

Open2Test Test Automation Framework for SilkTest - Quick Start Guide

Version 1.0 January 2010

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1 Purpose of the Document

This document drives the settings and describes how to get started with keyword-driven scripting in SilkTest.

2 Enabling Extension

Enabling Extensions is performed to identify/recognize the objects in Application Under Test (AUT) by SilkTest.

An extension is a file that serves to extend the capabilities of, or data available to, a more basic program. SilkTest provides



extensions for testing applications that use non-standard controls in specific development and browser environments.

Extensions can be enabled using any of the following methods:

2.1 Using Basic Workflowbar

1. To enable the extensions, launch the Application Under Test (AUT), then click on "Enable Extensions" in the "Basic Workflowbar" of SilkTest.



Figure 1Basic Workflowbar

2. Enable Extensions dialog is displayed with a list of all the opened applications in the "Application(s)" list.



😤 Enable Extensions		? 🔀
Application(s):	~	<u>S</u> elect <u>R</u> efresh Cancel
If your application is not running, please open it and click Refresh. Make sure it is not minimized.		

Figure 2Enable Extensions Dialog

Note: If the AUT is minimized or not visible in the application(s) section, maximize the AUT and click on the "Refresh" button in the Enable Extensions dialog.

3. Select the required application from the application(s) list, then click on the "Select" button.

4. Click on the "OK" button in the Extension Settings dialog.



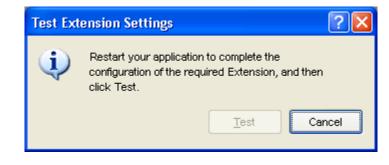
Extension Settings 🛛 💽 🔀
SilkTest detected a standalone Java application using the following Java Virtual Machine (JVM):
C:\Program Files\Java\jre1.5.0_10 SilkTest will copy the file(s) listed below:
Silk Test_java3.jar
to the following location:
C:\Program Files\Java\jre1.5.0_10\lib\ext
SilkTest will install or update the accessibility.properties file in the Vib directory of this JVM.
For rich client applications the config.ini will be updated.
OK Cancel

Figure 3Extension settings Dialog

5. Close the application, and then click on the "OK" button.

SilkTest 🔀
SilkTest needs to modify application configuration. Please shut down the selected application. Click OK when the application has shut down.

The Test Extension Settings dialog is displayed after closing the application.



Note: The "Test" button in the Test Extension Settings dialog gets



enabled once the application (AUT) is relaunched.

6. Relaunch the application, and then click on the "Test" button.

Test Ext	tension Settings 🛛 🛛 🛛 🖓
(į)	Restart your application to complete the configuration of the required Extension, and then click Test.
	Test Cancel

7. Click on the "OK" button in the dialog below once the extensions process is complete.

Test Pa	ssed 🛛 🔀
Test Par	Configuration of your Java Application is complete. You are now ready to configure the recovery system. The recovery system restores your application to a stable state, known as the BaseState: - Before running a testcase - During a testcase - If an error occurs - After a testcase completes This ensures that your tests can run unattended, even if an application error occurs.

2.2 Using the Options

1. Select Options \rightarrow Extensions, as shown below.



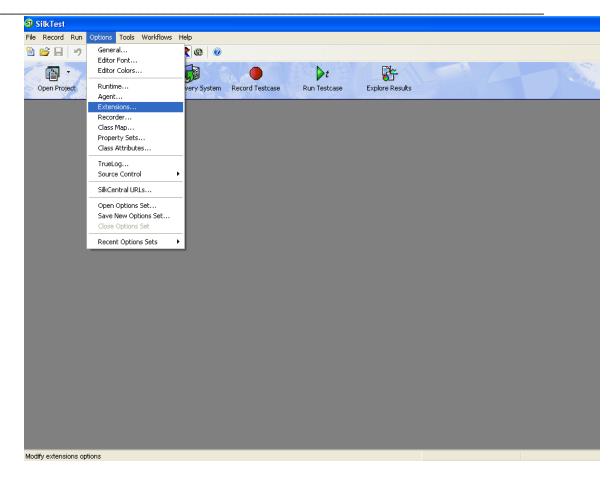


Figure 4SilkTest Host Options Dialog

2. Select the type of the AUT (e.g., Java, .Net, etc) from the "Extension Enabler" dialog, then click on the "OK" button.



