# **HPE Unified Functional Testing**

Software Version: 14.01

# Installation Guide

### Go to **HELP CENTER ONLINE**

http://uft-help.saas.hpe.com/





Document Release Date: July 30, 2017 | Software Release Date: August 2017

# **Legal Notices**

#### Warranty

The only warranties for Hewlett Packard Enterprise Development LP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HPE shall not be liable for technical or editorial errors or omissions contained herein.

The information contained herein is subject to change without notice.

### **Restricted Rights Legend**

Confidential computer software. Valid license from HPE required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

### **Copyright Notice**

© Copyright 1992 - 2017 Hewlett Packard Enterprise Development LP

#### **Trademark Notices**

Adobe® is a trademark of Adobe Systems Incorporated.

Microsoft® and Windows® are U.S. registered trademarks of Microsoft Corporation.

UNIX® is a registered trademark of The Open Group.

# **Contents**

HPE Unified Functional Testing	
UFT installation overview	5
Required access permissions	8
Required permissions for UFT	
Required permissions for ALM	9
Required permissions for BPT	9
Enterprise deployment	11
UFT and User Account Control (UAC)	11
Stingray or Terminal Emulator Add-ins	11
Upgrade UFT	13
Install UFT	16
Installation prerequisites	16
Install UFT with the install wizard	17
UFT silent installation	21
Verify the installation	30
Known issues	32
UFT licensing	38
UFT licenses	38
View license information in UFT	38
AutoPass License server	38
Seat vs. concurrent licenses	39
Seat licenses	39
Concurrent licenses	39
License editions	4C
Supported license editions	40
Upgrading licenses from before UFT 14.00	41
Licensing fallback mechanism	42
Define license usage behavior	43
Install licenses with the wizard	45
Install licenses with the command line	49
Install seat licenses with the command line	49
Install concurrent licenses with the command line	50

Licensing FAQs	51
Can I use my old license (from before UFT 12.50) with the new License Server?	52
Which license should I install?	52
How do I install the Autopass License Server?	53
If I am using concurrent licenses, how do I connect to the License Server?	53
How do I install licenses if I am deploying UFT across an enterprise network?	53
How do I manage the concurrent licenses on the License Server?	54
Can I configure license behavior myself?	54
Can I set up my License Server to work with a redundant (backup) License Server?	54
Can I use the Autopass License Server with a proxy?	55
What is a cleanup license?	55
My demo license is expiring early. What can I do?	55
Known issues with UFT licensing	55
Before connecting to ALM	57
Cond He Foodback	FO

# **UFT** installation overview

This guide provides details about how to install UFT from the full installation package, as well as a compressed, lighter installation package downloadable from the Web.

In either package, installing UFT provides core UFT features, the Run Results Viewer, and the following mandatory GUI testing add-ins:

- Web
- Standard Windows
- Mobile
- Windows Runtime (when installing on computers with Windows 8.x and higher, and Windows Server 2012)

You can select additional add-ins during installation.

Web 2.0 add-ins and extensibility toolkits must be installed separately from the full installation package, after the UFT installation is complete.

The **lighter installation package** provides the UFT setup program only.

The **full installation package** provides the UFT setup program, as well as additional setup programs for UFT components. To install an additional component, select it from the UFT installation wizard **Startup** screen.

Additional UFT components include:

Component	Description
UFT Add-in for ALM	Enables UFT to communicate with ALM and run tests or components from ALM.  Install the standalone version only if UFT is not installed on the computer.
	To install this together with UFT, select to install it while installing UFT. If you did not install this originally with UFT, and want to later on, run the installation wizard again. Select <b>Change</b> , and then select <b>ALM Plugin</b> in the Custom Setup screen.
Extensibility SDKs	Enable you to develop support for Java, .NET, WPF, Silverlight, or Web object not supported by UFT by default.

Component	Description
Web 2.0 Toolkit Support	Enable you to recognize and use objects in your test from Web 2.0 technologies, including:  • ASP .NET Ajax  • Dojo  • GWT (Google Web Toolkit)  • jQueryUI  • SiebelOpenUI  • EXT-JS  • YahooUI  Web 2.0 Toolkits appear in UFT as GUI Add-ins.
License server setup	Enables you to install the AutoPass License Server, which is used to install and manage UFT concurrent and commuter licenses.  For details, see "UFT licensing" on page 38 and the Autopass License Server User Guide.
Run Results Viewer setup	Enables you to install a standalone version of the Run Results Viewer.  Install the standalone version only if UFT is not installed on the computer.
UFT Pro (LeanFT) setup	<ul> <li>Enables you to install Lean Functional Testing, a functional testing tool that enables you to code tests directly from your developer IDE.</li> <li>Install the standalone version only if UFT is not installed on the computer.</li> <li>To install this together with UFT, select to install it while installing UFT. If you did not install this originally with UFT, and want to later on, run the installation wizard again. Select Change, and then select the UFT Pro (LeanFT) in the Custom Setup screen.</li> <li>You must install Node.js 4.1.2 before installing UFT Pro (LeanFT): https://nodejs.org/en/download/</li> <li>For more details, see the UFT Pro (LeanFT) Readme.</li> </ul>

**Note:** Unless otherwise specified, references to **Application Lifecycle Management** or **ALM** apply to all currently supported versions of ALM and Quality Center.

Some features and options may not be supported in the specific edition of ALM or Quality Center that you are using.

## Before installing:

- Ensure that you have required permissions, as listed in "Required access permissions" on the next page
- Review any known issues, as listed in "Known issues" on page 32 and "Known issues with UFT licensing" on page 55.

If you are installing in an enterprise environment, review "Enterprise deployment" on page 11.

If you are **upgrading**, review "Upgrade UFT" on page 13 for specific steps that may apply to you.

# Required access permissions

Verify the following access permissions before you start running UFT, or working with UFT and ALM or BPT.

### This chapter includes:

•	Required permissions for UFT	8
•	Required permissions for ALM	9
•	Required permissions for BPT	9

# Required permissions for UFT

# Required file system permissions

Read/write permissions	You must have <b>read/write</b> permissions to the following files and folders, as well as any sub-folders:
	The Windows\System32 folder
	The <b>Temp</b> folder
	The folder containing UFT solutions, tests, or run results
	• The <program files="">\Common Files\Mercury Interactive folder</program>
	• The <b>Program Data The Folder</b> (Windows 7 or Windows Server 2008 systems)
	User Profile folders
	The <windows>\mercury.ini file</windows>
	The following AppData folders:
	%userprofile%\AppData\Local\HPE
	%appdata%\Hewlett-Packard\UFT
	%appdata%\HPE\API Testing
Read	You must have <b>read</b> permissions to the following folders:
permissions	The Windows folder
	The System folder

### Required registry key permissions

Read/write permissions	All keys under:  • HKEY_CURRENT_USER\Software\Mercury Interactive or [HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Hewlett-Packard]
Read and Query Value permissions	HKEY_CURRENT_USER\SOFTWARE\Hewlett Packard     HKEY_LOCAL_MACHINE keys     HKEY_CLASSES_ROOT keys

# Required permissions for ALM

Read/write permissions	ALM cache folder
	<program data="">\HPE folder</program>
	UFT Add-in for ALM installation folder
Administrative permissions	For the first connection to ALM

# Required permissions for BPT

Ensure that you have the required ALM permissions before working with business components and application areas.

### Component steps

To work with component steps in ALM, you must have the appropriate **Add Step**, **Modify Step**, or **Delete Step** permissions set.

You do not need **Modify Component** permission to work with component steps.

The **Modify Component** permission enables you to work with component properties (the fields in the component Details tab).

## Parameters in ALM or other testing tools

To work with parameters in ALM or in a testing tool, you must have all the parameter task permissions set in ALM.

## **Application areas**

To modify application areas, you must have the separate permissions for resources required for modifying components, and adding, modifying, and deleting steps.

All four permissions are required.

Installation Guide Required access permissions

If one of these permissions is not assigned, you can open application areas only in read-only format.

# **Enterprise deployment**

When installing UFT in an enterprise business model across many computers in a network or company, ensure that you have administrator permissions on each computer.

This section includes:

- "UFT and User Account Control (UAC)" below
- "Stingray or Terminal Emulator Add-ins" below

UFT also supports silent installations. For details, see:

- "UFT silent installation" on page 21
- "Install licenses from the command line" on page 1

# **UFT and User Account Control (UAC)**

You do not need to turn off the computer's User Account Control (UAC).

For users to connect to ALM from UFT for the first time without turning off UAC, you must also install the ALM client MSI file on each machine.

Generate a custom MSI for all your users with the ALM Client MSI Generator. This tool enables you to configure the settings for your ALM servers before installing the client-side MSI.

Configure the settings for a custom MSI, as described in the user guide provided with each MSI Generator version.

Note: When configuring the settings, select the Check Include Component Registration and Use Shared Deployment Mode options.

