CROSSXCHECK networks

Crosscheck SOAPSonar
HP Quality Center

Integration Guide

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INTRODUCTION

Crosscheck Networks SOAPSonar provides simple, intuitive features that can be effectively utilized by all IT personnel throughout the service deployment lifecycle. The purpose is to provide a testing solution to facilitate robust, resilient, and reliable web services.

With comprehensive features supporting aspects of functional, performance, interoperability, and security testing, the SOAPSonar testing solution empowers developers, testers, support engineers, compliance officers, and business owners to optimize the lifecycle of a project deployment.

HP Quality Center is designed to address the wide-ranging challenges that your quality assurance professionals face. By leveraging consistent, repeatable and standardized software quality processes, it helps your quality assurance teams turn quality into a competitive advantage.

HP Quality Center software quality management tools help your organization:

- Gain real-time visibility into requirements coverage and associated defects to paint a clear picture of business risk
- Manage the release process and make more informed release decisions with real-time KPIs and reports
- Measure progress and effectiveness of quality activities
- Collaborate in the software quality lifecycle with a single global platform
- Manage manual and automated testing assets centrally
- Facilitate standardized testing and quality processes that boost productivity through workflows and alerts
- Lower costs by using QA testing tools to capture critical defects before they reach production

List of Features

- HP Quality Center Project Browsing Console
- Publish Test Run Results to Quality Center Project
- Uploading and Downloading Attachments
- Linking Data Sources to Quality Center Attachments
- Browsing and Creating Defects

Coverage of Integration

The SOAPSonar integration with HP Quality Center is focused on Project navigation, uploading and downloading files to and from the Quality Center server, publishing Test Run results within the project, linking to attachments dynamically, and launching SOAPSonar tests from within Quality Center.

Quality Center Integration Prerequisites

Quality Center installation requirements
SOAPSonar requires only the OTAClient.dll in order to communicate with the HP Quality Center server. To install this DLL on the machine where SOAPSonar is running, simply open a web browser and point to the URI location of the HP Quality Center service. The first access to the HP Quality Center server will download the OTAClient.dll file locally. Copy this file to the SOAPSonar installation directory to use the native HP Quality Center integration features.

Supported Operating Systems
Windows 2000, XP, Vista, and 2008.

Localization Environments
English.

User Privileges
The HP Quality Center integration requires that SOAPSonar be installed and run with a user account with Administrative privileges.

Product Minimum Requirements
1 GB RAM, 1 GHz CPU, 250 MB Free Space

3rd Party Software Requirements
SOAPSonar requires .NET Framework 2.0 to be installed.

Uninstall Instructions
Use the add/remove programs menu to uninstall the product.

Limitations
The HP Quality Center integration is not meant to be a replacement for the remote project access features supported directly from Quality Center. The integration is specifically limited to Test Run publishing and limited feature for Test Instance, Test Set, Attachment, and Defect browsing.

Using Extended Storage to Read and Write Attachments
The ability to read and write attachments to and from Quality Center are dependent upon permissions granted through the Quality Center API Extended Storage object. Quality Center disables the feature by default. To enable this feature, you must set a custom entry in the Quality Center Site Admin interface. On the **Site Configuration** tab of Quality Center Site Administration, add the parameter **DISABLE_EXTENDED_STORAGE** and set the value to **N**.

Known Bugs
No known bugs.

API Function Calls
The HP Quality Center integration uses the OTAClient.dll integration API. The classes methods and properties used for this integration are listed below.

TDAPIOLELib.TDConnection

```
InitConnectionEx(server)
Login(username, password)
Connected()
ProjectConnected()
LoggedIn()
VisibleDomains()
VisibleProjects(domain)
Disconnect()
Logout()
```

TDAPIOLELib.AttachmentFactory

```
NewList()
AddItem()
Post()
```

TDAPIOLELib.IExtendedStorage

```
AttachmentStorage()
Load(filename)
RemoveItem(attach)
```

TDAPIOLELib.BugFactory

```
NewList()
```

TDAPIOLELib.Bug

```
Status
AssignedTo
Priority
Summary
```

TDAPIOLELib.LinkFactory

```
NewList()
TargetEntity
```

TDAPIOLELib.Test

```
ID
Name
```

TDAPIOLELib.TestSet

```
Name
Post()
```

TDAPIOLELib.TestSetTreeManager

```
AddNode()
Root
NodeByPath(path)
```

TDAPIOLELib.TestSetFolder

```
AddNode()
FindTestInstances()
```

```
FindTestSets
NewList()
```

TDAPIOLELib.TestSetTreeManager

```
TreeRoot(name)
NodeByPath(path)
NewList()
FindTests()
```

TDAPIOLELib.RunFactory

```
NewList()
Name
Status
Field()
Filter
```

TDAPIOLELib.Run

```
Name
Field
Post()
```

TDAPIOLELib.TSTest

```
Status
Post()
```

TDAPIOLELib.Step

```
Status
Field()
Post()
```

HP QUALITY CENTER INTEGRATION : EMBEDDED

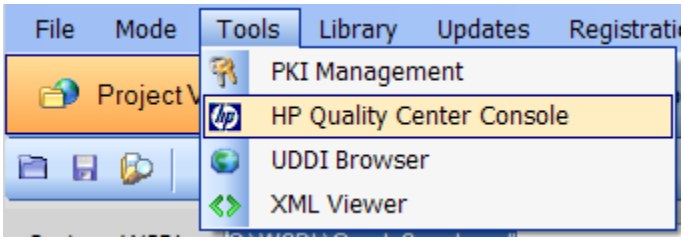
SOAPSonar provides native integration with HP Quality Center allowing test run information to be published directly into HP Quality Center and tests can be run from either within a Quality Center project, or separately from the SOAPSonar console or command-line interface. SOAPSonar also provides an HP Quality Center console allowing browsing Test Instances, Test Sets, Defects, and Attachments. SOAPSonar projects can now be managed and stored directly within an HP Quality Center project.

SOAPSonar Embedded Integration Features

The embedded HP Quality Center features provide the means to login to an HP Quality Center project on the project server and access the Test Instance, Test Plan, and Defect, and Attachment information. To use the embedded HP Quality Center features, you will first need to access the HP Quality Center server from a web browser on the machine where SOAPSonar is running. This process will ensure that the required OTAClient.dll library is copied and registered locally on the machine. Once you have accessed the HP Quality Center project, you will then need to copy the OTAClient.dll file into the SOAPSonar installation directory. After that you will have access to all of the embedded HP Quality Center features.

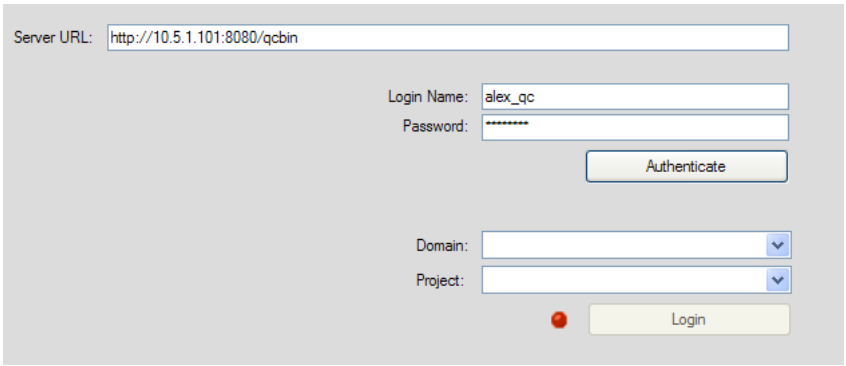
HP Quality Center Console

To access an HP Quality Center Project information, go to the **Tools->HP Quality Center Console**. This will allow you to login and view project information.



