



EXPERIMENT - 8

Software Testing and Quality Assurance

Abstract

Automate the Test cases using Test Automation tool QA Complete.

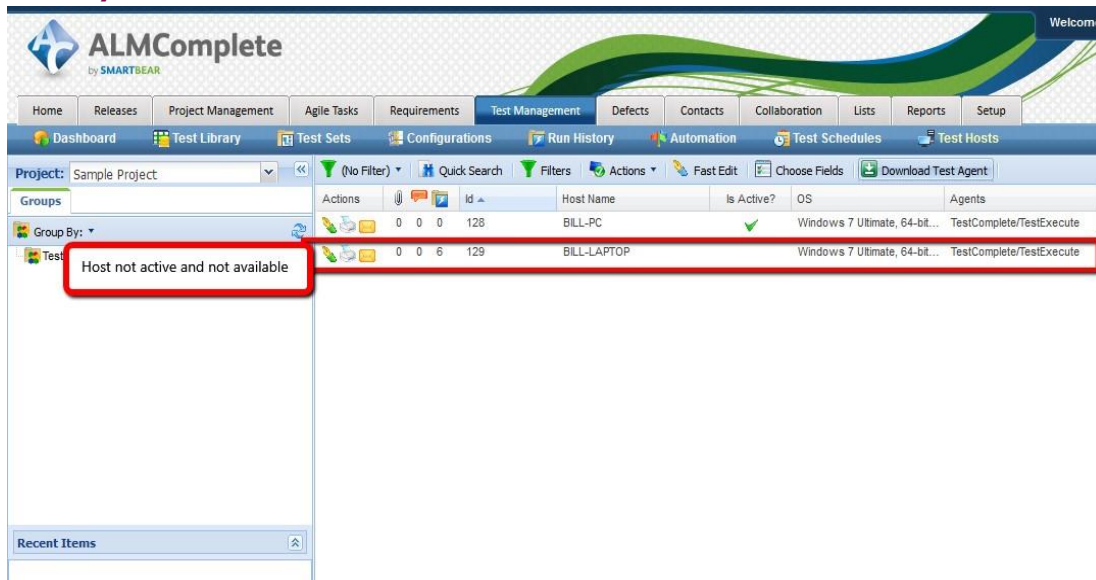
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EXPERIMENT – 8

Aim:

Automate the Test cases using Test Automation tool QA Complete.

Theory:



Step1:

Check in QAComplete that the TestComplete host is available by viewing the 'Test Hosts' records. If the host isn't listed at all then enable the 'Show Inactive Test Hosts' option. If the host isn't active then start the service on the TestComplete machine.

Step 2:

On the TestComplete machine Press Ctrl+Shift+Esc to display task manager and then click on the 'Services' tab followed by the 'Services' button. In the Services window click on the 'TestManager Agent' service and start the service.

Step 3:

Creating An Automate Test

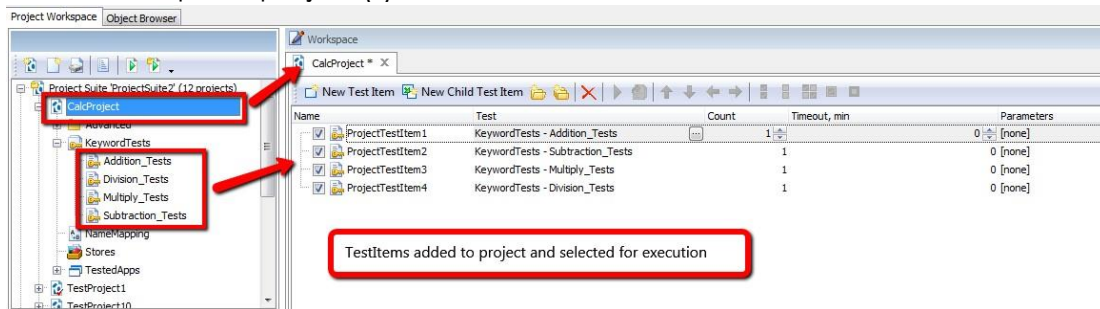
This is a 4 stage process.

