



Alicante Tech Meetup



Selenium

Web Browser Automation





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Selenium

www.seleniumhq.org

Selenium.

I. Introduction.

II. Selenium WebDriver.

III. Why / when should I use it?

IV. Speed it up!

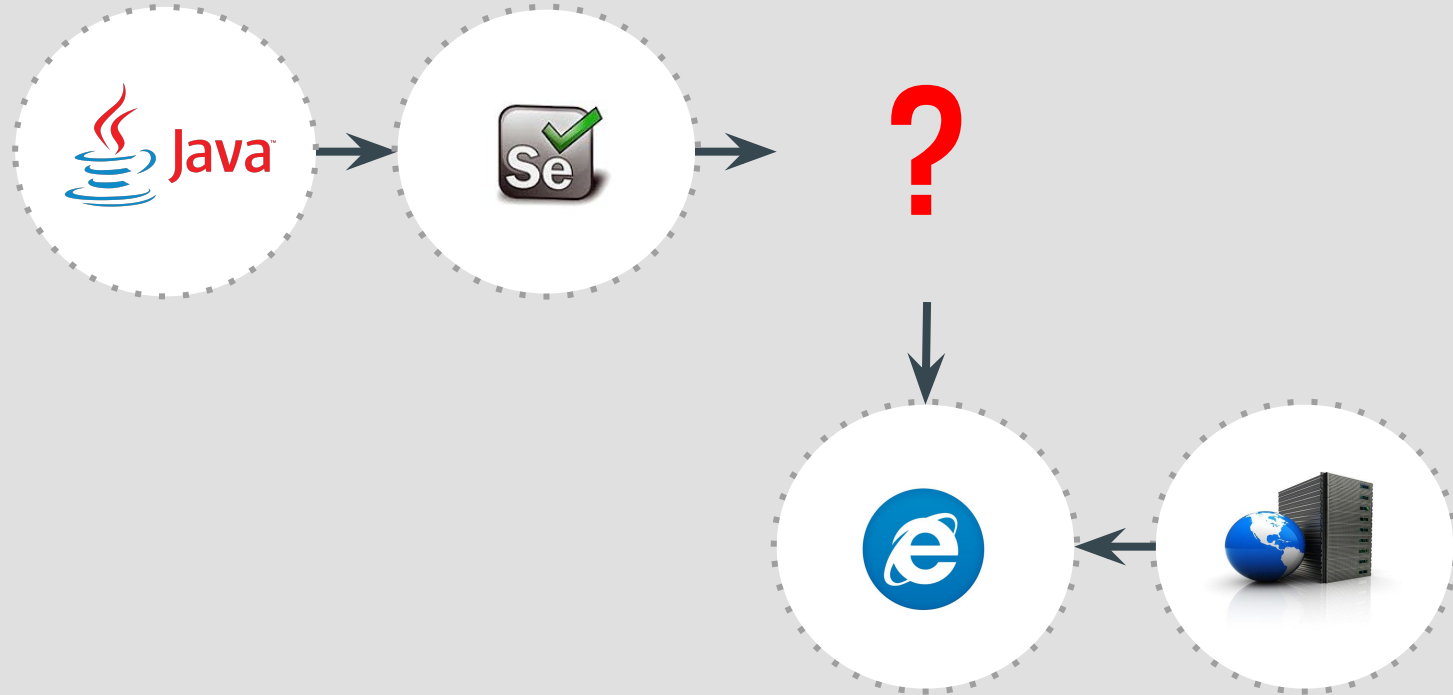
V. Test case.

What is Selenium?

— a suite of tools for automating web browsers, primarily used for testing purposes.

