Selenium (software)

This article is about the software testing framework. For the chemical element, see Selenium.

Selenium	
Stable release	3.141.59 / November 19, 2018; 18 months ago[1]
Repository	github.com/SeleniumHQ/selenium ✏️
Written in	Java
Operating system	Cross-platform
Type	Software testing framework for web applications
License	Apache License 2.0
Website	selenium.dev/ ✏️

Selenium is a portable framework for testing web applications. Selenium provides a playback tool for authoring functional tests without the need to learn a test scripting language (Selenium IDE). It also provides a test domain-specific language (Selenese) to write tests in a number of popular programming languages, including C#, Groovy, Java, Perl, PHP, Python, Ruby and Scala. The tests can then run against most modern web browsers. Selenium runs on Windows, Linux, and macOS. It is open-source software released under the Apache License 2.0.

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Contents

History[edit]

Selenium was originally developed by Jason Huggins in 2004 as an internal tool at **ThoughtWorks**. Huggins was later joined by other programmers and testers at ThoughtWorks, before Paul Hammant joined the team and steered the development of the second mode of operation that would later become "Selenium Remote Control" (RC). The tool was open sourced that year.

In 2005 Dan Fabulich and Nelson Sproul (with help from Pat Lightbody) made an offer to accept a series of patches that would transform Selenium-RC into what it became best known for. In the same meeting, the steering of Selenium as a project would continue as a committee, with Huggins and Hammant being the ThoughtWorks representatives.

In 2007, Huggins joined Google. Together with others like Jennifer Bevan, he continued with the development and stabilization of Selenium RC. At the same time, Simon Stewart at ThoughtWorks developed a superior browser automation tool called WebDriver. In 2009, after a meeting between the developers at the Google Test Automation Conference, it was decided to merge the two projects, and call the new project Selenium WebDriver, or Selenium 2.0.[2]

In 2008, Philippe Hanrigou (then at ThoughtWorks) made "Selenium Grid", which provides a hub allowing the running of multiple Selenium tests concurrently on any number of local or remote systems, thus minimizing test execution time. Grid offered, as open source, a similar capability to the internal/private Google cloud for Selenium RC. Pat Lightbody had already made a private cloud called "HostedQA" which he went on to sell to Gomez, Inc.

The name Selenium comes from a joke made by Huggins in an email, mocking a competitor named **Mercury**, saying that you can cure mercury poisoning by taking selenium supplements. The others that received the email took the name and ran with it.[3]

Components[edit]

Selenium is composed of several components with each taking on a specific role in aiding the development of web application **test automation**.[4]

Selenium IDE[edit]

Selenium IDE is a complete **integrated development environment** (IDE) for Selenium tests. It is implemented as a **Firefox Add-On** and as a **Chrome Extension**. It allows for recording, editing and debugging of functional tests. It was previously known as Selenium Recorder. Selenium-IDE was originally created by Shinya Kasatani and donated to the Selenium project in 2006. Selenium IDE was previously little-maintained.[5] Selenium IDE began being actively maintained in 2018.[6][7][8][9]

Scripts may be automatically recorded and edited manually providing **autocompletion** support and the ability to move commands around quickly.