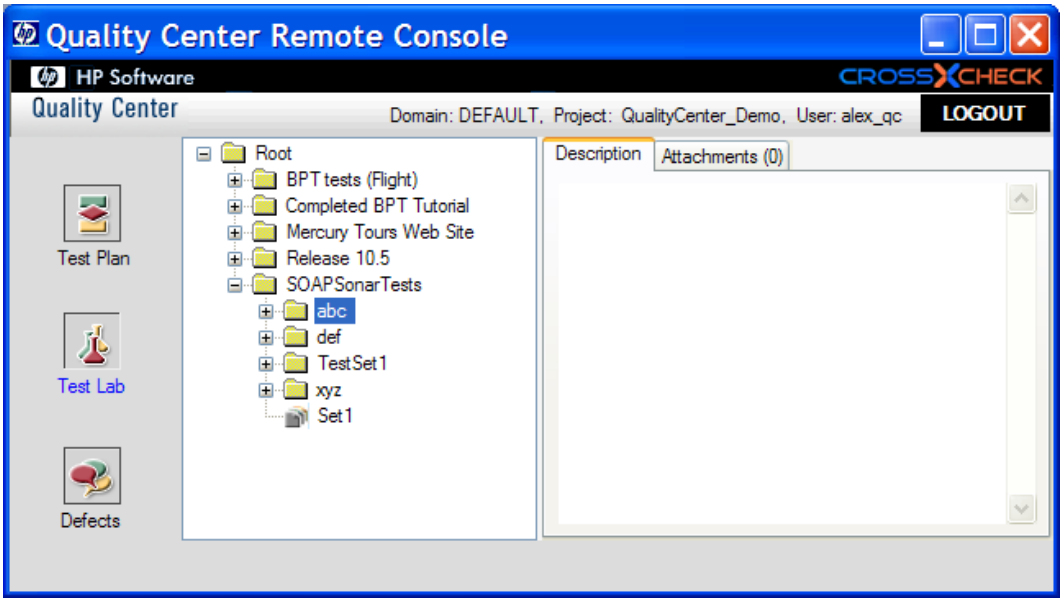
Login Screen

To access an HP Quality Center project, the Server URL, username, and password must be provided. The Server URL is the same HTTP endpoint that was used to access the HP Quality Center project via a web browser from the client machine. It is usually in the format **http://server:port/qcbin**.



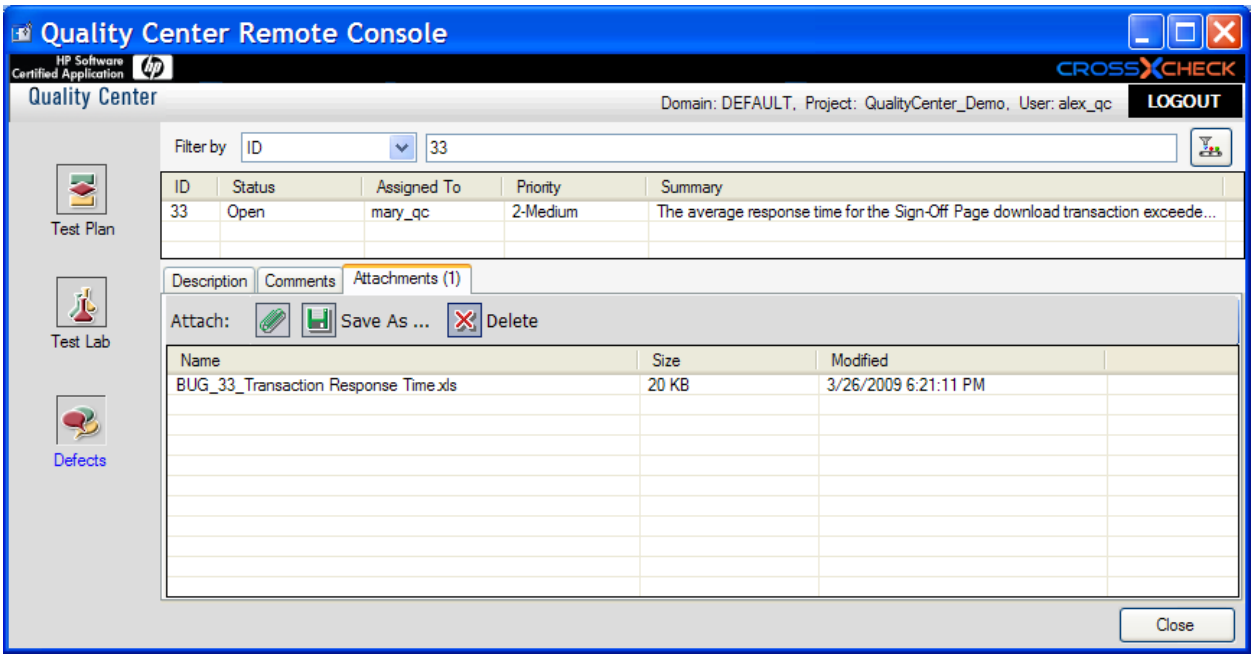
Project Viewer

Once the credentials have been provided and the corresponding Domain and Project selected, the project information will be shown for the Test Plan, Test Lab, and Defects.



Uploading and Downloading Files Directly To HP Quality Center Server

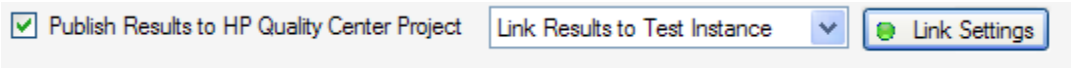
Local files can be stored to the HP Quality Center project on the server. To upload files to the server, select on a project object that supports attachments. These include Test Instance, Test Folder, Test Set, and Defects. Each of these screens will show an attachment tab. Selecting the attachment tab will provide the menu options to upload or download attachments. Attachments can be any file type, including SOAPSonar project files or XML result log files.



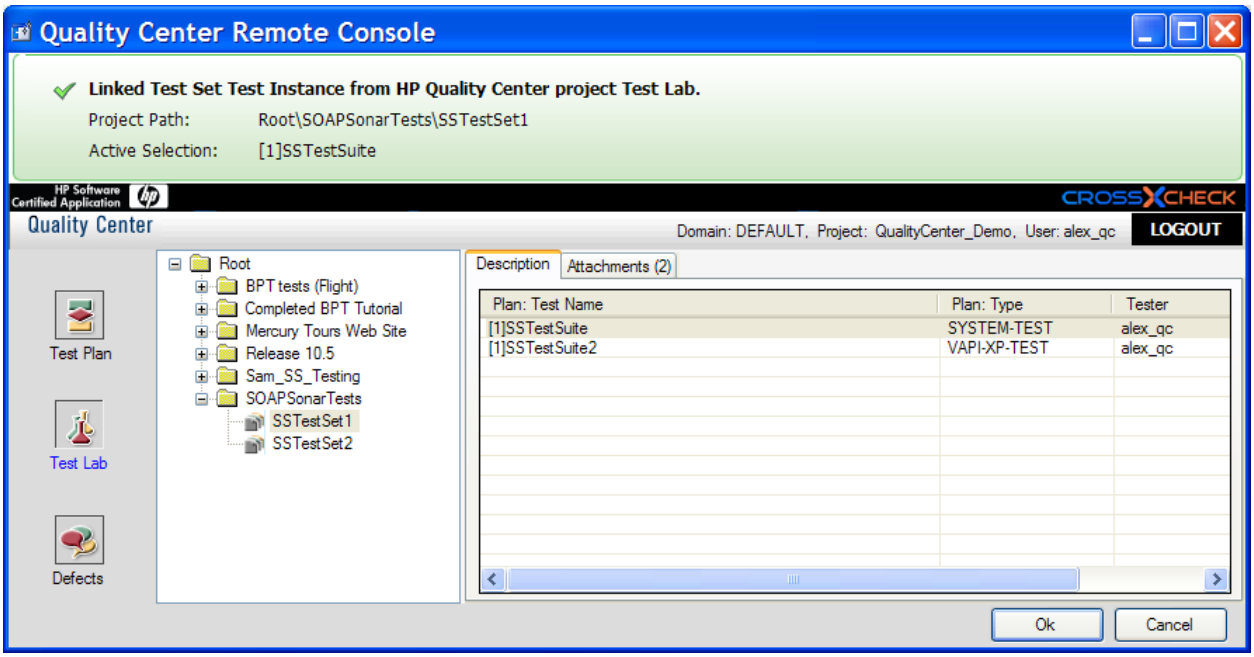
Automatically Publish Test Results to HP Quality Center

SOAPSonar test results can be published to HP Quality Center as a test run. There are 2 settings you can choose for test run publishing. The first option links all test results to a selected Test Instance. The second option links test results based on the Suite Test Group to a target Test Set with associated Test Instances.

