

Angular Test Automation – Which tool is preferred?

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Popular UI automation tools



Protractor

End to end test framework – Only
for Angular and AngularJS
applications



Selenium WD

W3C controlled API to automate
browsers for any web applications*

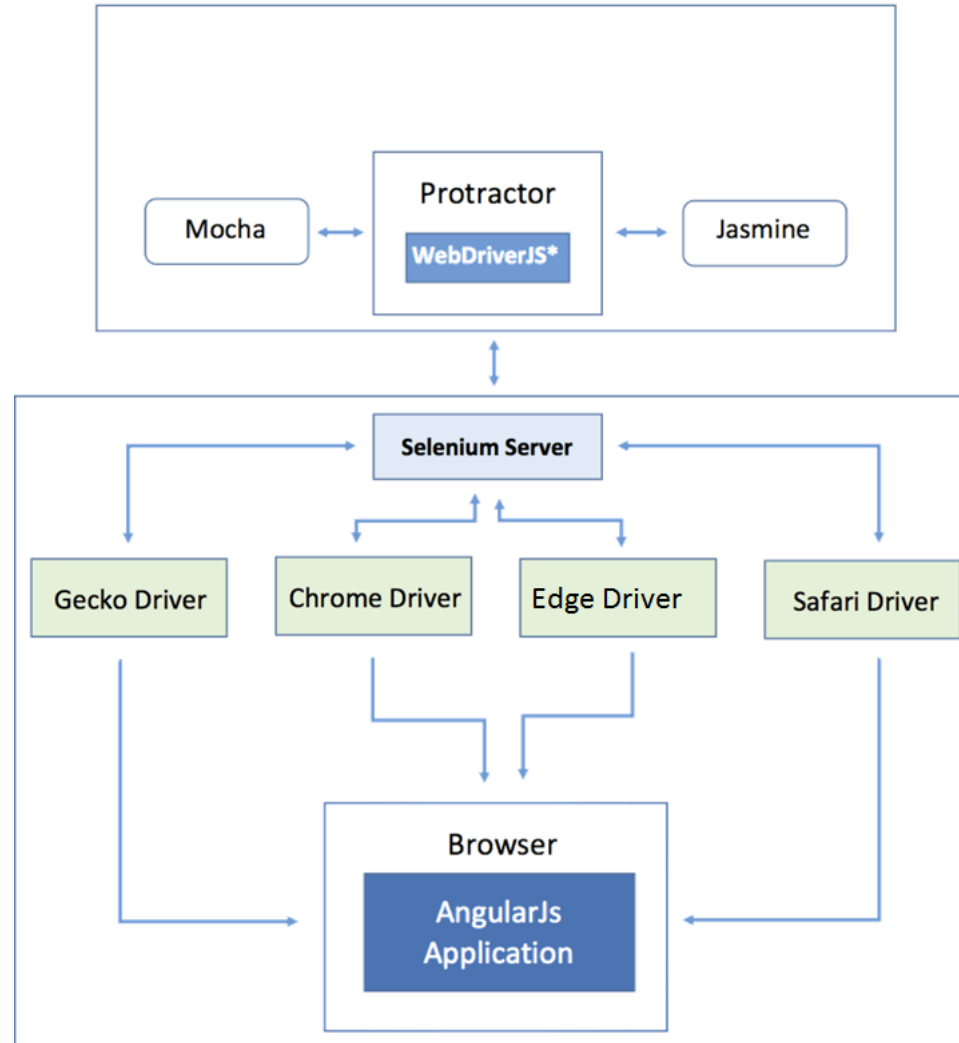
Protractor Architecture

Protractor uses Selenium WD to interact with browsers



Protractor

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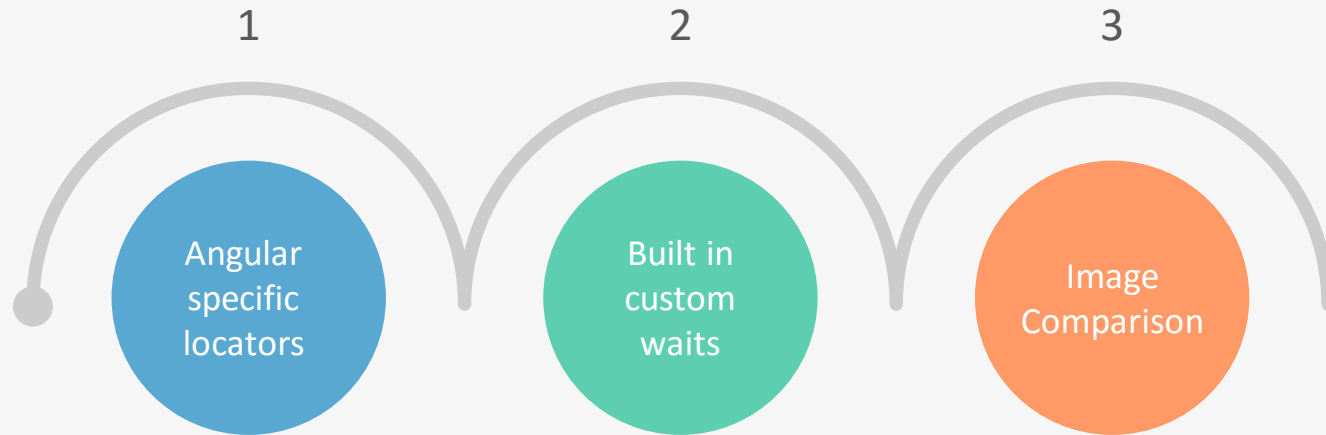


