VERSION 2015.1 JANUARY 19, 2015



TEST STUDIO QUICK-START GUIDE

STANDALONE & VISUAL STUDIO PLUG-IN

TELERIK A PROGRESS COMPANY

TEST STUDIO QUICK-START GUIDE

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CREATE YOUR FIRST TEST

Let's jump right in and show you how easy it is to record test. We'll show you how to record a Web, WPF, and Silverlight test with the Standalone and Visual Studio plugin versions. Ready? Here we go.

STANDALONE WEB TEST

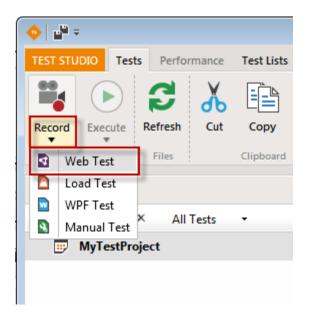
- 1. Launch Telerik Test Studio.
- 2. Click New > Create new project.

🔶 📲 =	
TEST STUDIO Tests	Performance Test Lists Results Reports Help
New	Create new project
Open	
Save	
Export	
Recent	
Close Project	
Exit	

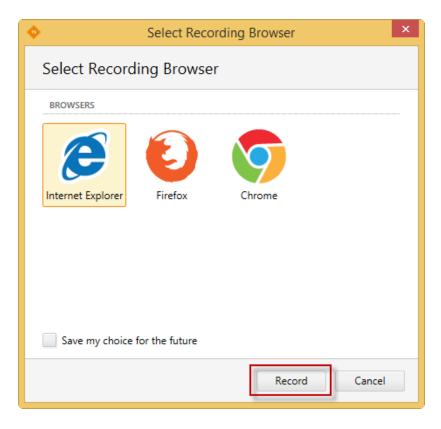
3. Provide Project Name and Location.

💠 New Project		
Project Name: Location:	MyTestProject C:\TestStudioProject	
	ОК	Cancel

4. Click **Record > Web Test**.

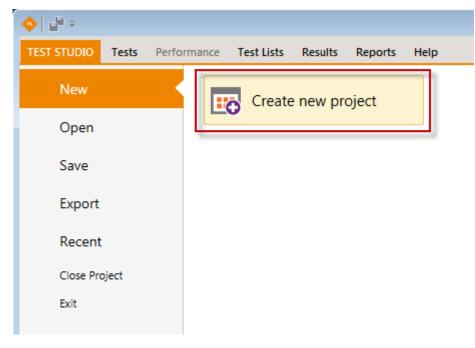


5. Select recording browser and click Record:

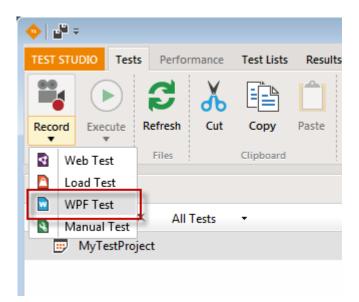


STANDALONE WPF TEST

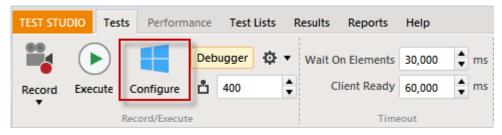
- 1. Launch Test Studio.
- 2. Click New > Create new project.



3. Click **New Test > WPF Test**.



4. Click **Configure** button.

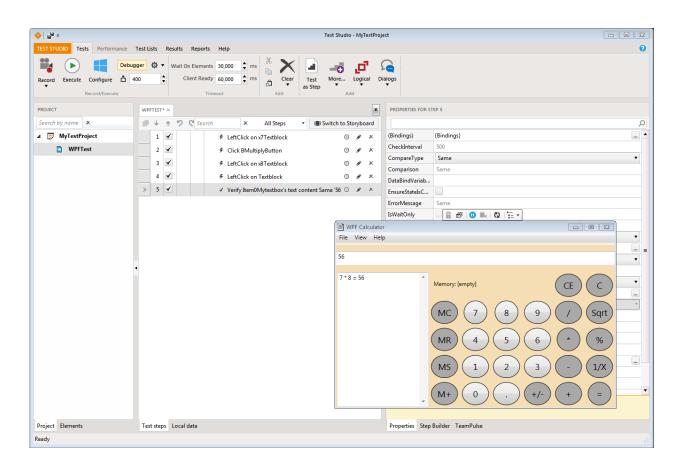


The **Configure WPF Application Path** window appears. There are two options to determine the default application to launch when recording and executing this test.

- WPF Application Path drag and drop the shortcut icon into this text box, or click Browse and locate it manually.
- Current Path Expanded read-only display of full path if environment variables are used.
- Use default path whether to use the path set here or the default path set in Project Settings > General.
- Active WPF Applications Telerik Test Studio detects all WPF apps currently running and lists them. Highlight the desired app and press **Select Application**.
- Recording Options whether to record window state changes.

TEST STUDIO Tests Performance Test List	is Results Reports Help	
Record Execute Configure de 400	 Wait On Elements 30,000 rms Client Ready 60,000 rms Timeout Edit Edit Edit Add 	
PROJECT	Configure WPF Application Path	
Search by name × All Tests •	WPF Application Path	
⊿ 😳 MyTestProject	Determines the application to launch when recording or executing this test.	
WPFTest	WPF Application Path: (Drag & Drop the Link to your Application or browse to it.)	
	C:\Work\WPF Samples\Executables\AvalonCalculator2_WPF40Copy.exe Browse	
	Paths support environment tokens (i.e. %ProgramFiles%\MyApp\App.exe). Current Path Expanded:	
	C:\Work\WPF Samples\Executables\AvalonCalculator2_WPF40Copy.exe	
	Use default path (Project -> Settings -> General)	
	Default Path:	
	Active WPF Applications	
	IAStorDataMgrSvc (3712): <no title=""></no>	
	Jing (4368): <no title=""> SCNotification (6500): <no title=""></no></no>	
	Refresh	
	i circai	
	To select a currently running application, click 'Select Application'	
	Recording Options	_
	Record Window State Changes (Maximize, Minimize, Restore, Close)	
	OK Cance	9

- Click **OK**. If you need to later modify the WPF application path, choose **Configure** from the toolbar.
- Hit **Record** to launch the app with the recording toolbar docked at the top.



Notice that steps are added to the test as actions are taken within the application.

Close the application to stop recording. That's how easy it is to create your first WPF Test!

VISUAL STUDIO PLUG-IN WEB TEST

- 1. Launch Visual Studio.
- 2. Click Telerik > Test Studio > Create New Test Project.

Start Page - Micro	osoft Visual Studio (Ad	lministrator)
FILE EDIT VIEW	TELERIK DEBUG	TEAM SQL TOOLS TEST ANALYZE WINDOW HELP
G - O 📴 - 🔮	Test Studio	Create New Test Project
* # A ÷	 About 	
od Start Page → ×		
Start Page → ×		GET STARTED HOW-TO VIDEOS (STREAMING)

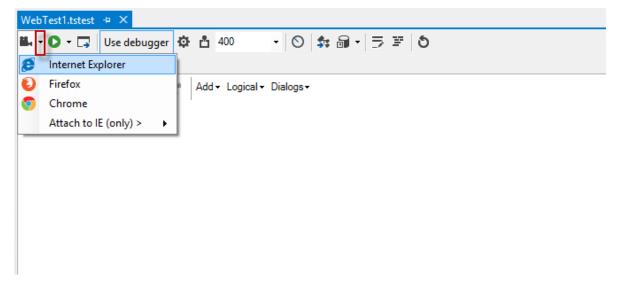
3. Choose **Telerik > Test > VB or C# Test Studio Project**, name the project and click **OK**.

