command:

  Specify the name of the instance to be converted. If the `-key` option is specified, be sure to specify this option for an Agent in a multi-instance configuration.
- For the `htmsrv` command:

Specify the name of the instance to be started or stopped.

- For the `jpcdbctrl config` command:

  Specify the instance name to be processed by the functionality of Store database version 2.0. The instance name must exist on the specified host and the specified service key. You can use from 1 to 32 bytes of one-byte alphanumeric characters. You cannot specify this option for a single instance Agent.

- For the `jpcdbctrl display` command:

  Specify the instance name to be processed by the functionality of Hybrid Store or a Store database version 2.0. The instance name must exist on the specified host and the specified service key. You can use from 1 to 32 bytes of one-byte alphanumeric characters to specify the instance name. You can omit this option for a multi-instance Agent. You cannot specify this option for a single instance Agent.

- For the `jpcdbctrl setup`, `jpcdbctrl unsetup`, and `jpcdbctrl import` commands:

  Specify the instance name to be processed by the functionality of Store database version 2.0. The instance name must exist on the specified host and the specified service key. You can use from 1 to 32 bytes of one-byte alphanumeric characters to specify the instance name. You must specify this option for a multi-instance Agent. You cannot specify this option for a single instance Agent.

- For the `jpcinssetup` command:

  Specify the instance name for which you want to create or update an execution environment. Use from 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 from 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 from 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 check 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.

- For the `jpctdraidperf` command:

  Specify the name of an instance for which you want to obtain performance data.

Specify this option when manually executing the `jpctdraidperf` command.

- For the `jpctwchkinst` command:

  Specify the instance name of Agent for SAN Switch that is to check 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.

- For the `jpctdrefresh` command:

  Specify the instance name of the Agent for RAID instance for which you want to collect the configuration information for the storage system. You cannot omit this argument.

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 from 1 to 32 bytes of one-byte alphanumeric characters.

- For the `jpcresto` command:

  Specify the instance name if you want to perform restoration to a particular instance database. This option is valid only when you specify an Agent that has the instance environment for the service key. Use from 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 from 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 from 1 to 32 bytes of one-byte alphanumeric characters.

-interval *collection-interval-in-seconds*

Specify a collection interval in seconds.

You can specify single-byte numeric characters from 1 to 60. The default value is 1 (second).

Note: When obtaining the activity-rate ranking information (MPRANK) for each processor allocated to an MP blade, because the minimum value of collection intervals for the performance data is 5 seconds, the data acquisition timing differs depending on the specified collection interval.

For details about collection timing, see the notes on CSV files of MPRANK of Notes: on page 5-143 of jpctdraidperf on page 5-140.

jdkpath *Oracle-JDK-installation-directory-name*

Specifies the full path to the Oracle JDK installation directory when switching the JDK that is used by Tuning Manager Agent REST API Component to Oracle JDK. Note that you cannot use a relative path to specify *Oracle-JDK-installation-directory-name*. Make sure that you specify the absolute path.

-key

Specify the absolute path of the location to which a private key will be output. The size of a private key is 2,048 bits (fixed).

-key *service-key*

Specifies a service key in the following cases:

- When starting a service (in this case, you can specify a service key of Collection Manager or Agents)
- When stopping a service (in this case, you can specify a service key of Collection Manager or Agents)
- When checking the running status of a service (in this case, you can specify a service key of Collection Manager or Agents)
- When activating an alarm definition
- When binding an alarm table
- When copying an alarm table or an alarm
- When deleting an alarm table or an alarm
- When exporting an alarm table or alarm definition information (in this case, the `-template` option cannot be specified at the same time)
- When inactivating an alarm definition
- When displaying definition information or binding information for an alarm table
- When releasing the binding of an alarm table
- When specifying an Agent to be processed by the functionality of Store database version 2.0
- When specifying a specific agent to be the backup target (If omitted, all instances of all agents that support Hybrid Store are to be backed up.)
- When specifying a specific agent to be the restoration target (If omitted, all backup data that was obtained by using the `htmhsbackup` command is to be restored.)
- When specifying a specific agent to be the migration target (If omitted, all agents that support Hybrid Store are to be migrated.)
- When specifying a specific agent to be the conversion target

For details about service keys, see Appendix D, Specifying a Service Key on page D-1.

-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.

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.

-ldev *LDEV-number*

Specify information about an LDEV for which you want to obtain performance data.

You can specify only one LDEV number.

Format of LDEV number

logical DKC number:*CU number*:*LDEVID*

- For each item, you can use single-byte hexadecimal characters (two characters), and colons (:) as delimiters. (8 characters in total)
- You must use the format shown above. If you specify a LDEV number in a different format, it will not be recognized as an LDEV number.

Examples: 00:2F:AC

If this option is omitted, the file `raidperf_ldevlist.conf`#, which specifies the LDEVs for which performance data is to be obtained in seconds, will be read.

Note:

Use the file `raidperf_ldevlist.conf`, which specifies LDEVs for which performance data is to be obtained in seconds, to obtain information for multiple LDEVs.

For each instance, create a file for specifying LDEVs for which performance data is to be obtained in seconds. Copy the sample file `raidperf_ldevlist.conf.sample` stored in the same directory to create the file.

The file for specifying LDEVs for which performance data is to be obtained in seconds is stored in the following directories:

- In Windows:

installation-folder\agtd\agent*instance-name*

- In UNIX:
  /opt/jp1pc/agtd/agent/*instance-name*

Note the following when creating the file for specifying LDEVs for which performance data is to be obtained in seconds, and when executing a command by using this file:

- If an LDEV number is not specified by using the -ldev option, the file for specifying LDEVs for which performance data is to be obtained in seconds does not exist, or no LDEV number is defined in the file, only the information for the data header will be output.
- The maximum number of LDEVs that can be defined in a single file is 128.
- If the number of defined LDEVs exceeds the maximum, the command ends in an error.
- A line that begins with "#" is regarded as a comment.
- Specify one LDEV number in one line. For details about the format of LDEV numbers, see the description of the -ldev option.
- If LDEV numbers are not specified in the designated format, the command ends in an error.
- Do not define identical LDEV numbers. If the LDEV numbers are duplicated, the same performance data is output as many times as the number of duplications.

The following shows an example of specifying LDEV numbers:

```
##
#
00:01:11
00:2F:AC
#00:A1:F2
```

-lhost *logical-host-name*

Specifies the logical host name as follows:

- For htmhsbackup, the logical host name when you want to back up the performance data of the logical host. For multiple instances, you must also specify the -inst option.
- For htmhsrestore, the logical host name when you want to restore the performance data of the logical host. For multiple instances, you must also specify the -inst option.
- For htmhsconvert, the logical host name when you want to convert the performance data of the logical host.
- For htmsrv, the logical host name of the host for which you want to check whether the service is running or has stopped, and to check the running status of the service.

- For `jpcconf prodname disable`, the name of the logical host for which you want to disable the product name display function. You can omit this option.
- For `jpcconf prodname display`, the name of the logical host for which you want to display the product name display function settings. You can omit this option.
- For `jpcconf prodname enable`, the name of the logical host for which you want to enable the product name display function. You can omit this option.
- 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 server host is displayed, set, or changed.
- For `jpctdchkinst`, the host name when you want to check the instance information set up for the logical host.
- For `jpctdraidperf`, the host name when the instance for which you want to obtain performance data is set in the logical host environment. If you omit this option, the physical host is recognized as having been specified.
- For `jpctdrefresh`, the name of the logical host where the instance environment for which you want to collect configuration information of the storage system exists.
- For `jpctwchkinst`, the host name when you want to check the instance information set up for the logical host.
- For `jpcdbctrl display`, specify the host name of the logical host to be processed by the functionality of Hybrid Store or a Store database version 2.0. The logical host name must exist on the host where the command was executed. If you omit this option, the physical host is recognized as having been specified. In addition, even if you specify a logical host name for the `JPC_HOSTNAME` environment variable, the specification is invalid.
- For `jpcdbctrl setup`, `jpcdbctrl unsetup`, `jpcdbctrl import`, and `jpcdbctrl config`, specify the host name of the logical host to be processed by the functionality of Store database version 2.0. The logical host name must exist on the host where the command was executed. If you omit this option, the physical host is recognized as having been

specified. In addition, even if you specify a logical host name for the JPC_HOSTNAME environment variable, the specification is invalid.

You can use from 1 to 32 bytes of one-byte alphanumeric characters to specify the name. However, 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.

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 from 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.

list

Specifies the port number. When you specify this option, the information noted in Table 5-99 Information that Is Displayed When the List Option Is Specified on page 5-193 is displayed.

Table 5-99 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. It is used for sending an event or a report from an Agent to a Tuning Manager server or from an Agent to Performance Reporter. • View: Indicates the View service. It is between Main Console and the View Server service, and between Performance Reporter and the View Server service.

Item	Description
	• 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.
Port	Port number. If this information is undefined, undef is displayed.
Host Name	Host name

-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.

-mode {uname|hostname|alias}

Specifies the method used to acquire a monitoring host name in the physical host environment. The following table describes the options that can be specified and the corresponding methods.

Table 5-100 Methods for Acquiring a Monitoring Host Name

-mode Option	Description
uname	In UNIX, the uname -n command is used to acquire a monitoring host name.
hostname	The hostname command is used to acquire a monitoring host name.
alias	An alias name is used for the monitoring host name.

-move

The -move option specifies whether the contents of the current directory are inherited or copied to the new directory when the directory settings of the Store service are changed. Note that the specification of the -sd|-bd|-bs|-pbd|-dd|-id option determines whether you can specify the -move option as follows:

Option Name	Whether the - move Option Can Be Specified
-sd	Specifiable

Option Name	Whether the - move Option Can Be Specified
-bd	Specifiable
-bs	Unspecifiable
-pbd	Specifiable
-dd	Unspecifiable
-id	Specifiable

If you omit the -move option, only the directory settings will be changed. When you specify the -move option, the following restrictions apply:

- An empty directory must be specified.
- A directory under the currently set directory cannot be specified.

mx *maximum-memory-size*

Specifies the maximum memory size that is used by Tuning Manager - Agent REST Application Service in megabytes.

The specifiable values are as follows:

- minimum value : 512
- maximum value : 2147483647

-n

Specify this option if you want to execute the command in non-interactive mode. When this option is specified, the command outputs no messages that interrupt command execution and require a user response.

-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 from 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 from 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.

-newhost *new-host-name*

Specifies a new host name. The following table describes the type of host name you can specify for each condition, and provides notes on the values you can enter.

Table 5-101 Types of Host Names and Notes on Entered Values

Condition		Type of Host Name	Notes on Entered Value
-lhost Option	**Monitoring Host Name Acquisition Method (See Note 1)**		
Not specified	`hostname`	Physical host name (value displayed by the `hostname` command)	• You can use from 1 to 255 one-byte alphanumeric characters. • You cannot specify `localhost` or a host name that begins with an IP address.
	`uname -n`	Physical host name (value displayed by the `uname -n` command)	
	`alias`	Alias name (any host name) (See ***Note 2***)	• You can use from 1 to 32 one-byte alphanumeric characters. • You cannot specify `localhost` or a host name that begins with an IP address.
Specified	--	Logical host name	• You can use from 1 to 32 one-byte alphanumeric characters and hyphens (-). • You cannot specify `localhost` or a host name that begins with an IP address or a hyphen (-).

