



Hewlett Packard
Enterprise

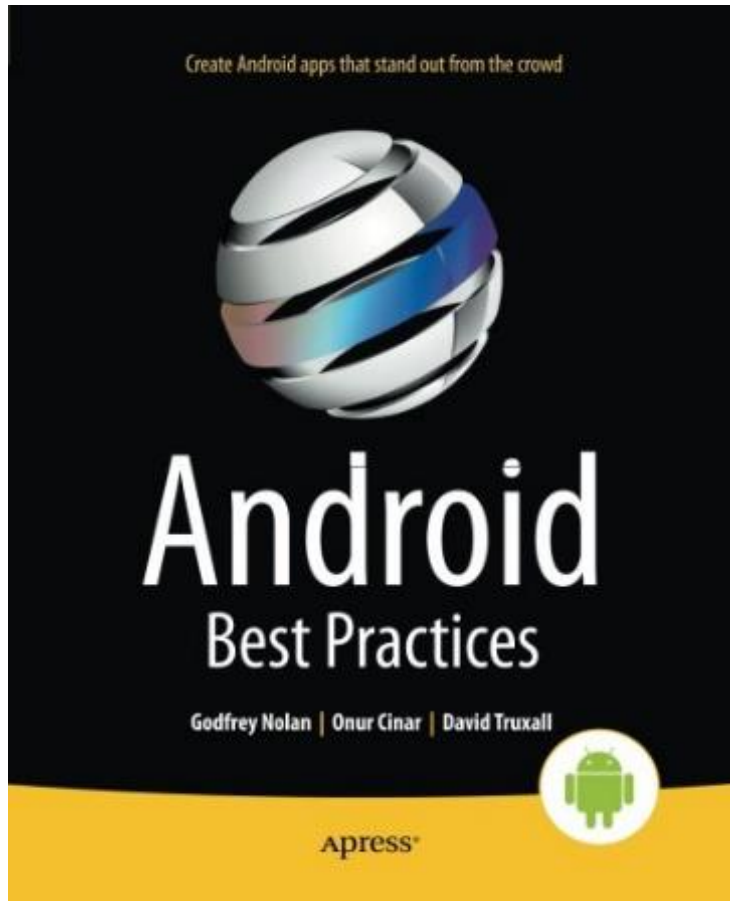


Software In Motion

Continuous Delivery for Mobile

David Truxall, Ph.D.

