



Hitachi HiCommand™ Tuning Manager 1.1

Quick Start Guide

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- *Tuning Manager v01-00 Quick Start Guide*, revision 3 (Hitachi SSD source document).
- *Tuning Manager v01-01 Quick Start Guide*, revision 2 (Hitachi SSD source document).
- *Tuning Manager v01-01*, revision 6 (Hitachi SSD source document)
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- HDS review of this document

Referenced Documents

- *HiCommand™ Tuning Manager Installation and Administration Guide*, MK-92HC021
- *HiCommand™ Tuning Manager Reference Guide*, MK-92HC022
- *HiCommand™ Tuning Manager User's Guide*, MK-92HC013
- *HiCommand™ Tuning Manager Server Installation and Configuration Guide*, MK-91HC002
- *Hitachi Lightning 9900™ V Series User and Reference Guide*, MK-92RD100
- *Hitachi Lightning 9900™ User and Reference Guide*, MK-90RD008
- *Hitachi Thunder 9500™ User and Reference Guide*, MK-92DF630
- *Hitachi Thunder 9200™ User and Reference Guide*, MK-90DF504

Changes in this Revision

- Updated product version (Front Matter)
- Deleted references to Apache and Tomcat
- Added Web Service and Servlet Service information (throughout document)
- Added information about accessing HTIM through a Web browser (throughout document)
- Added 9900V information (throughout document)
- Updated information about installing the Agent for RAID (section 2.5.3)
- Updated information about Oracle® for Windows™ platforms (section 2.5.4)
- Updated information about HiCommand Tuning Manager (HTM) server for Solaris platforms (Chapter 3)
- Deleted references to Interbase database (throughout document)
- Updated information about deinstalling HTM server for Solaris platforms (section 6.3)
- Updated information about related service processes for Windows 2000 and Solaris platforms (Appendix A)
- Updated information about HTM server installation for Windows platforms (section 2.1)
- Updated information for setting single sign-on mode for Windows (section 2.2.1)
- Updated information about agent installation for Oracle® for Solaris platforms (section 4.1.4)
- Updated information about stopping the HTM server for Windows platforms (section 2.4)
- Updated information about installing the Agent for Oracle® for Windows platforms (section 2.5.4)
- Updated information about changing to single sign-on mode for Solaris platforms (section 3.2.1)
- Updated information about starting the HTM server for Solaris platforms (section 3.3)
- Made existing information into a separate chapter (Chapter 4)

Preface

The *HiCommand™ Tuning Manager Quick Start Guide* provides an overview of Tuning Manager installation and setup to assist the user in starting Tuning Manager operations as quickly and smoothly as possible. This document assumes that:

- The user has a background in data processing and understands peripheral storage device subsystems and their basic functions.
- The user has read and understands the user guide for the storage subsystem (e.g., *Hitachi Lightning 9900™ User and Reference Guide*, *Hitachi Thunder 9200™ User and Reference Guide*).
- The user is familiar with the operating system (OS) which hosts the HiCommand™ Tuning Manager software (e.g., Solaris™ OS, Windows® 2000 OS).

Note: The term “9900V” refers to the entire Lightning 9900™ V Series subsystem family (e.g., 9980V, 9970V), unless otherwise noted. The term “9900” refers to the entire Lightning 9900™ subsystem family (e.g., 9960, 9910), unless otherwise noted.

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Software Revision Level

This document revision applies to HiCommand™ Tuning Manager version 1.1.

COMMENTS

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Make sure to include the document title, number, and revision.
Please refer to specific page(s) and paragraph(s) whenever possible.
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Thank you!

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Chapter 1 Pre-installation Requirements

1.1 Overview of Pre-installation Requirements

The following are requirements for installing the HiCommand Tuning Manager (HTM):

- HiCommand Device Manager R.2.3 or higher
- License key (available in readme.txt on the HTM CDs)
- An http port
- HTM-CD1 and HTM-CD2 CD-ROMs
- Web browser (Internet Explorer or Netscape) for configuring the HiCommand Tuning Manager (HTM) and for setting users, polling times, and so on.

Refer to the *HiCommand Tuning Manager Installation and Administration Guide*, MK-92HC021, for further information.

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Chapter 2 Installation and Setup for the Windows® Environment

2.1 Installing HTM Server for Windows® Platforms

Note: HiCommand Device Manager R2.3 or higher must be installed before the HTM Server can be installed.

1. Stop all HiCommand Device Manager related services.
 - a) Open the Administrative Tools control panel (**Start → Settings → Control Panel → Administrative Tools**).
 - b) Select **Services**.
 - c) Stop the service labeled **HiCommand Server**.
 - d) Stop the service labeled **HiCommand Suite Single Sign On Service**.
 - e) Stop the service labeled **HiCommand Suite Common Web Service**.
2. Insert the HTM-CD1 CD-ROM in your machine.
3. Execute **Setup.exe** from the **Windows** directory, and follow the installation instructions on screen.

License key: QVQR-STUK-TUVZ-00A8
4. Enter the license key. **Note:** The license key is case sensitive.
5. Enter the directory where HTM will be installed.

Note: Use of the default directory is recommended.

A reboot will be required at this point to continue the installation.
6. After the system has rebooted, stop all HiCommand Device Manager related services.
 - a) Open the Administrative Tools control panel (**Start → Settings → Control Panel → Administrative Tools**).
 - b) Select **Services**.
 - c) Stop the service labeled **HiCommand Server**.
 - d) Stop the service labeled **HiCommand Suite Single Sign On Service**.
 - e) Stop the service labeled **HiCommand Suite Common Web Service**.
7. Insert the HTM-CD2 CD-ROM in your machine.
8. Execute **Setup.exe** from the **\manager\windows** directory, and follow the installation instructions on screen.
9. Enter the directory where HiCommand Suite Common Components will be installed.