▷ Recent		.NET Framework 4.5	 Sort by: Default 	- III II	Search Installed Templates (Ctrl+E)
▲ Installed		Visual Basic Tes	st Studio Project	Telerik	Type: Telerik
✓ Templates ▷ Visual Basic ▷ Visual C#	Î	Visual C# Test S	,	Telerik	Create Telerik Test Studio Test Project to record and/or code browser based scenario tests for your web applications. The tests can be used to record actions
 ▷ Visual C++ ▷ Visual F# SQL Server ▲ Telerik Test LightSwitch ▷ Other Project T ▷ Online 	ypes 🔻				against web elements, verify web elements' states and content and to also perform test synchronization to help automate rich internet applications (RIAs) that utilize dynamic technologies like ASP.NET AJAX, ASP.NET MVC or Silverlight. The tests can be recorded once and then run against InternetExplorer, Firefox, Chrome or Safari.
Name:	TestStudioProjec	:t32			
Location:	c:\users\landry\o	documents\visual studio 2	2012\Projects	-	Browse
Solution name:	TestStudioProjec	:t32			✓ Create directory for solution ☐ Add to source control
					OK Cancel

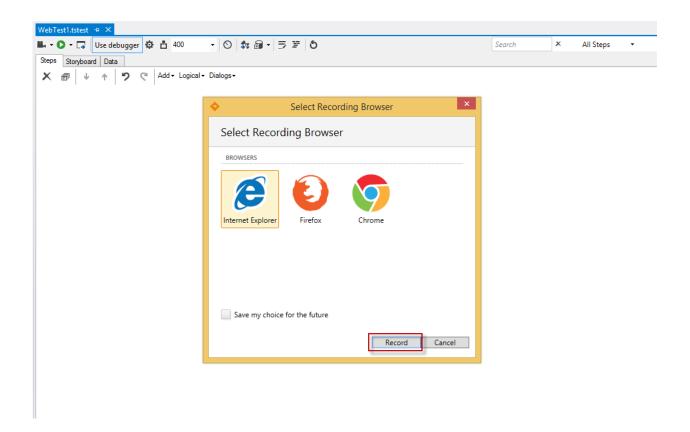
4. A Web Test is added to the project. Open the Web Test to view the Steps pane.

BEGIN RECORDING IN THE VS PLUGIN

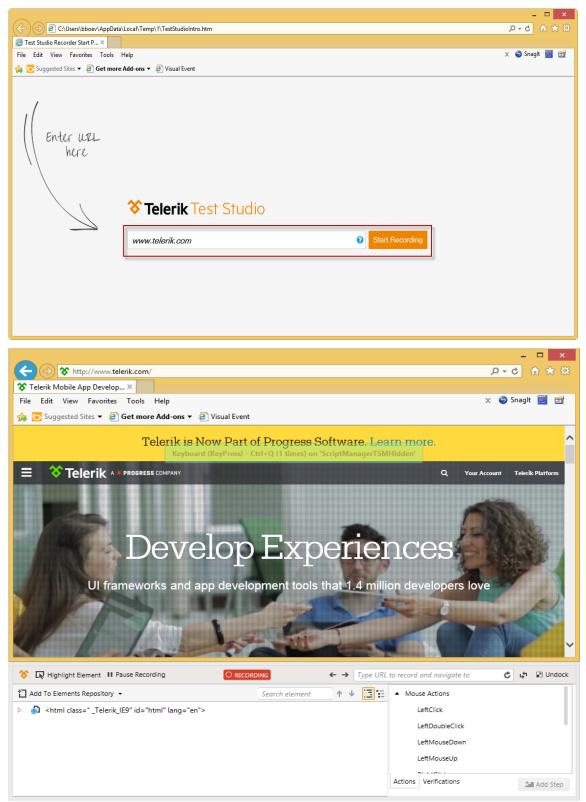
 Select the recording browser. The recording will start automatically in the selected browser (2013 R2).



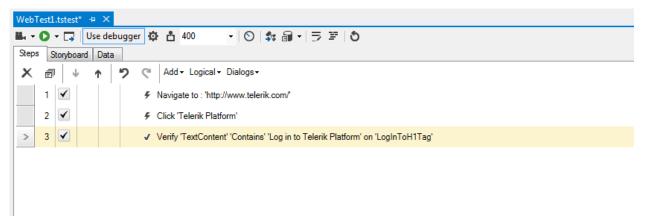
Or click the **Record** button to begin recording test steps in the already selected default browser.



2. Enter a URL and press Enter/Start Recording button. A recording step is added to the Steps pane and the recorder is attached to the browser.



3. Perform actions on the page. More steps are added to the Steps pane.



4. Close the recording browser window. That's how easy it is to create your first Web Test! Save and build your project.

VISUAL STUDIO PLUG-IN WPF TEST

- 1. Launch Visual Studio.
- 2. Click Telerik > Test Studio > Create New Test Project.

Start Page - Micro	osoft Visual Studio (Ad	ministrator)					
FILE EDIT VIEW	TELERIK DEBUG	TEAM SQL	TOOLS	TEST	ANALYZE	WINDOW	HELP
G - O 📴 - 🔮	Test Studio	🕨 📑 Crea	ate New Te	st Project	ī		
* * ? -	 About 	-				1	
g Start Page → ×							
Start Page → ×							
			G	ET STARTE	D HOW-	TO VIDEOS (ST	REAMING)

3. Choose **Telerik > Test > VB or C# Test Studio Project**, name the project and click **OK**.

▷ Recent		.NET Framework 4.5 * Sort by: Default	- III II	Search Installed Templates (Ctrl+E)
▲ Installed		Visual Basic Test Studio Project	Telerik	Type: Telerik
▲ Templates ▷ Visual Basic ▷ Visual C#	Î	Visual C# Test Studio Project	Telerik	Create Telerik Test Studio Test Project to record and/or code browser based scenario tests for your web applications. The tests can be used to record actions
▷ Visual C++ ▷ Visual F# SQL Server				against web elements, verify web elements' states and content and to also perform test synchronization to help automate rich internet applications (RIAs)
✓ Telerik Test LightSwitch				ASP.NET AJAX, ASP.NET MVC or Silverlight.
 Other Project T Online 	ypes 👻			The tests can be recorded once and then run against InternetExplorer, Firefox, Chrome or Safari.
Name:	TestStudioProje	ct32		
Location:	c:\users\landry\	documents\visual studio 2012\Projects	*	Browse
Solution name:	TestStudioProje	ct32		 Create directory for solution Add to source control
				OK Cancel