Publish Option #1: Link Results to Test instance



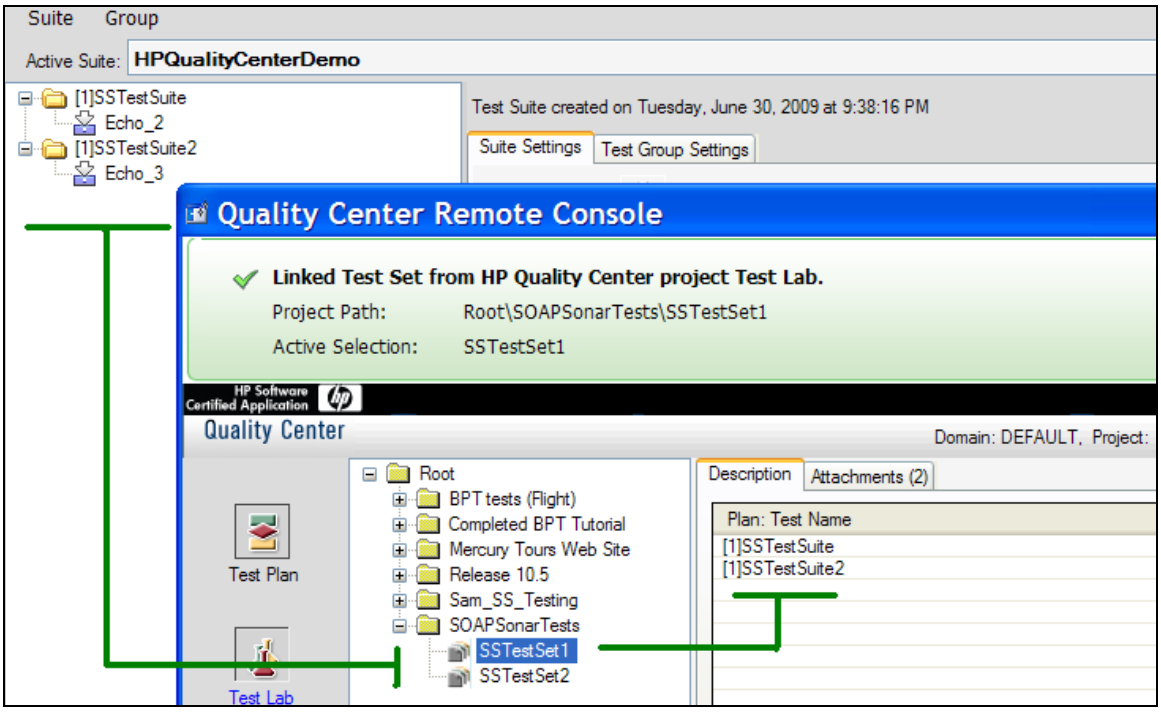
With this option selection, test runs are allocated to a Test Instance that has been associated with a Test Set. To configure SOAPSonar to automatically publish test results to HP Quality Center as a new Test Run, go to **Run View** and click on the **Publish Results to HP Quality Center** checkbox and then click on the **Link Settings** button. Enter the credentials for accessing the Quality Center project, then navigate to the **Test Lab, Test Set,** and **Test Instance** that corresponds to the Test Instance where you want to publish the test results as a new Test Run.



Publish Option #2: Link Groups to Test Set

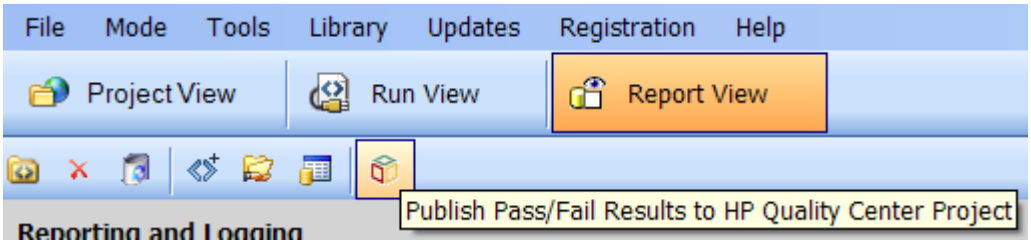
With this option selection, test runs are segmented by Test Suite Group name and them mapped to each Test Instance associated with the target Test Set. To configure SOAPSonar to automatically publish test

results to HP Quality Center as a new Test Run, then go to **Run View** and click on the **Publish Results to HP Quality Center** checkbox and then click on the **Link Settings** button. Enter the credentials for accessing the Quality Center project, then navigate to the **Test Lab,** and **Test Set** that corresponds to the Test Set where you want to map the Test Suite Group results to the Test Instances that have been defined for the Test Set.



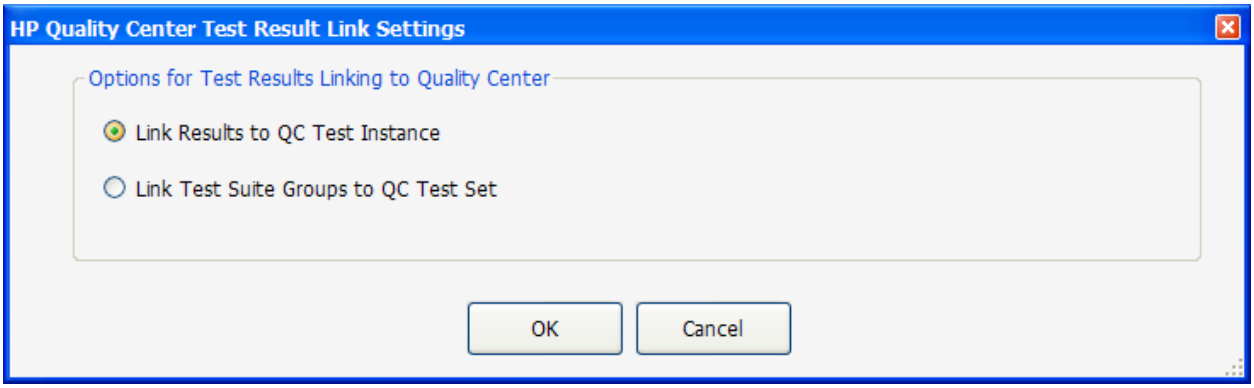
Manually Publish Test Results to HP Quality Center

SOAPSonar test results can be published to HP Quality Center as a test run manually from a previous run log file. To manually publish test results from a previous test run to Quality Center, go to Report View, click on a result file, then click the Publish to Quality Center button.

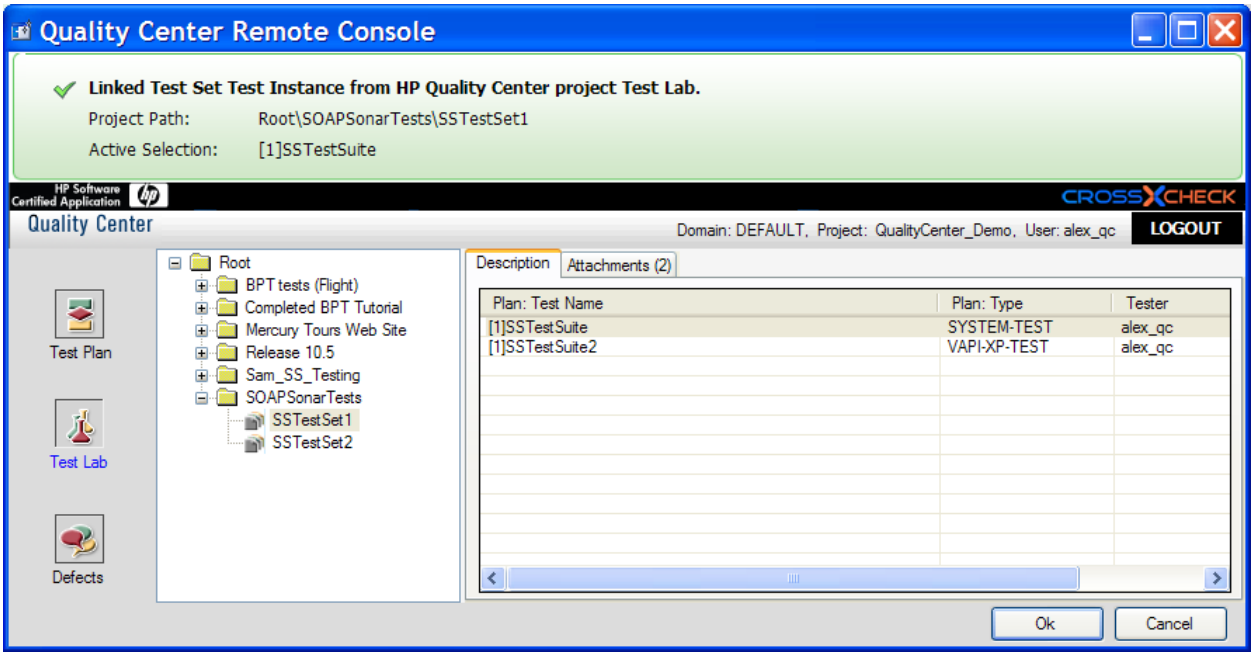


There are 2 settings you can choose for test run publishing. The first option links all test results to a selected Test Instance. The second option links test results based on the Suite Test Group to a target Test Set with associated Test Instances.

