

HP Functional Testing Concurrent License Server

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Installation Guide

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This manual's title page contains the following identifying information:

- Software version number, which indicates the software version
- Document release date, which changes each time the document is updated
- Software release date, which indicates the release date of this version of the software

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Welcome to This Guide

Welcome to the HP Functional Testing Concurrent License Server Installation Guide for QuickTest Professional, WinRunner, and WinRunner add-ins.

This chapter includes:

- ▶ How This Guide Is Organized on page 7
- ▶ Who Should Read This Guide on page 8
- ▶ Additional Online Resources on page 8
- ▶ Typographical Conventions on page 10

How This Guide Is Organized

This guide contains the following chapters:

Chapter 1 Before You Install

Lists the minimum system requirements required to install the HP Functional Testing Concurrent License Server.

Chapter 2 Setting Up the Concurrent License Server

Describes how to set up and install the HP Functional Testing Concurrent License Server, including requesting and installing a license key.

Chapter 3 Concurrent License Server Tips and Tricks

Provides hints, tips, and troubleshooting information for working with the HP Functional Testing Concurrent License Server.

Chapter 4 License Server Error Codes

Provides information regarding HP Functional Testing Concurrent License Server errors that may occur.

Chapter 5 Concurrent License Server Utilities

Provides a general overview of the utilities included with the HP Functional Testing Concurrent License Server.

Chapter 6 Uninstalling a Concurrent License Server

Describes how to uninstall the HP Functional Testing Concurrent License Server.

Who Should Read This Guide

This guide is intended for users who need to install, set up, and maintain a HP Functional Testing Concurrent License Server.

Readers of this guide should have some knowledge of system administration.

Additional Online Resources

Mercury Tours sample Web site is the basis for many examples in this guide. The URL for this Web site is newtours.demoaut.com.

Knowledge Base opens directly to the Knowledge Base landing page on the Mercury Customer Support Web site. Choose **Help > Knowledge Base**. The URL for this Web site is support.mercury.com/cgi-bin/portal/CSO/kbBrowse.jsp.

Customer Support Web site accesses the HP Software Support Web site. This site enables you to browse the Support Knowledge Base and add your own articles. You can also post to and search user discussion forums, submit support requests, download patches and updated documentation, and more. Choose **Help > Customer Support Web site**. The URL for this Web site is www.hp.com/go/hpsoftwaresupport.

Most of the support areas require that you register as an HP Passport user and sign in. Many also require a support contract.

To find more information about access levels, go to:
http://h20230.www2.hp.com/new_access_levels.jsp

To register for an HP Passport user ID, go to:
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Send Feedback enables you to send online feedback about **QuickTest Professional** to the product team. Choose **Help > Send Feedback**.

HP Software Web site accesses the HP Software Web site. This site provides you with the most up-to-date information on HP Software products. This includes new software releases, seminars and trade shows, customer support, and more. Choose **Help > HP Software Web site**. The URL for this Web site is www.hp.com/go/software.

Typographical Conventions

This guide uses the following typographical conventions:

UI Elements and Function Names	This style indicates the names of interface elements on which you perform actions, file names or paths, and other items that require emphasis. For example, “Click the Save button.” It also indicates method or function names. For example, “The wait_window statement has the following parameters:”
<i>Arguments</i>	This style indicates method, property, or function arguments and book titles. For example, “Refer to the <i>HP User’s Guide</i> .”
<Replace Value>	Angle brackets enclose a part of a file path or URL address that should be replaced with an actual value. For example, <MyProduct installation folder>\bin .
Example	This style is used for examples and text that is to be typed literally. For example, “Type Hello in the edit box.”
CTRL+C	This style indicates keyboard keys. For example, “Press ENTER.”
[]	Square brackets enclose optional arguments.
{ }	Curly brackets indicate that one of the enclosed values must be assigned to the current argument.
...	In a line of syntax, an ellipsis indicates that more items of the same format may be included. In a programming example, an ellipsis is used to indicate lines of a program that were intentionally omitted.
	A vertical bar indicates that one of the options separated by the bar should be selected.

1

Before You Install

The HP Functional Testing Concurrent License Server Installation Guide for QuickTest Professional, WinRunner, and WinRunner add-ins provides the information you need to install the HP Functional Testing Concurrent License Server and a concurrent license key.

Before you install the concurrent license server, you need the following minimum system requirements:

Computer/Processor	An IBM-PC or compatible with a Pentium III 550 MHz or higher microprocessor
Operating System	Windows 2000/2003/XP
Memory	A minimum of 256 MB of RAM
Free Hard Disk Space	10 MB of free disk space
Accessories	DVD drive (If you install from a local drive)
Protocols	TCP/IP

2

Setting Up the Concurrent License Server

You can work with QuickTest and WinRunner with two types of licenses: seat and concurrent. A **seat** license is a per computer license. A **concurrent** license is a per session license that is available only if your company has a HP Functional Testing Concurrent License Server, your computer has access to that server, and a concurrent license is available for your use.

The HP Functional Testing Concurrent License Server supports concurrent licensing on QuickTest version 6.0 and later, WinRunner version 7.01 and later, and WinRunner add-ins version 7.6 and later.

If you are working with a version of QuickTest or WinRunner later than 8.2.x, you need to use the HP Functional Testing Concurrent License Server version 9.0 or later.

This guide describes everything you need to know about installing the HP Functional Testing Concurrent License Server and a concurrent license key. For information on installing a seat license, see the *HP QuickTest Professional Installation Guide* or the *HP WinRunner Installation Guide*. If you are not sure which type of license to install, refer to the relevant product's installation guide or contact your system administrator or local HP representative.

Note that you must also install the QuickTest or WinRunner client, using the concurrent license option, on each computer on which you want to run QuickTest or WinRunner. When you install a concurrent license, you can install QuickTest or WinRunner on as many computers as you want. However, the HP Functional Testing Concurrent License Server regulates the number of copies of QuickTest and/or WinRunner that are allowed to run concurrently based on your concurrent license key.

You can increase the number of copies of QuickTest or WinRunner that you can run at the same time by purchasing additional QuickTest or WinRunner licenses from HP. To connect to the concurrent license server from QuickTest or WinRunner, you must install a valid license key on the concurrent license server. Note that a demo license option is not available for the HP Functional Testing Concurrent License Server. For information on installing the QuickTest and WinRunner clients, see the *HP QuickTest Professional Installation Guide* or the *HP WinRunner Installation Guide*.

This chapter includes:

- ▶ Setting up QuickTest or WinRunner with a Concurrent License on page 15
- ▶ Upgrading the Concurrent License Server on page 16
- ▶ Installing a Concurrent License Server on page 18
- ▶ Requesting a Concurrent License Key on page 28
- ▶ Installing a Concurrent License Key on page 30
- ▶ Transferring a Concurrent License Server to a Different Network Computer on page 37

Setting up QuickTest or WinRunner with a Concurrent License

Computers running QuickTest or WinRunner using a concurrent license must always be able to access the concurrent license server. This section summarizes the steps for setting up QuickTest or WinRunner with a concurrent license.

Note: You can use the *commuter licensing feature* for computers that temporarily cannot access the concurrent license server (for example, users taking their laptop computers on business trips). The commuter licensing feature is available for HP Functional Testing Concurrent License Server version 7.6 and later. If you have a license key for an earlier version of the concurrent license server, you need to request a new HP Functional Testing Concurrent License Server license key from HP Customer Support. For more information, see “Installing a Concurrent License Key” on page 30.

To set up QuickTest or WinRunner with a concurrent license:

- 1** Install the HP Functional Testing Concurrent License Server on a network computer. For more information, see “Installing a Concurrent License Server” on page 18.
- 2** Request your concurrent license key. For more information, see “Requesting a Concurrent License Key” on page 28.
- 3** Once you receive the concurrent license key from HP, enter the key to install your license on the license server. For more information, see “Installing a Concurrent License Key” on page 30.
- 4** Run the QuickTest or WinRunner setup program on each computer from which you want to run QuickTest or WinRunner. Select **Concurrent License** in the License Type screen. For more information, see the *HP QuickTest Professional Installation Guide* or the *HP WinRunner Installation Guide*.
- 5** Begin using QuickTest or WinRunner. When QuickTest or WinRunner opens, it automatically finds the license server and connects to it.

