

# HP Functional Testing Concurrent License Server

Software Version: 10.00

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## Installation Guide

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- Software Release Date, which indicates the release date of this version of the software.

To check for recent updates, or to verify that you are using the most recent edition of a document, go to:

**<http://h20230.www2.hp.com/selfsolve/manuals>**

This site requires that you register for an HP Passport and sign-in. To register for an HP Passport ID, go to:

**<http://h20229.www2.hp.com/passport-registration.html>**

Or click the **New users - please register** link on the HP Passport login page.

You will also receive updated or new editions if you subscribe to the appropriate product support service. Contact your HP sales representative for details.

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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
- ▶ QuickTest Professional Online Documentation on page 9
- ▶ Additional Online Resources on page 11

## 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 an HP Functional Testing Concurrent License Server.

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



## QuickTest Professional Online Documentation

QuickTest Professional includes the following online documentation:

**Readme** provides the latest news and information about QuickTest. Select **Start > Programs > QuickTest Professional > Readme**.

**HP QuickTest Professional Installation Guide** explains how to install and set up QuickTest. Select **Help > Printer-Friendly Documentation > HP QuickTest Professional Installation Guide**.

**HP QuickTest Professional Tutorial** teaches you basic QuickTest skills and shows you how to design tests for your applications. Select **Help > QuickTest Professional Tutorial**.

**Product Feature Movies** provide an overview and step-by-step instructions describing how to use selected QuickTest features. Select **Help > Product Feature Movies**.

**Printer-Friendly Documentation** displays the complete documentation set in Adobe portable document format (PDF). Online books can be viewed and printed using Adobe Reader, which can be downloaded from the Adobe Web site (<http://www.adobe.com>). Select **Help > Printer-Friendly Documentation**.

**QuickTest Professional Help** includes:

- ▶ **What's New in QuickTest Professional** describes the newest features, enhancements, and supported environments in the latest version of QuickTest.
- ▶ **HP QuickTest Professional User Guide** describes how to use QuickTest to test your application.
- ▶ **HP QuickTest Professional for Business Process Testing User Guide** provides step-by-step instructions for using QuickTest to create and manage assets for use with Business Process Testing.
- ▶ **HP QuickTest Professional Add-ins Guide** describes how to work with supported environments using QuickTest add-ins, and provides environment-specific information for each add-in.

- ▶ **HP QuickTest Professional Object Model Reference** describes QuickTest test objects, lists the methods and properties associated with each object, and provides syntax information and examples for each method and property.
- ▶ **HP QuickTest Professional Advanced References** contains documentation for the following QuickTest COM and XML references:
  - ▶ **HP QuickTest Professional Automation Object Model** provides syntax, descriptive information, and examples for the automation objects, methods, and properties. It also contains a detailed overview to help you get started writing QuickTest automation scripts. The automation object model assists you in automating test management, by providing objects, methods and properties that enable you to control virtually every QuickTest feature and capability.
  - ▶ **HP QuickTest Professional Test Results Schema** documents the test results XML schema, which provides the information you need to customize your test results.
  - ▶ **HP QuickTest Professional Test Object Schema** documents the test object XML schema, which provides the information you need to extend test object support in different environments.
  - ▶ **HP QuickTest Professional Object Repository Schema** documents the object repository XML schema, which provides the information you need to edit an object repository file that was exported to XML.
  - ▶ **HP QuickTest Professional Object Repository Automation** documents the Object Repository automation object model, which provides the information you need to manipulate QuickTest object repositories and their contents from outside of QuickTest.
- ▶ **VBScript Reference** contains Microsoft VBScript documentation, including VBScript, Script Runtime, and Windows Script Host.

To access the QuickTest Professional Help, select **Help > QuickTest Professional Help**. You can also access the QuickTest Professional Help by clicking in selected QuickTest windows and dialog boxes and pressing F1. Additionally, you can view a description, syntax, and examples for a QuickTest test object, method, or property by placing the cursor on it and pressing F1.

## 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](http://newtours.demoaut.com).

The **HP Software Web 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. The URL for this Web site is [www.hp.com/go/software](http://www.hp.com/go/software).

The following additional online resources are available from the QuickTest Professional **Help** menu:

**Troubleshooting & Knowledge Base** accesses the Troubleshooting page on the HP Software Support Web site where you can search the Self-solve knowledge base. Choose **Help > Troubleshooting & Knowledge Base**. The URL for this Web site is <http://h20230.www2.hp.com/troubleshooting.jsp>.

**HP Software Support** accesses the HP Software Support Web site. This site enables you to browse the Self-solve knowledge base. You can also post to and search user discussion forums, submit support requests, download patches and updated documentation, and more. Choose **Help > HP Software Support**. The URL for this Web site is [www.hp.com/go/hpsoftwaresupport](http://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](http://h20230.www2.hp.com/new_access_levels.jsp)

To register for an HP Passport user ID, go to:

<http://h20229.www2.hp.com/passport-registration.html>

Welcome to This Guide

# 1

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## 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:

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



# 2

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## 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 an 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, see 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 17
- ▶ Upgrading the Concurrent License Server on page 18
- ▶ Installing a Concurrent License Server on page 20
- ▶ Requesting a Concurrent License Key on page 31
- ▶ Installing a Concurrent License Key on page 34
- ▶ Transferring a Concurrent License Server to a Different Network Computer on page 42



## 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.

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**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 Software Support. For more information, see “Installing a Concurrent License Key” on page 34.

