React Native CI/CD
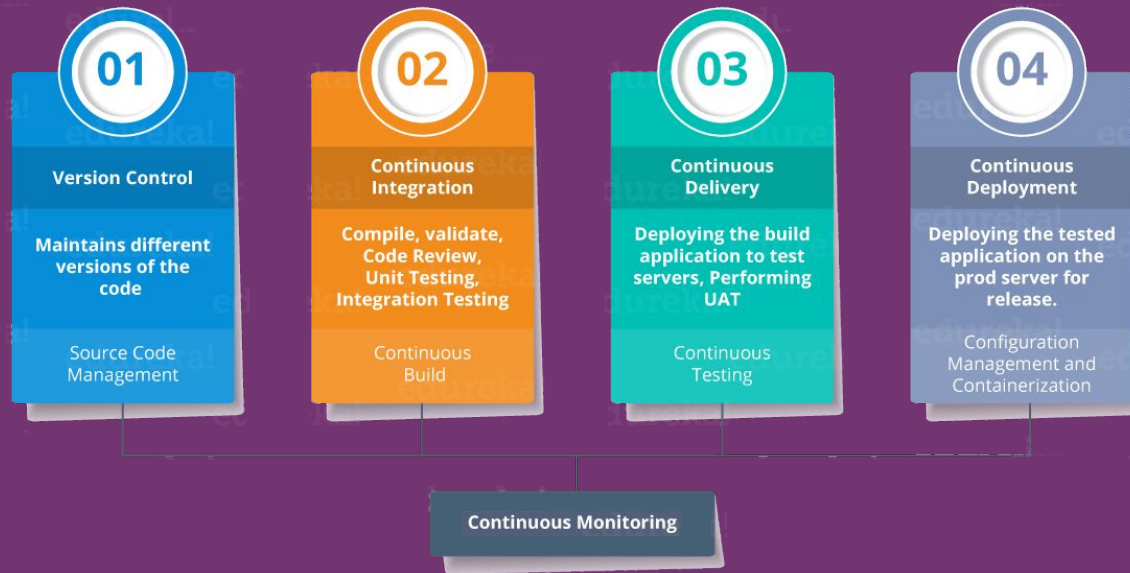
Isumi
Jakarta, June 2020

