

HPE UFT Pro (LeanFT)

Software Version: 14.00

Installation Guide

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System requirements

	Minimum	Recommended
Computer processor	Dual-core CPUs or better For example, AMD Phenom II X2 and Intel Core Duo	Core™ i3 Processor or Phenom II X3
Operating system - Windows	Windows 7	Windows 7 or Windows 2012
Operating System - Linux	Desktop environment: Gnome	
	Ubuntu Version 14.04	Ubuntu Version 16.04
	RedHat Version 7	RedHat Version 7.3
	CentOS Version 7	CentOS Version 7.3
Operating System - Mac	El Capitan 10.11	El Capitan 10.12
Memory	Windows: 2 GB	Windows: 8 GB
	Linux/Mac: 4 GB	Linux/Mac: 4 GB
Free hard disk space	Windows: 2 GB	Windows: 10 GB
	Linux/Mac: 1 GB	Linux/Mac: 1.5 GB
IDE (if using the LeanFT plugin)	Microsoft Visual Studio 2012 (Windows only)	Microsoft Visual Studio 2013 SP 1
	Eclipse 4.3 (Kepler) Note: Does not support LeanFT Maven-based templates.	Eclipse 4.4 (Luna)
	IntelliJ IDEA 14	IntelliJ IDEA 14, 15
.NET framework (Windows only)	.NET Framework 4.5	
Java	1.7	
Node.js	4.1.2	

- For a complete list of all supported operating systems, browsers, and development environments, see the [LeanFT Product Availability Matrix](#) (requires an HPE Passport).
- For cross-platform feature support, see [Cross-platform feature support](#) in the LeanFT Help Center.

Prerequisites

System requirements	Ensure that your computer meets the system requirements .
Required permissions	Ensure that you have the required permissions on the computer. Linux/Mac: To perform the installation, you must have ROOT permissions.
Before installing LeanFT	<p>Before installing LeanFT, a supported version of Node.js (4.1.2 or later) must be installed on the LeanFT computer.</p> <p>If Node.js is not installed / silent installations:</p> <ul style="list-style-type: none"> • If Node.js is not installed, you will be required to stop the LeanFT installation, install Node.js, and then start the LeanFT installation again. • In the case of the silent LeanFT installation, if Node.js is not installed, the silent installation will fail. <p>To download and install Node.js, see the Node.js website.</p>
IDEs	<p>If you intend to use LeanFT from within your IDEs (LeanFT plugin), make sure your IDEs are already installed.</p> <p>The LeanFT plugin is currently available for Visual Studio (Windows only), Eclipse, and IntelliJ IDEA.</p> <p>Note for Eclipse Kepler/Luna users:</p> <p>To use the Eclipse IDE for Java EE Developers or Eclipse Standard editions with the LeanFT plugin, you must deploy the Google Gson plugin to your Eclipse folder:</p> <ol style="list-style-type: none"> 1. Download the Google Gson plugin, version 2.1 or later, from MVN Repository. 2. Copy the downloaded .jar file to your <Eclipse deployment>\plugins folder and reopen Eclipse. <p>For more details, see the LeanFT Product Availability Matrix (requires an HPE Passport).</p>

Enterprise deployment

When installing LeanFT in an enterprise business model across many computers in a network or company, note the following:

Administrative permissions	<ul style="list-style-type: none"> • Windows/Mac: Make sure you have administrator permissions on each of the computers where you are installing LeanFT. • Linux/Mac: Make sure you have ROOT permissions on each of the computers where you are installing LeanFT. • Make sure you have access to the necessary folders, files, and registry keys. For details, see "Required permissions" below.
User Account Control (UAC) (Windows only)	<p>You can install LeanFT with User Account Control (UAC) turned on or off.</p>
Silent installation	<p>You can install LeanFT silently, including prerequisite software if needed, on a local or remote computer. For details, see:</p> <ul style="list-style-type: none"> • Silent installation for Windows • Silent installation for Linux

Required permissions

Make sure the required permissions are defined on your LeanFT computer.

- ["Required permissions for Windows" on the next page](#)
- ["Required permissions for Linux" on page 10](#)
- ["Required permissions for Mac" on page 10](#)

Note: Read/write permissions to these folders must also enable permission to any subfolders.

If not, the system administrator must grant administrative permissions to the subfolders contained in these folders.

Required permissions for Windows

Function	Permission	Item
File system permissions to work with LeanFT	Full read and write permissions	<ul style="list-style-type: none"> • C:\Temp folder • The folder to save tests or run results • Windows 7 or Windows Server 2008: <Program Data>\HP folder • User Profile folders • <Windows>\mercury.ini file • %appdata%\Hewlett-Packard\
	Read permissions	Windows folder and System folder
Registry key permissions to work with LeanFT	Full read and write permissions	<ul style="list-style-type: none"> • Keys under HKEY_CURRENT_USER\Software\Mercury Interactive and HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Hewlett-Packard • Keys under HKEY_CURRENT_USER\SOFTWARE\Hewlett Packard
	Read and Query Value permissions	All HKEY_LOCAL_MACHINE and HKEY_CLASSES_ROOT keys
Permissions to work with ALM	Full read and write permissions	<ul style="list-style-type: none"> • ALM cache folder • <Program Data>\HP folder
Permissions to work with BPT	Miscellaneous	<ul style="list-style-type: none"> • To work with component steps in ALM, set the the appropriate Add Step, Modify Step, or Delete Step permissions. Tip: The Modify Component permission enables you to work with component properties (the fields in the component Details tab). You do not need this permission to work with component steps. • To work with parameters in ALM, you must have all the parameter task permissions set in ALM. • To modify application areas, you must have all of the separate permissions for resources required for modifying components, and adding, modifying, and deleting steps. If one of these permissions is not assigned, you will be open application areas in read-only format only.