Note: Use of the default directory is recommended.

A reboot will be required to complete the installation.

2.2 Overview of Setting Single Sign-on Mode (SSO Mode)

Changing to Single Sign-on Mode (SSO Mode)

To change to SSO mode, you will need to:

1. Stop HiCommand Tuning Manager service.
2. Start HiCommand Device Manager services.
3. Execute commands.
4. Start HiCommand Tuning Manager service.

2.2.1 Changing to Single Sign On Mode (SSO Mode) for Windows Platforms

1. Stop HiCommand Tuning Manager service.
 - a) Open the Administrative Tools control panel (**Start → Settings → Control Panel → Administrative Tools**).
 - b) Select **Services**.
 - c) Stop the service labeled **HiCommand Suite TuningManager**.
2. Start HiCommand Device Manager related services.
 - a) Start the service labeled **HiCommand Server**.
 - b) Start the service labeled **HiCommand Suite Single Sign On Service**.
 - c) Start the service labeled **HiCommand Suite Common Web Service**.

3. From a command prompt, do the following to set the SSO URL link.

- a) Register launch address of Tuning Manager.
- b) Execute "`c:\Program Files\HiCommand\Base\bin\hcndsrep`" /add /type TuningManager /url http://<IP address>:23015/TuningManager/login.do /user <username> /pass <password>

c:\Program Files\HiCommand\Base\bin: this is the default path used when HiCommand Device Manager was installed. If this is not correct, make the necessary changes before executing the command.

IP address: IP address of the machine HiCommand Tuning Manager is installed on. Change accordingly.

Note: Use the actual IP address and not localhost.

23015: default port number for Tuning Manager (not user modifiable)

username: one of the usernames used by HiCommand Device Manager to login with admin authority (default is **system**)

password: password for the username used in the username parameter to login (default is **manager**)

The following is an example using these parameter values where IP address is **192.168.1.1**, username is **hdvm**, and password is **hds**.

```
"c:\Program Files\HiCommand\Base\bin\hcndsrep" /add /type TuningManager  
/urlhttp://192.168.1.1:23015/TuningManager/login.do /user hdvm /pass hds
```

Note: The following parameters are case sensitive.

/type: either DeviceManager or TuningManager must be entered exactly as written or an error message will be generated.

/url: this is case sensitive and must be entered correctly. If it is entered incorrectly the URL will not be called properly. The URL link is not tested at this point, so if the information is entered incorrectly the error will not appear until the launch is attempted.

/user & /pass: case sensitivity for these parameters is determined by the HDvM setting. The normal default is NO CASE SENSITIVITY. Alternatively, case sensitivity may be enabled in HDvM.

- a) Register the launch address of Device Manager.
- b) Execute "c:\Program Files\HiCommand\Base\bin\hcndsrep" /add /type DeviceManager /url http://< IP address>:2001/ service/Launcher /user <username> /pass <password>

c:\Program Files\HiCommand\Base\bin\: this is the default path used when HiCommand Device Manager was installed. If this is not correct make the necessary changes before executing the command.

IP address: IP address of the machine HiCommand Device Manager is installed on. Change accordingly.

Note: Use the actual IP address and not localhost.

2001: default port number for Device Manager (not user modifiable)

username: one of the usernames used by HiCommand Device Manager to login with admin authority (default is **system**)

password: password for the username used in the username parameter to login (default is manager)

The following is an example using the parameter values where IP address is **192.168.1.1**, username: is **hdvm**, and password: is **hds**

```
"c:\Program Files\HiCommand\Base\bin\hcndsrep" /add /type DeviceManager /url  
http://192.168.1.1: 2001/DeviceManager/service/Launcher /user hdvm /pass hds
```

Note: The following parameters are case sensitive.

/type: either DeviceManager or TuningManager have to be entered exactly as written or an error message will be generated.

/url: this is case sensitive and must be entered correctly. If it is entered incorrectly, the URL will not be called properly. The URL link is not tested at this point; if the information is entered incorrectly the error will not appear until the launch is attempted.

/user & /pass: case sensitivity in for these parameters is determined by the HDvM setting. The normal default is NO CASE SENSITIVITY, however, case sensitivity may be enabled in HDvM.

- a) Switch mode for Tuning Manager
- b) Execute "**c:\Program Files\HiCommand\Tuning Manager\bin\htm-switch-mode**" -
sso

c:\Program Files\HiCommand\Tuning Manager\bin\: this is the default path used when Tuning Manager was installed. If this is not correct, make the necessary changes before executing the command.

4. Start the HiCommand Tuning Manager service.
 - a) Open the Administrative Tools control panel (**Start → Settings → Control Panel → Administrative Tools**).
 - b) Select **Services**.
 - c) Start the service labeled HiCommand Suite TuningManager.
5. Start browsing.

HTM can be accessed via a web browser at <http://localhost:23015/TuningManager/login.do>

Login to HiCommand Tuning Manager using the same user account that you would use to login to HiCommand Device Manager (defaults are user: **system**, pass: **manager**).

2.3 Starting HTM Server for Windows® Platforms

HTM and the associated services should start automatically when the system is rebooted. To start HTM and the associated services manually, complete the following steps:

1. Start Collection Manager:
 - a) Open the Administrative Tools control panel (**Start → Settings → Control Panel → Administrative Tools**).
 - b) Select **Services**.
 - c) Start the services labeled **PFM - xxxx**.
or
 - d) Open a DOS window and at the command prompt enter:

```
"c:\Program Files\HiCommand\Tuning Manager\jplpc\tools\jpcstart" all
```
2. Start Web Service (HiCommand Suite Common Web Service) and Servlet service (HiCommand Suite TuningManager):
 - a) Open the Administrative Tools control panel (**Start → Settings → Control Panel → Administrative Tools**).
 - b) Select **Services**.
 - c) Start the service labeled **HiCommand Suite Common Web Service**.
 - d) Start the service labeled **HiCommand Suite Tuning Manager**.
3. Start browsing.

