Silk Central Connect 17.5

Help

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Silk Central Connect

Silk Central Connect combines aspects of test execution management and configuration testing into an easy to use interface, providing the following advantages:

- Simple execution of all your automated unit tests on a variety of *configurations*, which are combinations of operating systems and Web browsers.
- Leverages the advantages of the Amazon Web Services, enabling you to easily access a variety of configurations without any upfront investment.
- Tight integration between Silk Central Connect and Silk4J for easy test creation, maintenance, and execution.
- Side-by-side result analysis, enabling you to compare all of your tests across the different configurations.

Overview

Silk Central Connect offers a new way to harness the power of the cloud to test Web applications across desktop and mobile Web browsers without the pain of setup or configuration. Silk Central Connect:

- Reduces the time and effort required for cross browser testing by up to 80%
- Lowers total cost of ownership by eliminating the need to setup hardware for different browsers
- Resolves issues faster by visually identifying where applications fail on different browsers

Silk Central Connect is an add-on to Silk Central - upgrading is done by license key – there's nothing additional to install. Combine the powers of Silk Central Connect and Silk Central. This enables you to use all Silk Central features for your Silk Central Connect projects, for example requirements, issues, attributes, schedules, parameters, dependencies, notifications, and more.

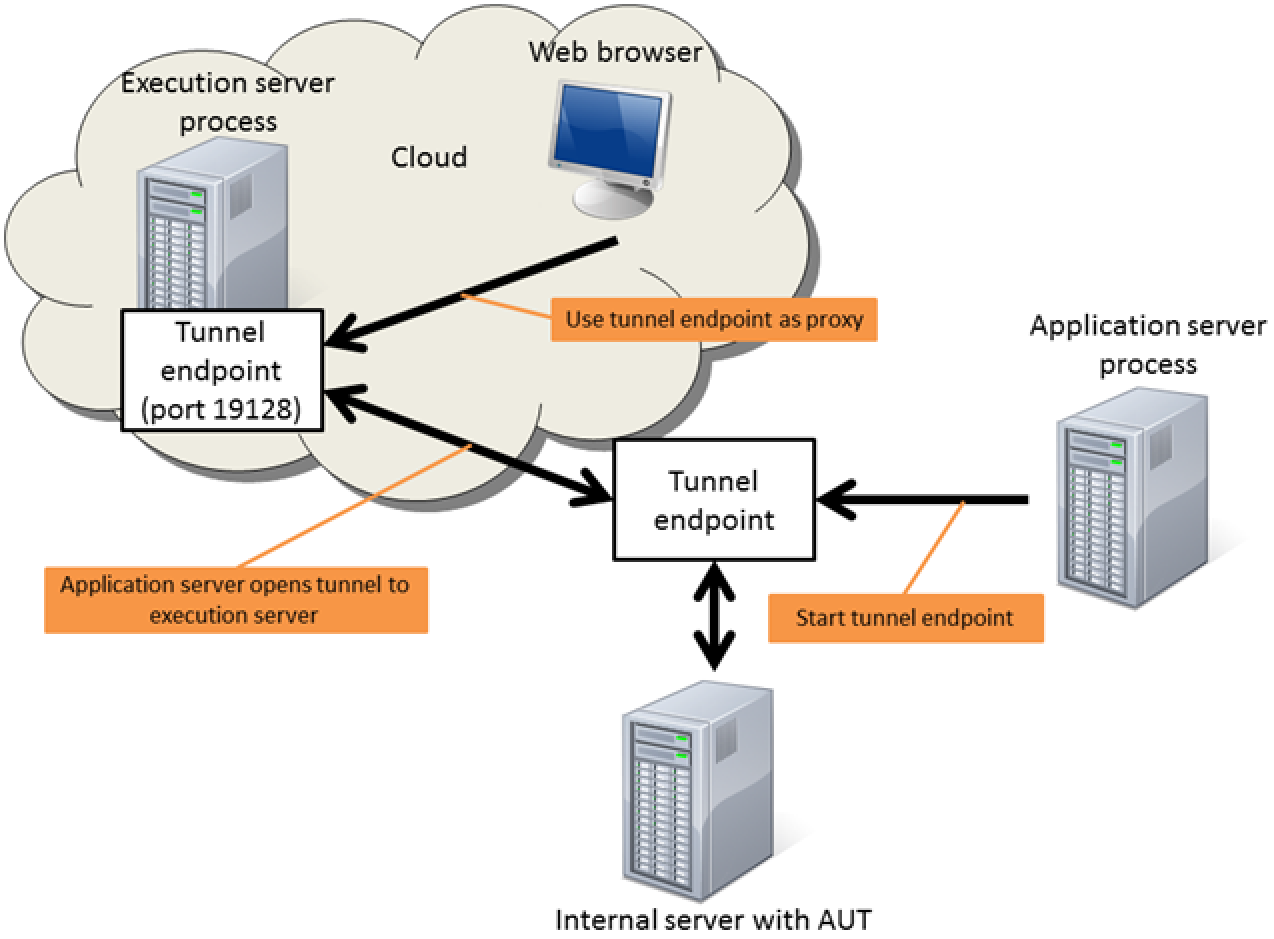
For information about Silk4J, refer to the *Silk4J User Guide*.