Application	Primary Extension	Java	ActiveX	Accessibility	.NET		
America Online, Internet Explorer	Disabled					Options	
Firefox 1.5	Disabled					Extension	<u>N</u> ew
nternet Explorer 6	Internet Explorer						<u>-4</u> 644
Internet Explorer 7	Disabled					Java	Duplicate
Internet Explorer 8	Disabled					<u>J</u> ava	Duplicate
Java Application	(None) 💉	✓				ActiveX	Remove
Netscape Navigator 7	Disabled					Activex	Remove
No-Touch App	Disabled					Accessibility	Details

Figure 5Extensions Enabler Dialog

Once the enabling extension is completed, the recovery system may need to be set.

2.3 Setting Recovery System

The recovery system is used to set the default base state for the application.

By default, the recovery system carries out four tasks for client-server applications:

- Ensures that the application or browser is running
- Restores the application if it is minimized
- Sets the application active
- Closes any application child windows or dialog boxes

1. To set the recovery system, launch AUT, then click the "Set Recovery System" icon on the "Basic Workflowbar" of the SilkTest Host.



pendest SilkTest - Open Source Test Automation Framework Quick Start Guide

				▶t	*
Open Project	Enable Extensions	Set Recovery System	Record Testcase	Run Testcase	Explore Results

The Set Recovery System dialog is displayed with the list of the open applications in the "Application" section.

🖹 Set Recovery System 🔹 🤶 🔀
<u>F</u> rame filename:
C:\Documents and Settings\027861\Desktop\SilkTest\Basava\Datadriven\frame.inc
Application:
Program Manager
Test Application
AUT
Working directory:
C:\Program Files\Borland\SilkTest\JavaEx\JFC
Command line:
C:\Program Files\Java\jre1.5.0_10\bin\java.exe -Dsilktest.tafont=arialuni.ttf -cp .;C:\WINDOWS\Fonts ta
Window <u>n</u> ame:
TestApplication
OK Cancel

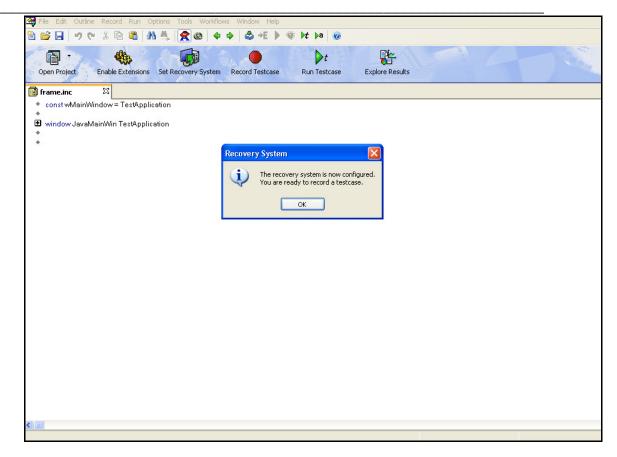
Figure 6Set Recovery System Dialog

2. Select the application from the application section, then click on the "OK" button.

3. Click on the "OK" button in the recovery system completion popup message dialog.

New "frame.inc" file is created.





3. Click on the "OK" button in the popup message window.

3 Creating New Test

A new test in SilkTest can be created from SilkTest Host. There are two types of test files: Script files, and data-driven files.



3.1 Scripts File Creation in SilkTest

StilkTest File Record Run	n Options	Tools Workflo	ws Help					
New Open	Ctrl+N Ctrl+O	6 A 4						
New Project Open Project Close Project		xtensions Se	t Recovery System	Record Testcase	▶ t Run Testcase	Explore Results	1	
Export Project Email Project	10							
Check Out Check In	Ctrl+T Ctrl+K	-						
Run Debug								
Printer Setup								
Recent Files Recent Projects)							
Exit	Alt+F4	-						

Figure 7New File Creation

2. Select the "4Test script" option and click on the "OK" button in the New File dialog.



🗎 New File	? 🛛
Create a new file	1 N
Select the file type.	
- File type	
🔘 Test frame	
🔵 Test <u>p</u> lan	
⊙4Test <u>s</u> cript	
🔘 4Test include	
🔘 S <u>u</u> ite	
<u>○ ⊤</u> ext	
	OK Cancel

Figure 8New File Selection Dialog

A blank script file will be created. The file can then be saved in the preferred location.