# Stingray or Terminal Emulator Add-ins

If your users are using either the Stingray or Terminal Emulator add-ins, there are additional configurations you or the user must perform after installing UFT

## Both the Stingray and Terminal Emulator Add-ins

Run the Additional Installation Requirements after the main installation on each computer.

This tool is found in the Start menu (Start > All Programs > HPE Software > HPE Unified Functional Testing > Tools > Additional Installation Requirements).

In the Additional Installation Requirements, select the **Run Stingray Wizard** and/or **Run Terminal Emulator Wizard** options, and follow the configuration wizard steps to set up the add-ins.

### Stingray Add-in

After installing UFT, users must run the Stingray Support Configuration Wizard from inside UFT: **Tools** > **Options** > **GUI Testing** tab > **Stingray** pane > **Select Version**.

This configuration requires no administrative permissions.

### Terminal Emulator Add-in

After installing UFT, users must run the Terminal Emulator configuration wizard from inside UFT: **Tools** > **Options** > **GUI Testing** tab > **Terminal Emulator** pane > **Open Wizard** 

Users must have administrator permissions to run this wizard.

You can also run the wizard once, and then save the settings to a registry file that can be deployed on all computers, as follows:

- 1. In the final screen of the Terminal Emulator Wizard, select the **Save terminal emulator settings to file** option.
  - **Note:** Ensure that you record the vendor name and emulator name assigned to the configuration, as well as the exact location of the **.reg** file.
- 2. Copy the file to the **<UFT installation folder>\dat** folder on your computer.
- 3. Double-click the registry file to open the Registry Editor message box.
- 4. Click **Yes** to add the information into the registry. A message opens confirming that the information has been copied into the registry.
- 5. Click **OK**. The emulator name assigned to this configuration is added to the list of available terminal emulators for your UFT installation.

# **Upgrade UFT**

You can upgrade directly to the most recent version of UFT from any previous version of UFT, or from Service Test 11.50.

For other upgrades, including versions of QuickTest or Service Test versions earlier than 11.50, manually uninstall QuickTest or Service Test, and then install UFT.

Upgrades retain Run Session and Startup options only.

Ensure that you restart your system before performing the upgrade to ensure complete configuration fo the system.

#### This topic includes:

- "Upgrade silent installation scripts" below
- "Upgrade licenses" below
- "Upgrade with a concurrent license" on the next page
- "Upgrade with Web tests on Microsoft Edge" on the next page
- "Upgrade with Web tests on Safari" on the next page
- "Upgrade UFT" above
- "Upgrade with text recognition options in automation scripts" on the next page
- "Upgrade after using UFT and ALM" on the next page
- "Upgrade with the QTPNET\_00015 patch" on page 15
- "Upgrade from QuickTest Professional 11.00" on page 15

### Upgrade silent installation scripts

Due to the removal of the Help documentation from the UFT installation, the **Help\_Documents** parameter for msi silent installation is no longer supported. If your installation scripts use this parameter, update the scripts to remove the parameter.

If you still need a local copy of the Help, you can download it directly from the **Help** tab of the Options dialog (**Tools > Options > General** tab > **Help** node).

### **Upgrade licenses**

If you are upgrading from QuickTest, Service Test, or a version of UFT earlier than 12.50, you must get a new license.

Do this from the HPE Software Licenses and Downloads portal, where you can access entitlements to software activations and downloads.

You will need the original Order Number (not the SAID) to access the entitlements in this Portal.

In addition, you can also upgrade your license to the new Functional Testing licenses: UFT Ultimate, UFT Enterprise, and UFT Pro. This step is not required.

For assistance, contact a regional licensing support center or your sales representative.

### Upgrade with a concurrent license

UFT supports the Autopass License Server as its concurrent license server.

If you are upgrading to UFT with a concurrent license, you must also upgrade your concurrent license server and install your licenses on the Autopass License Server.

For details, see the *Autopass License Server User Guide*, downloaded with your AutoPass License Server installation.

**Note:** If you are installing UFT from the compressed package for the Web, this link is not available. If you need to install UFT and the License Server, you must install UFT from the full installation package.

### Upgrade with Web tests on Microsoft Edge

UFT has changed the way that the Microsoft WebDriver program (required for the Functional Testing Agent for Edge) is used. For details on the required steps to perform, see the topic on using the Edge extension.

### Upgrade with Web tests on Safari

If you used a previous version of UFT to test Web applications on Safari, you must reinstall the UFT Connection Agent on the Mac from the current version of UFT.

The UFT Connection Agent preferences and the Unified Functional Testing Agent Safari extension preferences are reset to their defaults.

### Upgrade with text recognition options in automation scripts

If you are running UFT with an automation script and have added text recognition options to the script, the following properties are obsolete and must be updated:

- Update TextRecognitionLanguages to AbbyOcrLanguages
- Update TextRecognitionOrder to TextRecognitionOcrMechanism

### Upgrade after using UFT and ALM

If you upgrade to UFT from an version of UFT earlier than 12.50 shortly after using UFT to run GUI tests from ALM, make sure to stop the Remote Agent (if running) before running tests from ALM again.

To stop the previous Remote Agent process, in the Windows system tray, right-click the Remote Agent icon and select **Exit**.

# Upgrade with the QTPNET\_00015 patch

If you install UFT while the **QTPNET\_00015** patch (a QuickTest 10.00 patch) is installed on your computer, UFT may behave unexpectedly.

Before installing UFT, remove the patch from the Windows Control Panel Add/Remove Programs dialog box.

## Upgrade from QuickTest Professional 11.00

When upgrading from QuickTest Professional 11.00 and installing UFT into the same directory as QuickTest, certain files will be missing from the installation.

After the upgrade, run the UFT installation again and select the **Repair Installation** option.

# **Install UFT**

### This chapter includes:

- "Installation prerequisites" below
- "Install UFT with the install wizard" on the next page
- "UFT silent installation" on page 21
- "Verify the installation" on page 30
- "Known issues" on page 32

# Installation prerequisites

Before installing, verify the following prerequisites:

Prerequisite	Description
Permissions	Verify that you are logged on with the relevant access permissions.
	For details, see "Required access permissions" on page 8.
Install location	Select the location where you want to install UFT.
	Do not install UFT on a network drive.
	The installation path, and the path to the installation files, must include English characters only.
Computer state	Ensure that your computer does not need to be restarted.
System requirements	Ensure that your computer meets all minimum system requirements listed in the UFT Readme.
Internet access	If you are installing the UFT Installation Package for the Web, ensure that you have internet access.
Upgrades	If you are upgrading, check any relevant prerequisites described in "Upgrade UFT" on page 13.
Licenses	Know which type of license you are using.
	If you are using a concurrent license, have the license server URL available.
	For more details, see "UFT licensing" on page 38.
GUI testing add-ins	Know which add-ins you want to use for GUI testing. We recommend installing only those you expect to use.

Prerequisite	Description
API testing	If you plan to run tests of a Web Service using security settings, you must have the .NET Framework 3.5, WSE 2.0sp3 package, and WSE 3.0 package installed on your computer.
	These packages are not provided with the UFT installation. If they are not installed on your computer, you can install them from the following locations on the DVD:
	<ul> <li>NET 3.5 Framework: DVD/prerequisites/dotnet35_sp1/donetfx35_ sp1.exe</li> </ul>
	<ul> <li>WSE 2.0 sp3:</li> <li>DVD/prerequisites/wse20sp3/MicrosoftWSE2.0SP3Runtime.msi</li> </ul>
	WSE 3.0: DVD/prerequisites/wse30/MicrosoftWSE3.0Runtime.msis

**Note:** If you install the UFT Add-in for ALM as part of the installation and you plan to work with ALM 11.52 patch 4 or earlier, you must also install the Microsoft Visual C++ 2005 SP1 Redistributable Package on your computer.

You can download this file from http://www.microsoft.com/enus/download/details.aspx?id=5638.

# Install UFT with the install wizard

The UFT install wizard guides you through the installation process.

Before the installation, restart your computer to ensure complete configuration of the system.

When the Startup screen opens, select **Unified Functional Testing Setup**. If you do not see this screen, run the **setup.exe** file in the UFT installation directory.

Follow the steps in the wizard to complete your installation.

This topic also includes additional details about the install wizard:

- "Custom Setup screen" on the next page
- "UFT Configuration screen" on page 20

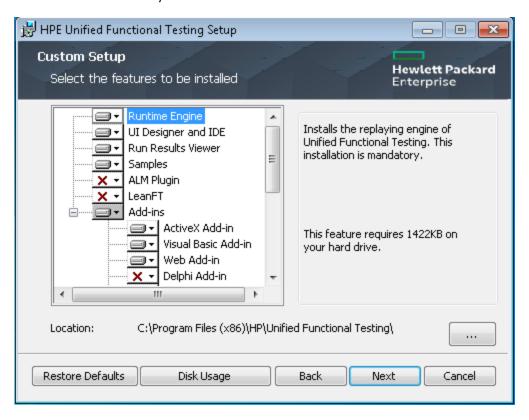
When the UFT installation is complete, you are prompted to view the **Readme** and installation log.