For information about installation, deployment, and licensing issues, refer to the *Silk Central Installation Help*.

For information about configuring your test environment, see *Setting Up Execution Servers*.

Silk Central Connect Architecture

Silk Central Connect is based on Silk Central's architecture. Additionally, it allows you to use cloud-based execution servers. If you are testing an internal Web application on your intranet using cloud-based execution servers, you can configure the tunnel settings for local intranet website testing. With this setting, the Silk Central application server opens a tunnel to cloud-based execution servers and acts as a proxy to allow testing a website in your local intranet. Note that this option is slower than a direct connection, so only select it if needed.


Web browser
Execution server process
Cloud
Tunnel endpoint (port 19128)
Use tunnel endpoint as proxy
Application server process
Tunnel endpoint
Application server opens tunnel to execution server
Start tunnel endpoint
Internal server with AUT

Prerequisites

To work with Silk Central Connect, the following prerequisites are required:

- Silk Central Connect needs to be installed in your environment.
- Silk4J, the Silk Test plug-in for Eclipse, needs to be installed in your environment.

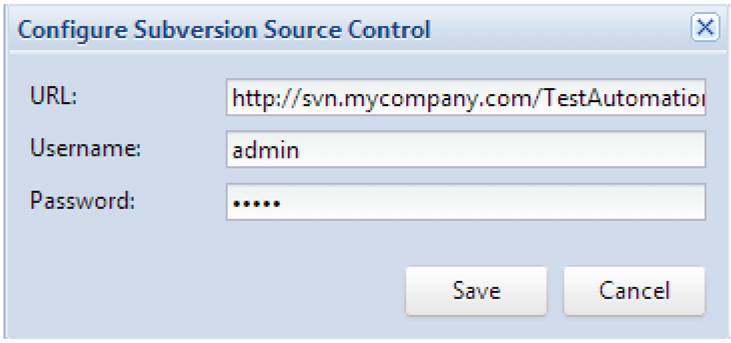
Configuring Source Control

To enable Silk Central Connect to store end execute tests, you have to integrate Silk Central Connect with your Subversion (SVN) source control system.

1. On the Silk Central Connect panel, click **Configure Subversion Source Control**.
2. Type the URL of your Subversion repository into the **URL** field. If no SVN repository is configured, Silk Central Connect automatically configures a file-based repository.

   ⚠ **Important:** A file-based repository is for evaluation purposes only and should not be used in production. Also, this repository can only be accessed on the local machine, and Silk4J must also be installed on this computer.

   For example, if the location of your Subversion server is *http://svn.mycompany.com*, and the repository is located under `TestAutomation/trunk`, type `http://svn.mycompany.com/TestAutomation/trunk` into the **URL** field.