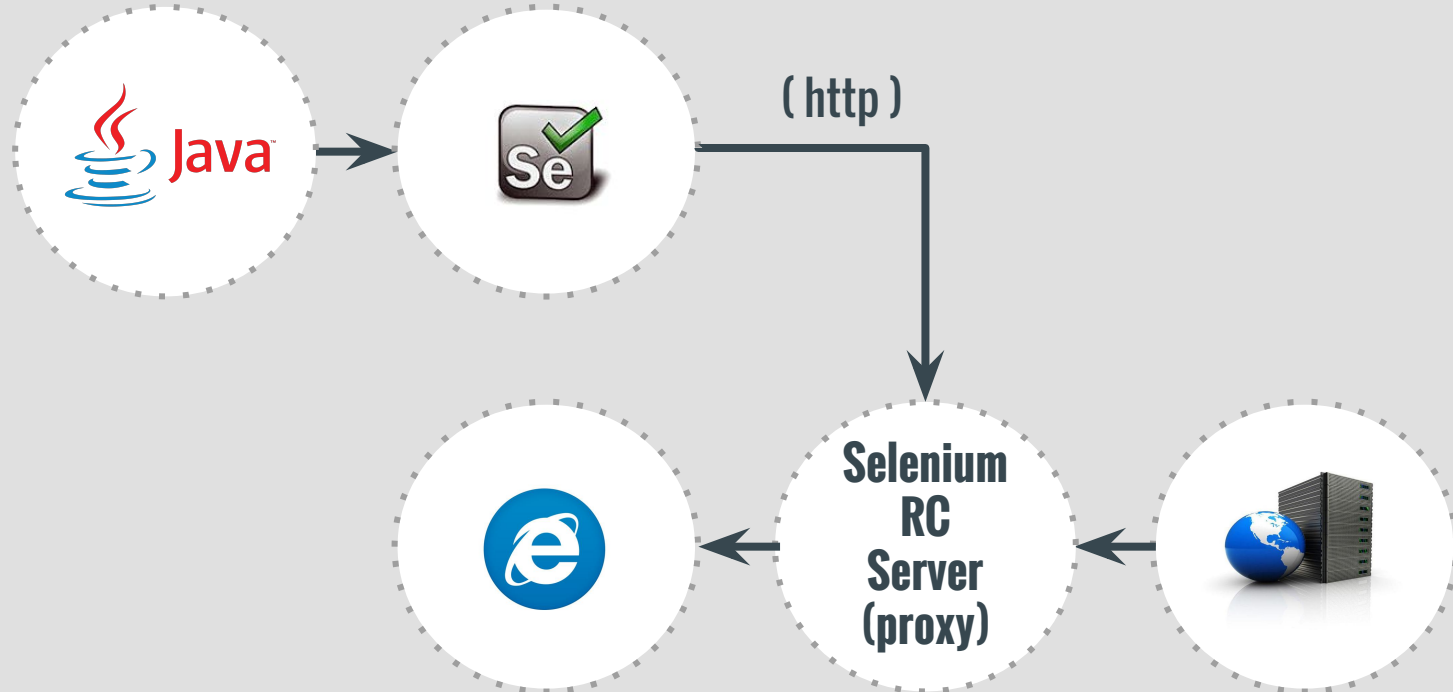


Brief history.



Brief history.

2004. Selenium Remote Control (RC).



Brief history.

2006. Selenium IDE Firefox add-on (Shinya Kasatani).

selenium ide - Google Search

http://www.google.com/search?hl=en&q=selenium+

Selenium IDE

File Edit Options

http://www.google.com/

Fast Slow

Table Source

Command	Target	Value
open	/webhp?hl=en	
type	q	selenium ide
clickAndWait	btnG	
verifyTextPr...	selenium-ide.openqa....	

verifyTextPresent

selenium-ide.openqa.org/ - Find

Log Reference UI-Element Rollup

verifyTextPresent(pattern)
Generated from **isTextPresent(pattern)**

Arguments:

- pattern - a pattern to match with the text of the page

Returns:

true if the pattern matches the text, false otherwise

Done

Web Images Maps News Shopping Gmail more Sign in

Google selenium ide

Web Results 1 - 10 of about 218,000 for selenium ide. (0.04 seconds)

Selenium IDE: Selenium IDE
Selenium IDE is an integrated development environment for Selenium tests. It is implemented as a Firefox extension, and allows you to record, edit, ...
[selenium-ide.openqa.org/](#) - 4k - Cached - Similar pages

Selenium IDE: Download
Selenium IDE: Download.
[selenium-ide.openqa.org/download.jsp](#) - 2k - Cached - Similar pages