4. Right click on the project node in the solution explorer and select **Add > New WPF Test**.

	✓ Solu	ition Explorer 🔹 🖣 🗙
-	× All Steps - 🔾	ି 🔂 🧿 - ତି 🕼 🔑 🔂
	Sear	rch Solution Explorer (Ctrl+;)
r: Chrome 🔻 🏟 🏦 400 🕶 🖸 🗸 🙆		Solution 'TestStudioProject32' (1 project)
to : 'http://duckduckgo.com/'	🏥 Build	perties
goHomepageDiv'	Rebuild	erences
His114thLink'	Clean Run Code Analysis	ta tings.aiis :bTest1.tstest
	Scope to This	WebTest1.resx
	New Solution Explorer View	
	Calculate Code Metrics	
The New Item Ctrl+Shift+A	Add	• •
ta Existing Item Shift+Alt+A	Add Reference	
管 New Folder	Add Service Reference	
Test Studio Web Test	Hanage NuGet Packages	
🛛 Test Studio Wpf Test	🔩 View Class Diagram	
🖄 Unit Test	Set as StartUp Project	
월드 Ordered Test	Debug	• • • • • • • •
the second second	tea anala a a a a	possessessessessessessessessesses ▼ ₽ ×

5. Click Add.

▲ Installed	Sort by:	Default 👻 🏭		Search Installed Templates (Ctrl+E)
 Visual C# Items Code 	۲	Web Test	Visual C# Items	Type: Visual C# Items Use a Test Studio WPF test to record and
Data General	$\mathbf{\overline{o}}$	Wpf Test	Visual C# Items	playback scenarios for your WPF applications.
Web Windows Forms	Ę,	Class	Visual C# Items	
WPF Reporting	•0	Interface	Visual C# Items	
 Test Workflow 		Windows Form	Visual C# Items	
▶ Online		User Control	Visual C# Items	
	£4	Component Class	Visual C# Items	
		User Control (WPF)	Visual C# Items	
	10	About Box	Visual C# Items	
	Ð	ADO.NET Entity Data Model	Visual C# Items	
	Ð	Application Configuration File	Visual C# Items	
	E	Application Manifest File	Visual C# Items	
	Ēï	Assembly Information File	Visual C# Items	
Name: WpfTest1.tstest	å	Authentication Domain Service	Visual C# Items	v
mpriod.500				Add Cancel

6. Open the new test and click the **Configure WPF Application Path** icon in the toolbar.

WpfTest1.t	st + ×
iii O	Use debugger 🕸 📩 400 🔹 🚫 🍰 📾 🔹 ラ 😇 🔕
Steps Sto	poard Data
Xē	🗸 🛧 笋 🍽 Add - Logical - Dialogs -

- 7. The **Configure WPF Application Path** window appears. There are two options to determine the default application to launch when recording and executing this test.
 - WPF Application Path drag and drop the shortcut icon into this text box, or click Browse and locate it manually.

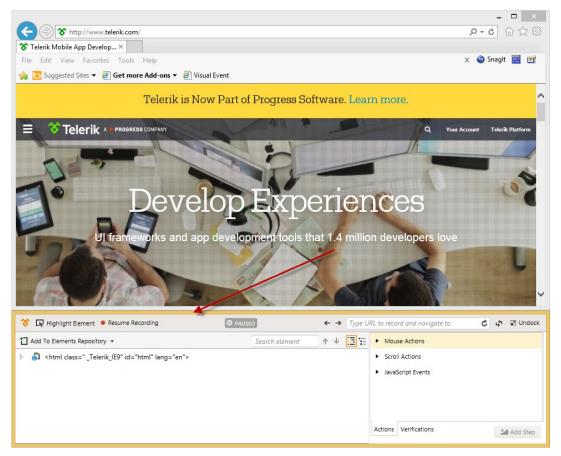
- **Current Path Expanded** read-only display of full path if environment variables are used.
- Use default path whether to use the path set here or the default path set in Project Settings > General.
- Active WPF Applications Telerik Test Studio detects all WPF apps currently running and lists them. Highlight the desired app and press **Select Application**.
- **Recording Options** whether to record window state changes.
- 8. Hit **Record** to launch the app with the recording toolbar docked at the top.
- 9. Notice that steps are added to the test as actions are taken within the application.

Configure WPF Application Path		
WPF Application Path		
Determines the application to launch when recording or executing this test.		
WPF Application Path: (Drag & Drop the Link to your Application or browse to it.)		
		Browse
Paths support environment tokens (i.e. %ProgramFiles%\MyApp\App.exe). Current Path Expanded:		
	8	
Use default path (Project -> Settings -> General) Default Path:		
Active WPF Applications		
IAStorDataMgrSvc (3712): <no title=""></no>	1	Select Application
Jing (4368): <no title=""> SCNotification (6500): <no title=""></no></no>		Select Application
Schouleuter (SSO), the files		Refresh
To select a currently running application, click 'Select Application'		
Recording Options		
Record Window State Changes (Maximize, Minimize, Restore, Close)		
		OK Cancel

10. Close the application to stop recording.

RECORDING TOOLBAR

After entering a URL and pressing Enter/**Start Recording** button the recording toolbar is attached at the **bottom** of the browser:



Here are its features:

R. Highlight Element	Enable/Disable Hover Over Highlighting (Press "Pause/Break" to toggle)
II Pause Recording	Pause Recording (Press "Print Screen" to toggle)
Resume Recording	Start Recording (Press "Print Screen" to toggle)
L ^{f1}	Reconnect Recorder (Restores communication between Test Studio and the recording browser window or WPF app, if necessary)
← → Type URL to record and navigate to	Navigation panel (Type URI to record and navigate to / Refresh Browser))
Undock / Dock	Undock/Dock (Undock or Dock again the recorder)
1 Add To Elements Repository 👻	Add To Elements Repository (Add a single or multiple elements to the Elements Explorer)
	Elements Tree/Tag View (Whether to display the elements as tree view or tag view)

ADD QUICK VERIFICATION STEPS

The easiest and fastest way to add a verification to your test is through the Quick Tasks menu.

- 1. Create a Web Test and click Record.
- 2. Navigate to http://bing.com
- 3. Enter Telerik in the search box and click the Search button.
- 4. Enable hover over highlighting by clicking Highlight Element in the Test Studio Recorder.

♦	Recorder			- 🗆 🗙
Pause Recording		← → Туре	🖒 🦨 🖬 Dock	
Add To Elements Repository 👻	Search element	↑ ↓ 🛄 🗄	Mouse Actions	
Attml lang="en" lang="en" xml:lang="en" xmlns="http://w	www.w3.org/1999/xhtml">			
			 JavaScript Events 	
			1	
			Actions Verifications	Add Step
				Add Step

5. In the recording browser window, hover over the element against which to verify. Choose **Quick Steps > Verify** - text contains entry.

bing	telerik
	Web Images Videos News More
	797,000 RESULTS Telerik strong Telerik strong Telerik guick Steps Quick Steps Verify - element is visible Verify - element is not visible Verify - text contains 'Telerik' Mouse Actions Verify - text contains 'Telerik' Scroll Actions Verify - element is enabled ASP Add to Elements Locate in DOM Wait - element does not exist Wait - element is not visible Wait - element is not visible Wait - element is not visible Wait - element is not visible Wait - element is not visible Wait - element is not visible Wait - element is not visible Wait - element is not visible Wait - element is not visible Wait - element is not visible Wait - element is not visible Wait - element is not visible Wait - element is not visible Wait - element is not visible Wait - element is enabled Wait - element is enabled Extract - element is visible Extract - element is not visible
	academy.telerik.com ¬ Telerik Academy Адрес ж.к. Млад Extract - text contains 'Telerik' Extract - element is enabled Extract - element is enabled

6. The Verify step is added to the test.

bin	bing X									
đ	🗊 🔸 🕇 🎾 🖓 🎲									
	1	✓			F Navigate to : 'http://www.bing.com/'		8	۲	×	
	2	✓			🐔 Enter text 'telerik' in 'SbFormQSearch' 💿 💉 🗡					
	3 ✔ F Click 'SbFormGoSubmit' ③ A ×						×			
>	4	•			✓ Verify 'TextContent' 'Contains' 'Telerik' on 'TelerikStrongTag'		0	۲	×	

CREATE ADVANCED VERIFICATION STEPS

An advanced verification allows you to interactively build verification rules and validate them against a live web document or WPF application.

