



QTP Open Source Test Automation Framework Implementation Guide

Version 1.1

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TABLE OF CONTENTS

1. PURPOSE OF THE DOCUMENT	3
2. FRAMEWORK IMPLEMENTATION IN QTP	4
2.1. Test Settings for Keyword-driven Scripting	4
2.1.1. Run Settings.....	5
2.1.2. Resources Settings.....	6
2.1.3. Environment Tab Settings.....	7
2.2. Managing Object Repository	8
2.3. Call to Framework	9
2.4. Usage of Keywords	10
2.5. Test Results for a Keyword-driven Script	11
3. REFERENCES	12

1. Purpose of the Document

This document provides an overview of the prerequisites and settings required to implement the Keyword-driven Framework in HP QuickTest Professional (QTP).

2. Framework Implementation in QTP

The Keyword-driven Framework is an application independent framework that performs all possible actions and verifications on an object. Hence, the code for the same object can be used across different applications.

2.1. Test Settings for Keyword-driven Scripting

In the keyword-driven approach the entire script is developed with keywords. The script is developed in a spreadsheet that is interpreted by the main driver script, which then uses the function library to execute the complete script.

The QTP Settings.vbs file can be used to easily perform the test settings that are needed before proceeding with the Keyword-driven Scripting. This file associates the Function libraries, recovery scenarios, Environment Variables and the Object Repository files that are needed for a script.

The QTP Settings file needs to be customized before usage. Edit the .vbs file in notepad and make the necessary changes (mentioned below) in the 'Input Data' section of the file.

1. Function Libraries - Specify the path where the Framework Files, Common Functions and the User Defined Functions are stored.
2. Recovery Scenario File - Specify the path of the file where the Recovery scenarios are placed.
3. Recovery Scenarios Name - Specify the names of the Recovery scenarios that need to be associated to the test script.
4. Environment File - Specify the path of the xml file for the Global Environment Variables.
5. Object Repository files - Specify the path of the Object Repository.

Open the test script in QTP for which the settings are needed and double click on the QTP Settings.vbs file. This file will perform the preferred settings automatically.



If there are multiple items of libraries, object repositories or global variables file, they can be specified as an array separated by ','



Set the Flag `envi_flag`, `recover_flag`, `repos_flag`, `library_flag` to "Yes" if the corresponding files need to be associated to test, Else set it to "no"

Given below is a sample "QTP Settings".

```
libraries= array ("C:\WebFramework.vbs","C:\common functions.vbs")
recovery_file= "C:\recover.qrs"
recovery_name=array("Scenario1","Scenario2")
environment_file= "C:\Environment.xml"
repository_name= array ("C:\repository1.tsr","C:\repository2.tsr")

'NOTE: Please set the Flag to "Yes" if the files are to be associated to
test, otherwise set it to "no"
envi_flag="yes"
recover_flag=" yes"
repos_flag=" yes"
library_flag=" yes"
```



There should be just one Recovery file which holds all the Recovery scenarios. Multiple Recovery files cannot be used.

There should be no unsaved tests currently open in QTP. The test script for which the test settings need to be done should be open in QTP.

2.1.1. Run Settings

In the Run tab of the Test Settings dialog,

1. The Run one iteration only radio button will be selected.
2. The Disable Smart Identification during the run session check box will be checked.
3. The Object Synchronization timeout value will be set as 20 seconds.

