



HP Unified Functional Testing

Software Version: 12.52

Windows® operating systems

Installation Guide

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Welcome to Unified Functional Testing

Welcome to HP Unified Functional Testing, the advanced keyword-driven testing solution for functional test and regression test automation. This guide describes everything you need to know to install UFT on a standalone computer.

UFT Installation Packages

You can install UFT from one of the following packages:

- **A full installation package.** This provides the UFT Setup program as well as independent installations of the following programs:
 - UFT Add-in for ALM
 - Run Results Viewer
 - License Server Setup
 - Setup programs for Extensibility Accelerator, the Extensibility SDKs, and the Web 2.0 add-ins.
- **A compressed, downloadable UFT installation package from the Web.** It is smaller and faster to download than the full installation package

This installation package installs the same features as the UFT installation setup program but does not include options to perform independent installations of the Unified Functional Testing Add-in for ALM, the Run Results Viewer, Extensibility SDKs, or the License Server.

IMPORTANT: When installing UFT from the compressed package, you must have an internet connection to download the prerequisite software.

UFT Installation Content

The table below describes the programs you can install depending on the installation package you use.

- If you are installing the Compressed Package for the Web, the installation runs only the main UFT installation program.
- If you are installing the full installation package, the Setup Screen enables you to select the program you want to install.

Program	Description
Unified Functional	<ul style="list-style-type: none">• Core UFT Features. These features include the core GUI testing and API testing functionality that enables you to open UFT, create GUI or API tests, and run the tests.

Testing Setup	<p>These features are installed by default, in both the regular and silent installations.</p> <ul style="list-style-type: none"> • Run Results Viewer This feature installs the Run Results Viewer, which enables you to view test results at the end of a test run. • UFT GUI Testing Add-ins. By default, UFT installs the Web, Standard Windows, Mobile, and Windows Runtime (for UFT installations on computers running Windows 8.x and higher and Windows Server 2012) add-ins as a core part of the installation. These add-ins cannot be uninstalled or cleared from the installation. <p>You can install additional add-ins (such as the Active X, Java, or Visual Basic Add-ins) in the Custom Setup screen of the installation wizard.</p> <p>The Custom Setup screen also enables you to install LeanFT, the UFT Add-in for ALM and the Run Results Viewer at the same time as UFT.</p> <p>If you want to use the Web 2.0 Add-ins, you must install them independently. For details, see "Installing the Web 2.0 add-ins or extensibility toolkits" on page 17.</p> <div style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;"> <p>Note: If you need to install the UFT Add-in for ALM or LeanFT after performing the full installation, you must run the installation wizard again and select Change when prompted at the start of the installation wizard. Then select the ALM Plugin or LeanFT option in the Custom Setup screen of the installation wizard.</p> </div>
UFT Add-in for ALM	<p>The UFT Add-in for ALM enables UFT to communicate with ALM and run tests or components from ALM.</p> <div style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;"> <p>Note: This standalone version of the UFT Add-in for ALM should be used only when UFT is not installed on the computer.</p> <p>To install the UFT Add-in for ALM and UFT on the same computer, select the UFT Add-in for ALM from the Custom Setup screen in the UFT installation.</p> </div>
Add-in Extensibility and Web 2.0 Toolkits	<p>This program enables you to install:</p> <ul style="list-style-type: none"> • Extensibility Accelerator for HP Functional Testing. This program is an IDE which facilitates the development of Web Add-in Extensibility support toolkits. • Extensibility SDKs. These SDKs are used to develop support for Java, .NET, WPF, Silverlight, or Web objects not supported out of the box by UFT. • Web 2.0 Toolkit Support. These toolkits enable you to recognize and use objects in your tests from Web 2.0 technologies, including ASP .NET Ajax, Dojo, GWT (Google Web Toolkit), jQueryUI, SiebelOpenUI, EXT-JS, and YahooUI. <p>The extensibility and Web 2.0 installations are optional and independent. They can be installed without a full UFT installation, or after the installation is complete.</p> <p>To install the Web 2.0 add-ins, follow the instructions on "Installing the Web 2.0 add-ins or extensibility toolkits" on page 17.</p> <p>After installation, the Web 2.0 toolkits appear as child add-ins of the Web Add-in inside the Add-in Manager dialog box.</p>
License Server Setup	<p>This program enables you to install the Autopass License Server. Using this server, you can install and manage concurrent and commuter licenses for your UFT installations.</p> <p>For full details on the License Server installation, see the <i>Autopass License Server User Guide</i>.</p>
Run Results	<p>The Run Results Viewer enables you to view the test or component run results after the run session is complete.</p>

Viewer Setup	<p>Note: This standalone version of the Run Results Viewer should be used only when UFT is not installed on the computer.</p> <p>The Run Results Viewer is installed by default when you install UFT.</p>
LeanFT Setup	<p>LeanFT enables you to code functional tests directly from your developer IDE in programming languages such as C# and Java. It includes the LeanFT runtime engine, .NET and Java versions of the SDK, and a plugin to Visual Studio or Eclipse that provides design-time tools for accelerated creation and maintenance of robust tests.</p> <p>Note: This standalone version of LeanFT should be used only when UFT is not installed on the computer.</p> <p>To install LeanFT and UFT on the same computer, select LeanFT from the Custom Setup screen in the UFT installation.</p>

Chapter 1: Before You Install

Note: Unless otherwise specified, references to **Application Lifecycle Management** or **ALM** apply to all currently supported versions of ALM and Quality Center. Note that some features and options may not be supported in the specific edition of ALM or Quality Center that you are using.

For details, see the [HP Unified Functional Testing Product Availability Matrix](#) and the *HP Application Lifecycle Management User Guide* or the *HP Quality Center User Guide*.

Before you install UFT, check that your computer meets all minimum system requirements (Windows operating system version, hard disk space, computer processor and more). For details on the system requirements, see the *HP Unified Functional Testing Readme*, or for the most updated listing, visit <https://hpln.hp.com/page/uft-system-requirements>.

This chapter includes:

- [Setting Required Access Permissions](#) 9
- [Enterprise Deployment of UFT](#) 10
- [Upgrading from QuickTest, Service Test, or Earlier Versions of UFT](#) 12

Setting Required Access Permissions

Make sure the following access permissions are set to run UFT or to work with ALM.

Permissions Required When Working with UFT

You must have the following file system permissions:

- Full read and write permissions to the Temp folder
- Read permissions to the Windows folder and to the System folder
- Full read and write permissions to the folder on which you are saving solutions, tests, or run results
- Full read and write permissions to the <Program Files>\Common Files\Mercury Interactive folder
- If you are working on Windows 7 or Windows Server 2008 operating systems: Full read and write permissions to the <Program Data>\HP folder
- Full read and write permissions to the User Profile folders
- Full read and write permissions to the <Windows>\mercury.ini file
- Full read and write permissions to the following AppData folders:
 - %userprofile%\AppData\Local\HP
 - %appdata%\Hewlett-Packard\UFT
 - %appdata%\HP\API Testing

Note: Read/write permissions to these folders should also enable permission to any subfolders contained in the folders listed above. If not, the system administrator must grant administrative permissions to the subfolders contained in these folders.

You must have the following registry key permissions:

- Full read and write permissions to the keys under HKEY_CURRENT_USER\Software\Mercury Interactive or [HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Hewlett-Packard]
- Full read and write permissions to all the keys under HKEY_CURRENT_USER\SOFTWARE\Hewlett Packard
- Read and Query Value permissions to all the HKEY_LOCAL_MACHINE and HKEY_CLASSES_ROOT keys

Permissions Required When Working with ALM

You must have the following permissions to use UFT with ALM:

- Full read and write permissions to the ALM cache folder
- Full read and write permissions to the <Program Data>\HP folder
- Full read and write permissions to the UFT Add-in for ALM installation folder
- Administrative permissions for the first connection to ALM

Permissions Required When Working with Business Process Testing

Make sure you have the required ALM permissions before working with business components and application areas.

- 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).
- To work with parameters in ALM or in a testing tool, you must have all the parameter task permissions set in ALM.
- 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. If one of these permissions is not assigned, you can open application areas only in read-only format.

For more information on setting user group permissions in the Business Components module, see the *HP Business Process Testing User Guide*.

Enterprise Deployment of UFT

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

Administrative permissions	<ul style="list-style-type: none">• Ensure you have administrator permissions on each of the computers on which you are installing UFT.• Make sure you have access to the necessary folders and registry keys. For a list of the necessary access permissions, see "Setting Required Access Permissions" on the previous page.
Installing UFT and User Account Control (UAC)	<p>You can install UFT (either through the wizard or silently) without turning off the computer's User Account Control (UAC).</p> <p>For details on installing UFT through the installation wizard, see "Installing UFT" on page 15. For details on the silent installation, see "Installing UFT Silently" on page 18.</p>
Installing licenses	<p>You can also install the user licenses from the command line. For details, see "Install UFT Licenses from the Command Line" on page 37.</p>
Installing the UFT Add-in for	<ul style="list-style-type: none">• If the user of the UFT computer needs to connect to ALM through UFT, you can install the UFT Add-in for ALM as part of the installation, in the Custom Setup screen, or with the ADDLOCAL silent installation

ALM	<p>parameter.</p> <ul style="list-style-type: none"> For users to connect to ALM from UFT for the first time without turning off the UAC, you must also install the ALM client MSI file on each user's machine. You can generate a custom MSI for all your users by using the HPALM Client MSI Generator. This tool enables you to configure the settings for your ALM servers before installing the client-side MSI. <p>You can download the ALM Client MSI Generator and User Guide from https://hpln.hp.com/page/hp-alm-client-msi-generator. Instructions for configuring the settings for a custom MSI are provided in the user guide.</p> <div style="background-color: #f0f0f0; padding: 10px; border: 1px solid #ccc;"> <p>IMPORTANT: When configuring the settings, you must select the Check Include Component Registration and Use Shared Deployment Mode options.</p> </div> <p>After the custom MSI is installed on each user's machine, they can connect to ALM without temporarily deactivating the UAC for their user account.</p>
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If your users are using either the Stingray or Terminal Emulator add-ins, there are additional configurations you or the user must perform **AFTER** the installation:

