

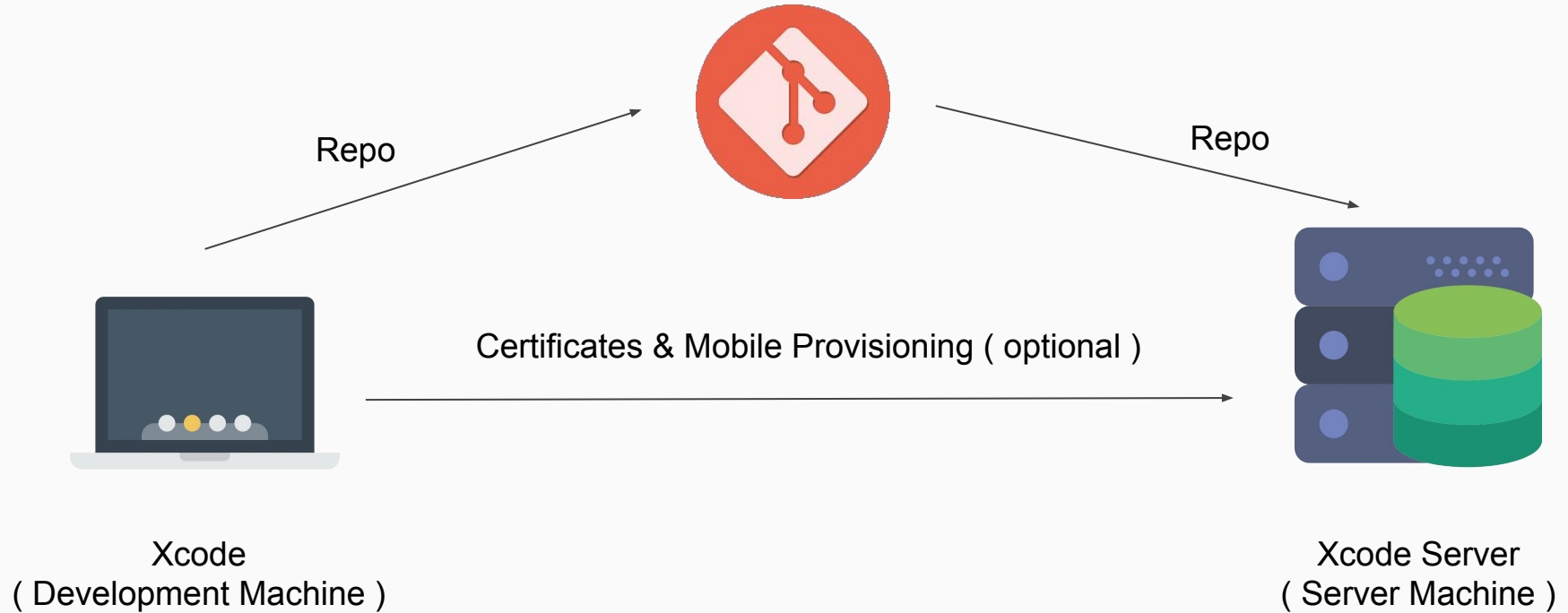
# Xcode + Xcode Server CI

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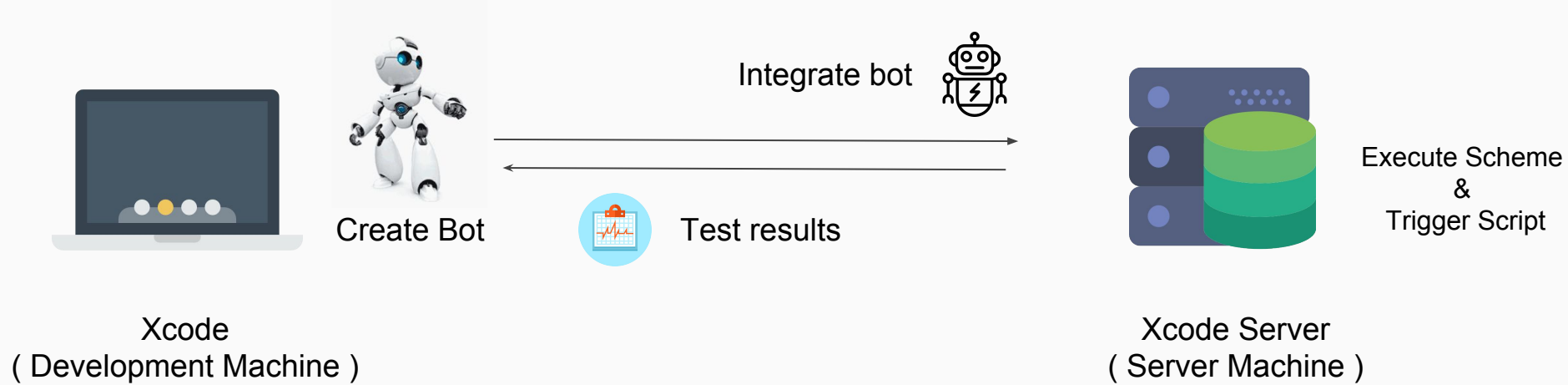
Growth Session #14 - May 17-18 2018

