



The Past 12 Months of Appium

Mobile Testing Summit China 2019

Jonah Stiennon • Partner • Cloud Grey

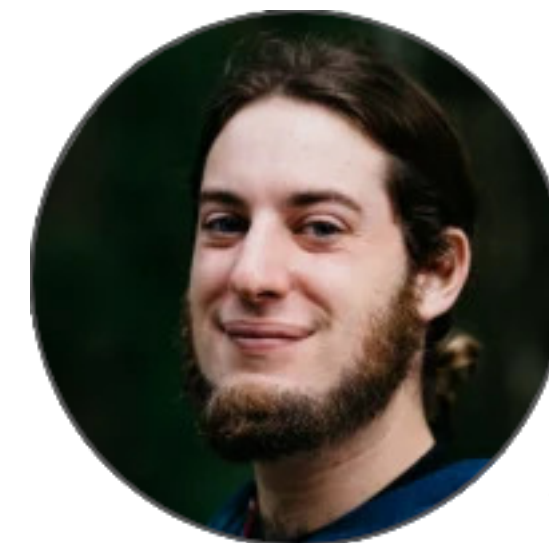
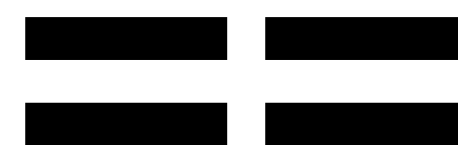
@AppiumDevs • @cloudgrey_io • @jonahss • appiumpro.com

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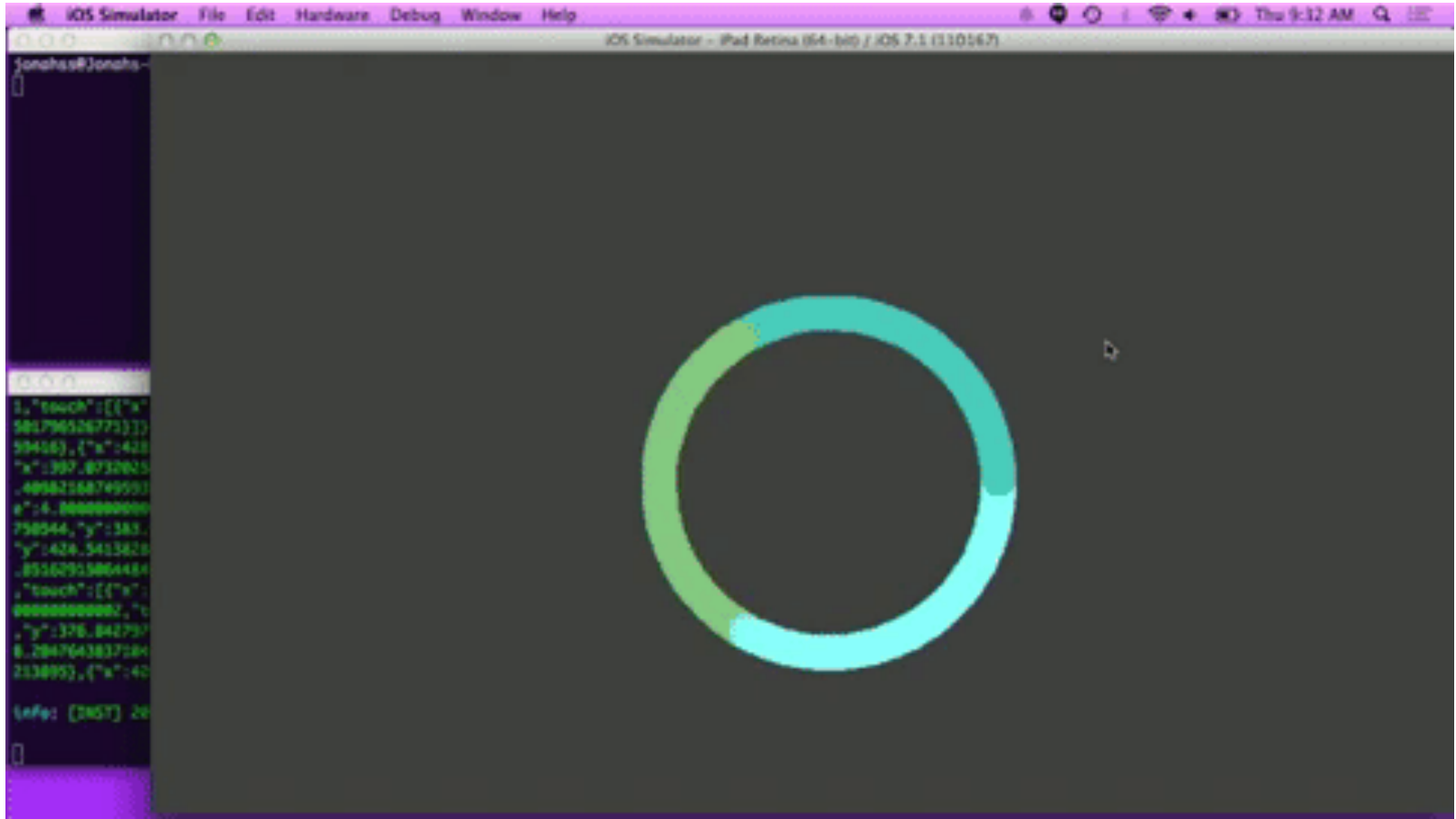
Hired by Jonathan Lipps at Sauce Labs in 2014 to help work on Appium



