Silk Test 17.5

Silk4NET Quick Start Tutorial

Contents

Silk4NET

Silk4NET is the Silk Test plug-in for Microsoft Visual Studio. Silk4NET enables you to efficiently create and manage functional, regression, and localization tests directly in Visual Studio. With Silk4NET, you can perform the following tasks within Visual studio:

- Record tests.
- Develop tests using Visual Basic .NET.
- Develop tests using C#.
- Run tests as a part of a test plan in the Microsoft test environment.
- Run tests as a part of your build process.
- View test results.

For information on the tested versions of Visual Studio, refer to the *Release Notes*.

Silk4NET supports the testing of a broad set of application technologies. Designed for realizing automation benefits even when applied to complex tests, Silk4NET brings true test automation capability directly to the developer's preferred environment and lets you easily cope with changes made in the test application.

Additionally, the powerful testing framework of Silk4NET enables high reusability of tests across multiple test projects, which further increases the achievable Return On Investment (ROI). With less time spent on building and maintaining testing suites, your QA staff can expand test coverage and optimize application quality.

Note: If you have opted not to display the start screen when you start Silk4NET, you can check for available updates by clicking **Help** > **Check for Product Update**.

Getting Started with Silk4NET

Silk4NET enables you to create and execute automated functional and regression tests. Perform the following actions to get started with Silk4NET:

1. Create a Silk4NET project.
2. Create automated Silk4NET tests, either by recording actions or keywords, or by manually scripting the tests.
3. Add the Silk4NET tests to your project. A project can include any combination of recorded tests and manually scripted tests.
4. Execute the tests.
5. Analyze the test results.

Creating a Silk4NET Project

1. Click **Silk4NET** > **New Project** or **File** > **New Project** . The **New Project** dialog box displays.
2. Under **Installed** > **Templates**, click **Visual Basic** or **Visual C#**, select **Test** and then select **Silk4NET Project**.
3. Type a name for the project into the **Name** field.

   For the tutorial, type `Tutorial`.
4. *Optional:* Type a name for the solution into the **Solution** field.
5. Click **OK**. The **Project Created** dialog box opens.
6. Click **Yes** to start recording a new test or click **No** to create an empty project.

   For the tutorial, click **No**.

   If you have selected to start recording, the **Add New Item** dialog box opens.
7. In the **Add New Item** dialog box, select which type of test you want to record.

   - To bundle the recorded actions into one or more keywords, select **Silk4NET Keyword-Driven Test**.
   - To record the test without creating keywords, select **Silk4NET Test**.
8. If you have selected to start recording, type a name for the new test into the **Name** text box in the **Add New Item** dialog box.
9. Click **Add**.
10. If you have selected to record a new Silk4NET test, the **Select Application** dialog box opens. Select the tab that corresponds to the type of application that you want to test:

    - If you are testing a standard application that does not run in a browser, select the **Windows** tab.
    - If you are testing a web application or a mobile web application, select the **Web** tab.
    - If you are testing a native mobile application, select the **Mobile** tab.
11. To test a standard application, if you have not set an application configuration for the current project, select the application from the list.
12. To test a Web application or a mobile Web application, if you have not set an application configuration for the current project, select one of the installed browsers or mobile browsers from the list.

    Specify the Web page to open in the **Enter URL to navigate** text box. If an instance of the selected browser is already running, you can click **Use URL from running browser** to record against the URL currently displayed in the running browser instance. For the tutorial, select **Internet Explorer** and specify *http://demo.borland.com/InsuranceWebExtJS/* in the **Enter URL to navigate** text box.
13. To test a native mobile application (app) if you have not set an application configuration for the current project:
    a) Select the mobile device, on which you want to test the app, from the list.
    b) Click **Browse** to select the app file or enter the full path to the app file into the **Mobile app file** text field.

       Silk4NET supports HTTP and UNC formats for the path.

       Silk4NET installs the app on the mobile device or emulator.
14. Click **OK**. If you have selected an existing instance of Google Chrome on which you want to replay a test method, Silk4NET checks whether the automation support is included. If the automation support is not included, Silk4NET informs you that Google Chrome has to be restarted. The application and the **Recording** window open.

If you have selected to create an empty Silk4NET test, a new solution containing the Silk4NET project is created. Additionally, a Silk4NET test is created in the project with the following language-specific file name:

- UnitTest1.vb
- UnitTest1.cs

Note: You can also use the context menu in the **Solution Explorer** to add Silk4NET projects to an existing solution.