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### 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 20.
- 2** Request your concurrent license key. For more information, see “Requesting a Concurrent License Key” on page 31.
- 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 34.
- 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.

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**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 60.

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## 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 10.00

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. Select **Start > Settings > Control Panel > Administrative Tools > Services**. In the Services dialog box, right-click **Sentinel LM** and select **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\Common Files\SafeNet Sentinel\Sentinel LM Server\WinNT, or in the location specified by the **lservrc** environment variable.

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**Tip:** To find the path of **lservrc** environment variable, right-click **My Computer** and select **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.

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- 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 20.
- 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 select **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.

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- 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.

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

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## 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. For more information about the Sentinel LM Server, see 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.)

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**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 18.

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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**.



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

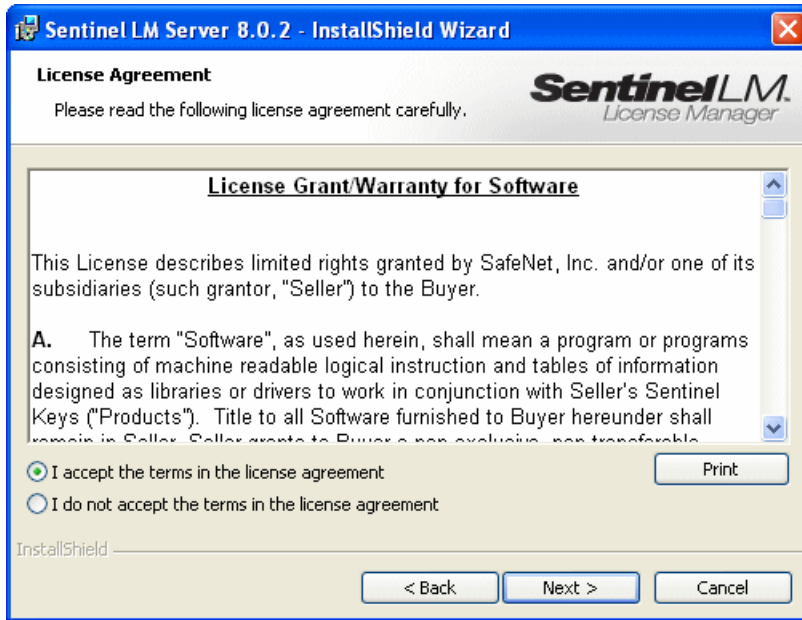
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**2** Click **Install the HP Functional Testing Concurrent License Server.**

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

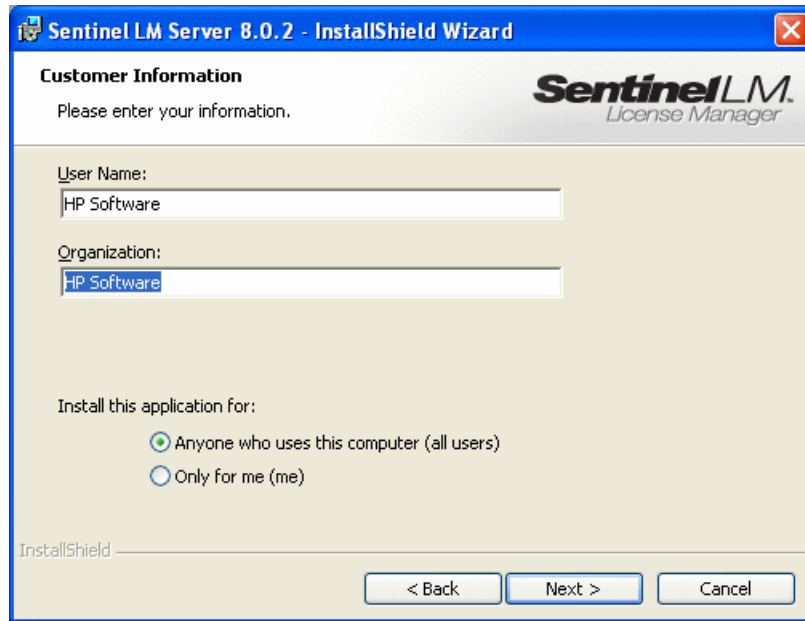


3 Click **Next**. The Sentinel LM License Agreement screen opens.



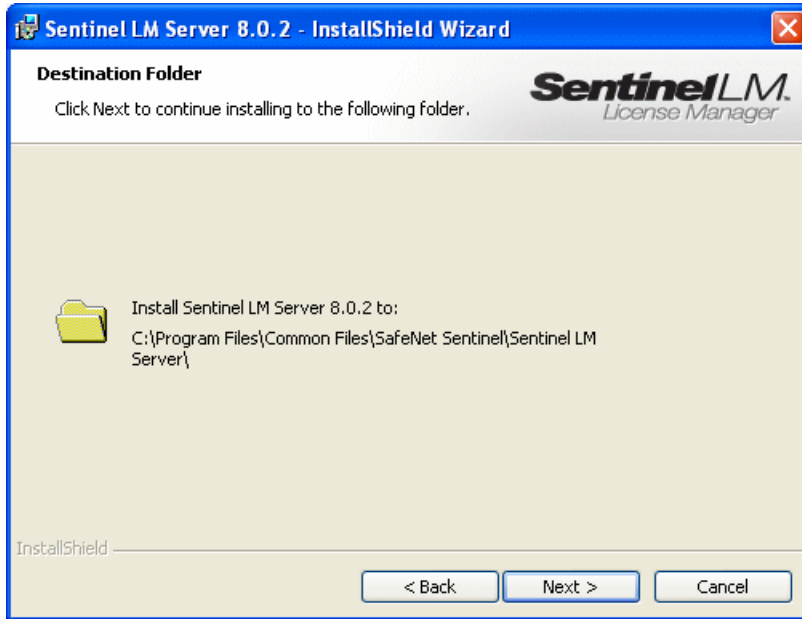


- 4 Select **I accept the terms in the license agreement** and click **Next** to accept the terms of the license agreement and install the HP Functional Testing Concurrent License Server. (If you select **I do not accept the terms in the license agreement**, you will not be able to continue with the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