Now working with Jonathan at our Appium consultancy



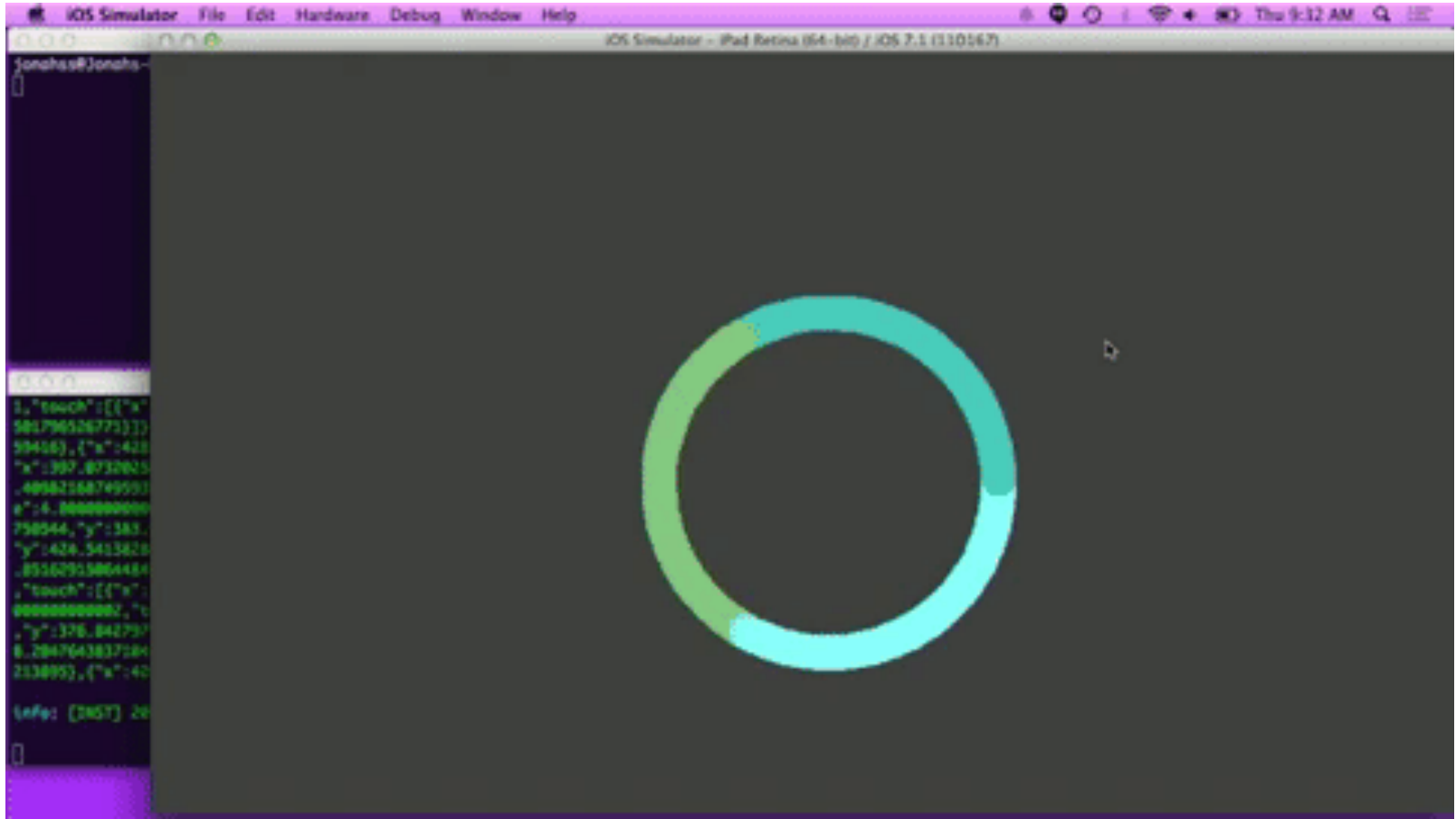
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Jonah Stiennon



