Appium Introduction

A powerful automation testing framework for mobile application

What is Appium?

Appium is an open-source automation framework for mobile and desktop applications.

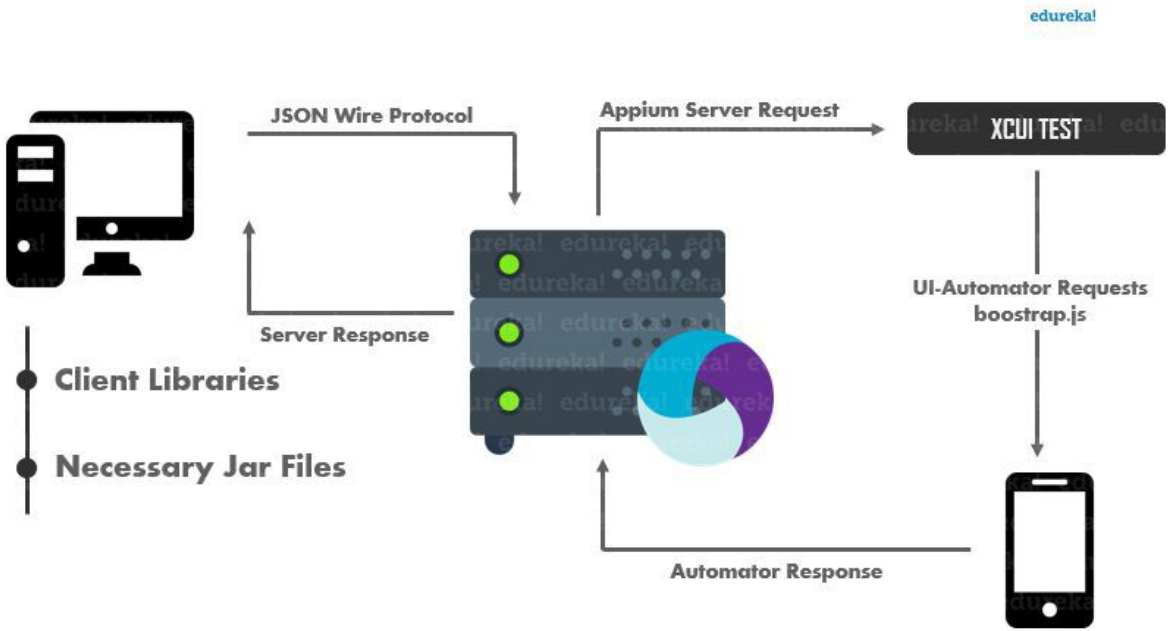
Advantages:

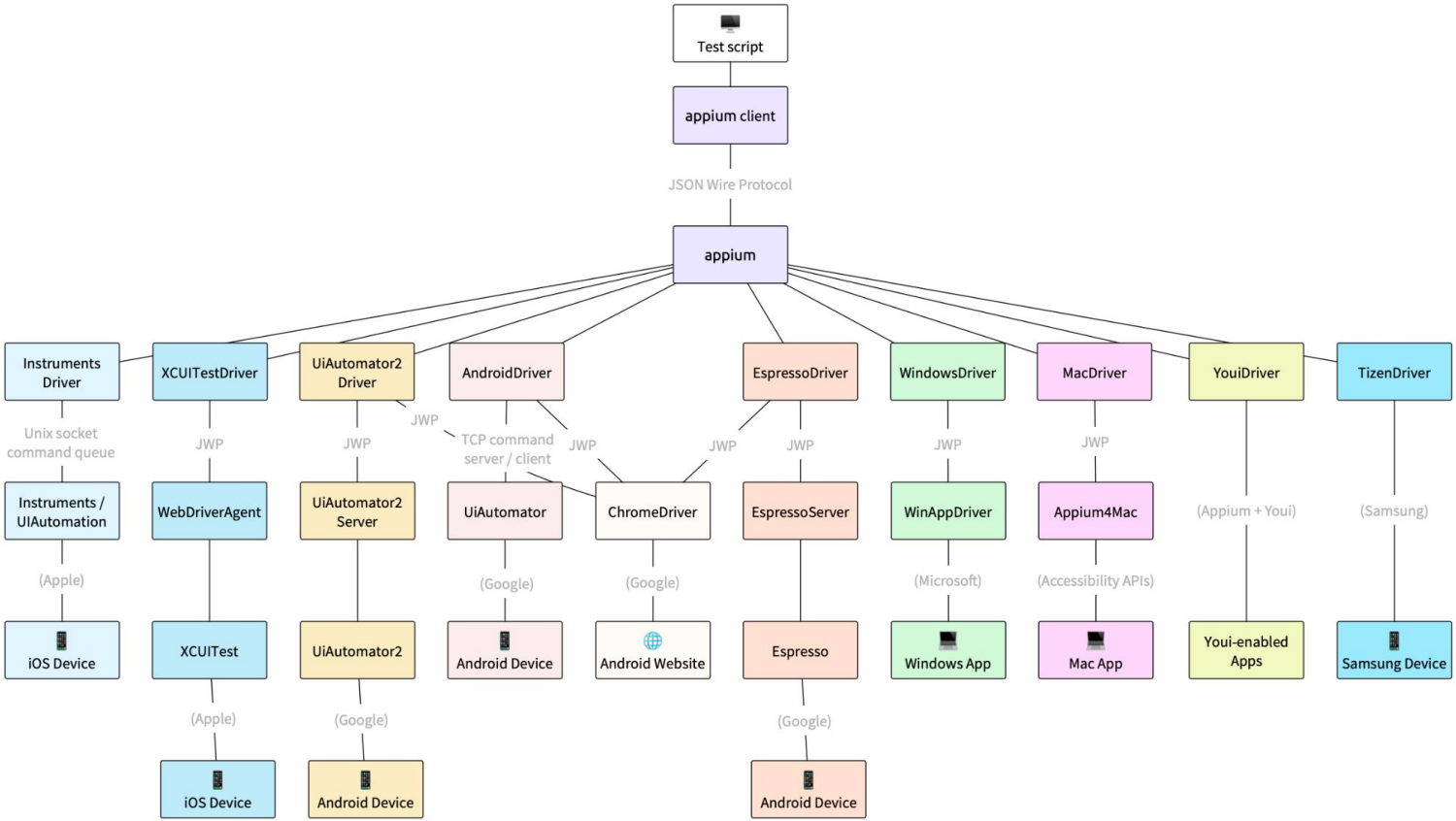
- Open Source: Appium is an open-source project, which means it is freely available and has a large and active community of contributors.
- Support Multiple Programming Languages: Java, Python, JavaScript, Ruby, C#, etc.
- Cross platform: supports Android, iOS, Windows, MacOS, etc
- Real Device & Emulators: Supports real device, cloud device, emulators and simulators

Disadvantages:

- Complex setup and configuration (can be solved using cloud testing)
- Resource Intensive

Appium Architecture




Test script
appium client
JSON Wire Protocol
appium
Instruments Driver
XCUITestDriver
UiAutomator2 Driver
AndroidDriver
EspressoDriver
WindowsDriver
MacDriver
YouiDriver
TizenDriver
Unix socket command queue
JWP
JWP
TCP command server / client
JWP
JWP
JWP
JWP
JWP
JWP
Instruments / UIAutomation
WebDriverAgent
UiAutomator2 Server
UiAutomator
ChromeDriver
EspressoServer
WinAppDriver
Appium4Mac
(Appium + Youi)
(Samsung)
(Apple)
(Google)
(Google)
(Microsoft)
(Accessibility APIs)
iOS Device
XCUITest
UiAutomator2
Android Device
Android Website
Espresso
Windows App
Mac App
Youi-enabled Apps
Samsung Device
(Apple)
(Google)
(Google)
iOS Device
Android Device
Android Device

Mobile Application Types

- Native Mobile Applications:

  Native apps are developed specifically for a single mobile platform, such as iOS or Android, using platform-specificprogramming languages and development tools

- Web Mobile Applications (Mobile Websites):

  Web apps are developed using web technologies like HTML, CSS, and JavaScript. They are accessed through a mobile web browser (e.g., Safari, Chrome) and do not require installation from an app store.

- Hybrid Mobile Applications:

  Hybrid apps are built using web technologies (HTML, CSS, JavaScript) like web apps but are wrapped in a native container or WebView component.

Appium Locators

Common Locators:

- Id, name, XPath
- AccessibilityID

Android:

- UiAutomator Locator

iOS:

- iOS Class Chain Locator
- iOS Predicate String Locator

Appium Gesture

Gestures we can perform using W3C Actions API (Pointer Actions)

- Click and hold / Long Press
- Swipe
- Scroll
- Drag and drop
- Zoom in / Zoom out

Extent Report

1. Add extentreports-cucumber7-adapter dependency (this is especially for cucumber 7)
2. Add plugin “com.aventstack.extentreports.cucumber.adapter.ExtentCucumberAdapter:” in test runner
3. Add “extent.properties” file under resources
4. Configure extent.properties file