HTM can be accessed via a web browser at:

<http://localhost:23015/TuningManager/login.do>

2.4 Stopping HTM Server for Windows® Platforms

There should normally be no reason to stop HTM and the associated services. If for some reason HTM and the associated services have to be stopped, follow these steps:

1. Stop the Web Service (HiCommand Suite Common Web Service) and the Servlet service (HiCommand Suite Tuning Manager):
 - a) Open the Administrative Tools control panel (**Start → Settings → Control Panel → Administrative Tools**).
 - b) Select **Services**.
 - c) Stop the service labeled **HiCommand Suite Tuning Manager**.
 - d) Stop the service labeled **HiCommand Suite Tuning Service**.
 - e) Stop the service labeled **HiCommand Suite Common Web Service**.
2. Stop Collection Managers:
 - a) Open the Administrative Tools control panel (**Start → Settings → Control Panel → Administrative Tools**).
 - b) Select **Services**.
 - c) Stop all services labeled **PFM - xxxx**.
 - or
 - d) Open a DOS window and at the command prompt enter:

```
"c:\Program Files\HiCommand\Tuning Manager\jplpc\tools\jpcstop" all
```

Note: This path is for the default directory. If the default was not used, edit path accordingly.

2.5 Installing Agents for Windows® Platforms

Organization of this section:

- Configuring the local HOSTNAME (section 2.5.1)
- Agent Installation for Windows (section 2.5.2)
- Agent Installation for RAID (section 2.5.3)
- Agent Installation for Oracle (section 2.5.4)

2.5.1 Configuring the Local HOSTNAME

If the HTM Server is not accessible via HOSTNAME, use the following step to add HOSTNAME accessibility from the local system.

Since the HTM server is accessed by HOSTNAME, the HTM Server IP address and associated host name must be added to the HOSTS file. To add the required information enter the following at the command prompt:

```
edit C:\WINNT\System32\Drivers\ETC\Hosts
```

When the edit is displayed, add a line at the end of the file that looks like this:

```
192.168.0.1      HTMServer      #IP address, name assigned to HTM server
```

The format of the line is: HTM Server IP address, at least 1 blank space, then the name to be associated with the IP address. The information after the # is a comment.

Note: Substitute the appropriate IP address and hostname in this example.

2.5.2 Agent Installation for Windows® Platforms

1. Insert the HTM-CD2 CD-ROM in your machine.
2. Execute the **setup.exe** command from the agent\windows directory.
After installation, assign administrator authority to the logon account of the following service: "PFM - Agent for RAIDMap"
3. Execute the **jpcnshostname** command to specify HTM Server.
 - a) Open a DOS window and at the command prompt enter:

```
"c:\Program Files\Hitachi\jplpc\tools\jpcnshostname" -s <HTM Server  
hostname>
```

Note: This path is for the default directory. If the default was not used, edit path accordingly.

<HTM Server hostname> is the locally assigned name used in configuring the local HOSTNAME (refer to section 2.5.1).

2.5.3 Agent Installation for RAID for Windows® Platforms

Preparation: 9900 Series and 9900V Series

- Install RAID Manager Library:
 - a) Insert RAID Manager Library CD-ROM.
 - b) Execute **setup.exe** from the win_nt directory.
- Set up a Command Device. Refer to the appropriate Lightning 9900 and 9900V user documentation for information.

Note: Using the default install directory is recommended.

Preparation: 9200 Series and 9500V Series

- Use the DAMP (Disk Array Management Program 2) utility to enable the following parameters. Refer to the appropriate Thunder documentation for information.

Note: For the 9500V, the following options are enabled by default.

- Inquiry: 83H Page report mode
- Standard INQUIRY data expansion mode
- HBA WWN Report mode

To install the Agent for RAID:

1. Insert the HTM-CD2 CD-ROM in your machine.
2. Execute **setup.exe** from the **agent_for_raid\windows** directory.
3. Create an instance after installation.
4. Open a DOS window and at the command prompt enter:

```
"\Program Files\Hitachi\jplpctools\jpcinssetup' agtd -inst <instance name>
```

Note: This path is for the default directory. If the default was not used, edit path accordingly.

Note: Command Device and RAID Manager Library will be required for Lightning.

For Lightning

If Command Device File is drive5,
Command Device File Name should be \\.\PhysicalDrive5.

For Thunder

Copy the setting file "utlprm.inf" in C:\Program Files\Hitachi\jp1pc\agtd\<instance name> directory.

This is a definition file for storage subsystems. This file is created when Thunder 9200 or 9500V is set up using the DAMP 2.

- The array unit name is case sensitive.
- If using Password Protection option, the user name and password will be case sensitive. If not using Password Protection, just press **ENTER**.

After installation, assign administrator authority to the logon account of the following service: "PFM - Agent for RAID <instance name>"

5. Execute the **jpcnshostname** command to specify HTM Server. At command prompt enter:

```
"c:\Program Files\Hitachi\jplpc\tools\jpcnshostname" -s <HTM Server  
hostname>
```

Note: This path is for the default directory. If the default was not used, edit path accordingly.

<HTM Server hostname> is the locally assigned name used in configuring the local HOSTNAME (refer to section 2.5.1).