Thank You TesterHome

TesterHome ranked in top referrers to
<https://github.com/appium/appium>

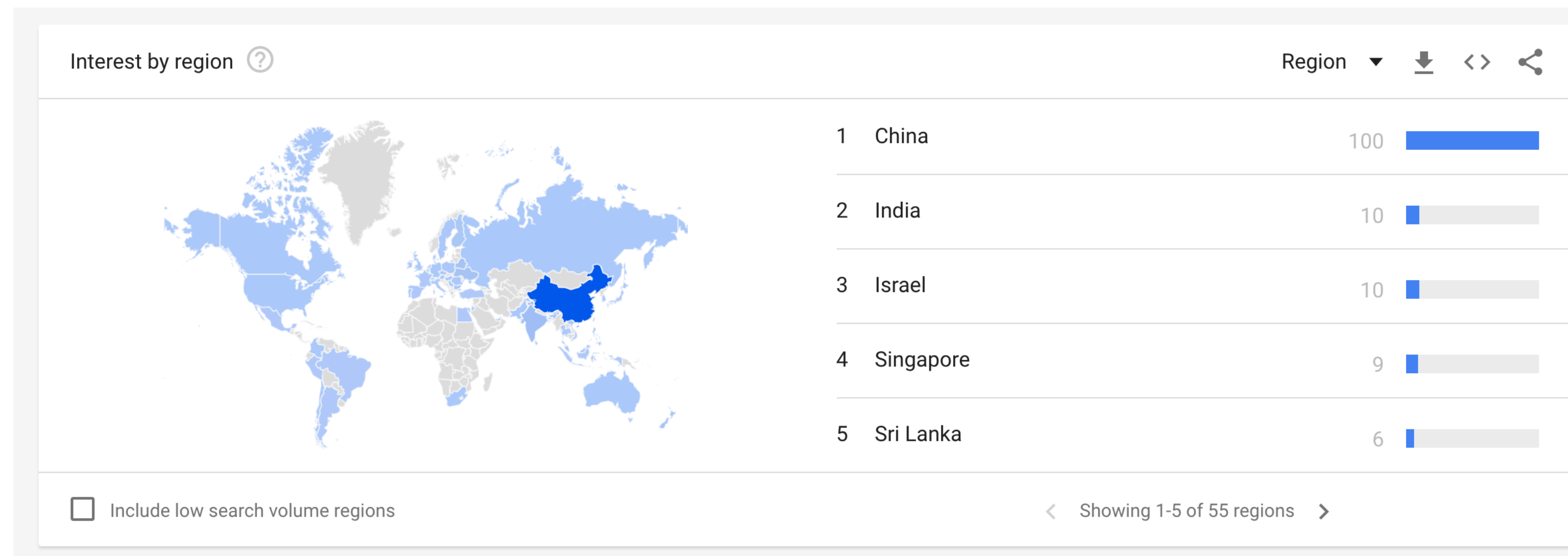
Referring sites	
Site	
	Google
	github.com
	appium.io
	testerhome.com
	Baidu
	discuss.appium.io
	DuckDuckGo
	cn.bing.com
	npmjs.com
	Bing