Note: If your QuickTest or WinRunner client computer cannot find the license server and connect to it, you may need to set the LSHOST or LSFORCEHOST variable. For more information, see “Setting the LSHOST or LSFORCEHOST Variable” on page 56.

Upgrading the Concurrent License Server

If a previous version of the concurrent license server is currently installed on your network computer, you can upgrade to HP Functional Testing Concurrent License Server 9.5.

If you are upgrading the license server on Windows 2000, 2003, or XP, you must have administrator privileges.

To upgrade the concurrent license server:

- 1** Manually stop the Sentinel LM Service. Choose **Start > Settings > Control Panel > Administrative Tools > Services**. In the Services dialog box, right-click **Sentinel LM** and choose **Stop**.
- 2** Save the **lservrc** file to a backup location. The **lservrc** file is located either in the folder in which the Sentinel LM server is currently installed, for example, C:\Program Files\Rainbow Technologies\SentinelLM 7.3.0 Server\English\lservrc, or in the location specified by the **lservrc** environment variable.

Tip: To find the path of **lservrc** environment variable, right-click **My Computer** and choose **Properties**. In the System Properties dialog box, select the **Advanced** tab, and then click **Environment Variables**. The path is displayed in the **User variables for <user>** box of the Environment Variables window for the **lservrc** variable. For example, C:\Program Files\Common Files\HP\License Manager\lservrc.

- 3 Install the HP Functional Testing Concurrent License Server on the license server computer. The license server installation upgrades the license server to the new version. For more information, see “Installing a Concurrent License Server” on page 18.
- 4 After installation, copy the **lservrc** file that you backed up to the following location, depending on whether QuickTest is installed:
 - If QuickTest is installed, copy the file to the location specified by the **lservrc** environment variable.

Tip: To find the path of **lservrc** environment variable, right-click **My Computer** and choose **Properties**. In the System Properties dialog box, select the **Advanced** tab, and then click **Environment Variables**. The path is displayed in the **User variables for <user>** box of the Environment Variables window for the **LSERVRC** variable. For example, C:\Program Files\Common Files\HP\License Manager\lservrc.

- If QuickTest is not installed, copy the **lservrc** file to the same folder as the **lservnt.exe** file, for example, C:\Program Files\Common Files\SafeNet Sentinel\Sentinel LM Server\WinNT\lservnt.exe.

Tip: To find the location of **lservnt.exe**, choose **Start > Settings > Control Panel > Administrative Tools > Services**. In the Services dialog box, right-click **Sentinel LM** and choose **Properties**. The path for **lservnt.exe** is displayed in the **Path to executable** box.

Installing a Concurrent License Server

This section describes how to install a concurrent license server on a computer.

HP Functional Testing Concurrent License Server installs Sentinel LM Server version 8.0.2.

Note: If a previous version of the concurrent license server is already installed on the computer and you want to upgrade to the latest version, you must perform specific steps. For more information, see “Upgrading the Concurrent License Server” on page 16.

It is recommended to install the license server on a computer that is running Windows 2000, 2003, or XP. If you are installing on Windows 2000, 2003, or XP, you must have administrator privileges to install the license server.

You must install the license server on a computer that has TCP/IP installed. To ascertain that TCP/IP is installed and functioning properly, you can check that another computer on the network can identify the computer where you plan to install the license server. On another computer, click **Start > Run**. In the **Open** box, type ping <name of the computer where the license server will be installed>. Click **OK**. If the first computer can identify the second computer on the network, an MS-DOS window opens and four successful reply messages open. If the first computer cannot identify the second computer on the network, an MS-DOS window opens, but there are no successful reply messages.

After you have installed the concurrent license server, it must be running whenever you use QuickTest or WinRunner.

To install the concurrent license server:

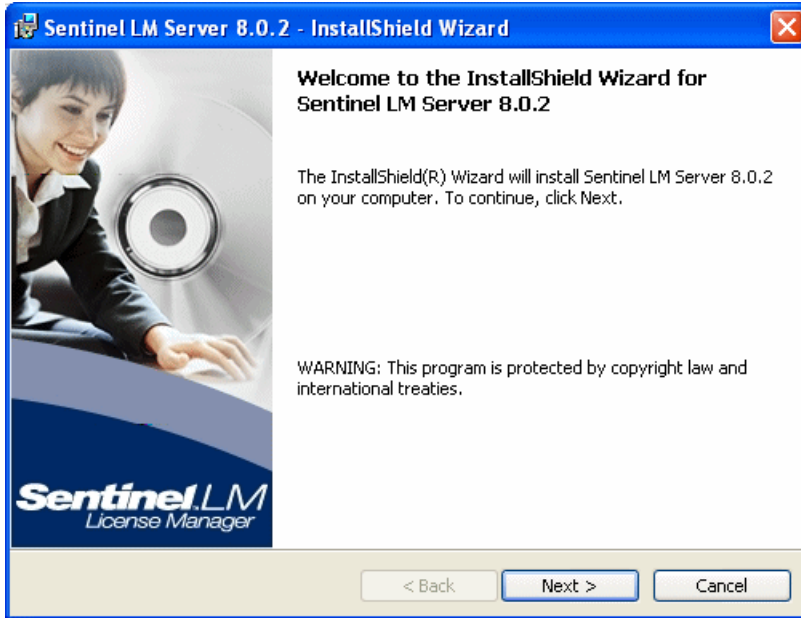
- 1 Insert the HP Functional Testing Concurrent License Server DVD into the drive from which you want to install. If the DVD drive is located on your local computer, the HP Functional Testing Concurrent License Server installation window opens. If you are installing from a network drive, connect to it and run **autorun.exe**.



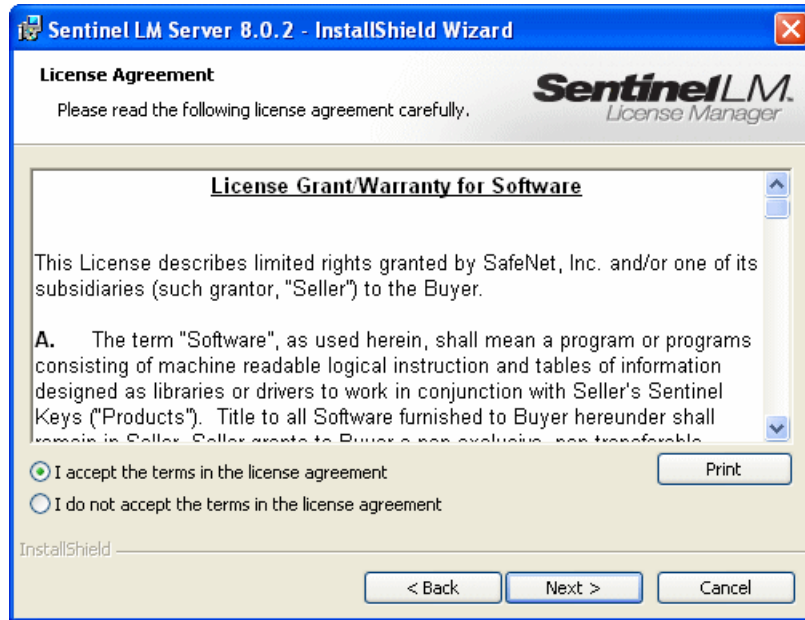
Note: You must be logged on with Administrator privileges (if applicable on your operating system) to install the concurrent license server.

2 Click Install the HP Functional Testing Concurrent License Server.

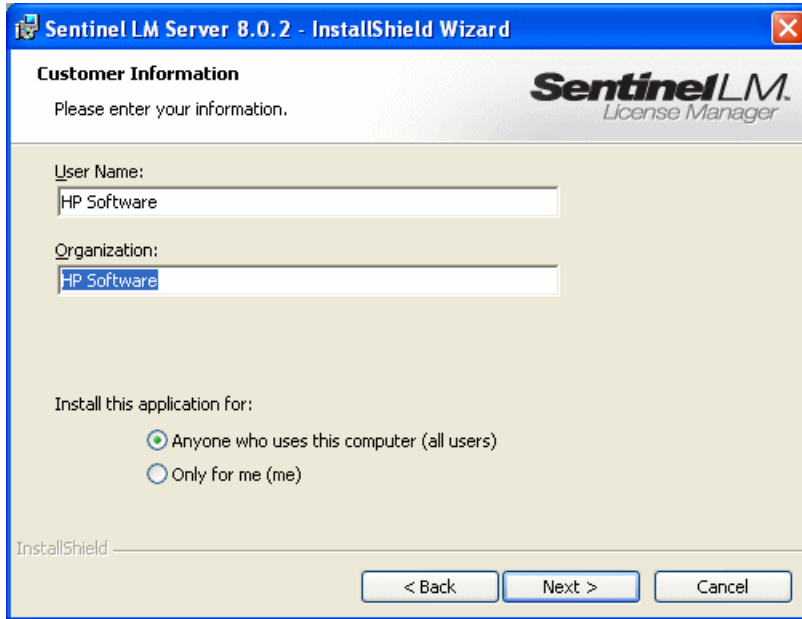
The Sentinel LM Server setup program starts and the Sentinel LM Welcome screen opens.