About Me



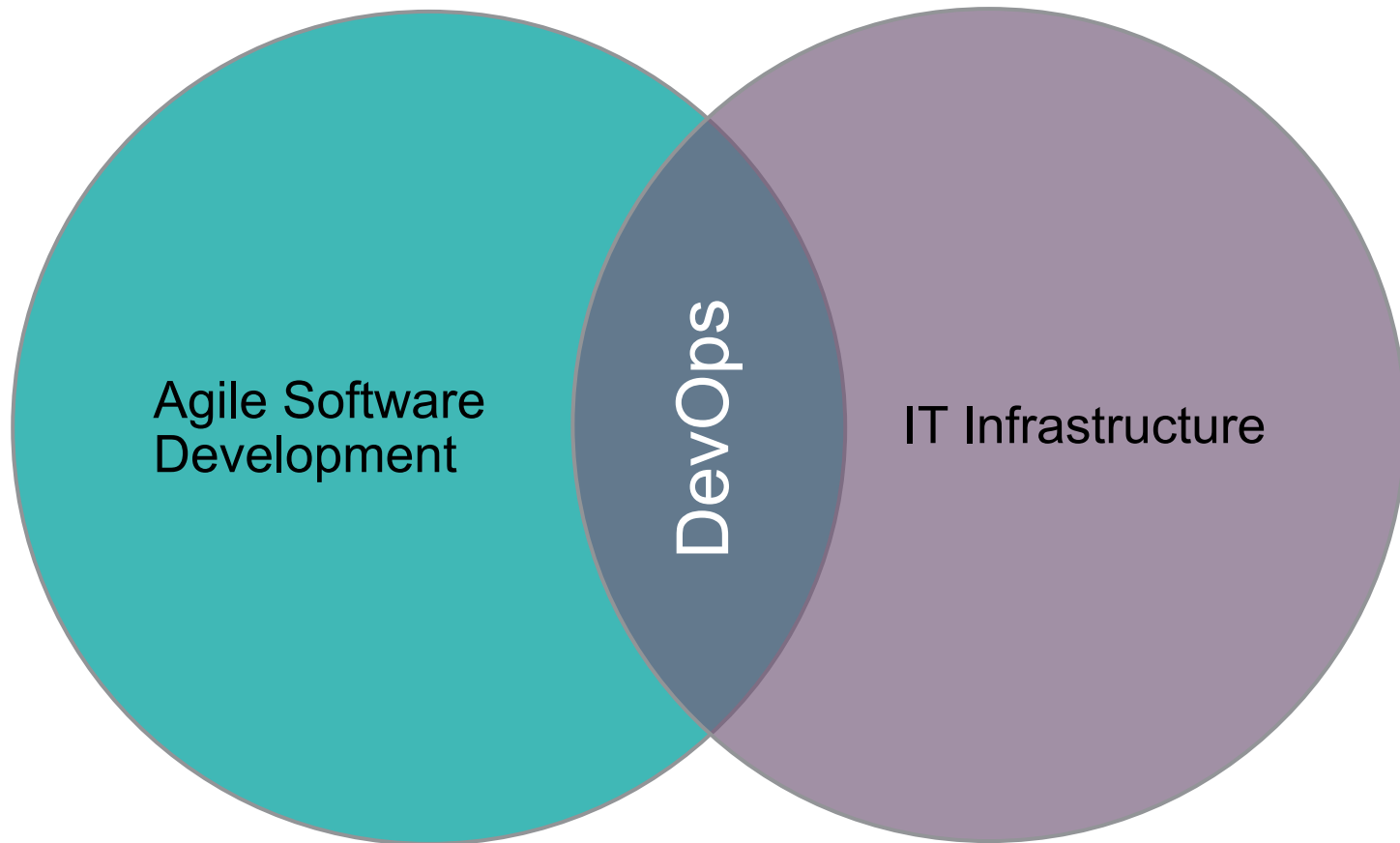
@davetrux

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Agenda

1. Concepts
2. Build tools
3. Platform examples
4. Testing
5. Deployment

DevOps



Concepts

–Continuous Integration

- Build the app regularly
- Know when the app is compiling or broken
- Fail early
- Happens more often than you would imagine