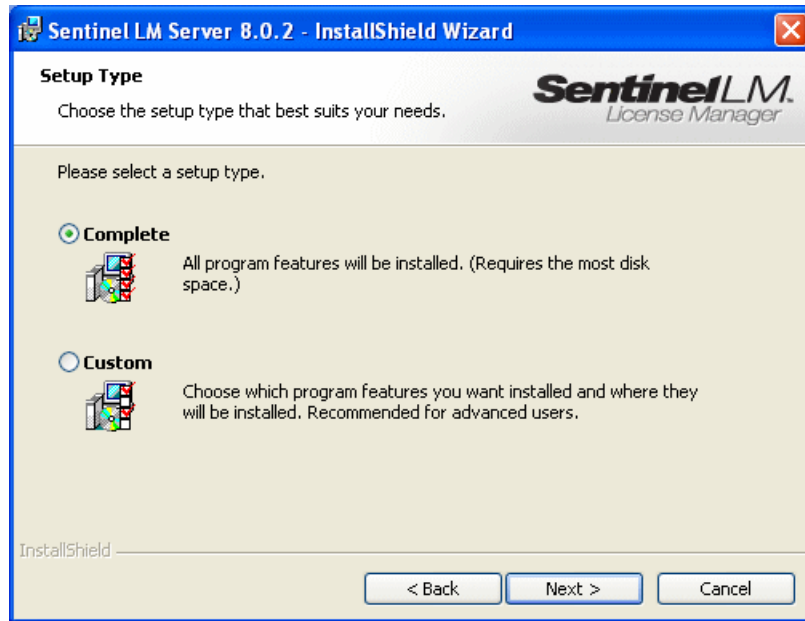
- 5 Enter your name and the name of your organization, and then select whether to install the application for anyone using your computer, or only for yourself. Click **Next**. The Destination Folder screen opens.

- 6 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.



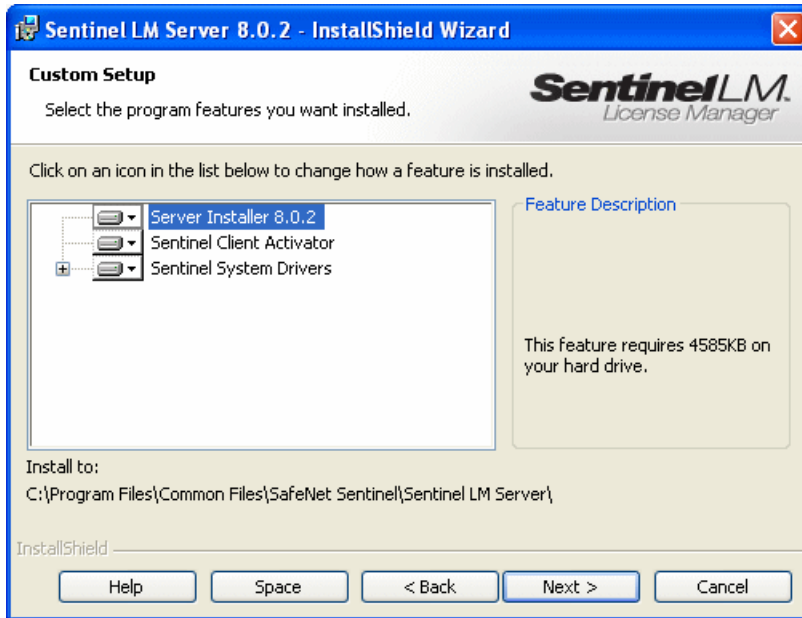
Click **Next** to proceed. If you chose **Custom**, proceed to step 8. If you chose **Complete**, proceed to step 9.

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**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.

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- 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 drop-down 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**.

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

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- 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.