Required permissions for Linux

Function	Permission	Item
File system permissions to install LeanFT	Full read and write permissions	<ul style="list-style-type: none"> • ROOT • /opt(install location) • /var(installer registry file) • IDE folders (dropins/plugins) • /opt/google/chrome (chrome extension)
File system permissions to work with LeanFT	Full write permissions	home directory
	Full read permissions	<ul style="list-style-type: none"> • /opt/leanft • IDE folders

Required permissions for Mac

Function	Permission	Item
File system permissions to install LeanFT	Full write permissions	<ul style="list-style-type: none"> • /Applications • IDE location
File system permissions to work with LeanFT	Full read and write permissions	<ul style="list-style-type: none"> • User folder • IDE location

Installation

- ["Install LeanFT for Windows" below](#)
- ["Install LeanFT for Linux" on page 15](#)
- ["Install LeanFT for Mac" on page 17](#)

Install LeanFT for Windows

By default, LeanFT is installed in **C:\Program Files (x86)\HP\LeanFT**.

This section includes:

- ["Download the installation file" on the next page](#)
- ["Manual installation" on the next page](#)
- ["Silent installation" on the next page](#)

Download the installation file

Download the LeanFT installation file to the machine where you plan to install LeanFT:

1. Log into [HPE SaaS](#). If you do not have an account, create one.
2. Go to the [LeanFT download page](#).
3. Download the installation file for Windows.
4. Continue with "[Manual installation](#)" below or "[Silent installation](#)" below.

Manual installation

1. Download the installation file. See "[Download the installation file](#)" above.
2. Restart the machine where you plan to install LeanFT.
3. Run the installation file, and follow the on-screen instructions.

On the Custom Setup page, select an installation mode:

Mode	For computers where you plan to...
LeanFT runtime engine only	Run existing LeanFT tests without modifying them.
Full installation	<p>Develop and run LeanFT tests.</p> <ul style="list-style-type: none"> • Eclipse, a path field is displayed. Click Change to browse to the folder where your Eclipse IDE is deployed. • IntelliJ IDEA: If you have multiple versions of IntelliJ IDEA, click Select versions to select the version where you want to install the LeanFT plugin. <p>When the full installation is complete, a LeanFT menu is added to your IDE, and LeanFT project templates are available in the IDE.Notes:</p> <p>Note: If you run the Full installation, but do not select any IDEs for the LeanFT plugin, the LeanFT SDKs are still installed in <LeanFT installation>\SDK.</p>

4. Restart the machine, and then continue with "[Post installation](#)" on page 18.

Silent installation

1. **Prerequisites for silent installation:**
 - Administrator permissions
 - Node.js 4.1.2 or later must be installed



Caution: If Node.js is not installed, the silent installation will fail.

2. Download the installation file. See "[Download the installation file](#)" above.

3. Restart the machine where you plan to install LeanFT.
4. From the command line, change to the directory where you downloaded the installation file.
5. Run the following commands to extract the setup file.

```
\<LeanFTVersionSetupfile>.exe -y -ExecuteFile=""
```

6. Run the relevant commands.
"Full silent installation commands" below
"Customized silent installation commands" on the next page
7. When the installation is complete, restart the machine, and continue with .

Full silent installation commands

Installation	Command
LeanFT default installation (including the prerequisite software)	<extracted setup folder>\setup.exe /s

Note: When you use the **setup.exe /s** command, there is no visual indication of the installation progress. To verify completion, monitor the process in the Windows Task Manager or check the installation log file.

You can also append the following:

Functional Testing concurrent license server	LICSVR=<server name or IP>
--	----------------------------

Components	<p>ADDLOCAL=<component name>, where <component name> is one or more of the following, separated by commas:</p> <ul style="list-style-type: none"> • LeanFT runtime engine: <code>LeanFT_Engine</code> • LeanFTClient (SDK): <code>LeanFT_Client</code> • Visual Studio 2012, 2013, 2015 Plugin: <code>RegVS2012, RegVS2013, RegVS2015</code> • Eclipse Plugin <code>RegEclipse</code> • IntelliJ IDEA Plugin <code>RegIntelliJ</code> <p>Note: For Eclipse and IntelliJ IDEA, add their installation paths (<code>ECLIPSE_INSTALLDIR=<path></code>, <code>INTELLIJ_INSTALLDIRS=<path1>,<path2>,...,<path-n></code>) after the ADDLOCAL attribute. See the example below.</p>
------------	---

Example of a full silent installation

The following command:

- Installs prerequisites
- Installs the LeanFT runtime engine and client
- Installs the LeanFT plugin on Visual Studio 2012, Eclipse, and on 2 versions of IntelliJ IDEA, in the specified folders
- Generates an installation log

```
c:\Temp\LeanFT\setup.exe /s ADDLOCAL=LeanFT_Engine,LeanFT_Client,RegVS2012,RegEclipse,RegIntelliJ ECLIPSE_INSTALLDIR=c:\eclipse,INTELLIJ_INSTALLDIRS=c:\intellij14,c:\intellij15 /l*xv %TEMP%\LeanFTinstall.log
```

Customized silent installation commands

Alternatively, you can use any of the following to install specific elements of the installation silently.

LeanFT default installation, excluding prerequisites

The following command runs the LeanFT default installation, excluding the prerequisites. A log is produced at the end of the installation.

32-bit	<code>msiexec /i "<extracted setup folder>\LeanFT_x86.msi" /qb /l*xv %TEMP%\LeanFTinstall.log</code>
64-bit	<code>msiexec /i "<extracted setup folder>\LeanFT_x64.msi" /qb /l*xv %TEMP%\LeanFTinstall.log</code>

Note: When you use `msiexec /qb`, a progress bar displays during the installation.