Configure Subversion Source Control

URL: http://svn.mycompany.com/TestAutomatio

Username: admin

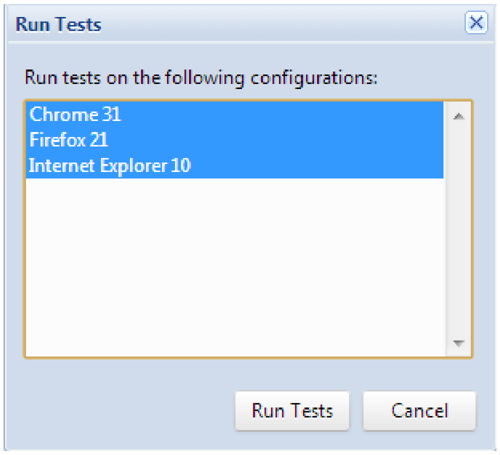
Password: •••••

3. Type a valid **Username** and **Password**. These credentials will be used to access your repository for all projects. If you are using a file-based repository, no **Username** and **Password** is required.
4. Click **Save**.

Creating your Web Application Tests

Directly after installing Silk Central Connect and configuring Subversion, you can create a new project for your Web application. Then you can use the built-in verification run to take a first screenshot of the Web application in each of the browsers that are available on your local machine.

1. On the Silk Central Connect panel, click **New Project**. The **New Project** dialog box displays.
2. If you are using Silk Central Connect in a full Silk Central environment, you can choose to add your new Silk4J project to an existing Silk Central project or to create a new Silk Central project.
3. If you are creating a new project, type a name for the new project into the **Project Name** field.
4. Type the URL of the test application into the **URL** field.
5. Click **OK**.
6. *Optional:* If you are testing an internal Web application on your intranet using cloud-based execution servers, click **Tunnel Settings** and select **Local intranet website**. With this setting, the Silk Central application server opens a tunnel to cloud-based execution servers and acts as a proxy to allow testing a website in your local intranet. Note that this option is slower than a direct connection, so only select it if needed.
7. Click **Run Tests**.
8. Select all available configurations.



Run Tests

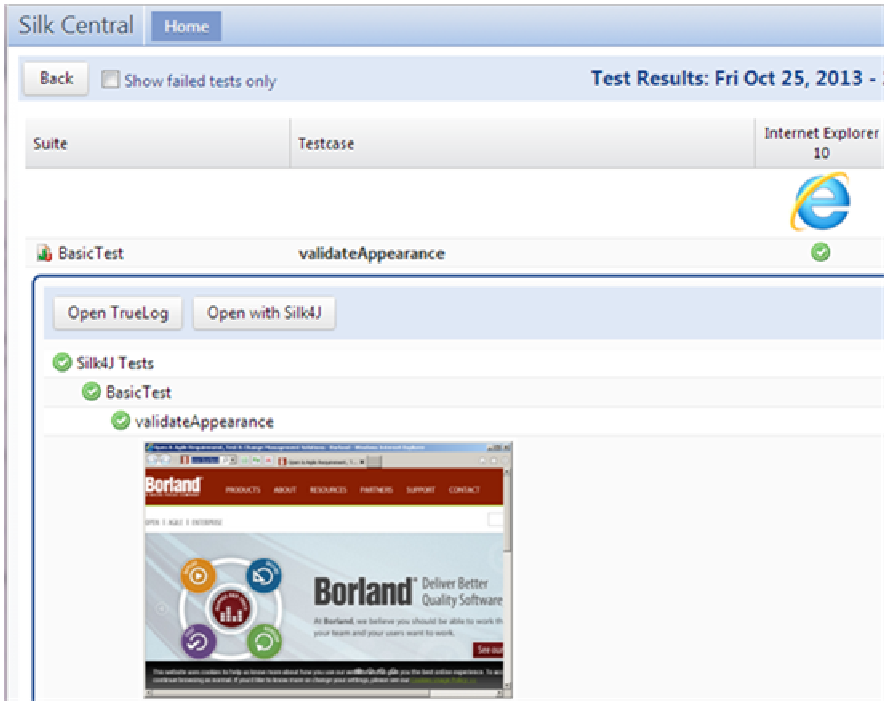
Run tests on the following configurations:

Chrome 31
Firefox 21
Internet Explorer 10

9. Click **Run Tests**.
10. Click **Refresh** to see if the execution is finished.
11. When the execution is finished, click on the start time link. You can see the test result for every configuration. The default test case is called *validateAppearance*.

12. Click on the test result of the first configuration. You can see details for the test result, including a screenshot of the test application. You can click on the screenshot to enlarge it.