1. Package up the TestComplete project suite
2. Define the Automated Test in the QAComplete Test Library
3. Execution of Automated Tests – standalone

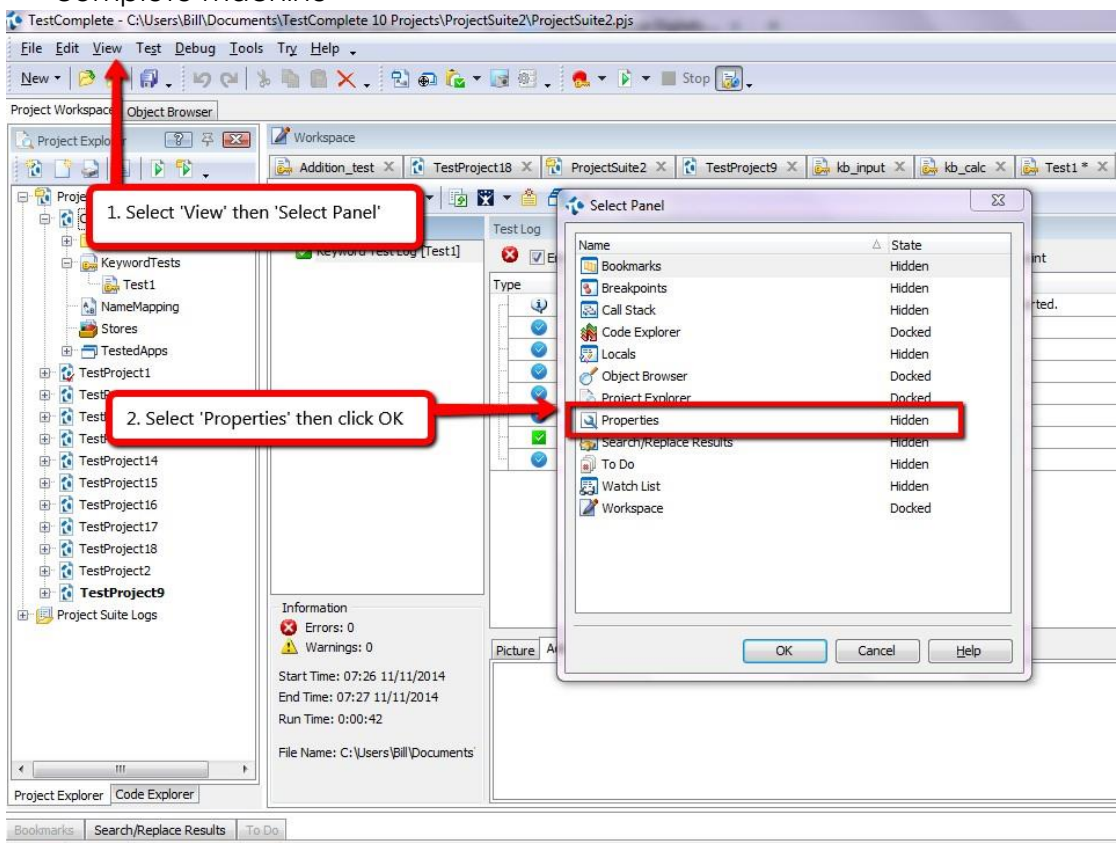
4. Execution of Automated Tests – as part of a Test Set

1: Package up the TestComplete
Project Suite To zip the project suite up
follow these steps:

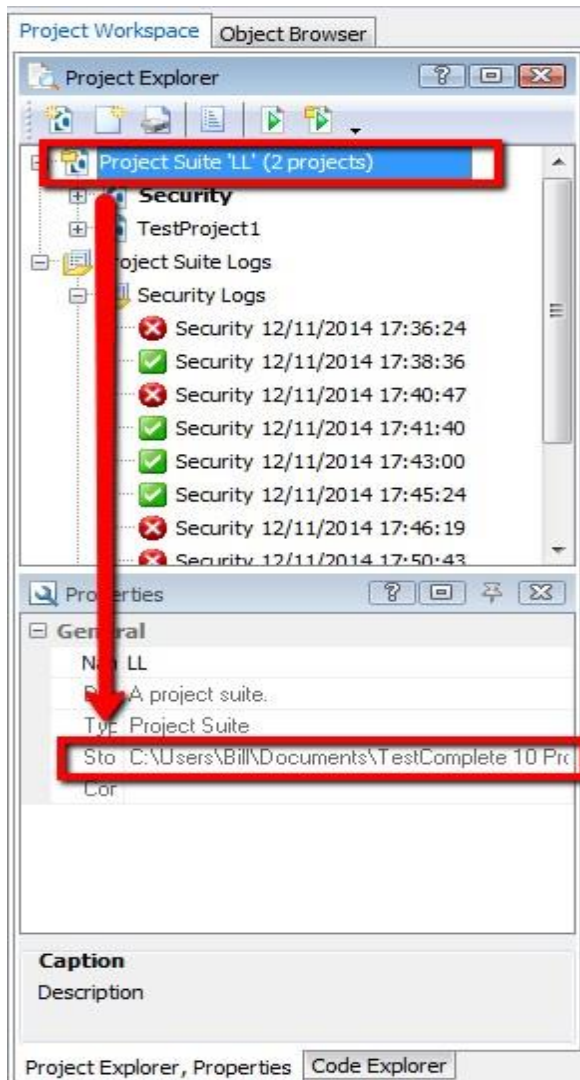
1) Make sure to define the 'Test Items' and enabled them within
TestComplete project(s)



2) Find the location of testcomplete project suite on the file system of test
complete machine



From here we can see where test complete is storing the project on file system.