In order to create custom verification you need to highlight the element and choose Build Step... from the menu:

bing	telerik
	Web Images Videos News More
	797,000 RESULTS
	Telerik - Official Site www.tele a Telerik is f UI controls, end-to-end solutions for mobile app developm Quick Steps iajor development platforms.
	ASP. JavaScript Events Support
	Dem Mouse Actions Devtools for .NET
	Com Scroll Actions Forums
	ASP. Add to Elements Contact Us
	E Locate in DOM
	Comm T Build Step
	www.telerik.com/community ▼

Complete .NET Toolbox. DevCraft Supercharge your .NET productivity; Mobile App Development. **Telerik** Platform Develop cross-platform and mobile applications

In the Recorder select **Verifications** node.

O PAUSED	← → Type URL	to record and navigate to	🖒 🖨 🖬 Dock
Search element	↑ ↓ IB 🗄	 Mouse Actions 	
	•	 Scroll Actions 	
	=	 JavaScript Events 	
	•	Actions Verifications	Add Step
		Search element	Search element

Start by selecting a type of Available Verifications:

- IsVisible
- Content
- Style
- IsEnabled
- Image

IsVisible	Verify element
Content	True
Style	
IsEnabled	
Image	
Actions Ver	ifications 2 Add Step

When crafting verifications, content is dynamically built against the currently selected element. As selections are made, default values are populated according to values the element contains. For example, choose Content as the verification type and three menu options appear.

IsVisible	Verify
Content	InnerText 🔻
Style	
IsEnabled	Exact •
Image	Telerik
Actions Ve	Add Step

Click on the down arrow next to each option to see a list of possible values.

IsVisible	Verify	IsVisible	Verify
Content	InnerText 🔹	Content	InnerText 🔻
Style IsEnabled	InnerText InnerMarkup	Style IsEnabled	Exact Exact
Image	OuterMarkup TextContent StartTagContent	Image	Same Contains NotContain
			StartsWith EndsWith RegEx
Actions	Verifications 2 Add Step	Actions Ve	erifications 🎦 Add Step

Once finished building the verification(s), click Add Step to add it as a step to the current test.

Actions	Verifications	Add Step

The newly created verification appears in the test:

bing	bing X												
đ	Bearch X All Steps ▼ Ill Switch to Storyboard Illl Switch to Storyboard Illl Switc									oard			
	1	✓				۶ Navigate to : 'http://www.bing.com/'					8	۲	×
	2	✓				🗲 Enter text 'telerik' in 'SbFormQSearch' 💿 💉 🗡							
	3	✓				🗲 Click 'SbFormGoSubmit' 💿 💉 🗙					×		
	4	✓				✓ Verify 'TextContent' 'Contains' 'Telerik' on 'TelerikStrongTag'							
>	5 🗸 Verify 'InnerText' 'Contains' 'Telerik' on 'TelerikStrongTag' ⓒ ◈ >				×								

We recommend against using the Content Markup validation types. They are fragile in the face of minor page changes, and different browsers may reorder the element attributes making them unreliable. For more information please see our Automated Testing blog entry on <u>Understanding</u> <u>Validation Content Element Types</u>.

CREATE A DATA DRIVEN TEST

Let's create a new, Local Data Driven test. We'll go through five iterations of the test, each with a different search text.

- 1. Create a new Web Test and click Record.
- 2. Navigate to www.google.com, enter Telerik in the Google search box, and hit the Search button.
- 3. Click the Pause Recording button in the docked toolbar.

🎸 Highlight Element 🛿 Pause Recording	

4. Click the Local Data button in the bottom of the test or the Data tab in Visual Studio.

Image: Search of the second of th	
1 ✓	
2 Image: Steps Storyboard Data > 3 Image: Steps Storyboard Data X Image: Steps Storyboard Image: Steps Storyboard	5
1 Image: Second sec	
2 Z F Enter text 'Telerik' in 'GbqtqText'	
> 3 🗹 🗲 Click 'Span'	
Test steps Local data VS Plugin	
tandalone Version	

5. There are three buttons at the top of this pane. Only **Create a new data table** is enabled. Click it to add a new grid for data.

webtest Columns		6				
	Col1	Col2	Col3	Col4	Col5	
▶1						
* <u>2</u>						

- 6. The default grid will have five columns. This example will execute five iterations of the test with different search text for each.
- 7. Change the columns text box to 1 and click **Update**.

VEBTEST ×	Ŧ
olumns: 1 😪 🔒 🕞	
Col1	
1	
2	

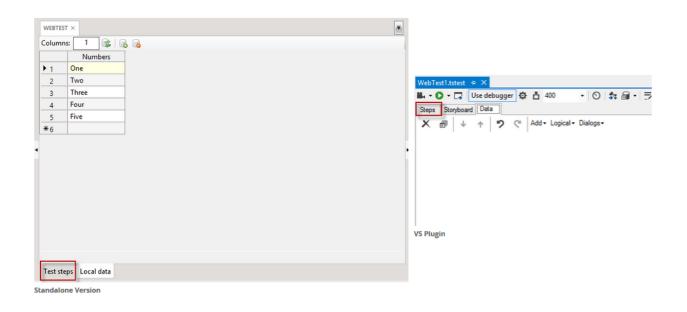
- 8. Enter any text into the first grid cell and hit the Enter or Tab key. The input will move to the second row.
- 9. Continue entering text for the remaining grid cells. New rows are added as you type.

WEBTE	ST ×
Colum	ns: 🚺 🎉 🧊
	Col1
1	One
2	Two
3	Three
4	Four
▶ 5	Five
*6	

10. Right click *Col1* and choose **Rename Column**. In this example, Numbers is the new name.

Local Test Data - WebTest2.tstest								
Columns: 1 📚 🔒 🔒								
	Coli							
1	One	Rename Column						
	Two	Delete Column						
2								
3	Three							
4	Four							
▶ 5	Five							
*6								

- 11. Save the test.
- 12. Data from an array can be used in recorded steps and code behind methods. To bind data from a data array to a recorded step, continue step 13. To use reference data from the data array in a code behind method, skip to step 22.
- 13. Click the **Test Steps** at the button of the test or the **Step** tab in Visual Studio to return to the Test Steps View



14. Highlight step 2. This is the recorded step that sets the value of the Google search text box.

WEE	TEST	×								-
Ē	Ψ	Ť	5	C 4	;		Search × All Steps • III Switch to	Sto	orybo	ard
	1	✓				۶	Navigate to : 'https://www.google.bg/'	3	۶	×
	2	<				5	Enter text 'Telerik' in 'GbqfqText'	3	۶	×
>	3	✓				ş	Click 'Span'	3	۲	×

15. The properties for this step appear in the Properties pane, located on the right of the screen.

		5	D
(Bindings)	{Bindings}		٠
AjaxTimeout	0		
ClosesBrowser			
Encrypt			
IsPassword			≡
KeyHoldTime	100		
LogMessageOn			
Pause	None	•	
PrimaryTarget	/Google/GbqfqText		
RunsAgainst	AllBrowsers	•	
RunsAgainstVer			
RunsAgainstVer	Equals	•	
SecondaryTarget			Ŧ
	Builder TeamPulse		

- 16. Click the '...' button for (Bindings).
- 17. Choose the 'Numbers' from the drop down for Text.