- 3 Click **Next**. The Sentinel LM License Agreement screen opens.

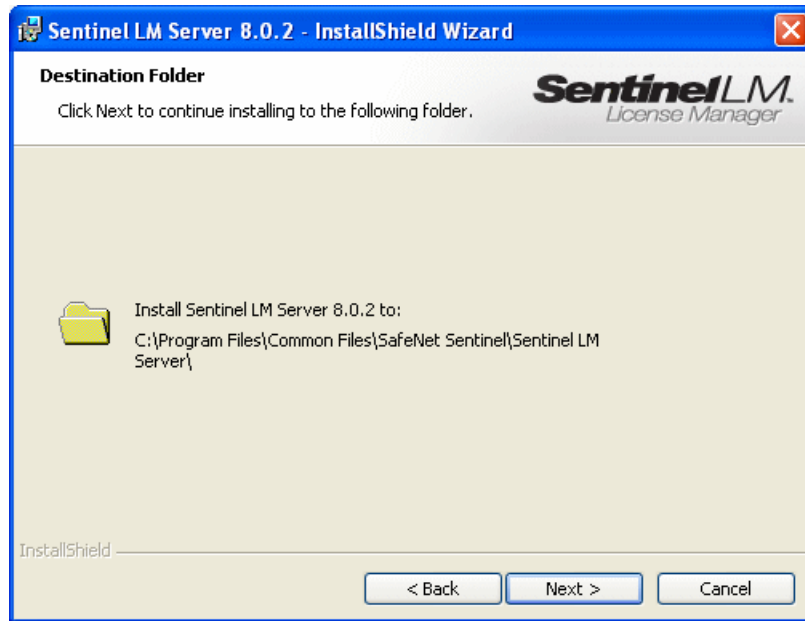


- 4 Select **I accept the terms in the license agreement** and click **Next** to accept the terms of the license agreement and install the HP Functional Testing Concurrent License Server. (If you select **I do not accept the terms in the license agreement**, you will not be able to continue with the installation.) The Customer Information screen opens.



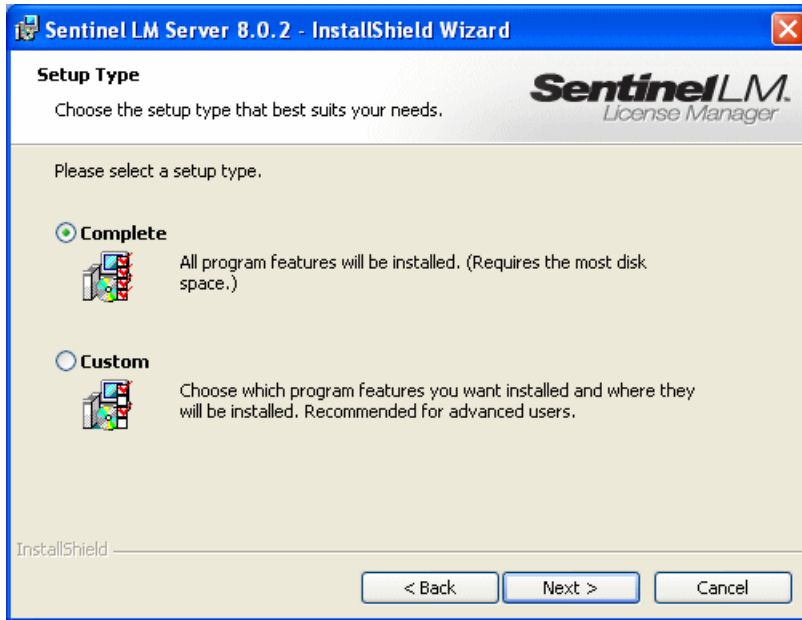
- 5 Type your name and the name of your organization, and then select whether to install the application for anyone using your computer, or only for yourself. Click **Next**. The Destination Folder screen opens.

- The Destination Folder specifies where the HP Functional Testing Concurrent License Server will be installed.



Click **Next** to proceed. The Setup Type screen opens.

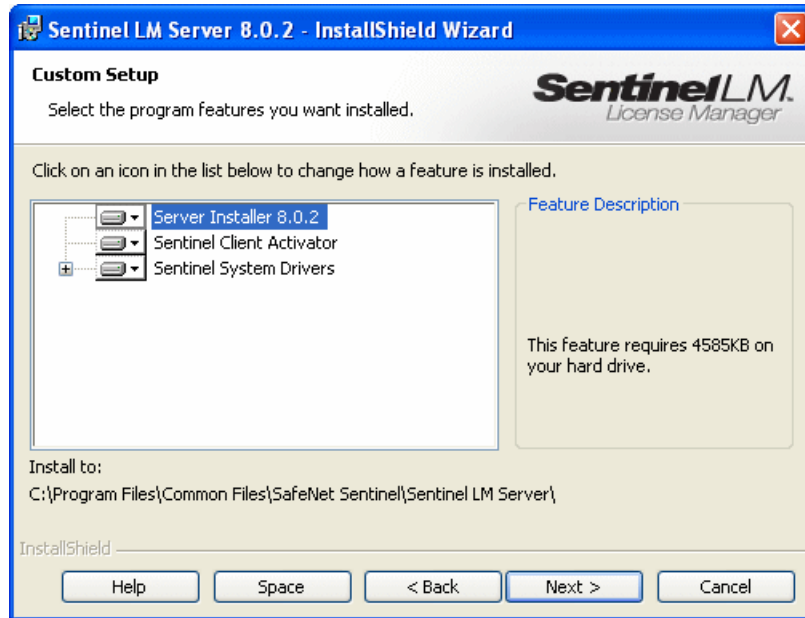
- 7 In the Setup Type screen, select **Complete** or **Custom** installation.



Click **Next** to proceed. If you chose **Custom**, proceed to step 8. If you chose **Complete**, proceed to step 9.

Note: The **Complete** option installs additional program features that are not required for the HP Functional Testing Concurrent License Server. For this reason, you may prefer to select the **Custom** option and install only the required program features, as described below.

- 8 In the Custom Setup screen, select the features you want to install, and how they should be installed. You must install the **Server Installer 8.0.2** feature. Other features are optional, and are not used by the HP Functional Testing Concurrent License Server.



You can click the dropdown arrow next to each feature, and then select whether to install only the feature, or the feature and all its sub-features, to the local hard drive.

Click **Next**.

Tip: Click **Space** to view the disk space requirements for the selected features.

- 9 If you are installing the license server on an operating system that has an enabled Windows firewall, for example, Windows XP Service Pack 2, a screen opens indicating that you need to modify the computer's firewall settings, as shown in the example below. (If you are installing the license server on an operating system that does not have an enabled Windows firewall, proceed to step 10.)