Legend:

--: Not applicable

Note: *1:* The method used to acquire monitoring host names is set by the `jpcconf host hostmode` command. You can use the `jpcconf host hostmode -display` command to check which method is currently being used to acquire monitoring host names.

Note: *2:* For details about alias names, see the chapter that describes setting up Tuning Manager series programs in the *Tuning Manager Installation Guide*.

-noprogress

If this option is specified, the progress of the application processing is not output.

-output *CSV-file-output-destination-directory*

Specifies the output destination directory for the CSV files to be output by the `jpctdraidperf` command. In the specified output destination directory, following directory is automatically created, and then each CSV file is output.#

- In Windows:
  `secdata\<YYYYMMDD>`
- In UNIX:
  `secdata/<YYYYMMDD>`

Specify the directory by using an absolute path whose length is 1 to 95 characters.

Specifiable characters are single-byte alphanumeric characters, symbols, and spaces. You cannot use the following characters:

; , * ? ' " < > |

You cannot specify the following values:

- Directories in a relative path
- Directories that contain two-byte characters
- Directories whose names are already used by other files

The default output destinations are as follows:

- In Windows:
  installation-folder`\agtd\agent\`*instance-name*
- In UNIX:
  `/opt/jp1pc/agtd/agent/`*instance-name*

Note:

The name of the file to be output to the directory is as follows:

target-resource_YYYYMMDDhhmmss_instance-name_host-name.csv

The following values are used for the variables:

target-resource

For LDEV performance data: LDEV

For processor performance data: MP

For activity-rate ranking information for each processor allocated to a MP blade: MPRANK

For port performance data: PORT

YYYYMMDDhhmmss

Date and time the collection of performance data started by using the command

YYYY : Year

MM : Month

DD : Day

hh : Hour

mm : Minute

ss : Second

instance-name

Instance name specified by using the `-inst` option

host-name

Host name of the instance to be output

-p

Specifies to display product information with the patch history information.

-partial [*startday*| *endday*| *dbid*| *recname*| *drawer*]

Executes partial backup. This option backs up only the specified Store services whose Store database version is 2.0.

`startday`: Specify how many days before the current date (in GMT) you want the data backup to start.

`endday`: Specify how many days before the current date (in GMT) you want the data backup to end.

`dbid`: Specify the database ID. If you omit this, all of the databases will be the target to be backed up.

`recname`: Specify the record type. If you omit this, all of the record types will be the targets to be backed up.

`drawer`: Specify the summarization unit. If you omit this, all of the summarization units will be the targets to be backed up. The following table shows the values that can be specified for the summarization unit:

Specifiable Value	Explanation
Minute	Specifies the minute record
Hour	Specifies the hour record
Day	Specifies the day record
Week	Specifies the week record
Month	Specifies the month record
Year	Specifies the year record

Usage Example 1

When partially backing up all record types from three days before to one day before.

```
-partial 3,1,
```

Usage Example 2

When partially backing up the PD_PDI record in the PD database from three days before to one day before.

```
-partial 3,1,PD,PDI
```

Usage Example 3

When partially backing up the month record in the PI database from three days before to one day before.

```
-partial 3,1,PI,,Month
```

-proxy {y|n}

If you specify a remote host in host when you cannot directly communicate with an Agent at the remote host, use this option to select whether to communicate with the Agent via the Tuning Manager server as a proxy.

If you specify y, the command checks the status of the target Store service via the Tuning Manager server. 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 the Tuning Manager server.

proxy={y|n}

If you specify a remote host in host when you cannot directly communicate with an Agent at the remote host, use this option to select whether to communicate with the Agent via the Tuning Manager server as a proxy.

If you specify y, the command checks the status of the target Store service via the Tuning Manager server. 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 the Tuning Manager server.

-rawlimitdays DD

Specify this option to convert raw data of a specific period. This option converts the raw data of the period counting back the number of specified days from the time the latest performance value is obtained. If you specify 0, raw data is not converted.

DD refers to the number of days. The day is represented by a value in the range from 01 to 31.

-rawstartdate YYYY/MM/DD

Specify this option to convert raw data of a specific period. This option converts the raw data of the period from the date specified by `-rawstartdate` (inclusive) until the time the latest performance value is obtained. Specify a value by using the local time of the host that executed the `htmhsconvert` command.

YYYY/MM/DD refers to the start date of the period for conversion. The meanings of the symbols are as follows:

- YYYY
  Displays the year in four digits.
- MM
  Displays the month. The month is represented by a value in the range from 01 to 12.
- DD
  Displays the day. The day is represented by a value in the range from 01 to 31.

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 Agent for Platform (Windows), specify `PCSR`. For record IDs, see the chapter explaining records (a list of records) in the *Tuning Manager Hardware Reports Reference* or *Tuning Manager Operating System Reports Reference*.

If the specified record ID does not exist, an export file with a size of 0 is created, and the command is terminated normally.

-s *host-name*

Specifies the host name of the host of the connection-target Tuning Manager server. You can use from 1 to 128 bytes of one-byte alphanumeric characters to specify the name. You cannot use IP addresses or space characters.

If a Tuning Manager server has been installed on the local host, specifying this argument results in an error. If a Tuning Manager server is installed on the same host as the Agent, the connection-target Tuning Manager server is the Tuning Manager server on the local host. The Tuning Manager server host of a remote host cannot be specified as the connection-target Tuning Manager server.

If Tuning Manager server is running in a cluster environment and installed on the same host as the Agent, do not specify any host other than the Tuning Manager server host on the same host.

This option can also be used when a Tuning Manager server and an Agent are installed on the same host and only the Tuning Manager server is on a logical host.

-sd|-bd|-bs|-pbd|-dd|-id *setting-value*

Specify the item for which you want to change the settings of the Store service. The item you will specify corresponds to the label name of the `jpcsto.ini` file as shown in the table below. Executing the `jpcdbctrl config` command with this option specified changes the corresponding label name in the `jpcsto.ini` file.

Option Name	Corresponding Label Name of the jpcsto.ini File	Explanation
`-sd`	`Store Dir`	Changes the Store directory of the Store database.
`-bd`	`Backup Dir`	Changes the backup directory of the Store database.
`-bs`	`Backup Save`	Changes the number of generations for the backup directory of the Store database.
`-pbd`	`Partial Backup Dir`	Changes the partial backup directory of the Store database.
`-dd`	`Dump Dir`	Changes the dump directory of the Store database.
`-id`	`Import Dir`	Changes the import directory of the Store database.

The value that you can specify for *setting-value* differs as follows depending on the Store database version of the target Store service:

Option Name	Store Database Version	
	1.0	2.0
-sd	Specify no more than 127 bytes. You can use one-byte alphanumeric characters, symbols, and spaces, except for the following characters: ; , * ? ' " < > | Use an absolute path or a relative path to specify the value.	Specify no more than 214 bytes. You can use one-byte alphanumeric characters, symbols, and spaces, except for the following characters: ; , * ? ' " < > | Use an absolute path or a relative path whose length is no more than 214 bytes to specify the value. You must specify an existing directory.
-bd	Specify no more than 127 bytes. You can use one-byte alphanumeric characters, symbols, and spaces, except for the following characters: ; , * ? ' " < > | Use an absolute path or a relative path to specify the value.	Specify no more than 211 bytes. You can use one-byte alphanumeric characters, symbols, and spaces, except for the following characters: ; , * ? ' " < > | Use an absolute path or a relative path whose length is no more than 211 bytes to specify the value. You must specify an existing directory.
-bs	An integer in the range from 1 to 9	An integer in the range from 1 to 9
-pbd	Cannot be specified for this version.	Specify no more than 214 bytes. You can use one-byte alphanumeric characters, symbols, and spaces, except for the following characters: ; , * ? ' " < > | Use an absolute path or a relative path whose length is no more than 214 bytes to specify the value. You must specify an existing directory.
-dd	Specify no more than 127 bytes. You can use one-byte alphanumeric characters, symbols, and spaces, except for the following characters: ; , * ? ' " < > |	Specify no more than 127 bytes. You can use one-byte alphanumeric characters, symbols, and spaces, except for the following characters: ; , * ? ' " < > | Use an absolute path or a relative path to specify the value.

Option Name	Store Database Version	
	1.0	2.0
	Use an absolute path or a relative path to specify the value.	
`-id`	Cannot be specified for this version.	Specify no more than 222 bytes. You can use one-byte alphanumeric characters, symbols, and spaces, except for the following characters: `; , * ? ' " < > |` Use an absolute path or a relative path whose length is no more than 222 bytes to specify the value. You must specify an existing directory.

Note: You can only specify a directory on the local disk for *setting-value*.

service-id

Specifies the service ID (whose second character is S) of the Master Store service or the Agent Store service. Use from 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.

Note that you cannot use a wildcard character for the `-d` option of the `jpcctrl backup` command.

service-key

The following table lists commands and available service keys:

- `all`: 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 a Tuning Manager server or an Agent
- `agtd`: Service key of Agent for RAID
- `agte`: Service key of Agent for RAID Map[1]

- agtt: Service key of Agent for Platform (Windows)
- agtu: Service key of Agent for Platform (UNIX)
- agtw: Service key of Agent for SAN Switch
- agtn: Service key of Agent for Network Attached Storage
- agto: Service key of Agent for Oracle
- agtq: Service key of Agent for Microsoft SQL Server
- agtz: Service key of Agent for Microsoft Exchange Server
- agtr: Service key of Agent for DB2

Note 1:

For the jpctminfo command, agte is treated as a service key of Agent for Server System.

Table 5-102 Commands and Service Keys to Be Specified

Command	Service Key
jpcagtsetup	The service of a new Agent that you want to add
jpctminfo	The service of the Agent whose version you want to display. You can specify the following service keys: agte, agtm, agtn, agto, agtq, agtd, agtw, and agtr. If you specify a service key other than the ones listed here, an error will occur.
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
jpcdbctrl display	Specify an Agent to be processed by the functionality of Hybrid Store or a Store database version 2.0. For the service key, specify the service key of an Agent that has been set up on the specified host, in the agt*?* format. For *?*, specify the service ID of the Agent.

Command	Service Key
`jpcdbctrl setup`	Specify an Agent to be processed by the functionality of Store database version 2.0. For the service key, specify the service key of an Agent that has been set up on the specified host, in the `agt?` format. For *?*, specify the service ID of the Agent.
`jpcdbctrl unsetup`	
`jpcdbctrl import`	
`jpcdbctrl config`	

For details on the service keys of Agent services, see Appendix D, Specifying a Service Key on page D-1.

If you specify `mgr` or the service key of an Agent service for *service-key*, the command performs processing(Note) 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.

For the `jpcagtsetup` command, specify the service key for the additional Agent to be 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`.

start

Starts services according to the option specified for the `htmsrv` command. The following table describes the correspondence between the specified option and the services to be started.