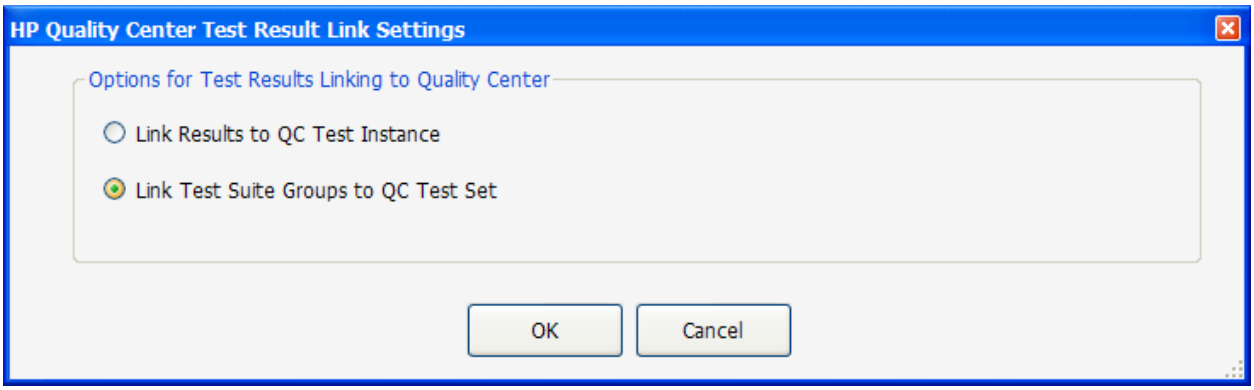
Publish Option #1: Link Results to Test instance



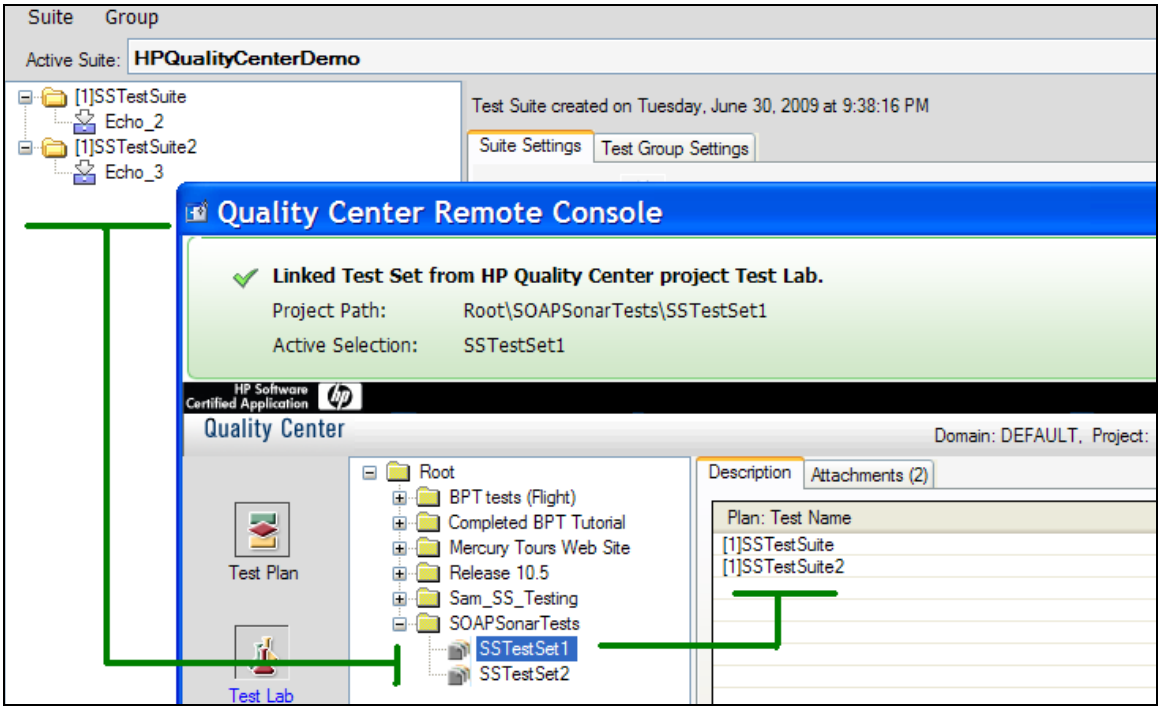
With this option selection, test runs are allocated to a Test Instance that has been associated with a Test Set. Enter the credentials for accessing the Quality Center project, then navigate to the **Test Lab, Test Set,** and **Test Instance** that corresponds to the Test Instance where you want to publish the test results as a new Test Run.



Publish Option #2: Link Groups to Test Set



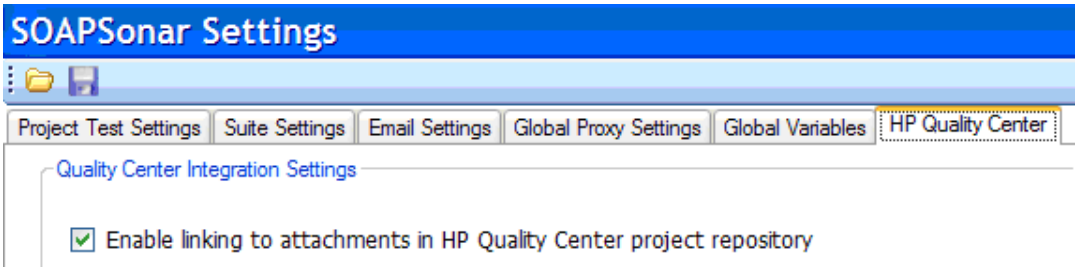
With this option selection, test runs are segmented by Test Suite Group name and them mapped to each Test Instance associated with the target Test Set. Enter the credentials for accessing the Quality Center project, then navigate to the **Test Lab,** and **Test Set** that corresponds to the Test Set where you want to map the Test Suite Group results to the Test Instances that have been defined for the Test Set.



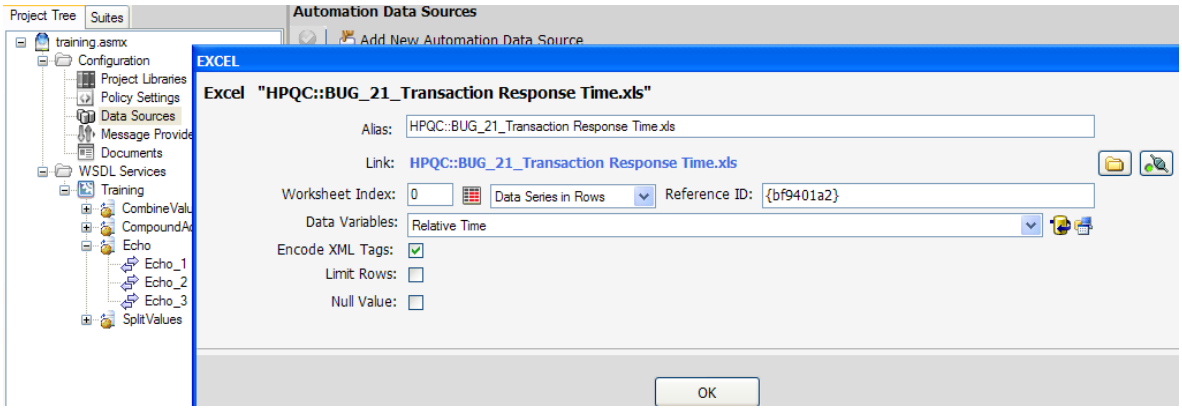
Dynamically Link to Quality Center Attachments for SOAPSonar Data Sources

SOAPSonar can be configured to dynamically link to a CSV or Excel file attachment in an HP Quality Center project for use as an Automation Data Source.