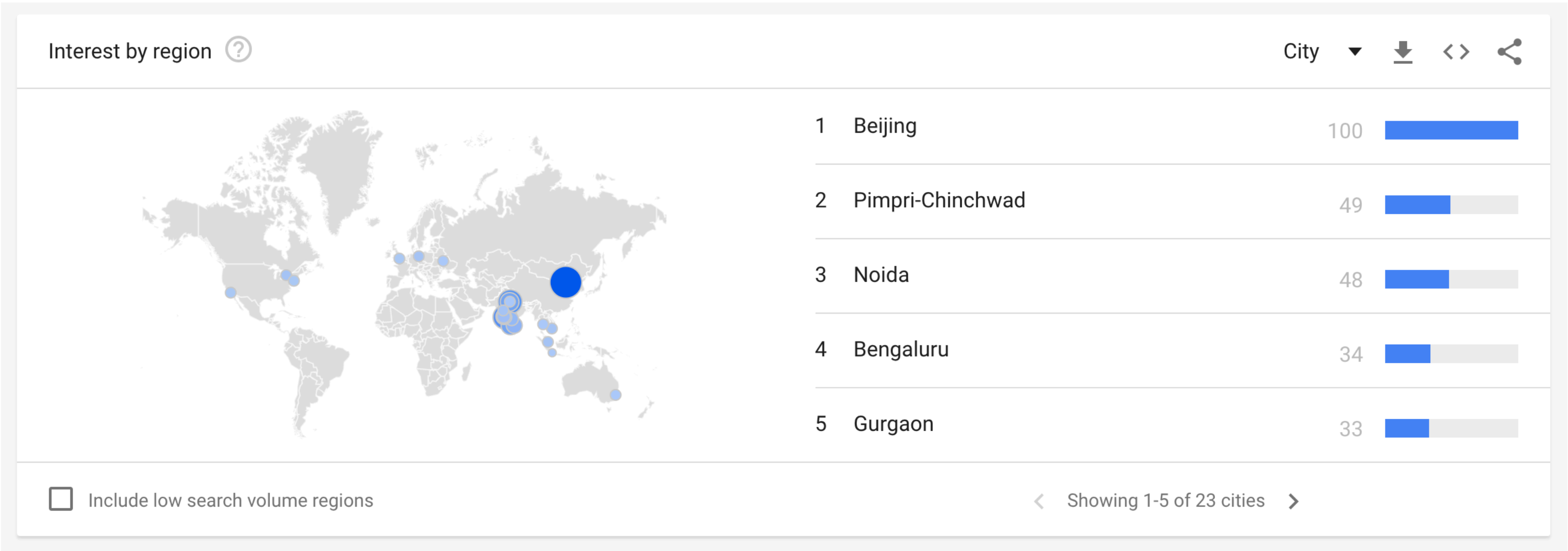
Appium's Popularity



Google Trends ranking for "appium", past twelve months



Google Trends ranking for "appium", past twelve months



Versions Released in the past 12 Months

9
New Versions