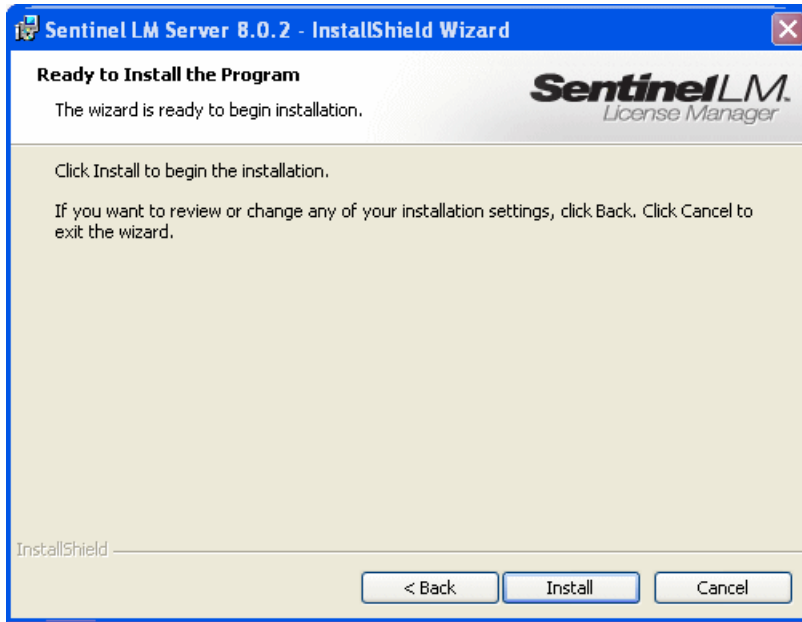
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**Note:** If you choose to unblock the Windows firewall for Sentinel LM at a later time, refer to the Windows operating system documentation for assistance.

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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.

After 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

After 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:**

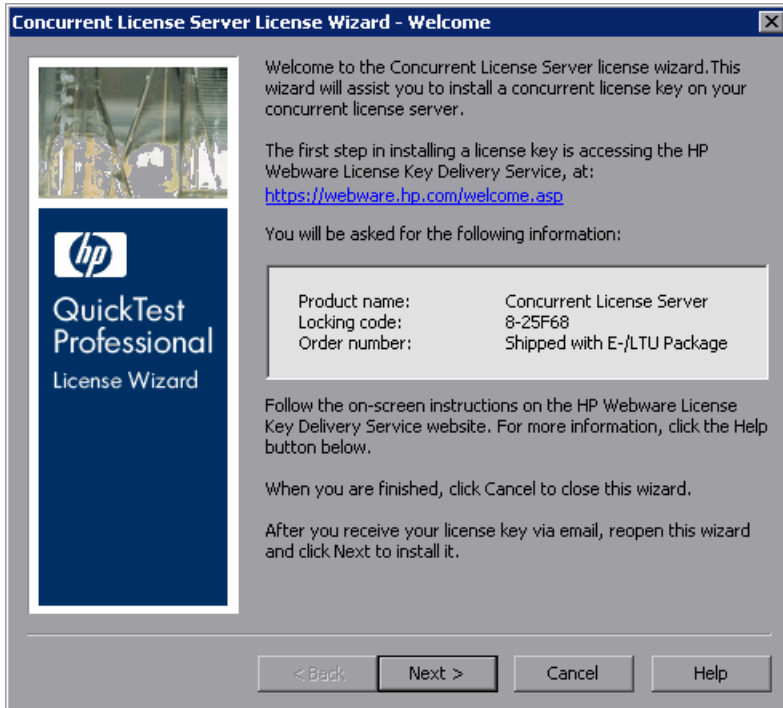
- 1 Insert the HP Functional Testing Concurrent License Server DVD into the drive from which you want to install. If the DVD drive is located on your local computer, the HP Functional Testing - License Server Installation window opens.

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** Click the link on the QuickTest Professional License Installation - Welcome screen for the **HP Webware License Key Delivery Service** to request your license key. Follow the instructions as described in “Requesting a License Key via the HP Webware License Key Delivery Service” on page 33.
- 4** If you already have your license key, proceed to step 4 on page 38 in the “Installing a Concurrent License Key” section.



## Requesting a License Key via the HP Webware License Key Delivery Service

The HP Webware License Key Delivery Service assists you in requesting a license key. This procedure provides an overview of this process as it specifically relates to requesting QuickTest Professional license keys.

For details on the individual fields in the License Key Delivery Service form, download the ESD and Webware License Management Guide. (Click the **Webware User Guide** link in the **Support** section of the HP License Key Delivery Service Welcome page.)

### To request a license key:

- 1** Click the link on the QuickTest Professional License Installation - Welcome screen for the **HP Webware License Key Delivery Service**. The HP License Key Delivery Service Welcome page is displayed.
- 2** Click **Generate New Licenses**. The Generate license(s) page is displayed.
- 3** Enter the order number from the Software Entitlement Certificate you received in your LTU or ELTU package.
- 4** Click **Next**. The Product Selection page is displayed.
- 5** Select the check box next to the product for which you are requesting a license key.
- 6** Click **Next**. The Order Product Detail(s) page is displayed.
- 7** Enter the locking code for your computer. The locking code is found in the QuickTest Professional License Installation - Welcome screen.
- 8** Click **Next**. The Member sign-in page is displayed.
- 9** If you have used the Webware Licensing service before, enter your e-mail address and password. Otherwise, login as a new user.
- 10** Click **Sign-in**. The Address information page is displayed. If you are a returning user, Webware automatically populates the fields with your information. If you are a new user, fill in the information according to the on-screen instruction. For information on filling in the Address information page, see the ESD and Webware License Management Guide.

- 11** If you are a customer representative requesting a license key on behalf of a customer and do not want them to receive a copy of the transaction, deselect the **E-mail a copy of this license transaction to the license owner** check box.
- 12** If you are the end-user customer select the **I am the License owner** check box. The **License owner (End-user) information** section is disabled.
- 13** If you are a customer representative requesting a license key on behalf of a customer, deselect the **I am the License owner** check box. Complete the information requested in the **License owner (End-User) information** section.
- 14** Click **Next**. The License/Password page is displayed. Keep a record of your **Session ID** and click **Main Menu** to return to the Welcome page. A Permanent Password Certificate will be e-mailed to the address you provided, containing your license key.
- 15** Click **Cancel** and wait for your Permanent Password Certificate to arrive by e-mail. When it arrives, follow the instructions as described in “Installing a Concurrent License Key” on page 34.

