



# DevOps for Mobile - CI and CD in practice

## Digital Day SP 2016

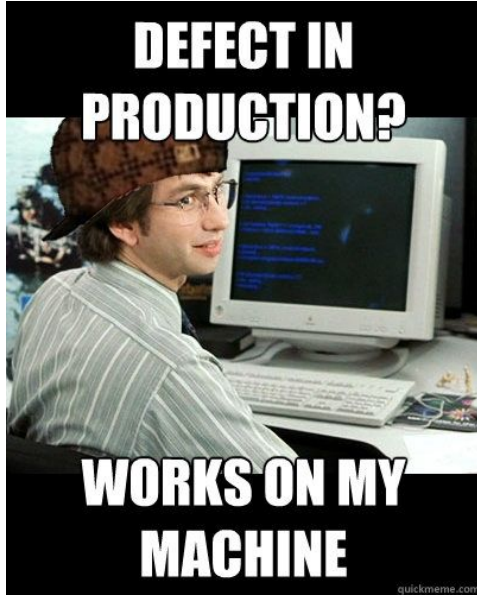
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*CI&T Digital Day  
São Paulo 2016*

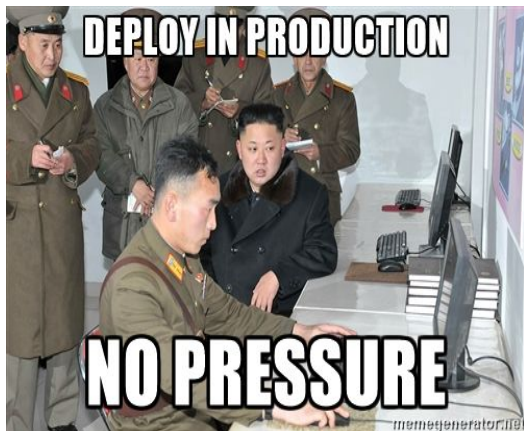
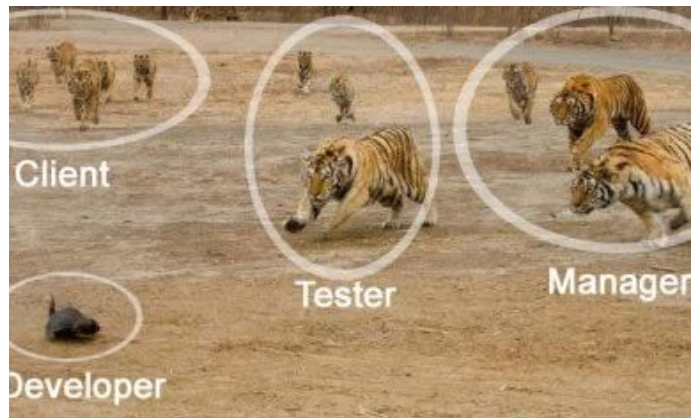
# Agenda

1. Main problems of Mobile Development
2. Benefits of CI and CD for Mobile Development
3. DevOps Tools for Mobile CI / CD
4. CI/CD - Architecture / Infrastructure for Mobile
5. CI/CD - Pipelines (Step-By-Step)
6. Hands-on (How does it really works)

# Main problems of Mobile Development

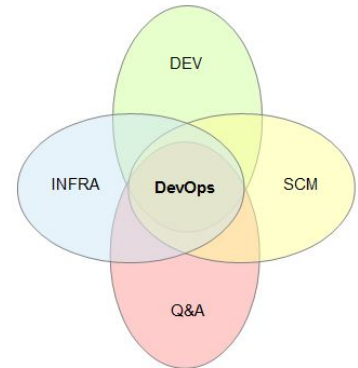


# Main problems of Mobile Development



# Benefits of CI and CD for Mobile Development

- 1) Provide a stable and safety environment for project development;
- 2) Automate manual routines increasing the team productivity;
- 3) Perform continuous delivery with more quality assurance;
- 4) Increase the business value to the customers;
- 5) The same code version generates different release version (Alpha, Beta, Prod);
- 6) Faster identification and correction on production bugs;
- 7) Decrease the lead time Production deployment;
- 8) Decrease the maintenance costs;
- 9) Etc;