For both the Stingray and Terminal Emulator Add-ins	<p>Run the Additional Installation Requirements after the main installation on each computer. This tool is found in the Start menu (Start > All Programs > HP Software > HP Unified Functional Testing > Tools > Additional Installation Requirements).</p> <p>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.</p>
For the Stingray Add-in	<p>For the Stingray add-in, the user runs the Stingray Support Configuration Wizard in the Stingray pane of the Options dialog box (Tools > Options > GUI Testing tab > Stingray pane > Select Version). This configuration requires no administrative permissions.</p>
For the Terminal Emulator Add-in	<div style="background-color: #f0f0f0; padding: 10px; border: 1px solid #ccc;"> <p>Note: For the Terminal Emulator, the user must have administrator permissions. Each user can run the Terminal Emulator configuration wizard from the Terminal Emulator pane of the Options dialog box (Tools > Options > GUI Testing tab > Terminal Emulator pane > Open Wizard).</p> </div> <p>For the Terminal Emulator add-in, you can run the configuration one time with administrator permissions, and save the settings to a registry file which can be deployed on all the computers.</p> <p>To copy and deploy the settings, do the following:</p> <ol style="list-style-type: none"> In the final screen of the Terminal Emulator Wizard, select the Save terminal emulator settings to file option. <div style="background-color: #f0f0f0; padding: 10px; border: 1px solid #ccc;"> <p>Note: Before you copy the saved configuration, make sure you know the vendor name and the emulator name assigned to the configuration, and the exact name and location of the file. The file has a <code>.reg</code> extension.</p> </div> <ol style="list-style-type: none"> Copy the file to the <code><UFT installation folder>\dat</code> folder on your computer. Double-click the registry file to open the Registry Editor message box. Click Yes to add the information into the registry. A message opens confirming that the information has been copied into the registry. Click OK. The emulator name assigned to this configuration is added to the list of available terminal emulators for your UFT installation.

Upgrading from QuickTest, Service Test, or Earlier Versions of UFT

- If you are upgrading from QuickTest, Service Test, or a previous version of UFT (including older versions of the UFT Add-in for ALM), the upgrade is performed as described in the table:

Previous Version	Upgrade Mechanism Behavior
QuickTest	Manually uninstall QuickTest and install the new version of UFT.
Service Test version 11.20 and earlier	Manually uninstall Service Test and install UFT.
Service Test 11.50	The UFT installation automatically uninstalls the previous version and installs the new version of UFT.
Previous versions of UFT	The UFT installation automatically uninstalls the previous version and installs the new version of UFT.

- Before upgrading from a previous version of QuickTest, Service Test, or UFT version prior to 12.50, you must get your new license.

You can perform the upgrade in different places:

For existing customers	www.hp.com/software/updates (you need to enter your SAID number)
For new customers	http://h30580.www3.hp.com

Detailed instructions on how to use the Licensing Portal are provided at the top of the License Portal window. You can also see the presentation at

<https://softwaresupport.hp.com/group/softwaresupport/search-result/-/facetsearch/document/KM01778685> for additional details.

- 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 on setting up a concurrent license server, see the *Autopass License Server User Guide*. This guide is available in the **License Server Setup** link on the UFT setup screen that runs at the beginning of the installation from the full installation package.

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

- All GUI Testing add-ins that were installed with QuickTest or UFT are identified during the upgrade. You can add or remove add-ins during the installation.
- The run session options and startup options of the **Tools > Options** dialog box, are retained. No other

options are retained when you upgrade.

In QuickTest, these options can be found in **Tools > Options > General/Run** nodes. In UFT, these options can be found in **Tools > Options > General tab > Run sessions/Startup Options** nodes

- Connection settings to ALM are not retained when you upgrade. If required, you must reconnect to ALM after the installation.

Chapter 2: Installing UFT

The standard installation process (using the installation wizard) automatically installs UFT and the Web, Visual Basic, and ActiveX Add-ins. In the installation wizard, you can also select additional add-ins to install. You can install UFT silently in the background and on remote computers.

You must not run any other installation at the same time as you run the UFT installation. In addition, before you install UFT, ensure that your computer is not in a state that requires a restart.

This chapter includes:

- [Installing UFT](#) 15
- [Installing UFT Silently](#) 18
- [UFT Program Folder Structure](#)25
- [Troubleshooting and Limitations - Installing/Uninstalling UFT](#) 27

Installing UFT

Your setup program includes an installation wizard that guides you through the installation process.

This task includes the following items:

- ["Prerequisites" below](#)
- ["Installing a localized version of UFT" below](#)
- ["Installing UFT" on the next page](#)
- ["Installing the Web 2.0 add-ins or extensibility toolkits" on page 17](#)

Prerequisites

1. Make sure you are logged on with the appropriate privileges. For details on the required privileges, see ["Setting Required Access Permissions" on page 9](#).
2. Select a local drive on which to install UFT. Do not install UFT on a network drive.
3. If you are installing UFT from the UFT Compressed Package for the Web, you must have access to the Internet to download the necessary prerequisite software.
4. If you plan to run tests of a Web service with security settings that was created using Service Test or earlier versions of UFT, you must have the .NET Framework 3.5, WSE 2.0 sp3 package, and WSE 3.0 package installed on your computer.

These prerequisites are not provided with the UFT installation. If they are not installed on your computer, you can install them from the following locations in the full installation package:

- **NET 3.5 Framework:** <UFT installation directory>/prerequisites/dotnet35_1/dotnetfx35_sp1.exe
- **WSE 2.0 sp3:** <UFT installation directory>/prerequisites/wse20sp3/MicrosoftWSE2.0SP3Runtime.msi
- **WSE 3.0:** <UFT installation directory>/prerequisites/wse30/MicrosoftWSE3.0Runtime.msi

Installing a localized version of UFT

If you are installing UFT on a computer using a language other than English, your installation setup and wizard automatically runs in the language of your computer.

By default, UFT is installed in English. If you want to install UFT in the language of your operating system, you can do so in the **License Agreement** screen of the installation.




You can install UFT in the following languages: **Brazilian Portuguese, Chinese, Dutch, French, German, Italian, Japanese, Korean, Russian, or Spanish.**

Installing UFT

In the Unified Functional Testing Setup Screen, select **Unified Functional Testing Setup**.

The Unified Functional Testing Installation Wizard opens. Follow the steps in the wizard to complete your installation.

Note the following considerations as you run through the installation wizard:

Installation Wizard Screen	Considerations
License Agreement	If you are installing UFT on a computer with an operating system in one of the supported languages, select the language option at the bottom of this screen.
Custom Setup	<p>If you are not sure what features you need to install, see "What Installation Components Do I Need to Install?" on page 44</p> <p>Select the necessary features to install:</p> <ul style="list-style-type: none">• Runtime Engine: Enables you to run UFT tests without installing the entire UFT IDE. If you install this feature, you can only run, but not edit UFT tests. The installation of this component is mandatory.• UI Designer and IDE: The UFT user interface (without UFT's run-time capability).• Run Results Viewer: Enables you to view the test or component run results after a test or component run.• Samples: Installs the demo applications to enable you to practice using UFT.• Product Documentation: The UFT Help Set which provides detailed information on how to set up and use UFT.• ALM Plugin: Enables you to run and edit UFT tests directly from ALM.• 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. <p>The selected features are installed in one of the following ways:</p> <ul style="list-style-type: none">•  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.•  Entire feature will be unavailable. Excludes the feature from the installation. It will not be available in UFT. <p>If you are using Web 2.0 add-ins (ASP .NET AJAX, Dojo, Google Web Tools (GWT), jQueryUI, SiebelOpenUI, EXT-JS, or YahooUI), you need to perform an additional installation after the full installation. For details, see "Installing the Web 2.0 add-ins or extensibility toolkits" on the next page.</p> <p>IMPORTANT: 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/en-</p>

	us/download/details.aspx?id=5638 .
UFT Configuration	<p>Select the necessary configuration options:</p> <ul style="list-style-type: none"> Configure Internet Explorer settings. Select this check box to automatically configure the Internet Explorer options that enable UFT to use the Microsoft Script Debugger application during test runs. You can also configure these options manually before running UFT. In Internet Explorer, select Tools > Internet Options > Advanced. Then select Disable script debugging and Enable third-party browser extensions. Enable running UFT remotely from ALM. Select this check box to automatically change DCOM permissions and security settings and open a firewall port on your UFT computer. These configurations are only required if you want to run UFT tests remotely from ALM, and are running UFT on Windows 7. If you need to set these options manually, see "Modifying DCOM Permissions Manually to Enable Remote UFT Execution" on page 46. You can also manually configure DCOM later by running the Additional Installation Requirements tool (Start > All Programs > HP Software > HP Unified Functional Testing > Tools > Additional Installation Requirements) or running the Remote Agent (<installation directory>\bin\UFTRemoteAgent.exe). Enable running UFT remotely from Automation Scripts. Select this check box to automatically change DCOM permissions and security settings to enable another computer to remotely control UFT using automation scripts. <p>Caution: Selecting this option enables remote users to control UFT on this machine, exposing the UFT computer to security risks.</p> <p>For information on how to configure this option manually, see "Enable group-wide remote DCOM execution of UFT scripts:" on page 49.</p> <ul style="list-style-type: none"> Download and Install Microsoft Script Debugger. Provides the debugging environment that UFT uses during test runs. This item is displayed only when not currently installed.