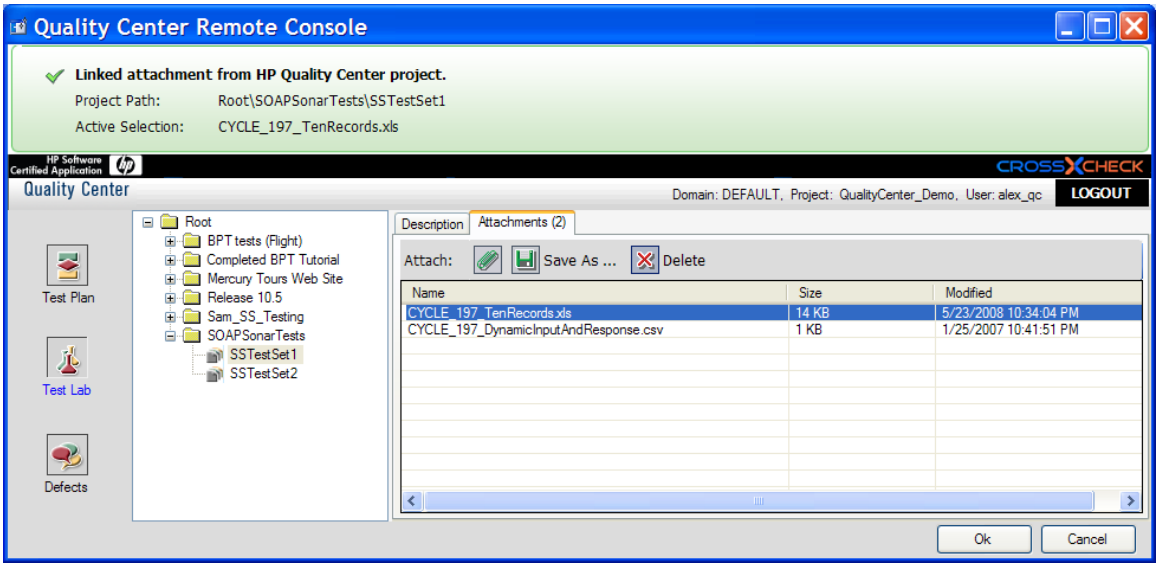
To enable the ability to perform dynamic file linking, go to the Setttings and Preferences from the File menu and select the HP Quality Center tab. Click on the checkbox for attachment linking.



Once the setting above is enabled, when you are viewing file based data sources (CSV and Excel), the HP QC link button will appear next to the browse button. Click this button to browse an HP QC project for an attachment to link as the target data source.



Once an attachment is selected from either a Test Plan, Test Lab, or Defect object the link indicator at the top of the screen will appear with a check indicating the link has been established.



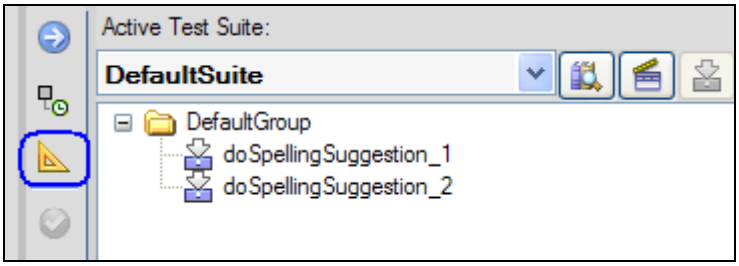
HP QUALITY CENTER INTEGRATION : VAPI-XP-TEST

SOAPSonar Automation and Platinum Editions provide the ability to integrate with HP Quality Center to run tests from within Quality Center and have test results reported back into Quality Center for bug tracking, workflow analysis, and other standard Quality Center features. HP Quality Center integration is supported for QA mode tests where results are in pass/fail format.

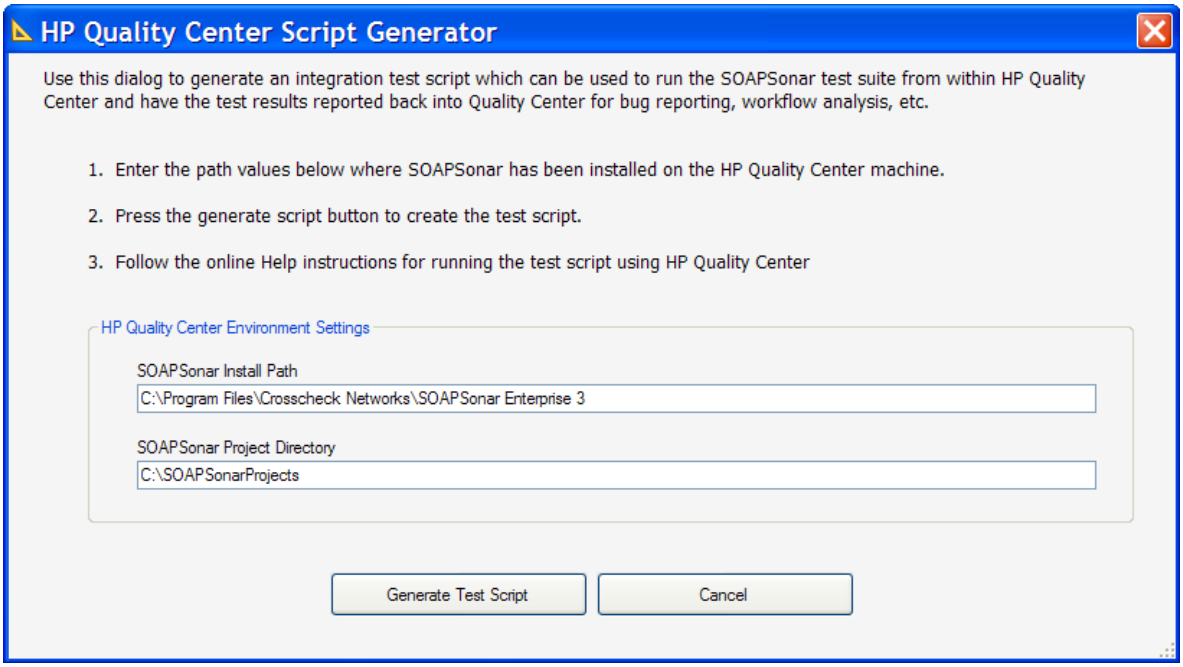
SOAPSonar Generated HP Quality Center Test Script

SOAPSonar automatically builds the HP Quality Center VAPI-XP-TEST VBScript for any test suite. This test script is then used by HP Quality Center to invoke SOAPSonar and run the test suite and report the test suite results as a test run.

To create the HP Quality Center test script from within the SOAPSonar interface, choose the active test suite to run and then click the icon to open the HP Quality Center script generator.

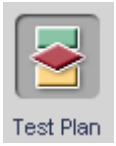


Scripts can be generated on SOAPSonar instances which are not running on the HP Quality Center machine, but the test themselves are run from the SOAPSonar instance installed on the Quality Center machine. To generate the test script with the applicable path settings, enter the SOAPSonar install path and directory where the SOAPSonar project file is stored for the HP Quality Center machine. If you are unsure, these values can be edited later directly in the script. Click the “Generate Test Script” button to proceed.

