Native mobile application test automation on real devices

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#TAPOST2016

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PRESENTATION AGENDA

- About us
- Test automation plans
- Appium framework
- Parallelization
- Project integration
- Statistics
- Summary
- Contribution

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About us

Who we are?

Global social network built on a Q&A format

- Available in 49 languages
- 60 million downloads of the mobile app
- 45 percent of mobile users log in daily

- Questions asked: 9 000/min
- Questions answered: 5 550/min
- Answers liked: 29 000/min

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Test automation

How do we efficiently deliver?

Automate regression testing

- Back-end testing of the REST API with Cucumber BDD
- WEB UI testing using the Selenium with Cucumber BDD
- **Native mobile application testing - ?**

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Tool selection

Which one to choose?

POSSIBLE TOOLS

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Xamarin

Robotium

Ranorex®

TouchTest

Calabash

experitest

appium

UI TESTING FOR ANDROID
espresso

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Appium framework

Why Appium?

Appium framework privileges

ASKfm

PLATFORMS Supports platforms Android, iOS, Windows phone and FirefoxOS

WEBDRIVER Uses the WebDriver approach just like Selenium Web tests

FREE Open-source project

COMMUNITY Very active community

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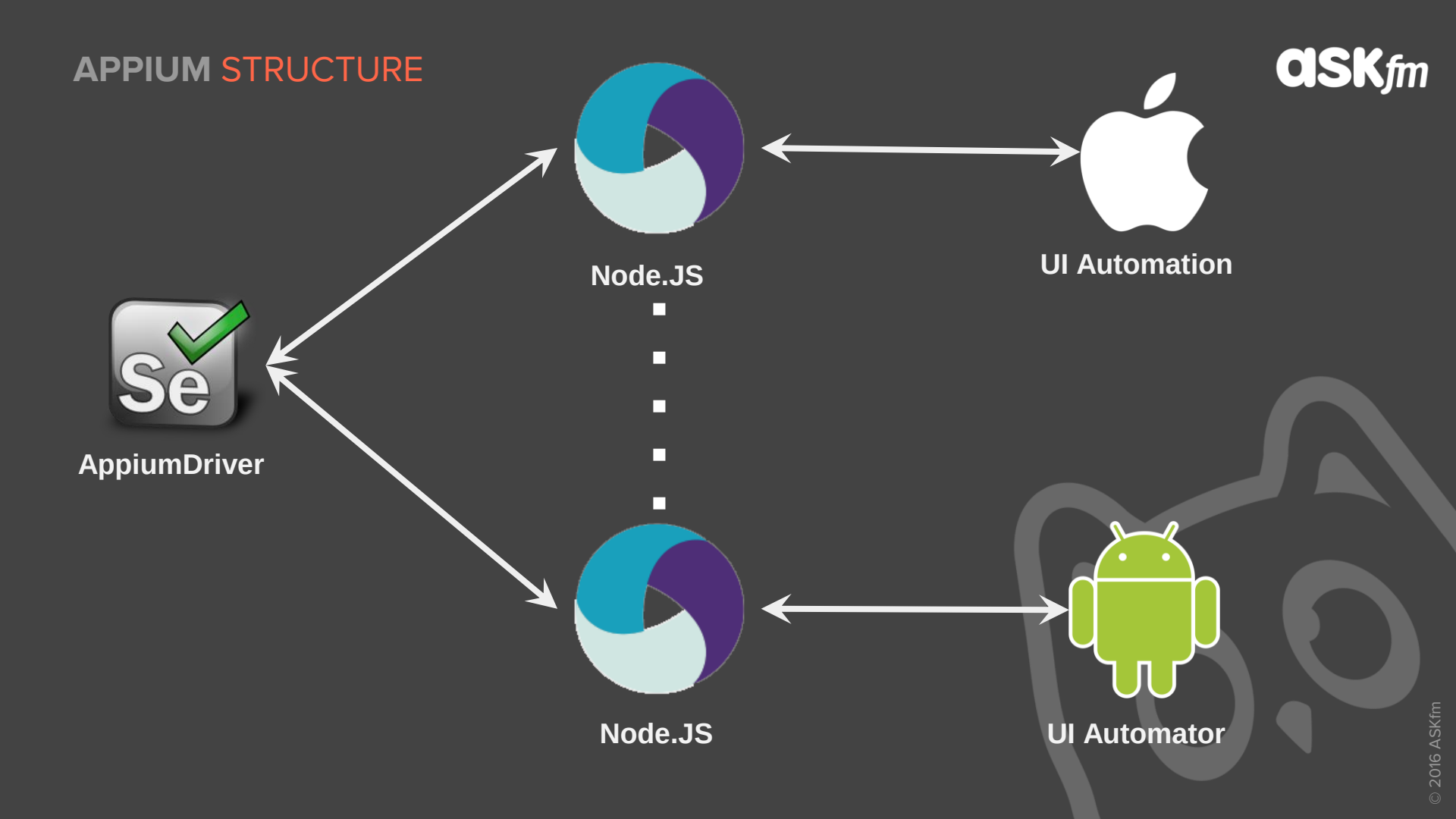
Test execution

How does it work?