When the UFT installation is complete, the installation wizard gives you the option to view the Readme file and a log of all installation details.

In some situations, you may be prompted to restart your computer after you have installed UFT. It is recommended that you restart your computer as soon as possible if you are prompted to do so. Delaying the system restart may result in unexpected UFT behavior.

Installing the Web 2.0 add-ins or extensibility toolkits

If you plan to use the Web 2.0 add-ins (ASP .NET Ajax, Dojo, GWT (Google Web Tools), jQueryUI, SiebelOpenUI, EXT-JS, or YahooUI), or use extensibility to develop support for add-in objects not currently supported by UFT add-ins, you need to perform an additional installation:

If you are using the UFT full installation package:	<ol style="list-style-type: none"> In the UFT installation start screen, select the Add-in Extensibility and Web 2.0 Toolkits option. <p>Note: You must install the Web Add-in as part of the main installation to test</p>
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	<p>applications based on Web 2.0 technologies.</p> <ol style="list-style-type: none"> 2. 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. 3. Follow the steps in the wizard to complete your installation. <p>After your installation, the toolkit files and Extensibility SDKs are found in the <UFT installation>\dat\Extensibility folder. The Web 2.0 add-ins are displayed as child add-ins to the Web Add-in in the Add-in Manager when starting UFT.</p>
If you are installing the UFT Compressed Package for the Web:	<ol style="list-style-type: none"> 1. After performing the UFT installation, navigate to the <UFT installation>\Installations\Web2AddinSetup folder. <p>Note: You must install the Web Add-in as part of the main installation to test applications based on Web 2.0 technologies.</p> <ol style="list-style-type: none"> 2. In the Web2AddinSetup folder, run the Web2AddinSetup.exe file. 3. Follow the steps in the wizard to complete your installation. <p>After your installation, the Web 2.0 add-ins are displayed as child add-ins to the Web Add-in in the Add-in Manager when starting UFT.</p>

Installing UFT Silently

A *silent installation* (or *quiet installation*) is an installation that is performed in the background. You can install UFT and the ALM Add-in silently on your computer or a remote computer.

You must have administrator privileges to install UFT and the ALM Add-in silently.

This task includes the following steps:

- ["Prerequisites" below](#)
- ["Install UFT " on page 20](#)
- ["Install UFT add-ins " on page 21](#)
- ["Install the UFT Add-in for ALM as a standalone \(without UFT installed\)" on page 22](#)
- ["Install localized versions of UFT" on page 23](#)
- ["Set UFT installation-related configuration options" on page 23](#)
- ["Install licenses silently" on page 24](#)
- ["Specify a concurrent license server" on page 23](#)
- ["Silent installation command examples" on page 24](#)

Prerequisites

- Save any open files and close all open applications before running the silent installation.
- Install the prerequisite software for UFT:

- To install **all prerequisites silently**, run the following command in the command line:

```
<UFT installation directory>\Unified Functional Testing\EN\setup.exe
/InstallOnlyPrerequisite /s (if you are installing from the full installation package)

or

<installation download directory>\Unified Functional Testing\EN\setup.exe
/InstallOnlyPrerequisite /s (if you are installing from the Compressed Package for the
Web)
```

- To install **individual prerequisites silently**, use the following syntax:

Note: If you are installing UFT from the Compressed Package for the Web make sure to change <UFT installation directory> to the download directory you used.

For UFT	
Prerequisite	Silent Command Line Syntax
.NET Framework 4.5	<UFT installation directory>\prerequisites\dotnet45\dotnetfx45_full_x86_x64.exe /q /norestart
Microsoft Access database engine 2010	<UFT installation directory>\prerequisites\msade2010\AccessDatabaseEngine.exe /quiet
Microsoft WSE 2.0 SP3 Runtime	<UFT installation directory>\prerequisites\wse20sp3\MicrosoftWSE2.0SP3Runtime.msi /quiet /norestart ALLUSERS=1
Microsoft WSE 3.0 Runtime	<UFT installation directory>\prerequisites\wse30\MicrosoftWSE3.0Runtime.msi /quiet /norestart ALLUSERS=1
Microsoft Visual C++ 2010 Run-time Components for 32/64 bit Operating Systems	<UFT installation directory>\prerequisites\vc2010_redist\vc_redist_x86.exe /q (for 32-bit machines) <UFT installation directory>\prerequisites\vc2010_X64_redist\vc_redist_x86.exe /q (for 64-bit machines)
Microsoft C++ 2012 Redistributable	<UFT installation directory>\prerequisites\vc2012_redist_x86\vc_redist_x86.exe /quiet /norestart (for 32-bit machines) <UFT installation directory>\prerequisites\vc2012_redist_x64\vc_redist_x64.exe /quiet /norestart (for 64-bit machines)

For the UFT Add-in for ALM:

Prerequisite	Silent Command Line Syntax
.NET Framework 4.5	<UFT installation directory>\prerequisites\dotnet45\dotnetfx45_full_x86_x64.exe /q /norestart
Microsoft Visual C++ 2012 Redistributable	<UFT installation directory>\prerequisites\vc2012_redist_x86\vc_redist_x86.exe /quiet /norestart (for 32-bit machines) <UFT installation directory>\prerequisites\vc2012_redist_x64\vc_redist_x64.exe /quiet /norestart (for 64-bit machines)

For the Run Results Viewer:

Prerequisite	Silent Command Line Syntax
.NET Framework 4.5	<UFT installation directory>\prerequisites\dotnet45\dotnetfx45_full_x86_x64.exe /q /norestart
Microsoft Visual C++ 2012 Redistributable	<UFT installation directory>\prerequisites\vc2012_redist_x86\vc_redist_x86.exe /quiet /norestart (for 32-bit machines) <UFT installation directory>\prerequisites\vc2012_redist_x64\vc_redist_x64.exe /quiet /norestart (for 64-bit machines)

Install UFT

In the command line, run the `msiexec` command to install UFT, using the following syntax:

```
msiexec /i "<UFT installation directory>\Unified Functional Testing\MSI\Unified_Functional_Testing_x64.msi" /qb (for 64-bit machines)
```

```
msiexec /i "<installation_download_directory>\Unified Functional Testing\MSI\Unified_Functional_Testing_x64.msi" /qb (for 64-bit machines)
```

or

```
msiexec /i "<UFT installation directory>\Unified Functional Testing\MSI\Unified_Functional_Testing_x86.msi" /qb (for 32-bit machines)
```

```
msiexec /i "<installation_download_directory>\Unified Functional Testing\MSI\Unified_Functional_Testing_x86.msi" /qb (for 32-bit machines)
```

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

For a description of possible silent installation commands, see ["Silent Installation Commands" on page 45](#).

Install UFT add-ins

You can 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.

You install the various components of UFT using the following commands:

Note: The silent installation commands are case-sensitive and should be entered exactly as listed below.

Command Type	Command Syntax	Description
Mandatory commands	Core_Components	Installs the UFT Runtime Engine.
Optional commands for UFT core components	IDE	Installs the UFT user interface.
	Test_Results_Viewer	Installs the Run Results Viewer.
	Samples	Installs the sample applications included with the UFT installation.
	Help_Documents	Installs the UFT Help Set.
	ALM_Plugin	Installs the UFT Add-in for ALM.
LeanFT components	LeanFT_Engine	Installs the LeanFT run-time engine.
	LeanFT_Client	Installs the LeanFT client.
	Vs2012Addin	Installs the LeanFT Plugin for Microsoft Visual Studio 2012.
	Vs2013Addin	Installs the LeanFT Plugin for Microsoft Visual Studio 2013.
	EclipseAddin	Installs the LeanFT Plugin for Eclipse.
	ECLIPSE_INSTALLDIR	The path to your Eclipse IDE.
Optional commands for UFT Add-ins	<ul style="list-style-type: none">• ActiveX_Add_in• Visual_Basic_Add_in• Web_Add_in• Delphi_Add_in	Installs the various UFT add-ins.

	<ul style="list-style-type: none">• 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 the UFT Add-in for ALM as a standalone (without UFT installed)

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
```

Note: If you are installing UFT, you cannot use this command to install the UFT Add-in for ALM. Use the `ADDLOCAL` command described above.

For a description of possible silent installation commands, see ["Silent Installation Commands" on page 45](#).

Example

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

Install localized versions of UFT

You can also perform a silent installation of a localized version of UFT.

In the command line, add the `PRODUCT_LOCALE` property to the `msiexec` command to install the following localized versions:

- Brazilian Portuguese: `PRODUCT_LOCALE="PTB"`
- Chinese: `PRODUCT_LOCALE="CHS"`
- Dutch: `PRODUCT_LOCALE="NLD"`
- French: `PRODUCT_LOCALE="FRA"`
- German: `PRODUCT_LOCALE="DEU"`
- Italian: `PRODUCT_LOCALE="ITA"`
- Japanese: `PRODUCT_LOCALE="JPN"`
- Korean: `PRODUCT_LOCALE="KOR"`
- Russian: `PRODUCT_LOCALE="RUS"`
- Spanish: `PRODUCT_LOCALE="ESP"`

Set UFT installation-related configuration options

The following configuration options are included in the silent installation:

- **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: Setting this option enables remote users to control UFT on this machine, exposing the UFT computer to security risks.

- **Download and install Microsoft Script Debugger** (to exclude this option from the installation, set `DLWN_SCRIPT_DBGR=0`)

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 silent installation to `=1`

Specify a concurrent license server

You can specify a specific license server during the silent installation. Use the `LICSVR` command as follows:

```
LICSVR=<server name>
```

Install licenses silently

You can also install licenses directly from the command line. For details, see ["Install UFT Licenses from the Command Line" on page 37](#).

Silent installation command examples

The following examples illustrate different possible commands for a silent installation of UFT.

- **Standard installation:** `msiexec /i "<UFT installation directory>\Unified Functional Testing\MSI\Unified_Functional_Testing_x64.msi" /qb`
- **Run-time engine only installation:** `msiexec /i "<UFT installation directory>\Unified Functional Testing\MSI\Unified_Functional_Testing_x64.msi" /qb ADDLOCAL="Core_Components" TARGETDIR="<UFT_Folder>" ALLOW_OTHERSRUNTESTS=1`
- **Standard full installation with the Java Add-in, installed from the full installation package**
`msiexec /i "<UFT installation directory>\Unified Functional Testing\MSI\Unified_Functional_Testing_x64.msi" /qb ADDLOCAL="Core_Components,IDE,Test_Results_Viewer,Help_Documents,Samples,Java_Add_in" TARGETDIR="<UFT_Folder>"`
- **Standard installation from the Web download with the Web and Java Add-ins installed, DCOM configurations set, the Microsoft Script Debugger not downloaded:** `msiexec /i "<installation_download_directory>\Unified Functional Testing\MSI\Unified_Functional_Testing_x64.msi" /qb ADDLOCAL="Core_Components,Samples,Java_Add_in" DLWN_SCRIPT_DBG=0 CONF_DICOM=1 TARGETDIR="<UFT_Folder>"`
- **Standard installation of the localized German version of UFT with the .NET Add-in:** `msiexec /i "<UFT installation directory>\Unified Functional Testing\MSI\Unified_Functional_Testing_x64.msi" /qb ADDLOCAL="Core_Components,Samples,_Net_Add_in" PRODUCT_LOCALE="DEU" TARGETDIR="<UFT_Folder>"`

UFT Program Folder Structure

After the UFT installation is complete, the following items are added to your UFT program folder (**Start > All Programs > HP Software > HP Unified Functional Testing**):

- **Documentation.** Provides the following links to commonly used documentation files:

Option	Description
HP Unified Functional Testing Code Samples Plus	Opens the Unified Functional Testing Code Samples Plus Help, which provides sample function libraries, code, and SDK samples with accompanying explanations. Note: These samples are relevant for GUI testing only.
HP UFT Help	Opens the UFT Help, which displays links to commonly used topics and movies that describe how to use UFT, as well as additional links to HPSoftware Websites. The UFT Help provides access to all guides available for UFT, such as Getting Started guides, Helps, reference files, and links to printer-friendly (PDF format) documentation. It contains various navigation options to help you find the information you need.
UFT Tutorial and GUI Tutorial for Web Applications	Opens the UFT tutorial or the GUI Tutorial for Web Applications, which teach you basic skills and shows you how to start testing your applications.
UFT Runner Configuration Help	Opens the Configuration Help Guide for the UFT Runtime Engine.
Unified Functional Testing Automation Reference	Opens the Unified Functional Testing Automation Object Model Reference for GUI Testing. The object model assists you in automating GUI test management, by providing objects, methods and properties that enable you to control UFT features and configurations. The Object Model Reference provides syntax, descriptive information, and examples for the objects, methods, and properties. It also contains a detailed overview to help you get started writing GUI test scripts.

- **Sample Applications.** Contains the following links to sample applications that you can use to practice testing with UFT:

Option	Description
Flight API	Opens the API side of the demo application, used in conjunction with an API test. Note: You must have administrator privileges to use this application.
Flight GUI	Opens a sample flight reservation Windows application. To access the application, enter the username john and the password hp .
Mercury Tours Web site	Opens a sample flight reservation Web application. This Web application is used as a basis for the UFT GUI Testing tutorial. For details, see the <i>HP Unified Functional Testing Tutorial for GUI Testing of Web Applications</i> .

- **Tools.** Contains the following utilities and tools that assist you with the testing process:

Note: The available tools depend on the installed UFT add-ins.

Option	Description
Activity Wizard	Opens the API Testing Activity Wizard, which enables you to create custom API activities that will be visible in the Toolbox pane.
Additional Installation Requirements	Opens the Additional Installation Requirements Utility, which displays any prerequisite software that you must install or configure to work with UFT.
Functional Testing License Installation Wizard	Opens the License Wizard which enables you to install and switch the type of active license.
HP Micro Player	Opens the HP Micro Player, which enables you to view captured movies of a run session without opening UFT. For details, click the Help button in the HP Micro Player window.
HP UFT Installation Validation Tool	Enables you to check the status of your UFT installation. For details, see "Verifying the UFT Installation" on page 54 .
Java Add-in JRE Support Tool	Opens the Java Add-in JRE Support Tool, which adjusts the JVM Runtime Parameters of your JRE to enable the Java Add-in to recognize Java applets and the Java objects within them. This tool is necessary only for certain operating systems, browsers, and JRE versions. For details, see the Java section of the <i>HP Unified Functional Testing Add-ins Guide</i> . This tool is only available when the Java add-in is installed with UFT.
Password Encoder	Opens the Password Encoder tool, which enables you to encode passwords. You can use the resulting strings as method arguments or Data pane parameter values.
Register New Browser Control	Opens the Register Browser Control Utility, which enables you to register your browser control application so that UFT recognizes your Web objects when recording or running GUI tests. For details, see the section on registering browser controls in the <i>HP Unified Functional Testing Add-ins Guide</i> .
Remote Agent	Activates the UFT Remote Agent, which enables you to configure how UFT behaves when a GUI test or component is run by a remote application such as ALM.
Run Settings	Opens the Run Settings Configuration tool, which enables you to set run-time settings for the Runtime Engine.
Silent Test Runner	Opens the Silent Test Runner. This enables you to run a test in the manner in which it is run from LoadRunner or Business Availability Center.
soapUI to API Test Converter	Converts soapUI tests to a UFT API Test.

Stingray Support Configuration Wizard	Opens the Stingray Support Configuration Wizard which enables UFT to recognize Stingray objects in your application. This tool is only available when the Stingray add-in is installed with UFT.
Test Batch Runner	Opens the Test Batch Runner application, which enables you to set up UFT to run several tests in succession.

- **HP Unified Functional Testing.** Opens the UFT application.
- **Readme.** Opens the *HP Unified Functional Testing Readme*, which provides the latest news and information on UFT and the UFT add-ins.
- **Run Results Viewer.** Opens the Run Results Viewer which enables you to view test or component run results.

Note:

- If you uninstalled a previous version of UFT before installing this version, you may have additional (outdated) items in your UFT program folder. In addition, if you have UFT add-ins or extensibility SDKs installed, you may have items in your program folder that relate specifically to these items.
- For details on accessing UFT and UFT tools and files in Windows 8.X or higher and Windows Server 2012, see [Accessing in Windows 8 Operating Systems](#).

Troubleshooting and Limitations – Installing/Uninstalling UFT

This section describes troubleshooting and limitations for installing UFT. It contains the following sections:

- ["General Limitations" below](#)
- ["Upgrading from QuickTest Professional" on the next page](#)
- ["Uninstalling UFT" on the next page](#)

General Limitations

- If the HP UFT Files in Use dialog box is displayed during the installation process:
 - Select the **Close the application and attempt to restart them option**. UFT automatically closes the applications and continues the installation.
- If after restarting, the HP 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.
- You cannot automatically install a previous version of UFT after installing UFT 12.00 or higher.
Workaround: Manually uninstall UFT before installing the older version.
- After uninstalling LoadRunner 11.50, UFT does not work.
Workaround: After uninstalling LoadRunner 11.50, perform a repair installation for UFT.
- **Sprinter:** If you are using both UFT and Sprinter on the same computer, and you modify either UFT or Sprinter, you must run a **Repair** for the installation of the other product.
- Installing UFT on a network drive is not supported.
- If version 6.0.0.8169 of pdm.dll is found on your computer, the setup program will recognize 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/>.
- When installing UFT on a Windows 10 operating system, you must close Cortana and the Action Center before performing the UFT installation. 0
- 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:
 - a. Under the **HKLM\SOFTWARE\Policies\Microsoft\Windows\Installer** key, create a DWORD with the name **SecureRepairPolicy**.
 - b. Set the value of the SecureRepairPolicy to 2.
 - c. In the **HKLM\SOFTWARE\Policies\Microsoft\Windows\Installer** key, create StringValues with the UFT product code.

Upgrading from QuickTest Professional

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

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

Uninstalling UFT

- 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 HP Micro Player.

Workaround: Re-associate the movie files with the HP Micro Player, as follows:

- a. Select **Start > All Programs > HP Software > HP Unified Functional Testing > Tools > HP Micro Player** to open the HP Micro Player.
- b. Select **File > Options** to open the HP Micro Player Options dialog box. Then select the **Associate FBR files with this Player** check box to associate the files with the HP Micro Player.

- 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.

Workaround: Restart the computer after uninstalling UFT.

Chapter 3: UFT Licenses

Relevant for: GUI testing and API testing

When using UFT, you must install a valid license on your computer. This license can be one of the following types:

- Seat (formerly known as a local or standalone license)
- Concurrent (also known as a floating license)
- Commuter

The license enables you to access specific UFT features, depending on the license used.

This chapter includes:

- [UFT License Types](#)31
- [Install UFT Licenses with the License Wizard](#) 32
- [Install UFT Licenses from the Command Line](#)37
- [UFT Licensing FAQs](#)39
- [UFT Licenses - Troubleshooting and Limitations](#) 42

UFT License Types

When using UFT, you can choose between different types of licenses:

- **Seat**
- **Concurrent**
- **Commuter**

The table below summarizes the differences between the license types:

Topic	Seat Licenses	Concurrent Licenses	Commuter Licenses
General description	A machine-specific license linked to your computer.	A license taken from a license server on a per-session basis.	A license checked out for a period of time to use when you are not connected to the license server. You can check out a commuter license directly from a license server or have another user remotely check out a license for you.
Number of installations per license key	One	Unlimited The license server regulates the number of licenses in use at any given time. Note: You can install a special tool to track license usage (both for UFT and other products) across your network. This tool is available here: https://hpln.hp.com//contentoffering/usage-tracking	One for a limited period of time.
Other issues	The license key is based on a specific locking code per computer. Note: A computer with multiple bootable partitions may generate a different locking code for each partition. When obtaining a seat license	You must have an active network connection to install and check out commuter licenses.	The license key is based on the machine identification. The license is specific for the computer making the request.

	<p>key, you need to use the locking code for the partition on which you want to use UFT.</p> <p>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.</p>		<p>You or another user must have an active network connection to install and check out commuter licenses.</p>
Entering the license key in UFT	<p>A seat license keys needs to be entered only once.</p>	<p>Each time UFT starts, UFT tries to connect to the License Server for an available license.</p>	<p>A commuter license key needs to be entered only once.</p> <p>After the commuter license expires, UFT automatically returns to the previously used license type.</p>

Install UFT Licenses with the License Wizard