3.2 Creating New Data-Driven Test

Note: Before creating a data-driven test file, a 4Test script file and a keyword script file or keyword script template should be prepared.

1. Select Workflows \rightarrow Data Driven



SilkTest				
ile Record Run Options Tools Workflows Help				
🖹 📂 🔚 🔊 (* 🔏 💼 💼 🗸 Basic Data Driven) 🕗			
Open Project Enable Extensions Set Recovery	System Record Testcase	▶ t Run Testcase	Explore Results	
reate a Data Driven Testcase				

Figure 9SilkTest Workflows

2. Click on File \rightarrow Open or click on $\stackrel{\frown}{=}$ toolbar icon.



Image: Control Run Options Tools Workflows Help New Ort-N Open	🦻 SilkTest					
CPFn CPF0 New Project Ches Project Check Out Crf+T Check Nu Crf+T Check Nu Crf+T Debug Printer Setup Printer Setup Printer Setup Exat Project Printer Setup Printer Setup Printer Setup Printer Setup Printer Setup Exat No e						
New Project Case Project Export Project Ender Koul Cit+T Check Nu Cit+T			📇 😤 🕲 🥹			
Enal Project Check Out Ch'H T Check Out Ch'H T Run Debug Printer Setup Printer Setup Recent Files Printer Setup Exit Ak+F4	New Project Open Project	12		5	L-AL	
Check In Ctrl HC Run Pither Setup Pither Setup Recent Projects Exit Alt+F4						
Debug Printer Setup Recent Friles Recent Arbiteta Data						
Recent Firejects * Exit Alt+F4						
Recent Projects • Exit Alt+F4	Printer Setup					
	Exit	Alt+F4				
	pen an existing file					

Figure 10 Opening an Existing File

3. Select an existing script (.t) file and then click on the "Open" button.

Note: If the script file is not created or doesn't exist, then create a new script file as explained in section 3.1

4. Now click on the "Data Drive Testcase" icon in the "Data Driven Workflowbar" of SilkTest.







5. Select the testcase name from the Testcase section in the "Select Testcase" dialog, then click on the "OK" button.

Select Testcase		? 🔀
Testcase: example		OK Cancel
Figure 12	Select Testcase Dialog	

6. Specify data-driven script file in the Specify Data Driven Script File dialog, then click on the "OK" button.

Specify Data Driv	en Script File	? 🛛
	for the Data Driven Testcase ile / Overwrite an existing file ng file	
<u>F</u> ilename:	Example.g.t	
<u>S</u> ave as format:	UTF-8	~
	ОК (Cancel

Figure 13Specify Data-Driven Script File Dialog

Note: The Filename will be displayed by default (i.e., the same name as the ".t" file with an extension ".g.t").

7. Select a data source file and then click on the "Browse" button in the select data source dialog.

8. Browse for the keyword scripts Excel sheet path, click on "Open", and then click on the "OK" button in the select data



source dialog.

Select Data Source 🛛 ? 🛛
Select Data <u>S</u> ource:
Silk DDA Excel 👻
Select <u>W</u> orkbook:
C:\Documents and Settings\027861\Desktop\SilkTest\Basa'
OK Cancel

Figure 14 Select Data Source Dialog

Note: Silk DDA Excel data source file is used for keyword scripting.

9. Click on the "OK" button in the Specify Data Driven Testcase dialog.

Specify Da	ata Driven Testcase 🛛 🔹 🔀
	n ew Data Driven Testcase write existing Data Driven Testcase
<u>N</u> ame:	DD_example
	OK Cancel

Figure 15Select Data Driven Testcase Dialog

Note: The name of the data-driven testcase is displayed by default (i.e., it will be same as the script (.t) file prefixed with "DD_").

10. Click on the "Cancel" button in the "Find/Replace Value" dialog.

A new data-driven test is generated after clicking on the "Cancel" button in the "Find/Replace Value" dialog.



Note: The sheet names and column names of the keyword script Excel file will be displayed in the table and column droplists. This is a validation of the set-up.