- **1.9.0**
- **1.9.1**
- **1.10.0**
- **1.10.1**
- **1.11.0**
- **1.11.1**
- **1.12.0**
- **1.12.1**
- **1.13.0**



How Many Appium Users?

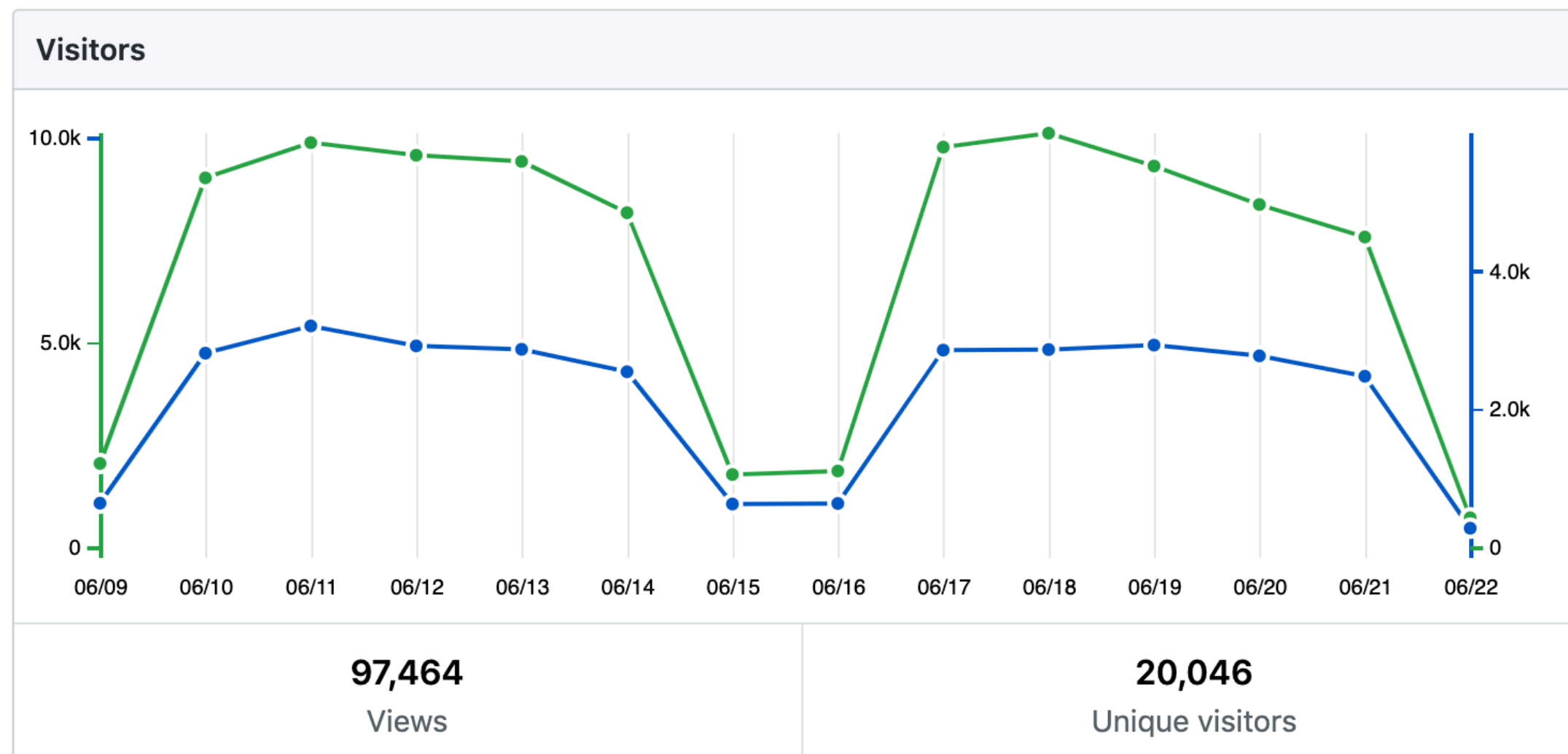
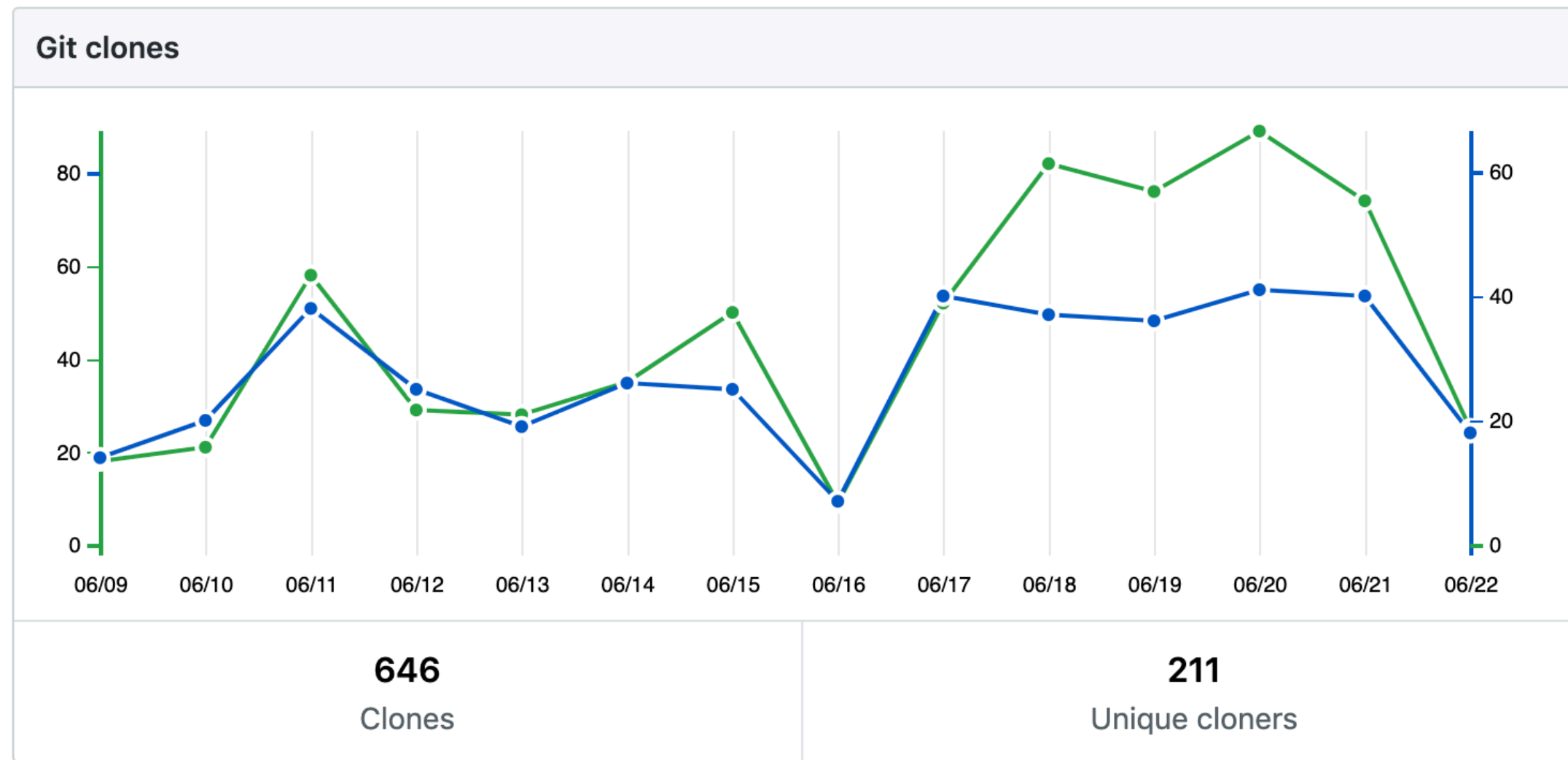
No way to know for sure