Note: Before upgrading to UFT 12.50 from a previous version of QuickTest, Service Test, or UFT, you must upgrade your license. Customers with a valid Entitlement Order Number or Numbers can obtain the new license key(s) in the HP Licensing portal, found at <https://h30580.www3.hp.com/poeticWeb/portalintegration/hppWelcome.htm?lang=en&cc=us&hp>. Detailed instructions on how to use the Licensing Portal are provided at the top of the License Portal window.

Note that your previous UFT license keys will not work with UFT version 12.50.

The Functional Testing License Wizard enables you install or check out a seat, concurrent, or commuter license for UFT. You can also use the wizard to switch from one license type to another.

When you first install UFT, it uses the demo license. To continue after the demo license period, you must install a valid license. To install a license, use the Functional Testing License Wizard.

You can reach the License Wizard in any of the following ways:

- **Start > All Programs > HP Software > Unified Functional Testing > Tools > Functional Testing License Wizard**
- From the warning message displayed when starting UFT
- By selecting **Help > License Wizard**.
- **Windows 8 only: C:\Program Files (x86)\HP\Unified Functional Testing**

When you start the License Wizard, it displays the currently installed license. You can also view license information by selecting **Help > About Unified Functional Testing** and clicking the **License** button.

UFT also displays a warning message in the status bar at the bottom of the UFT IDE if your license is going to expire. If you have multiple installed licenses, UFT displays the status of the license closest to the expiration date.

Note: You can also install UFT licenses via command line. For details, see ["Install UFT Licenses from the Command Line" on page 37](#).

You can do the following using the license wizard:

- ["Install a Seat license" below](#)
- ["Install a Concurrent license" on the next page](#)
- ["Check out and install a Commuter license" on the next page](#)
- ["Return a Commuter license" on page 35](#)
- ["Check out and install a Remote Commuter license" on page 36](#)
- ["Return a Remote Commuter license" on page 37](#)

Install a Seat license

1. In the License Wizard start screen, select **Seat license**.
 2. In the Seat License installation screen, do one of the following:
 - Click **Load License Key File** and select your license key file. The seat license key file has a .dat extension.
 - Paste the license key in the edit field and click **Verify**.
- If you don't yet have a license key, expand the **How can I get a license key file** section for instructions.
3. After verifying that the license key is valid, click **Install**.
 4. Click **Exit Wizard** to exit the wizard. To apply the new license, you must restart UFT.

Note:

- 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 UFT seat license installations on that computer.
For questions about this issue, contact your HP license supplier.
- 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. In the License Wizard start screen, select **Concurrent license**.
3. In the Concurrent License Installation screen, enter the License Server address in the format `<license server address>:<port>`. If you do not enter a port number, the default port, **5814** is automatically inserted after the server address.

Note: The format of the address must be the same as the format used in the **Main** tab of the Configuration pane in the License Server. For details on setting up the address of your license server, see the *Autopass License Server User Guide*, included with the License Server installation in the UFT installation.

4. Click **Connect** to connect UFT to the License Server.
5. (Optional) Expand the **Add Redundant Server** link.
Enter the address for the redundant License Server. If your primary License Server is unavailable, UFT will connect to the redundant License Server to obtain a license.

Note:

You do not need an additional license for the redundant license server. You install the same licenses on the primary server and the primary and redundant servers sync the licenses.

The primary and redundant license servers are automatically synchronized as part of their setup and configuration. For details on setup and configuration of a redundant license server, see the *Autopass License Server User Guide*.

6. From the product license drop-down list, select the appropriate license and click **Install**.
7. Click **Exit Wizard** to exit the wizard. To apply the license, you must restart UFT.

Check out and install a Commuter license

If you usually use a concurrent license, but cannot connect to a License Server (for example, during a business trip), you can install a commuter license for those periods when you cannot access the License Server. Once you install the commuter license, you can use UFT without an active network connection.

You must have access to a License Server to check out a commuter license for yourself. If you do not have access to the License Server, see the section on [installing remote commuter licenses](#) below.

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

To install a commuter license:

1. **Prerequisite:** Make sure you are connected to the network and can access the License Server.
2. In the License Wizard start screen, click the **Additional Options** drop-down link.
3. Select **Commuter License**.
4. In the Commuter License Installation screen, enter the License Server address with the format `<license server address>:<port>`. By default, port number 5814 is used.

Note: The format of the address must be the same as the format used in the **Main** tab of the Configuration pane in the License Server. For details on setting up the address of your license server, see the *Autopass License Server User Guide*, included with the License Server installation in the UFT 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.

Note: You can check out a commuter license for a maximum of 180 days.

9. Click **Check Out**. The license is checked out and is immediately displayed in the **Checked Out** section.
10. Click **Next** to install the license.
11. Click **Exit Wizard** to exit the wizard. To apply the concurrent license, you must restart UFT.

Note: The commuter license check out time always ends at 23:59 of the expiration day. Thus, if you check out a license for X days and start using it immediately in UFT, the Add-in Manager will display X days + Y hours (where Y is the number of hours until midnight).

Return a Commuter license

After you are finished using a commuter license, you should return the license to the License Server to make it available for other users.

You must have access to a License Server to return the commuter license. If you do not have access to the License Server, see the section on [installing remote commuter licenses](#) below.

To return a commuter license to the License Server:

1. **Prerequisite:** Make sure you are connected to the network and can access the License Server.
2. Select **Commuter License**.

3. In the Commuter License Installation screen, the License Server address should already be displayed and connected.

If needed, enter the License Server address with the format <license server address>:<port>. By default, port number 5814 is used and click **Connect** to connect to the License Server.

Note: The format of the address must be the same as the format used in the **Main** tab of the Configuration pane in the License Server. For details on setting up the address of your license server, see the *Autopass License Server User Guide*, included with the License Server installation in the UFT installation.

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

Note: If you do not want to return all the licenses that you checked out, you must still return all your checked out commuter licenses and then re-check out the licenses you need.

6. Click **Next**. The license wizard reports that the license type was switched back to the previous license type (either seat or concurrent). The next time you open the license wizard, it displays the relevant type as the active license.
7. Click **Exit Wizard** to exit the wizard. To apply the return of the commuter license and revert to your previous license, you must restart UFT.

Note: If you do not check in your commuter license before the expiration date, UFT automatically reverts to the previous license state when the commuter license expires.

Check out and install a Remote Commuter license

If you need a commuter license when you are not able to connect with your License Server to check one out, you can use a **Remote Commuter** license. In this case, you generate a request, and then another user who has access to the License Server checks out the license and sends you the required key.

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

To install a remote commuter license when you do not have access to the License Server:

1. In the License Wizard start screen, expand the **Additional Options** drop-down link.
2. Select **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.

Note: You can check out multiple types of licenses.

5. In the **Check out licenses for (days)** field, enter the number of days for which you need the commuter license.

Note: You can check out a remote commuter license for a maximum of 180 days.

6. Click **Generate Request File**. In the save dialog, the location for the request file (with a `.lcor` file extension) is displayed.
7. Send the request file to a License Server administrator or to a user with access permissions to the License Server. The other user checks out a license key file for you using the generated request file. For details on checking out commuter licenses from the license server, see the *Autopass License Server User Guide*.
8. When you receive the license key file from the other user, return to the Remote Commuter License Installation screen. Ensure that **Install License** is selected.
9. Click **Choose File**. In the Open dialog, navigate to the location where you stored the license key file.
10. Click **Install**.
11. Click **Exit Wizard** to exit the wizard. To apply the commuter license, you must restart UFT..

Return a Remote Commuter license

1. In the License Wizard start screen, expand the **Additional Options** drop-down link.
2. Select **Remote Commuter license**.
3. In the Remote Commuter License Installation screen, ensure that **Generate Request File** is selected.
4. In the Remote Check In Request Generation screen, the list of currently checked out commuter licenses is displayed. In the Generation screen, click **Generate and Save Check In Request**. In the Save dialog, the location for the check in request file (with a `.lcir` file extension) is displayed.
5. Click **Next**. The license wizard reports that the remote commuter license is uninstalled and UFT reverts to the previous license type as the active license.
6. Click **Exit Wizard** to exit the wizard. To apply the return of the commuter license and revert to your previous license, you must restart UFT.

Note: If you do not check in your commuter license before the expiration date, UFT automatically reverts to the previous license state when the commuter license expires.

Install UFT Licenses from the Command Line

You can install a seat or concurrent license directly from the command line without opening the License Wizard. You can also use the command line to check the status of licenses in the License Server.

To install a license from the command line:

In a command window, enter the following command, followed by the relevant parameters as described below:

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

Seat license	<ul style="list-style-type: none"> • seat "<license key string>" <p>Note: If the license key contains a quotation mark character (") in the license key string, make sure to add a backslash character (\) before the quotes.</p> <ul style="list-style-type: none"> • seat "<path to the license key file>"
Concurrent license	<pre>concurrent <license ID> <license version> <server name/address> [<redundant server name/address>] [/force]</pre> <p>Note:</p> <ul style="list-style-type: none"> • The <server name/address> or <redundant server name/address> uses the format server name/address:port. The port number is optional. Default = Port 5814. • The <server name/address> or <redundant server name/address> must be in the same format as the server name or address listed in the Main tab of the Configuration pane of the License Server. For more details on setting up the License Server address, see the <i>Autopass License Server User Guide</i>. • Both the [<redundant server name/address>] and /force parameters are optional. • The /force parameter saves the license installation information even if the current installation fails. In subsequent UFT sessions, UFT will check the listed license server for the listed license.
Change server connection information	<p>Change the primary License Server address: config protocol.primary <http/https></p> <p>Change the secondary License Server address: config protocol.second <http/https></p>
To check the available licenses	<pre>licenses <server name/address> [<redundant server name address>]</pre>

Examples

Install a seat license key from a file saved locally:

```
"C:\Program Files (x86)\HP\Unified Functional
Testing\bin\HP.UFT.LicenseInstall.exe" seat "Downloads\HP UFT-licfile.dat"
```

Install a seat license key from a license key string:

```
"C:\Program Files (x86)\HP\Unified Functional  
Testing\bin\HP.UFT.LicenseInstall.exe" seat "9CDG C9MA H9P9 8HW3 UXB5 HWWF Y9JL  
KMPL B89H MZVU 6R4Q LHWE JHRP 3FQ3 CMRG HPMR MFVU A5K9 MVEC EKW9 HKDU LWWP SRL7  
QPJQ YMM5 YQVW NV6G AG2A QZWD HY9B N4ZF BGWB B8GX 7YRF T8XT W7VB QW54 G83H 2TRY  
KBTD EQUZ M8LB DZU7 WE6H 4NMU BG55 4XKB 27LX ATQB UKF8 3F9N JQY5 \" HP Unified  
Functional Testing
```

Install a concurrent license:

```
"C:\Program Files (x86)\HP\Unified Functional  
Testing\bin\HP.UFT.LicenseInstall.exe" concurrent 11.11.111.111:5814 /force
```

Check the available licenses on a License Server:

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

UFT Licensing FAQs

This topic answers a number of frequently asked questions about using and installing UFT licenses:

- ["Can I use my old license \(from versions of UFT prior to 12.50\) with the new License Server?" below](#)
- ["Since I need a new license, how to do I get this new license?" on the next page](#)
- ["If I have any trouble when regenerating licenses on the HP License Portal, what can I do?" on the next page](#)
- ["When I open the License Wizard, how do I know which type of license to select?" on the next page](#)
- ["How do I install the Autopass License Server?" on page 41](#)
- ["Can I install the License Server with silent installation?" on page 41](#)
- ["If I am using concurrent licenses, how do I get UFT to work with the License Server?" on page 41](#)
- ["How do I install licenses if I am deploying UFT across an enterprise network?" on page 41](#)
- ["How do I manage the concurrent licenses on the License Server?" on page 41](#)
- ["Can I set up my License Server to work with a redundant \(backup\) License Server?" on page 41](#)
- ["What is a cleanup license?" on page 42](#)

Can I use my old license (from versions of UFT prior to 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 need to upgrade your licenses. For details, see the topic on upgrading licenses in the *HP Unified Functional Testing Installation Guide*.

Since I need a new license, how to do I get this new license?

In order to use UFT 12.50 and higher, you have to upgrade your license. This enables you to convert your old license to a license compatible with UFT 12.50 and higher and the new Autopass License Server.

You upgrade your license through the HP Licensing portal. For details, see the topic on upgrading licenses in the *HP Unified Functional Testing Installation Guide*.

If I have any trouble when regenerating licenses on the HP License Portal, what can I do?

Contact your regional support for HP Licensing. You can find the appropriate person for yourself here: <https://h30580.www3.hp.com/poeticWeb/portalintegration/hppWelcome.htm?stepaction=contactLicenseSupport>

When I open the License Wizard, how do I know which type of license to select?

In UFT, you can install a number of different license types:

- **Seat:** A machine-specific license that is used only by the computer on which the license is installed
- **Concurrent:** A multi-user license that is taken from a central License Server and returned after the user's session is complete
- **Commuter:** A machine-specific license that is checked out from a central License Server for a defined period of time. This license is either checked in to the License Server or expires.
- **Remote Commuter:** A machine-specific license that is checked out for one user by another user who has an active connection to the License Server.

In order to know which type of license you need, answer the following questions:

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. Note: 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 travelling and will not have access to a license server?	Commuter
Are you already travelling and cannot access the License Server to get a license?	Remote Commuter

How do I install the Autopass License Server?

In the UFT Setup, there is a link to the **License Server** setup. If you click the link, a second window opens with links to install the License Server and view the *Autopass License Server User Guide*. The User Guide contains full instructions for setup and installation.

Can I install the License Server with silent installation?

Yes. The UFT installation uses the LICSVR command (as in previous versions of UFT).

For details on silent installation, see the silent installation section of the *HP Unified Functional Testing Installation Guide*.

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

In the UFT License Wizard, if you select **Concurrent license**, you need to enter the License Server IP address. This checks the connection between UFT and the License Server, and also gives you a list of possible licenses to install.

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

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 .

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). You can see full details on how to use and manage this License Server in the *Autopass License Server User Guide*, provided with the UFT Setup program (in the **License Server** link).

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

Can I set up my License Server to work with a redundant (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 redundant server. This configuration is done in the Autopass License Server Web UI.

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

For details on the redundant License Server setup, see the *Autopass License Server User Guide*.

What is a cleanup license?

If your computer is clock-tampered after installing the License Server, both the License Server and UFT'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 HP license supplier.

UFT Licenses – Troubleshooting and Limitations

Relevant for: GUI testing and API testing

- 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 UFT seat license installations on that computer. For questions about this issue, contact your HP license supplier.
- The License Server does not support the use of Network Address Translation (NAT).
- The concurrent license does not include a demo license and does not work without an active connection to a License Server and an installed license key.
- You must have administrator permissions to change the license type from seat to concurrent or vice versa.
- 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.

Appendix A: Additional Installation Information

This chapter provides additional supplemental information about the installation.

This chapter includes:

- [What Installation Components Do I Need to Install? 44](#)
- [Silent Installation Commands 45](#)
- [Modifying DCOM Permissions Manually to Enable Remote UFT Execution46](#)
- [Modifying UAC Settings to Connect with ALM53](#)
- [Verifying the UFT Installation54](#)

What Installation Components Do I Need to Install?