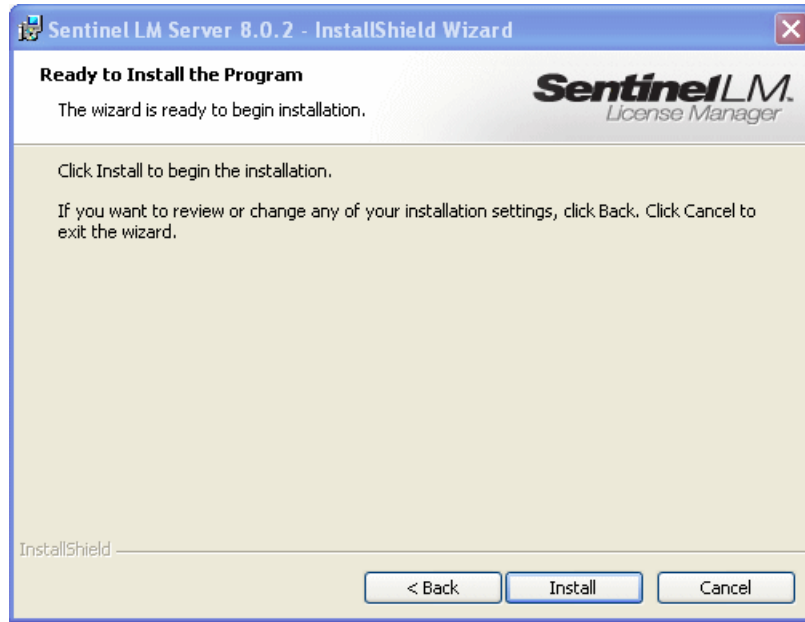
Select the **Unblock Firewall for Sentinel LM** check box to enable communication between the Sentinel LM server (concurrent license server) and the network clients. If you clear the check box, computers running QuickTest or WinRunner using a concurrent license will not be able to access the concurrent license server.



Note: If you choose to unblock the Windows firewall for Sentinel LM at a later time, refer to the Windows operating system documentation for assistance.

Click **Next**.

- 10 The Ready to Install the Program screen opens.



Click **Install**.

- 11 The installation process begins. To pause or quit the installation process, click **Cancel**.
- 12 When the installation is complete, the InstallShield Wizard Completed screen opens. Click **Finish** to exit the wizard and complete the installation process.

Once you have installed the concurrent license server, you must request and install the concurrent server license key before you can use QuickTest or WinRunner. Note that there is no concurrent demo license available.

Requesting a Concurrent License Key

Once the concurrent license server is installed, you must run the Concurrent License Server license installation program to request your license key from HP. You must run the Concurrent License Server license installation program on the computer on which you installed the concurrent license server.

To request a concurrent license key:

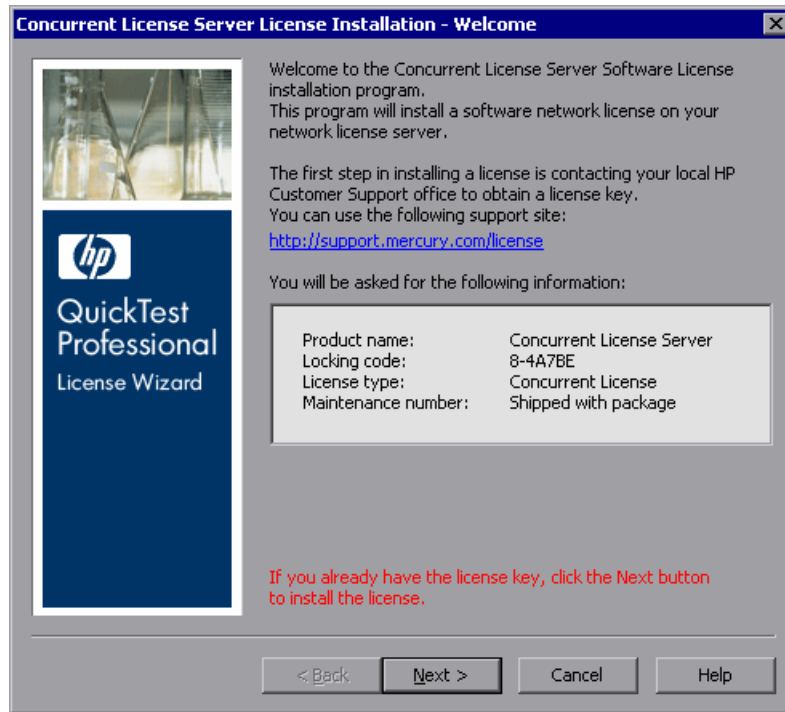
- 1 Insert the HP Functional Testing Concurrent License Server DVD into the drive from which you want to install. If the DVD drive is located on your local computer, the HP Functional Testing - License Server Installation window opens.

If you are installing from a network drive, connect to it and run **autorun.exe**.



2 Click **Install Concurrent License**.

The Concurrent License Server license installation program starts and the Welcome screen opens, displaying the locking code for your computer and the license type.



- 3 Request your license key as per the instructions included in your package. For more information, contact your HP Functional Testing products supplier or Customer Support. You will receive your license key via e-mail.
- 4 If you already have your license key, proceed to step 4 on page 33 in the “Installing a Concurrent License Key” section. Otherwise, click **Cancel** and wait for your license key to arrive. When it arrives, follow the instructions as described in “Installing a Concurrent License Key” on page 30.

Installing a Concurrent License Key

Once you receive your license key from HP, you must run the Concurrent License Server license installation program again to install the key. The concurrent license key must be installed on the computer on which you installed the concurrent license server.

You cannot install a concurrent license key remotely (for example, using Symantec pcAnywhere, Citrix, or Terminal Server).

To install your concurrent license key:

- 1 Insert the QuickTest Professional installation DVD into the DVD drive. If the DVD drive is on your local computer, the QuickTest Professional Setup window opens.

If you are installing from a network drive, double-click **setup.exe** in the root folder of the DVD. The QuickTest Professional Setup window opens.

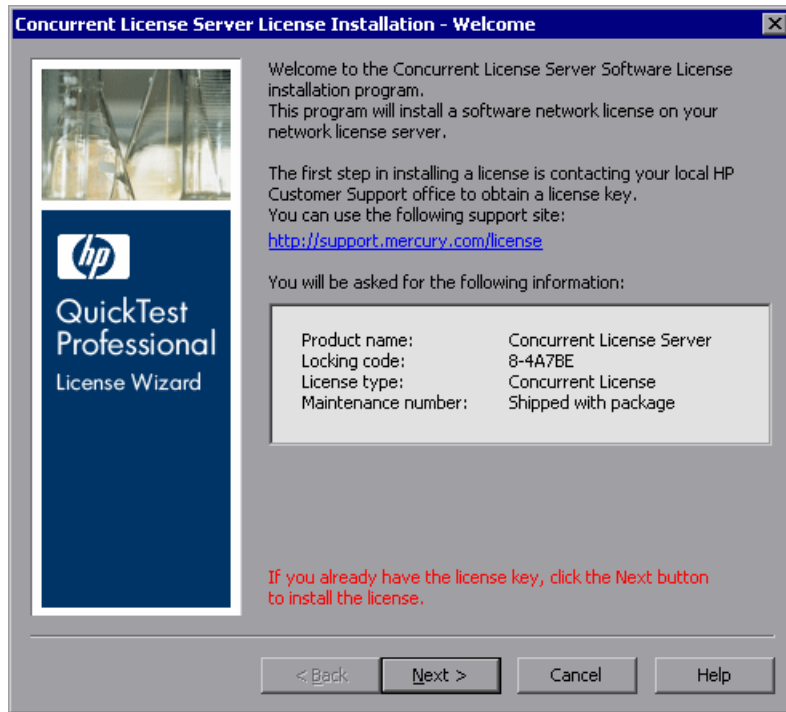


- 2 Select **License Server Setup**. The QuickTest Professional Concurrent License Server setup screen opens.

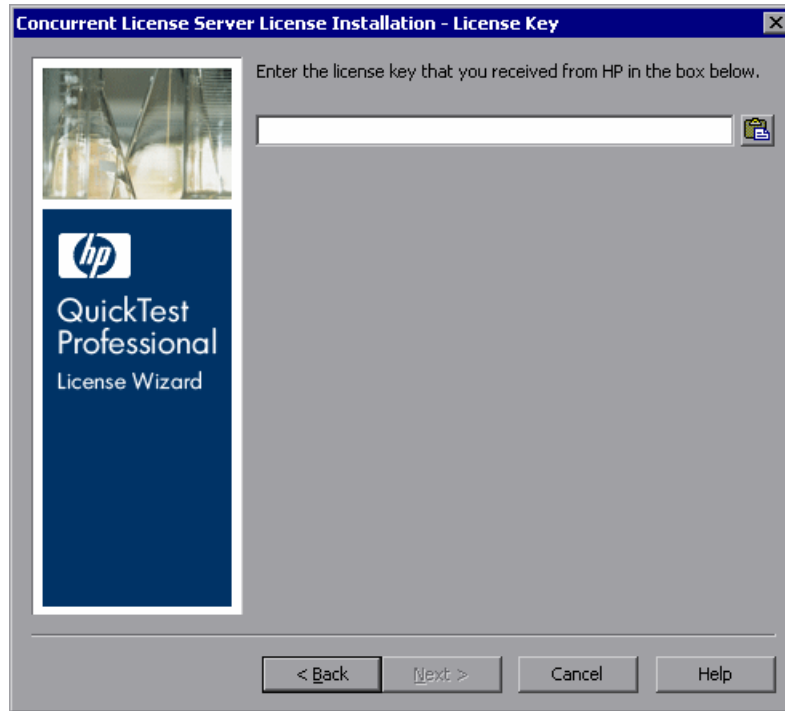


3 Click Install Concurrent License.

The Concurrent License Server license installation program starts and the Welcome screen opens, displaying the locking code for your computer and the license type.