You may also be prompted to restart your computer. If you are, we recommend restarting as soon as possible. Delaying the system restart may result in unexpected UFT behavior.

If you are using Web 2.0 add-ins or extensibility toolkits, perform additional installations. For details, see "Install Web 2.0 add-ins or extensibility toolkits" on page 21.

### **Custom Setup screen**

Select the features that you want to install:



Feature	Description
Runtime Engine	Mandatory. Enables you to run UFT or UFT Pro (LeanFT) tests.
UI Designer and IDE	Enables you to edit UFT tests.
Run Results Viewer	Enables you to view UFT or UFT Pro (LeanFT) run results.  Alternately, you can view run results in a browser window without the Run Results Viewer.
Samples	Demo applications used in the UFT tutorials.

Feature	Description
ALM Plugin	Enables you to run and edit UFT tests directly from ALM.
UFT Pro (LeanFT)	Enables you to create functional tests directly from your developer IDE.
GUI Testing Add-ins	Provide the support which enable you to test applications using supported technology versions.
	You must install the Web Add-in to test applications based on Web 2.0 technologies.

For each feature, select one of the following installation options:

Will be installed on local hard drive.

Installs the selected feature on your local hard drive. Sub-features of the selected feature are not installed.

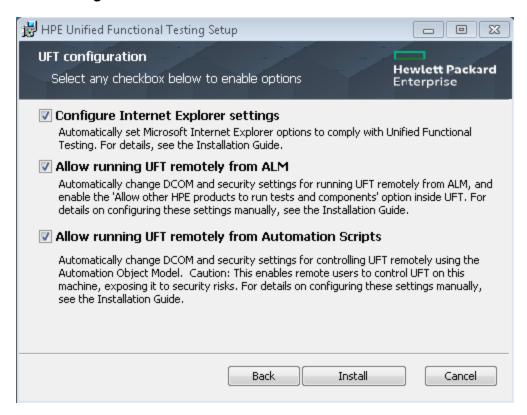
Entire feature will be installed on local hard drive.

Installs the entire selected feature and its sub-features on your local hard drive.

For example, you can instruct UFT to install the .NET Add-in with its sub add-ins, Silverlight and Windows Presentation Foundation.

Selecting **Entire feature will be unavailable.** excludes the feature from the installation. It will not be available in UFT.

### **UFT Configuration screen**



Select any required items you want to configure automatically with the UFT installation.

Configure Internet Explorer settings	Enables UFT to use the Microsoft Script Debugger application during test runs.  Alternately, configure these settings manually before running UFT. In Internet Options > Advanced, select the following options:
	<ul> <li>Disable script debugging</li> <li>Enable third-party browser extensions</li> </ul>
Allow running UFT remotely from ALM	Changes DCOM permissions and security settings and opens a firewall port on your UFT computer.
	Required if you are running UFT on Windows 7, and want to run UFT tests remotely from ALM.
	To set these options manually later on, see https://softwaresupport.hpe.com/group/softwaresupport/search-result/-/facetsearch/document/KM02239325

Enable running UFT remotely from	Changes DCOM permissions and security settings to enable other computers to remotely control UFT using automation scripts.
Automation Scripts	To set these options manually later on, see https://softwaresupport.hpe.com/group/softwaresupport/searchresult/-/facetsearch/document/KM02239325



**Caution:** Running UFT remotely from Automation Scripts enables remote users to control UFT on this machine, exposing the UFT computer to security risks.

## Install Web 2.0 add-ins or extensibility toolkits

You must perform an additional installation to use Web 2.0 add-ins or extensibility toolkits. Extensibility toolkits enable you to develop support for add-in objects not currently supported by UFT add-ins.

Do one of the following, depending on the type of UFT installation you performed:

UFT installation package	Web 2.0 / extensibility installation
Full installation package	<ol> <li>Run the UFT installation wizard.</li> <li>In the UFT installation start screen, select the Add-in Extensibility and Web 2.0 Toolkits option.</li> </ol>
	<ol> <li>In the Unified Functional Testing Add-in Extensibility and Web 2.0         Toolkit support page, select the Extensibility SDK or Web 2.0 Toolkits installation option that you want.     </li> </ol>
	3. Follow the steps in the wizard to complete your installation.
Lighter installation package for the	1. After performing the UFT installation, navigate to the <b><uft< b="">  installation&gt;\Installations\Web2AddinSetup folder.  2. In the Web2AddinSetup folder, run the Web2AddinSetup ever file.</uft<></b>
Web	<ol> <li>In the Web2AddinSetup folder, run the Web2AddinSetup.exe file.</li> <li>Follow the steps in the wizard to complete your installation.</li> </ol>

After your installation, the toolkit files and Extensibility SDKs are found in the **<UFT installation>\dat\Extensibility** folder.

Web 2.0 add-ins are displayed as child add-ins to the Web Add-in in the Add-in Manager when starting UFT.

# **UFT** silent installation

You can install UFT and the ALM Add-in silently on your computer or a remote computer.

Before installing silently:

- Verify that you have administrator privileges.
- Save any open files and close all open applications.
- **Restart** your system to ensure a complete system configuration.
- Note that silent installation commands are case-sensitive and should be entered exactly as listed.
- If you are installing the lighter installation package from the web, in the silent installation commands, **change** <UFT installation directory> to the download directory you used.

The following is an example of a standard silent UFT installation:

msiexec /i "<UFT installation directory>\Unified Functional Testing\MSI\Unified\_ Functional\_Testing\_x64.msi" /qb

### Silent installation command reference

Prerequisites	"Install all UFT prerequisites" on the next page
	"Install specific UFT prerequisites" on the next page
	"Install UFT Add-in for ALM prerequisites" on page 24
	"Install Run Results Viewer prerequisites " on page 25
Install UFT	"Install UFT silently" on page 25
Install individual UFT features	"Install individual UFT features" on page 26
	"Mandatory commands" on page 26
	"Optional commands, for UFT core components" on page 26
	"Optional commands for UFT Add-ins" on page 27
	"Commands for UFT Pro (LeanFT) components" on page 27
Standalone UFT Add-in for ALM	"Install a standalone UFT Add-in for ALM" on page 28
Remote configuration options	"Set UFT remote configuration options" on page 28
Additional commands	"Additional silent installation commands" on page 29
Lighter installation package for the Web	"Install a lighter version of UFT" on page 30
License insallations	"Install licenses with the command line" on page 49

# Install all UFT prerequisites

<UFT installation directory>\Unified Functional Testing\EN\setup.exe
/InstallOnlyPrerequisite /s

back to top

# Install specific UFT prerequisites

Some items have different commands for different systems. Run the command most appropriate for your system.

	Silent Command Line Syntax
.NET Fram ework 4.5	<pre><uft directory="" installation="">\prerequisites\dotnet45\dotnetfx45_full_x86_ x64.exe /q /norestart</uft></pre>
Microsoft Access database engine 2010	<pre><uft directory="" installation="">\prerequisites\msade2010\AccessDatabaseEngine.exe /quiet</uft></pre>
Microsoft WSE 2.0 SP3 Runtime	<pre><uft directory="" installation="">\prerequisites\wse20sp3\MicrosoftWSE2.0SP3Runtime.msi /quiet /norestart ALLUSERS=1</uft></pre>
Microsoft WSE 3.0 Runtime	<pre><uft directory="" installation="">\prerequisites\wse30\MicrosoftWSE3.0Runtime.msi /quiet /norestart ALLUSERS=1</uft></pre>
Microsoft Visual C++ 2010 Run-time Compone nts for 32/64 bit Operating Systems	<pre><uft directory="" installation="">\prerequisites\vc2010_redist\vcredist_x86.exe /q <uft directory="" installation="">\prerequisites\vc2010_X64_redist\vcredist_ x86.exe /q</uft></uft></pre>
Microsoft Visual C++ 2012 Redistribu table	<pre><uft directory="" installation="">\prerequisites\vc2012_redist_x86\vcredist_ x86.exe /quiet /norestart  <uft directory="" installation="">\prerequisites\vc2012_redist_x64\vcredist_ x64.exe /quiet /norestart</uft></uft></pre>

Microsoft Visual	<pre><uft directory="" installation="">\prerequisites\vc2015_redist_x86\vcredist_ x86.exe /quiet /norestart</uft></pre>	
C++ 2015 Redistribu table	<pre><uft directory="" installation="">\prerequisites\vc2015_redist_x64\vcredist_ x64.exe /quiet /norestart</uft></pre>	
Microsoft PDM insta	<pre><uft directory="" installation="">\prerequisites\pdm\ScriptDebugging_x86.msi /quiet /norestart</uft></pre>	
ller	<pre><uft directory="" installation="">\prerequisites\pdm\ScriptDebugging_x64.msi /quiet /norestart</uft></pre>	

**Note:** The Microsoft Visual C++ 2015 Redistributable requires a Microsoft update:

For Windows 7: https://support.microsoft.com/en-us/kb/2999226.