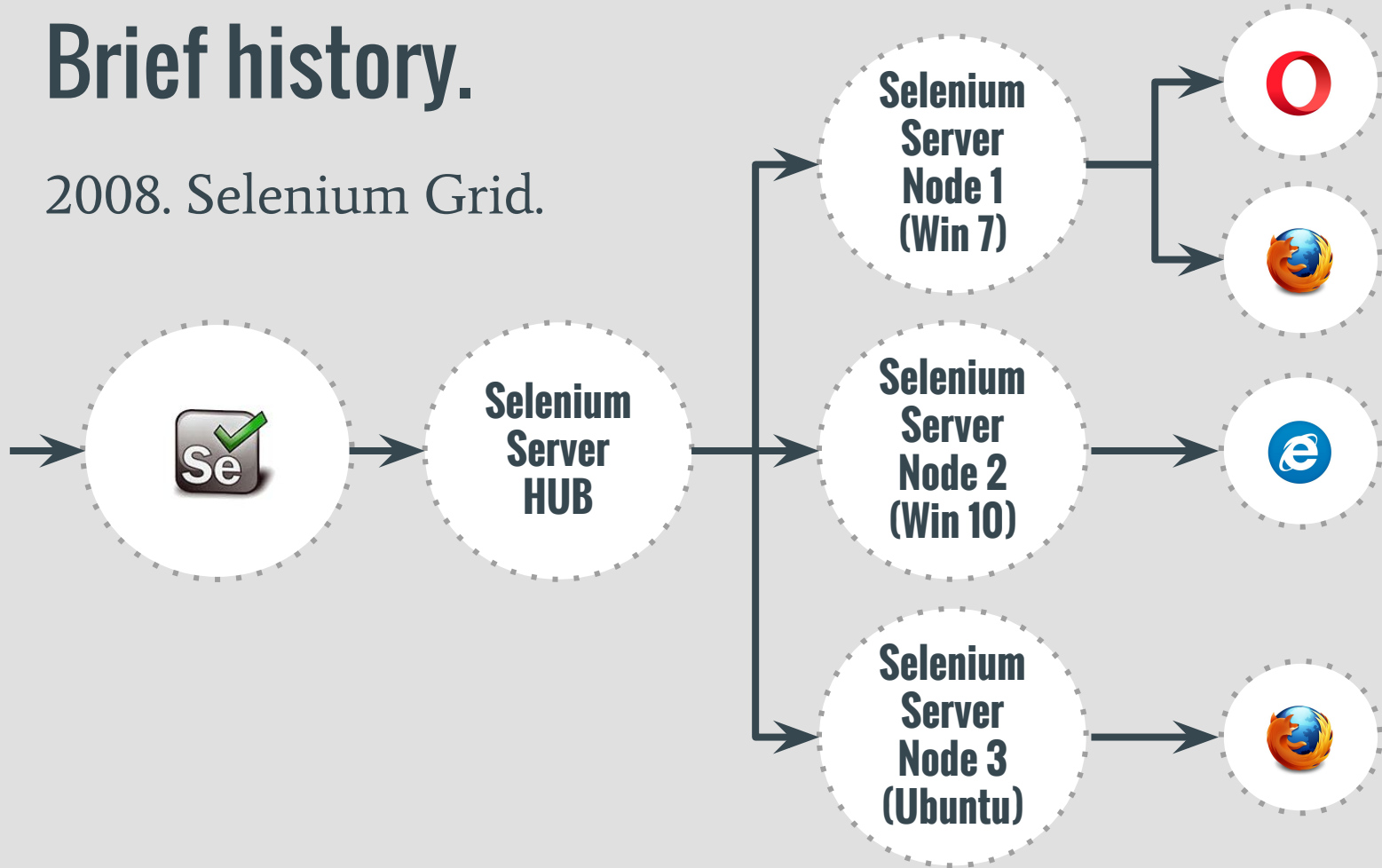
Selenium IDE Intro
There is a Firefox extension called Selenium IDE made by the folks over at OpenQA.org. It is a very easy to use and powerful tool for controlling, ...
[www.dynamitemap.com/selenium/](#) - 9k - Cached - Similar pages