- 3) On the file system (or in testcomplete) remove the log files.
- 4) At the project suite level on the file system find the folder containing project suite and zip up this project suite.

Define the Automated Test in the QAComplete Test Library: create the test case in the 'Test Library' area of QAComplete and then attach the zipped up TestComplete project suite to this test case.

- 5) First we need to create a new test. Navigate to the Test Management Library area in QAComplete and select 'Add New'. Then we need to define the usual meta data required to create the test case (e.g. Title, Description, etc). A couple of fields that are important though:

- **Execution Type:** set this to Automated

- **Default Host Name:** set this to the host that will be used by default to execute the automated test

Assuming selected Execution Type = Automated then save the test case to the 'Automations' tab for the test case. Click 'Add New' to add a new TestComplete Project Suite.

When adding a new TestComplete project suite to QAComplete following 6 fields will be presented :

Title: either leave this blank and QAComplete will give this automated test the same name as the TestComplete project or define your own name

Time Out: this is how long it should take to run the test. If it goes past this time out value then the test runner will stop running the test and move on to the next one.

Entry Point: use this to identify a specific test or project to run. If this field is blank the whole project suite will be run. Specify a specific test case to execute an individual test case or a specific project to run only one project.

Agent: at the moment QAComplete only supports one type of test agent which is TestComplete/TestExecute. Other types of test agent are in the pipeline.

Web Site Address or UNC Path: place the zipped up project suite file on a shared drive. In which case, define the path to that location and the file name here. Alternatively...

File Attachments: attached the zipped up project suite file to the QAComplete test case and upload the file to QAComplete

A completed record with a project suite zip file uploaded looks like this (the entry point in this example is at the Test Case level

A completed record with a UNC path looks like this (The Entry point in this example is at the project level)...