- Xcode CI
- Expectation
  - Run test cases
  - Release beta (with fastlane)
  - Release to Appstore
- Comparison
- Next step

# How it works?



# How to make it work?



# What is a bot?

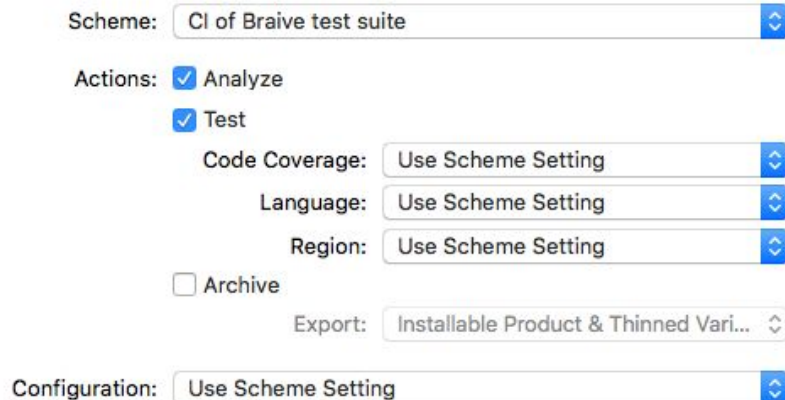
Bot is like a configuration for Xcode server

- Info
  - Bot name
  - Server to send bot to.
- Repository ( SSH can be send from Development machine )
  - Name
  - Branch to run
- Schedule
  - Build triggering by: commits, schedule, manually
- Code Signing
  - Can be copy from development machine to server machine automatically

# What is a bot?

Bot is like a configuration for Xcode server

- Configurations
  - Scheme, Region, Language



The image shows a screenshot of the Xcode Scheme configuration window. It contains several settings for a build scheme:

- Scheme:** A dropdown menu showing "CI of Braive test suite".
- Actions:** Two checked checkboxes: "Analyze" and "Test".
- Code Coverage:** A dropdown menu showing "Use Scheme Setting".
- Language:** A dropdown menu showing "Use Scheme Setting".
- Region:** A dropdown menu showing "Use Scheme Setting".
- Archive:** An unchecked checkbox.
- Export:** A dropdown menu showing "Installable Product & Thinned Vari...".
- Configuration:** A dropdown menu showing "Use Scheme Setting".

# What is a bot?

Bot is like a configuration for Xcode server

- Devices

- Simulator, iOS Devices
- Parallel testing just one check
- All simulators check + parallel testing is not possible ( memory issue )

The screenshot shows the 'Test With:' configuration in Xcode server. The 'Test With:' dropdown is set to 'iOS'. Below it, a button labeled 'Specific iOS Devices and Simulators' is visible. The main configuration area is divided into two sections: 'Specific iOS Devices and Simulators' and 'Simulators'. The 'Specific iOS Devices and Simulators' section contains three items, each with an unchecked checkbox: 'Issarapong's iPhone (11.3.1) + Issarapong's', 'Nimbl3 (11.3)', and 'Team's iPhone (11.3.1)'. The 'Simulators' section contains six items, each with an unchecked checkbox: 'iPad (5th generation) (11.3)', 'iPad (5th generation) (10.3.1)', 'iPad Air (10.3.1)', 'iPad Air (11.3)', 'iPad Air 2 (10.3.1)', and 'iPad Air 2 (11.3)'. At the bottom of the configuration area, there is a checkbox labeled 'Run tests in parallel' which is also unchecked.

Test With: iOS

Specific iOS Devices and Simulators

- ☐ Issarapong's iPhone (11.3.1) + Issarapong's
- ☐ Nimbl3 (11.3)
- ☐ Team's iPhone (11.3.1)