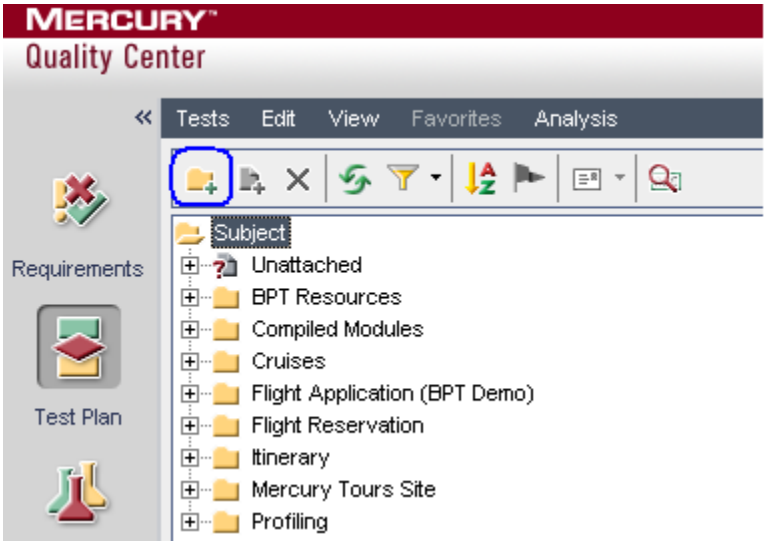


Integrate the SOAPSonar Test Script into HP Quality Center

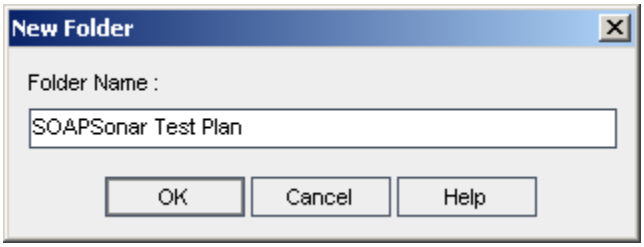
1. After logging in to HP Quality Center, click the Test Plan button from the left panel. The Test Plan area allows you to set up your automated test and custom scripts for Quality Center.



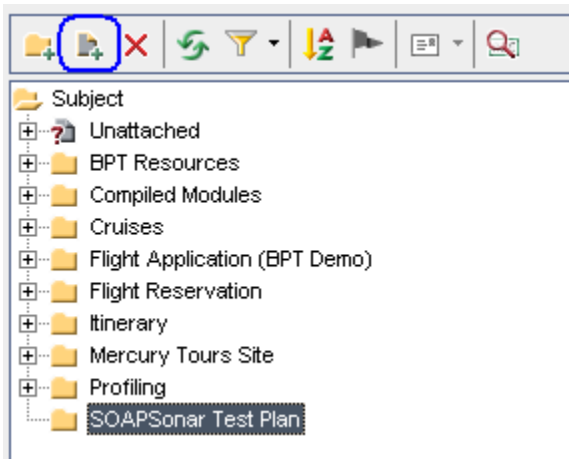
2. In the Test Plan Tree that appears, click the "New Folder" toolbar button.



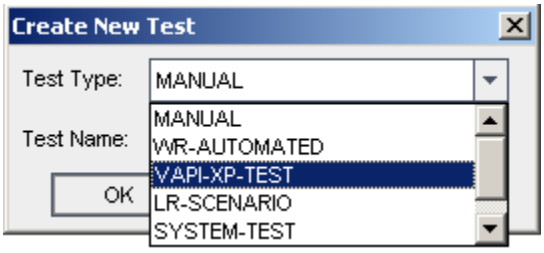
3. Enter a folder name. This example uses "SOAPSonar Test Plan" for the folder name.

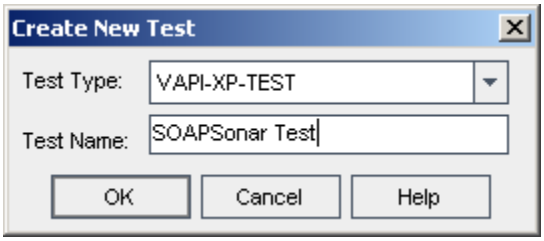


4. Highlight the newly created folder and then click the "New Test" toolbar button.

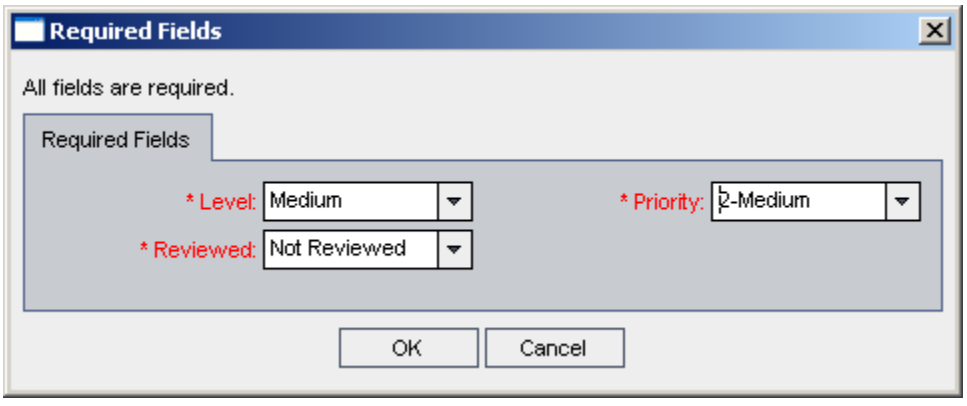


5. In the Create New Test dialog, select VAPI-XP-TEST as the test type and enter a test name. This example uses “SOAPSonar Test” as the test name. Press OK.