Table 5-103 Correspondence between the specified option and the services to be started

Service	Specified Option		
	all	webservice	CM option
Tuning Manager - Agent REST Web Service	Y	Y	N
Tuning Manager - Agent REST Application Service	Y	Y	N
Collection Manager and Agent services	Y	N	Y

Legend:

Y: The service starts.

N: The service does not start.

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 the `-localtime` option is specified, the time in GMT must be within the previously stated range. 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.

starttype

Specifies the startup type of the Tuning Manager - Agent REST Web Service and the Tuning Manager - Agent REST Application Service according to the option specified for the `htmsrv` command.

- `auto`: Automatic startup
- `manual`: Manual startup

-stat

Displays the status obtained by performing direct communication with the Status Server service of the host specified in `-host` *host-name* or `host=`*host-name*. This option is specified to display remote host information when the Tuning Manager server 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* or `host=`*host-name*.. This option cannot be simultaneously specified with `-proxy {y|n}` or `proxy={y|n}`.

Note: This option cannot be used when the status management function is disabled.

status

For the `htmsrv` command:

This command checks whether the services are running according to the specified option. The following table describes the correspondence between options and the services whose running status is to be checked.

Table 5-104 Correspondence between the specified option and the services whose startup statuses are to be checked

Service	Specified Option		
	all	webservice	CM option
Tuning Manager - Agent REST Web Service	Y	Y	N
Tuning Manager - Agent REST Application Service	Y	Y	N
Collection Manager and Agent services	Y	N	Y

Legend:

Y: Checks whether the service is running.

N: Does not check whether the service is running.

For the `htmchgjdk` command:

This command displays the JDK used by Tuning Manager Agent REST API Component.

For the `htmhschgmem` command:

This command displays the value set for the maximum memory size that is used by Tuning Manager - Agent REST Application Service in megabytes.

stop

Stops the services according to the option specified for the `htmsrv` command. The following table describes the correspondence between the specified option and the services to be stopped.

Table 5-105 Correspondence between the specified option and the services to be stopped

Service	Specified Option		
	all	webservice	CM option
Tuning Manager - Agent REST Web Service	Y	Y	N
Tuning Manager - Agent REST Application Service	Y	Y	N
Collection Manager and Agent services	Y	N	Y

Legend

Y: The service stops.

N: The service does not stop.

-syntax

Specifies that the only processing to be performed is to make sure that the syntax of an alarm definition file is correct.

-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 from 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.

-table *name-of-copy-source-alarm-table*

Specifies a name for the alarm table at the copy source.

You can use from 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.

-target *alarm-application-status*

Specify this option if you want to apply the alarm information to an agent only for services whose status is `Failed` (failed to be applied), or only for services whose status is `Uncertain` (status unknown). For the status for applying the alarm, specify the status (`Failed` or `Uncertain`) in which the alarm information will be be applied to the agent.

-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.

-time *collection-time-in-seconds*

Specify the collection time in seconds.

You can specify single-byte numeric characters from 1 to 3600. The default value is 300 (seconds).

-to *directory-for-storing-data-after-format-conversion*

Specify the directory that stores data after format conversion. If you omit this option, The converted data is stored in the Store directory. If you specify the `-from` option, be sure to also specify the `-to` option.

Specify the absolute path to the directory. The length of the path is between 1 and 80 bytes.

You can use single-byte alphanumeric characters, symbols, or spaces to specify the directory. You cannot use the following characters:

; , * ? ' " < > |

If the path contains a space character, enclose the space character with double quotation marks (").

Note that you cannot specify the following:

- Symbolic links
- Network drives
- Network directories
- Directory that stores the migrated Hybrid Store that will be used

Note

If the `-to` option is specified, the retention period of the performance data and settings of the output destination path are not inherited. Make sure to configure the settings again.

-u

Sets up the connection-target Tuning Manager server at the local host. This argument can be executed on the Tuning Manager server host.

-u *update-contents-file-name*

Specifies the path of the file that contains the update contents.

Note the following points when specifying the file that contains the update content:

- In UNIX, file names that include single-byte spaces must be enclosed in double quotation marks ("), and symbols must be escaped as necessary.
- Specify a path of from 1 to 255 bytes that points to a file that exists. Wildcard characters are not permitted.
- You can specify absolute or relative file path names. In the case of a relative file path, specify the path from the current directory at the time of command execution.

In the file that contains the update content, specify the section names, label names, and values to be updated using the format shown below. You can specify multiple setting values in the same file, but only the ones that need to be updated should be specified.

Table 5-106 Format for specifying the update contents

Format	Explanation
[section-name]	Specify up to 79 bytes of single-byte alphanumeric characters and single-byte spaces, including the square brackets ([]).
label-name=value	Specify the label name and value as follows. White spaces before and after the equals sign (=) are ignored. • label-name Specify up to 79 bytes of single-byte alphanumeric characters, single-byte spaces, and underscores (_). • value Specify a value to be set that does not exceed 511 bytes.

Note

- The same section name cannot appear more than once in a file. If you want to specify multiple labels from the same section, list the labels within a single section.
- Lines cannot exceed 592 bytes. If a line exceeds 592 bytes, the 593rd and subsequent bytes are treated as part of the next line.
- The following types of lines are ignored:
  - Sections or lines that do not follow the above format
  - Lines that begin with a `#`, `;`, or single-byte space
  - Empty lines

-validity

Specify the number of days during which the self-signed certificate is valid. If this option is omitted, the valid period is set to 3,650 days.

-xl

Specify this argument to output the XML trace log. If you omit this argument, the XML trace log is not output.

-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.

-y|-n

Table 5-107 Action that Results When You Specify -y or -n on page 5-211 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 5-107 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.

Operation	Action that Results From Each Specification		
	-y	-n	Omitted
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.

Notes on specifying the host or lhost option with the jpcctrl command

The following shows how to specify the `host` and `lhost` options when executing `jpcctrl` commands such as `jpcctrl backup` and `jpcctrl dump`, and shows the range of hosts to which the option applies.

When executing `jpcctrl` on a Tuning Manager server host

When you execute a `jpcctrl` command on a Tuning Manager server host, if Tuning Manager server is running in a logical host environment, you must specify the logical host in the `lhost` option. For example, for the system configuration shown in the figure below, specify `lhost=C` to execute the `jpcctrl` command on logical host C. If you omit the `lhost` option, the command will be executed on physical host A.

To apply the `jpcctrl` command to a service on a specific host, specify the `host` option. For example, to apply the command to host D in the system configuration shown below, specify `host=D lhost=C`.

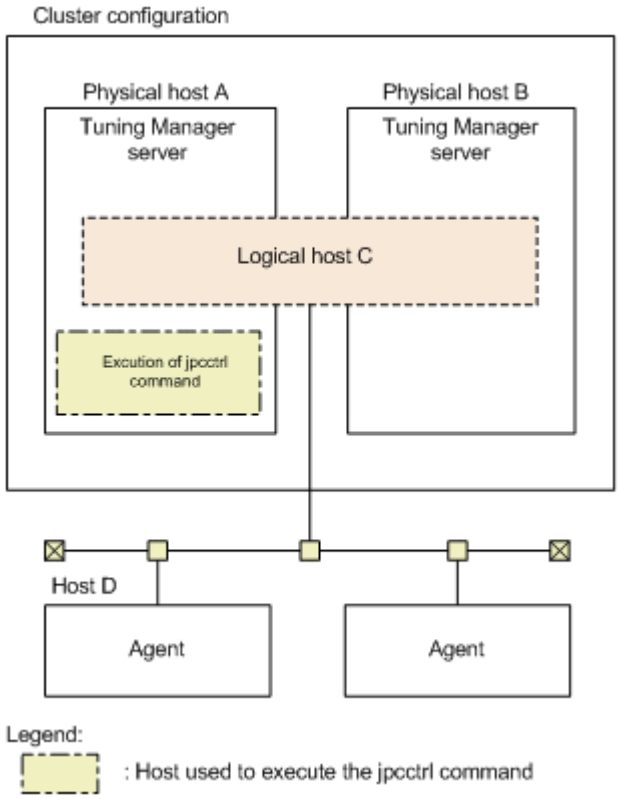


Figure 5-6 Executing the jpcctrl command on a Tuning Manager server host

When executing `jpcctrl` on an Agent host

When you execute a `jpcctrl` command on an Agent host, if Agent is running in a logical host environment, you must specify the logical host in the `lhost` option. For example, for the system configuration shown in the figure below, specify `lhost=C` to execute the `jpcctrl` command on logical host C.

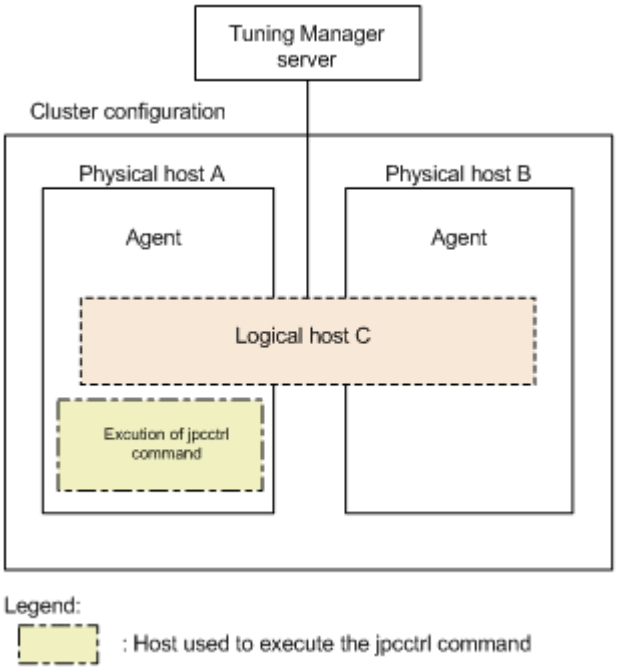


Figure 5-7 Executing the jpcctrl command on an Agent host

6

Command for Executing Tuning Manager API

This chapter describes the command for executing Tuning Manager API and the syntax of the command.

The coding format and syntax of the command for executing Tuning Manager API are the same in Windows and in Linux. In Linux, however, execute the command from a control terminal.

Settings required for executing the command

Java environment settings

To use the command for executing the Tuning Manager API, you must configure a Java environment. The prerequisite for configuring the Java environment of the command for executing Tuning Manager API is that the version of Java supported by Device Manager has been installed on the machine that will execute the command. In addition, specify the appropriate JRE corresponding to the execution environment of the command for executing Tuning Manager API.

Use either of the following methods to specify the JRE:

- Specify a JRE by using the `HTMREST_CLI_JRE_PATH` environment variable (recommended)

  The JRE[#1] that is included in the Hitachi Command Suite product, or the JRE downloaded from the Oracle website.

- Specify a JRE by using the `PATH` environment variable[#2]

  Specify the JRE that is downloaded from the Oracle website.

#1

If you use SSL for connections, do not specify the JRE that is included in the Hitachi Command Suite product.