Software Testing - Selenium IDE
Selenium IDE is the easiest way to use Selenium and most of the time it also serves as a starting point for your automation. Selenium IDE comes as an ...
[www.testinggeek.com/selenium.asp](#) - 34k - Cached - Similar pages

Introduction to the Selenium IDE
If you would like to try out Selenium and the Selenium IDE, you should check out this tutorial (complete with screencasts) that will get you up and running ...
[www.dreaminaminute.com/article/2009/introduction-to-the-selenium-ide](#)

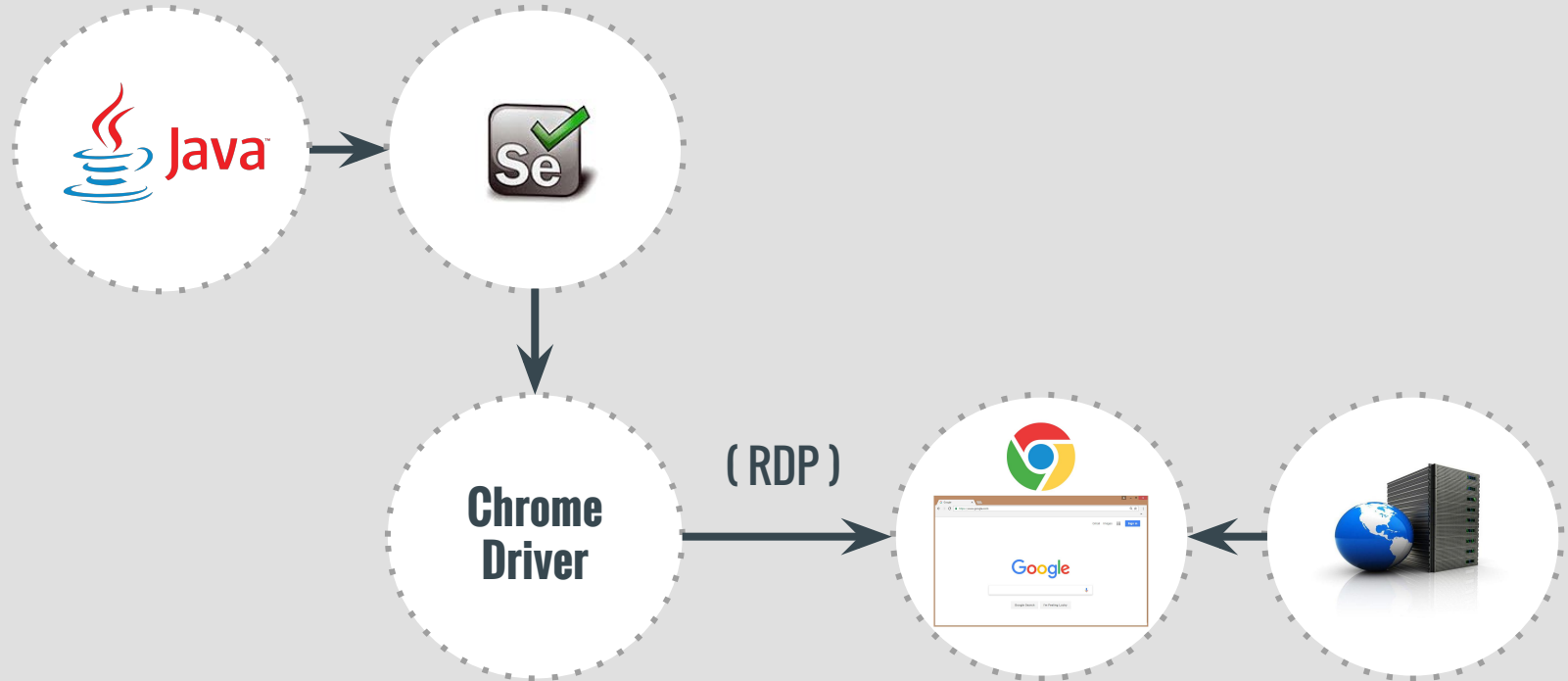
Brief history.

2008. Selenium Grid.



Brief history.

2009. WebDriver (IE: COM, Opera: Opera Debug, Firefox: extension).



Brief history.