Adding a Silk4NET Test to a Project

You can only add Silk4NET tests to an existing Silk4NET or Test project. If no Silk4NET or Test project exists, create a Silk4NET or Test project before you try to create a Silk4NET test.

1. Click **Silk4NET** > **New Test** or **Project** > **Add New Item** .

    > **Note:** If your solution contains more than one Silk4NET projects, select the project to which you want to add the new test from the list in the **Project Selector**.

    The **Add New Item** dialog box opens.

2. Under **Installed**, click one of the following:

    - If your project is a Visual Basic project, click **Common Items** > **Silk4NET Test**.
    - If your project is a Visual C# project, click **Visual C# Items** > **Silk4NET Test**.

3. Type a name for the test into the **Name** field and click **Add**. The **Create a Silk4NET Test** dialog box opens.

4. Select how you want to create your Silk4NET test by clicking one of the following option buttons:

Record a Silk4NET test	Record actions and verifications against your application under test and generate a new test containing the recorded automation statements.
Create an empty Silk4NET test	Create an empty test that can be filled with automation statements later on.

    For the tutorial, click **Create an empty Silk4NET test**.

5. Click **OK**.

6. If you have selected to record a new Silk4NET test, the **Select Application** dialog box opens. Select the tab that corresponds to the type of application that you want to test:

    - If you are testing a standard application that does not run in a browser, select the **Windows** tab.
    - If you are testing a web application or a mobile web application, select the **Web** tab.
    - If you are testing a native mobile application, select the **Mobile** tab.

7. To test a standard application, if you have not set an application configuration for the current project, select the application from the list.

8. To test a Web application or a mobile Web application, if you have not set an application configuration for the current project, select one of the installed browsers or mobile browsers from the list.

    Specify the Web page to open in the **Enter URL to navigate** text box. If an instance of the selected browser is already running, you can click **Use URL from running browser** to record against the URL currently displayed in the running browser instance. For the tutorial, select **Internet Explorer** and specify *http://demo.borland.com/InsuranceWebExtJS/* in the **Enter URL to navigate** text box.

9. To test a native mobile application (app) if you have not set an application configuration for the current project:

    a) Select the mobile device, on which you want to test the app, from the list.

    b) Click **Browse** to select the app file or enter the full path to the app file into the **Mobile app file** text field.

    Silk4NET supports HTTP and UNC formats for the path.

    Silk4NET installs the app on the mobile device or emulator.

10. Click **OK**. If you have selected an existing instance of Google Chrome on which you want to replay a test method, Silk4NET checks whether the automation support is included. If the automation support is

not included, Silk4NET informs you that Google Chrome has to be restarted. The application and the **Recording** window open.

If you have selected to record the test, the recorded test is added to your project. If you have selected to add an empty test, an empty Silk4NET test is added to your project.

Note: You can also use the context menu in the **Solution Explorer** to add Silk4NET tests to your Silk4NET or Test project.

Recording a Silk4NET Test

1. Click **Silk4NET** > **New Test** or **Project** > **Add New Item** .

   📝 **Note:** If your solution contains more than one Silk4NET projects, select the project to which you want to add the new test from the list in the **Project Selector**.

   The **Add New Item** dialog box opens.
2. Under **Installed**, click one of the following:

   - If your project is a Visual Basic project, click **Common Items** > **Silk4NET Test**.
   - If your project is a Visual C# project, click **Visual C# Items** > **Silk4NET Test**.
3. Type a name for the test into the **Name** field and click **Add**. The **Create a Silk4NET Test** dialog box opens.
4. Select **Record a Silk4NET test** and click **OK**.
5. If you have not set an application configuration for the current project, select the tab that corresponds to the type of application that you are testing:

   - If you are testing a standard application that does not run in a browser, select the **Windows** tab.
   - If you are testing a web application or a mobile web application, select the **Web** tab.
   - If you are testing a native mobile application, select the **Mobile** tab.
6. To test a standard application, select the application from the list.
7. To test a Web application or a mobile Web application, if you have not set an application configuration for the current project, select one of the installed browsers or mobile browsers from the list.

   Specify the Web page to open in the **Enter URL to navigate** text box. If an instance of the selected browser is already running, you can click **Use URL from running browser** to record against the URL currently displayed in the running browser instance. For the tutorial, select **Internet Explorer** and specify *http://demo.borland.com/InsuranceWebExtJS/* in the **Enter URL to navigate** text box.
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      Silk4NET supports HTTP and UNC formats for the path.