For Windows 8 and 8.1, and Windows Server 2012: https://support.microsoft.com/en-us/kb/2975061, or the following: https://support.microsoft.com/en-us/kb/2919442, https://support.microsoft.com/en-us/kb/2919355, https://support.microsoft.com/en-us/kb/2932046, https://support.microsoft.com/en-us/kb/2937592, https://support.microsoft.com/en-us/kb/2938439, https://support.microsoft.com/en-us/kb/2934018, and https://support.microsoft.com/en-us/kb/2999226

If the installation does not start due to some missing KB files, you can view the **VC2015Prerequisite\_yyyymmdd\_XXXXXX.log** file in the **%TEMP**% directory.

### back to top

### Install UFT Add-in for ALM prerequisites

	Silent Command Line Syntax
.NET Frame work 4.5	<pre><uft directory="" installation="">\prerequisites\dotnet45\dotnetfx45_full_x86_ x64.exe /q /norestart</uft></pre>
Microsoft Visual C++	<pre><uft directory="" installation="">\prerequisites\vc2012_redist_x86\vcredist_ x86.exe /quiet /norestart</uft></pre>
2012 Redistribut able	<pre><uft directory="" installation="">\prerequisites\vc2012_redist_x64\vcredist_ x64.exe /quiet /norestart</uft></pre>

Microsoft Visual C++	<pre><uft directory="" installation="">\prerequisites\vc2015_redist_x86\vcredist_ x86.exe /quiet /norestart</uft></pre>
2015 Redistribut	<pre><uft directory="" installation="">\prerequisites\vc2015_redist_x64\vcredist_ x64.exe /quiet /norestart</uft></pre>
able	You must also have the following update installed to install the Microsoft Visual C++ 2015 Redistribute: https://support.microsoft.com/en-us/kb/2999226

## Install Run Results Viewer prerequisites

	Silent Command Line Syntax
.NET Frame work 4.5	<pre><uft directory="" installation="">\prerequisites\dotnet45\dotnetfx45_full_x86_ x64.exe /q /norestart</uft></pre>
Microsoft Visual C++ 2012 Redistribut able	<pre><uft directory="" installation="">\prerequisites\vc2012_redist_x86\vcredist_ x86.exe /quiet /norestart <uft directory="" installation="">\prerequisites\vc2012_redist_x64\vcredist_ x64.exe /quiet /norestart</uft></uft></pre>
Microsoft Visual C++ 2015 Redistribut able	<pre><uft directory="" installation="">\prerequisites\vc2015_redist_x86\vcredist_ x86.exe /quiet /norestart  <uft directory="" installation="">\prerequisites\vc2015_redist_x64\vcredist_ x64.exe /quiet /norestart  You must also have the following update installed to install the Microsoft Visual C++ 2015 Redistribute: https://support.microsoft.com/en-us/kb/2999226</uft></uft></pre>

### back to top

# Install UFT silently

Run the msiexec command to install UFT using the following syntax.

If you do not specify an installation folder, UFT is installed in the default installation folder.

### 64 bit

msiexec /i "<UFT installation directory>\Unified Functional Testing\MSI\Unified\_
Functional\_Testing\_x64.msi" /qb

#### 86 bit

msiexec /i "<UFT installation directory>\Unified Functional Testing\MSI\Unified\_

```
Functional_Testing_x86.msi" /qb
```

### Install individual UFT features

Use the ADDLOCAL MSI property in the silent installation command line to specify the UFT features and add-ins that you want to install.

If you want to install only the UFT core components, you do not need to use this option.

**Note:** When installing a feature using the ADDLOCAL property, its parent always is installed as well.

The following example installs UFTRuntime Engine only.

msiexec /i "<UFT installation directory>\Unified Functional Testing\MSI\Unified\_
Functional\_Testing\_x64.msi" /qb ADDLOCAL="Core\_Components" TARGETDIR="<UFT\_Folder>"
ALLOW\_OTHERSRUNTESTS=1

The following example performs a standard installation with the Java Add-in

msiexec /i "<UFT installation directory>\Unified Functional Testing\MSI\Unified\_
Functional\_Testing\_x64.msi" /qb ADDLOCAL="Core\_Components,IDE,Test\_Results\_
Viewer,Samples,Java\_Add\_in" TARGETDIR="<UFT\_Folder>">"

The following example performs a standard installation with Web and Java Add-ins and he DCOM configurations set.

msiexec /i "<installation\_download\_directory>\Unified Functional Testing\MSI\Unified\_
Functional\_Testing\_x64.msi" /qb ADDLOCAL="Core\_Components,Samples,Java\_Add\_in" CONF\_
DICOM=1 TARGETDIR="<UFT\_Folder>"

### Mandatory commands

Command Syntax	Description
Core_Components	Installs the UFT Runtime Engine.

### back to top

# Optional commands, for UFT core components

Command Syntax Description	Command Syntax
----------------------------	----------------

IDE	Installs the UFT user interface.	
Test_Results_Viewer	Installs the Run Results Viewer.	
Samples	Installs the sample applications included with the UFT installation.	
ALM_Plugin	Installs the UFT Add-in for ALM.	

# Commands for UFT Pro (LeanFT) components

Command Syntax	Description
LeanFT_Engine	Installs the LeanFT run-time engine.
LeanFT_Client	Installs the LeanFT client.
Vs2012Addin	Installs the UFT Pro (LeanFT) Plugin for Microsoft Visual Studio 2012.
Vs2013Addin	Installs the UFT Pro (LeanFT) Plugin for Microsoft Visual Studio 2013.
EclipseAddin	Installs the UFT Pro (LeanFT) Plugin for Eclipse.
ECLIPSE_INSTALLDIR	The path to your Eclipse IDE.

back to top

# Optional commands for UFT Add-ins

Installs various UFT add-ins:

- ActiveX\_Add\_in
- Visual\_Basic\_Add\_in
- Web\_Add\_in
- Delphi\_Add\_in
- Flex\_Add\_in
- Java\_Add\_in
- \_Net\_Add\_in
- Silverlight\_Add\_in
- WPF\_Add\_in
- Oracle\_Add\_in
- PeopleSoft\_Add\_in
- PowerBuilder\_Add\_in
- Qt\_Add\_in

- SAP\_Solutions\_Add\_in
- SAP\_eCATT\_integration
- Siebel\_Add\_in
- Stingray\_Add\_in
- TE\_Add\_in
- VisualAge\_Add\_in

### Install a standalone UFT Add-in for ALM

If you are installing UFT, you cannot use this command to install the UFT Add-in for ALM. Instead, see "Install individual UFT features" on page 26.

In the command line, run the msiexec command to install the UFT Add-in for ALM, using the following syntax:

msiexec /i "<UFT installation directory>\ALMPlugin\MSI\<ALM\_Plugin\_File>"
/qn

#### For example:

```
msiexec /i "<UFT installation directory>\ALMPlugin\MSI>\Unified_
Functional_Testing_Add-in_for_ALM.msi" /qn
```

See also: "Additional silent installation commands" on the next page.

back to top

## Set UFT remote configuration options

By default, the **Allow running UFT remotely from ALM** and **Allow running UFT remotely from Automation Scripts** options are not included. To set this option for a silent installation, set the value of each option to =1

Option	Command
Configure Internet Explorer settings	CONF_MSIE
Allow running UFT remotely from ALM	ALLOW_RUN_FROM_ALM
Allow running UFT remotely from Automation Scripts	ALLOW_RUN_FROM_SCRIPTS



**Caution:** Running UFT remotely from Automation Scripts enables remote users to control UFT on this machine, exposing the UFT computer to security risks.

By default, the silent installation does not configure DCOM settings required for remotely controlling UFT using automation scripts.

To configure the DCOM settings for automation scripts, use the following synax in your silent installation command:

ALLOW\_RUN\_FROM\_ALM=1
ALLOW\_RUN\_FROM\_SCRIPTS=1

### back to top

## Additional silent installation commands

Command / Argument	Description
ADDLOCAL	(Optional) Instructs the silent installation to install specific UFT features and add-ins. For more details and a list of available features, see "Install individual UFT features" on page 26.
	Note:
	This command is relevant for the UFT core installation only.
	If you do not use this argument, UFT is installed with the default add-ins.
	You must include Core_Components in the ADDLOCAL command.
	Values must be separated by commas and must not contain spaces.
LICSVR= <server name=""></server>	(Mandatory) The name or IP address of the license server to specify when installing UFT licenses.
MsiFlags	(Optional) Any MSI options, flags, and other instructions that are not included in the MsiProperties arguments, such as logging commands.
MsiProperties	(Optional) Any MSI properties or parameters, such as <b>TARGETDIR</b> . Each MSI property and its definition must be contained in quotes ("") and must not contain spaces.
ALM_Plugin	(Mandatory) The name of the MSI installation file.
	There is a different MSI file for each available user interface language.
	Note: This command is relevant for the UFT Add-in for ALM installation only.
<uft directory="" installation=""></uft>	The path to the full installation UFT package
<installation_ download_ directory&gt;</installation_ 	The path to the UFT Installation executable that you downloaded.