## Installing a Concurrent License Key

After you receive your license key from HP, you must run the Concurrent License Server license installation program again to install the key. The license key is included in the .dat file attached to the e-mail containing your Permanent Password Certificate. 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.

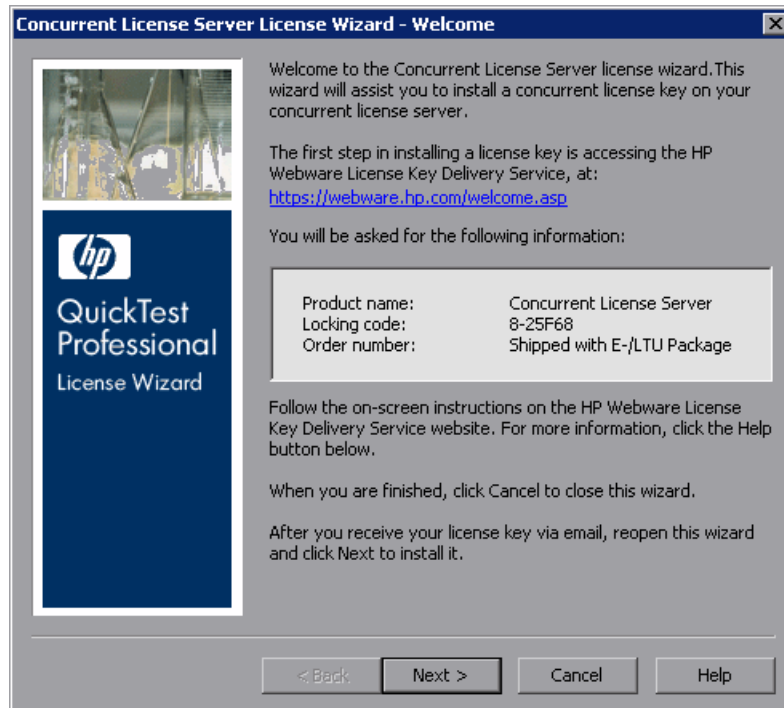


- 2 Select **Functional Testing License Server Setup**. The QuickTest Professional Concurrent License Server setup screen opens.

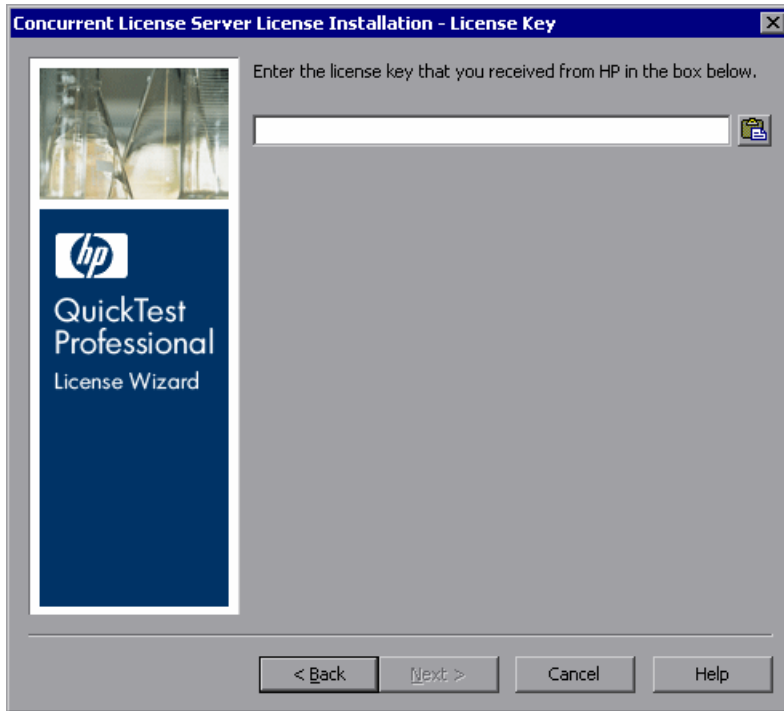


**3 Click Install Concurrent License.**

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.



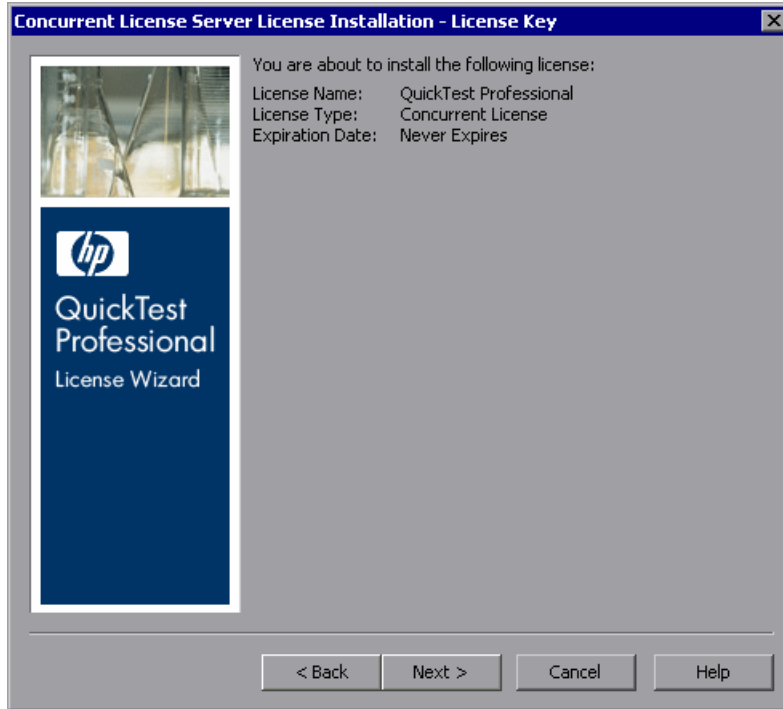
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**Note:** The license key is valid only for the computer with the locking code that you submitted to HP.