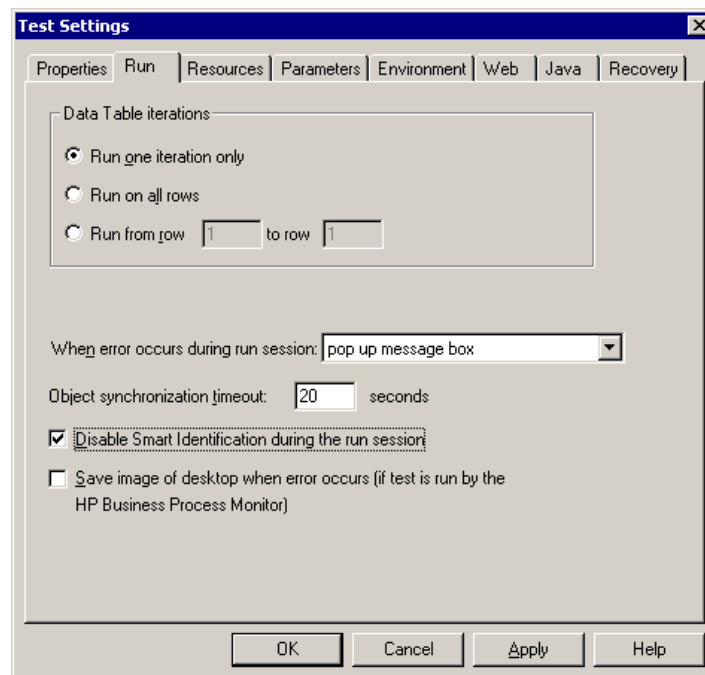


Figure 1: Run Settings

2.1.2. Resources Settings

After the run settings are completed, the QTP Settings file associates the framework with the test script. Here, the path and the names of the framework files need to be specified in the QTP Settings file. The framework will be taken from the location specified and associated with the test as shown below.

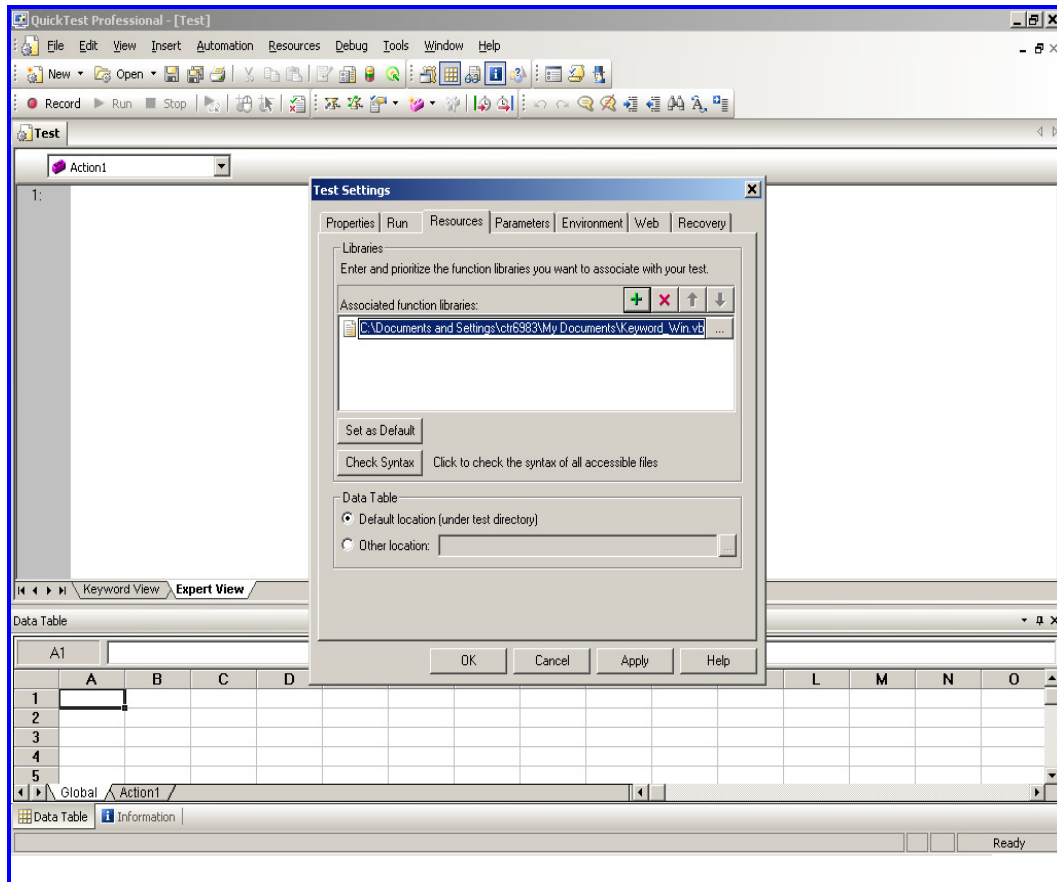


Figure 2: Associating Framework File

NOTE: The Common functions file and the User defined functions file should be associated with the test only if needed by the test script.

2.1.3. Environment Tab Settings

QTP can insert a value from the environment variable list, which is a list of variables and corresponding values that can be accessed from the test. Throughout the test run, the value of an environment variable remains the same, regardless of the number of iterations, unless the value of the variable is changed programmatically in the script.