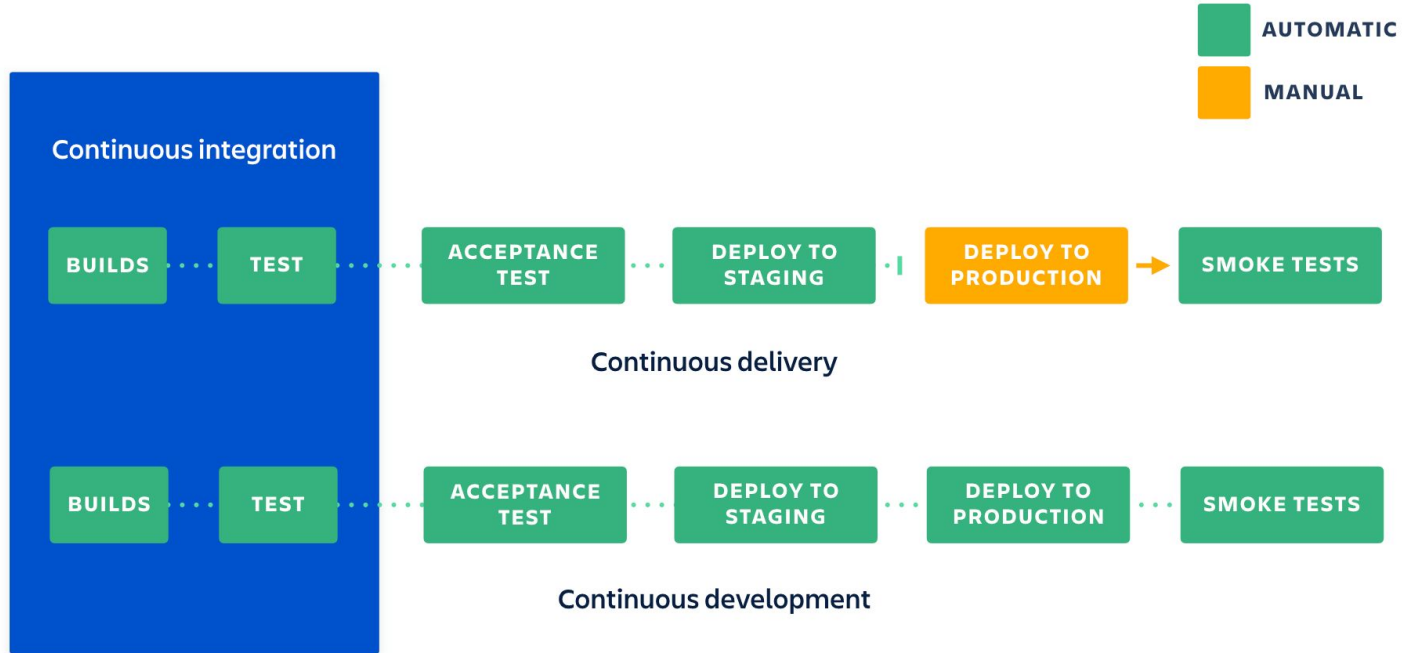# GOALS

1. Intro CI/CD
2. Setup Environment on Gitlab
3. Setting Script

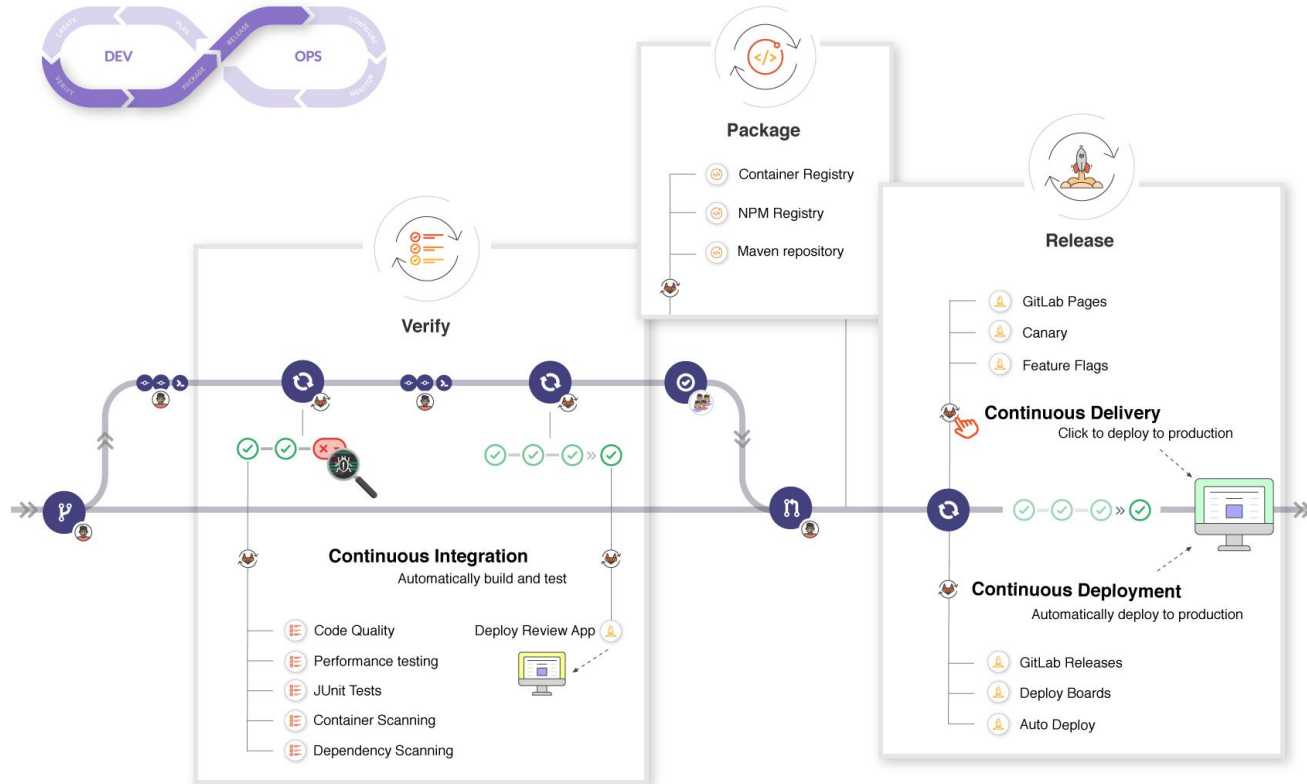# 1. Intro CI/CD

01

**Version Control**

Maintains different versions of the code

Source Code Management

02

Continuous Integration

Compile, validate, Code Review, Unit Testing, Integration Testing

Continuous Build

03

Continuous Delivery

Deploying the build application to test servers, Performing UAT

Continuous Testing

04

Continuous Deployment

Deploying the tested application on the prod server for release.

Configuration Management and Containerization

Continuous Monitoring

CI vs CD

AUTOMATIC

MANUAL

Continuous integration

| BUILDS | TEST | ACCEPTANCE TEST | DEPLOY TO STAGING | DEPLOY TO PRODUCTION | SMOKE TESTS |

Continuous delivery

| BUILDS | TEST | ACCEPTANCE TEST | DEPLOY TO STAGING | DEPLOY TO PRODUCTION | SMOKE TESTS |