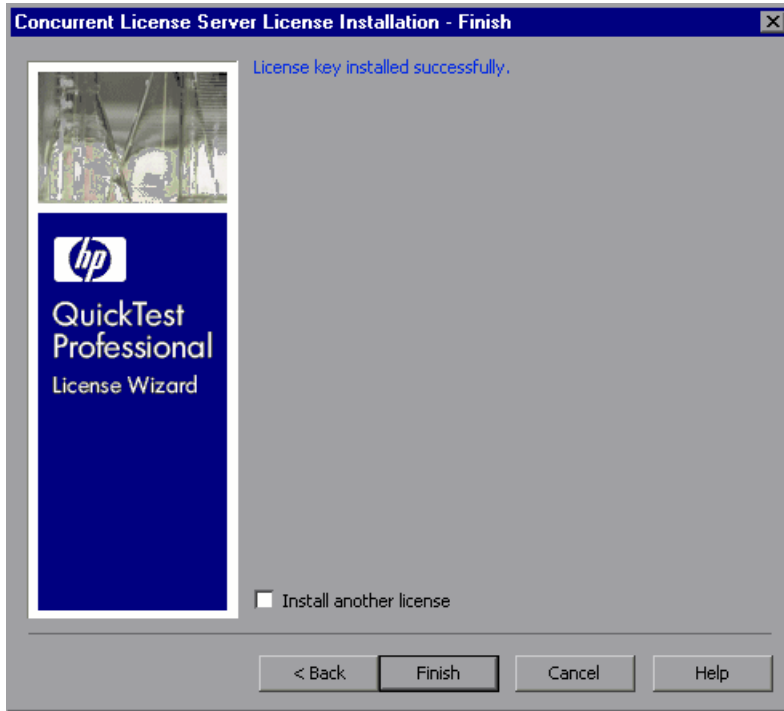
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- 5 Open the **.dat** file attached to the email containing your Permanent Password Certificate using any text editor. The license key is also included in the Permanent Password Certificate.
- 6 Select and copy the license key including the # character from the **.dat** file to the clipboard.
- 7 Paste the key into the QuickTest Professional License Installation - License Key screen by clicking the **Paste From Clipboard** button.

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



- 9 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 Software Support location. Make sure that you fill in the required information in the e-mail so that Software Support can assist you.

To install another license select the **Install another license** check box and repeat steps 5 to 9.



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

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**Notes:**

For more information on licensing and the HP Functional Testing Concurrent License Server, search the HP Software Self-solve knowledge base located in the HP Software Support Web site.

If you are using the HP Functional Testing Concurrent License Server with QuickTest Professional, refer to the HP Software Self-solve knowledge base (<http://h20230.www2.hp.com/selfsolve/document/KM174867>) and search for Problem ID 18251, *Top QuickTest Professional Licensing Articles*.

If you are using the HP Functional Testing Concurrent License Server with WinRunner, refer to the HP Software Self-solve knowledge base (<http://h20230.www2.hp.com/selfsolve/document/KM169895>), and search for Problem ID 11625, *Top WinRunner Licensing Articles*.

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## 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 20.
- 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 31. 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

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## 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 43
- Stopping and Restarting the Concurrent License Server on page 43
- Locking Codes on page 44
- Known Problems and Workarounds on page 45

### General Tips

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

### 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.

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

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**To stop and restart the license server:**

- 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 53.

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## 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
<p>The concurrent license server is installed on a different domain/subnet than the QuickTest or WinRunner clients.</p>	<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 60.</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 &lt;server i.p. address&gt; : &lt;byte size&gt; &lt; time &gt;.</p>
<p>You want to install concurrent license servers on Novell or Unix computers.</p>	<p>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.</p>
<p>Although you have a legal license key installed on your concurrent license server, you cannot start QuickTest or WinRunner.</p>	<p>If you install QuickTest or WinRunner using the <b>setup.exe</b> 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 <b>Install License</b>. This opens the License Installation utility, which enables you to change your license type to the concurrent license option.</p>
<p>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.</p>	<p>Restore the computer’s clock to the original date and contact HP Software Support for further assistance.</p>

For more information about these and other issues, see the QuickTest and/or WinRunner Knowledge Base in the HP Software Support Web site at <http://h20230.www2.hp.com/troubleshooting.jsp>.

# 4

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## 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.

Select **Start > Programs > Administrative Tools > Services**. Locate the Sentinel LM service and click **Start**.