But we can look at some other metrics

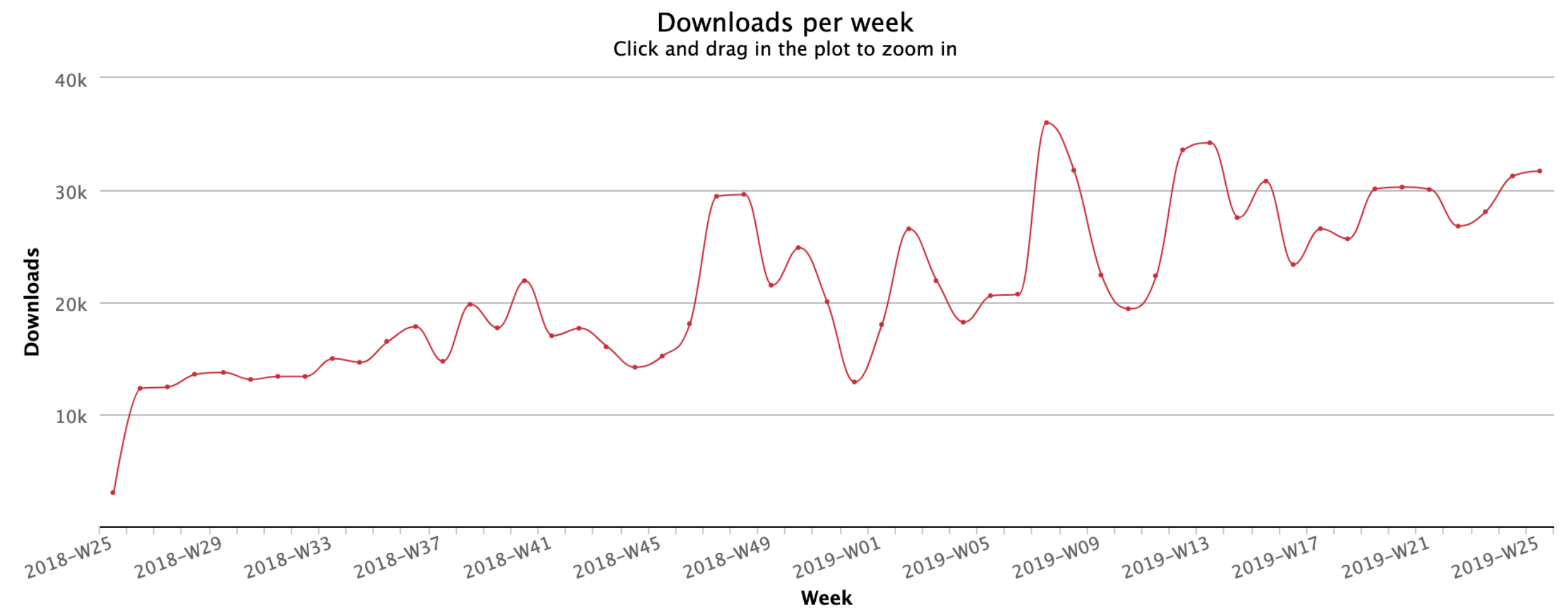
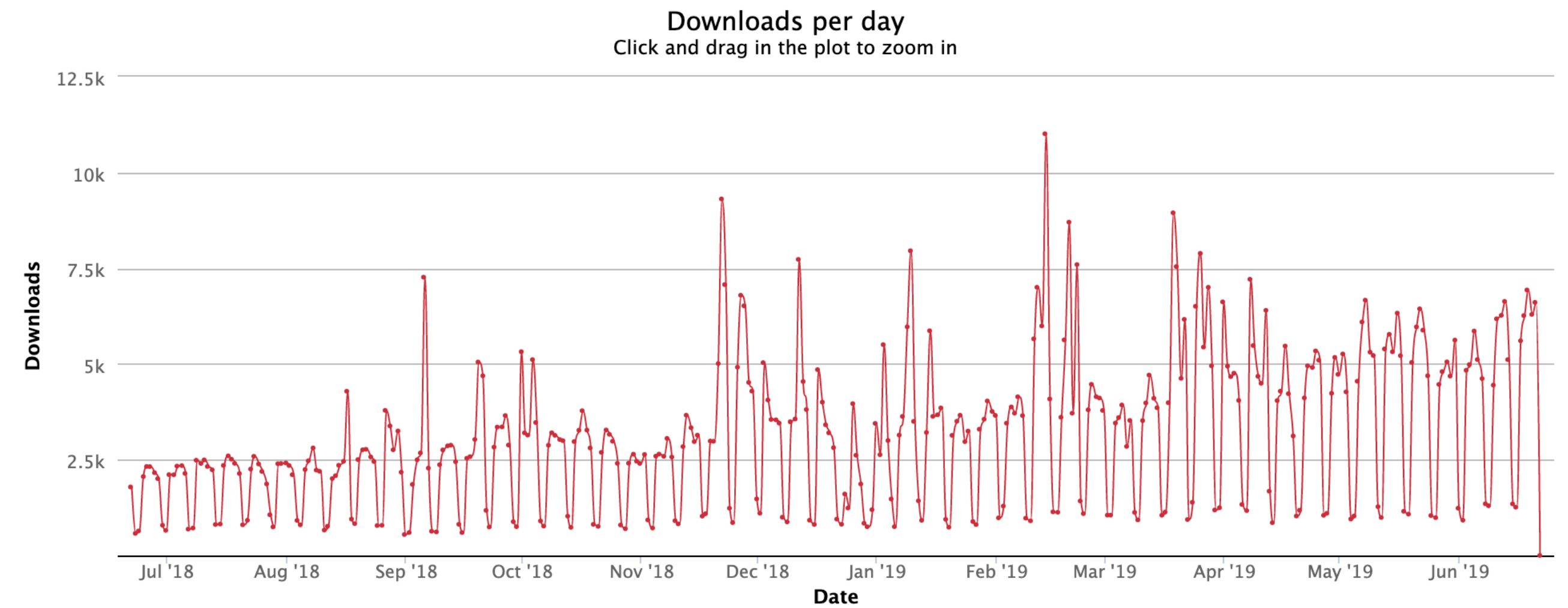