Continuous development

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CI/CD | Workflow

DEV

OPS

Package
- Container Registry
- NPM Registry
- Maven repository

Verify

Release
- GitLab Pages
- Canary
- Feature Flags

Continuous Delivery
Click to deploy to production

Continuous Integration
Automatically build and test

Deploy Review App

Continuous Deployment
Automatically deploy to production

- Code Quality
- Performance testing
- JUnit Tests
- Container Scanning
- Dependency Scanning

- GitLab Releases
- Deploy Boards
- Auto Deploy

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2. Setup Environment

-   Setting Bot on Telegram
-   Setting Environment Variables on Gitlab

Setting Bot | Telegram
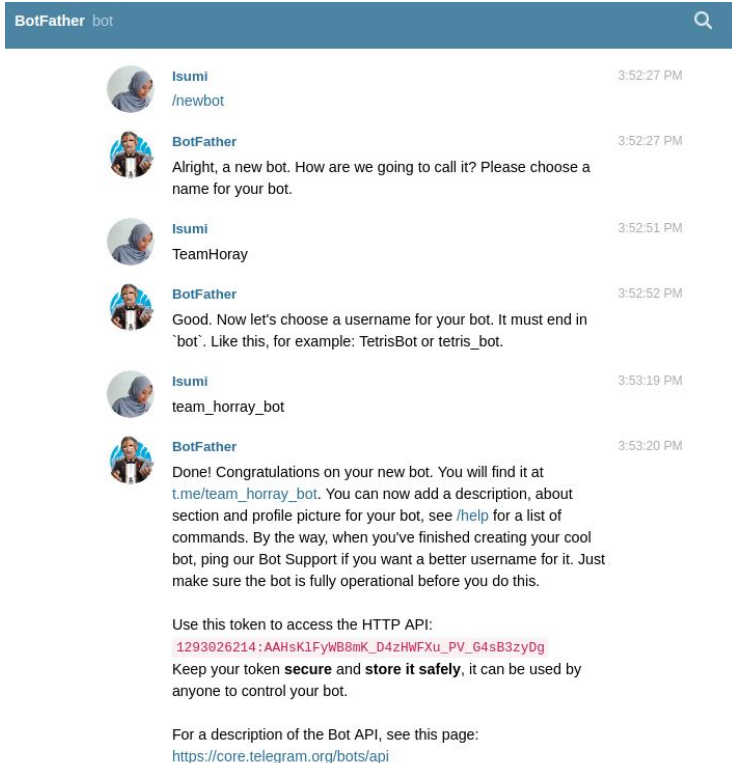
1. Search & Add User: BotFather
2. Type: /newbot
3. Create a name for bot
4. Create a username for bot
5. Copy the token