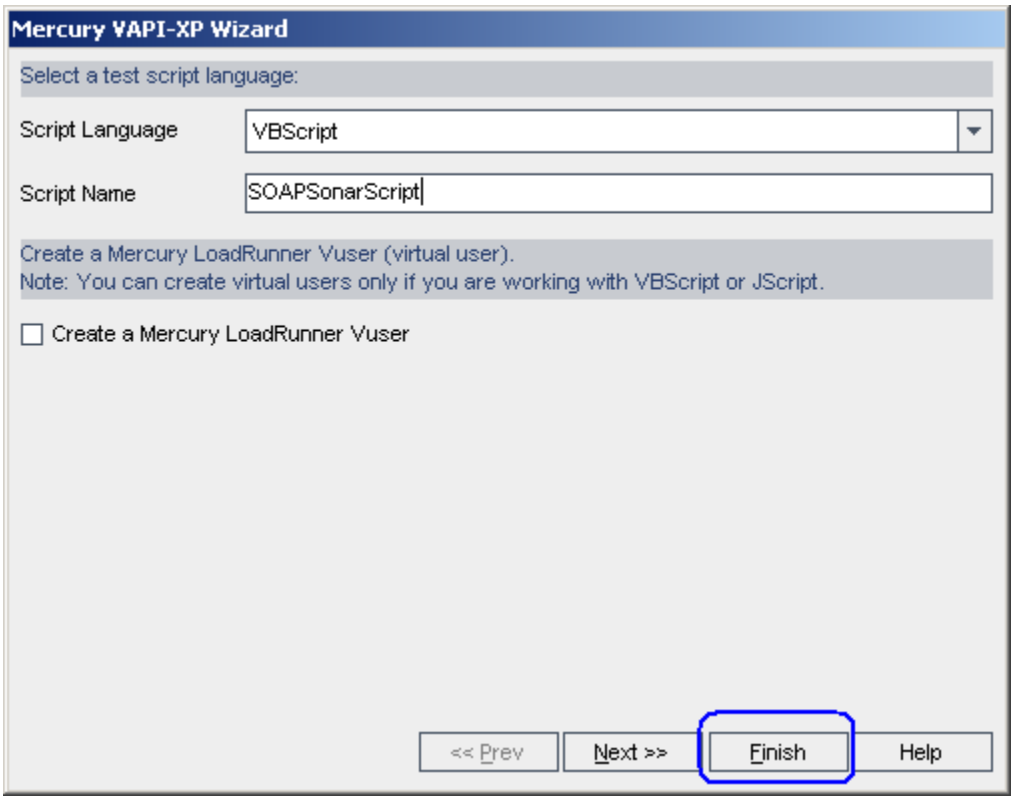




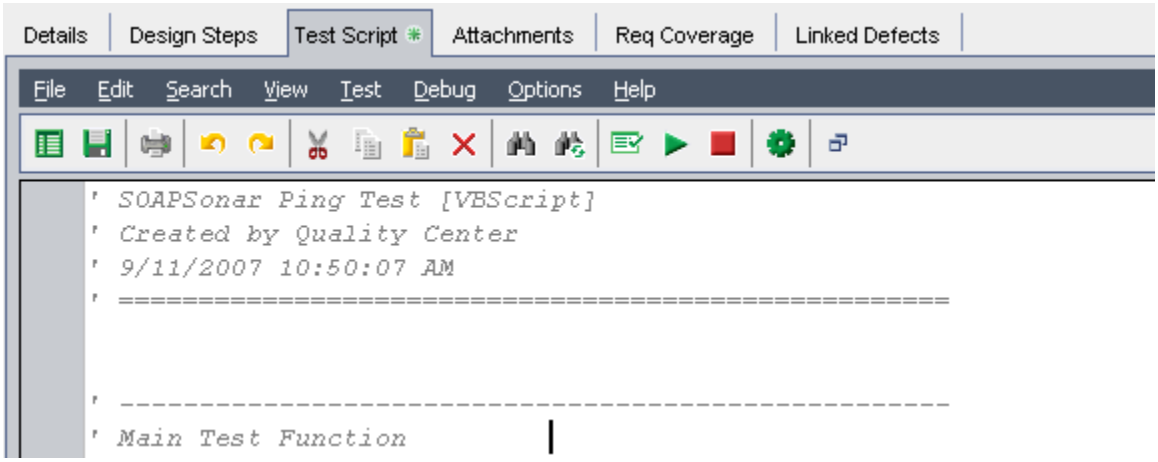
6. Choose the Level, Review Status, and Priority for this test from the available options. Press OK.



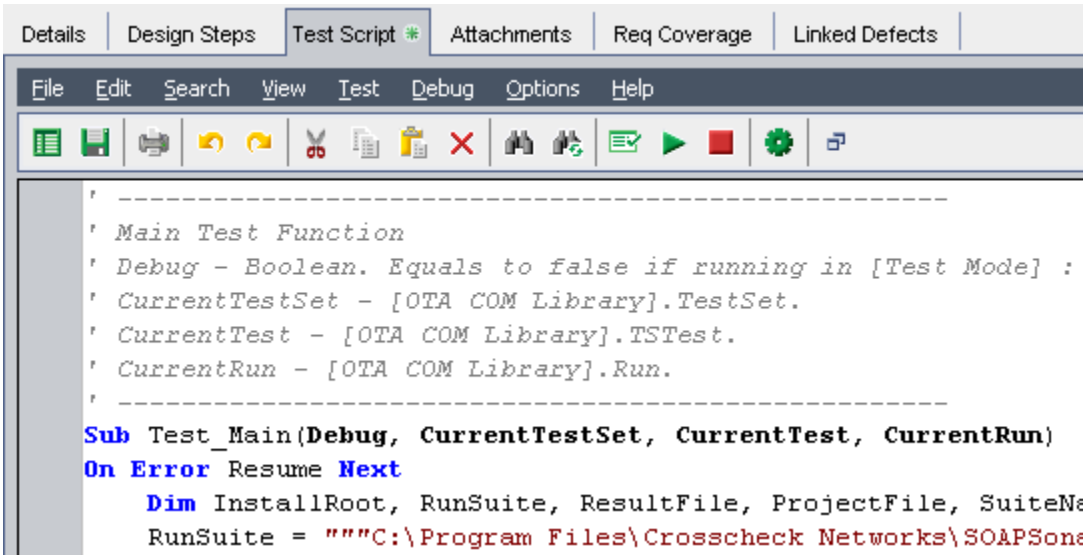
7. Choose VBScript as the script type and enter a script name. This example uses "SOAPSonarScript" for the script name. Click Finish



8. Select the Test Script tab. A default script template will have been created from the steps above. Press CTRL-A to select all of the text and then press the DELETE key to delete it.

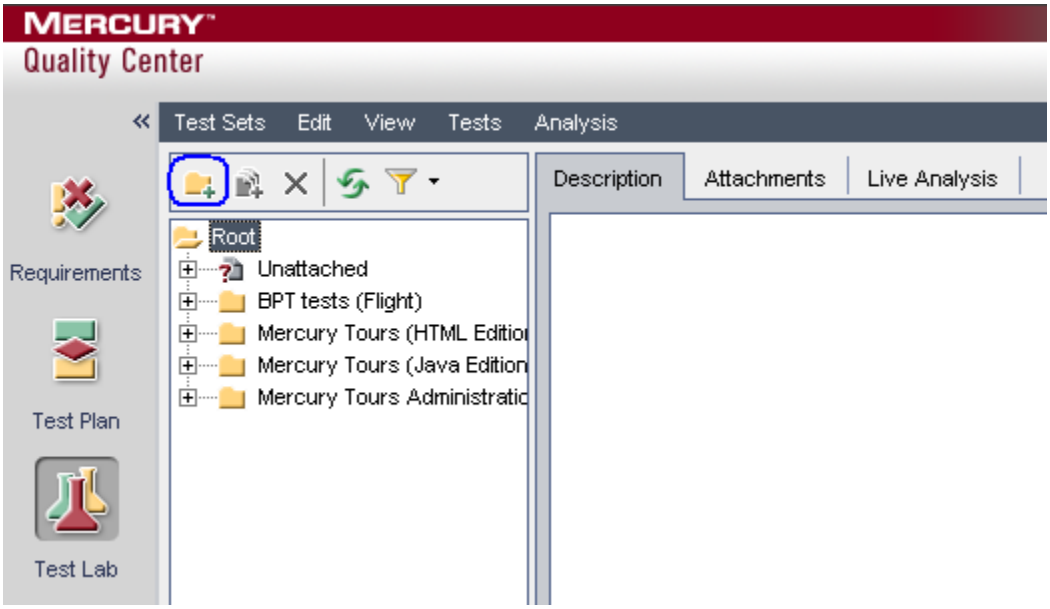


9. Open the SOAPSonar HP Quality Center test script saved from the Generate Test Script section above. Copy the contents of the SOAPSonar script file into the Test Script area.

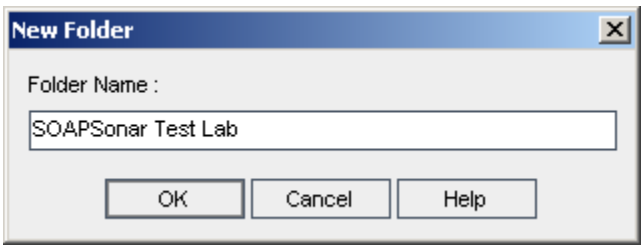


10. Verify that all of the paths and filenames point to the proper locations for the current machine then click the Save button.

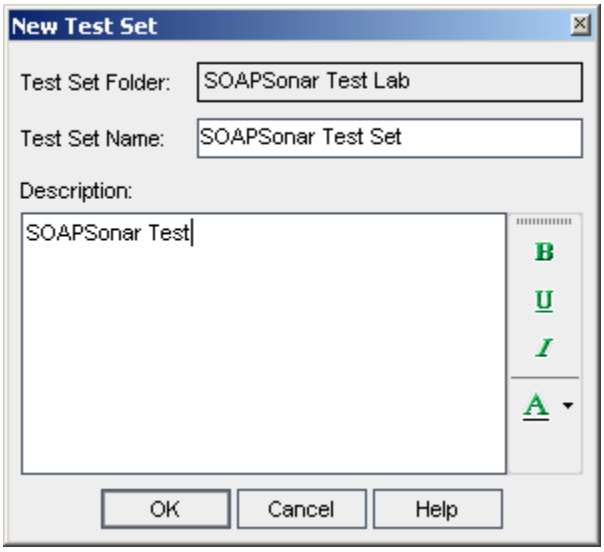
11. Select the Test Lab button on the left. The Test Lab area allows you to combine the tests to run interactively.