–Continuous Delivery

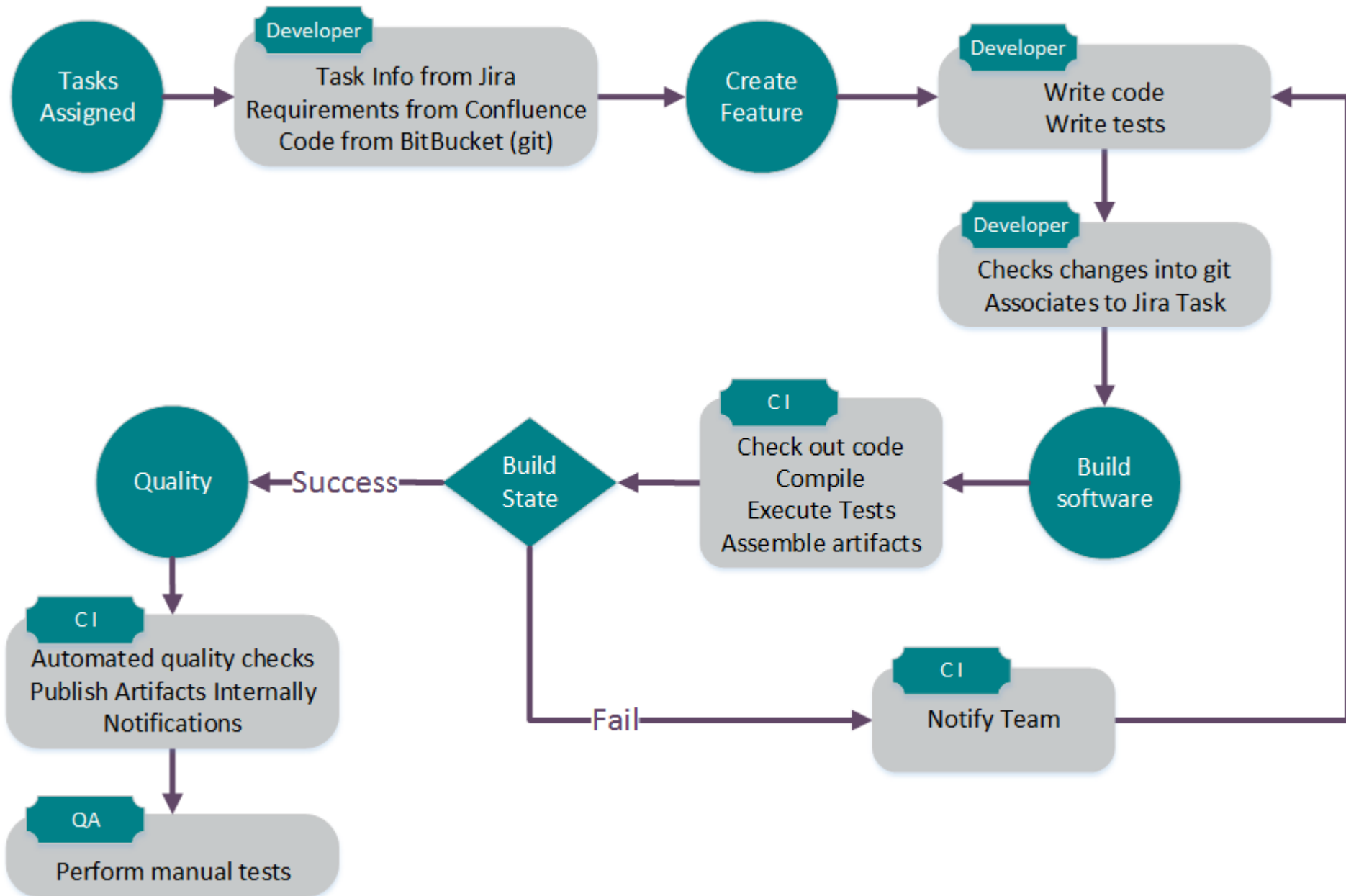
- App is constantly tested
- Deliverable to production at any time
- Automated deployment

Mobile Problems

- Multiple Platforms
- Multiple Environments
- App Signing
- Testing
- Deployment
- Release frequency

Goals

- Consistency across platforms
- Automation
- Easy for team





Tools



Tools Tools Tools

1

En

O

12c

3

Os

My

MySQL

11

En

Mq

MSSQL

4

Os

Gt

Git

12

Os

Sv

Subversion

PERIODIC TABLE OF DEVOPS TOOLS (V1)