PROPERTIES FOR ST	EP 2				
	ل	ρ			
(Bi Text	•	•			
Aja	Numbers ar				
Closessionser	{ } Add coded data variable				
Encrypt					
IsPassword		≡			
KeyHoldTime	100				
LogMessageOn					
Pause	None 🔻				
PrimaryTarget	/Google/GbqfqText				
RunsAgainst	AllBrowsers 🔹				
RunsAgainstVer					
RunsAgainstVer	Equals 🔻				
SecondaryTarget		•			
	roperties against a datasource. Click the drop erties that support data binding				
Properties Step Builder TeamPulse					

18. Click the **Set** button.

PROPERTIES FOR ST	EP 2	
	۵,	2
(Bi Text	Numbers 🔻	•
Aja	Set Clear	
Closesoromer		
Encrypt		
IsPassword		=
KeyHoldTime	100	
LogMessageOn		
Pause	None	
PrimaryTarget	/Google/GbqfqText	
RunsAgainst	AllBrowsers 🔹	
RunsAgainstVer		
RunsAgainstVer	Equals 🔻	
SecondaryTarget		•
	roperties against a datasource. Click the drop erties that support data binding	
Properties Step	Builder TeamPulse	

- 19. The data for the column named Numbers from the data array is now bound to the Text property for that step. Instead of entering Telerik into the search box, the data stored in the array will be entered.
- 20. Save and execute the test. Note that the test will execute for each row in the data array, for a total of five iterations.
- 21. If the test executes too quickly to validate visually, click the "Enable Annotation" button and set the delay in milliseconds before executing. These are located in the Quick Execution ribbon.

TEST STUDIO Tests Performance	
99, (A)	WebTest1.tstest 🗢 🗙
Debugger 🔅 🔻	👪 - 🔘 - 🗔 Use debugger 🔅 ᆸ 400
Record Execute 💾 400 🗘 🗔	Steps Storyboard Data
Record/Execute (a)	VS Plugin
tandalone Version	

CUSTOM STEPS

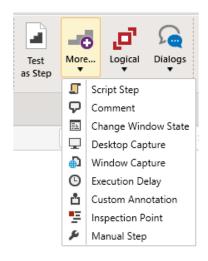
The Recording Surface can help build a wide range of automation and verification quickly and without having to resort to manual configuration. However, there are some steps that need to be added manually. For these, use the "Add" ribbon in the Standalone version and the "Add" button in Visual Studio.

Web

Test as Step	More	b Logical Dialogs		
	1	Script Step		
	P	Comment		
	⊕	Browser Capture		
		Desktop Capture		
	Θ	Execution Delay		
	ů	Custom Annotation		
	Ē	Maximize Browser		
	X)	Clear Browser Cache		
	8	Wait For Url		
	5	Inspection Point		
	ş	Manual Step		

Standalone Version

WPF



Add - Logical - Dialogs -බ Test As Step IJ Coded Step P Comment Capture 0 ۲ O Execution Delay ů Custom Annotation <u>.</u> Maximize Browser ×) Clear Browser Cache Wait for Url 3 5 Inspection Point يو Manual Step





VS Plugin

Standalone Version

- 1. <u>Script Step</u> add a coded step and open the code editor.
- 2. <u>Test as Step</u> run an existing test as a single step.
- 3. <u>Comment</u> display a text comment as a single test step and in the test log.
- 4. <u>Browser and Desktop Capture</u> take a screenshot of only the browser or the entire desktop.
- 5. **Execution Delay** pause the test for a specified amount of time.
- 6. <u>Custom Annotation</u> add a note to display when running "Quick Execution" with Annotation turned on.
- 7. <u>Maximize Browser</u> maximize, minimize or restore the active browser (Change Window State for WPF).
- 8. <u>Clear Browser Cache</u> clears all cookies, temp files or history from the active browser depending on the user's choice.
- 9. <u>Wait For URL</u> suspend the test until the specified URL is loaded into the browser address bar.
- 10. <u>Inspection Point</u> pause the test and display the DOM Explorer.
- 11. <u>Manual Step</u> display a dialog box to enter directions for a manual step.
- 12. <u>Change Window State</u> alter the state of the WPF application window.

TEST EXECUTION (QUICK EXECUTION)

1. Click the Execute button in the Quick Execution ribbon.

TEST STU Record		Wait On Elements 30,000	Help The Help	More	Dialogs	■. ●
Standalo	ne version					VS plugin

For a Web Test, you can select an alternative web browser first.



2. The Test Studio Test Runner launches first in a command prompt window. This calls the applicable browser or application.



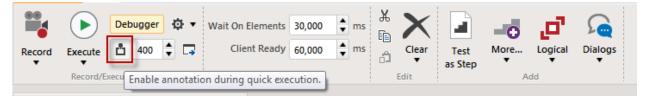
3. Notice the display in the lower right of your screen. It indicates the current step, includes play and pause ability, and shows additional Debug Options if you set a Breakpoint.

	(1/2)	5	••	►	н
1.Navigate to : 'http://bing.com/' Executing	T				

4. Afterwards, test results are automatically displayed. Click View Log for more information.

	/iew Log Cle		
		ar res	ults
I Solution 1 Soluti	0	۲	×
> 0 2 🗹 F Click 'MSNLink'	9	۲	×

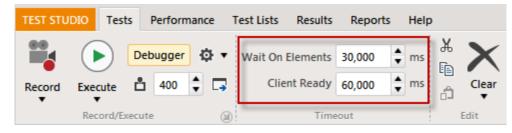
5. Click **Toggle Annotation** button to have the browser annotate each step with a brief message and by highlighting that step's element. This will also slow the test run down by inserting a delay between steps (in milliseconds) you set from either from the drop-down menu or by entering a custom value.



6. Click **Debugging Options** icon in the Quick Execution ribbon or the Visual Studio toolbar to Customize Auto-Pause Options if errors occur.

TEST STUDIO Tests Performance Test Lists Results Reports Help	👪 • 🔘 • 🗔 Use debugger 🌣 🏦 400 🛛 • 🚫 ≉ 📾 • 🗦 😤 🔕
Record Execute 🖞 400 🗘 🗔 Client Ready 60,000 🗘 ms	Steps Storyboard Data X Image: The start is a start in the start in the start is a start in the start
Record/Execute a Timeout Edit	
Standalone version	VS plugin

7. An easy way to change the default Timeouts for Wait on elements and Client ready.



TEST LISTS

In the Standalone version you can execute one or more tests through a Test List. There are two types of Test Lists: Static and Dynamic.

- A Static Test List contains a fixed, predetermined list of tests.
- A Dynamic Test List contains a list of tests that is dynamically generated upon execution based on test properties.

STATIC TEST LIST

- 1. Click the **Test Lists** tab.
- 2. Click List in the Add ribbon.

TEST STUDIO Tests Performance				Test Lists	Results	Repor	ts Help	•	
			Q _o	$\boldsymbol{\times}$					i
List	Dynamic		Edit	Delete	Сору	Run	Abort	Run List	Schedule
÷	List	List	Settings			List	Run	Remotely	TestList
	Add		Ed	lit			Executio	n	Scheduling

- 3. Name the Test List.
- 4. Add the test(s) to the list from left to right.