Associating the user-defined Environment Variables file with the test is also handled by the QTP Settings file. The Environment Variables file with an .xml file type will be taken from the path specified in the QTP Settings file and associated with the test.

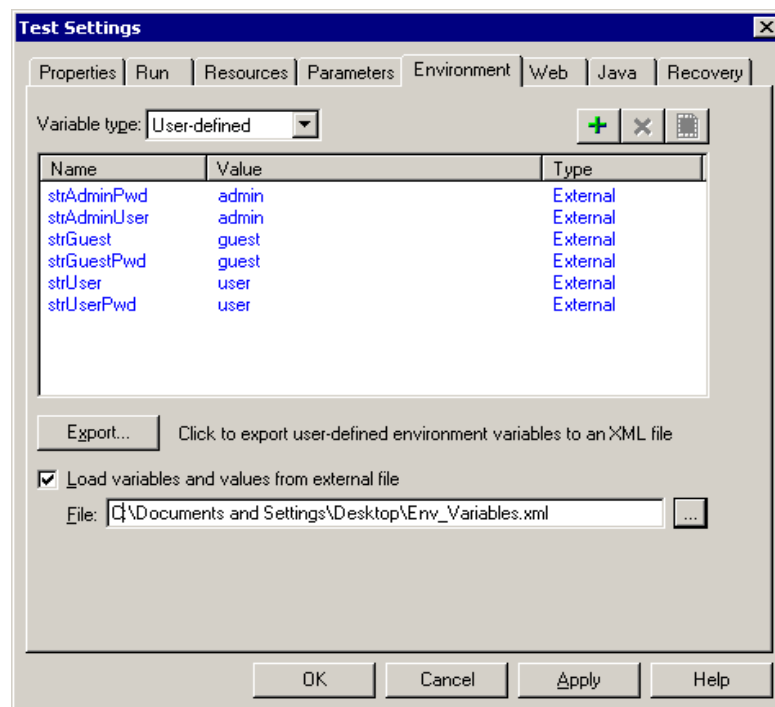


Figure 3: Loading Environment Variables from xml File

2.2. Managing Object Repository

After the test settings are completed, the QTP Settings file continues to associate the specified shared object repositories with the test. The objects from the shared repository will be uploaded and made available for the tests.

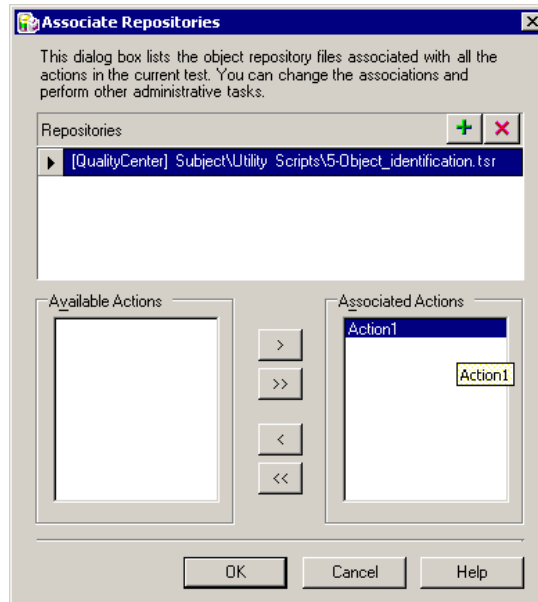


Figure 4: Associate Repositories Dialog

2.3. Call to Framework

The call to `Keyword_Driver()` needs to be specified in the Expert View as shown below. This will call the Framework file associated with the test and perform the actions by interpreting the keywords specified in the data table.