Os

Open Source

Fr

Free

Fm

Freemium

Pd

Paid

En

Enterprise

Database

CI

Deployment

Cloud / Iaas / Paas

BI / Monitoring

SCM

Repo Mgmt

Config / Provisioning

Release Mgmt

Logging

Build

Testing

Containerization

Collaboration

Security

5

En

Ch

Chef

13

Fr

Ssh

SSH

6

En

Pu

Puppet

14

En

Bl

BladeLogic

7

Os

An

Ansible

15

Os

Va

Vagrant

8

En

Sl

Salt

16

Fr

Tf

Terraform

9

Os

Dk

Docker

17

Os

Rk

rkt

10

Pd

Az

Azure

18

Fm

Hk

Heroku

19

Os

Pq

PostgreSQL

37

Os

Mg

MongoDB

55

En

Db

DB2

73

Fr

Cs

Cassandra

20

Fr

Mc

Mercurial

38

Fm

Gh

Github

56

Fm

Bb

Bitbucket

74

En

Hx

Helix

21

Os

Mv

Maven

39

Os

Br

Buildr

57

Fm

Qb

QuickBuild

75

Os

Msb

MSBuild

22

Os

Gr

Gradle

40

Os

At

ANT

58

En

Ub

UrbanCode Build

76

Os

Rk

Rake

23

En

Mr

Meister

41

Fm

Bm

BuildMaster

59

Pd

Ta

Visual Build

77

Os

Lb

LuntBuild

24

Os

Jn

Jenkins

42

Fm

Cs

Codeship

60

Fm

Tc

TeamCity

78

Os

Cu

Continuum

25

Pd

Bb

Bamboo

43

Fm

Sn

Snap CI

61

Fm

Sh

Shippable

79

Fm

Ca

Continua CI

26

Os

Tr

Travis CI

44

Fm

Cr

CircleCI

62

Os

Cc

CruiseControl

80

Os

Gu

Gump

27

Fr

Ar

Archiva

45

Os

Nx

Nexus

63

Os

Ay

Artifactory

81

Os

Ng

NuGet

28

Os

Fn

FitNesse

46

Fr

Cu

Cucumber

64

Fr

Ju

JUnit

82

Os

Ap

Appium

29

Fr

Se

Selenium

47

Os

Cj

Cucumber.js

65

Fr

Jm

JMeter

83

En

Xltv

XL TestView

30

Os

Gn

Gatling

48

Fr

Qu

Qunit

66

Fr

Tn

TestNG

84

En

Tc

TestComplete

31

Pd

Gd

Deployment Manager

49

Fr

Cp

Capistrano

67

En

Rd

RapidDeploy

85

Os

Go

Go

32

Os

Sf

SmartFrog

50

Fr

Ju

JuJu

68

Fm

Cy

CodeDeploy

86

En

Ef

ElectricFlow

33

Fr

Cb

Cobbler

51

Os

Rd

Rundeck

69

En

Oc

Octopus Deploy

87

En

Xld

XL Deploy

34

Os

Bc

Bcfg2

52