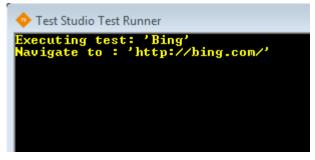
. Name:	Select Test List Type:	
MyTestList	Automated	•
ests 8. Select tests to include in your Test List		(?)
Google	Add	

- 5. Click **OK** to save the new Test List.
- 6. Click **Run List** in the **Execution** ribbon.

TEST S	TUDIO Test	s Performa	nce Test Lists	Resu	lts Report	s Help	
		1	% ×		j 🕑		B 🛗
List	Dynamic List Add		Edit Delete ttings Edit	Сору	Run List	Abort Run L Run Remot	
TEST LI	STS				Run List Execute t	the selected test I	ist(s)
Туре	Test List	T	Date	Т	Owner	Tests T	
<u>a</u>	MyTestList		9/8/2014 3:36:3	89 PM		1	

Select multiple Test Lists using the Shift key or Ctrl + Click, then click Run List to execute those lists in their order of selection.

7. The Test Studio Test Runner launches first in a command prompt window. This calls each test in the list.



8. A browser window or WPF app opens and each test executes in sequence. Upon completion, the Results tab opens.

TES	ST STUDIO	Tests	Perfor	mance T	est Lists	Results	Reports	Help				
	elete De All Sel	elete F lected Local	Reload	Publish to Server Scheduli	Manage Results ng Server	Word	X Excel	VS Result File Export	TFS Build Server	Submit Bug		
Re	sults an _{Day}		duled T Week	est Lists			_	14			_	
	Day		week	Mo	nth	Timelin	e					
	Sunday		WEEK		nth Monday			Ţ	luesday			Wednesday
Sep			WEEK						Tuesday 19			Wednesday 10
- 13 Sep	Sunday		WEEK	Mo	Monday 08	,	014 3:38 PM	0				
⁷ Sep - 13 Sep	Sunday		vveek.		Monday 08	,		0				
7 Sep - 13 Sep	Sunday				Monday 08	,		0				
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7 Sep - 13 Sep	Sunday				Monday 08	,		0				

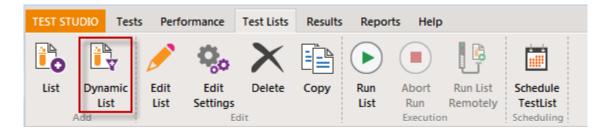
9. To view the test results, double click the test result entry in the Timeline view (MyTestList in this example).

DYNAMIC TEST LIST

1. Click the Project tab. Select a test and refer to the Test Details pane on the right. Below I have set Owner to Telerik and Priority to 1.

2 ¹⁰ 7	Test Studio - MyTestProject	
T STUDIO Tests Performance Test Li	ts Results Reports Help	
rests (a) Files	Paste Manage Add Bind Connect Status Connect Open Check Out Team Quality Bug Settings Test Test	
UECT	BING X GOOGLE X TEST DETAILS	
arch by name × All Tests •		
MyTestProject	> 1 ✓ ۶ Navigate to : 'http://bing.com/' 0 ×	rtart
🛐 Bing		<u>stest</u>
🛐 Google	Test description	
	CUSTOM PROPERTY 1 CUSTOM PROPERTY 2 CUSTOM PROPERTY 3 CUSTOM PROPERTY A CUSTOM PROP	
ect Elements	Test steps Local data Properties Step Builder TeamPulse	

- 2. Click the Test Lists Tab
- 3. Click Dynamic List in the Add ribbon.



4. Name the Test List.

5. Craft one or more Rules to filter on specific criteria, clicking plus button after each one. The current results are displayed real-time.

Add Dynamic Test List												
								ne of execution using p f individual tests.	redefined			
Test list name												
MyDynamic	MyDynamicTestList											
Rules												
Owner		•	Equals	5	•	Teler	ik					-
Priority		•	Equals	5	•	1						-
Name		•	Equals	5	•							+
Results												
Test Name	т	Own	er T		Desci	ription	Ŧ	Relative Path				Ŧ
Bing		Teler	ik					Bing.tstest				
Google		Teler	ik					Google.tstest				
										(DK	Cancel

6. Click OK to save the new Test List.

NOTE: Each time you click Run List in the Execution ribbon, Test Studio dynamically queries the project and executes the tests that meet the criteria of the Rules.

TEST RESULTS

The Test Results panel allows you to traverse test execution results, drilling down to the individual test step and back up again to the test list level.

- 1. To see the results for a test list, double-click the result in the calendar.
- 2. The **Test Results** panel appears on the right. The test results panel shows results for the entire test list.
- 3. The **Passed/Total** column shows that all steps of both tests passed. Double-clicking a test in this list drills down to show the steps of that test.

Results and Scheduled Test Lists for Friday, January 1	Test Results								
Calendar Report	Bundle Tests	Bundle Tests							
Day Week Month Timeline	Rail - 1 tests passed out of total 2 executed	. Executed on 'ITTO	DOROV' machine.			🍝 🖬 😫			
16 Friday	Test Path T	Browser T	End Time	Passed/Total	Result	r i			
_	drag.tstest	InternetExplorer	1/16/2015 2:45:44 PM	2/2	ø				
2 PM	WebTest.tstest	InternetExplorer	1/16/2015 2:45:50 PM	2/3	×				
Priority Bundle Test Test 3 PM 1/16/201 5 2:50 PM 4 PM									
C D L I									

4. Double-click a test in the Test Results view to see the result of each test step. The bread crumb trail at the top of the panel now shows the test list followed by the test name.

Test Results								
Sea	Search 2 Tests - Test 1 Bing Steps							
×	Fail - 4 steps passed out of total 5 executed.				a			
	Description T	More	Result		т			
1	Navigate to : 'http://www.bing.com/'			Ø				
2	Click 'NopeItSSpan'			Ø				
3	Click 'ThIdH4942426141229098AmpPid17AmpW239A			0				
4	Click 'IolMditLink'			Ø				
5	Connect to pop-up window : 'http://blogof.francesc			8				
6	Keyboard (KeyPress) - C (1 times) on 'SbFormQText'			0				
7	Click 'ThIdH4942426141229115AmpPid17AmpW362A			•				

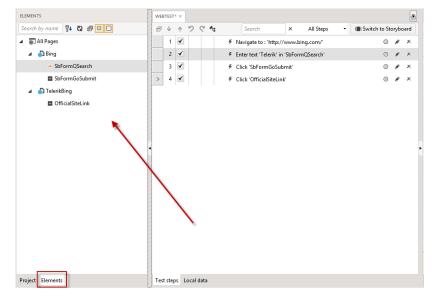
5. Click the top level in the bread crumb trail to jump directly back to the test list result.

If the test contains a Test as Step, ¹ appears next to the Test as Step. Double click that step to view the step results for that Test as Step.

Tes	Test Results							
Sea	rrch 2 Tests - Test 2 DuckDuckGo Steps							
×	Fail - 2 steps passed out of total 3 executed.				5	¢		
	Description T	More	Result			Ŧ		
1	Navigate to : 'http://duckduckgo.com/'			0				
2	Keyboard (KeyPress) - Enter (1 times) on 'SearchButt			ø				
3	Execute test 'Bing.tstest'	0		8				
4	Click 'NETUILink'			•				
5	Click 'TestStudioH2Tag'			•				
6	Click 'SupportLink'			•				
7	Click 'DocumentationLink'			•				

ELEMENTS EXPLORER

The Elements Explorer displays a tree of elements, the Elements Explorer only contains elements you want to use in your tests. Also, the elements in the tree view have properties that are more specific to testing. Although elements may be used in several tests and test steps, each element is shown only once in the Elements Explorer.