Use the following chart to determine which installation components you should select in the Custom Setup screen:

[Return to the main installation task](#)

I am:	You need to install these components:
Creating, editing and running UFT tests	<ul style="list-style-type: none"> • Runtime Engine • UI Designer and IDE • GUI Testing Add-ins (select the relevant add-ins for your application's technology. <p>You can also install:</p> <ul style="list-style-type: none"> • Run Results Viewer • Samples • Product Documentation
Running UFT tests locally (from automation or an external UFT tool)	<ul style="list-style-type: none"> • Runtime Engine <p>You can also install (not mandatory):</p> <ul style="list-style-type: none"> • Run Results Viewer • Samples • Product Documentation
Creating, editing, and running tests from ALM	<ul style="list-style-type: none"> • Runtime Engine • UI Designer and IDE • GUI Testing Add-ins (select the relevant add-ins for your application's technology. <p>You can also install:</p> <ul style="list-style-type: none"> • Run Results Viewer • Samples • Product Documentation
Running tests from ALM (without editing)	<ul style="list-style-type: none"> • Runtime Engine
Running tests remotely from automation	<ul style="list-style-type: none"> • Runtime Engine
Viewing UFT test or component run results	<p>Run Results Viewer (optional).</p> <p>Note: You can view UFT run results directly from your browser in a single HTML file also without the Run Results Viewer installed.</p>

Creating, editing, and running LeanFT tests	<ul style="list-style-type: none"> • Runtime Engine • LeanFT <p>You can also install (mandatory):</p> <ul style="list-style-type: none"> • Run Results Viewer • Samples
--	---

Silent Installation Commands

The following table lists commands, arguments, and options used for silent installation (in alphabetical order):

Command / Argument	Description
ADDLOCAL (UFT core installation only)	<p>(Optional) Instructs the silent installation to install specific UFT features and add-ins. For more details and a list of available features, see "Install UFT add-ins " on page 21.</p> <p>Note:</p> <ul style="list-style-type: none"> • 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	(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 TARGETDIR . Each MSI property and its definition must be contained in quotes (" ") and must not contain spaces.
ALM_Plugin (UFT Add-in for ALM installation only)	<p>(Mandatory) The name of the MSI installation file.</p> <p>Note: There is a different MSI file for each available user interface language.</p>
<UFT installation directory>	The path to the full installation UFT package
<installation_download_directory>	The path to the UFT Installation executable that you downloaded.

Modifying DCOM Permissions Manually to Enable Remote UFT Execution

This section describes how to manually change DCOM permissions and open firewall ports to enable remote execution of UFT. These changes are only required if you are running UFT on Windows 7 or Windows 8.

You need to make these changes only if:

- You plan to execute UFT tests remotely as part of a Default ALM test set.
- You did not select the Configure DCOM Settings option during the installation process.

Tip: The HP Support Knowledge Base provides utilities to assist you in making DCOM changes. For more details, see the HP Software Self-solve knowledge base (<http://h20230.www2.hp.com/selfsolve/document/KM196144>) and search for Problem ID 43245. The Knowledge Base area requires that you register as an HP Passport user and sign in.

In addition, before remotely running a test you must also make sure that the **Allow other HP products to run tests and components** option is selected in the Configurations screen of the installation.

To manually enable remote execution of UFT, you can perform the following procedures:

- "Enable Windows to authenticate the remote user:" below
- "Configure the Windows Firewall to enable port 135 for DCOM:" below
- "Modify DCOM security properties:" on the next page
- "Configure security settings for the Unified Functional Testing Remote Agent DCOM applications:" on page 48
- "Enable group-wide remote DCOM execution of UFT scripts:" on page 49
- "Disable group-wide remote DCOM execution of UFT scripts:" on page 51
- "Enable COM+ on a Windows 2008 or Windows 2012 server:" on page 53

Enable Windows to authenticate the remote user:

For users logged into both computers, add these users to the Local Administrators group on the UFT computer. This enables Windows to authenticate the remote user executing the tests against the DCOM objects.

Configure the Windows Firewall to enable port 135 for DCOM:

1. On the UFT computer, select **Control Panel > System and Security > Windows Firewall**. The Windows Firewall options open.
2. Select the **Allow a program or feature through Windows Firewall** option on the left sidebar.

3. Click **Allow another program**. The Add a Program dialog box opens.
4. Select or browse to the Remote Agent (<Unified Functional Testing installation>\bin\UFTRemoteAgent.exe) and click **OK**.

Note: If you do not configure the Remote Agent as an exception as described above, a Windows Security Alert message will display while running a test remotely. Click **Unblock** to solve this problem. The next time you remotely execute an automated test, the warning does not display.

5. Click **OK** to close the Windows Firewall dialog box.

Note: For more details, a list of port assignments for commonly-used services can be found at: <http://technet.microsoft.com/en-us/library/cc959833.aspx>.

Modify DCOM security properties:

1. Select **Start > Run**, type dcomcnfg, and press **Enter**. The Component Services window opens.
2. Navigate to **Console Root > Component Services > Computers > My Computer**.

Note: If a Windows Security Alert message opens, click **Ask me later** or **Unblock**.

3. Right-click **My Computer** and select **Properties**.
4. Select the **Default Properties** tab.
5. Make sure the **Default Impersonation Level** is **Identify** and click **Apply**.
6. Select the **COM Security** tab.
7. In the Access Permissions area, click **Edit Limits**. The Access Permission dialog box opens.
8. Click **Add**. The Select Users or Groups dialog box opens.
9. Click **Advanced**.
10. Click **Locations**. In the displayed dialog box, select your computer name and click **OK**.
11. Click **Find Now**.
12. Select the following users and groups from the local computer and click **OK**:
 - Administrator
 - Administrators
 - Authenticated Users
 - Anonymous Logon
 - Everyone
 - Interactive

- Network
 - System
13. Add the following users from the domain and click **OK**:
 - <domain user logged into the UFT computer>
 - <domain user logged into the ALM computer that is performing the remote execution>
 14. In the Access Permission dialog box, assign **Local Access** and **Remote Access** permissions to the groups and users in the list and click **OK**.