Os

Cf

CFEngine

70

En

No

CA Nolio

88

En

Ud

UrbanCode Deploy

35

Os

Kb

Kubernetes

53

Fr

Pk

Packer

71

En

Eb

ElasticBox

89

Os

Mo

Mesos

36

En

Rs

Rackspace

54

Fm

Bx

Bluemix

72

En

Ad

Apprenda

90

Os

Cf

Cloud Foundry

91

En

Xlr

XL Release

106

En

Sp

Splunk

92

En

Ur

UrbanCode Release

107

Os

Ki

Kibana

93

En

Ls

CA Service Virtualization

108

Fm

Nr

New Relic

94

En

Bm

BMC Release Process

109

Os

Ni

Nagios

95

En

Hp

HP Codar

110

Os

Gg

Ganglia

96

Pd

Ex

Excel

111

Os

Ct

Cacti

97

En

Pl

Plutora Release

112

Os

Gr

Graphite

98

En

Sr

Serena Release

113

Os

Ic

Icinga

99

Fm

Tr

Trello

114

Fm

Sl

Sumo Logic

100

Pd

Jr

Jira

115

Os

Ls

Logstash

101

Fm

Rf

HipChat

116

Fm

Lg

Loggly

102

Fm

Sl

Slack

117

Os

Gr

Graylog

103

Fm

Fd

Flowdock

118

Os

Sn

Snort

104

Pd

Pv

Pivotal Tracker

119

Os

Tr

Tripwire

105

En

Sn

ServiceNow

120

En

Cy

CyberArk

Continuous Integration Server



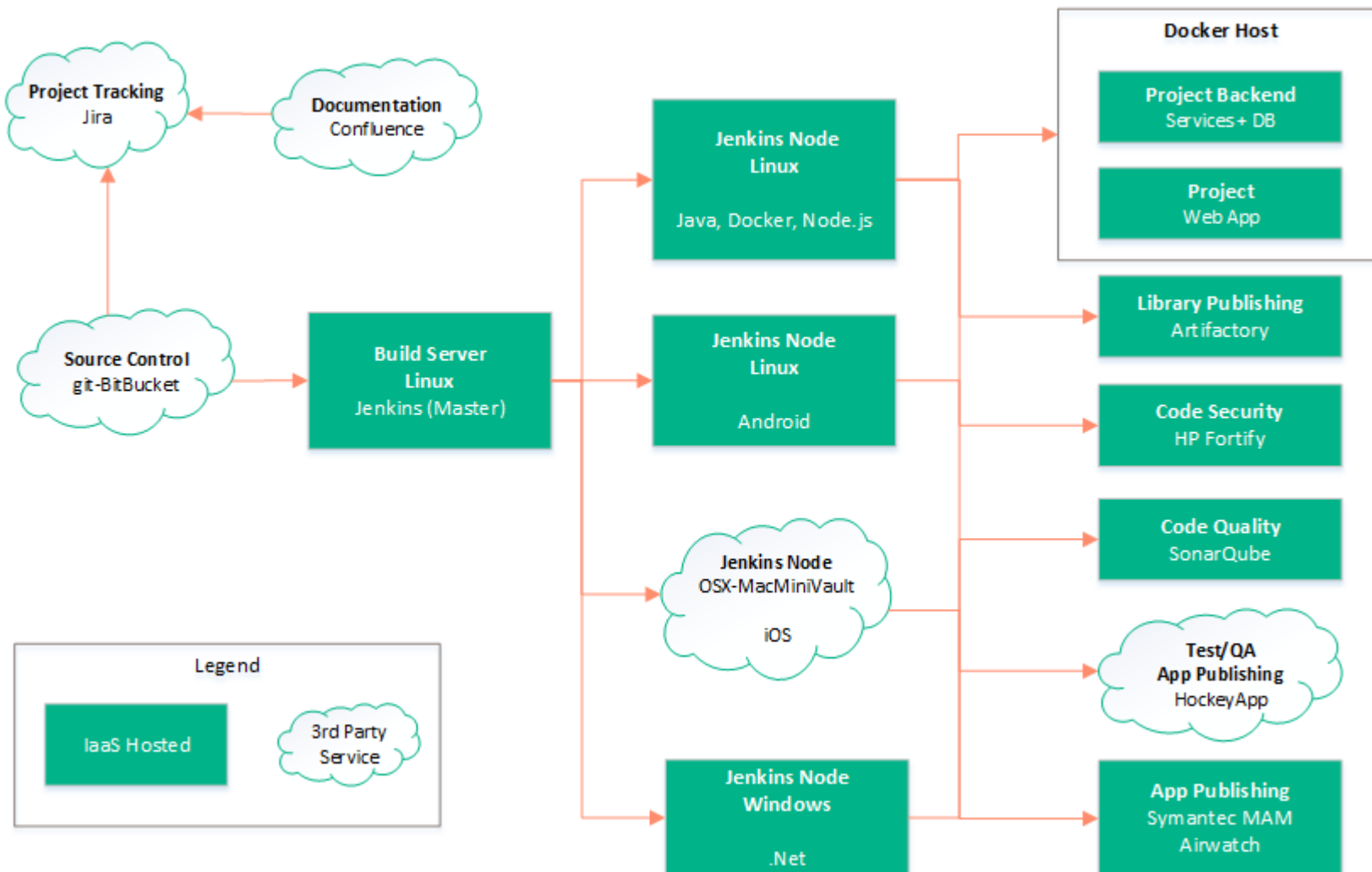
Jenkins

Build Scripts





Jenkins Tour





Mobile Nodes

iOS Jenkins Node

- Be reachable from the master
- Create a Jenkins user
- Install Java
 - Install Gradle
- Install Xcode
- Configure SSH
- Set Permissions

Gradle and iOS

OpenBakery Gradle Xcode Plugin

<http://openbakery.org/gradle.html>





iOS Demo

Android Jenkins Node

- Be reachable from master
- Install Java
- Install Android SDK
- Configure SSH
- Set Permissions

Android and Gradle

- Build Variants



Android Demo



Testing



Automated Testing

- Unit Tests
- Functional Tests



AWS Device Farm

Calabash



Automated Test Demo

Static Code Analysis

- FindBugs
- Lint tools
 - <http://developer.android.com/tools/help/lint.html>
 - <https://github.com/realm/SwiftLint>
 - <https://github.com/jshint/jshint>
- SonarQube



