QTP

quicktest professional

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About the Tutorial

HP **Q**uick**T**est **P**rofessional **(QTP)**, an automated functional testing tool that helps testers to perform automated regression testing in order to identify any gaps, errors/defects in contrary to the actual/desired results of the application under test.

This tutorial will give you an in-depth understanding on HP QuickTest Professional, its way of usage, record and play back of tests, object repository, actions, checkpoints, sync points, debugging, test results etc. and other related terminologies.

Audience

This tutorial is designed for Software Testing Professionals with a need to understand the QTP in detail along with its simple overview, and practical examples. This tutorial will give you enough ingredients to start with QTP from where you can take yourself at higher level of expertise.

Prerequisites

Before proceeding with this tutorial, you should have a basic understanding of software development life cycle (SDLC). A basic understanding of VBScript is also required. You can also go through the basics of VBScript here.

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1. QTP – Introduction

QTP stands for **Q**uick**T**est **P**rofessional, a product of **H**ewlett **P**ackard **(HP)**. This tool helps testers to perform an automated functional testing seamlessly, without monitoring, once script development is complete.

HP QTP uses **Visual Basic Scripting (VBScript)** for automating the applications. The Scripting Engine need not be installed exclusively, as it is available as a part of the Windows OS. The Current version of VBScript is 5.8, which is available as a part of Win 7. VBScript is NOT an object-oriented language but an object-based language.

Testing Tools

Tools from a software testing context, can be defined as a product that supports one or more test activities right from planning, requirements, creating a build, test execution, defect logging and test analysis.

Classification of Tools

Tools can be classified based on several parameters. It includes-

- The purpose of the tool
- The activities that are supported within the tool
- The type/level of testing it supports.
- The kind of licensing (open source, freeware, commercial)
- The technology used

Types of Tools

S. No.	Tool Type	Used for	Used by
1.	Test Management Tool	Test Managing, scheduling, defect logging, tracking and analysis.	Testers
2.	Configuration management tool	For Implementation, execution, tracking changes	All Team members
3.	Static Analysis Tools	Static Testing	Developers
4.	Test data Preperation Tools	Analysis and Design, Test data generation	Testers
5.	Test Execution Tools	Implementation, Execution	Testers

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6.	Test Comparators	Comparing expected and actual results	All Team members
7.	Coverage measurement tools	Provides structural coverage	Developers
8.	Performance Testing tools	Monitoring the performance, response time	Testers
9.	Project planning and Tracking Tools	For Planning	Project Managers
10.	Incident Management Tools	For managing the tests	Testers

Where QTP Fits in?

QTP is a Functional testing tool, which is best suited for regression testing of the applications. QTP is a licensed/commercial tool owned by HP, which is one of the most popular tools available in the market. It compares the actual and the expected result and reports the results in the execution summary.

QTP – History and Evolution

HP Quick Test Professional was originally owned by Mercury Interactive and it was acquired by HP. Its original name was Astra Quick Test and later named as Quick Test Professional but the latest version is known as Unified Functional Tester (UFT).

Version History

Now let us take a look at the version history of QTP.

Versions	Timelines
Astra Quick Test v1.0 to v5.5 - Mercury Interactive	May 1998 to Aug 2001
QuickTest Professional v6.5 to v9.0 - Mercury Interactive	Sep 2003 to Apr 2006
Hp-QuickTest Professional v9.1 to v11.0 - Acquired and Released by HP	Feb 2007 to Sep 2010
Hp-Unified Functional Testing v11.5 to v11.53	2012 to Nov 2013

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Advantages

- Developing automated tests using VBScript does not require a highly skilled coder and is relatively easy when compared to other object oriented programming languages.
- Easy to use, ease of navigation, results validation, and Report generation.
- Readily Integrated with Test Management Tool (Hp-Quality Center) which enables easy scheduling and monitoring.
- Can also be used for Mobile Application Testing.
- Since it is an HP product, full support is provided by HP and by its forums for addressing technical issues.

Disadvantages

- Unlike Selenium, QTP works in Windows operating system only.
- Not all versions of Browsers are supported and the testers need to wait for the patch to be released for each one of the major versions.
- Having said, that it is a commercial tool, the licensing cost is very high.
- Even though scripting time is less, the execution time is relatively higher as it puts load on the CPU & RAM.