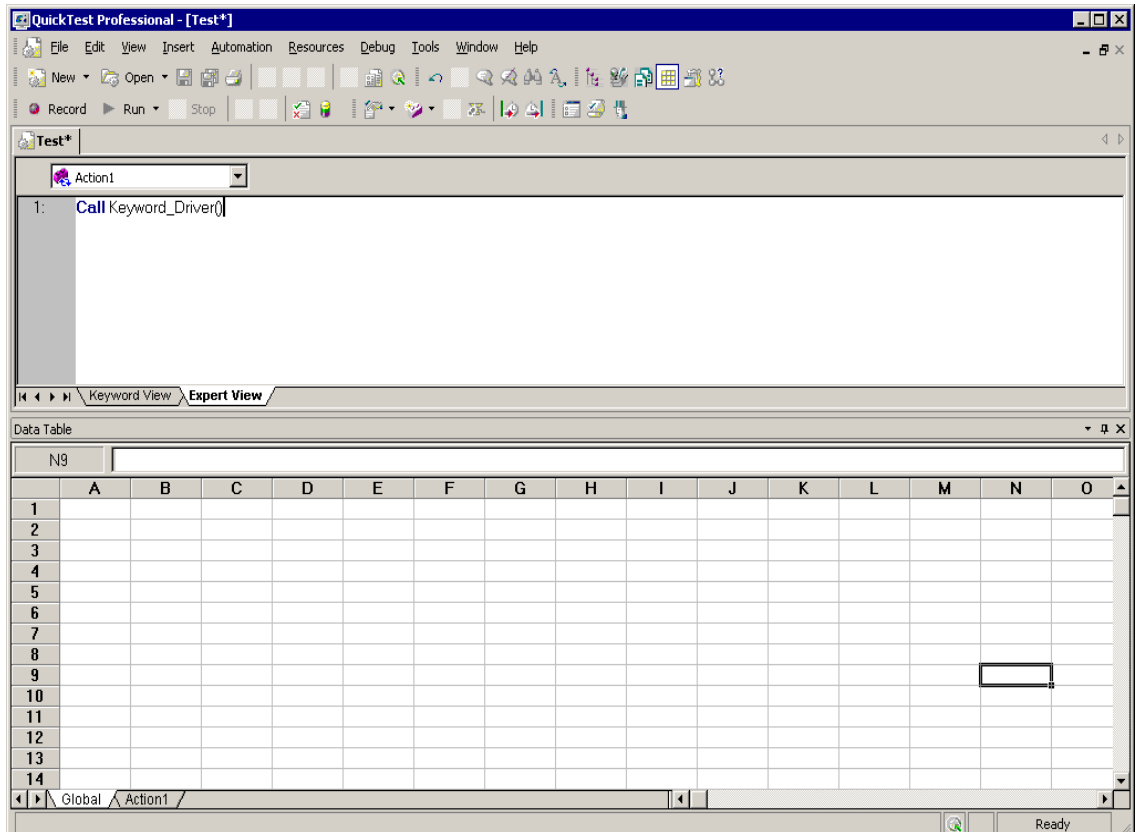



Figure 5: Call to Framework

2.4. Usage of Keywords

The keywords should be entered in the global sheet of the data table of the test according to the syntax. To access the data table, choose View > Data Table or click on the  toolbar button. Below is an example of Keyword-driven Scripting.