Appium Metrics

Github Metrics



NPM metrics

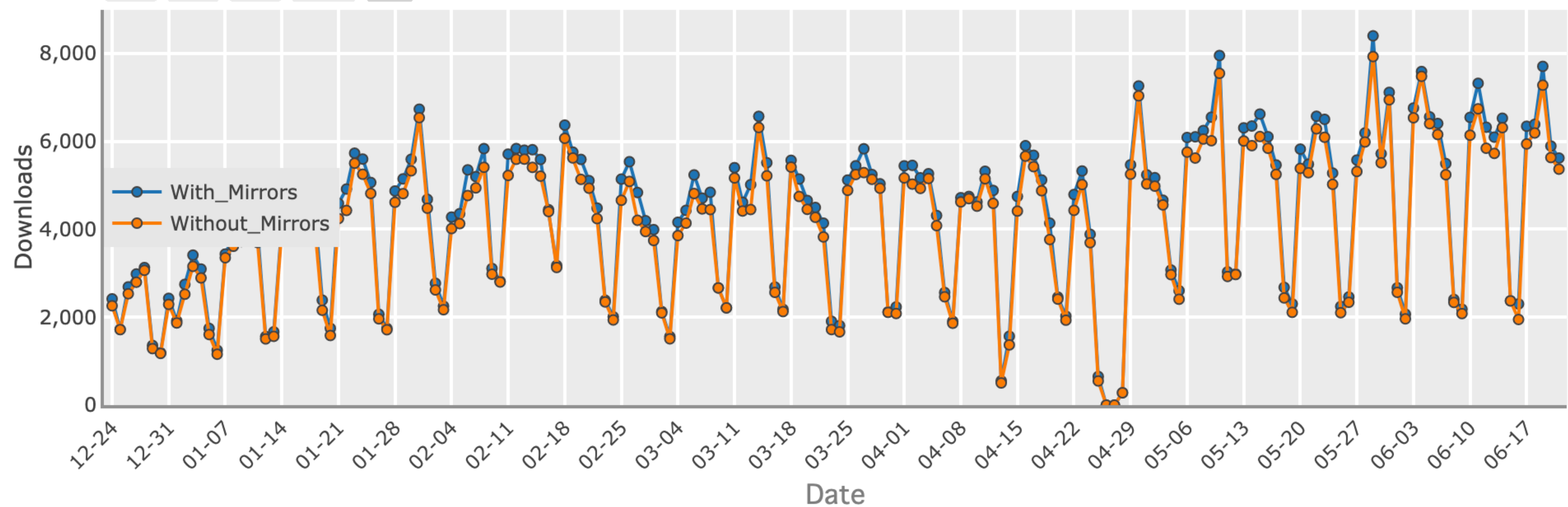


Java Client Metrics



Python Client Metrics

Total Downloads Over Past Six Months



How Many Appium Users?

The numbers are going up



TesterHome

How Did Appium Change?

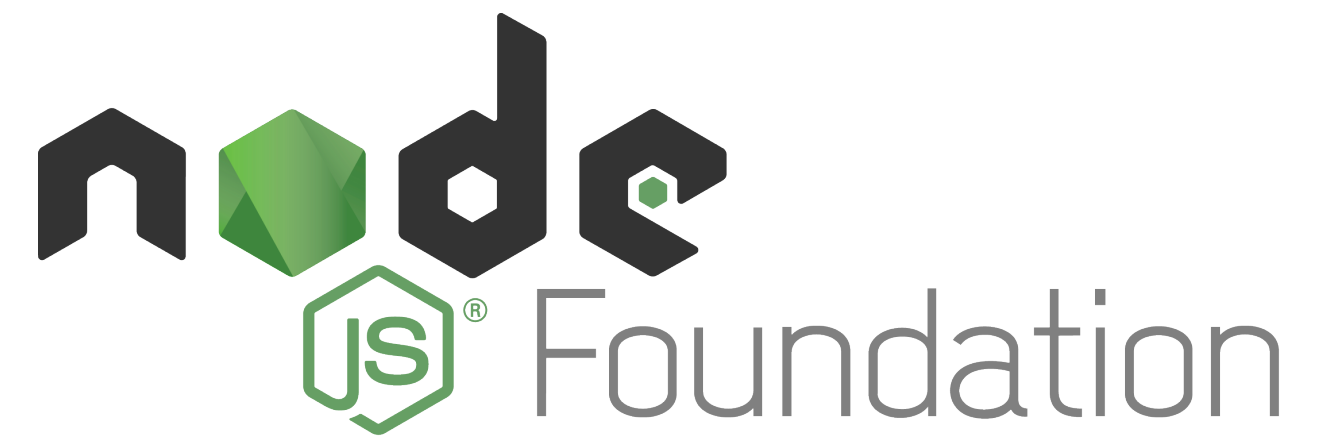
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OpenJS Foundation



+



<https://medium.com/@nodejs/introducing-the-openjs-foundation-the-next-phase-of-javascript-ecosystem-growth-d4911b42664f>