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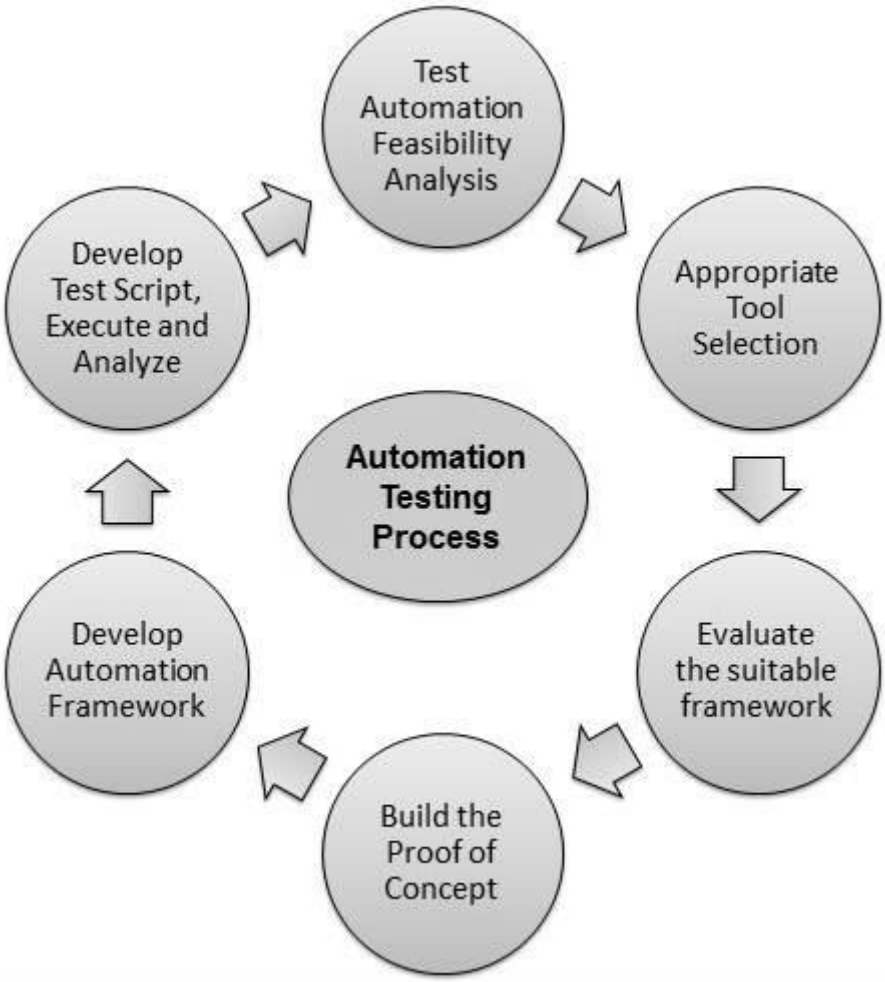
2. QTP – Automated Testing Process

For any automated tool implementation, the following are the phases/stages of it. Each one of the stages corresponds to a particular activity and each phase has a definite outcome.



- **Test Automation Feasibility Analysis** - First step is to check if the application can be automated or not. Not all applications can be automated due to its limitations.

- **Appropriate Tool Selection** - The next most important step is the selection of tools. It depends on the technology in which the application is built, its features and usage.

- **Evaluate the suitable framework** - Upon selecting the tool, the next activity is to select a suitable framework. There are various kinds of frameworks and each framework has its own significance. We will deal with frameworks in detail later in this tutorial.

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- **Build Proof of Concept** - Proof of Concept (POC) is developed with an end-to-end scenario to evaluate if the tool can support the automation of the application. It is performed with an end-to-end scenario, which ensures that the major functionalities can be automated.

- **Develop Automation Framework** - After building the POC, framework development is carried out, which is a crucial step for the success of any test automation project. Framework should be built after diligent analysis of the technology used by the application and also its key features.

- **Develop Test Script, Execute, and Analyze** - Once Script development is completed, the scripts are executed, results are analyzed and defects are logged, if any. The Test Scripts are usually version controlled.