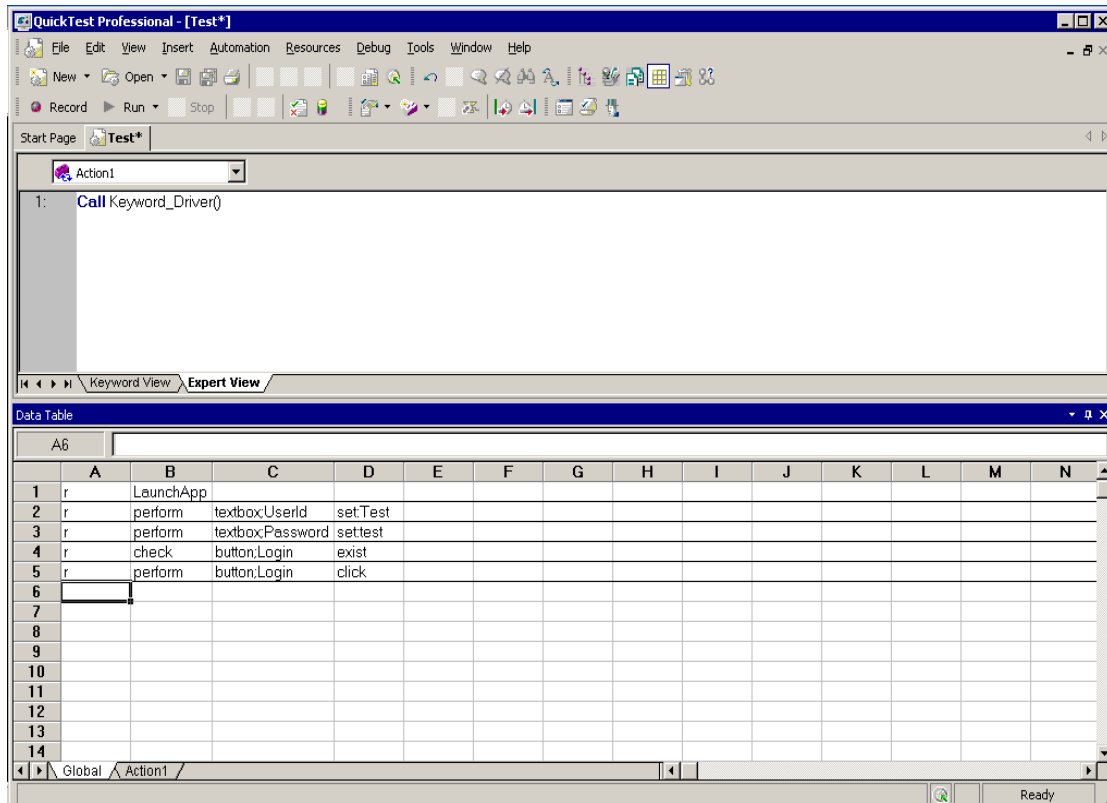



Figure 6: Using the keyword in a Data Table

2.5. Test Results for a Keyword-driven Script

Test execution results can be viewed and analyzed as soon as the run session ends. To access the test results, choose Automation > Results or click on the  toolbar button. The results window will be displayed.

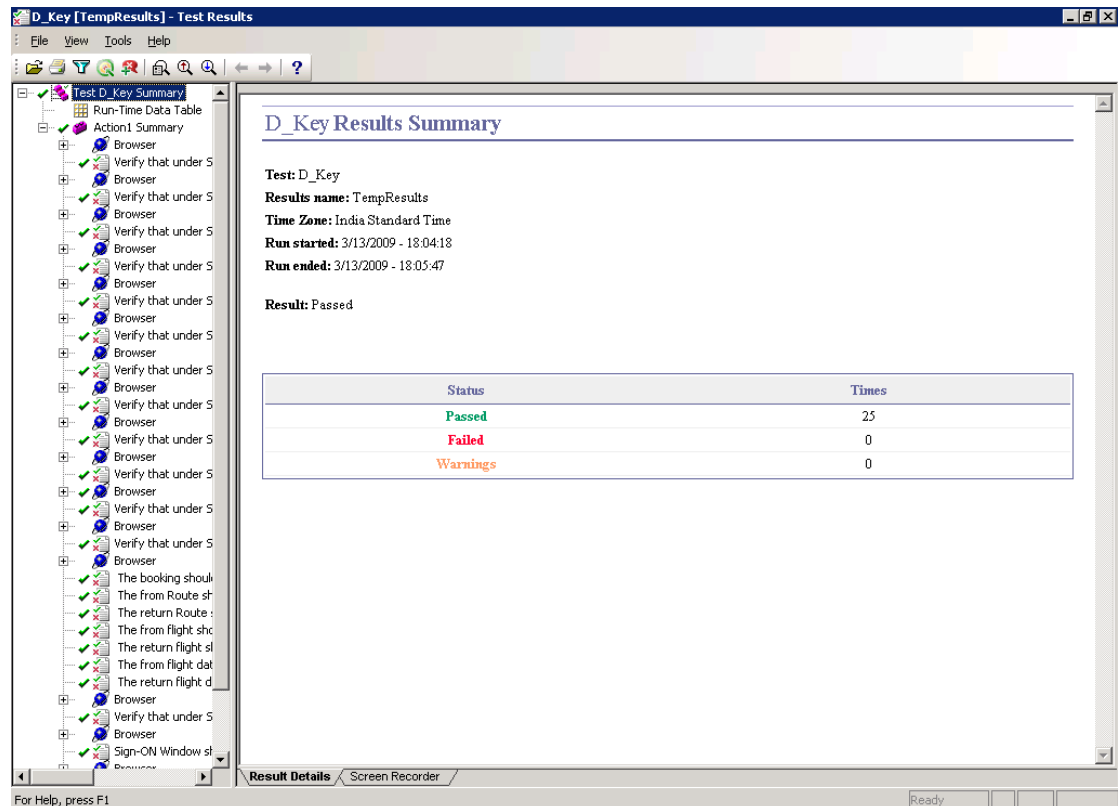


Figure 7: Results in QTP

3. References

HP QuickTest Professional Help documentation

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