Prerequisite product silent installation commands

.NET Framework 4.5	
32-bit	<extracted setup folder>\prerequisites\dotnet45\dotnetfx45_full_x86_x64.exe /q /norestart
64-bit	<extracted setup folder>\prerequisites\dotnet45\dotnetfx45_full_x86_x64.exe /q /norestart
Microsoft Visual C++ 2015 Redistributable	
32-bit	<extracted setup folder>\prerequisites\vc2015_redist_x86\vccredist_x86.exe /quiet /norestart
64-bit	<extracted setup folder>\prerequisites\vc2015_redist_x64\vccredist_x64.exe /quiet /norestart
Microsoft Visual C++ 2012 Redistributable	
32-bit	<extracted setup folder>\prerequisites\vc2012_redist_x86\vccredist_x86.exe /quiet /norestart
64-bit	<extracted setup folder>\prerequisites\vc2012_redist_x64\vccredist_x64.exe /quiet /norestart
Microsoft Visual C++ 2010 Redistributable	
32-bit	<extracted setup folder>\prerequisites\vc2010_redist\vccredist_x86.exe /quiet /norestart
64-bit	<extracted setup folder>\prerequisites\vc2010_x64_redist\vccredist_x64.exe /quiet /norestart
Microsoft Visual C++ 2008 Redistributable v 9030729	
32-bit	<extracted setup folder>\prerequisites\vc2008_sp1_redist_V9030729\vccredist_x86.exe /quiet /norestart
Install all LeanFT prerequisites	
32-bit	<extracted setup folder>\setup.exe /InstallOnlyPrerequisite /s
64-bit	<extracted setup folder>\setup.exe /InstallOnlyPrerequisite /s

Components

To install components, append the **LICSVR** and **ADDLOCAL** commands to the msixec command, as described in ["Full silent installation commands" on page 12](#).

Example of customized silent installation

```
msiexec /qb /i c:\temp\leanft\leanft_x64.msi ADDLOCAL=LeanFT_
Engine,LeanFT_Client,RegVS2013,RegEclipse ECLIPSE_INSTALLDIR=C:\eclipse
/norestart /l*xv C:\Users\ALM_UF~1\AppData\Local\Temp\LeanFTinstall.log
```

Install LeanFT for Linux

This section includes:

- ["Manual installation" below](#)
- ["Silent installation" on the next page](#)
- ["Default LeanFT installation location on Linux" on page 17](#)

Manual installation

1. Log into [HPE SaaS](#). If you do not have an account, create one.
2. Go to the [LeanFT download page](#), and download the installation file for Linux.
3. In Terminal, extract the installation file: **tar xvfz LeanFTSetup_Linux.tar.gz**
4. Launch the installation:

Mode	To run the installation
GUI	<p>In Terminal:</p> <ol style="list-style-type: none"> a. Change to the folder containing the extracted setup file. b. Run ./LeanFTSetup. <p>Note: The GUI installer is not supported when working via ssh or telnet. In this case, the installer will automatically open in console mode.</p>
Terminal	<ol style="list-style-type: none"> a. Change to the folder containing the extracted setup file. b. Run ./LeanFTSetup -i console.

5. Follow the on-screen instructions.

On the Installation Options page, select an installation mode:

Mode	For computers where you plan to...
LeanFT runtime engine only	Run existing LeanFT tests without modifying them.

Mode	For computers where you plan to...
Full installation	<p>Develop and run LeanFT tests.</p> <p>When selecting the IDE (Eclipse and/or IntelliJ IDEA) on which to install the LeanFT plugin, enter the full folder path.</p> <p>When the full installation is complete, a LeanFT menu is added to the IDEs you selected, and LeanFT project templates are available in the IDE.</p> <p>Notes: If you choose not to install the LeanFT plugin on any IDEs, the LeanFT SDKs are still installed in /opt/leanft/sdk</p>

6. When the installation is complete, continue with "[Post installation](#)" on page 18.

Silent installation

1. Prerequisites for silent installation:

- ROOT permissions
- Node.js 4.1.2 or later must be installed



Caution: If Node.js is not installed, the silent installation will fail.

2. Log into [HPE SaaS](#). If you do not have an account, create one.
3. Go to the [LeanFT download page](#), and click the link to download the zipped Linux installation file, **LeanFTSetup_Linux.tar.gz**.
4. In Terminal, extract the installation file: **tar xvfz LeanFTSetup_Linux.tar.gz**

5. Run the relevant commands:

Installation option	Command
LeanFT runtime engine only For running existing LeanFT tests	<code>\$/LeanFTSetup.bin -i silent DCHOSEN_INSTALL_FEATURE_LIST=engine</code>
Full installation For developing and running LeanFT tests	<code>\$/LeanFTSetup.bin -i silent DCHOSEN_INSTALL_FEATURE_LIST=engine,sdk,eclipseplugin,intellijplugin</code>
Integrate LeanFT plugin for IDE (Eclipse or IntelliJ IDEA)	Add the CUSTOM_ECLIPSE_PATH / CUSTOM_INTELLIJ_PATH options. For example, full installation with LeanFT plugin for Eclipse and IntelliJ IDEA: <code>\$/LeanFTSetup.bin -i silent DCHOSEN_INSTALL_FEATURE_LIST=engine,sdk,eclipseplugin,intellijplugin DCUSTOM_ECLIPSE_PATH=/tmp/eclipse DCUSTOM_INTELLIJ_PATH=/tmp/intellij</code>
Specify a Functional Testing concurrent license server	LICSVR=<server name or IP>

6. When the installation is complete, continue with ["Post installation" on the next page](#).

Default LeanFT installation location on Linux

LeanFT is installed by default in **/opt/leanft**.