13. Click through the results to see how the application looks on all configurations.



Test Results: Fri Oct 25, 2013 -

Suite	Testcase	Internet Explorer 10
BasicTest	validateAppearance	✓

- ✓ Silk4J Tests
  - ✓ BasicTest
    - ✓ validateAppearance

Tip: You can use the **Left** and **Right** keyboard keys to switch between the results.

Customizing Your Web Application Tests

To perform the actions described in this topic, the following prerequisites are required:

- To be able to record tests with Silk4J, a current version of Internet Explorer needs to be installed on your system. For a list of the supported versions, refer to the *Silk Central Connect Release Notes*.
- For a list of the supported browsers for replay, refer to the *Silk Test Release Notes*.
- To test against mobile browsers, you need to install an emulator on your system or connect a mobile device to your system. For additional information on testing mobile Web applications, refer to the *Mobile Testing Tutorial*.

After you have created a project for a Web application, you can add additional tests or enhance the existing tests to test additional functionality of the Web application.

1. To open a project in Eclipse, perform one of the following:
   - On the Silk Central Connect panel, click **Open with Silk4J** in the **Action** column that corresponds to the project.
   - On the overview page of the project, click **Open with Silk4J**.

   When creating a Silk Central Connect project, an Eclipse project template is committed to your specified source control, containing the following assets:

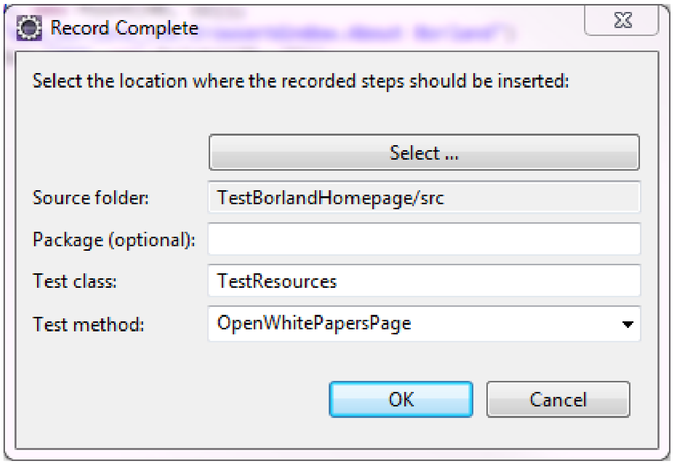
   - `src` folder: The location where new tests are stored
   - `Lib` folder: To use additional java libraries in your Silk4J project, add them to this folder. Silk Central Connect adds all jar files that are located in this folder to the classpath when executing the tests.
   - `build.xml`: A preconfigured ANT build file that Silk Central Connect uses to build the tests before execution.

- Other Eclipse-related files

2. Record additional tests in Silk4J.
   a) In the **Package Explorer**, select the project to which you want to add the new test.
   b) On the toolbar, click **Record Actions**.

      - If a Silk4J test class is open in Eclipse, the recorded actions are recorded into this file.
      - If no Silk4J test class is open in Eclipse, the recorded actions are recorded into a new Silk4J test class file.

      The Web application and the **Recording** window open. Silk4J creates a base state and starts recording.
   c) Perform the steps that you want to record against the AUT.
   d) Click **Stop Recording**. The **Record Complete** dialog box opens.

      Record Complete

      Select the location where the recorded steps should be inserted:

      Source folder: TestBorlandHomepage/src

      Package (optional):