, Inc. [US] | <https://github.com/angular/protractor/blob/master/pack>

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  "name": "protractor",
  "description": "Webdriver E2E test wrapper for Angular.",
  "homepage": "https://github.com/angular/protractor",
  "keywords": [
    "angular",
    "test",
    "testing",
    "webdriver",
    "webdriverjs",
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  ],
  "author": "Julie Ralph <ju.ralph@gmail.com>",
  "dependencies": {
    "blocking-proxy": "^1.0.0",
    "browserstack": "^1.5.1",
    "chalk": "^1.1.3",
    "glob": "^7.0.3",
    "jasmine": "^3.3.1",
    "optimist": "~0.6.0",
    "sauce-labs": "^1.5.0",
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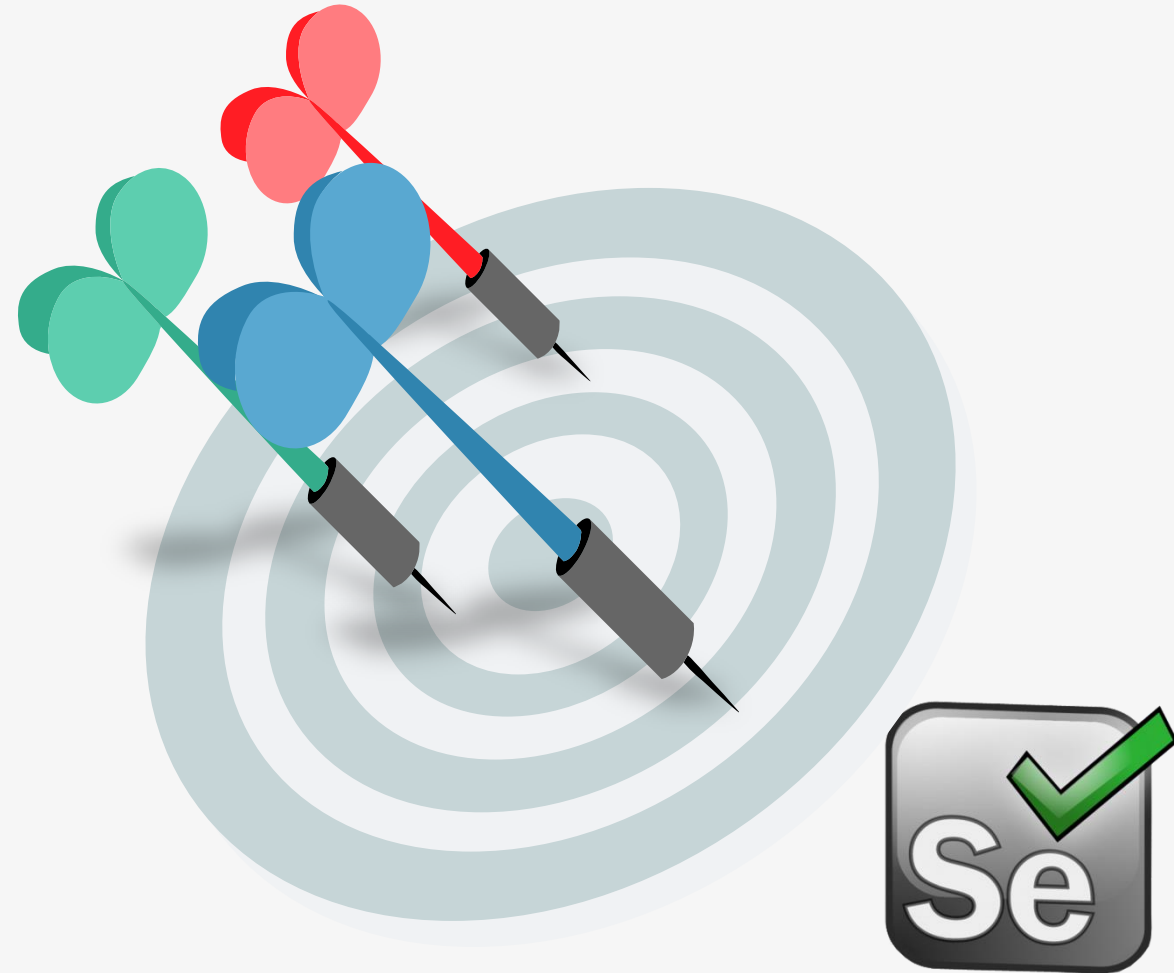
Major Benefits of using Protractor