Find / Replace Values		? 🔀
Find values of type ✓ <u>T</u> ext ✓ <u>N</u> umber ✓ Tru <u>e</u> /False	Direction O Down O Up	<u>Find Next</u> <u>R</u> eplace <u>C</u> ancel
Replace values with Value: Table: with Sheet1\$ Don't show me this again	C <u>o</u> lumn:	

Figure 16 Find/Replace Values Dialog



Eile Edit Outline <u>R</u> ecord Run Options Tool <u>s</u> Workflows <u>Wi</u> ndow <u>H</u> elp	
📂 🗔 🤊 (* 3 🖻 🛢 🗥 🙏 👷 🌚 🗢 🔶 🐔 🕨 🔖 材 🜬 🧶	
ta Drive Testcase Find/Replace Values Run Testcase Explore Results	
) Sampletest.g.t 🛛	
<pre>d values of type: V Text V Number V True/False Prev Next Replace value with:</pre>	Column:

Figure 17 New Data-Driven Test file

4 Test Settings for Keyword-Driven Scripting

The data-driven testing approach available in SilkTest is used for achieving the keyword-driven approach.

With 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 following test setting needs to be done before proceeding with the keyword-driven scripting.

Figure 18 Sample Keyword-Driven Test

4.1 Data-Driven Assistance Section

The following file paths need to be mentioned in the Data-Driven Assistance Section:

1. Datadriver File - Specify the path of the file where the datadriver script is stored.

2. Framework File - Specify the path of the file where the framework script is placed.

3. Window Declaration File - Specify the path of the file where



the object repository is placed.

4. Common Function and User-Defined Functions - Specify the path of the common functions and user-defined functions associated with the framework script.

4.2 DSN (Data Source Name)

Mention the path where the keyword script excel file is placed. Also mention the username and password, if applicable in the DBQ path.

Note: DSN file name will be displayed by default, which will be the data source file name that you selected while creating a datadriven script.

4.3 Global Record for Each Testcase

Mention the sheet name used for driving the keyword script in the keyword script excel file (i.e., after creating a new data-driven script file, the following script will be generated by default in the Global Record for each testcase section).

type REC_DATALIST_DD_example is record

Below this line, mention the following as shown in figure 4.1 above.

REC_<SheetName>_ rec<SheetName>_

Note: SheetName will be the name of the tab containing the script in the keyword script Excel file.

4.4 Global Record for Each Table

The columns of the keyword script Excel file need to be declared in this section (i.e., all the columns which are used for keyword scripting).

A sample script is given below:

[-] type REC_SheetName_ is record

- [] STRING <Column A name>
- [] STRING <Column B name>
- [] STRING <Column C name>
- [] STRING <Column D name>
- [] STRING <Column E name>



4.5 Global Record Containing Sample Data for Each Table

The column names used in the keyword script Excel file need to be declared in this section:

A sample script is given below:

[+] REC_<SheetName>_ grTest_<SheetName>_ = {...} [] "Automate" // First Column name of the keyword script excel [] "Action" //Second Column name of the keyword script excel [] "Object" //Third Column name of the keyword script excel [] "Action Value1" // Fourth Column name of the keyword script excel [] "Action Value2" // Fifth Column name of the keyword script excel

4.6 Calling Keyword Script

The following line will be generated after creating a new datadriven test (.g.t) file.

Note: "DD_example" is the name of the data-driven testcase.

A sample script is given below:

[-] testcase DD_example (REC_DATALIST_DD_example rData) appstate none

```
[ ] recording
//Specifies the first line of the keyword script, and it's the
counter of the keyword script.
[ ] Int j=1
```

//Declaration of arrays of anytype

- [] ARRAY[50] OF Anytype aCellData
- [] ARRAY[50] OF Anytype bCellData
- [] ARRAY[50] OF Anytype cCellData
- [] ARRAY[50] OF Anytype dCellData
- [] ARRAY[50] OF Anytype eCellData
- // Assigning of each column values to carry for particular row
 [] l={rData.rec<SheetName>_.<Column A Name>}



- [] m={rData.rec<SheetName>_.<Column B Name>}
- [] n={rData.rec<SheetName> _.<Column C Name>}
- [] p={rData.rec<SheetName> _.<Column D Name>}
- [] q={rData.rec<SheetName>_.<Column E Name>}

//Keyword driver function is called here
[] Keyword_Driver(aCellData,bCellData,cCellData,dCellData,
eCellData) // Call to Framework.