- 4 Click **Next** to begin installing the license. The License Key screen opens.



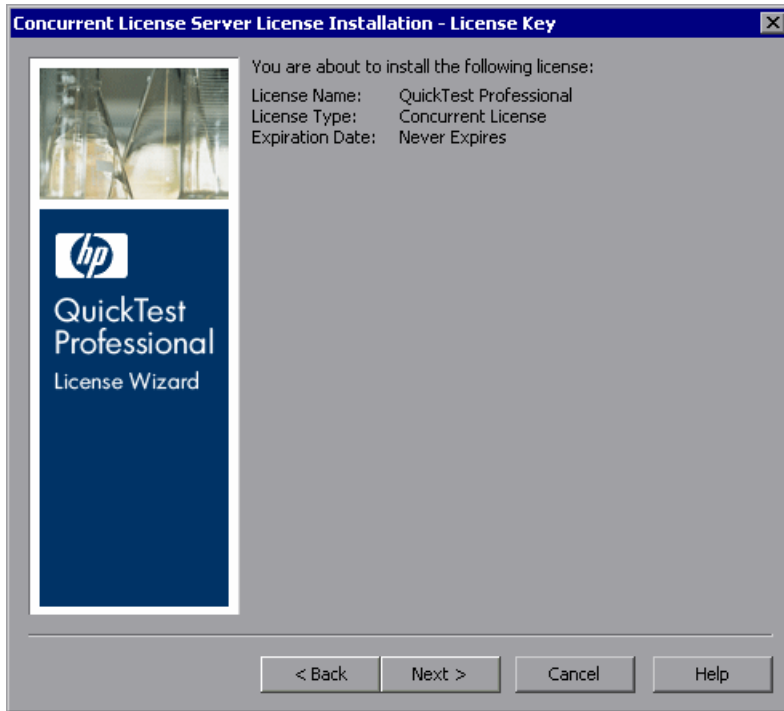
Note: The license key is valid only for the computer with the locking code that you submitted to HP.

- 5 Enter the license key that you received from HP, including the # character at the end of the license key.

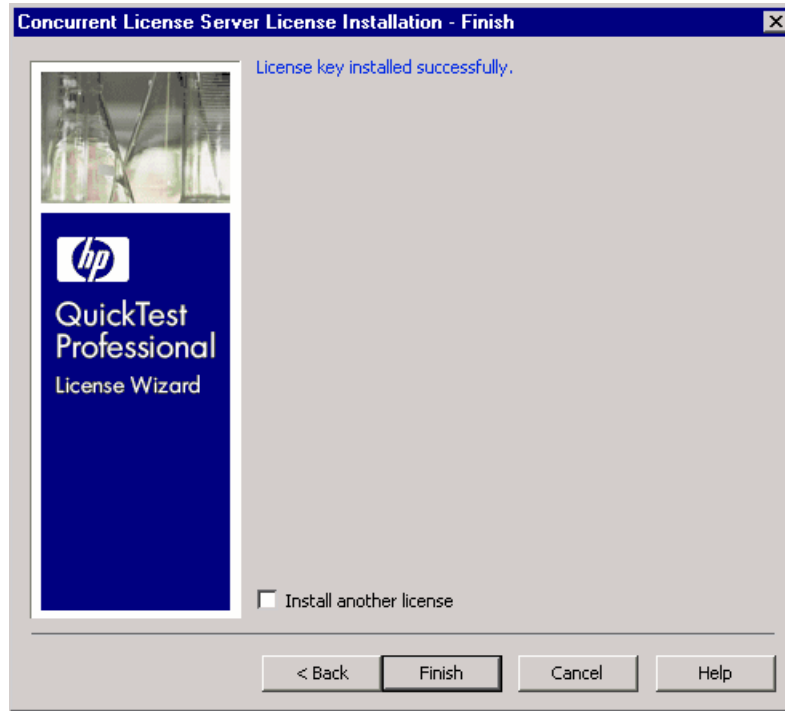


Tip: If you copy the license key to your clipboard, you can paste it in the license key box by clicking the **Paste From Clipboard** button.

6 Click **Next**. The Install Summary screen opens.



- 7 Verify that the information is correct and click **Next**. The Finish screen opens.



If you entered a valid license key, the Finish screen confirms that your license key was successfully installed.

If the license could not be installed successfully, a message is displayed, describing why. For example, if you did not enter the license key correctly, the installation will not succeed. If the license could not be installed, a **Send to support** button is displayed. You can click **Send to support** to create an e-mail with licensing information and send it to your nearest customer support location. Make sure that you fill in the required information in the e-mail so that customer support can assist you.

Tip: You can install another license by selecting the **Install another license** check box, then repeating steps 5 to 7.

- 8** If you do not want to install another license, click **Finish** to complete the license installation process and close the wizard.
-

Notes:

For more information on licensing and the HP Functional Testing Concurrent License Server, search the Customer Support Knowledge Base located in the HP Customer Support Web site.

If you are using the HP Functional Testing Concurrent License Server with QuickTest Professional, refer to the QuickTest Professional Knowledge Base (<http://support.mercury.com/cgi-bin/portal/CSO/kbBrowse.jsp>) and search for Problem ID 18251, *Top Astra QuickTest/QuickTest Professional Licensing Articles*.

If you are using the HP Functional Testing Concurrent License Server with WinRunner, refer to the WinRunner Knowledge Base (<http://support.mercury.com/cgi-bin/portal/CSO/kbBrowse.jsp>) and search for Problem ID 11625, *Top WinRunner Licensing Articles*.

Transferring a Concurrent License Server to a Different Network Computer

You may want to transfer your HP Functional Testing Concurrent License Server from one network computer to another.

To transfer your license server to a different computer:

- 1** Run the Concurrent License Server installation program to install the concurrent license server on the new computer, as described in “Installing a Concurrent License Server” on page 18.
- 2** Run the Concurrent License Server license installation program, and request a concurrent license key, as described in “Requesting a Concurrent License Key” on page 28. In your request, indicate that you are transferring your existing license server to a new computer.
- 3** After you receive and install your new concurrent license key on the new network computer, uninstall the concurrent license server from the old network computer.

3

Concurrent License Server Tips and Tricks

This chapter provides hints, tips, and troubleshooting information for your concurrent license server. It also describes how to stop and restart the concurrent license server.

This chapter includes:

- ▶ General Tips on page 39
- ▶ Stopping and Restarting the Concurrent License Server on page 40
- ▶ Locking Codes on page 41
- ▶ Known Problems and Workarounds on page 41

General Tips

When the client computers running QuickTest and/or WinRunner are on multiple domains, you should install a license server on each domain.

It is recommended to install the license server on a computer running Windows NT 4.0, 2000, 2003, or XP. The computer should also have a fixed IP address and must have TCP/IP installed.

Stopping and Restarting the Concurrent License Server

If you want to reset the license server, it is recommended to restart the computer. You can also turn off the license server and then turn it on again without restarting the computer by following the instructions below.

Note: The concurrent license server starts automatically at startup on the host computer.

To stop and restart the license server if the host computer is running Windows 2000, 2003, or XP:

- 1 Click **Start > Settings > Control Panel**.
- 2 Double-click **Administrative Tools** and then double-click **Services**. The **Services** dialog box opens.
- 3 In the **Services (Local)** list, select **Sentinel LM** and click **Stop Service**.
- 4 To restart the license server, highlight **Sentinel LM** and click **Start Service**.