You can find the Elements Explorer under the Elements tab on the left bottom pane.

Standalone version

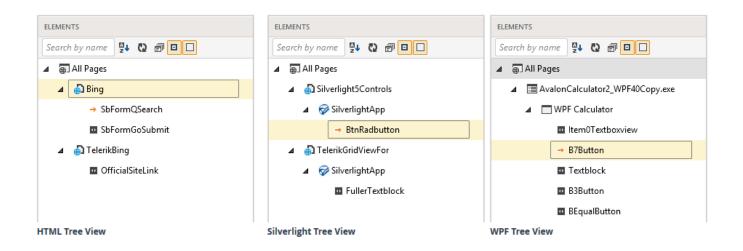
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	2	✓				۶	Enter text	Telerik	in 'Sb	bForm	nQSear	arch'							3	۶	×
	3	✓				۶	Click 'SbF	rmGoS	iubmit	iť									6	۲	×
>	4	✓				۶	Click 'Offic	ialSiteL	ink'										6	۲	×
			rer of				-	_										 		~ •	₽ ×
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The Elements tab, maintains a list of all Elements within the current project. It provides a one-stop shop to view elements and edit the way they are found during execution.

The Elements menu bar	Search by name	₽↓	č۵	j o			has the following buttons:
-----------------------	----------------	----	----	-----	--	--	----------------------------

- **Search** search the Explorer based on the element Friendly Name property.
- Sort organize the elements in an ascending or descending order, or clear the sorting.
- **Refresh** refresh the display of elements in the Explorer. You seldom should have to do this because Test Studio normally refreshes the window properly.
- **Enable/Disable Highlighting** control the highlighting of elements on the recording surface as they are selected in the tree view. When enabled, an element highlighted in the Elements pane will also be highlighted in the active browser.
- **Expand/Collapse** show or hide all elements under their respective page nodes.
- **This Test/All Tests** show elements for the currently loaded test only, or the elements for every test in the project.



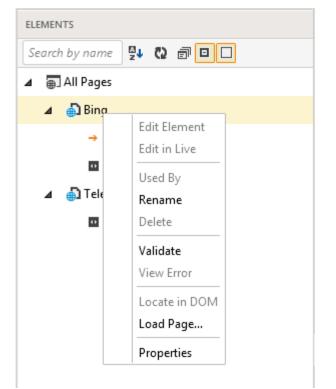
- The HTML tree view is organized by Page > Frame > Test Regions > Element.
- The Silverlight tree view is organized by Page > Frame > SilverlightApp > Element.
- The WPF tree view is organized by **Application > Window > Element**.

The hierarchy is maintained according to where the element is located on the page. For example, if there are no frames or regions, then elements for that particular page will be listed under the Page node.

Right click a Page node to see a context menu with these active choices:

• **Validate** - validate all elements in the page node against the currently loaded page. Requires the page to be loaded in the recording window. Results indicated with green checks and red X's.

- **Rename** alters the Friendly Name.
- Load Page loads the URL to which the page belongs in the recording window.
- Properties makes the Properties pane active.



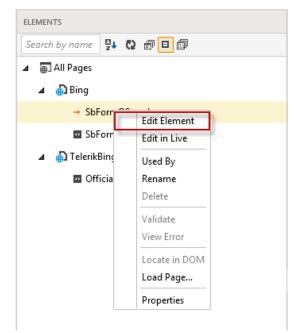
Each Element node has a context menu with these active choices:

- Edit Element loads the Find Element menu to choose where and how to locate this element in your web page or application.
- Edit in Live locate the element in the page currently loaded in the recording browser. Only available during recording.
- Used By loads the Test Step Selector and displays all tests and their steps that contain this element.
- Validate validate all elements in the page node against the currently loaded page. Requires the page to be loaded in the recording window. Results indicated with green checks and red X's.
- **Rename** alters the element's Friendly Name (an easy way to identify the node). This name will also be used for code generation as a variable name or a collection indexer.
- **Delete** remove the element from the Explorer. The element must be not be linked to any test steps.
- **View Error** show the erroneous find logic for an element that cannot be found.
- Locate in DOM jump to this element's position in the DOM when the recording window is loaded.
- Load Page loads the URL to which the element belongs in the recording window.
- **Properties** makes the Properties pane active.

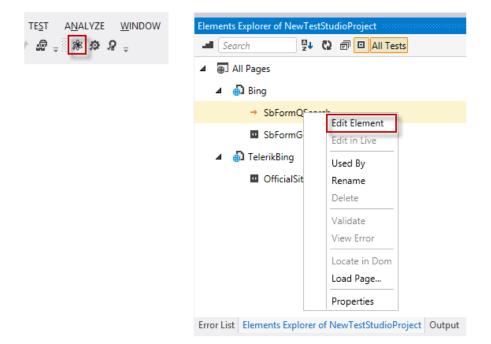
CHANGE HOW AN ELEMENT IS FOUND

When a web page element has an action recorded against it, or you explicitly add an element to the Elements pane, a Find Expression is generated that Test Studio uses to find that specific element on the web page.

To change how an element is found, right click on the element in the Explorer and select Edit Element.



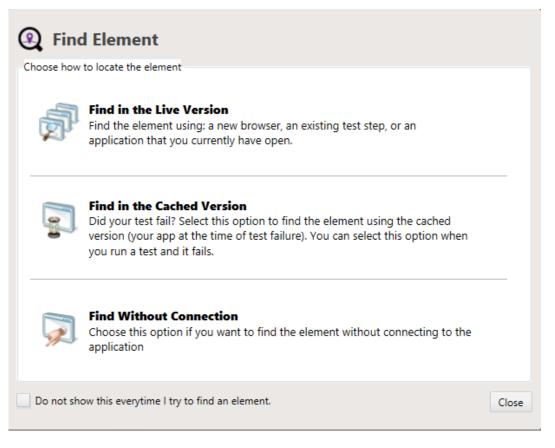
In the VS plugin, click the Show Element Explorer icon in the toolbar and locate the Explorer at the bottom of the screen.



Select Edit in Live to directly open the Find element dialog for the page open in the current recorder.

ELEMENTS	
Search by name	0 7 0
🔺 进 All Pages	
🔺 💼 Bing	
→ SbFormO	Edit Element
SbFo	Edit in Live
🔺 🍈 TelerikBii	Used By
💶 Offic	Rename
	Delete
	Validate
	View Error
	Locate in DOM
	Load Page
	Properties

The Find Element splash screen appears. You have three options for how to locate the element:



Find in the Live Version - find the element using the latest version of a new browser window, an existing test step, or an application that you currently have open.

- **New Browser** this will launch a new instance of your application. You may need to manually navigate to the element. Click Browse & Navigate to proceed.
- **Existing Test Step** use an existing step from a test to get to the element. Click Choose Test Step to proceed.
- **Current Page** select where the element is available from a list of currently running browser instances or WPF applications. Click Go to proceed.

onnect to the Live Version	
New Browser This will launch a new instance of your application. Depending on where your element is located, you may need to manually navigate to the element. Make sure that recording is paused to avoid adding extra steps to your test.	Browse & Navigate
Existing Test Step Use an existing step from a test to get to the element.	Choose Test Step
Current Page Select where the element is available:	Go >
← Back	
Do not show this everytime I try to find an element.	Close

Find in the Cached Version - if your test failed, you can find the element using the cached version of the application at the time of failure. Accessible only through the **Resolve Failure** tab in the Step Failure Details.