Simulators

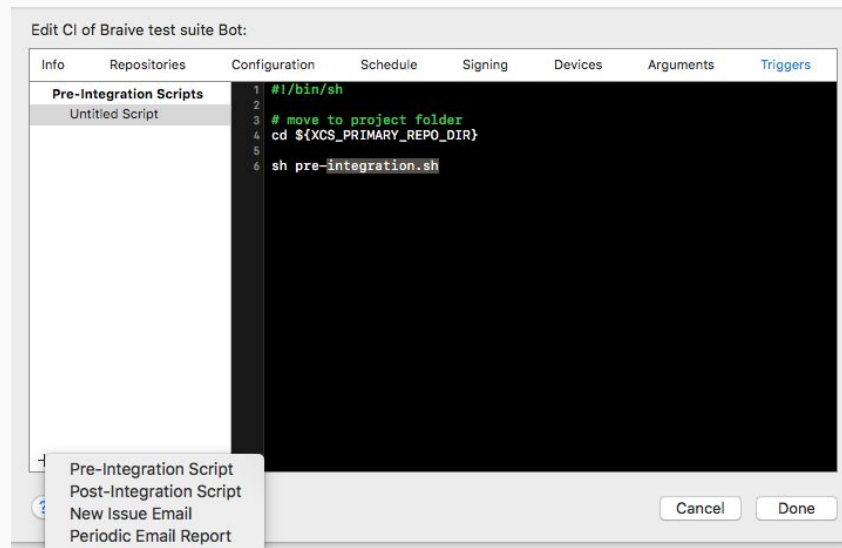
- ☐ iPad (5th generation) (11.3)
- ☐ iPad (5th generation) (10.3.1)
- ☐ iPad Air (10.3.1)
- ☐ iPad Air (11.3)
- ☐ iPad Air 2 (10.3.1)
- ☐ iPad Air 2 (11.3)

☐ Run tests in parallel

# What is a bot?

Bot is like a configuration for Xcode server

- Arguments
  - Setup environment variable
- Triggers
  - Shell script that's going to be execute On `Pre-Integration` and `Post-Integration`





# Achievements and progress

- Embed gems inside the project ``./.bundle``
  - No permission needed.
- Execute gems ( pod, fastlane ) from ``./.bundle/bin``

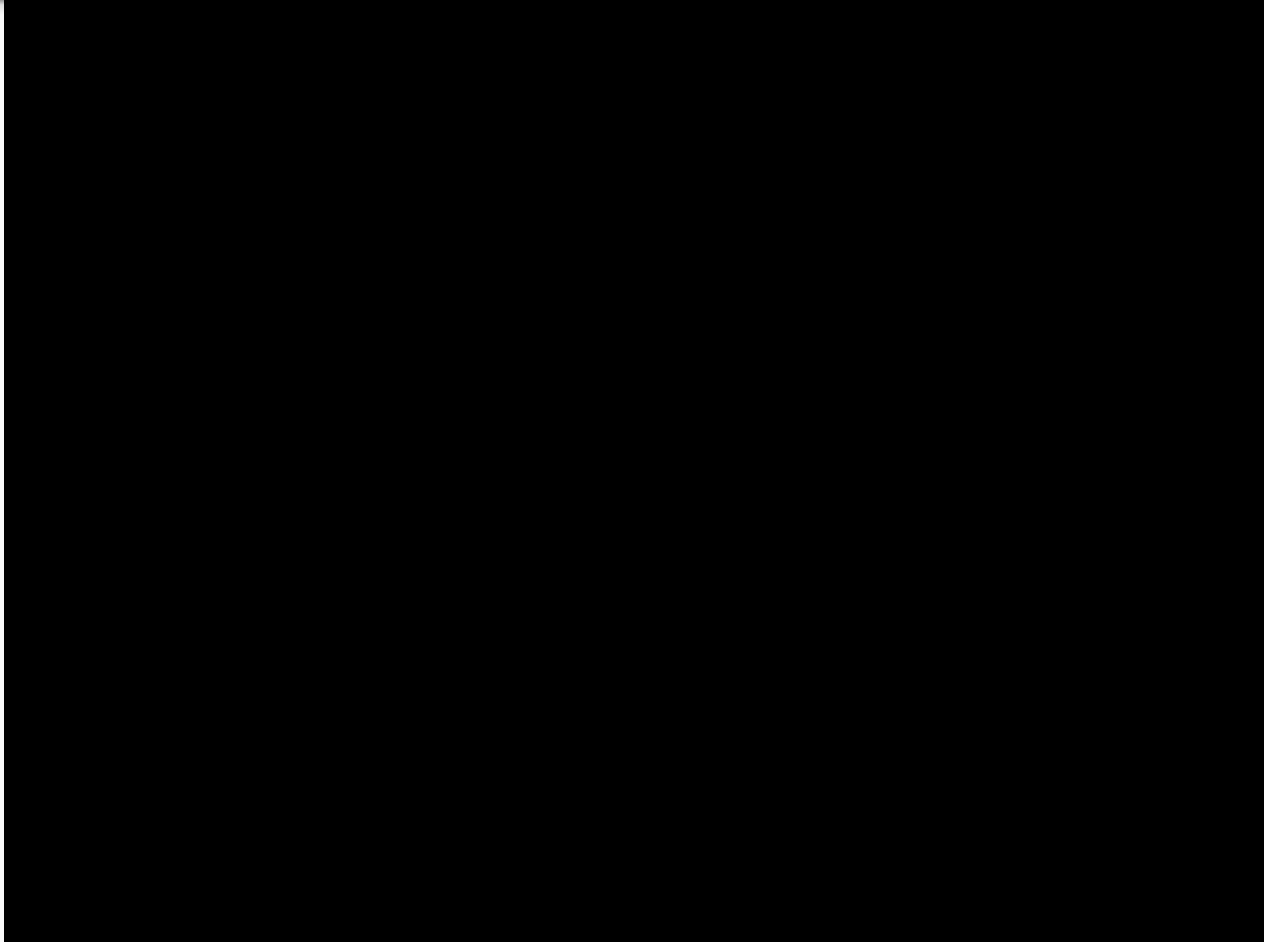
```
1  #!/bin/bash
2
3  BUNDLER_VERSION="1.16.2"
4  BUNDLER_BINARY_URL="https://github.com/bundler/bundler/archive/v$BUNDLER_VERSION.zip"
5  BUNDLER_HOME_PATH=".bundle"
6
7  # Clean bundle directory
8  rm -rf ./$BUNDLER_HOME_PATH
9
10 # Create bundler directory
11 mkdir -p $BUNDLER_HOME_PATH
12
13 # Download bundler.zip
14 curl -LkSs $BUNDLER_BINARY_URL -o $BUNDLER_HOME_PATH/bundler.zip
15
16 # Unzip bundler.zip
17 unzip ./$BUNDLER_HOME_PATH/bundler -d $BUNDLER_HOME_PATH
18
19 # bundle install
20 ./$BUNDLER_HOME_PATH/bundler-$BUNDLER_VERSION/bin/bundle install --path $BUNDLER_HOME_PATH
21
22 # Move binaries to ./bundle
23 mv ./$BUNDLER_HOME_PATH/ruby/*/.* $BUNDLER_HOME_PATH
24
```