Tips:

- ▶ You can highlight **Sentinel LM** and click **Restart Service** to stop and then restart the license server.

You can also shut down the license server using the LSRVDOWN utility. For more information, see page 49.

To stop and restart the license server if the host computer is running Windows NT 4.0:

- 1 Click **Start > Settings > Control Panel**.
- 2 Double-click **Services**. The **Services** dialog box opens.
- 3 In the **Service** list, select **Sentinel LM** and click **Stop**.
- 4 To restart the license server, highlight **Sentinel LM** and click **Start**.

Locking Codes

A locking code is a number generated by a license server or a seat license host. Every computer has its own locking code. The locking code, together with the maintenance number, are used to generate the license key for the server computer. A license key that is generated based on the locking code from one computer cannot be used on another computer.

Known Problems and Workarounds

The following table provides the known problems and workarounds:

Problem	Workaround
The concurrent license server is installed on a different domain/subnet than the QuickTest or WinRunner clients.	<p>Open UDP port 5093 between domains. Set the LSHOST or LSFORCEHOST parameters on the QuickTest or WinRunner client computers. For more information, see “Setting the LSHOST or LSFORCEHOST Variable” on page 56.</p> <p>To check the connection, use ping -a from the Windows command line.</p> <p>If this is successful, it should display: Reply from <server i.p. address> : <byte size> < time >.</p>
You want to install concurrent license servers on Novell or Unix computers.	The concurrent license server software does not support Novell or Unix. Generate a seat license key for each QuickTest or WinRunner client computer. Alternatively, use a Windows platform network computer as your concurrent license server.

Problem	Workaround
Although you have a legal license key installed on your concurrent license server, you cannot start QuickTest or WinRunner.	If you install QuickTest or WinRunner using the setup.exe file instead of from the autorun screen, it automatically installs QuickTest or WinRunner with the seat license option. In the message box that opens when you try to open QuickTest or WinRunner, click Install License . This opens the License Installation utility, which enables you to change your license type to the concurrent license option.
You have changed the date on the computer where the concurrent license server is installed, for example, due to date operations testing. This locked the concurrent license server license key.	Restore the computer's clock to the original date and contact HP Customer Support for further assistance.

For more information about these and other issues, refer to the QuickTest and/or WinRunner Knowledge Base in the HP Customer Support Web site at <http://support.mercury.com/cgi-bin/portal/CSO/kbBrowse.jsp>.

4

License Server Error Codes

This chapter provides information regarding concurrent license server error messages that may open.

This chapter describes:

- ▶ Error 5: Cannot talk to the license manager. “LocalHost” server not running
- ▶ Error 19: Cannot install a license code

Error 5: Cannot talk to the license manager. “LocalHost” server not running

The concurrent license server has stopped.

- ▶ For Windows NT, choose **Start > Settings > Control Panel > Services**. Locate the Sentinel LM service and click **Start**.
- ▶ For Windows 2000, 2003, and XP, choose **Start > Programs > Administrative Tools > Services**. Locate the Sentinel LM service and click **Start**.

If the license server does not start, contact HP Customer Support for assistance.

Error 19: Cannot install a license code

Error 19 can occur in two situations:

► **Failed to add license string "Unknown" to the license server on "NO-NET."**

A seat license cannot be installed on the concurrent license server running on the specified computer.

► **Failed to add license string UNKNOWN to the license server on "Local-host."**

A concurrent license cannot be installed on the concurrent license server running on the specified computer.

Reasons that Error 19 Occurs

The following table provides general information about why error 19 occurs:

Possible Causes	Possible Solutions
The license key is node-locked and does not match the locking code of the PC where the license server is being installed.	Contact HP Customer Support to reissue the license with the correct license key.
When you try to install a seat license, the license key is for a concurrent license.	Copy lsdecode.exe from the LicenseServer\utils folder on the QuickTest Professional installation DVD to Program Files\Common Files\HP\License Manager and run the lsdecode.exe file. This displays the license key information, which enables you to verify that you are installing the correct license type.

Possible Causes	Possible Solutions
The license key was entered incorrectly.	Copy Isdecode.exe from the LicenseServer\utils folder on the QuickTest Professional installation DVD to Program Files\Common Files\HP\License Manager and run the Isdecode.exe file. This displays the license key information, which enables you to verify that you are installing the correct license type.
The license key has already been installed.	<p>Check whether the Iservrc file exists. The location of the file depends on whether QuickTest is currently installed.</p> <ul style="list-style-type: none"> ▶ If QuickTest is installed, the location of the file is specified by the Iservrc environment variable. <ul style="list-style-type: none"> Tip: To find the path of Iservrc environment variable, right-click My Computer and choose Properties. In the System Properties dialog box, select the Advanced tab, and then click Environment Variables. The path is displayed in the User variables for <user> box of the Environment Variables window. For example, C:\Program Files\Common Files\HP\License Manager\Iservrc. ▶ If QuickTest is not installed, the file is located in the same folder as Iservnt.exe. By default, this is C:\Program Files\Common Files\SafeNet Sentinel\Sentinel LM Server\WinNT\. <ul style="list-style-type: none"> Tip: To find the path of Iservnt.exe, choose Start > Settings > Control Panel > Administrative Tools > Services. In the Services dialog box, right-click Sentinel LM and choose Properties. The path for Iservnt.exe is displayed in the Path to executable box. <p>If the Iservrc file exists, the license key is installed already. You may use the license server.</p>

5

Concurrent License Server Utilities

This chapter provides a general overview of the utilities included with the HP Functional Testing Concurrent License Server. These utilities assist you in managing your QuickTest Professional and WinRunner concurrent licenses, and are part of the Sentinel License Manager, which is supplied with the HP Functional Testing Concurrent License Server.

For more information about the utilities described in this chapter, refer to the *Sentinel LM System Administrator's Help* located in the **LicenseServer\server\SysAdminHelp** folder of the QuickTest Professional installation DVD. (Open the **index.html** file to access the help.)

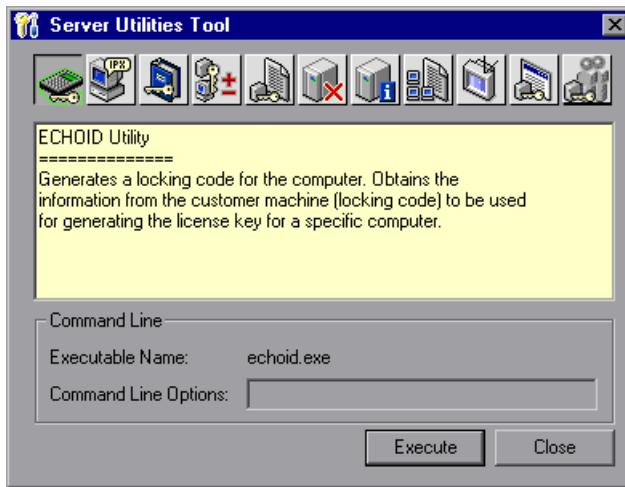
This chapter includes:

- Overview on page 48
- Displaying Current Concurrent License Server Users on page 53
- Displaying License Servers on page 53
- Monitoring License Servers on page 54
- Setting the LSHOST or LSFORCEHOST Variable on page 56

Overview

You can use the WLMADMIN utility to monitor a concurrent license server. You can use the other HP Functional Testing server management utilities to verify and manage specific elements of your concurrent license server.

You can start HP Functional Testing server management utilities from a Windows user interface by running **SrvUtils.exe** in the **LicenseServer\utils** folder of the QuickTest Professional installation DVD.



When the Server Utilities Tool opens, select the utility you want to run, and click **Execute**.

The following table provides a brief description of the HP Functional Testing license management utilities and brief examples to facilitate usage:

Utility	Description/Example of Usage
ECHOID Utility echoid.exe	Generates a computer's locking code. Obtains the information from your computer (locking code) that is used to generate the license key for a specific computer.
IPXECHO Utility ipxecho.exe	Displays the IPX network address on the computer on which it is run. Used to determine the IPX address of a license server.