## Install a lighter version of UFT

Command Syntax	Description
UFTSetup.exe -y	Installs the lighter version of UFT using a simple UI (a single dialog box with a progress bar only).
UFTSetup.exe -y -gm2	Installs the lighter version of UFT completely silently.
UFTSetup.exe - InstallPath="c:\ <path>"</path>	Installs the lighter version of UFT with a specific target directory instead of the default.
UFTSetup.exe -! <parameter list=""></parameter>	Installs the lighter version of UFT, passing the defined parameter values.
UFTSetup.exe - ExecuteFile=""	Extracts the installation package without running the UFT installation.

### **Examples:**

• Extract the package to the default location (c:\temp), but do not start the UFT installation:

```
UFTSetup.exe -y -ExecuteFile=""
```

• Extract the package to the specified location (c:\UFTinstall) in silent mode, but do not start the UFT installation:

```
UFTSetup.exe -y -gm2 -InstallPath="c:\UFTinstall" -ExecuteFile=""
```

• Extract the package silently and start installing UFT using the simple UI:

```
UFTSetup.exe -y
```

• Extract the package and start installing UFT silently:

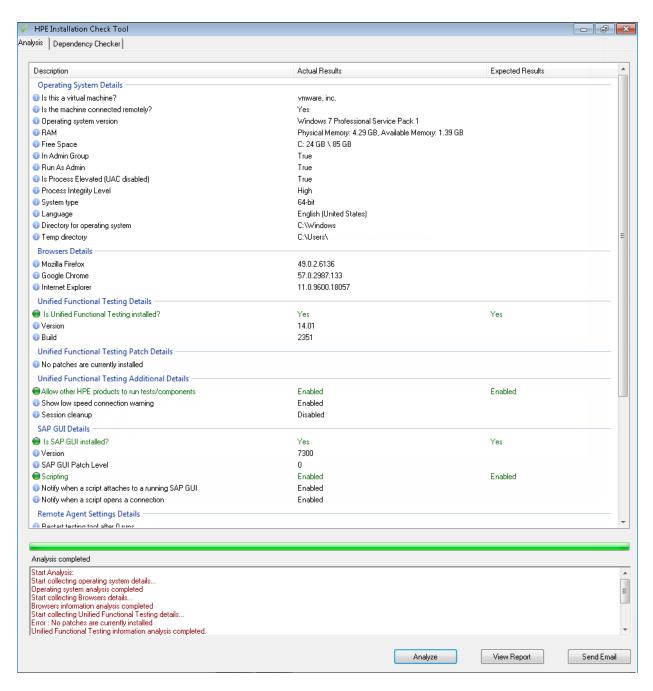
```
UFTSetup.exe -y -gm2 -! /s
```

### back to top

# Verify the installation

Use the HPE UFT Installation Validation Tool to verify the status of your installation.

After installing UFT, run the Additional Installation Requirements utility to access the Installation Validation Tool. Then, open the tool from the Start menu or Program Files.



In some cases, the Installation Validation Tool validates the state of settings against their expected values. If UFT returns the expected value, the setting is marked in green. If the value is not the same as the expected value, the setting is marked in red.

**Note:** The Installation Validation Tool does not return the data on Remote Agent Settings dialog unless the Remote Agent is run in administrator mode.

Click View Report to view the report as an .htm file. Click Send Email to send the report to another user.

# **Known** issues

This section describes troubleshooting and limitations for installing UFT and includes:

- "Previous UFT versions" below
- "Files in use" below
- "UFT installations and other HPE software" on the next page
- "UFT installations and Microsoft software" on the next page
- "UFT installations and the Functional Testing Agent (browser support)" on page 35
- "Known issues" above

### **Previous UFT versions**

- Ensure that you have the Microsoft update https://support.microsoft.com/en-us/kb/2999226 installed before installing UFT.
  - If the installation fails, repair the Microsoft C++ 2015 Redistributable installation (found in the **<UFT installation directory>/prerequisites** folder) and try the UFT installation again.
- Due to the Help documentation being online, the Help\_Documents silent installation parameter is no
  longer supported. If you have silent installation scripts that use this parameter, remove it from your
  scripts to ensure UFT installs correctly.

#### Files in use

If the UFT Files in Use dialog box is displayed during the installation process, select **Close the application and attempt to restart them.** 

UFT automatically closes the applications and continues the installation.

If after restarting, the UFT Files in Use dialog box lists **Explorer** as the open application, do one of the following:

Close the applications and attempt to restart them	Instructs UFT to automatically close the applications that are needed for the installation.
Do not close application.	Instructs UFT to continue the installation. You must restart your computer after the installation if you select this option.

## Component registration failed

If a message is displayed during installation about component registration failing, do **not** click **OK** to continue.

Instead, check the issue in the **VC2015Prerequisite\_yyyymmdd\_XXXXXX.log** file in the **%TEMP%** directory. If the log shows that a service did not start correctly, restart the service manually, and start your installation again.

# UFT installations and other HPE software

LoadRunner	After uninstalling LoadRunner 11.50, UFT does not work.
	<b>Workaround:</b> After uninstalling LoadRunner 11.50, perform a repair installation for UFT
	If you install LoadRunner 11.52 Patch 1 after installing UFT12.53, make sure to reboot the computer after installing LoadRunner. Otherwise, you may receive errors referring to the mdrv process.
Sprinter	If you are using both UFT and Sprinter on the same computer, and you modify either UFT or Sprinter, you must run a <b>Repair</b> for the installation of the other product.
ALM	When an ALM client is installed on the same computer as UFT, uninstalling UFT may remove the association of movie (.fbr) files.
	This may prevent you from viewing movies associated with defects in ALM using the HPE Micro Player.
	<b>Workaround:</b> Re-associate the movie files with the HPE Micro Player from the Windows File Options dialog box.
UFT Pro (LeanFT)	In the <b>Custom Setup</b> screen, it is possible to select the UFT Pro (LeanFT) Visual Studio or Eclipse plugins even if you do not have the relevant IDE installed at the time of the installation.
	If you install the IDE later, you will not have the LeanFT plugin available.
	Workaround: After installing the required IDE, run a Repair for the installation.

# **UFT** installations and Microsoft software

Software	UFT instructions
Windows 10	When installing UFT on a Windows 10 operating system, you must close Cortana and the Action Center before performing the UFT installation.
	<ul> <li>You must have administrative permissions to connect to ALM from UFT on Windows 10.</li> </ul>
	Connect to ALM with Administrator permissions immediately after installing UFT.
	<ul> <li>When uninstalling UFT on Windows 10, the UFT4WinRT service is not uninstalled with other UFT files. As a result, a new installation on the same machine will fail.</li> </ul>
	Workaround: Restart the computer after uninstalling UFT.

Software	UFT instructions
pdm.dll	If version 6.0.0.8169 of the pdm.dll is found on your computer, the setup program will recgonize this during installation and will instruct you download the corrected DLL from the Microsoft site.
	For more details, see http://support.microsoft.com/kb/q293693/.
	<ul> <li>To debug GUI tests in UFT, ensure that you have the most recent version of the pdm.dII file installed and registered.</li> </ul>
	The <b>pdm.dll</b> file is installed and registered with Microsoft Visual Studio and Microsoft Office, and installed (but not registered) with Microsoft Internet Explorer.
	If your currently registered version is lower than 9:
	a. Uninstall the Microsoft Script Debugger (if installed).
	<ul> <li>b. Perform a repair installation of Microsoft Visual Studio or Microsoft Office.</li> </ul>
	Check the registry for pdm.dll version: HKEY_CLASSES_ROOT\CLSID\ {78A51822-51F4-11D0-8F20-00805F2CD064}\InprocServer32
	If you need to use the pdm.dll file installed with Microsoft Internet Explorer, do the following:
	a. Ensure that you have administrator privelgest.
	<ul> <li>b. Locate the pdm.dll file, usually located either in c:\program files(x86)</li> <li>\internet explorer\ or c:\program files\internet explorer.</li> </ul>
	<ul> <li>c. Move the pdm.dll file and the msdbg2.dll file from the same folder to a different location.</li> </ul>
	d. Run the following commands:
	regsvr32 <full path="" pdm.dll="" to="">\pdm.dll</full>
	regsvr32 <full path="" pdm.dll="" to="">\msdbg2.dll</full>
Windows Update KB2918614	If you install UFT after installing Windows Update KB2918614, UFT behaves unexpectedly during installation, with very long installation times.
	Workaround: Do the following in the registry:
	<ol> <li>Under the HKLM\SOFTWARE\Policies\Microsoft\Windows\Installer key, create a DWORD with the name SecureRepairPolicy.</li> </ol>
	2. Set the value of the SecureRepairPolicy to <b>2</b> .
	<ol><li>In the HKLM\SOFTWARE\Policies\Microsoft\Windows\Installer key, create StringValues with the UFT product code.</li></ol>

Software	UFT instructions
Microsoft Office	You cannot install Microsoft Office 64-bit on a machine with UFT. Instead:
64-bit	<ol> <li>Uninstall the Microsofte Access database engine. This is installed together with UFT.</li> </ol>
	2. Install Microsoft Office 64-bit.
	<ol> <li>Reinstall the Mcrosoft Office Access database engine from the prerequisites\msade2010 folder of the UFT setup directory using the following command:</li> </ol>
	<pre><uft directory="" root="">\prerequisites\msade2010\AccessDatabaseEngine.exe /passive</uft></pre>
Windows 8.x or higher / Windows Server 2012 R2	When using UFT on Windows 8.X or higher or Windows Server 2012 R2, if you want to use API tests and components, make sure that you have MSU (Microsoft Update) KB2887595 installed.