After installation, you can move the installation folder to another location if you need to. However, if you do this, you must define a system variable called **LEANFT_HOME** that points to the new location.

Install LeanFT for Mac

Install LeanFT on Mac using the installation wizard.

This section includes:

- ["Manual installation" on the next page](#)
- ["Default LeanFT installation location on Mac" on the next page](#)

Manual installation

1. Log into [HPE SaaS](#). If you do not have an account, create one.
2. Go to the [LeanFT download page](#), and download the installation file for Mac.
3. Unzip the file.
4. Launch the installation by running the **LeanFTSetup.app** setup package.
5. Follow the on-screen instructions.

On the Installation Options page, select an installation mode:

Mode	For computers where you plan to...
LeanFT runtime engine only	Run existing LeanFT tests without modifying them.
Full installation	<p>Develop and run LeanFT tests.</p> <ol style="list-style-type: none"> a. Select the IDE (Eclipse and/or IntelliJ IDEA) on which to install the LeanFT plugin, enter the relevant path, and click Next. Make sure to include the full path to the IDE, including the file. For example: /Applications/IntelliJ IDEA.app b. If prompted, provide the path to your Node.js installation. If Node.js is not installed, you must install it and provide the path before you can continue. <p>When the full installation is complete, a LeanFT menu is added to the IDEs you selected, and LeanFT project templates are available in when creating a new project in the IDE.</p> <p>Note: If you choose not to install the LeanFT plugin on any IDEs, the LeanFT SDKs are still installed in /Applications/LeanFT/sdk.</p>

6. When the installation is complete, continue with "[Post installation](#)" below.

Default LeanFT installation location on Mac

LeanFT is installed by default in **/Applications/LeanFT**

After installation, you can move the installation folder to another location if you need to, in which case, you must define a system variable called **LEANFT_HOME** that points to the new location.



Tip: If you move the installation to **<users>/Applications/LeanFT**, you do not need to define the **LEANFT_HOME** system variable.

Post installation

This section includes:

- ["Install a license" below](#)
- ["Post installation tasks" below](#)

Install a license

Upon installation, LeanFT includes a limited-time demo license that is valid for 60 days. When this license expires, you must install a valid LeanFT license.

For more details, see ["UFT Pro \(LeanFT\) licensing" on page 22](#).

Post installation tasks

If you plan to...	...you need to	How?
Test Web-based applications	Make sure the HPE Functional Testing Agent extension is enabled in your browser.	For details, see Set up web browsers and controls in the LeanFT Help Center.
Work in Eclipse with an existing LeanFT Java project (Windows only)	Update the library structure	This task is only for Java projects that were created in Eclipse prior to LeanFT 12.53. For details, see Update projects created in earlier LeanFT versions in the LeanFT Help Center.
Work with the JavaScript SDK	Install the JavaScript SDK as a Node.js module, and install your testing framework.	For details, see Setting up and working with the JavaScript SDK in the LeanFT Help Center.

If you plan to...	...you need to	How?
Run LeanFT tests from ALM on your computer (Windows only)	Configuring the following DCOM settings may expose the LeanFT computer to security risks:	
	Set the required DCOM permissions for the Remote Agent and open the DCOM port (port 153).	Open the command line and run <LeanFT installation>\Tools\RemoteAgent\LFTDcomPermissions.exe -set
	Configure the Remote Agent to allow ALM to run tests on your computer.	Open <LeanFT installation>\Tools\RemoteAgent\LFTRemoteAgent.exe.config in a text editor, and change <remoteAgent allowRun> to true . There are additional values that must be set in LFTRemoteAgent.exe.config before you run LeanFT tests from ALM. For details, see Integrate LeanFT in ALM in the LeanFT Help Center.

Maintaining and uninstalling LeanFT

Use the **Installer** wizard to uninstall LeanFT or to update the LeanFT plugin installations.

- ["Change / uninstall on Windows" below](#)
- ["Change / uninstall on Linux" on the next page](#)
- ["Change / uninstall on Mac" on the next page](#)

Change / uninstall on Windows

1. Browse to your Programs and Features control panel, and select HPE UFT Pro (LeanFT).
2. In the list of programs, select **HPE UFT Pro (LeanFT)**.
 - To change your installation, click **Change**, click **Change** again, and run through the wizard.
 - To uninstall LeanFT, click **Uninstall**.

Change / uninstall on Linux

1. Launch the installation wizard:

Mode	To run the installation
GUI	<p>In Terminal:</p> <ol style="list-style-type: none"> a. Change to the folder containing the extracted setup file. b. Run ./LeanFTSetup. <p>Note: The GUI installer is not supported when working via ssh or telnet. In this case, the installer will automatically open in console mode.</p>
Console	<p>In Terminal:</p> <ol style="list-style-type: none"> a. Change to the folder containing the extracted setup file. b. Run ./LeanFTSetup -i console.

2. Follow the on-screen instructions.
 - To change the plugin installations, click **Add/Remove Features**.
 - To uninstall LeanFT, click **Uninstall product**.

Note: `uninstall.jar` is not supported.

Change / uninstall on Mac

1. Launch the installation by running the **LeanFTSetup.app** setup package.
2. Follow the on-screen instructions.
 - To change the plugin installations, click **Add/Remove Features**.
 - To uninstall LeanFT, click **Uninstall product**.

Note: Do not drag the LeanFT folder into the **Trash**. This will not uninstall LeanFT properly.

UFT Pro (LeanFT) licensing

Upon installation, LeanFT includes a limited-time demo license that is valid for 60 days. When this license expires, you must install a valid LeanFT license.