Find Without Connection - choose this option to find the element without connecting to the application.

NOTE: To skip this splash screen the next time you load the Find Element dialog, check the box at the bottom and click Close.

The Find Element dialog appears. The Element Name, Element Type, and Connection Status are at the top.

				Find Element		
	FormQSearch ange <u>Element</u> Element Ty	pe: H	Htm	You are connected to Bing Connected to: Live Version	Connection Opt	tion
Suggestions DC		?		Select New Element	Advanced	Res
name	q	•		ightarrow Great! We were able to find your element using the settings below.	Troubleshoe	ot
title	Enter your search term				(?
class	b_searchbox			Filters for input		
type	search			id v is exactly v sb_form_q		
maxlength	1000			tagname 🔻 is exactly 🔹 input		
autocomplete	e off	=				
OuterMarkup	<pre>> <input name="q" q"="" title="</td"/><td></td><td></td><td></td><td></td><td></td></pre>					
NodeIndexPa	th /16/21/22/23/24/25/29/					
TagIndex	input:0					
XPath	/html[1]/body[1]/table[1],					Ŧ
< Ⅲ		•		Last validated on: 9/17/2014 11:21:41 AM Validate		
					Save Clo	se

The Change Element link opens the Select New Element dialog.

Element Name: ErenchLink Change Element Type: Html		
Suggestions DOM	?	Find S

In the Select Html Element dialog, you can open the Find Element dialog for a different element in the Elements Repository.

♦	Find Element	_ 🗆 ×
Element Name: SbFormQSearch Change Element	Select Html Element	nnected to Bing to: Live Version Connection Options
Suggestions DOM	Search ▲ Bing ■ SbFormQSearch	ect New Element Advanced Reset
name q title Enter your searc	✓	elow. Troubleshoot
class b_searchbox	OfficialSiteLink	form_q
maxlength 1000 autocomplete off		put
OuterMarkup		

The **Connection Options** button takes you back to the **Find Element** splash screen.

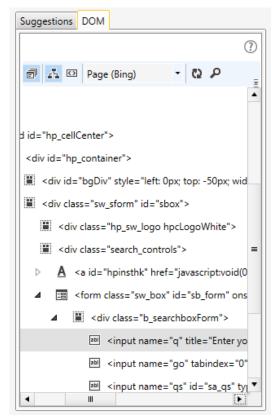


The Suggestions and DOM views are on the left side.

• **Suggestions** - these are the suggested items to help you find the element in the application. Click an item to add it to your Find Settings.

Suggestions DOI	N
	?
name	q
title	Enter your search term
class	b_searchbox
type	search
maxlength	1000
autocomplete	off
OuterMarkup	

• **DOM** - use the DOM as a reference when creating your Find Settings. This view is helpful in determining where your element is located relative to the DOM tree.



The **Find Settings** view is on the right side. You can edit these settings by typing in new properties, selecting a new modifier in the drop-down menu, or changing the values. Click Validate to confirm whether the element can be found using the current Find Settings.

Find Settings	Find Settings
→ Great! We were able to find your element using the settings below. Troubleshoot	→ The element was not found. Modify the items indicated below or click the 'Troubleshoot' button. Troubleshoot
Hint 🥥	Hint 🥑
Filters for ol → id is exactly rso	Filters for ol → id is exactly rso2
Filters for em	Filters for em
→ tagIndex is exactly • em:0	tagIndex is exactly em.0
Last validated on: 7/12/2011 10:39:05 AM Validate	Last validated on: 7/12/2011 10:37:56 AM Validate

DATA-DRIVEN FIND LOGIC

Here, you can also data drive the element find expression. If your test has an attached data source, the value fields of the find expressions for your elements will include a drop-down list displaying columns from your data source.

				^	
	id	is exactly 🔹	tick	ker 🗾	_
	tagname	is exactly	Tes	stName: WebTest	
				Col1	
-0				Col2	1
				Col3	
				E Col4	
				Col5	
				{ } Add coded data variable	
					_s
				Set Clear	P

Selecting a column databinds the column to the value of the find expression rule.

Find Settings	Select New Element	Advanced	Reset
			?
id	is exactly v sb_f	orm_q	-
tagname	is exactly	əl1) 💽	

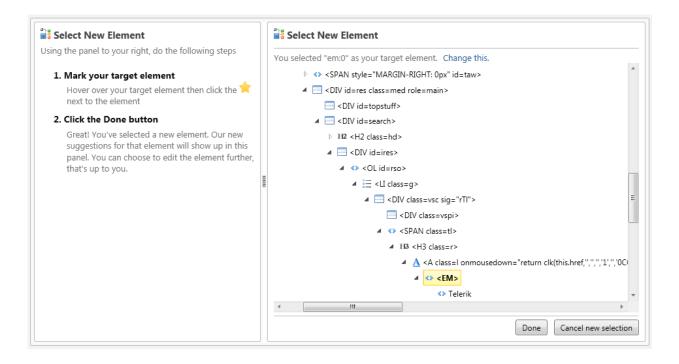
If the element was not found, click the **Troubleshoot** button. Choose a suggested fix from the Troubleshoot screen.

	Froubleshoot
Choos	se a suggested fix:
	Hint 🥝
→	Select a new element
	Did you record against the wrong element? Choose this option and we will help you find the correct element.
→	Update the search to fix the errors
	We will automatically update your Find Settings with new values in order to find the element.
→	Create a new search
	We will generate a new search for you that does not use the current attributes which might be the causing the error.
	Can

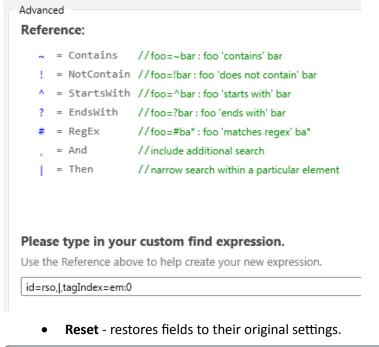
There are three additional buttons in the upper right of the Find Element dialog:

	_ 🗆 X
	You are connected to TelerikGoogleSearch Connected to: Live Version Connection Options
	Select New Element Advanced Reset
Find Settings	
→ Great! We were able to find your	element using the settings below. Troubleshoot

• Select New Element - choose this option if the incorrect element was selected for this step. This will clear your current settings and Test Studio provides new filters for the new element.



• Advanced - edit the Find Settings using a string-based expression builder.



Telerik - Test Studio		83
This will clear all of your changes and it	cannot be undone	e. Continue?
	Yes	No

Once you've confirmed you are targeting the correct element and it is correctly found, click Save and Close. If the modified element is used by multiple automation steps, you are prompted to select the steps you want to persist changes to.

Testcase Selector
The modified element is used by multiple automation steps. Please select the steps you want to persist changes to:
□·· □ All □·· □ Google.tstest ····· ☑ Step #4 - Verify 'TextContent' 'Contains' 'Telerik' on 'TelerikEmTag' ···· □ Step #5 - Click 'TelerikEmTag'
OK Cancel