2.5.4 Agent Installation for Oracle for Windows® Platforms

To install the Agent for Oracle:

1. Insert HTM-CD2 CD-ROM in your machine.
2. Execute **setup.exe** from the **agent_for_oracle\windows** directory.
3. Execute **sp_inst.sql** after installation. At the command prompt enter:

```
"c:\Program Files\Hitachi\jplpc\agto\agent\sql\sqlplus" sys/<password>  
AS SYSDBA @sp_inst.sql
```

Password of sys user will be required.

Note: If using Oracle9, use **sp_inst90.sql** instead of **sp_inst.sql**.

4. Create an instance. At the command prompt enter:

```
"c:\Program Files\Hitachi\jplpc\tools\jpcinssetup" agto -inst <instance  
name>
```

Oracle Version, Oracle Home, and password will be required.

5. Execute the **jpcnshostname** command to specify HTM Server. At command prompt enter:

```
"c:\Program Files\Hitachi\jplpc\tools\jpcnshostname" -s <HTM Server  
hostname>
```

<HTM Server hostname> is the locally assigned name used in configuring the local HOSTNAME (refer to section 2.5.1).

Note: The paths shown in this section are for the default directories. If the default directory is not used, edit path accordingly.

2.6 Starting and Stopping Agents for Windows® Platforms

2.6.1 Starting Agents for Windows® Platforms

Execute the following command from the directory that Tuning Manager is installed in. For Windows®, the default directory is `c:\Program Files\Hitachi\jplpc\tools`, and the command must be issued by an ID with Administrator authority.

Note: If the default was not used, edit the path accordingly.

```
jpcstart <service key> [inst=<instance name>]
```

or

```
jpcstart all
```

The *<instance name>* described here is for RAID and/or Oracle agents. If *<instance name>* is omitted, all instances start.

Table 2.1 lists the service keys for Windows® platforms.

Table 2.1 Service Keys for Windows® Platforms

No.	Product name/Component name	Service Key	Same as UNIX?
1	Collection – Manager	mgr	Yes
2	Action Handler (HTM Internal Service)	act	Yes
3	HTM – Agent for Oracle	agto	Yes
4	HTM – Agent for Platform (Windows)	agtt	No
5	HTM – Agent for RAID Map	agte	Yes
6	HTM – Agent for RAID	agtd	Yes
7	All Products/Components	all	Yes

2.6.2 Stopping Agents for Windows® Platforms

Execute the following command from the directory that Tuning Manager is installed in. For Windows, the default directory is: `C:\Program Files\Hitachi\jplpc\tools`, and the command must be issued by an ID with Administrator authority. **Note:** If the default was not used, edit path accordingly.

```
jpcstop <service key> [inst=<instance name>]
```

or

```
jpcstop all
```


Chapter 3 Installation and Setup for the Solaris™ Environment

3.1 Installing HTM Server for Solaris™ Platforms

Note: HiCommand Device Manager R2.3 or higher is required.

1. Stop HiCommand Device Manager related services. Open a terminal window and enter the following commands on the command line:
 - a) `/etc/init.d/hicommand stop`
 - b) `/etc/init.d/hicommand - CWS stop`
 - c) `/etc/init.d/hicommand - SSOS stop`
2. Insert HTM-CD1 CD-ROM in your machine.
3. Execute `./install-cd1.sh` from the **solaris** directory.

Note: Tuning Manager will be installed in the `/opt/HiCommand/TuningManager` directory.
4. Enter the license key. **Note:** License key is case sensitive.
License key: QVQR-STUK-TUVZ-00A8.
5. Insert the HTM-CD2 CD-ROM in your machine.
6. Execute `./install-cd2.sh` from the `/manager/solaris/` directory.
7. Start HiCommand Device Manager related services. Open a terminal window and enter the following commands on the command line:
 - a) `/etc/init.d/hicommand-CWS start`
 - b) `/etc/init.d/hicommand-SSOS stat`
 - c) `/etc/init.d/hicommand start`
8. Start HiCommand Tuning Manager service. Open a terminal window and enter the following command on the command line:
`/etc/init.d/hicommand-TM start`
`/etc/init.d/hicommand-TS start`

3.2 Overview of Changing to Single Sign-on (SSO)

Note: HiCommand Device Manager R2.3 or higher is required to use SSO mode.

Changing to Single Sign-on Mode (SSO Mode)

To change to SSO mode, you will need to:

1. Stop HiCommand Tuning Manager service.
2. Execute commands.
3. Start HiCommand Device Manager services.
4. Start HiCommand Tuning Manager service.

3.2.1 Changing to Single Sign-on Mode for Solaris Platforms

1. Stop HiCommand Tuning Manager service. Open a terminal window and enter the following command on the command line:

```
/etc/init.d/hicommand-TS stop
```

```
/etc/init.d/hicommand-TM stop
```
2. Stop HiCommand Device Manager related services. Open a terminal window and enter the following commands on the command line:
 - a) `/etc/init.d/hicommand-CWS stop`
 - b) `/etc/init.d/hicommand-SSOS stop`
 - c) `/etc/init.d/hicommand-stop`
3. Execute commands to set SSO mode.
4. Register launch address of Tuning Manager.
5. Execute `/opt/HiCommand/Base/bin/hcmdsrep -add -type TuningManager -url http://<IP address>:23015/TuningManager/login.do -user <username> -pass <password>`
/opt/HiCommand/Base/bin/: this is the default path used when HiCommand Device Manager was installed. If this is not correct, make the necessary changes before executing the command.
IP address: IP address of the machine HiCommand Tuning Manager is installed on, change accordingly
Note: Use the actual IP addresses, not the localhost.
23015: default port number for Tuning Manager (not user modifiable)
username: one of the usernames used by HiCommand Device Manager to login with admin authority (default is system)
password: password for the username used in the username parameter to login (default is manager)

The following is an example using parameter values where the IP address is **192.168.1.1**, the username is **hdvm**, and the password is **hds**.

```
/opt/HiCommand/Base/bin/hcmdsrep -add -type TuningManager -url  
http://192.168.1.1:23015/TuningManager/login.do -user hdvm -pass hds
```

Note: The following parameters are case sensitive.

