



T23

Mobile Testing

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3:00 PM

The Appium Framework: Create and Implement Your Mobile Testing Strategy

Presented by:

Harry Roberts

Perfecto

Brought to you by:



350 Corporate Way, Suite 400, Orange Park, FL 32073

Harry Roberts

Perfecto

Harry Roberts is a Senior Solutions Architect with Perfecto and has over 5 years of experience helping customers be successful with mobile automated testing. He has presented at multiple user conferences and tradeshow and has managed Development, QA, Support and Implementation Teams. Harry is an enthusiastic about helping customers develop and implement mobile testing strategies.

The Appium Framework

Create and Implement Your Mobile Testing Strategy

STAR EAST
A TECHWELL EVENT




Harry Roberts, Senior Solutions Consultant




Harry Roberts – Who I Am



- Senior Solutions Engineer at Perfecto
- Over five years test automation
- Over five years of mobile testing
- Project Management Professional
- Managed Development
- Managed QA




Agenda




- What is Appium?
- Mobile Testing Strategy
- Executing on Mobile Testing
- Appium's Strengths
- Appium's Weaknesses

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What is Appium



Appium is an open-source tool for automating native, mobile web, and hybrid applications on iOS mobile, Android mobile, and Windows desktop platforms. It was created as an open-source alternative to existing commercial tools.

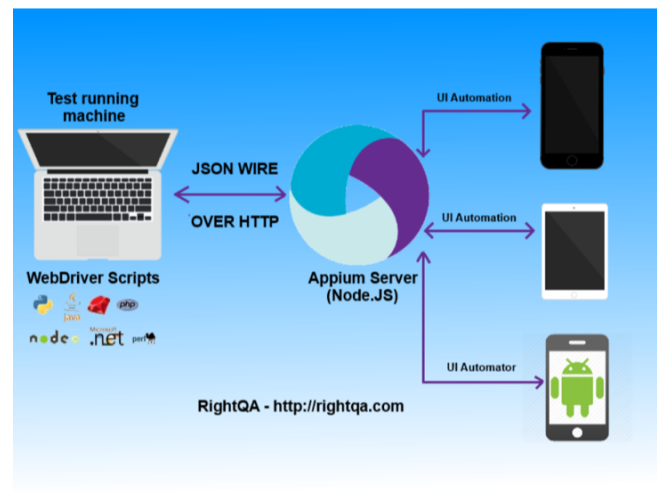
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Appium Design Philosophy



- Performs actions just like a user would
- No instrumentation of application
- Inherits from Selenium
- Test what you ship to the end user
 - In QA
 - In the wild

Appium – How it works



Appium Sample Commands




- `driver.findElementByXPath("//INPUT[@id='userId'])`
- `driver.manage().timeouts`

Appium

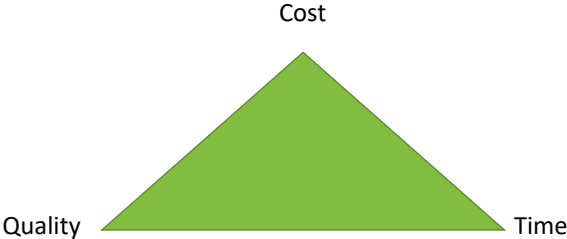


Mobile Testing Strategy

Mobile Testing Strategy




What are you solving for? What is most important?



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Mobile Testing Strategy



Script development

- By Developers
- By QA
- By Automation Engineers

What is your current/planned tools set

- Programming language(s)
- IDE(s)
- CI tools
- Other points of integration

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Mobile Testing Strategy



Device and O/S Coverage

- IOS
- Android
- Windows Mobile
- Native, Hybrid and/or WEB
- Do you have analytics?

Device Differences

- Device Browser Differences
- Device Performance
- O/S Differences
- Carrier OS Differences

Mobile Testing Execution



Define and Prioritize Test Cases

- Define what is Automatable
- P1 – on pull request
- P2 – partial regression
- P3 – full regression
- User Journey
- Atomic
- Autonomous

Mobile Testing Execution



Define Test Execution Timing

- P1 – on pull request
- P2 – partial regression
- P3 – full regression
- What is acceptable duration

Define device/OS/browser coverage

- P1 – on pull request
- P2 – partial regression
- P3 – full regression

Mobile Testing Execution




Define Test Execution Timing

- P1 – on pull request
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- What is acceptable duration

Define device/OS/browser coverage

- P1 – on pull request
- P2 – partial regression
- P3 – full regression


Mobile Testing Execution



What is your percentage of automation goal?

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Mobile Testing Execution




Define and agree to an approach

- Start Small
- Integrate with CI
- Run often
- Consistent results
- Lessons learned
- Grow the automation

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Appium Strengths




- Support for native, hybrid and web applications
- Inherits from Selenium
- Open source
- Cross device/OS/Browser testing
- No application instrumentation required

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Appium Strengths



- Does not require application source code
- Agnostic to language
- Agnostic to testing frameworks
- Agnostic to CI tools
- In theory, single script across IOS and Android

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Appium Weaknesses



- Espresso and XCUITest
 - Faster
 - Developers prefer to use IDE/Language
- Access to device settings
 - Network setting (Wifi/Airplane mode)
- Appium is limited to application/web objects
 - No visual verification
 - No OCR

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Appium Weaknesses



- Limited Real User Conditions
 - Network conditions
 - Other Apps in the background
- No image injection
- No fingerprint verification
- No Facial verification
- Testing multiple browsers on a specific device
- Lack of IDE plugins

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Appium Strategy



Planning is critical
Defining the test cases is critical
Focus on your minimum required capabilities

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thank you