# Achievements and progress

## Pre-Integration script

```
welcome | bundler.sh | pre-integration.sh x
1  #!/bin/sh
2
3  # setup env
4  export LANG=en_US.UTF-8
5  export GEM_PATH=${XCS_PRIMARY_REPO_DIR}/.bundle
6
7  # download bundler
8  sh ./bundler.sh
9
10 # pod install
11 ./bundle/bin/pod install
12 |
13 # fastlane match
14 ./bundle/bin/fastlane download_certs_and_provisioning_profiles
15
```

## Achievements and progress: Parallel testing



## Test results for multiple devices

Status	Tests	iPhone X Simulator	iPhone SE Simulator	Issarapong's iPhone	Nimbl3
▼ ButtonSpec > BraiveTests					
✓	Button__should_update_background_color_whe	✓	✓	✓	✓
✓	when_creating_with_default_style__should_hav	✓	✓	✓	✓
✓	when_creating_with_border_style__should_have	✓	✓	✓	✓
✓	Button__should_update_background_color_whe	✓	✓	✓	✓
✓	when_creating_with_border_style__should_have	✓	✓	✓	✓
✓	Button__should_update_background_color_whe	✓	✓	✓	✓
✓	Button__when_loading__should_hide_activity_in	✓	✓	✓	✓
✓	Button__when_loading__should_add_activity_in	✓	✓	✓	✓
✓	when_creating_with_default_style__should_hav	✓	✓	✓	✓

## CI Result

Integrate (51)

Integrate

Edit Bot...

Status: Warnings

Scheme: CI of Braive test suite

Branch: test-xcode-ci

Queued Time: Today 16:52

Start Time: Today 16:52

Duration: 13 minutes, 49 seconds

Configuration: Use Scheme Setting

Toolchain: Default

0

Errors  
-1

7

Warnings  
-155

0

Analysis Issues  
No change

84

Tests  
No change

### Bot Configuration Changes

- Device configuration changed

### Device Testing

Devices: 4

Total Tests: 84

Tests Passed: 84

Tests Failed: 0



**iPhone X**

iPhone X (Simulator)  
iOS 11.3

All Tests Passed



**Team's iPhone**

iPhone 6  
iOS 11.3.1

All Tests Passed



**iPhone SE**

iPhone SE (Simulat...  
iOS 11.3

All Tests Passed



**Nimbl3**

iPhone 6s  
iOS 11.3

All Tests Passed

# Conclusion

<b>Xcode CI/CD</b>	<b>Jenkins + Appium</b>
Native interface	Open source
Reliable and solid performance	Easy integration with various services
iOS only so easy and straightforward configuration	Android / iOS
Simple	Useful visualization and information
Commander - Multiple executors	Commander -> Master -> Multiple executors

## Next Steps

- If the project is iOS only, it may be considered to be used.
- The system itself is production ready if it is configured correctly.

# Thanks!

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