APPIUM STRUCTURE



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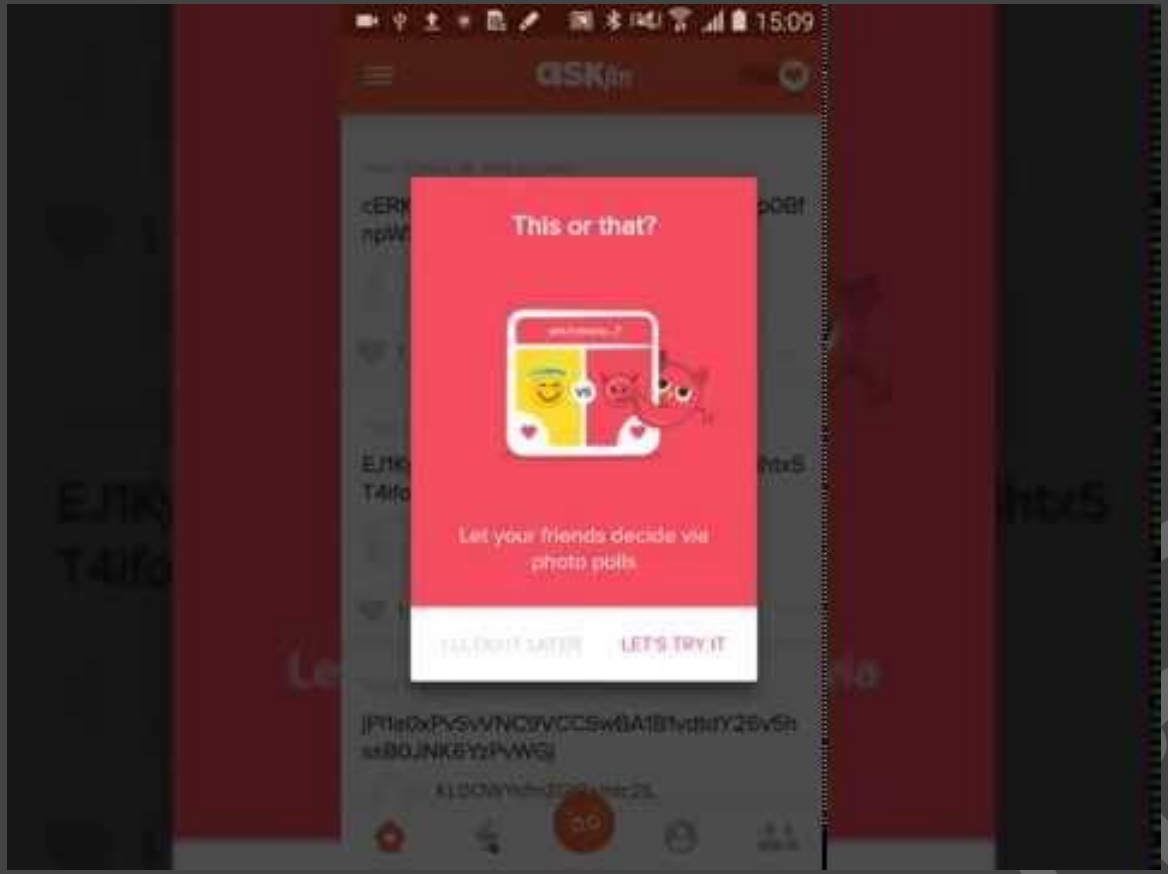
LIVE TEST EXECUTION