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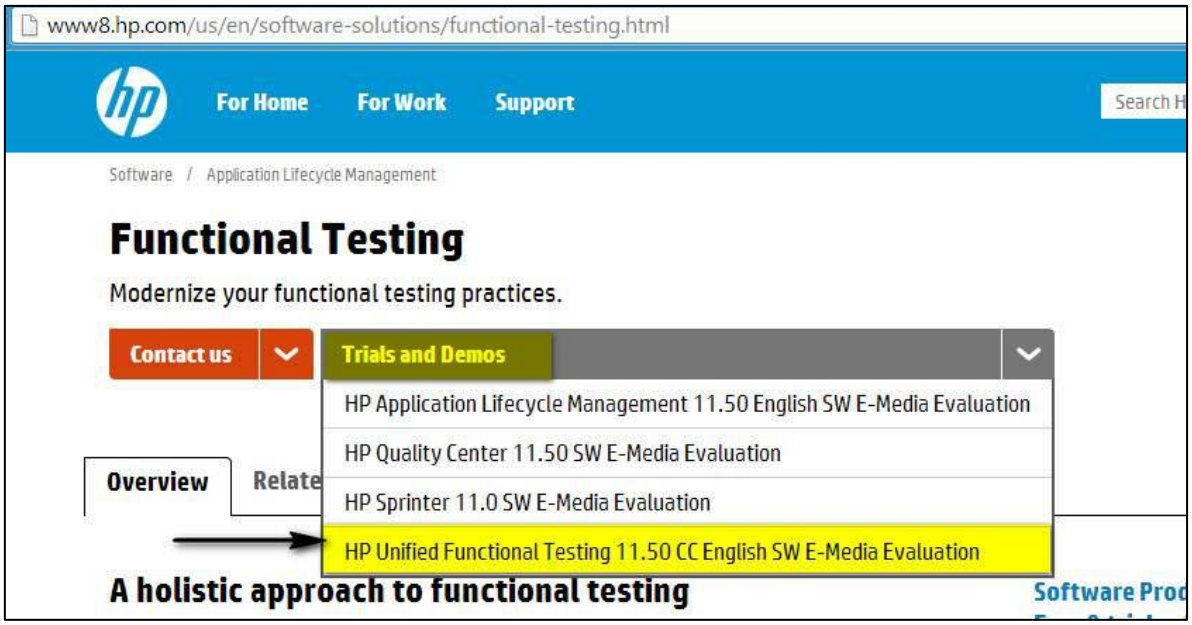
3. QTP – Environment Setup

QTP is a commercial tool and the trial version can be downloaded from HP site directly. Only the current version, which is Unified functional testing (11.5x) is available for download. Following is the URL from where the trial version can be downloaded.

The Download URL : http://www8.hp.com/us/en/software-solutions/functional-testing.html

Installation Procedure

Step 1 – Click the "Trials and Demos" link and select "HP Unified Functional Testing 11.50 CC English SW E-Media Evaluation" as shown below:



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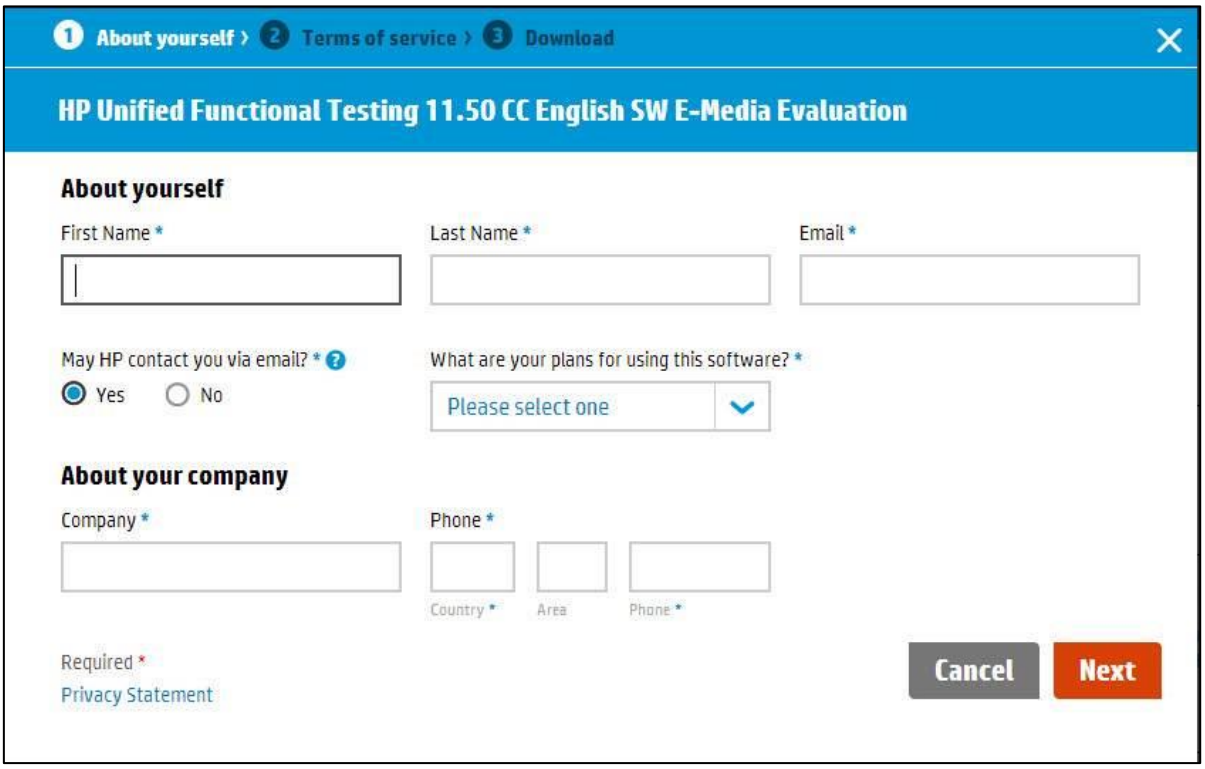
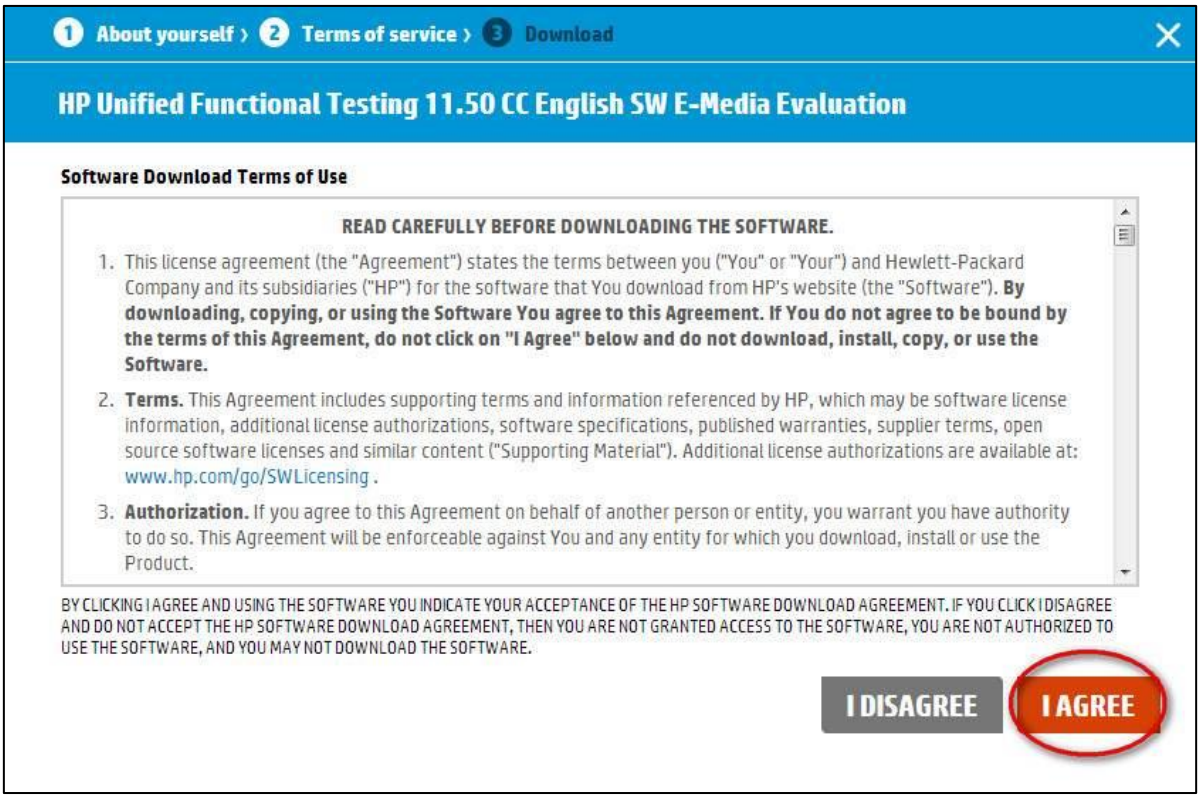
Step 2 - After Selecting "HP Unified Functional Testing 11.50", the download wizard opens. Fill in the Personal details and click Next.



Step 3 - Read the 'Terms of Use' and click "NEXT".