# UFT installations and the Functional Testing Agent (browser support)

Browser	UFT instructions
Google Chrome	If you are testing applications in Google Chrome version 31 or later, Chrome automatically downloads and installs the Functional Testing Agent for Google Chrome the first time you open Chrome after UFT is installed.
	In the following cases, you must manually enable the Functional Testing Agent for Google Chrome extension:
	You have no internet connection.
	You have not enabled the automatic updates for Google Chrome.
	You are using Google Chrome version 30 or earlier.
	For details on manually enabling the extension, see the task on How to Enable the Functional Testing Agent for Google Chrome Extension in the <b>Web</b> section of the <i>Unified Functional Testing Add-ins Guide</i> .

Browser	UFT instructions	
Mozilla	Firefox versions 33 or later	
Firefox	If you are testing applications in Firefox version 33 or later, accept the prompt for install Functional Testing Agent for Firefox the first time you open Firefox after UFT is installed.	
	Firefox versions 32 or earlier	
	If you testing applications in Firefox version 32 and earlier, do the following:	
	1. Open the <b><uft folder="" installation="">\Installations\Firefox</uft></b> folder.	
	2. From the Firefox folder, drag the <b>AgentLegacy.xpi</b> file into Firefox.	
	3. In Firefox, open the browser menu.	
	4. In the menu, click <b>Add-ons</b> .	
	5. In the Add-ons Manager tab, select the <b>Extensions</b> node.	
	6. In the Functional Testing Extension row, disable the Functional Testing Agent extension and enable the extension you added to Firefox.	
	Java applets	
	If you are testing Java applets, you must use the legacy Functional Testing Agent for Firefox.	
	Legacy Functional Testing Agent for Firefox	
	The legacy Functional Testing Agent for Firefox is supported only for Firefox versions 39 and earlier.	

**Note:** If you are using a version of the Functional Testing Agent for Google Chrome from UFT version 12.00 or earlier, you must enable the downloaded extension and remove the previous version of the Functional Testing Agent extension.

# UFT installations and 64-bit applications

Installing	UFT loses support for 64-bt appliations if a user with administrator priveleges
with	installs the Unified Functional Testing Add-in for ALM, or performs a Repair
administrator	operation on the Run Results Viewer, and the a user runs UFT on that same
privileges	computer without adminsitrator priveleges.
	<b>Workaround:</b> Log in as an administrator and do one of the following and Repair UFT or run <b><uftinstallation>\bin64\Mediator64.exe</uftinstallation></b> .

32-bit and 64-bit applications	If your computer has two versions of an application, where one is 32-bit and the other is 64-bit, UFT always opens the 32-bit version.  This occurs when the operating system performs a redirect from the Program Files folder to the Program Files (x86) folder, and from the System32 folder to the SysWow64 folder.  Workaround: To specify a 64-bit version, make sure that the step explicitly states the path to the 64-bit application.
.NET / WPF Add-in extensibility	When working with .NET or WPF Add-in extensibility for a 64-bit Windows Forms process, the custom server DLLs must be built using the <b>Any CPU</b> option.

## **UFT** licensing

This section describes the different types of UFT licenses, where to view your license information, and how to install licenses.

#### In this topic:

- "UFT licenses" below
- "View license information in UFT" below
- "AutoPass License server" below

**Note:** For details about license installations of UFT Pro (LeanFT) on Linux or Mac, see the UFT Pro (LeanFT) Help Center.

## **UFT licenses**

The HPE Functional Testing (FT) tools, UFT and UFT Pro (LeanFT), support various editions and types of licenses, including both seat licenses for individual users and concurrent licenses taken from a licensing server pool.

Demo licenses are available for 90 days after installing UFT or UFT Pro (LeanFT) for the first time. This demo license is a seat license. If you need a demo concurrent license, contact your HPE sales representative or HPE partner.

For more details, see "Seat vs. concurrent licenses" on the next page and "License editions" on page 40.

For details about installing new licenses, see:

- "Install licenses with the wizard" on page 45
- "Install licenses with the command line" on page 49

### View license information in UFT

In UFT, view your license information from the Help > About Unified Functional Testing screen.

Click the **License** button. If you have several licenses and at least one is about to expire, UFT's expiration notification displays the date of the license closes to expiration.

## AutoPass License server

Concurrent licenses require the use of the AutoPass License Server. We recommend the AutoPass License Server version 9 or higher.

This guide describes how to access licenses on the AutoPass License Server from UFT or UFT Pro (LeanFT).

For more details about AutoPass, such as proxy settings or managing licenses and users, see the *Autopass License Server User Guide*, downloaded with your AutoPass License Server installation.

## ʿ□ See also:

- "Licensing FAQs" on page 51
- "Known issues with UFT licensing" on page 55

## Seat vs. concurrent licenses

This topic describes UFT seat and concurrent licenses, and can help you select the best type of license for your needs.

### Seat licenses

Seat licenses are machine-specific licenses, 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 will be using UFT or UFT Pro (LeanFT).

#### Seat licenses and Windows servers

If you install a seat license on a Windows server, the seat license will be consumed by the first user who logs into the Windows server.

#### 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 seat license installations on that computer. For more information, contact your HPE 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.

## Concurrent licenses

Concurrent licenses are taken from the AutoPass License Server on a per-session basis. You must have an active network connection to install and access concurrent licenses.

Each time UFT or UFT Pro (LeanFT) starts, it tries to connect to the AutoPass License Server for an available license, which regulates the number of licenses currently in use.

The license is returned to the AutoPass License Server when UFT or UFT Pro (LeanFT) is closed. Additionally, concurrent licenses are released when UFT or UFT Pro (LeanFT) is idle, with no mouse or keyboard activity, for a specified amount of time.

If you need to use your FT tool without access to the internet, use one of the following instead:

Commuter license	If you know that you will need access to UFT or UFT Pro (LeanFT) without internet, check out a <b>commuter license</b> beforehand.
	Commuter license keys are entered once, and provide use for a single installation of UFT or UFT Pro (LeanFT), for a limited time period.
	The license key is based on the machine identification, and is specific for the computer making the request.
Remote commuter	If you find yourself without access to the internet unexpectedly, have another user with a connection check out a commuter license for you.
license	This is called a <b>remote commuter license</b> , and must be sent to you for you to use with your FT tool.

Both commuter and remote commuter licenses expire at 23:59 of the expiration day. After the commuter license expires, UFT and UFT Pro (LeanFT) automatically return to the previously used license type.



**Tip:** Track license usage across your network (for your FT tools as well as other products) with the following tool: https://marketplace.saas.hpe.com/itom/content/hpe-usage-hub.

## License editions

#### In this topic:

- "Supported license editions" below
- "Upgrading licenses from before UFT 14.00" on the next page
- "Licensing fallback mechanism" on page 42
- "Define license usage behavior" on page 43

## Supported license editions

HPE's Functional Testing (FT) tools support a variety of license editions, each bundled with a different subset of FT functionality.

	License names		es
Includes the use of these products:	UFT Ultimate	UFT Enterprise	UFT Pro (LeanFT)
UFT	✓	✓	x
UFT Pro (LeanFT)	<b>✓</b>	<b>✓</b>	<b>✓</b>

	License names		
Includes the use of these products:	UFT Ultimate	UFT Enterprise	UFT Pro (LeanFT)
Sprinter	<b>✓</b>	✓	x
ВРТ	<b>✓</b>	x	х
<b>Mobile Center</b> (for functional testing purposes only)	✓	x	x

Additionally, use a UFT **Runtime Engine** license when you need to run UFT or UFT Pro (LeanFT) tests only.

The UFT Runtime Engine license does not enable you to create or edit tests, or access the UFT IDE or UFT Pro (LeanFT) IDE plug-ins.

#### Note:

- The UFT Ultimate license is available only as a concurrent license.
- Sprinter is available for UFT Ultimate or UFT Enterprise concurrent licenses only.
- When using BPT with UFT with a UFT Enterprise license, you must also have a valid ALM license for your user.

## Upgrading licenses from before UFT 14.00

# Backwards compatibility

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.

UFT will continue to function with your existing license.

**UFT** and **UFT Pro (LeanFT)** licenses will be 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

#### Device ID based licenses

Starting in UFT 14.00, UFT supports concurrent licenses based on your device ID, in addition to the License Server IP address.