-type: either DeviceManager or TuningManager have to be entered exactly as written or an error message will be generated.

-url: this is case sensitive and must be entered correctly. If it is entered incorrectly the URL will not be called properly. The URL link is not tested at this point, so if the information is entered incorrectly the error will not appear until the launch is attempted.

-user & -pass: case sensitivity in for these parameters is determined by the HDvM setting. The normal default is NO CASE SENSITIVITY, but case sensitivity may be enabled.

a) Register the launch address of Device Manager.

Execute `/opt/HiCommand/Base/bin/hcmdsrep -add -type DeviceManager -url http://< IP address>:2001-/service/Launcher -user <username> -pass <password>`

/opt/HiCommand/Base/bin/: this is the default path used when HiCommand Device Manager was installed. If this is not correct make the necessary changes before executing the command.

IP address: IP address of the machine HiCommand Device Manager is installed on, change accordingly

2001: default port number for Device Manager (not user modifiable)

username: one of the usernames used by HiCommand Device Manager to login with admin authority (default is system)

password: password for the username used in the username parameter to login (default is manager)

Example of using the these parameter values: IP address: **192.168.1.1**, username: **hdvm**, password: **hds**

```
/opt/HiCommand/Base/bin/hcmdsrep -add -type DeviceManager -url http://192.168.1.1:  
2001-/service/Launcher -user hdvm -pass hds
```

Note: The following parameters are case sensitive.

-type: either DeviceManager or TuningManager must be entered exactly as written or an error message will be generated.

-url: this is case sensitive and must be entered correctly. If it is entered incorrectly, the URL will not be called properly. The URL link is not tested at this point, so if the information is entered incorrectly the error will not appear until the launch is attempted.

-user & -pass: case sensitivity in for these parameters is determined by the HDvM setting. The normal default is no case sensitivity, but case sensitivity may be enabled in HDvM.

- a) Switch mode for Tuning Manager
 - b) Execute `/opt/HiCommand/Tuning Manager/bin/htm-switch-mode -sso`
`/opt/HiCommand/Tuning Manager/bin/`: this is the default path used when Tuning Manager was installed. If this is not correct, make the necessary changes before executing the command.
3. Start HiCommand Device Manager related services. Open a terminal window and enter the following commands on the command line:
 - a) `/etc/init.d/hicommand-CWS start`
 - b) `/etc/init.d/hicommand-SSOS start`
 - c) `/etc/init.d/hicommand start`
 4. Start HiCommand Tuning Manager service.
`/etc/init.d/hicommand-TM start`
`/etc/init.d/hicommand-TS start`
 5. Start browsing.

HTM can be accessed via a web browser at:

<http://localhost:23015/TuningManager/login.do>

Login to HiCommand Tuning Manager using HiCommand Device Manager user account.

You cannot login to Tuning Manager using its user account.

3.3 Starting HTM Server for Solaris™ Platforms

HTM and the associated services should start automatically when the system is rebooted. To start HTM and the associated services manually, follow the steps listed below.

1. Start Web service (HiCommand Suite Common Web Service) and Servlet service (HiCommand Suite TuningManager):
 - a) `/etc/init.d/hicommand-CWS start`
 - b) `/etc/init.d/hicommand-SSOS start`
 - c) `/etc/init.d/hicommand-TM start`
 - d) `/etc/init.d/hicommand-TS start`
2. Start browsing.

HTM can be accessed via a web browser at:

<http://localhost:23015/TuningManager/login.do>

3.4 Stopping HTM Server for Solaris™ Platforms

There should normally be no reason to stop HTM and the associated services. If for some reason HTM and the associated services have to be stopped, follow the procedures listed below.

1. Stop Web service (HiCommand Suite Common Web Service) and Servlet service (HiCommand Suite TuningManager):
 - a) `/etc/init.d/hicommand-TM stop`
 - b) `/etc/init.d/hicommand-TS stop`
 - c) `/etc/init.d/hicommand-CWS stop`

Chapter 4 Agent Installation and Setup for the Solaris™ and the UNIX® Environments

4.1 Installing Agents for Solaris™ Platforms

Organization of this section:

- Configuring the local HOSTNAME (section 4.1.1)
- Agent Installation for Solaris (section 4.1.2)
- Agent Installation for RAID (section 4.1.3)
- Agent Installation for Oracle (section 4.1.4)

4.1.1 Configuring the Local HOSTNAME

If the HTM Server is not accessible via HOSTNAME, use the following step to add HOSTNAME accessibility from the local system.

Since the HTM server is accessed by HOSTNAME, the HTM Server IP address and associated host name must be added to the HOSTS file. To add the required information at the command prompt, enter: `vi /etc/hosts`

When the editor is displayed, add a line at the end of the file that looks like this:

```
192.168.0.1    HTMServer    #IP address, name assigned to HTM server
```

The format of the line is: HTM Server IP address, at least 1 blank space, and then the Name to be associated with the IP address. The information after the # is a comment.

Note: Substitute the appropriate IP address and hostname in the example provided above.