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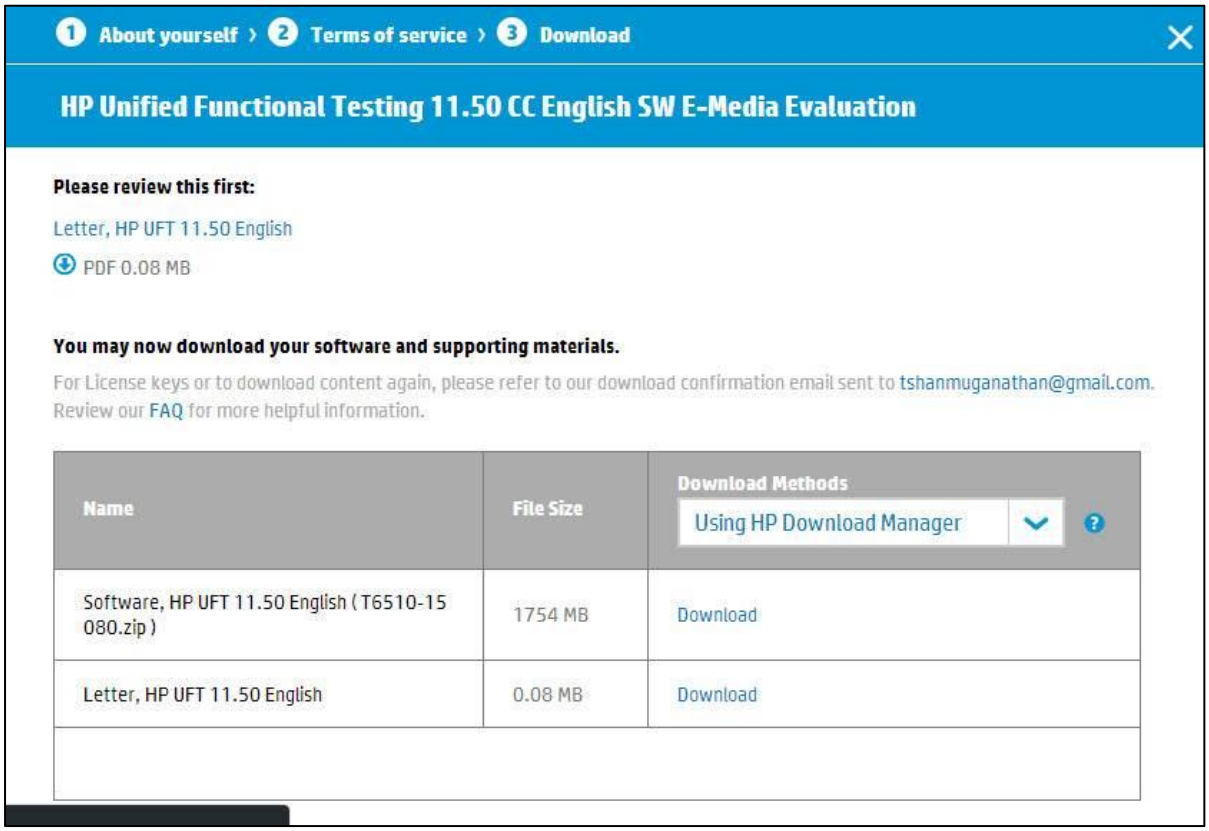
Step 4 – The Download window opens. Now, click the "Download" button.



Step 5 - The downloaded file will be of the format .RAR. Now you need to unzip the archive and the folder contents would be as shown below and execute the Setup.exe.

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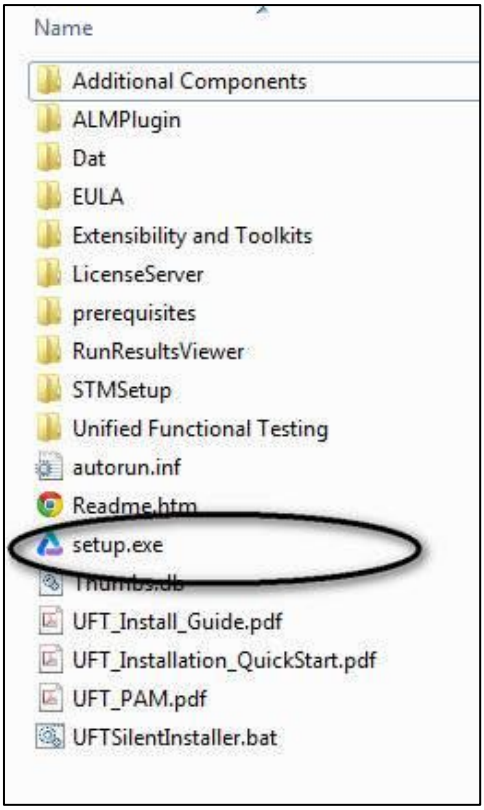

Step 6 - Upon Executing the Setup File, in order to install, select "Unified Functional Testing Set up" from the list as shown below:

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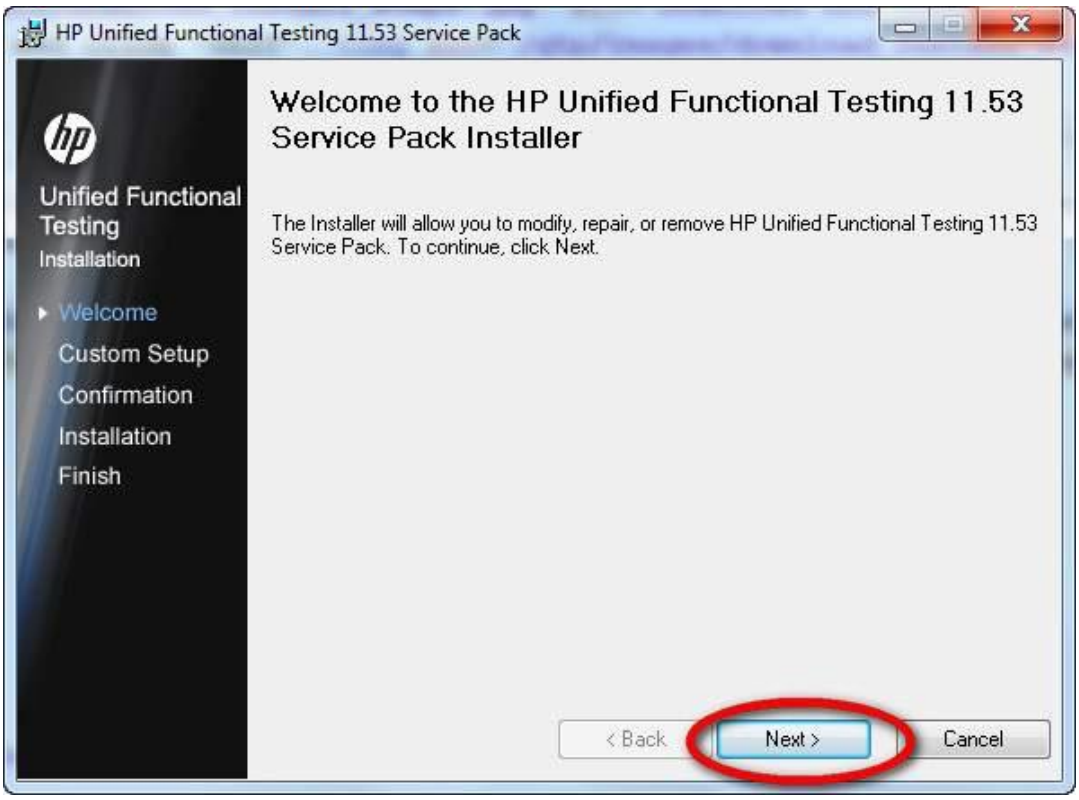
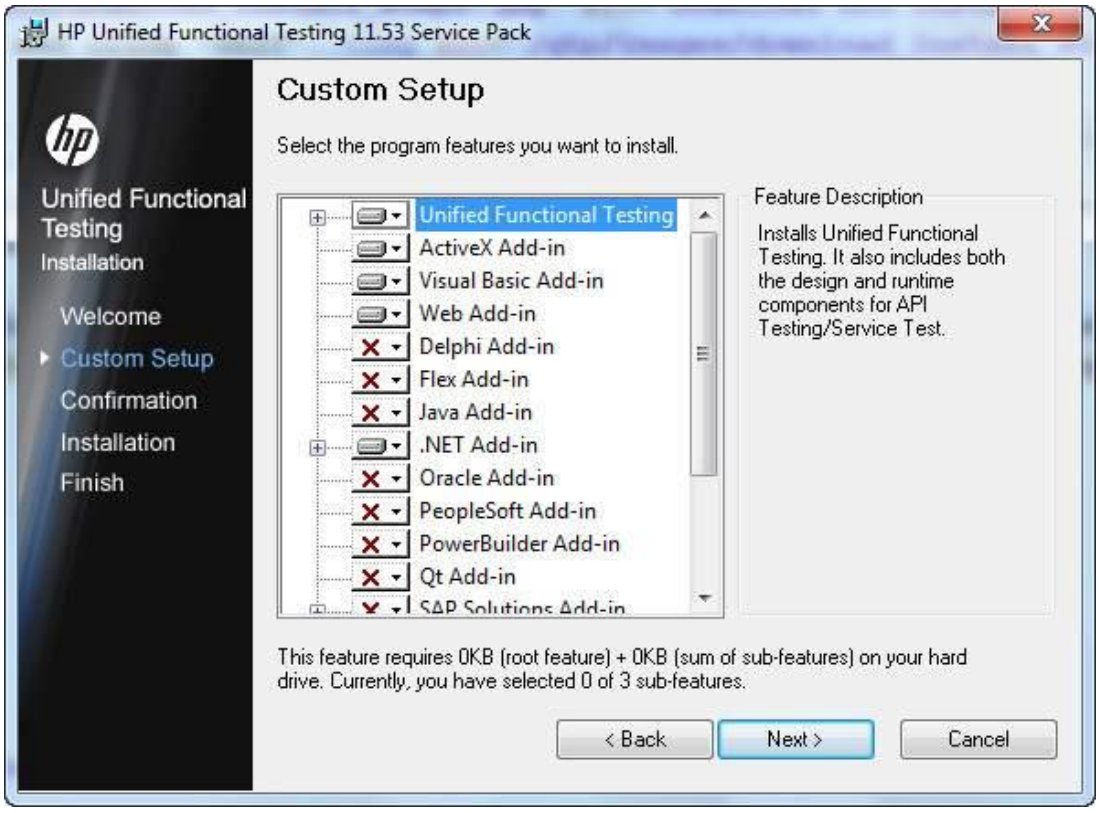
Step 7 - Then click Next to continue.



Step 8 - In the Custom Set up Window, select the plugins that are required for your automation i.e. you should select the plugins based on the technology of your application under test. For Example, if your application is based on .NET then you should ensure that you select .NET.