If you specify the JRE that is included in the Hitachi Command Suite product, the message below is output. If the message is output, specify the JRE that is downloaded from the Oracle website.

```
Connection error (detailed information:
java.net.SocketException: java.lang.ClassNotFoundException:
com.hitachi.truenorth.HiCommand.Base.Common.HBaseSSLSocketFactory
).
```

#2

Note the following when using the environment variable `PATH` to specify the path of the JRE:

- Operations of other applications that use Java might be affected.
- In an environment in which the JRE is automatically updated, the JRE version might unexpectedly be updated to a version not supported by the Device Manager.

Tip: The JRE included in the Hitachi Command Suite is stored in the following location.

- In Windows:
  Hitachi-Command-Suite-installation-folder`\Base64\uCPSB\jdk\jre\bin`
- In Linux:
  Hitachi-Command-Suite-installation-directory`/Base64/uCPSB/jdk/jre/bin`

Setting SSL

If the Tuning Manager server and Device Manager are installed on the same host, the command used for executing Tuning Manager API can encrypt communication data if you set SSL for the HBase 64 Storage Mgmt Web Service.

Note

If the Tuning Manager server and Device Manager are installed on separate hosts, you cannot encrypt communication data of the command used for executing Tuning Manager API.

1. Set SSL for the HBase 64 Storage Mgmt Web Service of the host where the Tuning Manager server and Device Manager are installed.

   For details on how to set SSL, see the section Configuring an SSL server (Common Component) in the *Hitachi Command Suite Administrator Guide*.

2. Import the server certificate into the following truststore of the host where the Tuning Manager server and Device Manager are installed:

   In Windows:

   The following is a setting example for when the JRE that is downloaded from the Oracle website is installed in the folder `C:\Program Files\Java\jdk1.8.0`:

   `C:\Program Files\Java\jdk1.8.0\jre\bin\keytool.exe -import -alias` *`alias`* `-trustcacerts -file` *`certificate`* `-keystore` *`truststore-file`* `-storepass` *`access-password-to-the-truststore`*

   In Linux:

   The following is a setting example for when the JRE that is downloaded from the Oracle website is installed in the directory `/usr/Java/jdk1.8.0`:

   `/usr/Java/jdk1.8.0/bin/keytool -import -alias` *`alias`* `-trustcacerts -file` *`certificate`* `-keystore` *`truststore-file`* `-storepass` *`access-password-to-the-truststore`*

   - `alias`: Specify the name used to identify the certificate in the truststore.

     If there are two or more server certificates, specify an alias name which is not used in the truststore.
   - `file`: Specify the certificate file.
   - `keystore`: Specify the truststore file path of the import destination.

3. Set the path of the truststore file for the environment variable `HTMREST_CLI_CERTS_PATH`.

   The following are the paths of the truststore file:

   In Windows:

   Hitachi-Command-Suite-installation-folder`\DeviceManager\HiCommandServer\tools\htmrest\HtmRestCerts`

   In Linux:

Hitachi-Command-Suite-installation-directory`/HiCommandServer/tools/htmrest/HtmRestCerts`

For details on the environment variable of the JRE, see Java environment settings on page 6-2.

Prerequisites for executing the command

The prerequisites for executing the command are as follows:

- You execute the command on a host on which Device Manager is installed.
- The conditions for executing the Tuning Manager API are met.
  For details on the conditions for executing Tuning Manager API, see the *Hitachi Command Suite Tuning Manager API Reference Guide*.
- A Java environment is configured on the host on which Device Manager is installed.
  For details on how to configure a Java environment, see "Java environment settings on page 6-2".

htmrest

Format

```
htmrest       HTTP-method URI-of-the-Tuning-Manager-API-to-be-executed
                -u | --user user-ID
                -p | --password password
                [ -b | --body path-of-the-request-file ]
                [ --connect-timeout timeout-value-for-the-processing-that-connects-to-the-Tuning-Manager-API ]
                [ --read-timeout timeout-value-for-the-processing-that-reads-data-obtained-from-the-Tuning-Manager-API ]
```

Function

From a host on which Device Manager is installed, execute the command to operate the Alert function or to obtain performance data by using Tuning Manager API. The execution result is output to the standard output.

No permission is necessary.

Locating Storage Directories

- In Windows:
  Hitachi-Command-Suite-installation-folder`\DeviceManager\HiCommandServer\tools\htmrest\`
- In Linux:

Hitachi-Command-Suite-installation-directory`/HiCommandServer/tools/htmrest/`

Options

The table below lists the attribute options of the `htmrest` command.

Table 6-1 Attribute options of the htmrest command

Option	Required/ optional	Description
HTTP-method	Required	Specify one of the HTTP methods (`GET, POST, PUT, and DELETE`).
URL-of-the-Tuning-Manager-API-to-be-executed	Required	Specify the URL of the API to be executed.
`-u | --user` *user-ID*	Required	Specify the user ID for logging in to Hitachi Command Suite.
`-p | --password` *password*	Required	Specify the password for logging in to Hitachi Command Suite.
`-b | --body` *path-of-the-request-file*	Required when the POST or PUT method is used.	Specify the path of the file in which the information to be specified for the request body of the Tuning Manager API is recorded. *Note:* ◦ The information recorded in the file must be in the JSON format. ◦ `UTF-8` is the only character encoding that can be used in the file. ◦ The following are the newline characters that can be used in the file: In Windows: `CR+LF` In Linux: `LF` ◦ Specify either the absolute path or the relevant path from the directory where the command is to be executed.
`--connect-timeout` *timeout-value-for-the-processing-that-connects-to-the-Tuning-Manager-API*	Optional	Specify the timeout value (in seconds) for the processing that connects to the Tuning Manager API. You can specify a value in the range from `0` to `1000000`. • If the value is omitted: 300 seconds • If `0` is specified: The processing does not time out.
`--read-timeout` *timeout-value-for-the-processing-that-reads-data-obtained-from-the-Tuning-Manager-API*	Optional	Specify the timeout value (in seconds) for the processing that reads data obtained from the Tuning Manager API. You can specify a value in the range from `0` to `1000000`. • If the value is omitted: 3,600 seconds

Option	Required/ optional	Description
		• If 0 is specified: The processing does not time out.

Notes

- This command is not executed by using the absolute path. Navigate to the directory that contains the command, and then execute the command by using the relative path.
- Concurrent execution of this command is possible.
- For errors that might occur when using the command to execute Tuning Manager API, check the response of the API.

Return Values

Table 6-2 Return values of the htmrest command

Return Values	Meaning
0	The status code when functions of the Tuning Manager API are executed is in the range from 200 to 299.
1	The value specified for the option is invalid.
2	Could not access the file specified for the option.
3	Could not convert the file specified for the option.
4	Could not access the Tuning Manager API.
5	Memory is insufficient.
50	The status code when functions of the Tuning Manager API are executed is not in the range from 200 to 299.
99	An unexpected error occurred.

Usage Example (when referencing alert definition information)

```
htmrest.bat GET http://server_1:22015/DeviceManagerWebService/
analytics/v1/objects/alert-defs -u system -p manager
```

Output Example (when referencing alert definition information)

```
200
{"data":[{"alertDefName":"AlertVSPG1000_01"},
{"alertDefName":"AlertVSPG1000_02"},
{"alertDefName":"AlertVSPG1000_03"},{"alertDefName":"AlertUSPV_01"}]}
```

The API status code is output to the first line of the output result of the command. The API response body is output to the second line of the output result of the command.

A

Examples of using commands

After using a relevant Tuning Manager CLI report command to save report information in CSV format, use the `htm-csv-convert` command to customize the CSV output to suit your requirements.

- Use the `jpcrpt command` in these cases:

-- You want real-time or historical reporting on storage resources.

-- You want performance metrics in a granularity finer than hourly intervals.

-- You want more control over data output, for example, specific report columns and filter conditions.

- Use the `htm`-xxx CLI commands for historical metrics at hourly intervals or larger. You normally use the Main Console for performance monitoring and when you want the same reports for custom reporting.

- The `htm-csv-convert` command converts exported CSV files to a format that can easily serve as source data for graphs in any common spreadsheet application.

For details about using the `htm-csv-convert` command, see the *Hitachi Tuning Manager Agent Administration Guide*.

Note - When the number of data columns is larger than 200, you must specify the `-column_limit` option to place all of the information into one file. Without this option, the conversion result is output to multiple files. Values for this option range from 1 to 2147483647. You can omit this property if the `columnLimit` property is changed in the `htmCsvConvert.properties` file.

Customizing the CSV output of historical reports

You can generate historical reports using the jpcrpt and htm-csv-convert commands and customize the CSV output file to your requirements.

Example 1: Extract 24-hour IOPS report for front-end ports

Sample XML input

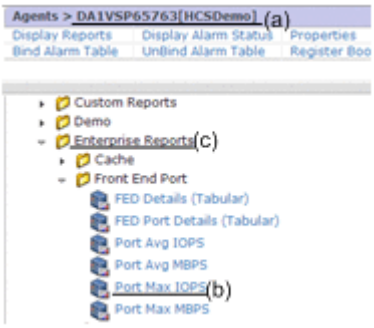


Figure A-1 Example of the correspondence between the information in the report window and the settings of the parameter file (window)

```
<!DOCTYPE pr-cli-parameters SYSTEM "rpt_params.dtd">
<pr-cli-parameters ver="0100">
  <launch-report>                                          (a)
    <agent>DA1VSP65763[HCSDemo]</agent>
    <report-definition name="Port Max IOPS" parent-folder="/Enterprise Reports/Front End Port">
      <launch-options>          (b)                  (c)
        <indication-settings maximum-number-of-records="300000">
          <report-interval>HOUR</report-interval>
          <start-time>03 25 2014 15:00</start-time>
          <end-time>03 26 2014 20:00</end-time>
        </indication-settings>
      </launch-options>
    </report-definition>
  </launch-report>
</pr-cli-parameters>
```

Figure A-2 Example of the correspondence between the information in the report window and the settings of the parameter file (the parameter file for the jpcrpt command)

Procedure

1. Run the `jpcrpt` command to generate a CSV file.

   Example of the command:

   ```
   jpcrpt -o abc.csv pmiops.xml
   ```

   Example of output:

   ```
   jpcrpt connected to localhost at 03 27 2014 01:24:25.191
   result OK : /Enterprise Reports/Front End Port/Port Max
   IOPS@DA1VSP65763[HCSDemo]
   jpcrpt disconnected at 03 27 2014 01:24:26.510
   ```

Port Number	Date and Time	Port Name	Max I/O /sec	Avg I/O /sec
0	03 25 2014 15:00:00	CL1-A	38	10.433333
1	03 25 2014 15:00:00	CL1-B	44	5.483333
112	03 25 2014 15:00:00	CL8-A	0	0
113	03 25 2014 15:00:00	CL8-B	0	0
114	03 25 2014 15:00:00	CL8-C	0	0
115	03 25 2014 15:00:00	CL8-D	0	0
16	03 25 2014 15:00:00	CL2-A	51	13

Figure A-3 Original file (24-hour IOPS report for front-end ports)