However, you cannot use both IP address-based and device ID-based licenses simultaneously.

Once you've installed an ID-based concurrent license on your AutoPass License Server, any IP address-based licenses for the same features are automatically archived.

When upgrading, select the type of licenses you want to use moving forward, and migrate your licenses as needed.

For details, see the *Autopass License Server User Guide*, downloaded with your AutoPass License Server installation.

## Licensing fallback mechanism

#### Note:

- The licensing fallback mechanism is relevant only when working with concurrent licenses.
- The licensing fallback mechanism is disabled by default.

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

If you are concerned about the availability of the license edition configured on your tool's machine, modify this configuration as described in "Define license usage behavior" on the next page below.

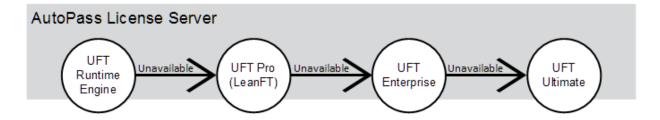
When the fallback mechanism is enabled, licenses are consumed as follows:

#### When starting UFT

- If you have a **UFT Enterprise** license installed, the License Server looks for the **UFT Ultimate** license as a fallback.
- If you have a **UFT Runtime Engine** or **UFT Pro (LeanFT)** license installed, no fallback is supported.

#### When starting UFT Pro (LeanFT)

When starting the UFT Pro (LeanFT) runtime engine, licenses are consumed in the following order on the License Server, starting with the license configured on your machine:





#### **Example:**

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

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

In turn, if no UFT Enterprise license is available, UFT Pro (LeanFT) tries to consume a **UFT Ultimate** license.



#### **Example:**

#### Scenario 2: UFT Runtime license configured on the UFT Pro (LeanFT) machine

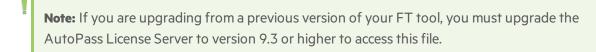
If the **UFTRuntime** license is configured on the UFT Pro (LeanFT) machine but there is no available UFT Runtime license, UFT Pro (LeanFT) tries to consume a **UFT Pro (LeanFT)** license.

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

## Define license usage behavior

Define how UFT and UFT Pro (LeanFT) use concurrent licenses on your AutoPass License Server machine.

Access the C:\ProgramData\HP\HP AutoPass License
 Server\AutoPass\LicenseServer\data\conf\HPE UFT.xml file.



2. 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" on the next page
- "Set maximum idle time" on the next page

#### Configure the licensing fallback mechanism

Define whether your system uses the licensing fallback mechanism for each of the products below, by setting the relevant value to **true**:

Product	License type	Key
UFT	Any	license.fallback.uft.rte
Runtime Engine	Any	license.fallback.rte.rte
UFT Pro (LeanFT)	UFT Pro	license.fallback.leanft.leanft
UFT Pro (LeanFT)	Runtime Engine	license.fallback.leanft.rte



**Example:** To enable the fallback mechanism when you want to use **UFT** and you have **any** of the license types configured, set the relevant key value to **true**, as follows:

<entry key="license.fallback.uft.rte">true</entry>

**Note:** If the fallback mechanism is enabled, and an available **Runtime Engine** license is found, you will only be able to run your tests, with no creation or editing abilities.

Ensure that you can you can always access the UFT IDE or the UFT Pro (LeanFT) IDE plug-ins by doing one of the following:

- Disable the fallback mechanism by setting the key values to false (this is the default).
- Contact your License Server administrator to ensure that any UFT Runtime Engine licenses are blocked or are in use.

#### Set maximum idle time

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

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

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

where # is the number of minutes of inactivity.



**Example:** The following syntax defines that your license is released after **10 minutes** of inactivity.



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

## See also:

- "UFT licensing" on page 38
- "Licensing FAQs" on page 51

## Install licenses with the wizard

The Functional Testing License Wizard enables you install or manage licenses for UFT or UFT Pro (LeanFT).

Installing licenses requires administrator permissions.

#### In this topic:

- "Install a Seat license" below
- "Install a Concurrent license (wizard)" on the next page
- "Check out and install a Commuter license" on the next page
- "Return a Commuter license" on page 47
- "Check out and install a Remote Commuter license" on page 48
- "Return a Remote Commuter license" on page 49

### Install a Seat license

Note: For details about using seat licenses in specific situations, see "UFT licensing" on page 38.

- 1. Access the wizard from the Start menu or your <UFT / UFT Pro (LeanFT) installation folder>\bin\HP.UFT.LicenseInstallationWizard.exe.
- 2. In the License Wizard start screen, select Seat license.
- 3. In the Seat License installation screen, do one of the following:
  - Click Load License Key File and select your license key .dat file that you received from your HPE representative.
    - Paste the license key in the edit field.
  - If you don't yet have a license key, follow the instructions in the expanded **How can I get a license key file** section.
- 4. Verify that the license key is valid, and click Install.
- 5. When the installation of the license is complete, restart UFT or UFT Pro (LeanFT) to apply the new license.

## Install a Concurrent license (wizard)

- 1. **Prerequisite**: Make sure you are connected to the network and can access the AutoPass License Server.
- 2. Access the wizard from the **Start** menu or your **<UFT / UFT Pro (LeanFT) installation folder>\bin\HP.UFT.LicenseInstallationWizard.exe**.
- 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 identical the one used in the **Main** tab of the License Server Configuration pane.

For details, see the *Autopass License Server User Guide*, downloaded with your AutoPass License Server installation.

- 5. Click **Connect** to connect to the License Server.
- 6. (Optional) Define a secondary License Server.

If your primary License Server is unavailable, UFT or UFT Pro (LeanFT) will connect to the secondary License Server to obtain a license. For details, see the *Autopass License Server User Guide*, downloaded with your AutoPass License Server installation.

Expand the **Add Redundant Server** link and enter the address for the secondary License Server.

- 7. From the product license drop-down list, select the appropriate license and click **Install**.
- 8. If UFT or UFT Pro (LeanFT) was running while you installed the license, restart it to apply the new license.

## Check out and install a Commuter license

- "Check out and install a Commuter license" above
- "Return a Commuter license" on the next page

#### 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 AutoPass License Server.

Alternatively, if you cannot access the License Server, see "Check out and install a Remote Commuter license" on page 48.

- 2. Access the wizard from the **Start** menu or your **<UFT / UFT Pro (LeanFT) installation folder>\bin\HP.UFT.LicenseInstallationWizard.exe**.
- 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

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

For details, see the *Autopass License Server User Guide*, downloaded with your AutoPass License Server installation.

- 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 UFT or UFT Pro (LeanFT) was running while you installed the license, restart it to apply the new license.

#### Return a Commuter license

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

This process checks in all of the licenses that are checked out. If you still need some of these licenses, check them out again.

- Prerequisite: Make sure you are connected to the network and can access the License Server.
   Alternatively, if you cannot access the License Server, see "Check out and install a Remote Commuter license" on the next page.
- 2. Access the wizard from the **Start** menu or your **<UFT / UFT Pro (LeanFT) installation folder>\bin\HP.UFT.LicenseInstallationWizard.exe**.
- 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

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

For details, see the *Autopass License Server User Guide*, downloaded with your AutoPass License Server installation.

- 5. In the area that lists the licenses, ensure that **Checked Out** is selected.
- 6. Click Check In All Licenses, and then Next. The list of checked out licenses is cleared.

## Check out and install a Remote Commuter license

- "Check out and install a Remote Commuter license" above
- "Return a Remote Commuter license" on the next page

#### 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 or your <UFT / UFT Pro (LeanFT) installation folder>\bin\HP.UFT.LicenseInstallationWizard.exe.
- 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.
- Click the link that appears below this button to open the folder containing the request file.
   Send the generated .lcor request file to a License Server administrator or to a user with access
  - The other user must access the Licensing Server to check out and send you a license key file.
- 8. When you receive the license key file, save it locally.
  - Click Install License, and click Choose File to browse to the file you received.
- 9. Click Install to install the license.

permissions to the License Server.

10. If UFT or UFT Pro (LeanFT) was running while you installed the license, restart it to apply the new license.

#### Return a Remote Commuter license

Perform this procedure after a License Server administrator has checked out your license.

- 1. Access the wizard from the Start menu or your <UFT / UFT Pro (LeanFT) installation folder>\bin\HP.UFT.LicenseInstallationWizard.exe.
- 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. In the Generation screen, click **Generate and Save Check In Request**, and save the **.lcir** check in request file.
- 5. Click **Next** to uninstall the license.

The license wizard reports that the remote commuter license is uninstalled. UFT or UFT Pro (LeanFT) reverts to the previous license type as the active license.

## <sup>[</sup>☐ See also:

- "UFT licensing" on page 38

## Install licenses with the command line

Install and verify the statuses of seat or concurrent licenses 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 below:

"<UFT or UFT Pro (LeanFT) installation directory>\bin\HP.UFT.LicenseInstall.exe"

## Install seat licenses with the command line

Note: For details about using seat licenses in specific situations, see "UFT licensing" on page 38.