This section includes:

- ["LeanFT license types" below](#)
- ["Install LeanFT license on Windows" on the next page](#)
- ["Install LeanFT license on Linux / Mac" on page 29](#)
- ["License editions" on page 30](#)
- ["Known issues with LeanFT licensing" on page 36](#)

LeanFT license types

Seat licenses

A machine-specific license based on a specific locking code per computer.

The key must be entered once only, and provides one installation per key.

A computer with multiple bootable partitions may generate a different locking code for each partition.

When obtaining a seat license key, you must use the locking code for the partition on which you want to use LeanFT.

Concurrent licenses

A license taken from a license server on a per-session basis. You must have an active network connection to install and check out commuter licenses.

Each time LeanFT starts, it tries to connect to the License Server for an available license.

Each key provides unlimited installations. The license server regulates the number of licenses in use at any given time.

Concurrent licenses are consumed as long as the LeanFT runtime engine is active, and include the following additional types:

Commuter licenses	Use a commuter license when you plan to have no access to the License Server. With a commuter license, you can use LeanFT without an active network connection. When you are finished using a commuter license, return it to make it available for other users.
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Remote commuter licenses	<p>Request a remote commuter license if you are not able to connect to the License Server to check one out.</p> <p>You must send the request to another user who does have access to the License Server, who in turn must send you the required key.</p>
---------------------------------	--

Concurrent licenses are released if the LeanFT runtime engine is idle beyond the defined timeout. The engine is active only when it interacts with your application via the Object Identification Center (OIC) or while running tests.

Both commuter and remote commuter licenses expire at 23:59 of the expiration day. If you do not check your commuter license in before it expires, LeanFT automatically reverts to the previous license state.

To install your license, see:

- ["Install LeanFT license on Windows" below](#)
- ["Install LeanFT license on Linux / Mac" on page 29](#)

Install LeanFT license on Windows

The LeanFT license can be installed in Windows machines using the Functional Testing License wizard, or by running commands from the command line.

Note: To installing a LeanFT license on Windows, you must have administrator permissions.

- ["Install LeanFT license using the License wizard" below](#)
- ["Install LeanFT license from the command line" on page 27](#)

Install LeanFT license using the License wizard

The Functional Testing License wizard enables you install, check out, or switch between license types on Windows machines.

Note: Installing licenses requires administrator permissions.

This section includes:

- ["Install a Seat license" on the next page](#)
- ["Install a Concurrent license" on the next page](#)
- ["Commuter licenses" on page 25](#)
- ["Return a Commuter license" on page 26](#)
- ["Remote Commuter licenses" on page 26](#)
- ["Return a Remote Commuter license" on page 27](#)

Install a Seat license

1. Access the wizard from the **Start** menu (**HPE Software > HPE UFT Pro (LeanFT) > Tools > Functional Testing License Wizard**).
2. In the License Wizard start screen, select **Seat license**.
3. In the Seat License installation screen, do one of the following:



Tip: You must have a license key before you do this step. If you don't yet have a license key, click **How can I get a license key file** and following the on-screen instructions.

- Click **Load License Key File** and select the license key **.dat** file that you received from your HPE representative.
 - Paste the license key into the edit field.
4. Verify that the license key is valid, and click **Install**.
 5. When the installation of the license is complete, restart the LeanFT runtime engine to apply the new license.

Note:

- **Limited seat licenses.** If you install a time-limited seat license, do not modify the date on your computer. Doing so will block your active seat license and prevent future LeanFT seat license installations on that computer.

For more information, contact your HP license supplier.

- **MAC address or host name changes.** If you modify the MAC address or host name of the computer after installing a seat license, you must regenerate and install your seat licenses again.

Install a Concurrent license

1. **Prerequisite:** Make sure you are connected to the network and can access the License Server.
2. Access the wizard from the **Start** menu (**HPE Software > HPE UFT Pro (LeanFT) > Tools > Functional Testing License Wizard**).
3. In the License Wizard start screen, select **Concurrent license**.
4. In the Concurrent License Installation screen, enter the License Server address in the following format:

<license server address>:<port>

Default port = **5814**

Note: The address format must be identical to the one used in the **Main** tab of the License

Server Configuration pane. For details, see the *AutoPass License Server User Guide*.

5. Click **Connect** to connect to the License Server.
6. (Optional) Define a redundant License Server.
If your primary License Server is unavailable, LeanFT will connect to the redundant License Server to obtain a license. For more details, see the *AutoPass License Server User Guide*.
Expand the **Add Redundant Server** link and enter the address for the redundant License Server.
7. From the product license drop-down list, select the license you purchased and click **Install**.
8. If the LeanFT runtime engine was running during the installation of the license, restart the runtime engine to apply the new license.

Commuter licenses

Check out and install a Commuter license

Commuter licenses can be checked out only if your License Server has available concurrent licenses.

1. **Prerequisite:** Make sure you are connected to the network and can access the License Server.
Alternatively, if you cannot access the License Server: ["Remote Commuter licenses" on the next page](#).
2. Access the wizard from the **Start** menu (**HPE Software > HPE UFT Pro (LeanFT) > Tools > Functional Testing License Wizard**).
3. In the License Wizard start screen, select **Additional Options > Commuter License**.
4. In the Commuter License Installation screen, enter the License Server address in the following format:

```
<license server address>:<port>
```

Default port = **5814**

The address format must be identical to the one used in the **Main** tab of the License Server Configuration pane.

For details, see the *AutoPass License Server User Guide*.