These are something Selenium (by default) does not have!!



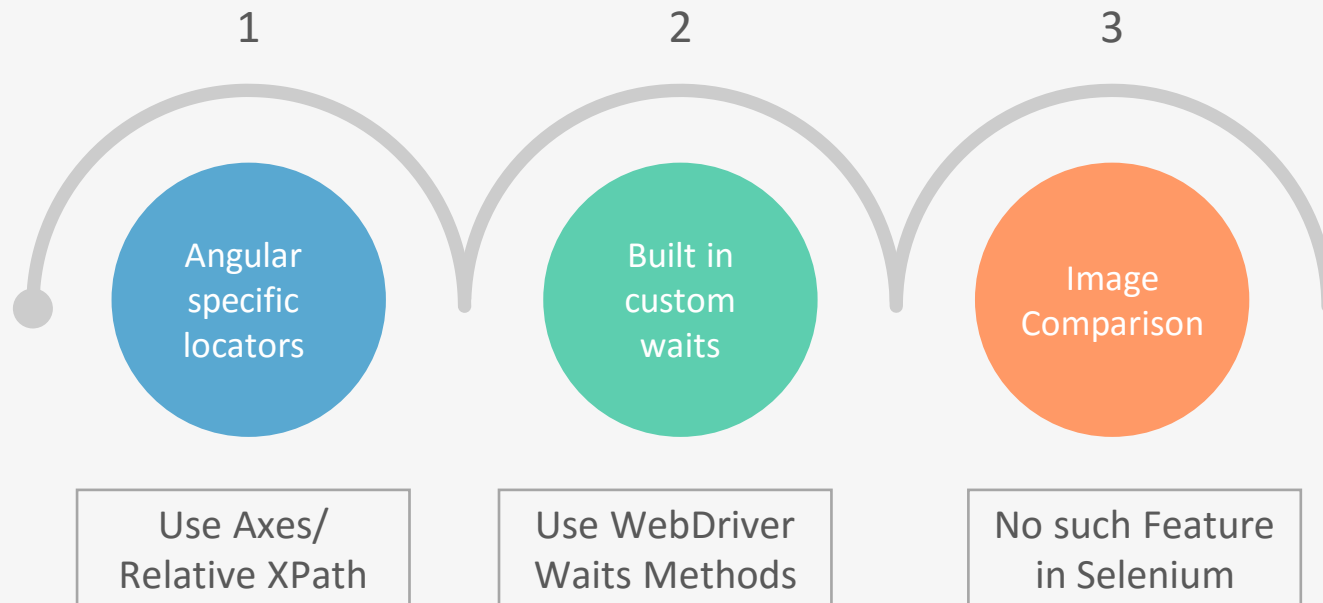
Can Selenium be customized to support those features?

yes



How Selenium can address?

WebDriver Customizations !!



So, What factors that impact the choice ...

Do you have framework?

The existing frameworks can be reused with slighter modifications



01

Which language?

Which language your automation engineers are comfortable – JS or Java/C#?



02

Automation Scope?

Are you looking automate just angular application or REST, DB etc.?



03

Test Runners?

Would you prefer to run sequential or in parallel with test speed as parameter?



04

Build Integration?

Do you wish to easily integrate with TFS of your test automation scripts?



05

Comparison Study

Features	Selenium (W/ Java)	Protractor	Comments
Can it run independent?	Yes	No	Protractor depends on Selenium
Can I use framework to automate Angular Apps?	Yes	No	May be only when written in JS
Can I write in any language?	Yes	No (Only JS)	JS dependent
Should I write additional wait methods?	Yes	May not be needed?	Selenium WebDriver Wait Implementation required
Does it own test reporting tools?	No	No	But Java based reporting tools are Awesome than JS
How about Test Runners Integrations?	Great (Specially with TestNG)	Limited (Mocha has limitations)	TestNG is powerful with rich features
How about BDD integrations?	Very easy	Cucumber JS has less usage	35
Can I use this framework than Angular?	Yes	No	That too have challenges when Porting from Angular 7 to 8