2011. Selenium 2.0 (WebDriver).

2012. W3C WebDriver draft release (www.w3.org).

2016. Selenium 3.0 (deep revision, RC removal).

Selenium family.

- Selenium RC

(Remote Control, JavaScript injection)

- Selenium 1.0

- Selenium IDE

(Integrated Development Environment)

- Selenium Server

- Selenium Grid 1.0

(RC only)

- Selenium WebDriver

(special drivers for each browser)

- Selenium 2.0

- Selenium Grid 2.0

(bundled with Selenium Server, WebDriver support)

- Selenium 3.0

Environment.

OSs:

Windows (7+), Apple OS X, Linux (Ubuntu tested).

Programming languages:

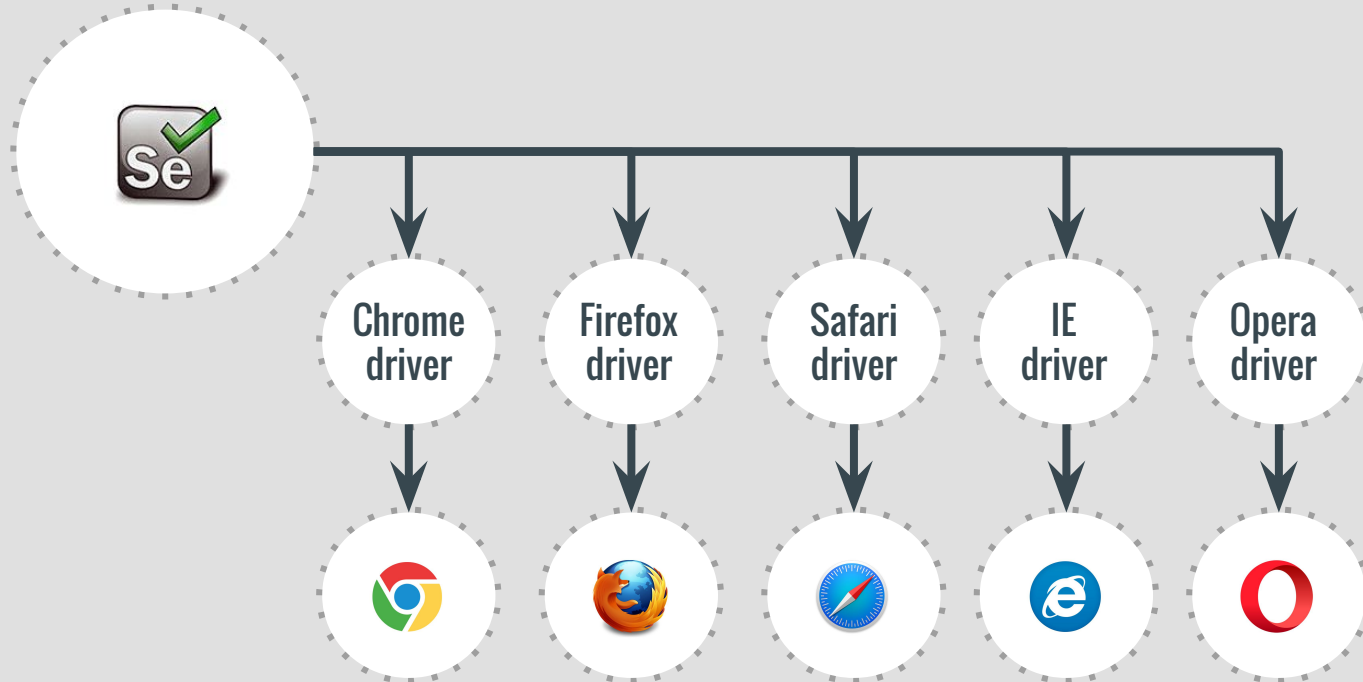
C#, Haskell, Java, JavaScript, Objective-C, Perl, PHP, Python, R, Ruby.

Browsers:

Chrome 26+, Firefox 17+, IE 7+, Opera 11+ (Presto, Blink), Safari 5.1+.

Selenium WebDriver.