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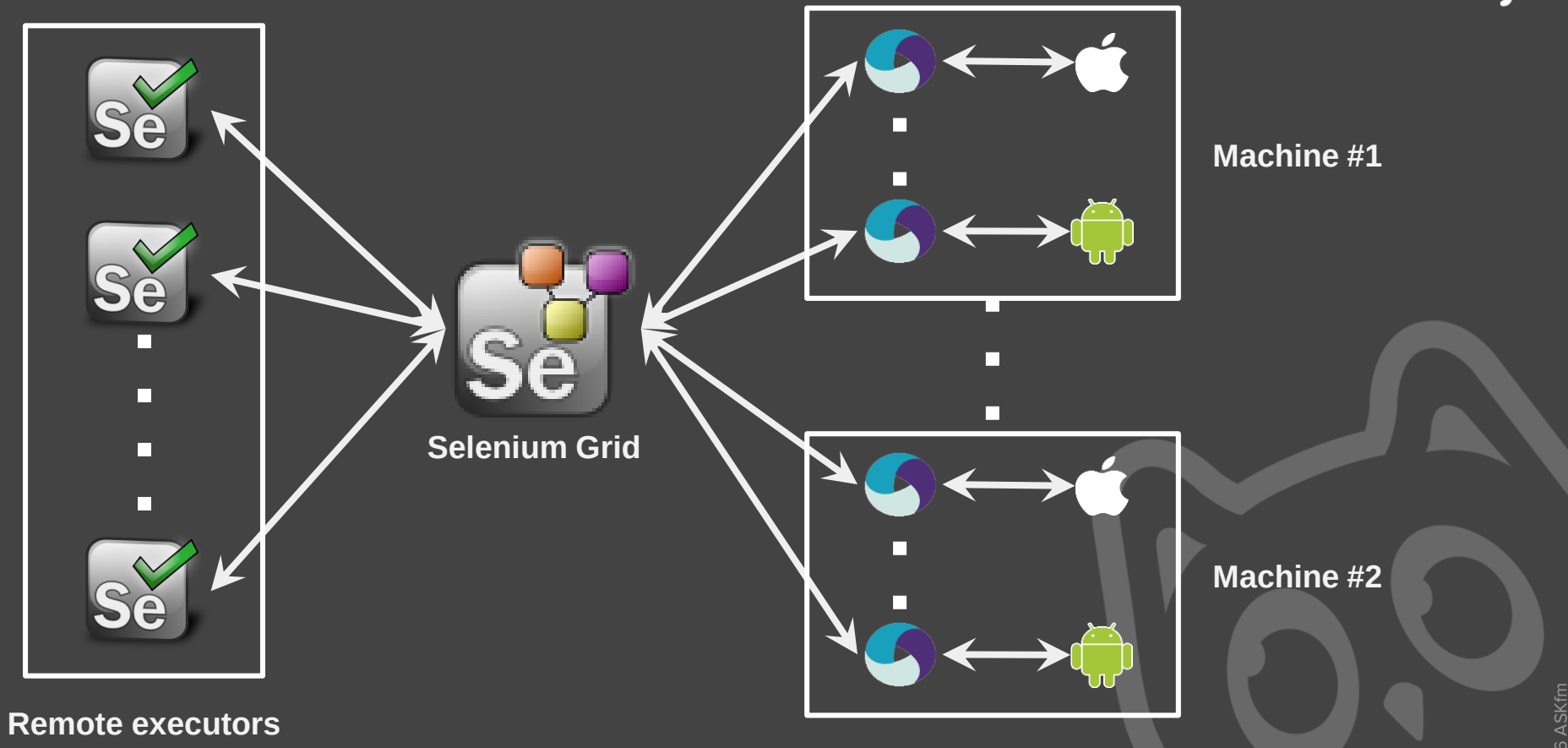
Parallel execution

How do we apply this
on range of devices?

DEVICE FARM



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Project integration

How does it work in project development cycle?

Appium test execution in project

ASKfm

GRID RESET — Restart Selenium Grid to reset Grid-Node connections

NIGHTLY BUILD — Build the Application from latest code in repository

TEST RUN — Run latest test code

REPORT — Post-build report generation

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Test statistics

How is it performing?

TEST STATISTICS

12 scenarios:

- Sony Xperia-Z: 49 min
- Samsung Galaxy S3: 60 min
- Samsung Galaxy S4: 54 min
- iPhone 5: 95 min

39 scenarios:

- iPhone 5: 5h 36 min
- iPod 6: 11h 12 min

73 scenarios:

- Sony Xperia-Z: 4h 35 min
- Samsung Galaxy Note: 4h 24 min

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Appium summary

Is it “good”?

ASKfm

Pros

- Application - already automation friendly
- Cross-platform
- Can automate Web, Hybrid and Native mobile automation
- WebDriver concept
- Active community

Cons

- One iOS instance per Mac
- Few features missing
- Device-sensitive

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Appium future

Can it get better?

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...of course! Contribute!

- Make changes to the Appium code or docs

  https://github.com/appium
- Become an Appium Triager
- Help out on forums

  https://discuss.appium.io
- Submit bug reports or feature requests

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