5 Managing Object Repository and Other Files

SilkTest learns the interface of an application to be able to work with it. It does this by interpreting the objects and recognizing them based on the class, properties, and methods that uniquely identify them. During testing, Silk Test interacts with the objects to submit operations to the application automatically, simulating the actions of a user, and then verifies the results of each operation. The simulated user, SilkTest, is said to be driving the application.

The repository includes descriptions of the GUI objects that comprise the application. Based on the properties and methods SilkTest associates with these objects, SilkTest can recognize the actions performed on them and intelligently record those actions into test script using the 4Test language.

The objects from the window declaration repository will be uploaded and made available for the tests either by using them in the "DATA DRIVEN ASSISTANT Section" of the data-driven test (.g.t) file or will be uploaded and made available for the tests.

Follow the steps below to upload the object repository and other files (Common functions, Userdefined functions or any ".inc" files).

1. Click on Options > Runtime



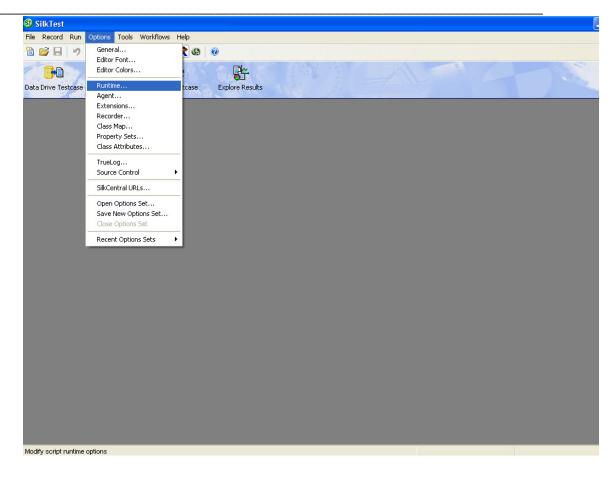


Figure 19Associate repository files Dialog



🗏 Runtime Optio	ons	×				
-4Test						
Agent <u>n</u> ame:	(local) Vetwork: TCP/IP					
Default Agent <u>:</u>	Classic Agent					
Arguments:						
<u>U</u> se path:						
Use files:	nYmame.inc,extendYexplorer.inc,extendYjavaex.inc,extendWIN32WIN32.inc					
Object filepath:						
<u>G</u> UI targets:]				
Default <u>B</u> rowser:	Internet Explorer 6					
Sa <u>v</u> e object file	es during compilation	J				
Results						
Directory/File:						
<u>H</u> istory size:	5					
✓ Write to disk af	fter each line 🛛 Show overall summary					
🗹 Find Error stop	Find Error stops at warnings					
Execution						
Minimize while i	running					
Show detailed :	status window Print tags with agent calls					
📃 Save status wij	indow position					
Animated Run I	Mode (Slow_Motion)					
	OK Cancel					

Figure 20

Runtime Options Dialog

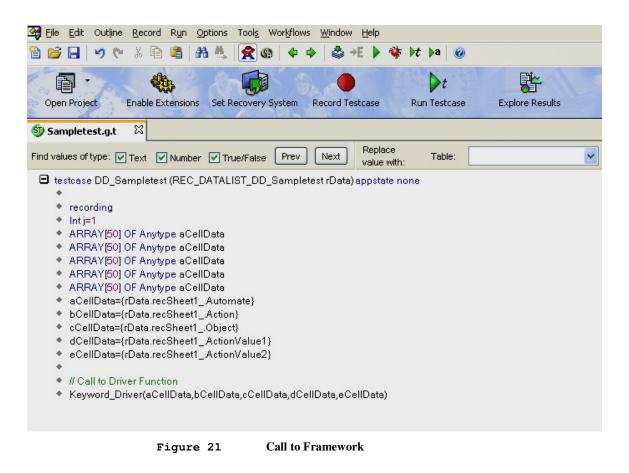
2. Browse for the object repository files by clicking on the icon next to "Use path" filed in Runtime Options dialog, then click on the "OK" button.

Note: Can also associate Framework file, Common functions file, etc. by using the above method, instead of defining in the .g.t file.



6 Call to Framework

The call to Keyword_Driver () needs to be specified in the test script as shown below. This will call the framework file associated with the test and perform the actions by interpreting the keywords specified in the keyword script file. The parameters that are required to be passed to Keyword_Driver () are the names of the active data columns where the script is present.