5. Click **Connect** to connect to the License Server.
6. After the list of available licenses is displayed, ensure that **Available** is selected below the License Server address field.
7. From the list of available licenses, select the licenses you need.
8. In the **Check out licenses for (days)** field, enter the number of days for which you need the commuter license.
Maximum = 180 days
9. Click **Check Out**, and then **Next** to install the license.

10. If the LeanFT runtime engine was running during the installation of the license, restart the runtime engine to apply the new license.

Return a Commuter license

When you are done with a license, you should return it back in to the license server.

1. **Prerequisite:** Make sure you are connected to the network and can access the License Server. Alternatively, if you cannot access the License Server: "[Remote Commuter licenses](#)" below.
2. Access the wizard from the **Start** menu (**HPE Software > HPE UFT Pro (LeanFT) > Tools > Functional Testing License Wizard**).
3. In the License Wizard start screen, select **Additional Options > Commuter License**.
4. In the Commuter License Installation screen, the License Server address should already be displayed and connected.

If needed, enter the License Server address in the following format:

```
<license server address>:<port>
```

Default port = **5814**

The address format must be identical to the one used in the **Main** tab of the License Server Configuration pane. For details, see the *AutoPass License Server User Guide*.

5. After the list of available licenses is displayed, ensure that **Checked Out** is selected below the License Server address field.
6. Click **Check In All Licenses**, and then **Next**. The list of checked out licenses is cleared.

Note: When you return a commuter license, all of the licenses that you check out at the same time are returned too. If you still need some of these licenses, check them out again.

Remote Commuter licenses

Check out and install a Remote Commuter license

Remote commuter licenses can be checked out only if your License Server has available concurrent licenses.

1. Access the wizard from the **Start** menu (**HPE Software > HPE UFT Pro (LeanFT) > Tools > Functional Testing License Wizard**).
2. In the License Wizard start screen, select **Additional Options > Remote Commuter license**.
3. In the Remote Commuter License Installation screen, ensure that **Generate Request File** is selected.
4. From the list of available licenses, select the license you need.
5. In the **Check out licenses for (days)** field, enter the number of days for which you need the commuter license.

Maximum = 180 days

6. Click **Generate Request File**.

Send the generated **.lcor** request file to a License Server administrator or to a user with access permissions to the License Server.

The other user must check out and send you a license key file.

7. Save the file, and click **Choose File** to browse to the file you received.

8. Click **Install** to install the license.

9. If the LeanFT runtime engine was running during the installation of the license, restart the runtime engine to apply the new license.

Return a Remote Commuter license

1. In the License Wizard start screen, select **Additional Options > Remote Commuter license**.

2. In the Remote Commuter License Installation screen, ensure that **Generate Request File** is selected.

3. In the Generation screen, click **Generate and Save Check In Request**, and save the **.lcor** check-in request file.

4. Click **Next** to uninstall the license.

The License Wizard reports that the remote commuter license is uninstalled. LeanFT reverts to the previous license type as the active license.

Install LeanFT license from the command line

You can install seat or concurrent licenses on Windows machines directly from the command line.

Note: Installing licenses requires administrator permissions.

Run the License Installer, **LicenseInstall.exe**, as follows, appending the relevant command and set of parameters described in the table below:

```
"<LeanFT installation directory>\bin\HP.UFT.LicenseInstall.exe"
```

Action	Commands and parameters
Seat license	

Action	Commands and parameters
Install a seat license	<ul style="list-style-type: none"> Run the License Installer, appending the following: seat "<license key string>" Example: "C:\Program Files (x86)\HP\LeanFT\bin\HP.UFT.LicenseInstall.exe" seat "<key> \ HP Unified Functional Testing" Note: If the license key contains a quotation mark character (") in the license key string, add a backslash character (\) before the quotation mark. If the license key file is saved locally, append the following: seat "<path to the license key file>" Note: Wrap the path to the license key file in quotes. Example: "C:\Program Files (x86)\HP\LeanFT\bin\HP.UFT.LicenseInstall.exe" seat "Downloads\HP UFT-licfile.dat"
Concurrent license	
Verify available licenses	<p>Run the License Installer, appending the following:</p> <p>licenses <primary server name/address>:<port> [<secondary server name address>:<port>]</p> <p>Note: secondary server name/address and port are optional.</p> <p>The available licenses are displayed by unique ID and version.</p> <p>Example:</p> <p>"C:\Program Files (x86)\HP\LeanFT\bin\HP.UFT.LicenseInstall.exe" licenses 11.11.111.111:5814</p>

Action	Commands and parameters
Install a concurrent license	<ol style="list-style-type: none"> Run the License Installer to verify which licenses are available on the AutoPass server, as described above. The available licenses are displayed by unique ID and version. Run the License Installer again, this time appending the following command and parameters: concurrent <license ID> <license version> <primary server name/address>:<port> [<secondary server name/address>:<port>] [/force] The address format must be identical to the one used in the Main tab of the Autopass License Server Configuration pane. For details, see the <i>AutoPass License Server User Guide</i>. Default port for the primary and secondary servers is 5814. /force saves the license installation information even if the current installation fails. In subsequent sessions, LeanFT will check the listed license server for the listed license. Note: secondary server name/address, port, and /force are all optional. Example: "C:\Program Files (x86)\HP\LeanFT\bin\HP.UFT.LicenseInstall.exe" concurrent 11.11.111.111:5814 /force
Modify server connection protocol	Run the License Installer, appending: <ul style="list-style-type: none"> Primary license server: config protocol.primary <protocol> Secondary license server: config protocol.second <protocol> where <protocol> is http or https as needed.

Install LeanFT license on Linux / Mac

On Linux/Mac machines, install seat or concurrent licenses directly in Terminal.

Note: You must have ROOT user permissions to install the license.