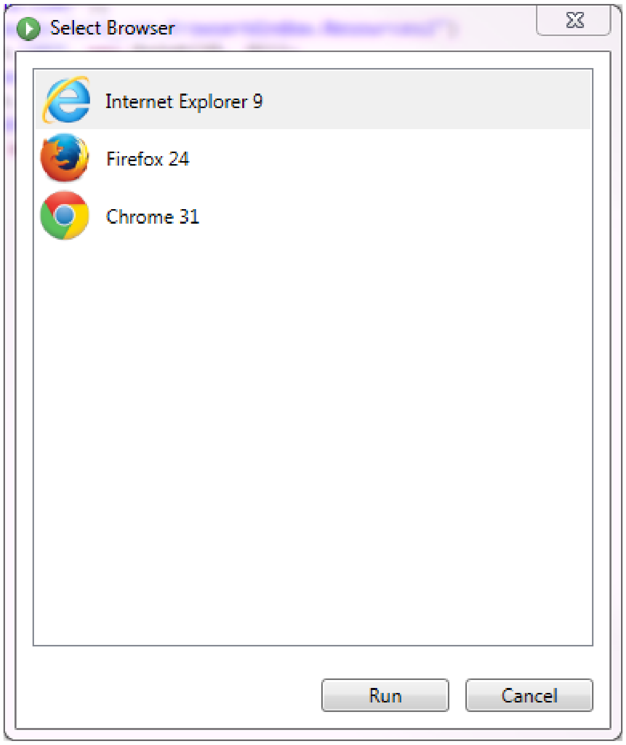
      Test class: TestResources

      Test method: OpenWhitePapersPage

   e) The **Source folder** field is automatically populated with the source file location for the project that you selected. To use a different source folder, click **Select** and navigate to the folder that you want to use.
   f) *Optional:* In the **Package** field, specify the package name.

      To use an existing package, click **Select** and select the package that you want to use.
   g) In the **Test class** field, specify the name for the test class.
   h) In the **Test method** field, specify a name for the test method.
   i) Click **OK**.

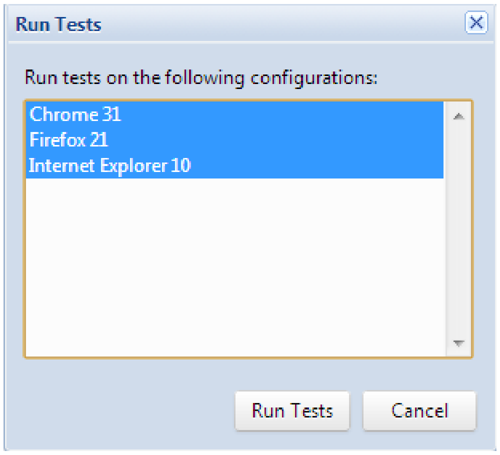
   For information about Silk4J, refer to the *Silk4J User Guide*.
3. Ensure that the test works as expected in Silk4J.
   a) On the Silk4J toolbar, click **Run selected Silk4J test(s)**.
   b) On the **Select Browser** dialog box, select the browser on which you want to replay the test.



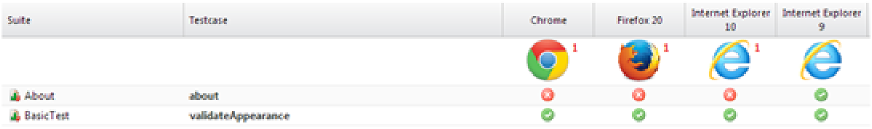
c) Click **Run**.

If the test passes and the test results look as expected, you can add the test to the test set for the project in Silk Central Connect.

4. On the Silk4J toolbar, click **Commit** to commit the changes in the project to the repository.
5. Back on the overview page of the project in Silk Central Connect, click **Run Tests** to execute all tests in the project.
6. Select the configurations.



7. Click **Run Tests**.
8. When the execution is finished, click on the start time link. You can see the test result for every test and every configuration.



Suite	Testcase	Chrome	Firefox 20	Internet Explorer 10	Internet Explorer 9
		1	1	1	
About	about	✗	✗	✗	✓
BasicTest	validateAppearance	✓	✓	✓	✓

If all tests have run as expected on all configurations, you can further enhance the test set or schedule the project for repeated execution.

Running Your Web Application Tests on Multiple Browsers in Parallel

When you have verified that the Web application looks as expected on all available browsers on your local machine, you can add additional execution servers to your testing environment to execute the tests for your Web application on multiple browsers in parallel.

To test your Web application on additional browsers, you have the following three options:

1. Install additional browsers on the existing execution servers.

   This option enables you to test additional browsers, but it increases the time required to run the test set against your application under test, because the browsers are tested sequentially on the execution servers.
2. Add additional execution servers to your testing environment.

   This choice enables you to test additional browsers without significantly increasing the execution time of your test set. The tests are distributed between the execution servers based on the available browsers on each server. However, this option increases your hardware requirements. For additional information on adding an execution server to your testing environment, see *Configuring Physical Execution Servers*.
3. Connect to the cloud.