# DevOps Tools for Mobile CI / CD



Windows Phone  
SDK

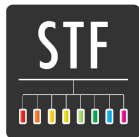


iOS SDK

*Calabash*



cucumber



artifactory



Jenkins



Xcode tools



Android SDK



Windows Phone  
Store



GitLab



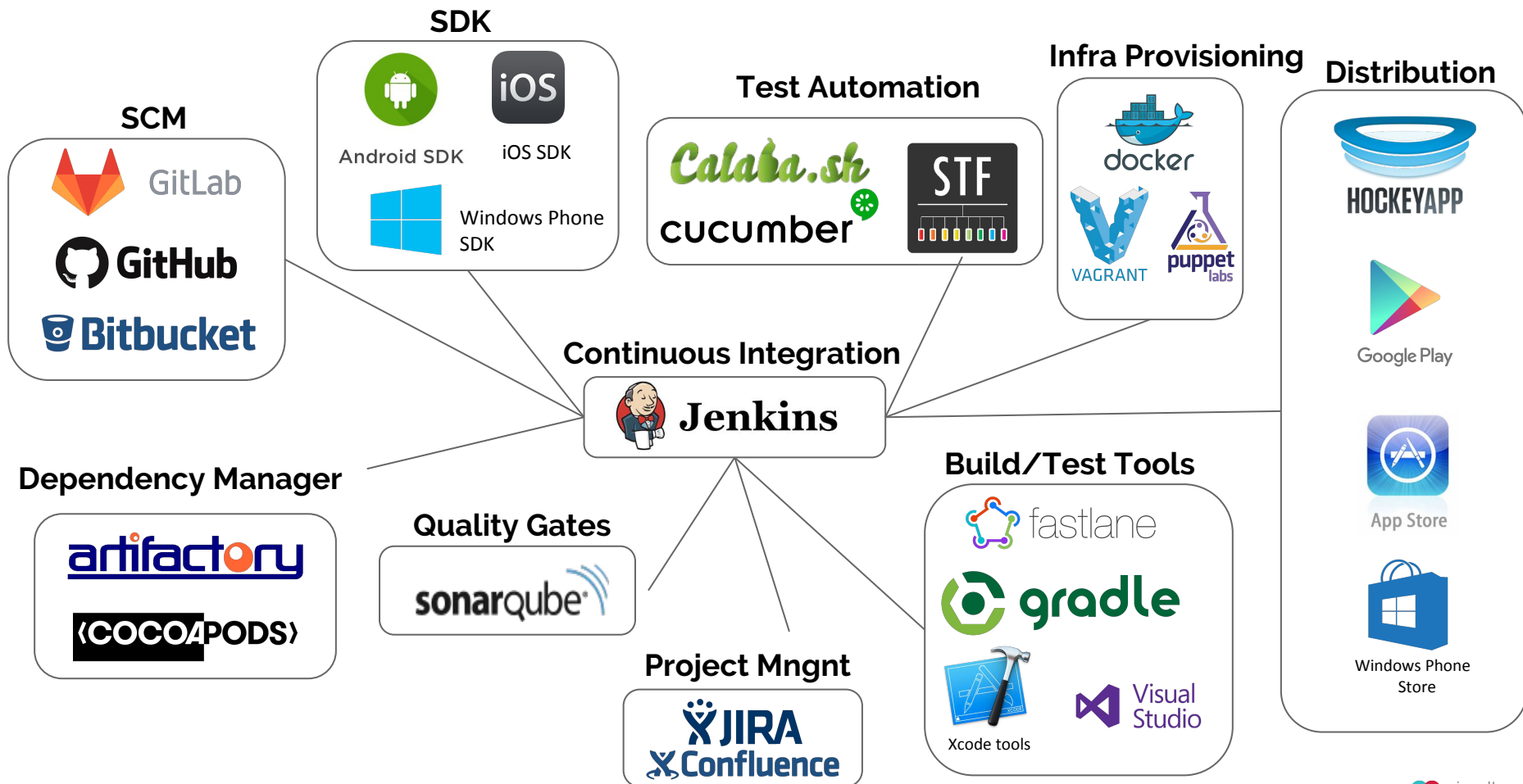
App Store

# How can we integrate all of them?





# DevOps Tools for Mobile CI / CD





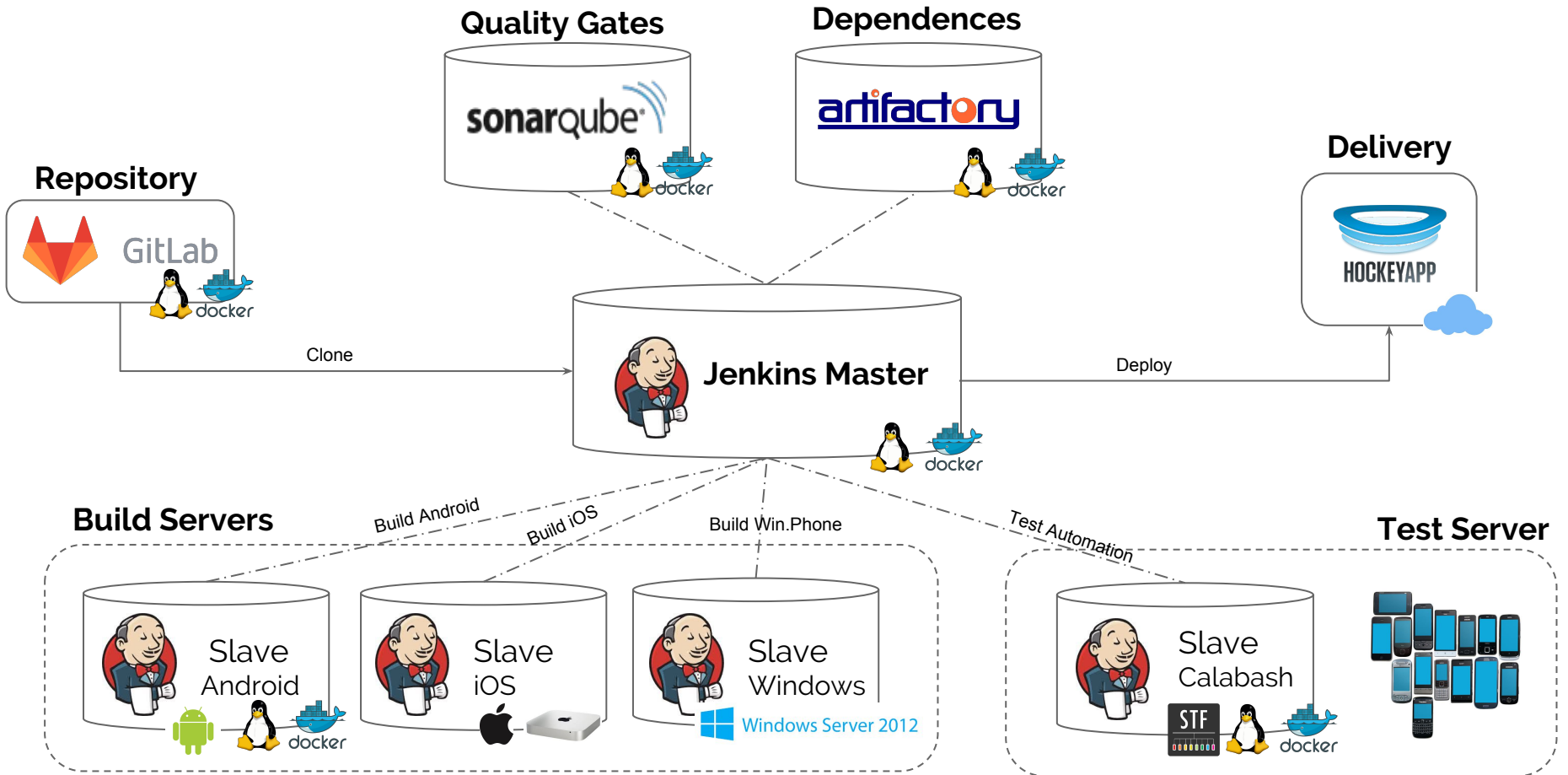


# CI/CD infrastructure for Mobile Apps

Ex: CI&T App Guidelines



# CI/CD - Architecture / Infrastructure for Mobile



# CI/CD - Pipelines (Step-By-Step)



GitLab

## 1. Clone

- Started after all new commit on the git repository;
- Clone the entire git repository;
- Checkout the latest version;
- Ensure the same code version will be run in all pipeline steps;
- Best practices: wipe entire workspace before starts every pipeline;