OpenJS Foundation

Part of



At Large Projects

- [ESLint](#)
- [Esprima](#)
- [Express](#)
- [Globalize](#)
- [Grunt](#)
- [HospitalRun](#)
- [Interledger](#)
- [JerryScript](#)
- [LoDash](#)
- [libuv](#)
- [Marko JS](#)
- [messageformat](#)
- [Moment.js](#)
- [Pep](#)
- [QUnit](#)

Impact Projects

- [Appium](#)
- [Dojo](#)
- [jQuery](#)
- [Node.js](#)
- [webpack](#)

Emeritus Projects

- [Chassis](#)
- [Jed](#)
- [jQuery UI](#)
- [RequireJS](#)
- [Sizzle](#)

Growth Projects

- [Architect](#)
- [Intern](#)
- [MochaJS](#)
- [Node-RED](#)
- [WebdriverIO](#)
- [webhint](#)



W3C WebDriver Spec

<https://w3c.github.io/webdriver/>

Fully Implemented!



W3C WebDriver Spec

<https://w3c.github.io/webdriver/>

Working Draft (WD)

we are here --> Candidate Recommendation (CR)

Proposed Recommendation (PR)

W3C Recommendation (REC)



W3C WebDriver Spec

Main Differences

- Some endpoints renamed
- HTTP status codes used instead of {statusCode:}
- /actions API



Next Generation Drivers

automationName desired capability will be required in 2.0

XCUITest default on iOS

UiAutomator2 default on Android (v1.14.x)



Find By Image

Supported on all drivers

New locator strategy: "-image"

driver.findElementByImage )



driver.findElementByImage(base64EncodedImage)



AI Selector Plugin

test.ai released a plugin to find elements using Machine Learning and image recognition.

<https://medium.com/testdotai/adding-ai-to-appium-f8db38ea4fac>

Find elements using just words like:

- battery
- bookmark
- music
- reply



AI Selector Plugin

```
HashMap<String, String> customFindModules = new HashMap<>();  
customFindModules.put("ai", "test-ai-classifier");  
  
caps.setCapability("customFindModules", customFindModules);
```

New selector strategy: "-custom"

```
driver.findElement(MobileBy.custom("ai:search"));
```

More information on how to use:
<https://appiumpro.com/editions/39>



Element Finding Plugin Framework

A Selector plugin is any Node.js module which exports a method like:

```
find(driver, logger, selector, multiple) => Array<Element>
```

Documentation:

<http://appium.io/docs/en/advanced-concepts/element-finding-plugins/>



Appium Project CI

Even a testing tool needs CI



Streaming Video From Devices

Supported on both iOS and Android

Starts an mjpeg server which you can connect to

`POST /session/:session_id/appium/start_recording_screen`

```
driver.startRecordingScreen();
```



Internationalization of Appium Desktop



<https://crowdin.com/project/appium-desktop>



Other Feature Work

- Clipboard contents
- Android device logs through WebSocket
- Get battery information from real devices
- Espresso driver with many "mobile:" commands
- Tizen driver
- iOS FaceID
- Improved XPATH performance on iOS and Android



AppiumConf 2019



Special Project Presented by Jonathan Lipps

Reinforcing the theme of using Appium to test any kind of system

Jlipps used Appium to drive tests for the microcontroller of an electronic drum machine.

<https://www.youtube.com/watch?v=6WeZhk95pwY>

<https://github.com/jlipps/appium-raspi-driver>



Desired Capabilities Docs

- Tagged by topic
- Searchable
- Ordered from Beginner to Advanced

<https://caps.cloudgrey.io>



Other News From AppiumConf

Jason Huggins still loves robots

Lots of great talks, all available on the conference website:

<https://confengine.com/appium-conf-2019/schedule/rich>



What's Next?



Appium 2.0

"automationName" desired capability required



Appium 2.0

Remove older drivers:

- appium-ios-driver (using Instruments)
- appium-android-driver (using UIAutomator)
- appium-selendroid-driver



Appium 2.0

Codebase consolidated into one repository

Drivers no longer bundled with Appium

Install just the drivers you want



Appium 2.0

Driver Plugins

Define custom code to run on server startup.

Or define code to be run on a specific command, adding to the current functionality.

Or define custom code, overriding the current Appium code for the command.



Appium 2.0

Driver Plugins

Enable plugin for your test run using a new desired capability
(whoever starts the server needs to explicitly install/enable them)

```
{"commandPlugins": ["test-ai-classifier", "custom-event-logger"]}
```



Appium 2.0

Driver Plugins

Plugins will extend our `BaseCommandPlugin` class and provide an `onCommand` function.

```
async function onCommand (next) {  
  this.logger.info("We're doing something custom here");  
  const result = await next();  
  this.logger.info("We're doing something custom here too");  
  return result;  
}
```



Appium 2.0

Driver Plugins

A work in progress.

More details in the proposal document:

<https://gist.github.com/jlipps/651b62316603400cab95ff0f9faf70f>

Please submit feedback and suggestions.



Thank You!