Utility	Description/Example of Usage
LSDECODE Utility lsdecode.exe	<p>Displays the license key information, which enables you to check that you are installing the correct license type.</p> <p>It decodes a HP Functional Testing concurrent license key (lservrc) and retrieves license information, for example, the license type, the maximum number of concurrent users, and so forth.</p> <p>Make sure that the server utilities application (SrvUtils.exe) and the LSDECODE utility (lsdecode.exe) are located in the same directory as the lservrc file.</p>
LSLIC Utility lslic.exe	<p>Adds or removes a license key. You can use the following command line options:</p> <ul style="list-style-type: none"> ▶ -a (add) -f (file name): adds a license key from a license file ▶ -removeall removes all licenses from a HP Functional Testing Concurrent License Server <p>Either use the LSHOST environment variable to specify the license server or ensure that the server utilities application (SrvUtils.exe) and the LSLIC utility (lslic.exe) are located in the same directory as the lservrc file.</p>
LSMON Utility lsmon.exe	<p>Monitors a HP Functional Testing Concurrent License Server computer.</p> <p>You can run the LSMON utility on a client computer (running QuickTest or WinRunner, and connected to a concurrent license server) or the host computer (the license server).</p> <p>To monitor a remote HP Functional Testing Concurrent License Server, specify <host name> or <IP address>. For example, <code>c:\lsmon.exe saturn</code> monitors the saturn host. For more information on this utility, see “Displaying Current Concurrent License Server Users” on page 53.</p>
LSRVDOWN Utility lsrvcdown.exe	<p>Shuts down the license server.</p> <p>Specify the license server host name as the command line option for this utility.</p> <p>You can also shut down the license server by stopping the service. For more information, see “Stopping and Restarting the Concurrent License Server” on page 40.</p>

Utility	Description/Example of Usage
<p>LSUSAGE Utility lsusage.exe</p>	<p>Displays usage information generated by the license server. The license server logs all license keys issued or denied, but it does not record license key updates.</p> <p>For example, <code>lsusage.exe -l Usage-log-file</code></p> <ul style="list-style-type: none"> ▶ <code>[-c CSV-Format-New-log-file]</code> ▶ <code>[-f Feature-Name1,Version:Feature-Name2,Version ...]</code> ▶ <code>[-y Start-Year(YYYY) [-m Start-Month(MM) [-a Start-Day(DD)]]]</code> ▶ <code>[-Y End-Year(YYYY) [-M End-Month(MM)] [-A End-Day(DD)]]]</code>
<p>LSWHERE Utility lswhere.exe</p>	<p>Searches for HP Functional Testing Concurrent License Servers on the network and displays the names of all the computers running license servers. You can run this utility on a client computer (running QuickTest or WinRunner, and connected to a concurrent license server) or the host computer (the license server). The parameter <code>-<IP address></code> searches for a specific network host.</p> <p>For more information on this utility, see “Displaying License Servers” on page 53.</p>
<p>SLMDEMO Utility slmdemo.exe</p>	<p>Simulates license usage. This utility can "add" or "remove" licenses to or from a specific server and produce a log file. You can use this utility to check that the license key is installed correctly on the license server host and that you have the correct number of concurrent licenses.</p>
<p>WLMADMIN Utility WLMAdmin.exe</p>	<p>Monitors HP Functional Testing Concurrent License Server transactions and provides information on license servers, users, and computers running QuickTest or WinRunner using a concurrent license server. You can use this utility to check that a HP Functional Testing Concurrent License Server is running, and to monitor its usage.</p> <p>For more information on this utility, see “Monitoring License Servers” on page 54.</p>

Utility	Description/Example of Usage
<p>WLSGRMGR Utility Wlsgrmgr.exe</p>	<p>Provides an easy way to create a reservation file that reserves license tokens for specific network users or computers, or excludes specific users or computers from using license tokens.</p>
<p>WCommute.exe</p>	<p>Enables a concurrent license user to check out and check in a commuter license for QuickTest or WinRunner (either on the local computer or on a remote computer). A commuter license enables concurrent license users to temporarily use QuickTest or WinRunner on a computer that is temporarily not connected to the network.</p> <p>For more information on this utility, see the <i>HP QuickTest Professional Installation Guide</i> or the <i>HP WinRunner Installation Guide</i>.</p> <p>Note that this utility can be activated only from the command line, and not from within the Server Utilities Tool window.</p>
<p>WRCommute.exe</p>	<p>Enables a concurrent license user to generate a locking code for a remote computer, which can be used to obtain and install a commuter license for QuickTest or WinRunner.</p> <p>For more information on this utility, see the <i>HP QuickTest Professional Installation Guide</i> or the <i>HP WinRunner Installation Guide</i>.</p> <p>Note that this utility can be activated only from the command line, and not from within the Server Utilities Tool window.</p>

The following table provides a description of variables used on QuickTest or WinRunner client computers to designate or control which concurrent license server(s) can be used:

Utility	Description/Example of Usage
LSFORCEHOST variable	Restricts a QuickTest or WinRunner client to a specific concurrent license server. (You can specify the license server by either host name or IP address.) For information on setting this variable, see “Setting the LSHOST or LSFORCEHOST Variable” on page 56.
LSHOST variable	Specifies the preferred concurrent license server for a QuickTest or WinRunner client. If the specified concurrent license server cannot be found, then a search is conducted on the entire network. Use this variable in order to contact a server in a remote subnet. For information on setting this variable, see “Setting the LSHOST or LSFORCEHOST Variable” on page 56.

Displaying Current Concurrent License Server Users

You can run the LSMON utility on a client computer (running QuickTest or WinRunner, and connected to the concurrent license server) or the host computer (the concurrent license server).

The LSMON utility is a DOS-based program that displays:

- ▶ the maximum number of concurrent QuickTest or WinRunner users allowed.
- ▶ the number of computers currently connected to the concurrent license server.
- ▶ the IDs of the computers currently connected to the concurrent license server.
- ▶ the number of licenses currently not in use.

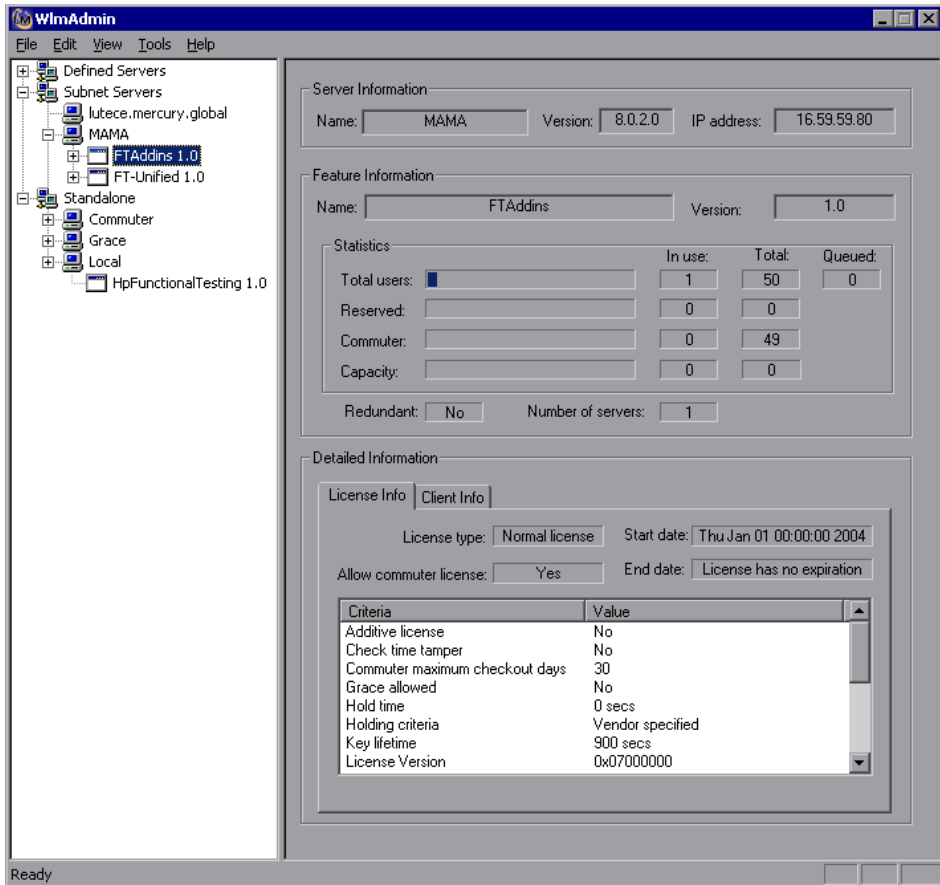
Note: To run the LSMON utility from a client computer and display information for all the computers in the network, type `LSMON <license server host name>`.