2. Convert the CSV file to the desired output format.

   Example of the command:

   ```
   htm-csv-convert -i abc.csv -o sortsbc.csv -dc 2 -kc 3 -vc 4
   ```

   Example of output:

   ```
   KATN12051-I The command htm-csv-convert started.
   KATN12084-I The command htm-csv-convert ended. (output file
   path name = sortsbc.csv)
   ```

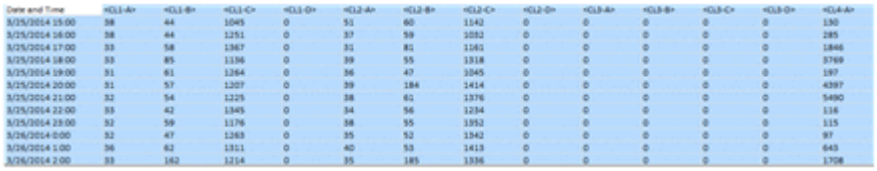


Figure A-4 After running the htm-csv-convert command (24-hour IOPS report for front-end ports)

Example 2: Extract write cache pending usage % information for the enterprise storage system

Sample XML input

```
<!DOCTYPE pr-cli-parameters SYSTEM "rpt_params.dtd">
<pr-cli-parameters ver="0100">
  <launch-report>
    <agent>DAIVSP65763[HCSDemo]</agent>
    <report-definition name="Max Write Pending Usage %" parent-folder="/Enterprise Reports/Cache">
      <launch-options>
        <indication-settings maximum-number-of-records="300000">
          <report-interval>HOUR</report-interval>
          <start-time>03 20 2014 06:00</start-time>
          <end-time>03 27 2014 06:00</end-time>
        </indication-settings>
      </launch-options>
    </report-definition>
  </launch-report>
</pr-cli-parameters>
```

Figure A-5 Parameter file settings (write cache pending usage % information for the enterprise storage system)

Procedure

1. Run the `jpcrpt` command to generate a CSV file.

   Example of the command:

   ```
   jpcrpt -o cwpweekly.csv maxcwp.xml
   ```

   Example of output:

```
jpcrpt connected to localhost at 03 27 2014 06:14:28.850
result OK : /Enterprise Reports/Cache/Max Write Pending Usage
%@DA1VSP65763[HCSDemo]
jpcrpt disconnected at 03 27 2014 06:14:30.101
```

CLPR Number	Date and Time	Max Cache Write Pending Usage %
0	03 20 2014 06:00:00	34.68667
0	03 20 2014 07:00:00	34.68667
0	03 20 2014 08:00:00	34.68667
0	03 20 2014 09:00:00	34.68667
0	03 20 2014 10:00:00	36.61486

Figure A-6 Original file (write cache pending usage % information for the enterprise storage system)

2. Convert the CSV file to the desired output format.

   Example of the command:

   ```
   htm-csv-convert -i cwpweekly.csv -o cpwwk.csv -dc 2 -kc 1 -vc
   3
   ```

   Example of output:

   ```
   KATN12051-I The command htm-csv-convert started.
   KATN12084-I The command htm-csv-convert ended. (output file
   path name = cpwwk.csv)
   ```

Date and Time	<0>
3/20/2014 6:00	34.68667
3/20/2014 7:00	34.68667
3/20/2014 8:00	34.68667
3/20/2014 9:00	34.68667
3/20/2014 10:00	36.61486
3/20/2014 11:00	34.68667

Figure A-7 After running the htm-csv-convert command (write cache pending usage % information for the enterprise storage system)

Example 3: Extract front-end port name, max IOPS, and max megabytes/second by hour of the day for 24 hours

Sample XML input

```
<!DOCTYPE pr-cli-parameters SYSTEM "rpt_params.dtd">
<pr-cli-parameters ver="0100">
  <launch-report>
    <agent>DA1VSP65763[HCSDemo]</agent>
    <report-definition name="Port Max MBPS" parent-folder="/Enterprise Reports/Front End Port">
      <launch-options>
        <indication-settings maximum-number-of-records="300000">
          <report-interval>HOUR</report-interval>
          <start-time>03 25 2014 15:00</start-time>
          <end-time>03 26 2014 20:00</end-time>
        </indication-settings>
      </launch-options>
    </report-definition>
  </launch-report>
</pr-cli-parameters>
```

Figure A-8 Parameter file settings (front-end port name, max IOPS, and max megabytes/second by hour of the day for 24 hours)

Procedure

1. Run the `jpcrpt` command to generate a CSV file.

   Example of the command:

   ```
   jpcrpt -o pmmbps.csv pmmbs.xml
   ```

   Example of output:

   ```
   jpcrpt connected to localhost at 03 27 2014 22:26:34.912
   result OK : /Enterprise Reports/Front End Port/Port Max
   MBPS@DA1VSP65763[HCSDemo]
   jpcrpt disconnected at 03 27 2014 22:26:36.229
   ```

Port Number	Date and Time	Port Name	Max IOPS	Max MBPS	Avg MBPS
0	03 25 2014 15:00:00	CL1-A	38	0.20605469	0.0566569
1	03 25 2014 15:00:00	CL1-B	44	0.5	0.049332682
112	03 25 2014 15:00:00	CL8-A	0	0	0
113	03 25 2014 15:00:00	CL8-B	0	0	0
114	03 25 2014 15:00:00	CL8-C	0	0	0
115	03 25 2014 15:00:00	CL8-D	0	0	0
16	03 25 2014 15:00:00	CL2-A	51	0.41796875	0.04638672

Figure A-9 Original file (front-end port name, max IOPS, and max megabytes/second by hour of the day for 24 hours)

2. Convert the CSV file to the desired output format.

   Example of the command:

   ```
   htm-csv-convert -i pmmbps.csv -o pmmbpsweekly.csv -dc 2 -kc 3
   -vc 4,5
   ```

   Example of output:

   ```
   KATN12051-I The command htm-csv-convert started.
   KATN12084-I The command htm-csv-convert ended. (output file
   path name = pmmbpsweekly.csv)
   ```

Date and Time	<CL1-A>Max IOPS	<CL1-A>Max MBPS	<CL1-B>Max IOPS	<CL1-B>Max MBPS	<CL1-C>Max IOPS	<CL1-C>Max MBPS
3/25/2014 15:00	38	0.20605469	44	0.5	1045	5.625
3/25/2014 16:00	38	0.18945312	44	0.49609375	1251	6.4228516
3/25/2014 17:00	33	0.18164062	58	0.51953125	1367	6.5546875
3/25/2014 18:00	33	0.16601562	85	1.0078125	1136	7.8222656
3/25/2014 19:00	31	0.3828125	61	0.76171875	1264	7.7070312
3/25/2014 20:00	31	0.42773438	57	1.2236328	1207	6.0634766
3/25/2014 21:00	32	0.16308594	54	0.51171875	1225	8.7109375

Figure A-10 After running the htm-csv-convert command (front-end port name, max IOPS, and max megabytes/second by hour of the day for 24 hours)

Example 4: Extract storage system total IOPS every hour for a week

Sample XML input

```
<!DOCTYPE pr-cli-parameters SYSTEM "rpt_params.dtd">
<pr-cli-parameters ver="0100">
  <launch-report>
    <agent>DA1VSP65763[HCSDemo]</agent>
    <report-definition name="Total IOPS" parent-folder="/Enterprise Reports/Subsystem Metrics">
      <launch-options>
        <indication-settings maximum-number-of-records="300000">
          <report-interval>HOUR</report-interval>
          <start-time>03 21 2014 01:00</start-time>
          <end-time>03 28 2014 01:00</end-time>
        </indication-settings>
      </launch-options>
    </report-definition>
  </launch-report>
</pr-cli-parameters>
```

Figure A-11 Parameter file settings (storage system total IOPS every hour for a week)

Procedure

1. Run the `jpcrpt` command to generate a CSV file.

   Example of the command:

   ```
   jpcrpt -o totiops.csv totiops.xml
   ```

   Example of output:

   ```
   jpcrpt connected to localhost at 03 28 2014 02:02:41.007
   result OK : /Enterprise Reports/Subsystem Metrics/Total
   IOPS@DA1VSP65763[HCSDemo]
   jpcrpt disconnected at 03 28 2014 02:02:42.368
   ```

Date and Time	Read I/O /sec	Write I/O /sec
03 21 2014 01:00:00	767	878
03 21 2014 02:00:00	737	968
03 21 2014 03:00:00	621	1046
03 21 2014 04:00:00	700	982
03 21 2014 05:00:00	700	940
03 21 2014 06:00:00	732	986

Figure A-12 Original file (storage system total IOPS every hour for a week)

Customizing the CSV output of real-time reports

You can generate real-time reports using the jpcrpt and `htm-csv-convert` commands and customize the CSV output file.

For details about the `jpcrpt` command, see jpcrpt on page 4-74.

Example 1: Extract port transfer information for 5 iterations at 10 second intervals

Sample XML input

Figure A-13 Example of the correspondence between the information in the report window and the settings of the parameter file (window)

```
<!DOCTYPE pr-cli-parameters SYSTEM "rpt_params.dtd">
<pr-cli-parameters ver="0200">
  <launch-report>                                    (a)
    <agent>DA1VSP65763[HCSDemo]</agent>
    <report-definition name="Port Transfer" parent-folder="/Enterprise Reports/Real Time">
                        (b)                                (c)
      <launch-options>
        <realtime-indication-settings indicate-delta-value="TRUE">
          <display-by-ranking field="NONE" />
        </realtime-indication-settings>
      </launch-options>
    </report-definition>
  </launch-report>
</pr-cli-parameters>
```

Figure A-14 Example of the correspondence between the information in the report window and the settings of the parameter file (the parameter file for the jpcrpt command)

Procedure

1. Run the `jpcrpt` command to generate a CSV file.

   Example of the command:

   ```
   jpcrpt -o rt.csv -rc 5 -ri 10 -dateformat pattern-ddMMyyyy
   realtime.xml
   ```

   Example of output:

   ```
   jpcrpt connected to localhost at 28 03 2014 05:09:21.807
   KAVJK8003-Q Are you sure you want to overwrite the "C:\Sush
   \rt.csv" file?[y/n]y
   result OK : /Enterprise Reports/Real Time/Port
   Transfer@DA1VSP65763[HCSDemo]
   jpcrpt disconnected at 28 03 2014 05:10:04.550
   ```

Record Time	Port Number	Port Name	Max Xfer /sec	Min Xfer /sec	Avg I/O /sec	Read I/O /sec	Write I/O /sec	Read Mbytes	Write Mbyte
28 03 2014 05:09:24	0	CL1-A	0.16210938	0	9	0	0	0	0
28 03 2014 05:09:24	1	CL1-B	0.0546875	0	3	0	0	0	0
28 03 2014 05:09:24	2	CL1-C	32.76172	0.69628906	368	0	0	0	0
28 03 2014 05:09:24	3	CL1-D	0	0	0	0	0	0	0
28 03 2014 05:09:24	16	CL2-A	0.048828125	0	14	0	0	0	0
28 03 2014 05:09:24	17	CL2-B	0.13378906	0	6	0	0	0	0
28 03 2014 05:09:24	18	CL2-C	0.48242188	0	23	0	0	0	0
28 03 2014 05:09:24	19	CL2-D	0	0	0	0	0	0	0
28 03 2014 05:09:24	32	CL3-A	0	0	0	0	0	0	0
28 03 2014 05:09:24	33	CL3-B	0	0	0	0	0	0	0
28 03 2014 05:09:24	34	CL3-C	0	0	0	0	0	0	0
28 03 2014 05:09:24	35	CL3-D	0	0	0	0	0	0	0