- Change to the **<LeanFT installation>/Tools** directory.
- Run the License Installer, **licenseInstaller**, appending the relevant command and set of parameters:

Action	Commands and parameters
Verify status and locking code	Run the License Installer, appending: status

Action	Commands and parameters
Help	Run the License Installer, appending: help
Seat license	
Install a seat license	Run the License Installer, appending: seat "<license_file_path>" Note: Wrap the path to the license key file in quotes.
Concurrent license	
Verify the available licenses on the server	Run the License Installer, appending: licenses <license server name/IP address> The available licenses are displayed by unique license ID and license version.
Install a concurrent license	<ol style="list-style-type: none"> Run the License Installer to verify the available licenses on the server on the Autopass license server, as described above. The available licenses are displayed by unique license ID and license version. Select one of the licenses and run license-installer again, this time appending the following command and parameters: concurrent <license ID> <version> <license server name/IP address> where license ID and version are the unique ID and version of the license you want to use.
Modify server connection protocol	Run the License Installer, appending: <ul style="list-style-type: none"> Primary license server: config protocol.primary <protocol> Secondary license server: config protocol.second <protocol> where <protocol> is http or https as needed.

License editions

LeanFT supports a variety of license editions, giving you a different set of functionality.

This section includes:

- ["Supported license editions" on the next page](#)
- ["Backward compatibility for upgrades" on the next page](#)
- ["Licensing fallback mechanism \(Windows only\)" on the next page](#)
- ["Define license usage behavior" on page 32](#)

Supported license editions

The following license editions can be used to activate LeanFT:

LeanFT standalone, now called UFT Pro (LeanFT): UFT Pro (LeanFT)

UFT / LeanFT:

- UFT Enterprise
- UFT Ultimate
- UFT Runtime Engine - enables test execution only.

Backward compatibility for upgrades

If you are upgrading, and currently have an FT, QTP, or UFT license, you are not required to migrate to one of the new license types. LeanFT will continue to function with your existing license.

When upgrading, existing licenses are automatically renamed as follows:

- **UFT license:** Your license is automatically renamed to the **UFT Enterprise** license.
- **LeanFT license:** Your license is automatically renamed to the **UFT Pro (LeanFT)** license

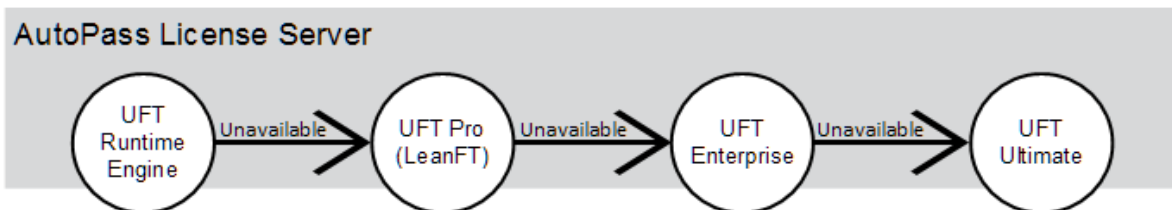
Licensing fallback mechanism (Windows only)

Note: The licensing fallback is relevant only when working with concurrent licenses on Windows, and is not enabled by default.

When starting LeanFT, the AutoPass License Server attempts to consume the exact license edition configured on the LeanFT machine, such as the **UFT Enterprise** or **UFT Pro (LeanFT)** license.

To modify this configuration on your Windows machine, see ["Define license usage behavior" on the next page](#). Do this if you are concerned about the availability of the license edition configured on your LeanFT machine.

LeanFT consumes licenses in the following order, starting from the license edition configured on the LeanFT machine:



Example:



Scenario 1: UFT Pro (LeanFT) license configured on your LeanFT machine

If the **UFT Pro (LeanFT)** license is configured on your LeanFT machine, but there is no available UFT Pro (LeanFT) license on the License Server, LeanFT will try to consume a **UFT Enterprise** license.

In turn, if no UFT Enterprise license is available, LeanFT will try to consume a **UFT Ultimate** license.

Scenario 2: UFT Runtime Engine license installed on your LeanFT machine

If the **UFT Runtime Engine** license is configured on your LeanFT machine but there is no available UFT Runtime Engine license, LeanFT will try to consume a **UFT Pro (LeanFT)** license.

In turn, if there is no available **UFT Pro (LeanFT)** license, LeanFT will try to consume a **UFT Enterprise** license, and so on.

Define license usage behavior

Define how your LeanFT installation uses licenses in the **HPE UFT.xml** file.

This file is located on your LeanFT computer at: **C:\ProgramData\HP\HP AutoPass License Server\AutoPass\LicenseServer\data\conf**.



Note: If you are upgrading from a previous UFT or LeanFT version, you must upgrade your Autopass License Server to version 9.3 or higher to access this file.

Open the **HPE UFT.xml** file in a text editor, then edit and add keys and values in the following format:

```
<entry key="{Key}">{Value}</entry>
```

Edit and add keys to do the following:

- ["Configure the licensing fallback mechanism" below](#)
- ["Set maximum idle time" on the next page](#)

Configure the licensing fallback mechanism

Depending on the license configured on your LeanFT machine, define whether your system uses the [licensing fallback mechanism](#) by setting the following values to **true**:

LeanFT license	Entry key value
UFT Pro (LeanFT)	<code><entry key="license.fallback.leanft.leanft">true</entry></code>
UFT Runtime Engine	<p><code><entry key="license.fallback.leanft.rte">true</entry></code></p> <p>Note: If there are LeanFT users using the LeanFT IDE plugins to create and modify tests, do one of the following:</p> <ul style="list-style-type: none"> • Ensure that all UFT Runtime Engine licenses on the License Server are blocked or in use. • Ensure that this entry key is set to false.