# CI/CD - Pipelines (Step-By-Step)

## 2. Build



- Get all dependencies from Artifactory/Cocoapods;
- Run the build script according to bellow parameters;

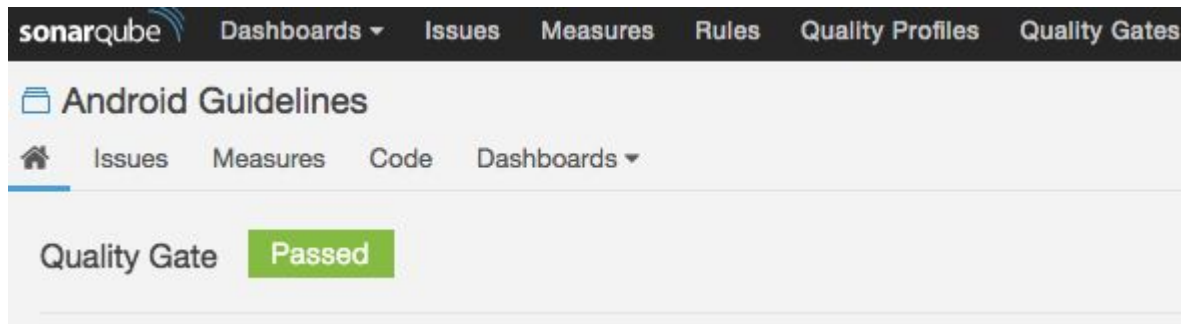
<b><i>Branch</i></b>	<b><i>Build Type / Log</i></b>	<b><i>Target Version</i></b>
develop	debug	alpha
release	debug	beta
master	release	production

# CI/CD - Pipelines (Step-By-Step)



## 3. Quality Gates

- Source code static analysis;
- Integrate to Sonarqube Metrics, Rules and Gates;
- Break the build if some result is out of Q&A metrics;
- Tools: Android Lint and OC Lint;



## 4. Testing (Automation)

- Unit Tests;
- Functional Tests (Cucumber/Calabash);
- BDD - Device Farm

### Test Summary

1	0	0	0.003s
tests	failures	ignored	duration

**100%**  
successful



*Openstf - Device Farm*



# CI/CD - Pipelines (Step-By-Step)



## 5. Release and Deploy

- New Release Candidate;
- Versioning: Create Tag on Git repository;
- Generate binary (apk,ipa) for Alpha / Beta / Prod version
- Signing (Production Keys) to Google / App Store
- Deploy HockeyApp (Alpha / Beta / Prod)



(free) CI&T...  
Android | alpha



(free) CI&T...  
Android | beta



(free) CI&T...  
Android | store



Reference...  
iOS | alpha



Reference...  
iOS | store



Reference...  
iOS | beta



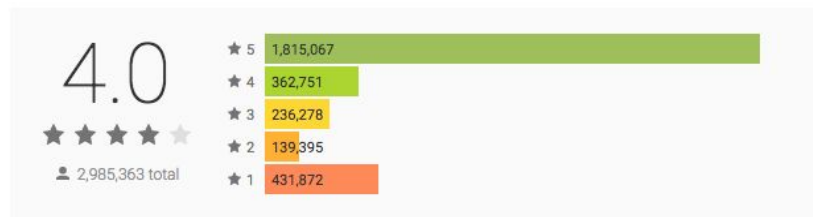
# CI/CD - Pipelines (Step-By-Step)

## 6. Feedback / Monitoring

- Send reports to stakeholders;
- Infra/Apps Monitoring;
- Production Store Analytics;
- App Sustaining;
- Crash reports;
- Logs;



### REVIEWS



Jordan Sullivan ★★★★★

**Looove it** Love this game bringing my childhood dreams to life. But i noticed some bugs.



Koreen Estal ★★★★★

**Footsteps** You don't want us walking into "dangerous places" while playing the game, but



Lannie Edwards ★★★★★

**Fun Game with Family** I love that this game gets my family out walking around and



Spencer Hamblen ★★★★★

**Its fun but.....** The game is fun but it would be fun if it was possible to play on an android.

Versions 126 Crashes 70980 Events Feedback 3 Users 230

Ref: Pokemon Go (Google Play) - Ago/2016



# Hands-on (How does it really works)

CI&T App Guidelines





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