

# Selenium



A TUTORIAL

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# Selenium Forms



- Selenium Core
- Selenium RC
- Selenium IDE
- Selenium on Rails

# Selenium Core



- A acceptance testing tool for web applications
- Tests run directly in the browser
- Selenium is implemented entirely with browser technology
  - JavaScript
  - DHTML
  - Frames
- Works by looking at the DOM
- Selenium deploys its BrowserBot alongside your application
- Selenium uses JavaScript and IFrames to embed the BrowserBot in your browser
- Works with virtually any JavaScript-enabled browser
- The engine is tweaked to support a wide range of browsers on Windows, Mac OS X and Linux

# Selenium RC



- Where the browser is under the control of another process
- Drivers exist for Java, .NET, Python, and Ruby
- The Browser Bot takes instructions from the adjacent process
  - However, JavaScript cannot open sockets (Cross-site scripting issues)
  - The Selenese driver continuously requests pages from the driving process, delivered as plain text
  - This is reply/request (rather than request/reply)

# Selenium IDE



- Firefox extension
- Includes the entire Selenium Core
- Easy record and playback
- Intelligent field selection will use IDs, names, or XPath as needed
- Auto complete for all common Selenium commands (Selenese)
- Walk through tests
- Debug and set breakpoints
- Save tests as HTML, Ruby scripts, or any other format
- Employ User extensions (.js files)
- Option to automatically assert the title of every page

# Selenium IDE Test



The screenshot shows the Selenium IDE application window. The title bar reads "Selenium IDE \*". The menu bar includes "File", "Edit", "Options", and "Help". The "Base URL" field contains "http://www.google.com/". The control bar has buttons for "Run", "Walk", "Step", and a play button. The "Editor" tab is active, displaying a table of test commands:

Command	Target	Value
open	/	
type	q	selenium IDE rocks!
clickAndWait	btnG	
clickAndWait	link=Antony Marcan...	
clickAndWait	link=5 comments	
assertTextPresent	I think record playba...	

Below the table, the "Command" dropdown is set to "assertTextPresent". The "Target" field contains "I think record playback is a wonderful thing" and has a "Find" button next to it. The "Value" field is empty.

At the bottom, the "Log Console" section has a dropdown menu set to "Info" and a "Clear" button.

# Locator Tools



- Xpather:

<https://addons.mozilla.org/extensions/moreinfo.php?id=1192>

- XPath Checker:

<https://addons.mozilla.org/extensions/moreinfo.php?id=1095>

- FireBug

<https://addons.mozilla.org/en-US/firefox/addon/1843>

- DOM Inspector

<https://addons.mozilla.org/en-US/firefox/addon/6622/>

# How To Use Selenium IDE



- Environment Setup
  - ✦ Site Creation and Data Seeding
- Acceptance Testing
  - ✦ Positive Path Functional Tests
- Regression Testing
  - ✦ Incorporating bug fixes and code changes into the Acceptance Tests on an ongoing basis



# Language Options



- HTML
- Java
- C#
- Perl
- PHP
- Ruby



Questions?