Figure A-15 Original file (port transfer information for 5 iterations at 10 second intervals)

2. Convert the CSV file to the desired output format.

   Example of the command:

   ```
   htm-csv-convert -i rt.csv -o realtimesort.csv -dc 1 -kc 3 -vc
   4 --date_format ddMMyyyy
   ```

   Example of output:

   ```
   KATN12051-I The command htm-csv-convert started.
   ```

Record Time	<CL1-A>	<CL1-B>	<CL1-C>	<CL1-D>	<CL2-A>
28-03-2014 05:09:24	0.16210938	0.0546875	32.76172	0	0.048828125
28-03-2014 05:09:34	0.16210938	0.0546875	32.76172	0	0.048828125
28-03-2014 05:09:44	0.16210938	0.0546875	32.76172	0	0.048828125
28-03-2014 05:09:54	0.16210938	0.0546875	32.76172	0	0.048828125
28-03-2014 05:10:04	0.16210938	0.0546875	32.76172	0	0.048828125

Figure A-16 After running the htm-csv-convert command (port transfer information for 5 iterations at 10 second intervals)

Example 2: Extract LDEV I/O rate for 30 iterations at 10-second intervals

Sample XML input

```
<!DOCTYPE pr-cli-parameters SYSTEM "rpt_params.dtd">
<pr-cli-parameters ver="0200">
  <launch-report>
    <agent>DA1VSP65763[HCSDemo]</agent>
    <report-definition name="LDEV IORATE" parent-folder="/Enterprise Reports/Real Time">
      <launch-options>
        <realtime-indication-settings indicate-delta-value="TRUE">
          <display-by-ranking field="NONE" />
        </realtime-indication-settings>
      </launch-options>
    </report-definition>
  </launch-report>
</pr-cli-parameters>
```

Figure A-17 Parameter file settings (LDEV I/O rate for 30 iterations at 10-second intervals)

Procedure

1. Run the `jpcrpt` command to generate a CSV file.

   Example of the command:

```
jpcrpt -o ldeviort.csv -rc 30 -ri 10 -dateformat pattern-
ddMMyyyy ldeviorealtime.xml
```

Example of output:

```
jpcrpt connected to localhost at 28 03 2014 07:52:44.142
```

Record Time	LDEV Number	Read I/O /sec	Write I/O /sec
31 03 2014 14:04:47	00:00:8A	0	0
31 03 2014 14:04:47	00:00:8B	0	0
31 03 2014 14:04:47	00:00:8C	0	0
31 03 2014 14:04:57	00:00:8A	0	0
31 03 2014 14:04:57	00:00:8B	0	1.7
31 03 2014 14:04:57	00:00:8C	4.1	13.4
31 03 2014 14:05:07	00:00:8A	0	0
31 03 2014 14:05:07	00:00:8B	0	1
31 03 2014 14:05:07	00:00:8C	0	3.8

Figure A-18 Original file (LDEV I/O rate for 30 iterations at 10-second intervals)

2. Convert the CSV file to the desired output format.

Example of the command:

```
htm-csv-convert -i ldeviort.csv -o rtldevio.csv -dc 1 -kc 2 -
vc 3,4 --date_format ddMMyyyy
```

Example of output:

```
KATN12051-I The command htm-csv-convert started.
KATN12084-I The command htm-csv-convert ended. (output file
path name = rtldevio.csv)
```

Record Time	<00:00:8A>Read I/O /sec	<00:00:8A>Write I/O /sec	<00:00:8B>Read I/O /sec	<00:00:8B>Write I/O /sec	<00:00:8C>Read I/O /sec	<00:00:8C>Write I/O /sec
31-03-2014 14:04:47	0	0	0	0	0	0
31-03-2014 14:04:57	0	0	0	1.7	4.1	13.4
31-03-2014 14:05:07	0	0	0	1	0	3.8
31-03-2014 14:05:17	0	0	0	0.4	0	4.2
31-03-2014 14:05:27	0	0	0	0	0	2.9
31-03-2014 14:05:37	0	0	0	0	0	0

Figure A-19 After running the htm-csv-convert command (LDEV I/O rate for 30 iterations at 10-second intervals)

Example 3: Extract the MP busy rate for 10 iterations at 10 second intervals

Sample XML input

```
<!DOCTYPE pr-cli-parameters SYSTEM "rpt_params.dtd">
<pr-cli-parameters ver="0200">
  <launch-report>
    <agent>DA1VSP65763[HCSDemo]</agent>
    <report-definition name="MP Busy" parent-folder="/Enterprise Reports/Real Time">
      <launch-options>
        <realtime-indication-settings indicate-delta-value="TRUE">
          <display-by-ranking field="NONE" />
        </realtime-indication-settings>
      </launch-options>
    </report-definition>
  </launch-report>
</pr-cli-parameters>
```

Figure A-20 Parameter file settings (MP busy rate for 10 iterations at 10 second intervals)

Procedure

1. Run the `jpcrpt` command to generate a CSV file.

   Example of the command:

   ```
   jpcrpt -o mpbrt.csv -rc 10 -ri 10 -dateformat pattern-
   ddMMyyyy mpbusyrt.xml
   ```

   Example of output:

   ```
   jpcrpt connected to localhost at 31 03 2014 14:23:55.469
   result OK : /Enterprise Reports/Real Time/MP
   Busy@DA1VSP65763[HCSDemo]
   jpcrpt disconnected at 31 03 2014 14:25:26.115
   ```

Record Time	Adaptor ID	Processor ID	Processor Type	Processor Busy %
31 03 2014 14:24:05	MPB0	0	MP	3.4
31 03 2014 14:24:05	MPB0	1	MP	2.3
31 03 2014 14:24:05	MPB0	2	MP	1.9
31 03 2014 14:24:05	MPB0	3	MP	1.8
31 03 2014 14:24:05	MPB0	_Total	MPB	2.3
31 03 2014 14:24:05	MPB2	8	MP	12.9
31 03 2014 14:24:05	MPB2	9	MP	5.1
31 03 2014 14:24:05	MPB2	0A	MP	4.4
31 03 2014 14:24:05	MPB2	0B	MP	5.8
31 03 2014 14:24:05	MPB2	_Total	MPB	7.1
31 03 2014 14:24:15	MPB0	0	MP	2.5
31 03 2014 14:24:15	MPB0	1	MP	1.9
31 03 2014 14:24:15	MPB0	2	MP	2.1
31 03 2014 14:24:15	MPB0	3	MP	1.7
31 03 2014 14:24:15	MPB0	_Total	MPB	2.1
31 03 2014 14:24:15	MPB2	8	MP	13.9
31 03 2014 14:24:15	MPB2	9	MP	5.2
31 03 2014 14:24:15	MPB2	0A	MP	6.1
31 03 2014 14:24:15	MPB2	0B	MP	5.1
31 03 2014 14:24:15	MPB2	_Total	MPB	7.6

Figure A-21 Original file (MP busy rate for 10 iterations at 10 second intervals)

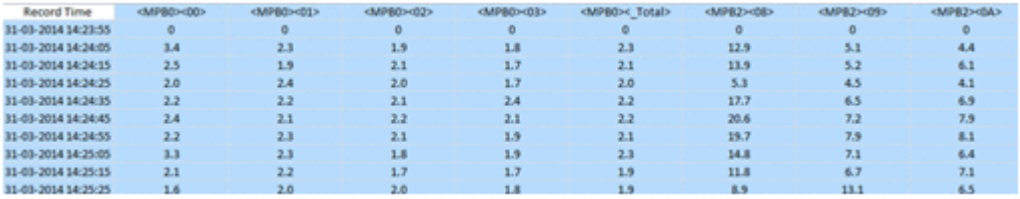
2. Convert the CSV file to the desired output format.

   Example of the command:

```
htm-csv-convert -i mpbrt.csv -o rtmpbusy.csv -dc 1 -kc 2,3 -
vc 5 --date_format ddMMyyyy
```

Example of output:

```
KATN12051-I The command htm-csv-convert started.
KATN12084-I The command htm-csv-convert ended. (output file
path name = rtmpbusy.csv)
```



Record Time	<MPB0><00>	<MPB0><01>	<MPB0><02>	<MPB0><03>	<MPB0><_Total>	<MPB2><08>	<MPB2><09>	<MPB2><0A>
31-03-2014 14:23:55	0	0	0	0	0	0	0	0
31-03-2014 14:24:05	3.4	2.3	1.9	1.8	2.3	12.9	5.1	4.4
31-03-2014 14:24:15	2.5	1.9	2.1	1.7	2.1	13.9	5.2	6.1
31-03-2014 14:24:25	2.0	2.4	2.0	1.7	2.0	5.3	4.5	4.1
31-03-2014 14:24:35	2.2	2.2	2.1	2.4	2.2	17.7	6.5	6.9
31-03-2014 14:24:45	2.4	2.1	2.2	2.1	2.2	20.6	7.2	7.9
31-03-2014 14:24:55	2.2	2.3	2.1	1.9	2.1	19.7	7.9	8.1
31-03-2014 14:25:05	3.3	2.3	1.8	1.9	2.3	14.8	7.1	6.4
31-03-2014 14:25:15	2.1	2.2	1.7	1.7	1.9	11.8	6.7	7.1
31-03-2014 14:25:25	1.6	2.0	2.0	1.8	1.9	8.9	13.1	6.5

Figure A-22 After running the htm-csv-convert command (MP busy rate for 10 iterations at 10 second intervals)

Customizing the CSV output of Main Console reports

You can generate Main Console reports using the Main Console commands and the `htm-csv-convert` command , and then customize the CSV output file.

Note - To obtain the subsystem information, you run the htm-subsystems command to get the information about monitored storage systems. You must the CLI syntax of the Main Console command and include mandatory parameters, such as SS (resource id), u, and w. The subsystem information includes the SS_xxx parameter, which is assigned to the each storage system as a resource ID.