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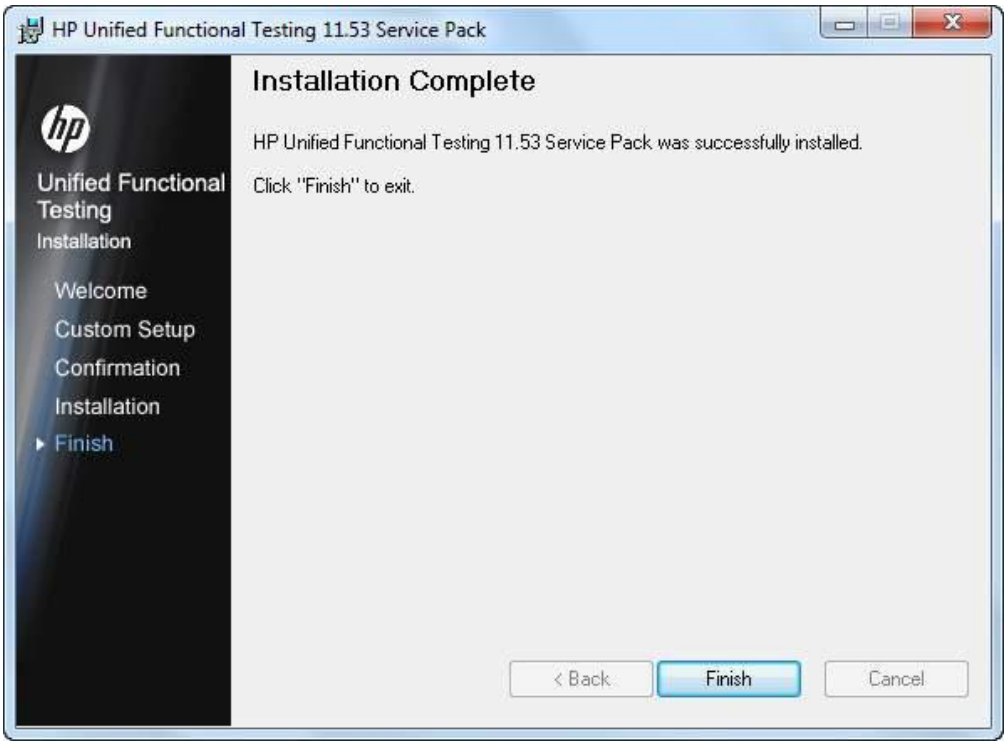
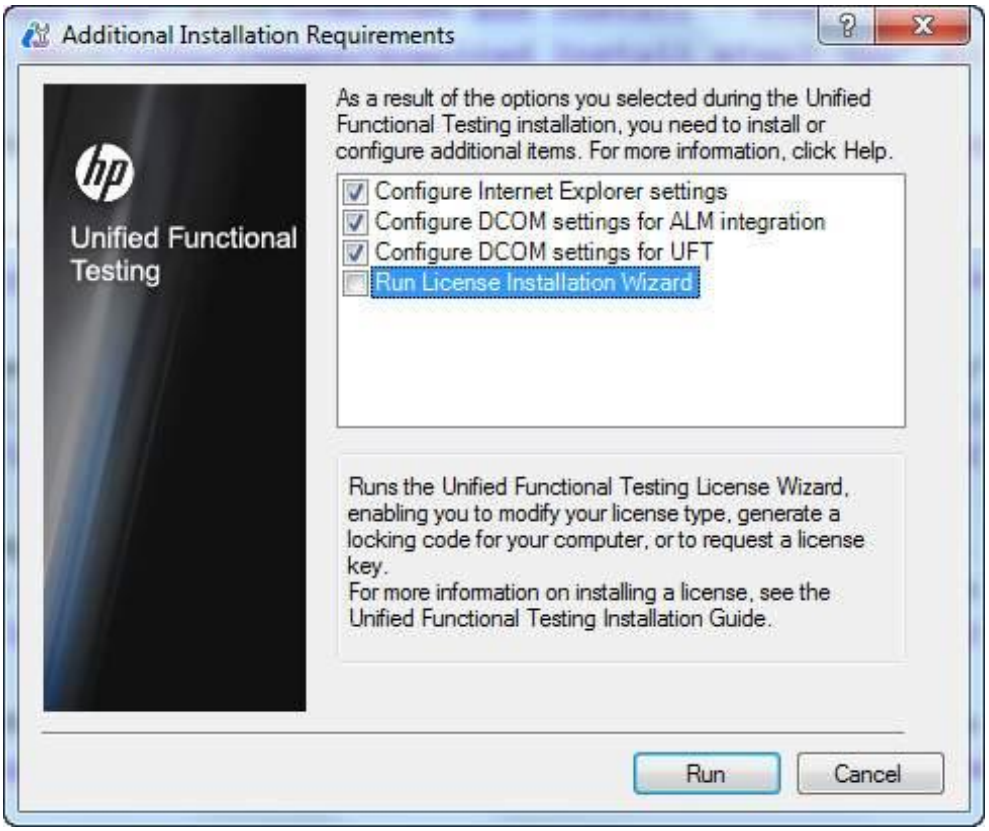
Step 9 - After selecting the required plugins for installation, click Next. After the completion of installation, you will end up with a Finish button Window.