4.1.2 Agent Installation for Solaris™ Platforms

1. Insert the HTM-CD2 CD-ROM in your machine.
2. `pkgadd -d /cdrom/agent/solaris HTMAgent` (if mounted on `/cdrom` directory)

3. Execute the `jpcnshostname` command to specify the HTM Server after installation.

`/opt/jplpc/tools/jpcnshostname -s <HTM Server hostname>`

`<HTM Server hostname>` is the locally assigned name used in configuring the local HOSTNAME (refer to section 4.1.1).

Note: The path shown above is for the default directory. If the default was not used, edit path accordingly.

4. Start agent service:

`/opt/jplpc/tools/jpcstart all`

Note: The path shown above is for the default directory. If the default was not used, edit path accordingly.

If using Password Protection option, the user name and password will be case sensitive.

If not using Password Protection, just press **ENTER**.

4.1.3 RAID Agent Installation for Solaris™ Platforms

Preparation: 9900 Series and 9900V Series

- Install RAID Manager Library.
 - a) Insert RAID Manager Library CD-ROM.
 - b) Execute `RLinstsh` script for automatic installation.

Note: Recommended install directory is `/opt` or `/usr`. Do not install RAID Manager Library under Tuning Manager installation directory.
- Set up Command Device. Refer to the appropriate Lightning 9900 user documentation for information.

Preparation: For 9200 Series and 9500V Series

Use the DAMP (Disk Array Management Program 2) utility to enable the following parameters. Refer to the appropriate Thunder documentation for information.

Note: For the 9500V, these options are enabled by default.

- Inquiry: 83H Page report mode
- Standard INQUIRY data expansion mode
- HBA WWN Report mode

To install the Agent for RAID:

1. Insert and mount the HTM-CD2 CD-ROM in your machine.
2. `pkgadd -d /cdrom/agent_for_raid/solaris HTMRaid`
(if mounted on the **/cdrom** directory)
3. Execute the **jpcnshostname** command to connect the HTM Server after installation.

`/opt/jplpc/tools/jpcnshostname -s <HTM Server hostname>`

<HTM Server hostname> is the locally assigned name used in configuring the local HOSTNAME (refer to section 4.1.1).

Note: This path is for default directory. If default was not used, edit path accordingly.

4. Execute the **jpcinssetup** command to create instance:

`/opt/jplpc/tools/jpcinssetup agtd -inst <instance name; RAID serial number>`

Note: This path is for default directory. If default was not used, edit path accordingly.

Command Device and RAID Manager Library will be required for Lightning.

For Lightning

If Command Device File is c1t0d6, Command Device File Name should be c1t0d6s2.

Slice number (s2) is required for Solaris.

For Thunder

To copy the setting file "utlprm.inf" in `/opt/jp1pc/agtd/<instance>/` directory.

This is a definition file for storage subsystems. This file is created when Thunder 9200 or 9500V is set up using the DAMP 2.

- The array unit name is case sensitive.
- If using Password Protection option, the user name and password will be case sensitive. If not using Password Protection, just press **ENTER**.

5. Start agent service.

`/opt/jplpc/tools/jpcstart agtd`

or

`/opt/jplpc/tools/jpcstart agtd inst=<instance name>`

Note: This path is for default directory. If default was not used, edit path accordingly.

4.1.4 Oracle Agent Installation for Solaris™ Platforms

1. Insert the HTM-CD2 CD-ROM in your machine.
2. `pkgadd -d /cdrom/agent_for_oracle/solaris HTMOra`
(if mounted on the `/cdrom` directory):
3. Execute `sp_inst.sql`
`cd /opt/jplpc/agto/agent/sql/sqlplus sys/<password> AS SYSDBA @sp_inst.sql`
Password of sys user will be required.
When using Oracle9, type `sp_inst90.sql` instead of `sp_inst.sql`.
Change user as Oracle user to execute `sqlplus`.
Note: This path is for the default directory. If default was not used, edit path accordingly.
4. Execute the `jpcinssetup` command to create instance:
`/opt/jplpc/tools/jpcinssetup agto -inst <instance name: unique name>`
Oracle Version, Oracle Home, and password will be required.
Note: This path is for the default directory. If the default was not used, edit path accordingly.
5. Execute the `jpcnshostname` command to specify the HTM Server.
`/opt/jplpc/tools/jpcnshostname -s <HTM Server hostname>`
`<HTM Server hostname>` is the locally assigned name used in configuring the local HOSTNAME.
Note: This path is for the default directory. If default was not used, edit the path accordingly.
6. Start agent service.
`/opt/jplpc/tools/jpcstart agto`
or
`/opt/jplpc/tools/jpcstart agto inst=<instance name>`
Note: This path is for the default directory. If default was not used, edit the path accordingly.

4.2 Starting and Stopping Agents for UNIX® Platforms

4.2.1 Starting Agents for UNIX® Platforms

Execute the following command from the directory that Tuning Manager is installed in. For UNIX®, the default directory is `/opt/jpc1pc/tools`, and the command must be issued by an ID with root authority. **Note:** If the default was not used, edit the path accordingly.

```
jpcstart <service key> [inst=<instance name>]  
or  
jpcstart all
```

The *<instance name>* described here is for RAID and/or Oracle agents. If *<instance name>* is omitted, all instances start.

Table 4.1 lists the service keys for UNIX® platforms.

Table 4.1 Service Keys for UNIX® Platforms

No.	Product name/Component name	Service Key	Same as Windows?
1	Collection – Manager	mgr	Yes
2	Action Handler (HTM Internal Service)	act	Yes
3	HTM – Agent for Oracle	agto	Yes
4	HTM – Agent for Platform (UNIX)	agtu	No
5	HTM – Agent for RAID Map	agte	Yes
6	HTM – Agent for RAID	agtd	Yes
7	All Products/Components	all	Yes

4.2.2 Stopping Agents for UNIX® Platforms

Execute the following command from the directory that Tuning Manager is installed in. For UNIX the default directory is: `/opt/pclpc/tools`, and the command must be issued by an ID with root authority. **Note:** If the default was not used, edit path accordingly.

```
jpcstop <service key> [inst=<instance name>]  
or  
jpcstop all
```

4.2.3 Setting Automatic Startup/Shutdown for Agents for UNIX® Platforms

Use the startup script file to automatically start services during startup on a UNIX® platform.