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

## Error 19: Cannot install a license code

Error 19 can occur in the following 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 Software 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 <b>lsdecode.exe</b> from the <b>LicenseServer\utils</b> folder on the QuickTest Professional installation DVD to <b>Program Files\Common Files\HP\License Manager</b> and run the <b>lsdecode.exe</b> 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 <b>Isdecode.exe</b> from the <b>LicenseServer\utils</b> folder on the QuickTest Professional installation DVD to <b>Program Files\Common Files\HP\License Manager</b> and run the <b>Isdecode.exe</b> 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 <b>Iservrc</b> file exists. The location of the file depends on whether QuickTest is currently installed.</p> <ul style="list-style-type: none"> <li>▶ If QuickTest is installed, the location of the file is specified by the <b>Iservrc</b> environment variable. <ul style="list-style-type: none"> <li><b>Tip:</b> To find the path of <b>Iservrc</b> environment variable, right-click <b>My Computer</b> and select <b>Properties</b>. In the System Properties dialog box, select the <b>Advanced</b> tab, and then click <b>Environment Variables</b>. The path is displayed in the <b>User variables for &lt;user&gt;</b> box of the Environment Variables window. For example, C:\Program Files\Common Files\HP\License Manager\Iservrc.</li> </ul> </li> <li>▶ If QuickTest is not installed, the file is located in the same folder as <b>Iservnt.exe</b>. By default, this is C:\Program Files\Common Files\SafeNet Sentinel\Sentinel LM Server\WinNT\.</li> </ul> <ul style="list-style-type: none"> <li><b>Tip:</b> To find the path of <b>Iservnt.exe</b>, select <b>Start &gt; Settings &gt; Control Panel &gt; Administrative Tools &gt; Services</b>. In the Services dialog box, right-click <b>Sentinel LM</b> and select <b>Properties</b>. The path for <b>Iservnt.exe</b> is displayed in the <b>Path to executable</b> box.</li> </ul> <p>If the <b>Iservrc</b> file exists, the license key is installed already. You may use the license server.</p>



# 5

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## 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, see 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.)

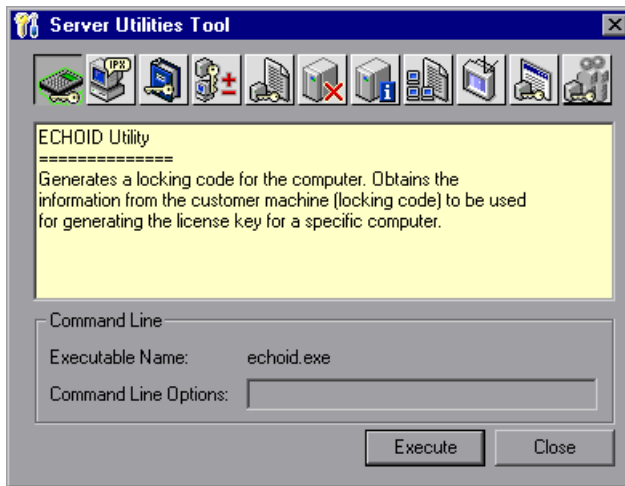
**This chapter includes:**

- Overview on page 52
- Displaying Current Concurrent License Server Users on page 57
- Displaying License Servers on page 57
- Monitoring License Servers on page 58
- Setting the LSHOST or LSFORCEHOST Variable on page 60

## 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 <b>echoid.exe</b>	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 <b>ipxecho.exe</b>	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 <b>lsdecode.exe</b>	<p>Displays the license key information, which enables you to check that you are installing the correct license type.</p> <p>It decodes an 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 (<b>SrvUtils.exe</b>) and the LSDECODE utility (<b>lsdecode.exe</b>) are located in the same directory as the <b>lservrc</b> file.</p>
LSLIC Utility <b>lslic.exe</b>	<p>Adds or removes a license key. You can use the following command line options:</p> <ul style="list-style-type: none"> <li>▶ <b>-a</b> (add) <b>-f</b> (file name): adds a license key from a license file</li> <li>▶ <b>-removeall</b> removes all licenses from an HP Functional Testing Concurrent License Server</li> </ul> <p>Either use the LSHOST environment variable to specify the license server or ensure that the server utilities application (<b>SrvUtils.exe</b>) and the LSLIC utility (<b>lslic.exe</b>) are located in the same directory as the <b>lservrc</b> file.</p>
LSMON Utility <b>lsmon.exe</b>	<p>Monitors an 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 &lt;host name&gt; or &lt;IP address&gt;. For example, <code>c:\lsmon.exe saturn</code> monitors the <code>saturn</code> host. For more information on this utility, see “Displaying Current Concurrent License Server Users” on page 57.</p>
LSRVDOWN Utility <b>lsrvcdown.exe</b>	<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 43.</p>

Utility	Description/Example of Usage
<p>LSUSAGE Utility <b>lsusage.exe</b></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"> <li>▶ <code>[-c CSV-Format-New-log-file]</code></li> <li>▶ <code>[-f Feature-Name1,Version:Feature-Name2,Version ...]</code></li> <li>▶ <code>[-y Start-Year(YYYY) [-m Start-Month(MM) [-a Start-Day(DD)]]]</code></li> <li>▶ <code>[-Y End-Year(YYYY) [-M End-Month(MM)] [-A End-Day(DD)]]]</code></li> </ul>
<p>LSWHERE Utility <b>lswhere.exe</b></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>-&lt;IP address&gt;</code> searches for a specific network host.</p> <p>For more information on this utility, see “Displaying License Servers” on page 57.</p>
<p>SLMDEMO Utility <b>slmdemo.exe</b></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 <b>WLMAdmin.exe</b></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 an 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 58.</p>
<p>WLSGRMGR Utility <b>Wlsgrmgr.exe</b></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>

Utility	Description/Example of Usage
<b>WCommute.exe</b>	<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>
<b>WRCommute.exe</b>	<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 60.
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 to contact a server in a remote subnet. For information on setting this variable, see “Setting the LSHOST or LSFORCEHOST Variable” on page 60.