Following is example output of the `htm-subsystems` command :

```
htm-subsystems -u system -w manager

"Date/Time","Resource ID","Subsystem","Type","Write Pending
Rate","Max Write Pending Rate","Cache Rate","Cache
Usage(MB)","Configured Capacity(MB)","Open-Allocated
Capacity(MB)","Open-Unallocated Capacity(MB)","Mainframe-
Unspecified Capacity(MB)","Number of LDEVs"

"2014-09-25 13:00","SS_50","Sil-47.71","VSP G1000","no data","no
data","no data","no
data","165065080.04","106650851.43","28819656.61","0.00","1800"

"2014-09-25 13:00","SS_7885","Sil-47.70","VSP
G1000","0%","0%","35%","76127.00","120474279.40","22241256.63","2
1085674.52","52053513.75","486"

"2014-09-25 13:00","SS_9684","HYPERLINK "mailto:VSP@IP-address"
VSP@IP-
address","VSP","4%","4%","42%","23408.00","79876152.85","52574228
.41","3150921.19","0.00","400"
```

```
"2014-09-25 13:00","SS_11144","HYPERLINK "mailto:AMS2100@IP-
address" AMS2100@IP-
address","AMS2100","0%","0%","100%","1392.00","1183255.00","68834
3.00","412992.00","0.00","114"
```

Example 1: Extract LDEV data related to the host groups in 1-minute intervals

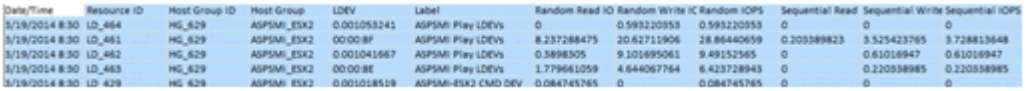
Procedure

1. Run the `htm-hostgroups` command to generate a CSV file.

   Example of the command:

   ```
   htm-hostgroups SS_num -u system -w Hitachi1 -hg ASPSMI_ESX4 -
   dt -s 2014/03/19/07/55 -e 2014/03/20/06/55 -o MINUTELY -dd C:
   \Sush\ -fp sush2
   ```

   Example of output:



Date/Time	Resource ID	Host Group ID	Host Group	LDEV	Label	Random Read IO	Random Write IO	Random IOPS	Sequential Read	Sequential Write	Sequential IOPS
3/19/2014 8:30	LD_464	HG_629	ASPSMI_ESX2	0.001053241	ASPSMI Play LDEVs	0	0.593220953	0.593220953	0	0	0
3/19/2014 8:30	LD_461	HG_629	ASPSMI_ESX2	00:00:8F	ASPSMI Play LDEVs	8.237288475	20.62711906	28.86440659	0.205389823	3.525423765	3.728813648
3/19/2014 8:30	LD_462	HG_629	ASPSMI_ESX2	0.001041667	ASPSMI Play LDEVs	0.3898305	9.101695061	9.49152565	0	0.61016947	0.61016947
3/19/2014 8:30	LD_463	HG_629	ASPSMI_ESX2	00:00:8E	ASPSMI Play LDEVs	1.779661059	4.644067764	6.423728943	0	0.220338985	0.220338985
3/19/2014 8:30	LD_429	HG_629	ASPSMI_ESX2	0.001018519	ASPSMI-ESX2 CMD DEV	0.084745765	0	0.084745765	0	0	0

Figure A-23 Original file (LDEV data related to the host groups in 1-minute intervals)

2. Convert the CSV file to the desired output format.

   Example of the command:

   ```
   htm-csv-convert -i 23hourMinuteASPSMIHG_LDEV.csv -o
   hgsort.csv -dc 1 -kc 4 -vc 17,18,19 --date_format yyyyMMdd
   ```

   Example of output:

   ```
   KATN12051-I The command htm-csv-convert started.
   KATN12066-W A duplicated key was detected in the specified
   key column. (option name = --key_column | -kc, specified
   value = 4)
   KATN12084-I The command htm-csv-convert ended. (output file
   path name = hgsort.csv)
   ```

Date/Time	<ASPSMI_ESX2>Read IOPS	<ASPSMI_ESX2>Write IOPS	<ASPSMI_ESX2>IOPS
3/19/2014 8:30	0.084745765	0	0.084745765
3/19/2014 8:31	0.083333336	0	0.083333336
3/19/2014 8:32	0.083333336	0	0.083333336
3/19/2014 8:33	0.083333336	0	0.083333336
3/19/2014 8:34	0.083333336	0	0.083333336

Figure A-24 After running the htm-csv-convert command (LDEV data related to the host groups in 1-minute intervals)

Example 2: Extract LDEV data for the last 24 hours related to host groups in 1-minute intervals

Procedure

1. Run the `htm-hostgroups` command to generate a CSV file.

Example of the command:

```
htm-hostgroups SS_num -u system -w Hitachi1 -s
2014/03/19/08/30 -e 2014/03/20/07/30 -o MINUTELY -dd C:\Sush\
-fp 23hourMinuteallhg
```

Example of output:

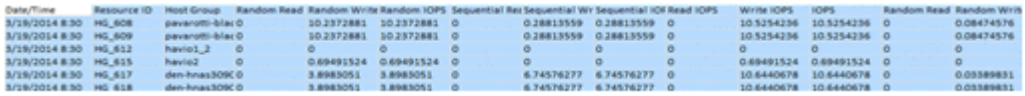


Figure A-25 Original file (LDEV data for the last 24 hours related to host groups in 1-minute intervals)

2. Convert the CSV file to the desired output format.

Example of the command:

```
htm-csv-convert -i 23hourMinuteallhg_HG.csv -o allhgsort.csv -
dc 1 -kc 3,22 -vc 10,11,12,19,20,21 --date_format yyyyMMdd --
column_limit 1000000
```

Example of output:

```
KATN12051-I The command htm-csv-convert started.
KATN12084-I The command htm-csv-convert ended. (output file
path name = allhgsort.csv)
```

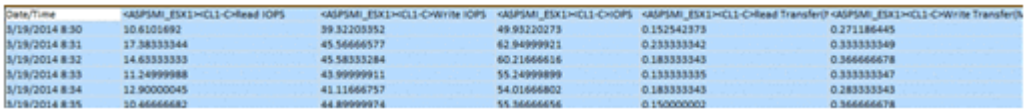


Figure A-26 After running the htm-csv-convert command (LDEV data for the last 24 hours related to host groups in 1-minute intervals)

Example 3: Extract microprocessor data hourly

Procedure

1. Run the `htm-mps` command to generate a CSV file.

Example of the command:

```
htm-mps SS_num -u system -w Hitachi1 -s 2014/04/01/00/00 -e
2014/04/02/10/00 -o HOURLY > mprocessors.csv
```

Example of output:

Date/Time	Resource ID	MP	MP Blade	Busy Rate	Max Busy Rate
4/1/2014 0:00	PRC_1517	0	MPB0	2%	3%
4/1/2014 0:00	PRC_1518	1	MPB0	2%	2%
4/1/2014 0:00	PRC_1519	2	MPB0	2%	3%
4/1/2014 0:00	PRC_1520	3	MPB0	2%	2%
4/1/2014 0:00	PRC_1521	8	MPB2	11%	21%
4/1/2014 0:00	PRC_1522	9	MPB2	6%	14%
4/1/2014 0:00	PRC_1523	0A	MPB2	6%	14%
4/1/2014 0:00	PRC_1524	0B	MPB2	6%	14%

Figure A-27 Original file (microprocessor data hourly)

2. Convert the CSV file to the desired output format.

   Example of the command:

   ```
   htm-csv-convert -i mprocessors.csv -o mprocconv -dc 1 -kc 4,3
   -vc 5 --date_format yyyyMMdd
   ```

   Example of output:

   ```
   KATN12051-I The command htm-csv-convert started.
   ```

Date/Time	<MPB0><00>	<MPB0><01>	<MPB0><02>	<MPB0><03>	<MPB2><08>	<MPB2><09>	<MPB2><0A>	<MPB2><0B>
4/1/2014 0:00	2%	2%	2%	2%	11%	6%	6%	6%
4/1/2014 1:00	2%	2%	2%	2%	11%	6%	6%	5%
4/1/2014 2:00	2%	2%	2%	2%	11%	6%	6%	6%
4/1/2014 3:00	2%	2%	2%	2%	11%	6%	6%	6%
4/1/2014 4:00	2%	2%	2%	2%	11%	6%	6%	5%
4/1/2014 5:00	4%	3%	3%	3%	11%	6%	6%	6%
4/1/2014 6:00	2%	2%	2%	2%	11%	6%	6%	5%
4/1/2014 7:00	2%	2%	2%	2%	11%	6%	6%	6%
4/1/2014 8:00	2%	2%	2%	2%	11%	6%	6%	6%
4/1/2014 9:00	2%	2%	2%	2%	11%	6%	6%	6%

Figure A-28 After running the htm-csv-convert command (microprocessor data hourly)

Example 4: Extract MP blade data hourly

Procedure

1. Run the `htm-mpbs` command to generate a CSV file.

   Example of the command:

   ```
   htm-mpbs SS_num -u system -w Hitachi1 -s 2014/04/01/14/00 -e
   2014/04/02/12/00 -o HOURLY --csv > mpblades.csv
   ```

   Example of output:

Date/Time	Resource ID	MP Blade	Busy Rate	Max Busy Ra
4/1/2014 14:00	PRC_1495	MPB0	2%	4%
4/1/2014 14:00	PRC_1496	MPB2	7%	15%
4/1/2014 15:00	PRC_1495	MPB0	2%	3%
4/1/2014 15:00	PRC_1496	MPB2	7%	14%
4/1/2014 16:00	PRC_1495	MPB0	2%	2%
4/1/2014 16:00	PRC_1496	MPB2	7%	16%
4/1/2014 17:00	PRC_1495	MPB0	2%	3%
4/1/2014 17:00	PRC_1496	MPB2	7%	16%
4/1/2014 18:00	PRC_1495	MPB0	2%	4%

Figure A-29 Original file (MP blade data hourly)

2. Convert the CSV file to the desired output format.

   Example of the command:

   ```
   htm-csv-convert -i mpblades.csv -o mpbladeconv -dc 1 -kc 3 -
   vc 5 --date_format yyyyMMdd
   ```

   Example of output:

   ```
   KATN12051-I The command htm-csv-convert started.
   KATN12084-I The command htm-csv-convert ended. (output file
   path name = mpbladeconv.csv)
   ```

Date/Time	<MPB0>	<MPB2>
4/1/2014 14:00	4%	15%
4/1/2014 15:00	3%	14%
4/1/2014 16:00	2%	16%
4/1/2014 17:00	3%	16%
4/1/2014 18:00	4%	16%
4/1/2014 19:00	3%	10%
4/1/2014 20:00	2%	15%
4/1/2014 21:00	3%	15%
4/1/2014 22:00	4%	17%
4/1/2014 23:00	3%	15%

Figure A-30 After running the htm-csv-convert command (MP blade data hourly)

Example 5: Extract port information

Procedure

1. Run the `htm-ports` command to generate a CSV file.

   Example of the command:

   ```
   htm-ports SS_num -u system -w Hitachi1 -s 2014/04/01/12 -e
   2014/04/02/12 --csv > ports.csv
   ```

   Example of output:

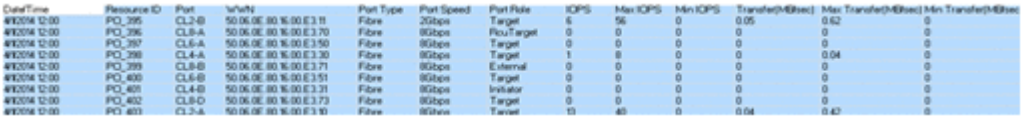


Figure A-31 Original file (port information)