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Setting Bot | Telegram

6. Paste the token into this format url:
api.telegram.org/bot<token>/getUpdates

7. Create a message using this format:
api.telegram.org/bot<token>/sendMessage?
chat_id=<id>&text=<your_text>

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Setting Environment Variables | Gitlab

1. Settings -> CI/CD
2. Variables -> Collapse
3. Add Variable: Token & Chat ID

Setting Environment Variables | Gitlab

Update variable   ×

Key
TG_BOT_TOKEN

Value
https://api.telegram.org/bot1293026214:AAHsKlFyWB8mK_D4zHWFXu_PV_G4sB3zyDg

Type   **Environment scope**
Variable   All (default)

Flags
☑ Protect variable ❓
    Export variable to pipelines running on protected branches and tags only.

☑ Mask variable ❓
    Variable will be masked in job logs. Requires values to meet regular expression requirements. More information

                    Cancel   Delete variable   Update variable

Update variable   ×

Key
TG_CHAT_ID

Value
115120260

Type   **Environment scope**
Variable   All (default)

Flags
☑ Protect variable ❓
    Export variable to pipelines running on protected branches and tags only.

☑ Mask variable ❓
    Variable will be masked in job logs. Requires values to meet regular expression requirements. More information

                    Cancel   Delete variable   Update variable

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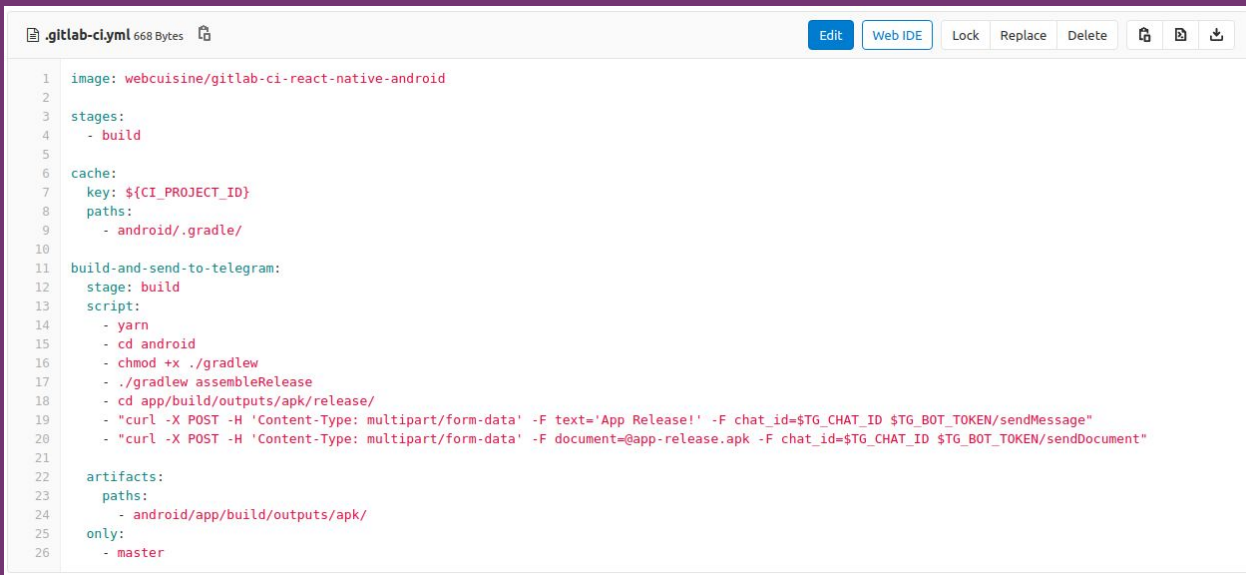
3. Setting Script