## 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.

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**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>`.

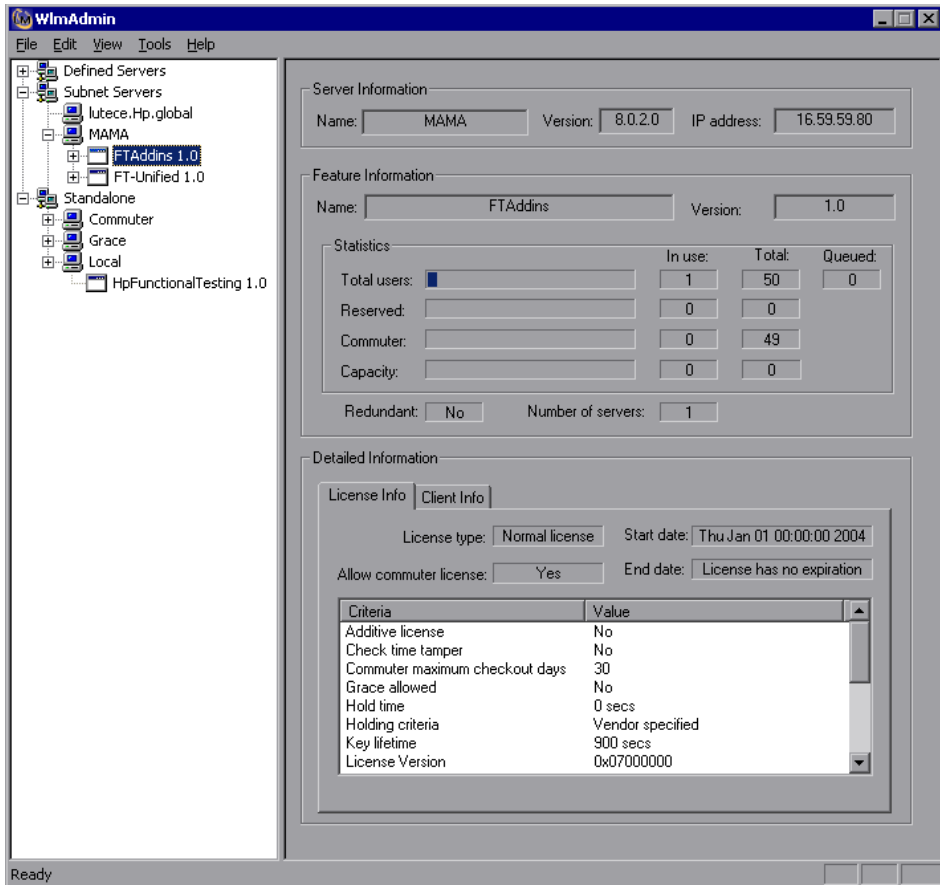
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## Displaying License Servers

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.

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**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.

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## 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 56.

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 45.

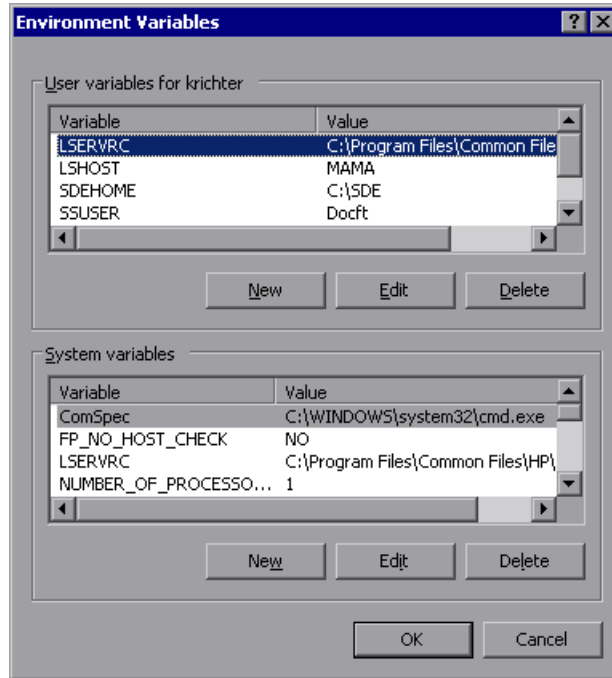
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**Note:** If you installed a concurrent license using the License Wizard, the LSHOST user variable is already defined with the concurrent license server you specified.

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To set the LSHOST or LSFORCEHOST variables:

- 1 Open the Environment Variables dialog box. (Select **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.)




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**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.

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- 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.

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- 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

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## 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 and reinstall it on a different computer, contact HP Software 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 select **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.

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- ▶ 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\.

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**Tip:** To find the location of **lservnt.exe**, select **Start > Settings > Control Panel > Administrative Tools > Services**. In the Services dialog box, right-click **Sentinel LM** and select **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** Select **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.

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