   Note: To be able to execute your tests in the cloud, you need a cloud provider account.

   This option enables you to test a great variety of browsers without increasing the execution time of your test set and without requiring additional hardware. The additional cost is directly related to your testing effort, which means the frequency at which you are executing your test set and the size of your test set.

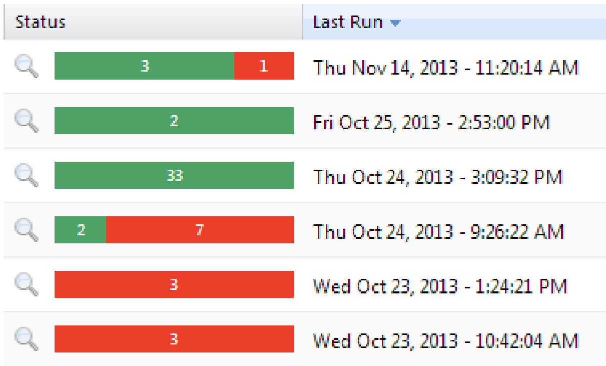
For information about configuring your test environment, see *Setting Up Execution Servers*.

For information on running keyword-driven tests across multiple browsers, see *Cross-Browser Testing with Keyword-Driven Tests*

Analyzing Test Results

After running a test, you can review the test results.

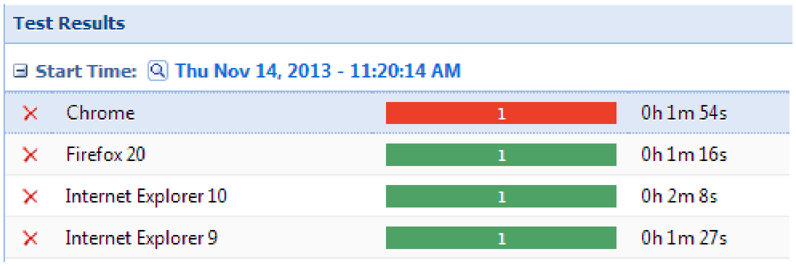
1. On the Silk Central Connect panel, you can see the status of the last test run of all your projects.



Status	Last Run
🟩 3 🟥 1	Thu Nov 14, 2013 - 11:20:14 AM
🟩 2	Fri Oct 25, 2013 - 2:53:00 PM
🟩 33	Thu Oct 24, 2013 - 3:09:32 PM
🟩 2 🟥 7	Thu Oct 24, 2013 - 9:26:22 AM
🟥 3	Wed Oct 23, 2013 - 1:24:21 PM
🟥 3	Wed Oct 23, 2013 - 10:42:04 AM

2. To see the results of all tests and all test runs for a specific project, click on the name of the project.

   The project overview page opens.