To start the services automatically:

1. Log on to the host where Agent is installed.
2. Go to the **/opt/jp1pc** directory.
Note: This is the default directory. If the default was not used, edit path accordingly.
3. Set up the startup script file. Execute the following command to copy the startup script **.model** file to the startup script file: `cp -p jpc_start.model jpc_start`
The names of the startup script. model file and the startup script file are:
 - Name of the startup script. **.model** file: `jpc_start.model`
 - Name of the startup script file: `jpc_start`

To stop the service automatically when the system ends:

1. Log on to the host where Agent is installed.
Note: This is the default directory. If the default was not used, edit the path accordingly.
2. Go to the **/opt/jp1pc** directory. **Note:** This is the default directory. If the default was not used, edit path accordingly.
3. Set up the shutdown script file. Execute the following command to copy the shutdown script **.model** file to the shutdown script file: `cp -p jpc_stop.model jpc_stop`

The names of the shutdown script **.model** file and the shutdown script file are as follows:

- Name of the shutdown script **.model** file: `jpc_stop.model`
- Name of the shutdown script file: `jpc_stop`

Chapter 5 Installation and Setup of Agents for the HP-UX® Environment

5.1 Installing Agents for HP-UX® Platforms

<Example> install HTM - Agent
`swinstall -s <target directory> HTMAgent`

Organization of this section:

- Configuring the local HOSTNAME (section 5.1.1)
- Agent Installation for HP-UX (section 5.1.2)
- Agent Installation for RAID (section 5.1.3)
- Agent Installation for Oracle (section 5.1.4)

5.1.1 Configuring the Local HOSTNAME

Same as for Solaris. Refer to section 4.1.1.

5.1.2 Agent Installation for HP-UX® Platforms

1. Insert the HTM-CD2 CD-ROM in your machine:
`swinstall -s /cdrom/agent/hp-ux HTMAgent`
(if mounted on the `/cdrom` directory)
2. Same as for Solaris (`jpcnshostname` command). Refer to step (3) in section 4.1.2.
3. Same as for Solaris (`jpcstart all` command). Refer to step (4) in section 4.1.2.

5.1.3 Agent Installation for RAID for HP-UX® Platforms

Preparation for 9900 and 9200 series: Same as for Solaris. Refer to section 4.1.3.

1. Insert and mount the HTM-CD2 CD-ROM in your machine.
2. `swinstall -s /cdrom/agent_for_raid/hp-ux HTMRaid`
(if mounted on the `/cdrom` directory)
3. Same as for Solaris (`jpcnshostname` command). Refer to step (3) in section 4.1.3.
4. Same as for Solaris (`jpcinssetup` command). Refer to step (4) in section 4.1.3.
5. Same as for Solaris (`jpcstart agtd` command). Refer to step (5) in section 4.1.3.

5.1.4 Agent Installation for Oracle for HP-UX® Platforms

1. Insert the HTM-CD2 CD-ROM in your machine.
2. `swinstall -s /cdrom/agent_for_oracle/solaris HTMOra`
(if mounted on the `/cdrom` directory)
3. Same as for Solaris (execute `sp_inst.sql`) . Refer to step (3) in section 4.1.4.
4. Same as for Solaris (`jpcinssetup` command). Refer to step (4) in section 4.1.4.
5. Same as for Solaris (`jpcnshostname` command). Refer to step (5) in section 4.1.4.
6. Same as for Solaris (`jpcstart agto` command). Refer to step (6) in section 4.1.4.

5.2 Starting and Stopping Agents for UNIX® Platforms

Same for Solaris™ and HP-UX® platforms. Refer to section 4.2.

Chapter 6 Deinstallation of the HTM Server

Before desintalling the HTM server, you must stop all Agents services.

Note: After deinstallation is complete, it may be necessary to delete any remaining files.

6.2 Deinstalling the HTM Server for Windows® Platforms

1. Stop HiCommand Tuning Manager service.
 - a) Open the Administrative Tools control panel (**Start → Settings → Control Panel → Administrative Tools**).
 - b) Select **Services**.
 - c) Stop the service labeled HiCommand Suite TuningManager.

2. Delete launch address of Tuning Manager.

Execute "c:\Program Files\HiCommand\Base\bin\hcndsrep" /delete /type TuningManager /user <username> /pass <password>

c:\Program Files\HiCommand\Base\bin: this is the default path used when HiCommand Device Manager was installed. If this is not correct, make the necessary changes before executing the command.

username: one of the usernames used by HiCommand Device Manager to login with admin authority (default is **system**)

password: password for the username used in the username parameter to login (default is **manager**)

The following is an example using these parameter values where username is **hdvm** and password is **hds**.

"c:\Program Files\HiCommand\Base\bin\hcndsrep" /delete /type TuningManager /user hdvm /pass hds

Note: The following parameters are case sensitive.

/type: either DeviceManager or TuningManager must be entered exactly as written or an error message will be generated.

/user & /pass: case sensitivity in for these parameters is determined by the HDvM setting. The normal default is NO CASE SENSITIVITY. Alternatively, case sensitivity may be enabled in HDvM.