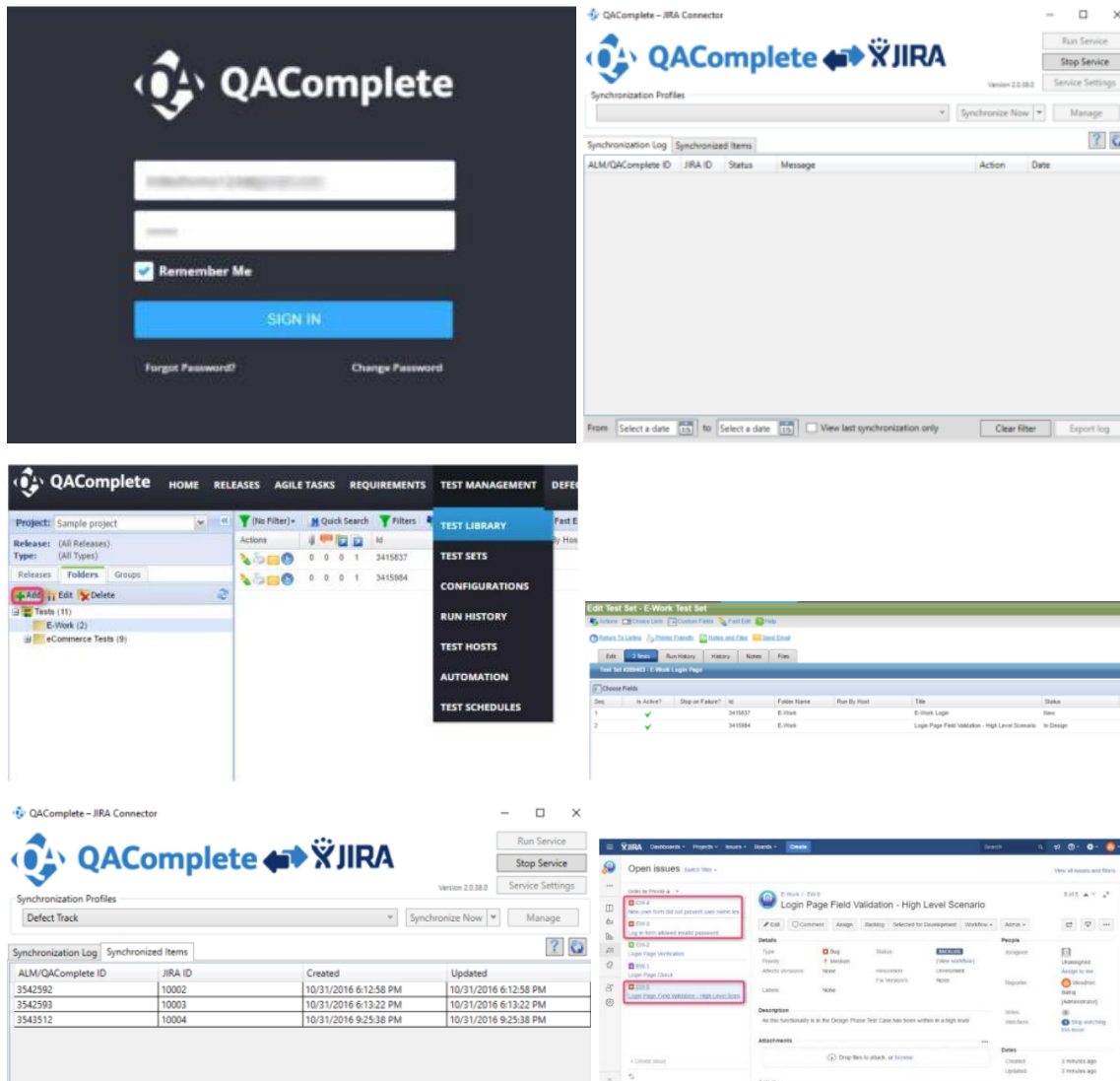
Add Automation

[Actions](#) [Help](#)

[Return To Listing](#)

Title:	CalcProject
Time Out(sec.):	30
Entry Point:	CalcProject
Created By:	11/14/2014 8:09:31 AM by Echlin, Bill
* Agent:	TestComplete/TestExecute
Last Updated:	
Web Site Address or UNC Path:	file:///B:\\BILL-LAPTOP\\Users\\Bill\\Documents\\TestComplete 10 Projects\\ProjectSuite1.zip
File Attachments:	<input type="text"/> <input type="button" value="Reset"/> <input data-bbox="1377 1654 1448 1675" type="button" value="Browse..."/>

At this point in time, only add one automation project suite to a single QAComplete automated test case



Result:

The QA Complete tool was successfully studied and explained.

Viva Questions

Q1. What is Automation testing?

Automated testing is a process that validates if software is functioning appropriately and meeting requirements before it is released into production. This software testing method uses scripted sequences that are executed by testing tools.

Q2 When will you automate a test?

Automatic testing is required when you want to run the same test cases across multiple machines at the same time. Automation testing is also a good way to avoid human error in your testing. With automation, you can be sure that all tests are exactly the same, with humans you are allowing your simple error."

Q3. What are the points that are covered while planning phase of automation?

During the planning phase of automation, the points to be considered are as follows:

- Selection of the "right" Automation tool
- Selection of Automation Framework if required
- List of in scope and out of scope items for automation
- Test Environment Setup
- Preparing the Gantt Chart of Project timelines for test script development & execution.
- Identify Test Deliverables

Q4. What are the steps involved in the Automation Process?

5 Steps to get started with Automated Testing

1. Step 1: Defining the Scope of Automation. ...
2. Step 2: Selecting a Testing Tool. ...
3. Step 3: Planning, Designing, and Development. ...
4. Step 4: Executing Test Cases and Build your reports. ...
5. Step 5: Maintaining previous test cases.

Q5: When will you not automate testing?

If a test needs to be manually “eyeballed” to determine whether the results are correct. Test that cannot be 100% automated should not be automated at all — unless doing so will save a considerable amount of time. Test that adds no value. Test that doesn't focus on the risk areas of your application.

1. User experience tests for usability (tests that require a user to respond as to how easy the app is to use).
2. Tests that you will only run one time. (This is a general rule. I have automated one-time tests for data population situations in which the steps can be automated quickly and when placing in a loop can produce thousands of records, saving a manual tester considerable time and effort).
3. Test that needs to run ASAP.
4. Tests that require ad hoc/random testing based on domain knowledge/expertise.
5. Tests without predictable results. For automation validation to be successful, it needs to have predictable results in order to produce pass and fail conditions.
6. If a test needs to be manually “eyeballed” to determine whether the results are correct.
7. Test that cannot be 100% automated should not be automated at all — unless doing so will save a considerable amount of time.
8. Test that adds no value.
9. Test that doesn't focus on the risk areas of your application.