The script can be run by clicking on the 🕨 icon on the toolbar or by pressing the F9 button.

7 Usage of Keywords

The keywords should be entered in the Excel sheet, and this Excel



sheet will be associated to the test in the DSN section of the data-driven test as explained in section 4.2

Note: Refer to the keyword naming convention document for more details about keyword syntax.

8 Test Results for a Keyword-Driven Script

Test execution results can be viewed and analyzed as soon as the run session ends. Click on the "Explore Results" icon on the Data-Driven Workflowbar and choose the file.

The results window will be displayed.



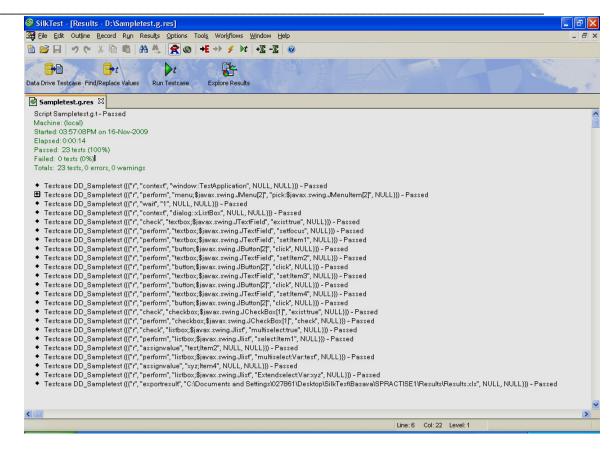


Figure 22 Test Results in SilkTest

8.1 External Test Results for Keyword-Driven Test Scripts

The check point test execution results can be viewed and analyzed as soon as the run session ends.

Open the Results.xls file present in the results folder. The result file will be displayed.

Note: The checkpoint results file would be stored in the results folder in the script file path.



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🛛 Microsoft Excel - Test.xls			
🛅 🔄 🖄 🖾 🥵 🏹 茨 🏷 🗿 😼 🕼 🖓 🗮 Reply with Changes End Review			
Eile Edit <u>Vi</u> ew Insert Format <u>T</u> ools <u>D</u> ata <u>W</u> indow <u>H</u> elp			Typ
	К	L	M
1 1 CheckPointPASSED			
2 Check-checkbox, The checkbox xCheckBox.JavaJFCCheckBox("\$javax.swing.JCheckBox[2]") is enabled			
3 ####################################			
4 1 CheckPointPASSED			
5 Check-checkbox,The checkbox xCheckBox.JavaJFCCheckBox("\$javax.swing.JCheckBox[2]") exist			
6 ####################################			
7 1 CheckPointFAILED			
B Check-checkbox,The checkbox xCheckBox.JavaJFCCheckBox("\$javax.swing.JCheckBox[2]") doesnot exist			
9 ####################################			
10 1 CheckPointPASSED			
11 Check-checkbox,The checkbox xCheckBox.JavaJFCCheckBox("\$javax.swing.JCheckBox[2]") exist			
13 1 CheckPointFAILED			
14 Check-checkbox,The checkbox xCheckBox.JavaJFCCheckBox("\$javax.swing.JCheckBox[2]") doesnot exist			
15 ####################################			
16 1 CheckPointFAILED			
17 Check-checkbox,The checkbox xCheckBox.JavaJFCCheckBox("\$javax.swing.JCheckBox[2]") is not enabled			
19 1 CheckPointFAILED			
20 Check-checkbox,The checkbox xCheckBox.JavaJFCCheckBox("\$javax.swing.JCheckBox[2]") is not state			
21 ####################################			
22 1 CheckPointFAILED			
23 Check-checkbox,The checkbox xCheckBox.JavaJFCCheckBox("\$javax.swing.JCheckBox[2]") is not state			
24 ####################################			
25 1 CheckPointPASSED			
26 Check-checkbox,The checkbox xCheckBox.JavaJFCCheckBox("\$javax.swing.JCheckBox[2]") is state			
27 ####################################			
28 1 CheckPointFAILED			
29 Check-checkbox,The checkbox xCheckBox.JavaJFCCheckBox("\$javax.swing.JCheckBox[2]") is not state			
30 ####################################			

Figure 23 External Test Results in SilkTest

9 References



SilkTest Help document

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