3. Stop HiCommand Device Manager related services.
 - a) Stop the service labeled **HiCommand Server**.
 - b) Stop the service labeled **HiCommand Suite Single Sign On Service**.
 - c) Stop the service labeled HiCommand Suite Common Web Service.
 - d) Stop the service labeled **HiCommand Suite Tuning Service**.
4. Open the Add/Remove Programs control panel (**Start → Settings → Control Panel → Add/Remove Programs**).

5. Remove the following applications in this order:
 - a) HiCommand Tuning Manager - CD-2
 - b) HiCommand Tuning Manager - CD-1
6. Start HiCommand Device Manager related services.
 - a) Open the Administrative Tools control panel (**Start → Settings → Control Panel → Administrative Tools**).
 - b) Select **Services**.
 - c) Start the service labeled **HiCommand Server**.
 - d) b) Start the service labeled **HiCommand Suite Single Sign On Service**.
 - e) c) Start the service labeled **HiCommand Suite Common Web Service**.

6.3 Deinstalling the HTM Server for Solaris™ Platforms

1. Stop HiCommand Tuning Manager service.

```
/etc/init.d/hicommand-TM stop
/etc/init.d/hicommand-TS stop
```

2. Deleting launch address of Tuning Manager.

Execute `/opt/HiCommand/Base/bin/hcmdsrep /delete /type TuningManager /user <username> /pass <password>`

`/opt/HiCommand/Base/bin/`: this is the default path used when HiCommand Device Manager was installed. If this is not correct, make the necessary changes before executing the command.

username: one of the usernames used by HiCommand Device Manager to login with admin authority (default is **system**)

password: password for the username used in the username parameter to login (default is **manager**)

The following is an example using these parameter values where username is **hdvm**, and password is **hds**.

```
/opt/HiCommand/Base/bin/hcmdsrep /delete /type TuningManager /user hdvm /pass hds
```

Note: The following parameters are case sensitive.

/type: either DeviceManager or TuningManager must be entered exactly as written or an error message will be generated.

/user & /pass: case sensitivity in for these parameters is determined by the HDvM setting. The normal default is NO CASE SENSITIVITY. Alternatively, case sensitivity may be enabled in HDvM.

3. Stop HiCommand related services
 - a) `/etc/init.d/hicommand stop`
 - b) `/etc/init.d/hicommand-SSOS stop`
 - c) `/etc/init.d/hicommand-CWS stop`
4. Execute `./uninstall-cd2.sh` in the `/opt/HiCommand/TuningManager/uninstall/` directory.
5. Execute `./uninstall-cd1.sh` in the `/opt/HiCommand/TuningManager/uninstall/` directory.
6. Start HiCommand Device Manager related services.
 - a) `/etc/init.d/hicommand-CWS start`
 - b) `/etc/init.d/hicommand-SSOS start`
 - c) `/etc/init.d/hicommand start`

6.4 Deinstalling the HTM Agents

6.4.1 Deinstalling HTM Agents for Windows® Platforms

1. Open the Add/Remove Programs control panel (Start → Settings → Control Panel → Add/Remove Programs).
2. Remove the following applications:
 - HiCommand Tuning Manager - Agent
 - HiCommand Tuning Manager - Agent for RAID
 - HiCommand Tuning Manager - Agent for Oracle

6.4.2 Deinstalling HTM Agents for Solaris™ Platforms

Execute the `pkgrm` command for each installed agent:

```
pkgrm HTMAgent  
pkgrm HTMRaid  
pkgrm HTMOra
```

6.4.3 Deinstalling the HTM Agents for HP-UX® Platforms

Execute the `swremove` command for each installed agent:

```
swremove HTMAgent  
swremove HTMRaid  
swremove HTMOra
```

Appendix A Related Service Processes of HiCommand™ Tuning Manager

Table A.1 lists the related service processes of HTM for Windows® 2000 platforms.

Table A.2 lists the related service processes of HTM for Solaris™ platforms.

Table A.3 lists the related service processes of HTM for HP-UX® platforms.

Table A.1 Related Service Process of HTM for Windows® 2000 Platforms

HTM Component	Function	Service Process Name
HTM Server	HTM service	HiCommand Suite Common Web Service (Web service) HiCommand Suite TuningManager (Servlet service) Hitachi Network Objectplaza Trace Monitor 2 (Log trace service) HiCommand Suite TuningService (CIM/SOAP-API service)
HTM Server	Collection Manager	PFM - Master Manager PFM - Master Store PFM - Name Server PFM - Trap Generator PFM - View Server PFM - Action Handler PFM - Corrector
HTM Agent	Agent	PFM - Action Handler PFM - Agent for xxxx PFM - Agent Store for xxxx xxxx: Windows, RAIDMap, RAID<instance Name> Oracle<instance Name>

Table A.2 Related Service Process of HTM for Solaris™ Platforms

HTM Component	Function	Service Process Name
HTM Server	HTM service	Httpsd (Web service) Java (Servlet service) Java (CIM/SOAP-API service) hntr2mon (Log trace service) rotatelog (Log trace service)
HTM Server	Collection Manager	jpcmm, jpcep, jpcsto, jpcnsrv, Jpctrp, jpctraps
HTM Agent	Agent	jpccgtu, jpcagto, jpcsto, jpcagte, jpcagtd, jpcch

Table A.3 Related Service Process of HTM for HP-UX® Platforms

HTM Component	Function	Service Process Name
HTM Agent	Agent	jpccgtu, jpcagto, jpcsto, jpcagte, jpcagtd, jpcch

Acronyms and Abbreviations

DAMP	Disk Array Management Program
HDvM	HiCommand Device Manager
HTM	HiCommand™ Tuning Manager
ID	identification, identifier
IP	internet protocol
OS	operating system
PFM	Performance Management
RAID	redundant array of independent disks
SSO	single signon mode
WWN	worldwide name