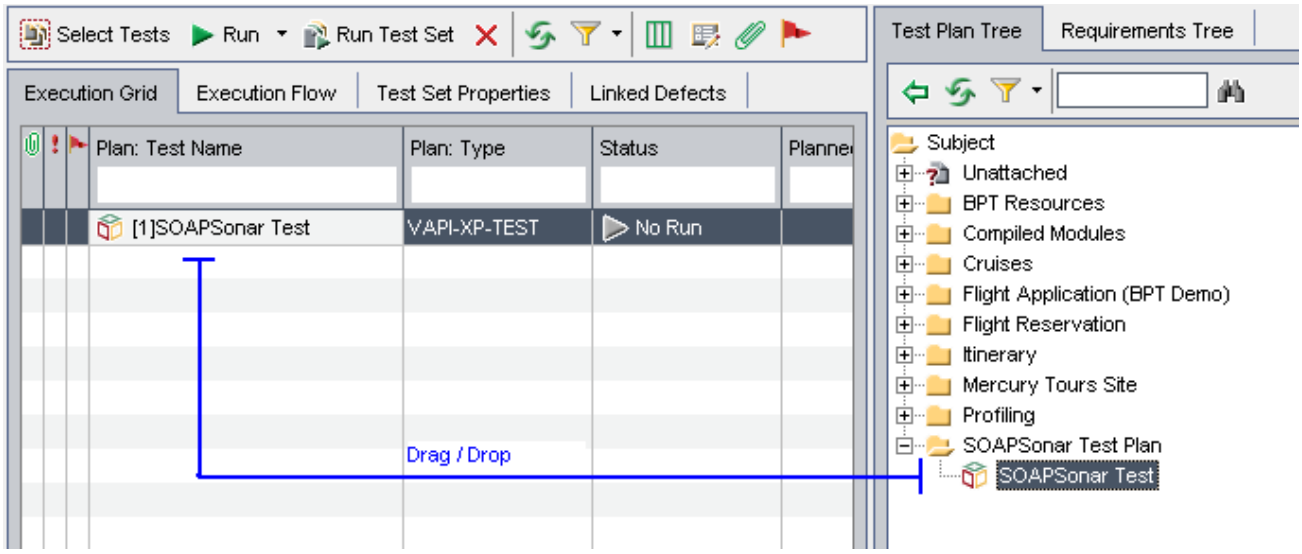
12. Create a new Folder by clicking on the New Folder toolbar button and enter a folder name. This example uses "SOAPSonar Test Lab" for the folder name.



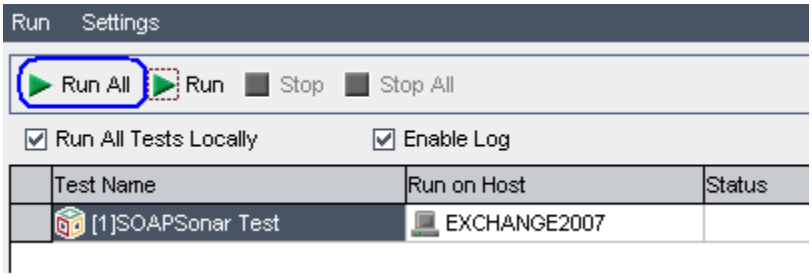
13. Click on the "New Test Set" toolbar button and enter a test set name a description for the test. This example uses "SOAPSonar Test Set" as the test set name.



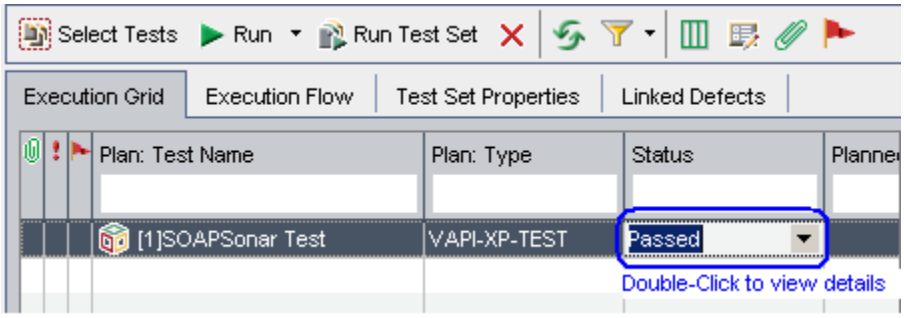
14. On the right side of the screen you will see the test plan folder created earlier. Within this folder is the newly created test. Drag this test to the Execution grid.



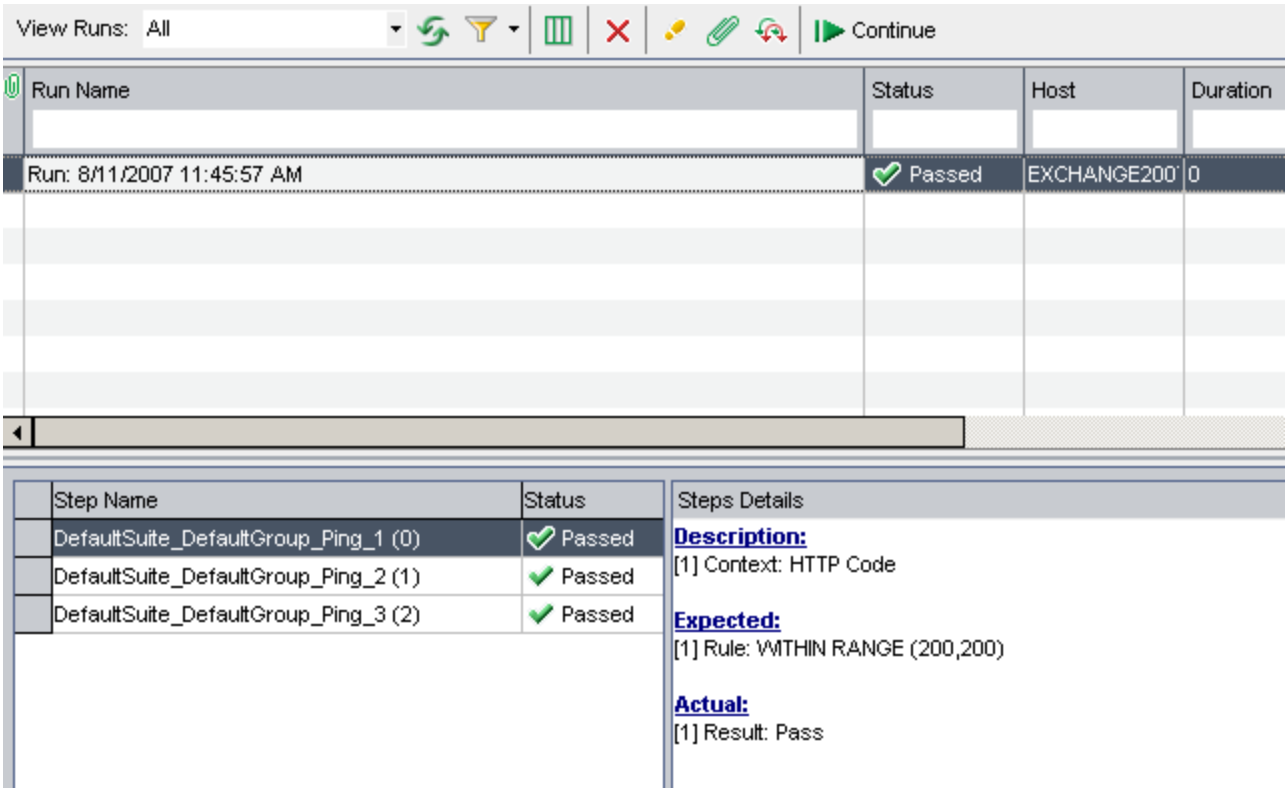
15. To run the test, click the Run button, check the "Run all Test locally" and "Enable Log" checkboxes, then click the "Run All" button.



16. Upon completion of the test there will an overall Pass or Fail indication. Double click on the status to view the detailed test step results that were reported back from SOAPSonar into the Quality Center panel.



17. Each test step will be displayed with the result.



18. Double-click on the status column for a detailed view of the Description, Expected, and Actual results. SOAPSonar test results and criteria rule evaluation are reported back to Quality Center as follows:

Description	Success Criteria Evaluation Function
Expected	Parameters of Success Criteria Evaluation Function
Actual	Results of the Success Criteria Evaluation for this Test result

For tests which have multiple criteria rules, each criteria evaluated will be preceded by an [x] indicator where x=1, 2, ... allowing correlation of each rule with the rule evaluation results.