      Silk4NET installs the app on the mobile device or emulator.
9. Click **OK**. If you have selected an existing instance of Google Chrome on which you want to replay a test method, Silk4NET checks whether the automation support is included. If the automation support is not included, Silk4NET informs you that Google Chrome has to be restarted. The application and the **Recording** window open.
10. Perform the interactions, which you want to record, with your application under test.

    For additional information about recording a mobile application, see *Recording Mobile Applications*. For information about the actions available during recording, see *Actions Available During Recording*.
11. When you are finished with recording, click **Stop**. The **Recording Complete** dialog box opens. From this dialog box, you can click **Playback** to replay the recorded test.

    - If you are using Visual Studio 2010, you can also access the **Test View** in Visual Studio, where you can replay and manage your tests.
    - If you are using Visual Studio 2012 or later, you can also access the **Test Explorer** in Visual Studio, where you can replay and manage your tests.

The recorded interactions are added as a file to your project. The default file name of the generated file is `UnitTest<Index>.cs` or `UnitTest<Index>.vb`, depending on the default programming language of

your project. For example, if you are recording the first test for a Visual Basic project, the name of the generated file is `UnitTest1.vb`

📝 **Note:** You can also create a new project and record the new test into the new project.

Running Silk4NET Tests

This topic describes how you can run your Silk4NET tests in Visual Studio.

1. To view all the tests that are available in the selected project or solution:

   - In Visual Studio 2010, click **Test** > **Windows** > **Test View**.
   - In Visual Studio 2012 later, click **Test** > **Windows** > **Test Explorer**.

2. In the **Test View** or the **Test Explorer**, depending on which version of Visual Studio you are using, select the tests that you want to execute.

3. Right-click on your selection and click one of the following:

   - In Visual Studio 2010, click **Run Selection**.
   - In Visual Studio 2012 or later, click **Run Selected Tests**.

   To run all tests in the selected project or solution, click **Run All** in the **Test View** or the **Test Explorer**, depending on which version of Visual Studio you are using.

4. If you are testing a Web application, the **Select Browser** dialog box opens. Select the browser and click **Run**.

   Note: If multiple applications are configured for the current project, the **Select Browser** dialog box is not displayed.

5. *Optional:* If necessary, you can press both **Shift** keys at the same time to stop the execution of the test.

6. When the test execution is complete, the **Playback Complete** dialog box opens. Click **Explore Results** to examine the results of the tests with TrueLog or click **OK** to close the dialog box.

   Note: When you execute your tests, and Visual Studio starts the components that are needed for the execution of the tests, Visual Studio will clean up everything when the test execution is finished, terminating the Open Agent and all open browser windows.

Enabling TrueLog

For new Silk4NET scripts, TrueLog is enabled by default. You can enable or disable TrueLog by checking or un-checking the **Enable TrueLog** check box in the **TrueLog** tab of the **Script Options** dialog box. To open the **Script Options** dialog box, click **Silk4NET** > **Edit Options**.

To enable TrueLog for existing Silk4NET scripts, which are using the Visual Studio Unit Testing Framework, you have to replace the `TestClass` attribute of all test classes in the script with the `SilkTestClass` attribute.

To enable TrueLog for existing Silk4NET scripts:

1. Open the script that contains the test class for which you want to enable TrueLog.
2. Add the `SilkTestClass` attribute to the test class.

By default, the TrueLog is created in the `TestResults` sub-directory of the directory, in which the Visual Studio solution file and the results of the Visual Studio Unit Testing Framework are located. To specify a different location for the TrueLog, click **Silk4NET** > **Edit Options** to open the **Script Options** dialog box and click **Browse** to the right of the **TrueLog file** field.

The Visual Studio solution file is the file in which the Silk4NET scripts are located. When the Silk4NET test execution is complete, a dialog box opens, and you can click **Explore Results** to review the TrueLog for the completed test.

Examples

To enable TrueLog for a class in a Visual Basic script, use the following code:

```
<SilkTestClass()> Public Class MyTestClass
  <TestMethod()> Public Sub MyTest()
    ' my test code
  End Sub
End Sub
```

To enable TrueLog for a class in a C# script, use the following code:

```
[SilkTestClass]
public class MyTestClass {
  [TestMethod]
  public void MyTest() {
    // my test code
  }
}
```

Analyzing Test Results

After running a test, you can review the test results and analyze the success or failure of the test run.

1. Run a Silk4NET test. When the execution is finished, the **Playback Complete** dialog box opens.
2. Click **Explore Results** to examine the results of the tests with TrueLog. Silk TrueLog Explorer opens.
3. Click through the results in Silk TrueLog Explorer.

   Silk TrueLog Explorer captures a screenshot whenever a test fails.