SonarQube Demo



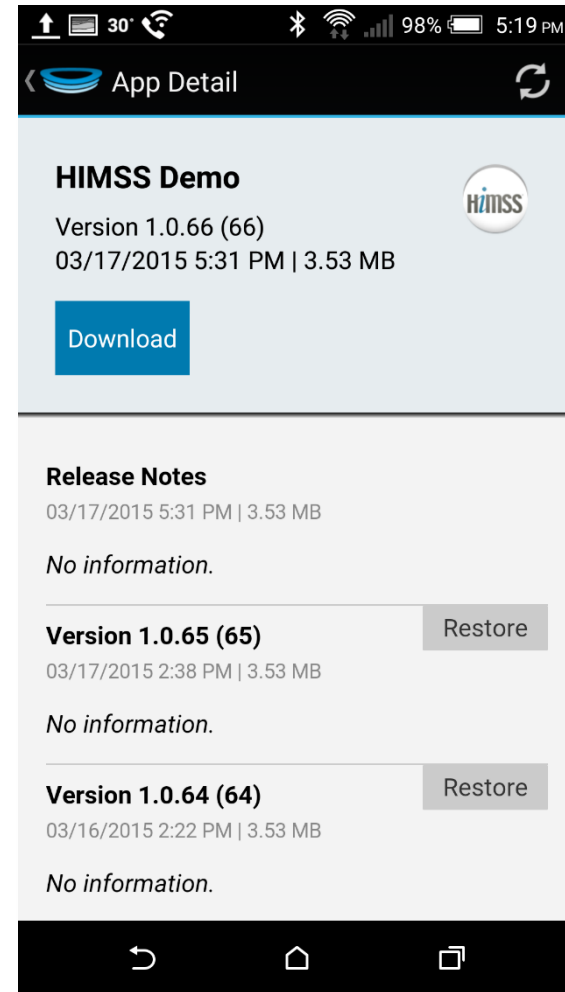
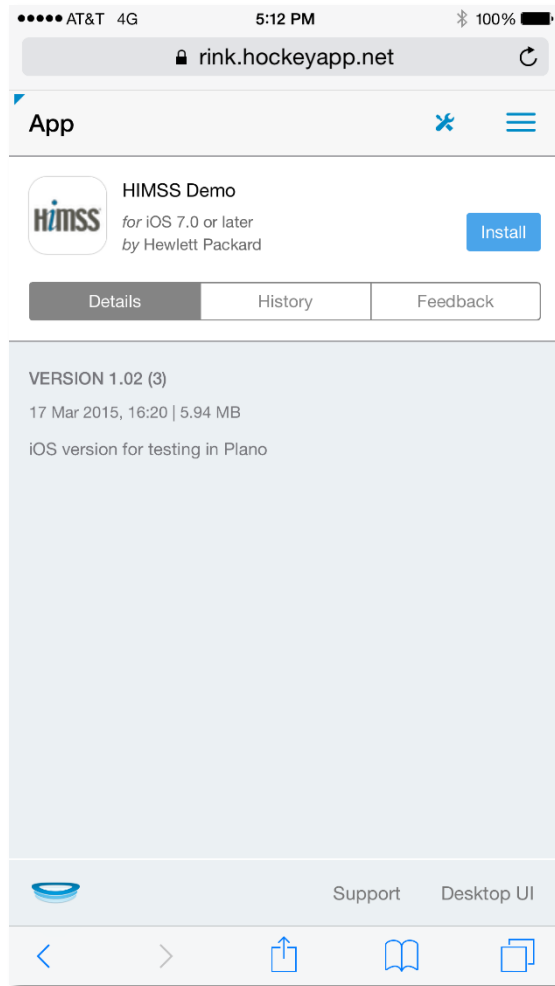
Deployment

Deployment

The logo for HockeyApp, featuring the word "HOCKEY" in dark blue and "APP" in light blue, all in a bold, sans-serif font, set against a solid blue rectangular background.