WebDriver, W3C standard.



```
// Create a new instance of the Firefox driver and open Google webpage
WebDriver driver = new FirefoxDriver();
driver.get("http://www.google.com");

// Find the text input element by its name, enter some text and submit the form
WebElement element = driver.findElement(By.name("q"));
element.sendKeys("Cheese!");
element.submit();

// Wait for the page to load
(new WebDriverWait(driver, 10)).until(new ExpectedCondition<Boolean>() {
    public Boolean apply(WebDriver d) {
        return d.getTitle().toLowerCase().startsWith("cheese!");
    }
});
System.out.println("Page title is: " + driver.getTitle());

// Close the browser
driver.quit();
```


What can I do with it?

What can I do with it?

- Manage browser (open/close, profiles);
- navigate (url, history);
- work with windows, tabs, popups;
- query DOM (XPath, CSS selector, by ID);
- make inputs (keyboard, mouse);
- exec JavaScript;
- make screenshots.

Selenium limitations.

- Dialog boxes (file download);
- Flash elements;
- Java applets.

Who uses it?

Google, Microsoft, IBM, Mozilla, LinkedIn.

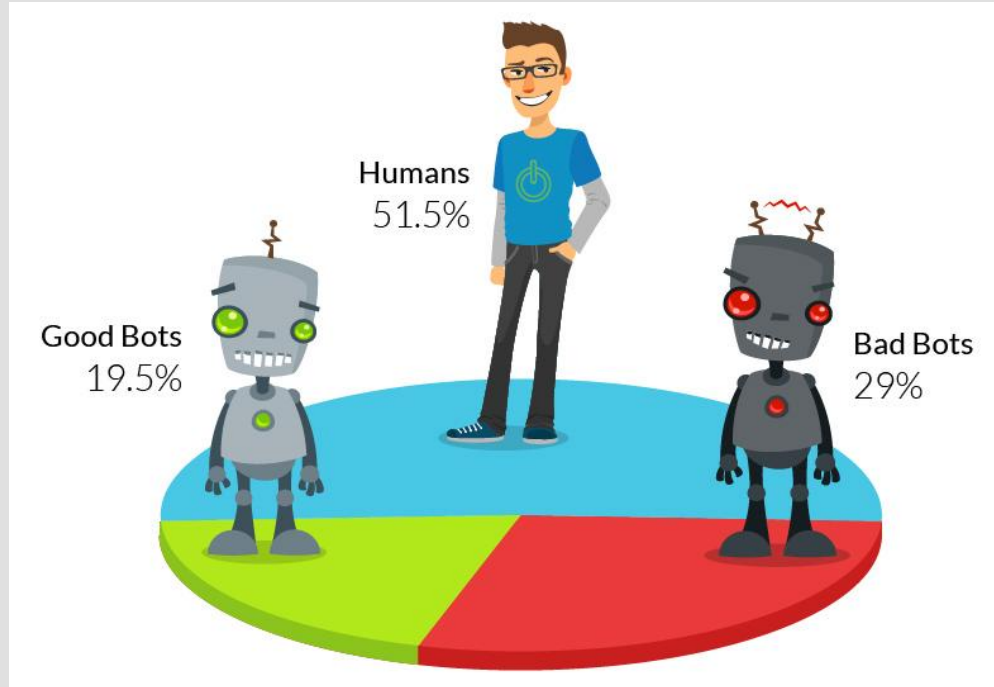
When should I use Selenium?

- Parsing of dynamic websites (lots of JavaScript);
- close to a user experience;
- specific automation;
- rendering matters (graphics);
- .. catching yourself doing a new browser.

Why exactly the Selenium?

- Few alternatives: watir.com, sahipro.com, watin.org;
- open source;
- support: OS, languages, browsers;
- setting the standards (W3C, 2017);
- evolving (Selenium 4 roadmap);
- integration (Jenkins, Visual Studio);
- Selenium Grid;
- docs and examples.

My use case.