#### Install a seat license:

• Run the License Installer, appending the following:

seat "cense key string>"



#### **Example:**

"C:\Program Files (x86)\HPE\Unified Functional Testing\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, run the License Installer, appending the following, wrapping the path to the license key file in quotes.

seat "<path to the license key file>"



#### **Example:**

 $\label{thm:constant} $$ "C:\Pr{\ model} \to \ model \to \ model} $$ Testing \in \ model \to \ model \to \ model} $$ Testing \to \ model \to \ model} $$$ 

## Install concurrent licenses with the command line

#### Verify available licenses on the AutoPass License Server

Run the License Installer, appending the following:

licenses <primary server name/address>:<port> [<secondary server name address>:<port>]

Note: secondary server name/address and port are optional.

The available licenses are displayed by unique ID and version.



#### **Example:**

"C:\Program Files (x86)\HPE\Unified Functional Testing\bin\HP.UFT.LicenseInstall.exe" licenses 11.11.111.111:5814

#### Install a concurrent license

1. Run the License Installer to verify which licenses are available on the AutoPass License Server, as described above.

The available licenses are displayed by unique ID and version.

2. Run the License Installer again, this time appending the following command and parameters:

## concurrent c

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 *Autopass License Server User Guide*, downloaded with your AutoPass License Server installation.

- 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, UFT or UFT Pro (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)\HPE\Unified Functional Testing\bin\HP.UFT.LicenseInstall.exe" concurrent 11.11.111.111:5814 /force

#### Modify server connection protocol

Run the License Installer, appending:

- Primary license server: config protocol.primary < protocol>
- Secondary license server: config protocol.second <protocol>

where **protocol>** is **http** or **https** as needed.

## ☐ See also:

- "UFT licensing" on page 38

## Licensing FAQs

This topic answers a number of frequently asked questions about using and installing Functional Testing licenses.

**Note:** This guide describes how to access licenses on the AutoPass License Server from the UFT and UFT Pro (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 User Guide*, downloaded with your AutoPass License Server installation.

#### In this topic:

- "Can I use my old license (from before UFT 12.50) with the new License Server?" below
- "Which license should I install?" below
- "How do I install the Autopass License Server?" on the next page
- "If I am using concurrent licenses, how do I connect to the License Server?" on the next page
- "How do I install licenses if I am deploying UFT across an enterprise network?" on the next page
- "How do I manage the concurrent licenses on the License Server?" on page 54
- "Can I configure license behavior myself?" on page 54
- "Can I set up my License Server to work with a redundant (backup) License Server?" on page 54
- "Can I use the Autopass License Server with a proxy?" on page 55
- "What is a cleanup license?" on page 55
- "My demo license is expiring early. What can I do?" on page 55

# Can I use my old license (from before UFT 12.50) with the new License Server?

**No.** UFT 12.50 has changed the license mechanism and the concurrent license server to the Autopass License Server.

Prior versions of UFT used the Sentinel Concurrent License Server.

**Note:** The Autopass License Server and accompanying documentation is provided with the UFT Setup program.

In order to use your licenses with versions of UFT 12.50 and later, or to install them on the Autopass License Server, you must upgrade your licenses using the HPE Licensing portal. For details, see the topic on upgrading licenses in the *Unified Functional Testing Installation Guide*.

## Which license should I install?

Use the following table to help determine which type of license to install. For details about license types, see "UFT licensing" on page 38.

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 of 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?	Concurrent 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*, downloaded with your AutoPass License Server installation.

# If I am using concurrent licenses, how do I connect to the License Server?

Run the Functional Testing License Wizard and enter the License Server IP address. This checks the connection to the License Server, and also provides a list of possible licenses to install.

After installing your concurrent license, UFT or UFT Pro (LeanFT) checks the specified License Server address each time UFT or the UFT Pro (LeanFT) runtime engine starts, taking the requested license.

For more details, see "Install licenses with the wizard" on page 45.

# How do I install licenses if I am deploying UFT across an enterprise network?

UFT provides a command-line tool that enables you to install UFT licenses without using the License Wizard interface.

For details on the commands to install these licenses, see "Install licenses with the command line" on page 49.

The command line license installation is supported for seat and concurrent licenses.

# 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 details, see the *Autopass License Server User Guide*, downloaded with your AutoPass License Server installation.



Tip: Use the HPE Usage Hub tool to track license usage across your network.

## Can I configure license behavior myself?

**Yes**. Change the values for general license behavior in the AutoPass license configuration file located on your UFT or UFT Pro (LeanFT) machine.

This file is located at C:\ProgramData\Hewlett-Packard\UFT\License\autopass.txt and includes details about possible values.



Note: For Linux/Mac installations of UFT Pro (LeanFT), see the UFT Pro (LeanFT) Help Center.



**Caution:** Configure this file with caution.

Incorrect configuration may cause UFT or UFT Pro (LeanFT) to behave unexpectedly, or prevent UFT or UFT Pro (LeanFT) from starting.

Additionally, if your concurrent license server has multiple license editions installed, you can enable a fallback mechanism to ensure that you can your product can find an available license. For details, see "Configure the licensing fallback mechanism" on page 44.

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

**Yes**. To do this, install the License Server on two separate servers, and then set one server to be the primary and the other to be the redundant server. This configuration is done in the Autopass License Server Web UI.

You also can supply this information to UFT or UFT Pro (LeanFT) in the License Wizard, which enables UFT or UFT Pro (LeanFT) to take a concurrent license from the redundant License Server in the event that the primary License Server is not available.

For details, see the *Autopass License Server User Guide*, downloaded with your AutoPass License Server installation.

## Can I use the Autopass License Server with a proxy?

Yes. Connection via proxy is supported starting with AutoPass License Server version 9.3.

Set the proxy settings in the **autopass.txt** file, located on your UFT or UFT Pro (LeanFT) machine, at **C:\ProgramData\Hewlett-Packard\UFT\License\autopass.txt**.

Note: For Linux/Mac installations of UFT Pro (LeanFT), see the UFT Pro (LeanFT) Help Center.

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 UFT's or UFT Pro (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 (90 days maximum), ensure the following:

- Ensure that you have full permissions to the UFT or UFT Pro (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.

## Known issues with UFT licensing

#### Relevant for: GUI testing and API testing

UFT and UFT Pro (LeanFT) concurrent installations	If you installed UFT Pro (LeanFT) from the UFT setup program, and you are using a seat license for UFT, UFT Pro (LeanFT) uses the same license.
	In such cases, you cannot run both UFT and UFT Pro (LeanFT) at the same time.

Modifying the computer date	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 seat license installations on that computer.
	For questions about this issue, contact your HPE license supplier.
NAT	The License Server does not support the use of Network Address Translation (NAT).
Demo licenses	Demo licenses are not included in concurrent licenses, which require an active connection to the AutoPass License Server and a license key installed.
Changing types	You must have administrator permissions to change the license type from seat to concurrent or vice versa.

## $^{[\hfill \hfill \hfi$

- "UFT licensing" on page 38
- "License editions" on page 40
- "Install licenses with the wizard" on page 45
- "Install licenses with the command line" on page 49
- "Licensing FAQs" on page 51

## Before connecting to ALM

Before connecting to ALM, you may need to modify User Account Control (UAC) settings. You can revert these modifications afterward.

You must perform this procedure if you intend on running UFT tests remotely from ALM, and are running UFT on one of the following operating systems:

- Windows 7
- Windows Server 2008
- Windows Server 2008 R2
- Windows 8.x and higher
- Windows Server 2012

**Note:** The security changes described in this section should be performed by your System Administrator.

Contact Microsoft Support if you have questions regarding changes in User Account Control (UAC) on any of these operating systems.

#### For Microsoft Windows 7 and Windows Server 2008 R2

- 1. Log in as an administrator.
- 2. From the Control Panel, select User Accounts > User Accounts > Change User Account Settings.
- 3. In the User Account Control Settings window, move the slider to **Never notify**.
- 4. Restart the computer to enable this setting to take effect.

#### For Microsoft Windows 8.x and higher and Windows Server 2012

- 1. Log in as an administrator.
- 2. From the Control Panel, select User Accounts and Family Safety > User Accounts > Change User Account Control Settings.
- 3. In the User Account Control Settings window, move the slider to **Never notify**.
- 4. In the Control Panel, select System and Security > Administrative Tools > Local Security Policy.
- 5. In the Local Security Policy window, in the left pane, select **Local Policies**.
- 6. In the Local Policies tree, select Security Options.
- 7. In the right pane, select the **User Account Control: Run all administrators in Admin Approval mode** option.
- 8. Select **Action > Properties** from the menu bar.

- 9. In the dialog that opens, select **Disabled**.
- 10. Restart the computer for your changes to take effect.

## Enable UAC again if required

After connecting to ALM, return to the User Account Control Settings window.

Restore the slider to its previous position to turn the UAC option on again.

Restart the computer for your changes to take effect.

## Send Us Feedback



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

Send your email to: docteam@hpe.com