Set maximum idle time

Define the number of minutes, with no keyboard or mouse input, after which LeanFT releases the currently used concurrent license.

In the **HPE UFT.xml** file, add the following line of code:

```
<entry key="autorelease.interval"><#></entry>
```

The number in this entry key is the number of minutes of inactivity.

For example, the following syntax defines that your license expires after **10 minutes** of inactivity.

```
<entry key="autorelease.interval">10</entry>
```

LeanFT licensing FAQs

This topic answers a number of frequently asked questions about using and installing LeanFT licensing.

Information in this Help Center describes how you can use the Autopass License Server from LeanFT. For full details on Autopass License Server capabilities, such as proxy settings, license installation and management, and user management, see the [AutoPass License Server](#) guide on HPLN.

In this topic:

- ["Which license should I install?" on the next page](#)
- ["How do I install the Autopass License Server?" on the next page](#)
- ["If I am using concurrent licenses, how do I get LeanFT to work with the License Server?" on the next page](#)
- ["How do I manage the concurrent licenses on the License Server?" on page 35](#)
- ["Can I configure license behavior myself?" on page 35](#)
- ["Can I set up my License Server to work with a secondary \(backup\) License Server?" on page 35](#)

- ["Can I use the Autopass License Server with a proxy?" on page 36](#)
- ["What is a cleanup license?" on page 36](#)
- ["My demo license is expiring early. What can I do?" on page 36](#)

Which license should I install?

In LeanFT, you can install a number of different license types. The following table should help you to identify the one to install.

Scenario	License Type to Install
Are you assigned a specific license (with its own unique license key)?	Seat
Are you part of a group that uses licenses on an as-needed basis?	Concurrent. You will need the IP address or the lock code on your License Server where the licenses are installed
Are you assigned the IP address from which to check out a license?	Concurrent
Are you traveling and will not have access to a license server?	Commuter
Are you already traveling and cannot access the License Server to get a license?	Remote Commuter

How do I install the Autopass License Server?

For full details, see the *Autopass License Server User Guide*, accessible from the [AutoPass License Server](#) page on HPE Live Network.

If I am using concurrent licenses, how do I get LeanFT to work with the License Server?

If you are installing a concurrent license, you must enter the License Server IP address or lock code.

This checks the connection between LeanFT and the License Server, and also gives you a list of possible licenses to install.

After you initially install the license, LeanFT checks the specified License Server address each time the LeanFT runtime engine starts and takes the requested license.

For full details on installing concurrent licenses, see ["UFT Pro \(LeanFT\) licensing" on page 22](#).

How do I manage the concurrent licenses on the License Server?

The Autopass License Server has a full Web-based interface that enables you to install, manage, and administer all your licenses (both concurrent and commuter).

For full details, see the *Autopass License Server User Guide*, accessible from the [AutoPass License Server](#) page on HPE Live Network.

You can also install a special tool to track license usage (both for LeanFT and other products) across your network. This tool is available here: <https://hpln.hpe.com//contentoffering/usage-tracking>.

Can I configure license behavior myself?

Yes.

Change the values for general license behavior in the Autopass license configuration file, **autopass.txt**, which is located in

- Windows: **C:\ProgramData\Hewlett-Packard\UFT\License**
- Linux/Mac: **<LeanFTInstallation>/bin/jars**

and includes details about possible values.



Caution: Configure this file with caution.

Incorrect configuration may cause to behave unexpectedly, or prevent LeanFT from starting.

Additionally, if your License Server has multiple license editions installed, you can enable a fallback mechanism to ensure that LeanFT can find an available license.

For details, see "[License editions](#)" on page 30.

Can I set up my License Server to work with a secondary (backup) License Server?

Yes. You need to install the License Server on two separate servers, and then set one server to be the primary and the other to be the secondary server. This configuration is done in the Autopass License Server Web UI.

You also can supply this information to LeanFT. This enables LeanFT to take a concurrent license from the secondary License Server in the event that the primary License Server is not available.

For full details, see the *Autopass License Server User Guide*, accessible from the [AutoPass License Server](#) page on HPE Live Network.

Can I use the Autopass License Server with a proxy?

Yes. Beginning with AutoPass License Server version 9.3, connection to the License Server with a proxy is supported. You set the proxy settings in the **autopass.txt** file, located in:

- Windows: **C:\ProgramData\Hewlett-Packard\UFT\License**
- Linux/Mac: **<LeanFTInstallation>/bin/jars**

See the comments inside this file for details on setting the proxy settings. Be sure to uncomment the relevant lines and define their values.

What is a cleanup license?

If your computer is clock-tampered after installing the License Server, both the License Server and LeanFT's connection to the License Server do not work.

In this case, you must get a cleanup license for your License Server. This enables you to reset all license capabilities.

For details on cleanup licenses, contact your HPE license supplier.

My demo license is expiring early. What can I do?

If you are having problems with the trial license period (60 days maximum):

- Ensure that you have full permissions to your LeanFT installation folder and all its subfolders.
- Ensure that you have not changed the system time. If you have moved the system time, the license mechanism can reduce the trial period based on the number of days that were back-dated.

See also:

- ["UFT Pro \(LeanFT\) licensing" on page 22](#)
- ["Known issues with LeanFT licensing" below](#)

Known issues with LeanFT licensing

- The License Server does not support the use of Network Address Translation (NAT).
- If you installed LeanFT from the UFT setup program, and you are using a seat license for UFT, LeanFT uses the same license.

In such cases, you cannot run both UFT and LeanFT at the same time.

Send Us Feedback



Let us know how we can improve your experience with the Installation Guide.

Send your email to: docteam@hpe.com


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