 15. In the Launch and Activation Permissions area, click **Edit Limits**. The Launch Permission dialog box opens.
 16. Repeat steps 8 to 13.
 17. In the Access Permission dialog box, assign **Local Launch**, **Remote Launch**, **Local Activation**, and **Remote Activation** permissions to the groups and users in the list and click **OK**.

Configure security settings for the Unified Functional Testing Remote Agent DCOM applications:

1. In the Component Services window, navigate to **Console Root > Component Services > Computers > My Computer > DCOM Config**.
2. Right-click the **AQTRmtAgent** item and select **Properties**. The AQTRmtAgent Properties dialog box opens.
3. In the **Identity** tab, select **The interactive user**. This enables the DCOM application to authenticate the process against the logged-in Windows user and run the process in that security context.
4. Select the **Security** tab.
5. In the Launch and Activation Permissions area, select **Customize** and click **Edit**. The Launch Permission dialog box opens.
6. Click **Add**. The Select Users or Groups dialog box opens.
7. Click **Advanced**.
8. Click **Locations**. In the displayed dialog box, select your computer name and click **OK**.
9. Click **Find Now**.
10. Select the following users and groups from the local computer and click **OK**:
 - Administrator
 - Administrators
 - Authenticated Users
 - Anonymous Logon

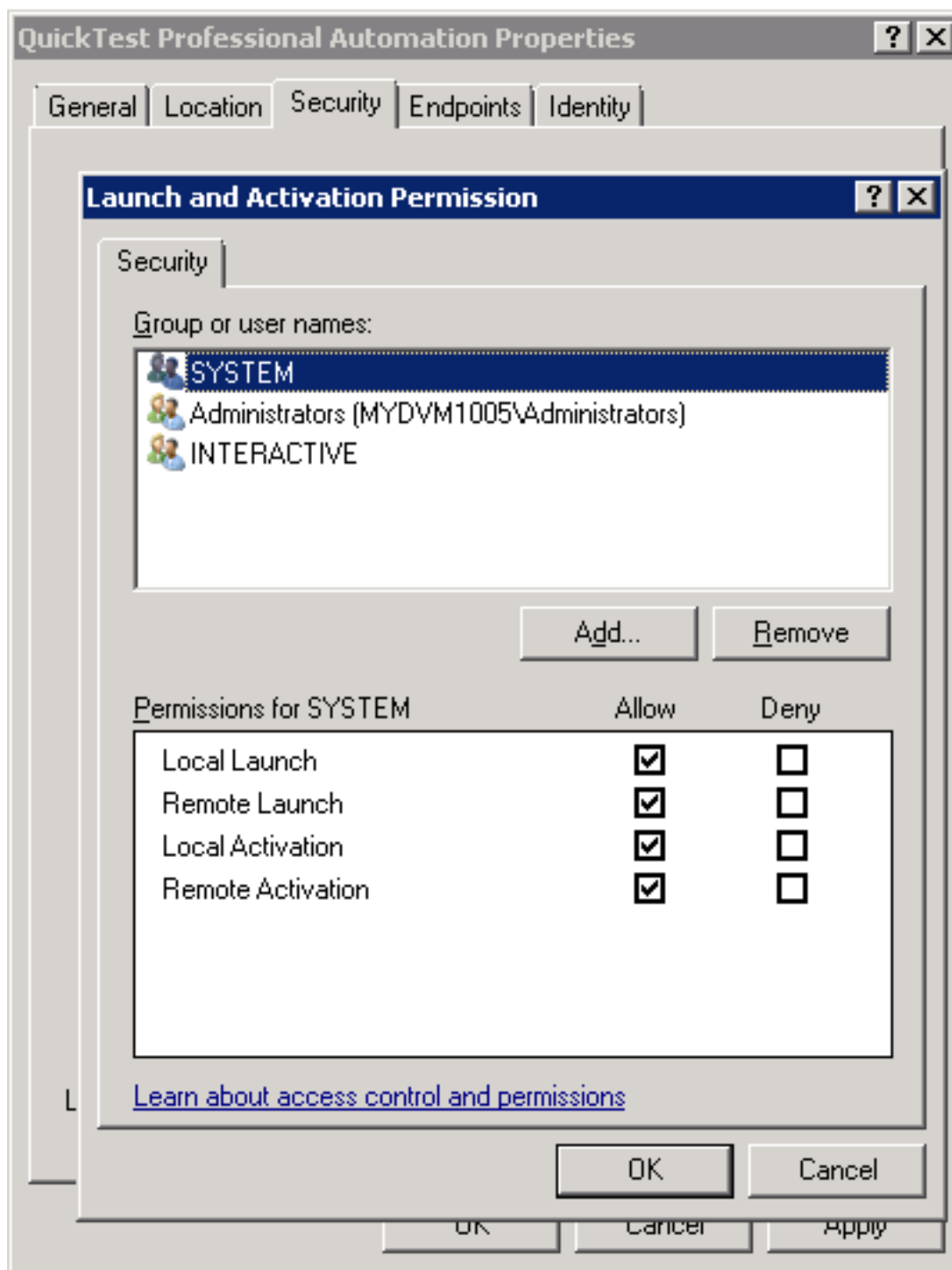
- Everyone
 - Interactive
 - Network
 - System
11. Add the following users from the domain and click **OK**:
 - <domain user logged into the UFT computer>
 - <domain user logged into the ALM computer that is performing the remote execution>
 12. In the Launch Permission dialog box, for all the groups and users in the list, select **Allow** for all permissions and click **OK**.
 13. In the Access Permissions area, select **Customize** and click **Edit**. The Access Permission dialog box opens.
 14. Repeat steps 6 to 12.
 15. Click **Apply** to save the changes and click **OK** to close the dialog box.
 16. Close the Component Services window.

Enable group-wide remote DCOM execution of UFT scripts:

If you do not select the **Configure DCOM settings for Automation Scripts** option during the UFT installation, and you want to run automation tests remotely, you must configure the DCOM options yourself. You can enable specific groups to have access permissions to the UFT computer:

1. In the Component Services window, navigate to **Console Root > Component Services > Computers > My Computer > DCOM Config**.
2. Right-click the **QuickTestProfessional Automation** item and select **Properties**. The QuickTestProfessional Automation Properties dialog box opens.
3. Select the **Security** tab.
4. In the Launch and Activation Permissions section, select **Customize** and Click **Edit**. The Launch and Activation dialog box opens.
5. Select a group/user name from the list of groups/user names following for it:

6. In the Permissions list below, for **Remote Activation**, select the **Allow** box.



Note: If you are adding access for a group of users, ensure that all members of the group also have the **Allow** option permissions enabled.

7. Repeat steps 5 and 6 for each group/user name in the list.

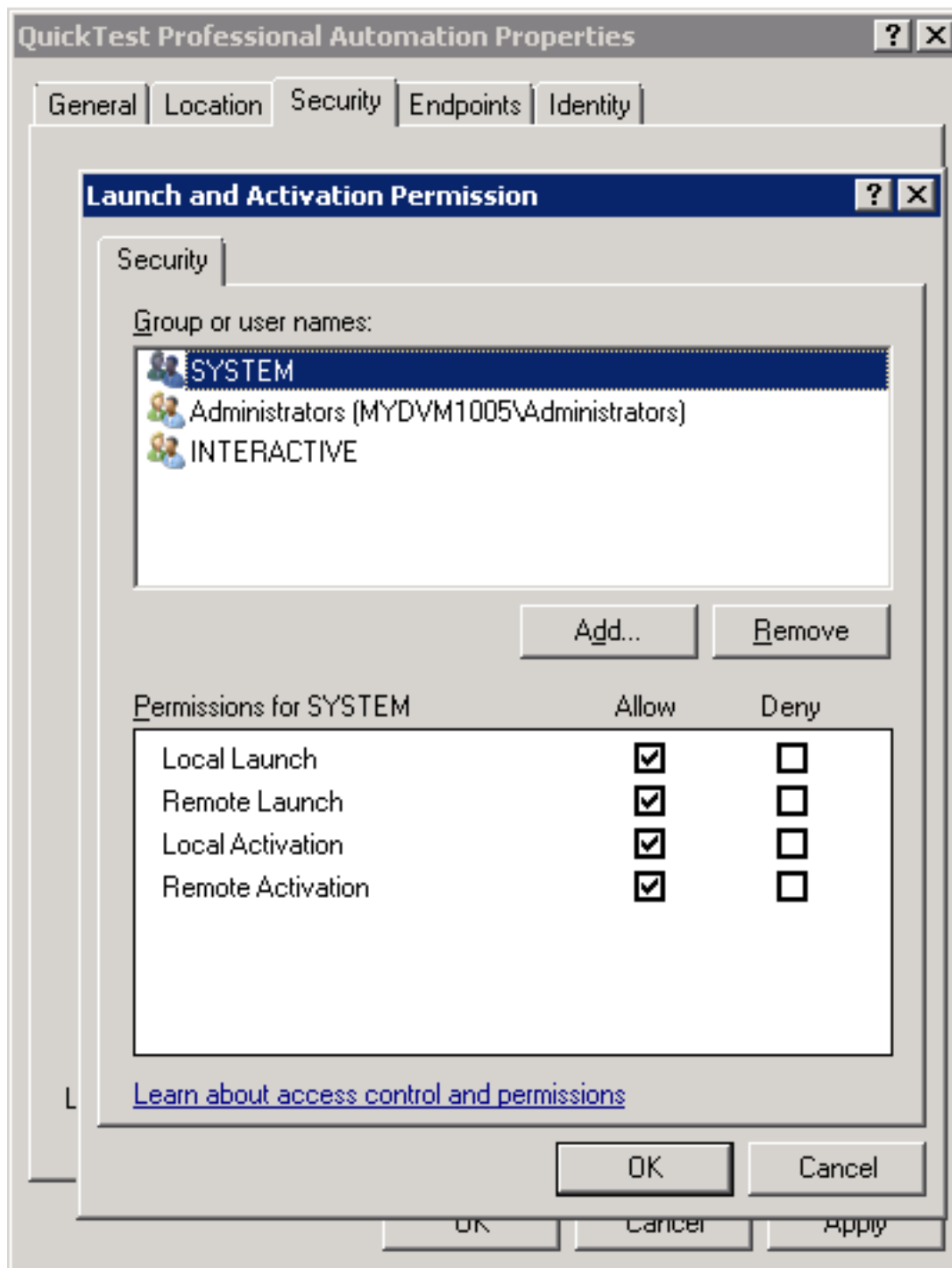
8. In the Identity tab, select the **The launching user** option and click **OK**.

Disable group-wide remote DCOM execution of UFT scripts:

By default, when you select the **Configure DCOM settings for Automation Scripts** option in the UFT installation, access permission is given to all groups. You may want to disable the ability of certain groups to access the computer:

1. In the Component Services window, navigate to **Console Root > Component Services > Computers > My Computer > DCOM Config**.
2. Right-click the **QuickTestProfessional Automation** item and select **Properties**. The QuickTestProfessional Automation Properties dialog box opens.
3. Select the **Security** tab.
4. In the Launch and Activation Permissions section, select **Customize** and Click **Edit**. The Launch and Activation dialog box opens.
5. Select a group/user name from the list of groups/user names following it.

6. In the Permissions list below, for **Remote Activation**, clear the **Allow** box.



7. Repeat steps 5 and 6 for each group/user name in the list.

Enable COM+ on a Windows 2008 or Windows 2012 server:

1. Open the Server Manager.
2. Install the **COM+ Network Access** feature in the **Application Server** role.

You can now remotely execute a UFT test from ALM.

Modifying UAC Settings to Connect with ALM

If you are running UFT on Windows 7, Server 2008, or Server 2008 R2, you must disable User Account Control (UAC) and restart your computer before you connect with ALM for the first time. After you have connected with ALM for the first time, you can enable User Account Control (UAC) again if required.

This change is required only if you are running UFT on one of the operating systems listed above. If you do not intend to execute UFT tests remotely from ALM, you do not need to make these changes.

Note: The security changes described in this section should be performed by your System Administrator. Please contact Microsoft Support if you have questions regarding changes in User Account Control (UAC) on any of these operating systems.

To temporarily turn off the UAC option, do the following:

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:

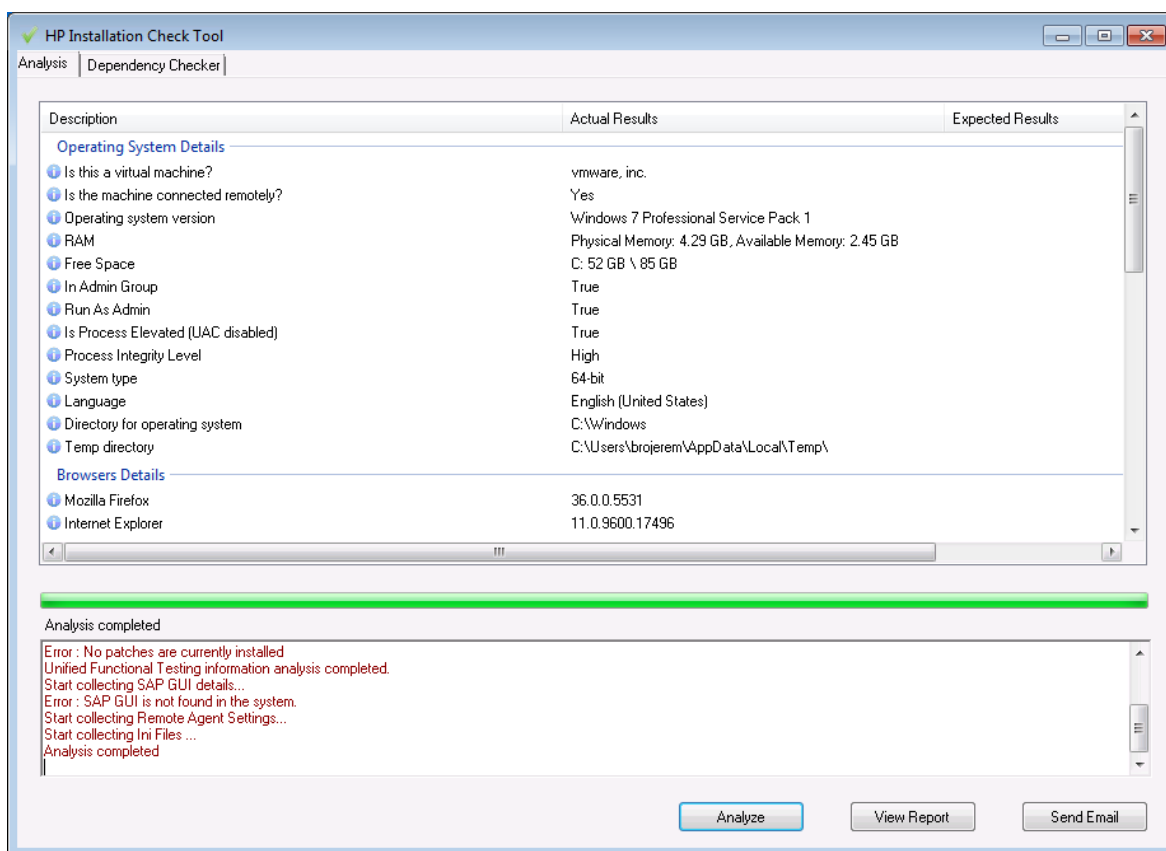
1. Log in as an administrator.
2. From the Control Panel, select **User Accounts and Family Safety > User Accounts > Change User Account Control Settings**.
3. In the User Account Control Settings window, move the slider to **Never notify**.
4. In the Control Panel, select **System and Security > Administrative 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.

11. After working with the desired tool, return to the User Account Control Settings window, and restore the slider to its previous position to turn the UAC option on again.
12. Restart the computer for your changes to take effect.

Verifying the UFT Installation

After installing UFT and running the Additional Installation Requirements utility, you can check the status of the installation using the HP Installation Check Tool.

Open the Installation Self-Check tool from the **Start** menu (**Start > All Programs > HP Software > HP Unified Functional Testing > Tools > HP Installation Validation Tool**) or **C:\Program Files (x86)\HP\Unified Functional Testing** (for Windows 8 only:).



In some cases, the Installation Check tool validates the state of settings against their expected values. If UFT is returning the expected value, then the setting is marked in green, and if the value is not expected, the setting is marked in red.

You can also view this report as a .htm file by clicking **View Report** or you can send it via e-mail to another user by clicking **Send Email**.

Send Us Feedback



Can we make this Installation Guide better?

Tell us how: docteam@hpe.com