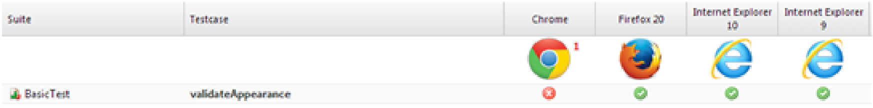


Test Results

⊟ Start Time: Thu Nov 14, 2013 - 11:20:14 AM

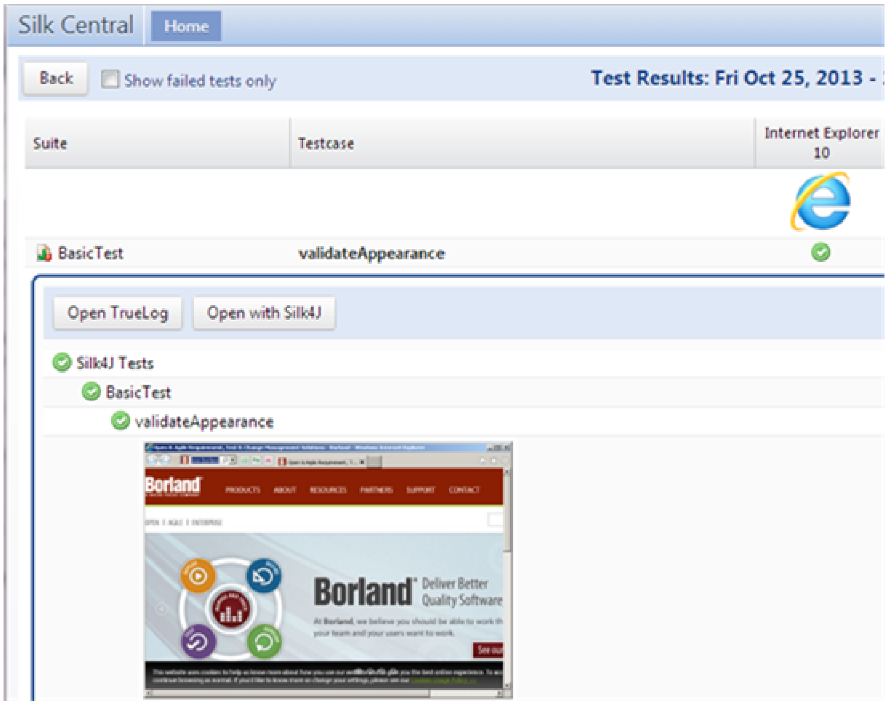
✗	Chrome	🟥 1	0h 1m 54s
✗	Firefox 20	🟩 1	0h 1m 16s
✗	Internet Explorer 10	🟩 1	0h 2m 8s
✗	Internet Explorer 9	🟩 1	0h 1m 27s

3. On the **Test Results** page, click on the status of a specific test result to see the result of the test run for every configuration.



Suite	Testcase	Chrome	Firefox 20	Internet Explorer 10	Internet Explorer 9
BasicTest	validateAppearance	✗	✓	✓	✓

4. On the **Test Results** page, click on the status of a test to view detailed information, including error logs and TrueLog files.



Test Results: Fri Oct 25, 2013 -

Suite	Testcase	Internet Explorer 10
BasicTest	validateAppearance	✓

✓ Silk4J Tests
✓ BasicTest
✓ validateAppearance

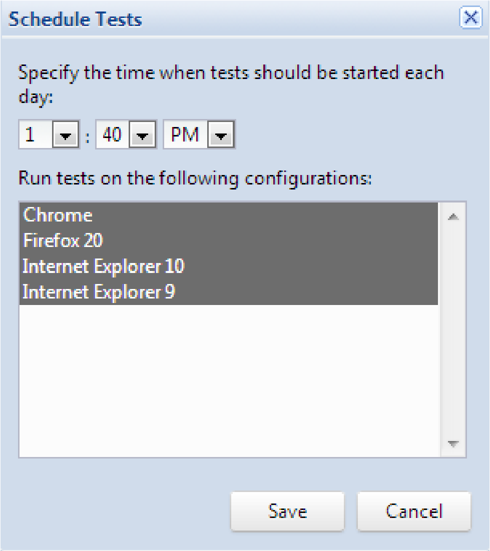
Scheduling Your Tests for Continuous Execution

You can schedule your projects to execute all the tests in the project at the same time each day.

Note: If you are using Silk Central Connect within a full Silk Central environment, you can use the more advanced scheduling features in **Execution Planning** > **Details View** > **Schedule**

instead.

1. On the Silk Central Connect panel, click on the name of the project, which you want to schedule for daily execution.
2. On the overview page of the project, click **Schedule Tests**.
3. On the **Schedule Tests** dialog box, specify the time when the test execution should start each day.



Schedule Tests

Specify the time when tests should be started each day:

1 : 40 PM

Run tests on the following configurations:

Chrome
Firefox 20
Internet Explorer 10
Internet Explorer 9

4. From the list of available configurations, select the configurations on which the tests should be executed.

   If you have already executed the tests in the project, the configurations that were used for the last run are pre-selected. If you have not executed the tests, all configurations are pre-selected.
5. Click **Save**.

All tests in the project will be executed on the selected configurations and at the specified time each day. The scheduled time is displayed in the overview page of the project. You can remove the schedule by clicking the remove button next to the schedule.

Frequently Asked Questions

This section provides answers to frequently asked questions about Silk Central Connect.

Why Do My Silk4J Tests Fail?

If executing Silk4J tests from Silk Central Connect does not work, the connection between Silk Central Connect and Silk4J might not work. You can try the following to establish the connection: If Silk4J was installed prior to Silk Central Connect, restart Eclipse or the Open Agent.