2. Convert the CSV file to the desired output format.

   Example of the command:

   ```
   htm-csv-convert -i ports.csv -o portconv -dc 1 -kc 3 -vc 8 --
   date_format yyyyMMdd
   ```

   Example of output:

   ```
   KATN12051-I The command htm-csv-convert started.
   KATN12084-I The command htm-csv-convert ended. (output file
   path name = portconv.csv)
   ```

Date/Time	<CL1-A>	<CL1-B>	<CL1-C>	<CL1-D>	<CL2-A>	<CL2-B>	<CL2-C>	<CL2-D>	<CL3-A>
4/1/2014 12:00	10	5	1128	0	13	6	38	0	12
4/1/2014 13:00	10	5	1134	0	13	7	35	0	12
4/1/2014 14:00	9	5	1136	0	13	6	34	0	15
4/1/2014 15:00	10	5	1151	0	13	6	39	0	12
4/1/2014 16:00	10	6	1112	0	13	6	30	0	13
4/1/2014 17:00	10	5	1181	0	13	7	37	0	24
4/1/2014 18:00	10	5	1156	0	13	6	34	0	18
4/1/2014 19:00	10	5	1156	0	13	6	35	0	12
4/1/2014 20:00	11	5	1179	0	12	6	33	0	16
4/1/2014 21:00	11	5	1191	0	12	6	36	0	12
4/1/2014 22:00	11	5	1133	0	12	6	34	0	12

Figure A-32 After running the htm-csv-convert command (port information)

B

Version Compatibility Between the Program and Data Model

This appendix describes compatibility between the Agent, data model, and alarm table versions.

Version Compatibility Between the Program and Data Model

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.

Table B-1 Version Relationships Among Agents, Data Models, and Alarm Tables on page B-2 lists version relationships among Agents, data models, and alarm tables.

Table B-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	8.5	9.8	9.40
	8.4.1	9.6	9.40
	8.4	9.4	9.40
	8.2.1	9.2	9.00
	8.2	9.0	9.00
	8.1.4	9.0	8.80
	8.1.3	8.8	8.80
	8.1.2	8.8	8.60
	8.0 - 8.1.1	8.6	8.60
	7.5 - 7.6.1	8.4	8.10
	7.2 - 7.4.1	8.2	8.10
	7.1 - 7.1.1	8.0	8.10
	7.0	7.8	8.10
	6.4	7.6	8.10
	6.3	7.5	8.10
	6.2	7.4	8.10
	6.0 - 6.1	7.3	8.10
Agent for RAID Map	8.0 - 8.5	5.0	-
	6.0 - 7.6.1	4.1	-
Agent for Platform(Windows)	7.4.1 - 8.5	8.0	09.10
	7.4	8.0	09.10
		7.8	
	7.0 - 7.3.1	7.8	09.10

Agent Name	Agent Version	Data Model Version	Version of Alarm Table in Solution Set
	6.3 - 6.4	7.6	09.00
	6.0 - 6.2	7.4	8.50
Agent for Platform(UNIX)	7.0 - 8.5	7.8	09.10
	6.3 - 6.4	7.6	09.00
	6.0 - 6.2	7.4	8.50
Agent for SAN Switch	6.0 - 8.5	5.0	7.00
Agent for NAS	8.4.1 - 8.5	6.8	8.13
	8.2.1 - 8.4	6.6	8.13
	8.1.3 - 8.2	6.4	8.13
	8.0 - 8.1.2	6.4	8.00
	7.2 - 7.6	6.2	7.00
	6.0 - 7.1.1	6.0	7.00
Agent for Oracle	8.1.1 - 8.5	9.0	10.50
	8.1	8.0	10.01
	8.0	8.0	10.00
	7.4 - 7.6.1	8.0	10.00
		7.0	09.00
	6.3 - 7.1.1	7.0	09.00
	6.0 - 6.2	7.0	8.50
Agent for Microsoft SQL Server	6.3 - 8.5	6.0	09.00
	6.0 - 6.2	5.0	8.50
Agent for Microsoft Exchange Server	7.6 - 8.5	4.0	09.00
	6.3 - 7.5	3.0	09.00
	6.0 - 6.2	3.0	8.00
Agent for DB2	6.3 - 8.5	6.0	09.00
	6.2	6.0	8.50
	6.0 - 6.1	6.0	8.10

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.

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.

Figure B-1 Data Model Version Compatibility (When Displaying a Report)

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.

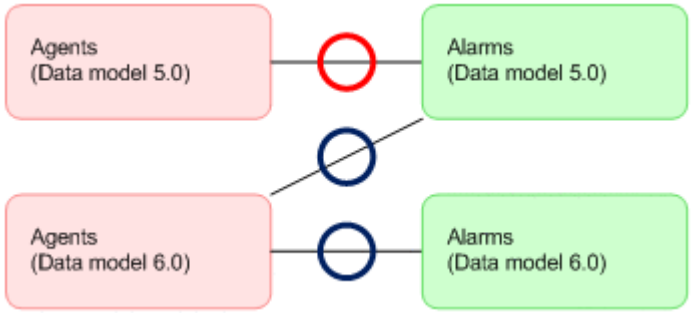


Figure B-2 Data Model Version Compatibility (When Binding an Alarm Table)

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.

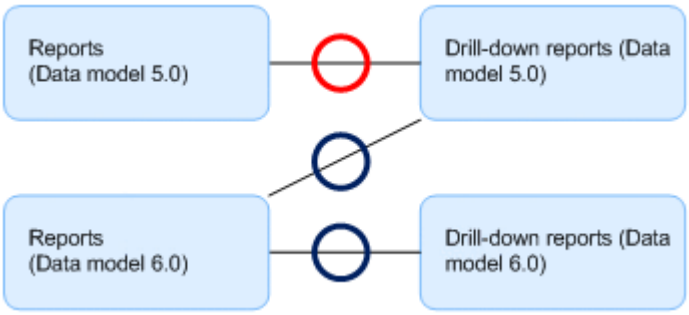


Figure B-3 Data Model Version Compatibility (When Associating a Drill-down Report with a Report)

C

Specifying a Service ID

This appendix describes service IDs.

Specifying a 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:

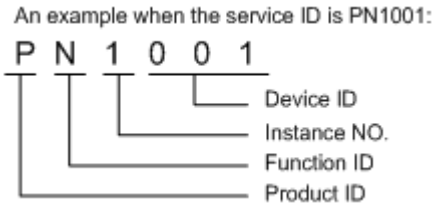


Figure C-1 Service ID Configuration

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 C-1 Product ID on page C-2.
- *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 C-2 Function IDs, Service Names, and Function Overview on page C-3.

- *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 series system. The device ID differs depending on the service.

Note: There is no device ID for the Performance Reporter service.

Table C-3 Service Name and Device ID on page C-3 lists the service names and the corresponding device IDs.

Table C-1 Product ID

Product ID	Description
P	Product ID of the Tuning Manager server
0	Product ID of a health check agent

Product ID	Description
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)
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 C-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 C-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.

Service Name	Specified Device ID Contents
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`, the function ID as `N`, and the 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`, the function ID as `P`, and the 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`, the 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`, the 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`, the instance name is `oracleA`, and the host name is `host03`: `OS1oracleA[host03]`

D

Specifying a Service Key

This appendix describes service keys.

Specifying a 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 D-1 Service Keys on page D-2 lists the service keys.

Table D-1 Service Keys

Service Key	Meaning
all	Indicates all the Agent and Collection Manager services.
mgr	Indicates the Collection Manager service.
agt0	Indicates the Health Check agent 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 (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: For the `jpctminfo` command, `agte` is treated as a service key of Agent for Server System.

E

Specifying an Alarm Table

This appendix describes alarm tables.

Specifying an 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 E-1 Alarm Tables on page E-2 lists the names of the alarm tables in the solution set.

Table E-1 Alarm Tables

Agent	Alarm Table
Health Check agent	PFM Health Check Solution Alarm 8.50
Agent for RAID	• PFM RAID Solution Alarms 8.10 • PFM RAID Solution Alarms [HUS100/AMS] 8.80 • PFM RAID Solution Alarms [USP V/USP] 8.80 • PFM RAID Solution Alarms [RAID Performance CLI] 9.00 • PFM RAID Solution Alarms [VSP G1000/VSP/VSP Gx00 Fx00] 9.40
Agent for Platform (Windows)	• PFM Windows Template Alarms 09.00 • PFM Windows Template Alarms [CPU] 09.00 • PFM Windows Template Alarms [MEM] 09.00 • PFM Windows Template Alarms [DSK] 09.00 • PFM Windows Template Alarms [NET] 09.00 • PFM Windows Template Alarms [PS] 09.10 • PFM Windows Template Alarms [LOG] 09.00 • PFM Windows Template Alarms [APP] 09.10
Agent for Platform (UNIX)	• PFM UNIX Template Alarms 09.00 • PFM UNIX Template Alarms [CPU] 09.00 • PFM UNIX Template Alarms [MEM] 09.00 • PFM UNIX Template Alarms [DSK] 09.00 • PFM UNIX Template Alarms [NET] 09.00 • PFM UNIX Template Alarms [PS] 09.10 • PFM UNIX Template Alarms [APP] 09.10
Agent for SAN Switch	PFM SAN Switch Solution Alarms 7.00
Agent for NAS	• PFM NAS Template Alarms [HDI] 8.13 • PFM NAS Template Alarms [HNAS] 8.13
Agent for Oracle	PFM Oracle Template Alarms 10.01
Agent for Microsoft SQL Server	PFM SQL Template Alarms 09.00
Agent for Microsoft Exchange Server	PFM MSExchange Template Alarms 09.00
Agent for DB2	PFM DB2 Template Alarms 09.00

Acronyms and Abbreviations

This manual uses the following acronyms and abbreviations:

A

ASCII
American Standard Code for Information Interchange

B

BAPI
Business Application Programming Interfaces

C

CCMS
Computer Center Management System

CLI
Command Line Interface

CLPR
Cache Logical PaRtition

CPU
Central Processing Unit

CSV
Comma Separated Values

| # | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |

D

DTD
Document Type Definition

F

FTP
File Transfer Protocol

G

GUI
Graphical User Interface

GUID
Globally Unique IDentifier

H

HTTP
HyperText Transfer Protocol

I

I/O
Input/Output

ID
IDentifier, IDentification

IP
Internet Protocol

L

LAN
Local Area Network

| # | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |

LDEV
Logical Device Unit

LU
Logical Unit

M

MB
MegaByte

MTE
Monitoring Tree Element

N

NAS
Network Attached Storage

O

OS
Operating System

R

RAID
Redundant Array of Inexpensive Disks

RFC
Remote Function Call

S

SAN
Storage Area Network

SLPR
Storage Logical PaRtition

SMTP
Simple Mail Transfer Protocol

SNMP
Simple Network Management Protocol

SSL
Secure Sockets Layer

X

XML
Extensible Markup Language

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