1. In your RN project, add file: .gitlab-ci.yml
2. Push the update: git add + commit + push
3. Pipeline will run automatically


```
.gitlab-ci.yml 668 Bytes          Edit  Web IDE  Lock  Replace  Delete

1    image: webcuisine/gitlab-ci-react-native-android
2
3    stages:
4      - build
5
6    cache:
7      key: ${CI_PROJECT_ID}
8      paths:
9        - android/.gradle/
10
11   build-and-send-to-telegram:
12     stage: build
13     script:
14       - yarn
15       - cd android
16       - chmod +x ./gradlew
17       - ./gradlew assembleRelease
18       - cd app/build/outputs/apk/release/
19       - "curl -X POST -H 'Content-Type: multipart/form-data' -F text='App Release!' -F chat_id=$TG_CHAT_ID $TG_BOT_TOKEN/sendMessage"
20       - "curl -X POST -H 'Content-Type: multipart/form-data' -F document=@app-release.apk -F chat_id=$TG_CHAT_ID $TG_BOT_TOKEN/sendDocument"
21
22     artifacts:
23       paths:
24         - android/app/build/outputs/apk/
25     only:
26       - master
```

✓ passed   **Job #594326651** triggered 32 minutes ago by 😊 Isumi

```
  1   Running with gitlab-runner 13.0.0 (c127439c)
  2     on docker-auto-scale fa6cab46
  3   Preparing the "docker+machine" executor                                          01:27
  4   Using Docker executor with image webcuisine/gitlab-ci-react-native-android ...
  5   Pulling docker image webcuisine/gitlab-ci-react-native-android ...
  6   Using docker image sha256:38633ab9f2138ef0782113f91395a407a4492300686e3d9fd4c0228ac9713ad4 for webcuisine/gitlab-ci-react-native-android ...
  8   Preparing environment                                                            00:05
  9   Running on runner-fa6cab46-project-19203698-concurrent-0 via runner-fa6cab46-srm-1592134797-1f1b1e36...
 11   Getting source from Git repository                                               00:16
 12   $ eval "$CI_PRE_CLONE_SCRIPT"
 13   Fetching changes with git depth set to 50...
 14   Initialized empty Git repository in /builds/isumizumi/wfh/.git/
 15   Created fresh repository.
 16   From https://gitlab.com/isumizumi/wfh
 17    * [new ref]         refs/pipelines/156035024 -> refs/pipelines/156035024
 18    * [new branch]      master                   -> origin/master
 19   Checking out c8e2a3bf as master...
 20   Skipping Git submodules setup
 22   Restoring cache                                                                  00:02
 23   Checking cache for 19203698...
 24   FATAL: file does not exist
 25   Failed to extract cache
 27   Downloading artifacts                                                            00:01
 29   Running before_script and script                                                 05:52
219   Running after_script                                                             00:01
221   Saving cache                                                                     00:03
222   Creating cache 19203698...
223   android/.gradle/: found 25 matching files
224   Uploading cache.zip to https://storage.googleapis.com/gitlab-com-runners-cache/project/19203698/19203698
225   Created cache
227   Uploading artifacts for successful job                                           00:04
232   Job succeeded
```

Isumi › WFH › **Pipelines**

All **4**   Pending **0**   Running **0**   Finished **4**   Branches   Tags   Run Pipeline   Clear Runner Caches   CI Lint

Filter pipelines

Status	Pipeline	Triggerer	Commit	Stages		
✓ passed [latest]	#156035024	😊	℗ master ⋄ c8e2a3bf 😊 update ci-cd	✓	⏱ 00:07:51 📅 1 hour ago	⬇ ▾
⊗ failed [latest]	#156022400	😊	℗ master ⋄ c8e2a3bf 😊 update ci-cd	⊗	⏱ 00:06:42 📅 2 hours ago	↻
⊗ failed	#156020314	😊	℗ master ⋄ 2ab23c43 😊 Update .gitlab-ci.yml	⊗	⏱ 00:07:25 📅 2 hours ago	↻
⊗ failed	#156018864	😊	℗ master ⋄ 9563ba8d 😊 Add .gitlab-ci.yml	⊗	⏱ 00:06:57 📅 3 hours ago	↻

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References

- [Gitlab Docs](#)

- [React Native with Gitlab CI/CD](#)

- [Publishing App: Android](#)

- [Publishing App: iOS](#)

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