Displaying License Servers

You can run the LSWHERE utility on a client computer (running QuickTest or WinRunner, and connected to the concurrent license server) or the host computer (the concurrent license server). It is a Windows-based program that displays the network names of all computers running the HP Functional Testing Concurrent License Server.

Monitoring License Servers

You can run the WLMADMIN utility on a client computer (running QuickTest or WinRunner, and connected to the concurrent license server) or the host computer (the concurrent license server). It enables you to monitor license server transactions for each HP product connected to the server and provides information on license servers, users, and computers running HP products using concurrent licenses. You can use this utility to monitor license server activity.



Note that QuickTest and WinRunner can share the same concurrent license server.

Note: The feature (license) names indicate the earliest supported version. For example, the feature **QuickTestPro 6.0** supports QuickTest Professional, version 6.0 and later; the feature **WR-core 7** supports WinRunner 7.0 and later.

Understanding How the License Server Determines the Type of License to Issue

When a user opens a QuickTest or WinRunner client that is set to work with a concurrent license, the client sends a license request to the concurrent license server. If the concurrent license server has multiple licence types available, for example, **HpFunctionalTesting 1.0**, **FT-Unified 1.0**, **QuickTestPro 6.0**, and **WR-core 7**, the functional testing tool applies program logic to determine the license type to request for this session. The license type may be product-specific, such as **QuickTestPro 6.0** or **WR-core 7**, or global and applicable to both QuickTest and WinRunner—**HpFunctionalTesting 1.0** or **FT-Unified 1.0**.

The first time a QuickTest or WinRunner client sends a request to the concurrent license server, it requests a product-specific license. If that license type is available, the concurrent license server issues it. If that license type is unavailable, the functional testing tool requests a global license. If no license is available, the functional testing tool displays a message indicating that all licenses are in use.

For subsequent sessions, the functional testing tool always requests the same type of license that was issued during the previous session. If that license type is unavailable, the functional testing tool requests the alternate license type.

For example, if the last time that the QuickTest client connected to the license server it was issued a **QuickTestPro 6.0** license, it requests the same license type again. If no **QuickTestPro 6.0** license is available, it requests an **FT-Unified 1.0** license.

Similarly, if the last time that the WinRunner client connected to the license server, it was issued an **FT-Unified 1.0** license, it requests the same license type again. If no **FT-Unified 1.0** license is available, it requests a **WR-core 7** license.

Setting the LSHOST or LSFORCEHOST Variable

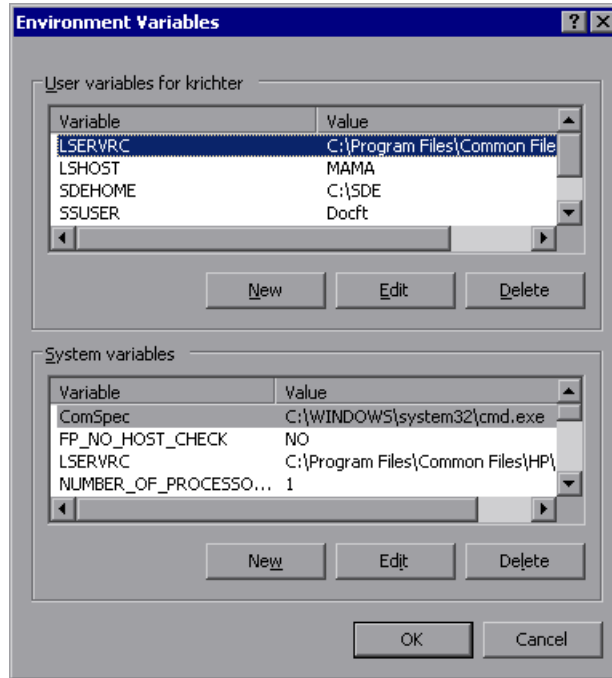
In addition to using the License Wizard to specify the concurrent license server to which you want QuickTest or WinRunner to connect, you can also specify a concurrent license server using Windows Environment variables. For example, you can use the LSHOST variable to set the preferred concurrent license server for a QuickTest client. If the specified concurrent license server cannot be found in the local subnet, then a search is conducted on the entire network. Alternatively, you can use the LSFORCEHOST variable to restrict QuickTest or WinRunner to a specific concurrent license server. The LSFORCEHOST variable restricts QuickTest or WinRunner to a specific concurrent license server. The LSHOST and LSFORCEHOST variables are described on page 52.

You may need to set the LSHOST or LSFORCEHOST variable if the HP Functional Testing Concurrent License Server is installed on a different domain or subnet than the QuickTest or WinRunner clients, as described in “Known Problems and Workarounds” on page 41.

Note: If you installed a concurrent license using the License Wizard, the LSHOST user variable is already defined with the concurrent license server you specified.

To set the LSHOST or LSFORCEHOST variables:

- 1 Open the Environment Variables dialog box. (Choose **Start > Settings > Control Panel > System**. In the System Properties dialog box, click the **Advanced** tab. Then click the **Environment Variables** button. The Environment Variables dialog box opens.)



Note: If the concurrent license server is already defined using an LSHOST or LSFORCEHOST system variable, you do not need to define it using the user variable.

- 2 Under **User variables for <user name>**, click **New**. The New User Variable dialog box opens.

- 3 In the **Variable Name** box, type LSHOST or LSFORCEHOST.
- 4 In the **Variable Value** box, type the full name of the concurrent license server. Alternatively, you can enter the IP address of the host computer.

Notes:

The LSHOST and LSHOSTFORCE environment variable values can contain up to 64 characters.

For multiple host names (for example, where there are HP Functional Testing Concurrent License Servers running on one network), use a semicolon (;) to separate the hosts' names or IP addresses in the **Variable Value** box.

- 5 Click **OK** to close the New User Variable dialog box.
- 6 Click **OK** to close the Environment Variables dialog box.
- 7 Click **OK** to close the System Properties dialog box.

6

Uninstalling a Concurrent License Server

You can uninstall the concurrent license server, if needed.

If you uninstall a concurrent license server, computers that previously used concurrent licenses from this server will not be able to run their QuickTest or WinRunner clients. To run a QuickTest or WinRunner client, you must install a seat license on each QuickTest and WinRunner computer, or set up the computers to access a different concurrent license server. For more information about changing a concurrent license to a seat license, see the *QuickTest Professional Installation Guide* or the *WinRunner Installation Guide*.

If you want to uninstall the license server in order to reinstall it on a different computer, contact HP Customer Support to receive a new license key that matches the locking code for the computer on which you want to install the license server.

To uninstall the concurrent license server:

- 1 Save the **lservrc** file to a backup location. The location of the **lservrc** file depends on whether QuickTest is currently installed.
 - If QuickTest is installed, the file location is specified by the **lservrc** environment variable.

Tip: To find the path of **lservrc** environment variable, right-click **My Computer** and choose **Properties**. In the System Properties dialog box, select the **Advanced** tab, and then click **Environment Variables**. The path is displayed in the **User variables for <user>** box of the Environment Variables window for the **LSERVRC** variable. For example, C:\Program Files\Common Files\HP\License Manager\lservrc.

- If QuickTest is not installed, the file is located in the same folder as **lservnt.exe**. By default, this is C:\Program Files\Common Files\SafeNet Sentinel\Sentinel LM Server\WinNT\.

Tip: To find the location of **lservnt.exe**, choose **Start > Settings > Control Panel > Administrative Tools > Services**. In the Services dialog box, right-click **Sentinel LM** and choose **Properties**. The path for **lservnt.exe** is displayed in the **Path to executable** box.

2 Click **Start > Settings > Control Panel > Add/Remove Programs**.

The Add/Remove Programs dialog box opens.

3 Choose **Sentinel LM Server 8.x.x** and click **Remove**.

4 Follow the displayed instructions.

Note: You can also uninstall the concurrent license server by using the **autorun.exe** file located in the **LicenseServer** folder on the QuickTest Professional installation DVD. Do not use the DVD to uninstall any other version of the license server, as this may cause unexpected behavior.
