

Features of Selenium 4



WebDriver became W3C (World Wide Web Consortium) Standardization



Selenium WebDriver is now W3C Standardized, and this WebDriver provides a friendly and flexible API for browser automation.

W3C standard encourages compatibility across various software implementations of WebDriver and API.



Selenium Grid Enhanced with Updates

The earlier versions of Selenium Grid were complex as it was based on Hub and Node(s) architecture. The Hub and Node(s) need to be separately started when performing automation tests.

In Selenium 4, Hub and Node (s) are packed in a single jar file, which means once the server starts, it acts as both Hub and Node.

Selenium 4 IDE Upgraded



Selenium IDE is a record and playback tool that was available as an add-on for Firefox in the earlier Selenium versions but got deprecated as the latest Firefox versions were standardized under the Web Extension Mechanism.



Relative Locators for Automation Scripts

Relative locators, also referred to as Friendly locators, help locate WebElements near to, left of, right of, above, and below a specified element.

It supports the usage of `withTagName` (in Selenium 4 Java) or `with_tag_name` (in Selenium 4 Python). It helps locate web elements based on the visual location relative to other DOM elements.

Chrome Debugging Protocol (CDP)



Selenium 4 provides native support for Chrome DevTools Protocol (CDP) through the DevTools interface.

It allows QAs to use Chrome development properties like Fetch, Network, Profiler, Performance, Application cache, and more.



Multiple Windows and Tabs Management

While testing the software testers have to switch across multiple windows, tabs, or applications in a single test flow.

In the earlier versions on Selenium, it was not easy to manage multiple windows or tabs as it required testers to create a new Web Driver object. Post which used to switch to the new window (or tab) using the unique WindowHandle to perform subsequent actions in that window (or tab).

Telemetry and GraphQL



A framework called Open Telemetry has been added to Selenium Grid. This feature brings more observability into Grid as it allows testers to see what's happening inside the Grid, especially when something goes wrong while running the test.



Improved Documentation

With the earlier versions of Selenium, users use to face a lot of difficulties with the documentation part as there were some lacking in the documentation capabilities of Selenium.

This has significantly improved in the latest versions of Selenium. Selenium 4.0 provides better documentation capabilities.