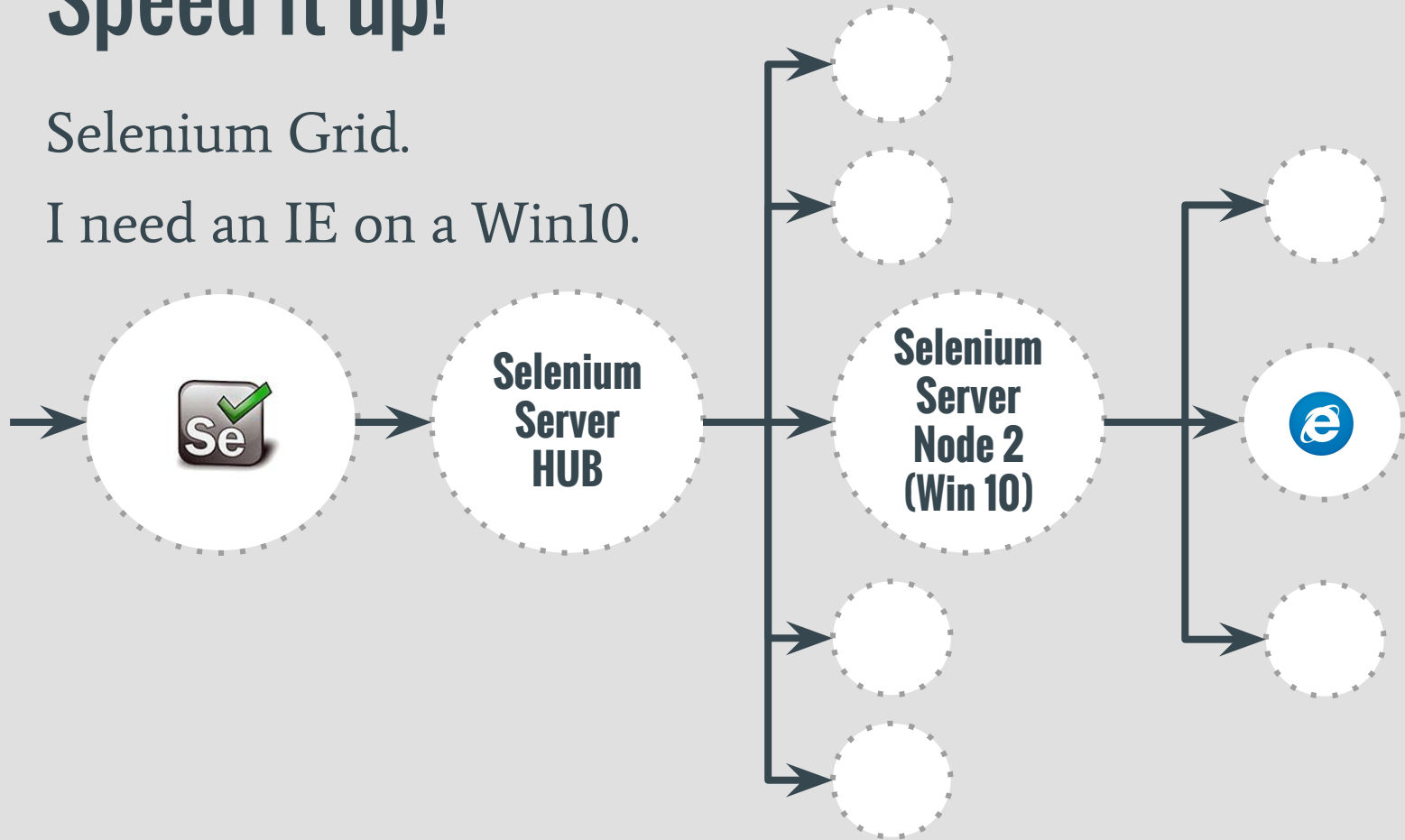


Incapsula.com / 2015

Speed it up!

Selenium Grid.

I need an IE on a Win10.



Speed it up!

- WebKit: Apple Safari, Chrome (<28/iOS), PhantomJS;
- Gecko: Firefox, SlimerJS (headless via xvfb);
- Rhino: HTMLUnit.

Speed it up!

Cloud services: saucelabs.com, browserstack.com,
bugbuster.com, testingbot.com

Wrappers: selenide.org, watir.com

Conclusion

- WebDriver is almost a standard;
- support from browsers' manufacturers;
- Selenium — power and capabilities, free;
- JavaScript is on the rise, so is the Selenium.

Test case.