HOCKEYAPP

HockeyApp - Install

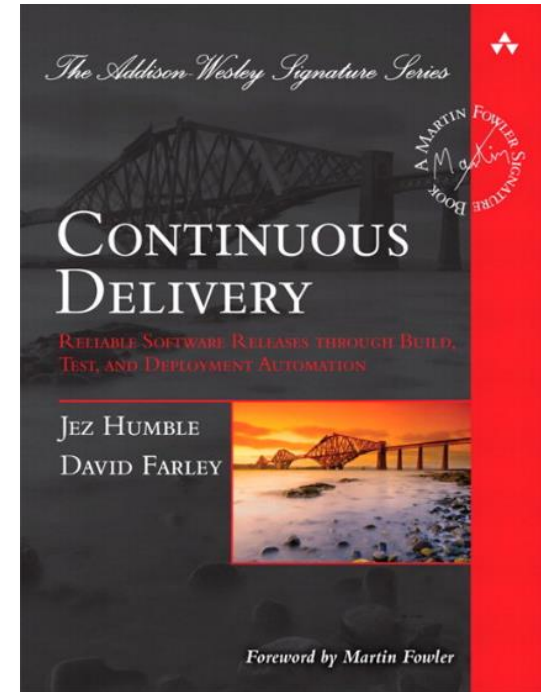




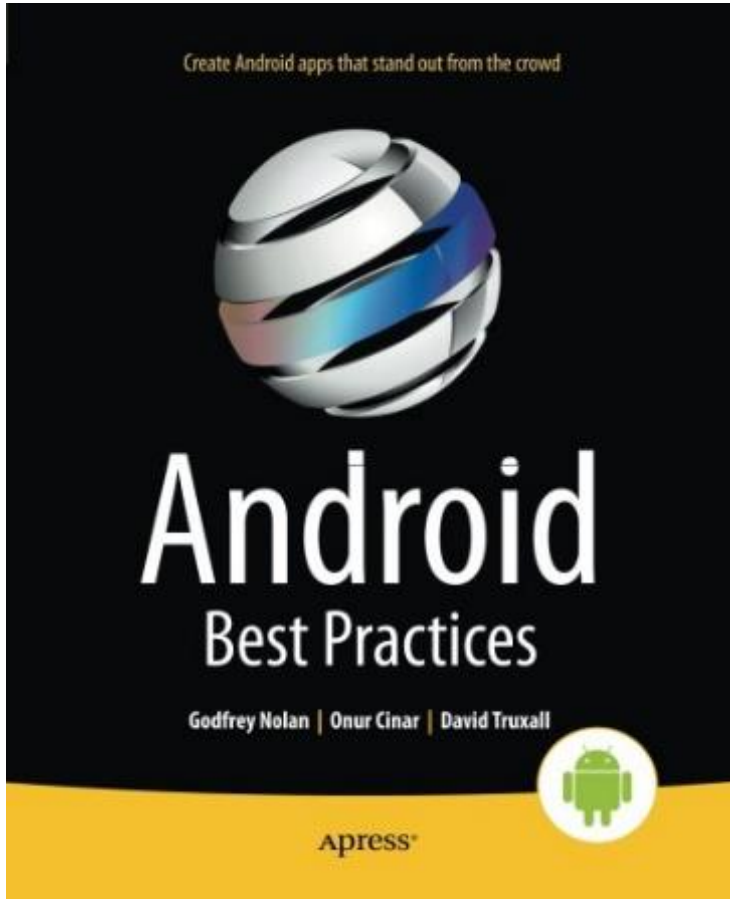
iOS Deployment

Resources

- <http://hockeyapp.net>
- <https://aws.amazon.com/device-farm/>
- <https://github.com/bmuschko/gradle-cargo-plugin>
- <http://calaba.sh/>
- <http://gradle.org/>
- <https://jenkins-ci.org/>
- <https://github.com/bmuschko/gradle-cargo-plugin>
- <http://appfoundry.be/blog/2014/07/04/Xcode-Env-Configuration/>
- <https://dzone.com/articles/the-state-of-continuous-integration-in-2015>
- <https://xebialabs.com/the-ultimate-devops-tool-chest/>



Shameless Plug #2



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