Step 10 - Once you complete your installation, the "Additional Installation Requirements" Dialog box opens. Select everything in the list other than "Run License Installation Wizard" and click "RUN". We Need NOT select "Run License Installation Wizard" because we are installing the trial version, which, by default, gives a license for 30 days.



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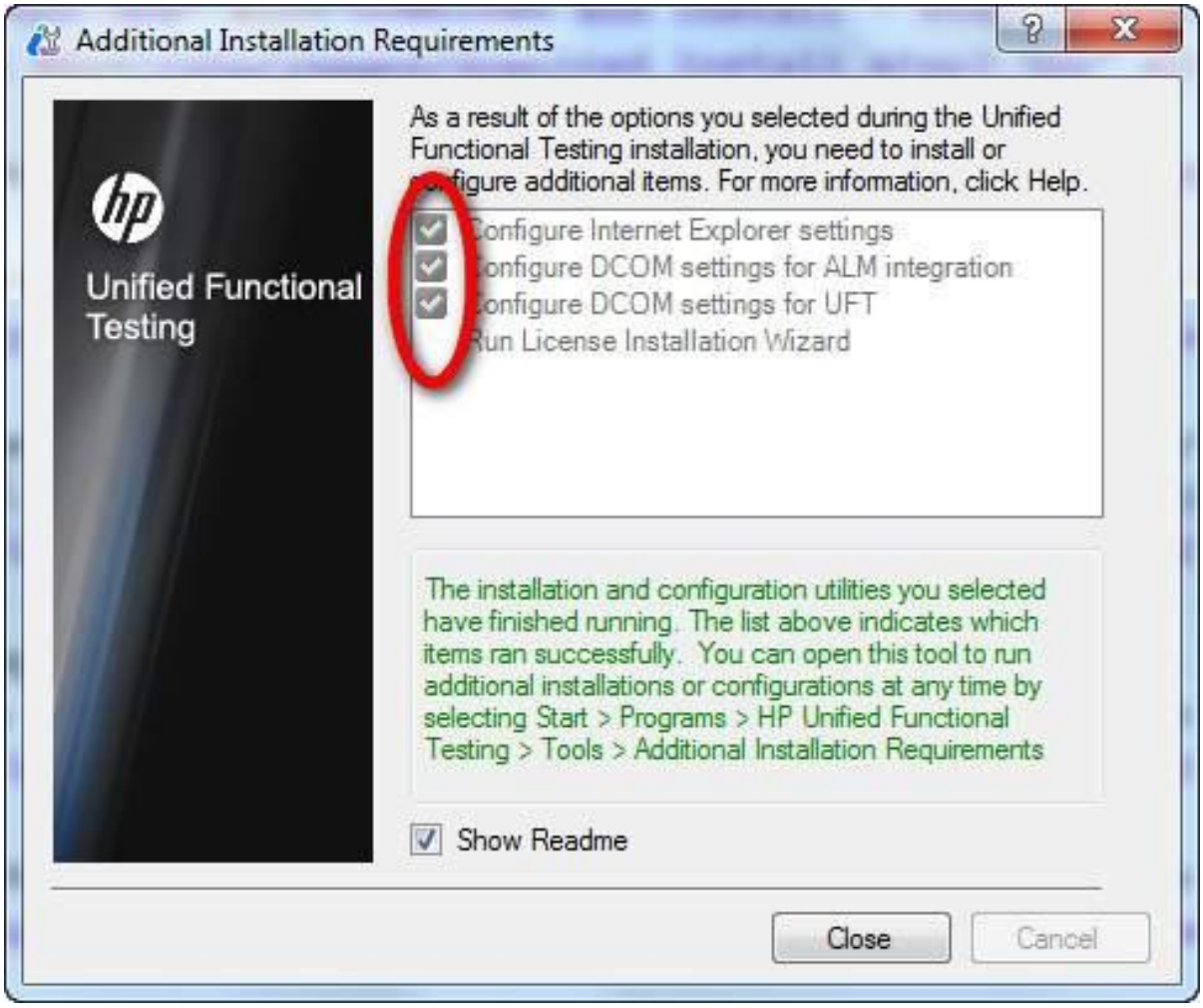
Step 11 – After the completion of Additional Installation Requirements, a tick mark is shown, which in turn states that the components are installed successfully. Now, click Close.



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