



# CODE, SHIP AND RUN

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*How we make it works (As seen at work)*







QUI SUIS-JE ?

.....

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*DevOps at PetalMD*

*jmaitrehenry.ca*

*<https://github.com/jmaitrehenry>*

*@jmaitrehenry*

# AGENDA

.....

# AGENDA



➤ Contexte

# AGENDA

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- Contexte
- Notre flow

# AGENDA

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- Contexte
- Notre flow
- Nos outils et pourquoi

# AGENDA

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- Contexte
- Notre flow
- Nos outils et pourquoi
- Prochaines étapes



# CONTEXTE

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*On fait quoi chez Petal ?  
Du point de vue de la R&D*





# CONTEXTE – NOS APPS



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- 1 application **Rails** avec 15k tests (incluant unit et e2e)

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- 1 application **front-end** avec 1985 unit tests et 426 e2e tests
- 1 application **front-end** avec 193 unit tests et 108 e2e tests

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- 1 application **front-end** avec 193 unit tests et 108 e2e tests
- 1 application **iOS / Swift** avec 908 unit tests et 48 UI
- 1 application **Android / React-Native** avec 462 unit tests



# CONTEXTE – NOTRE OBJECTIF

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- Réduire le temps entre le début du développement et la mise en production

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- Les tests ne doivent pas être un frein

# CONTEXTE – NOTRE OBJECTIF

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- Réduire le temps entre le début du développement et la mise en production
- Ne pas avoir de dépendance sur une équipe / personne qui met en production
- Les tests ne doivent pas être un frein
- Un coverage minimum par patch est obligatoire

# NOTRE FLOW

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*Du dev à la prod*



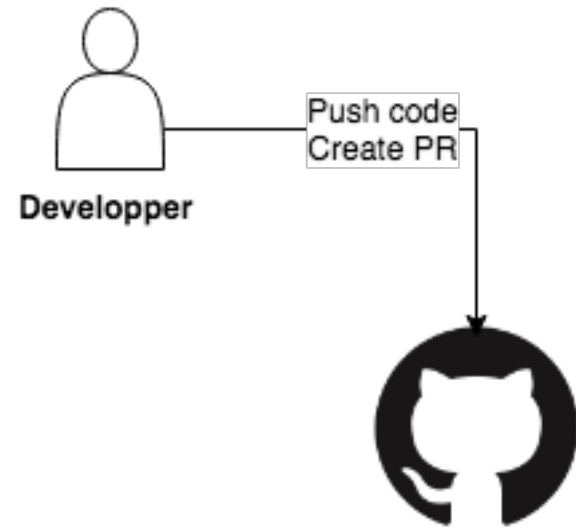


# NOTRE FLOW – PUSH TO MERGE

.....

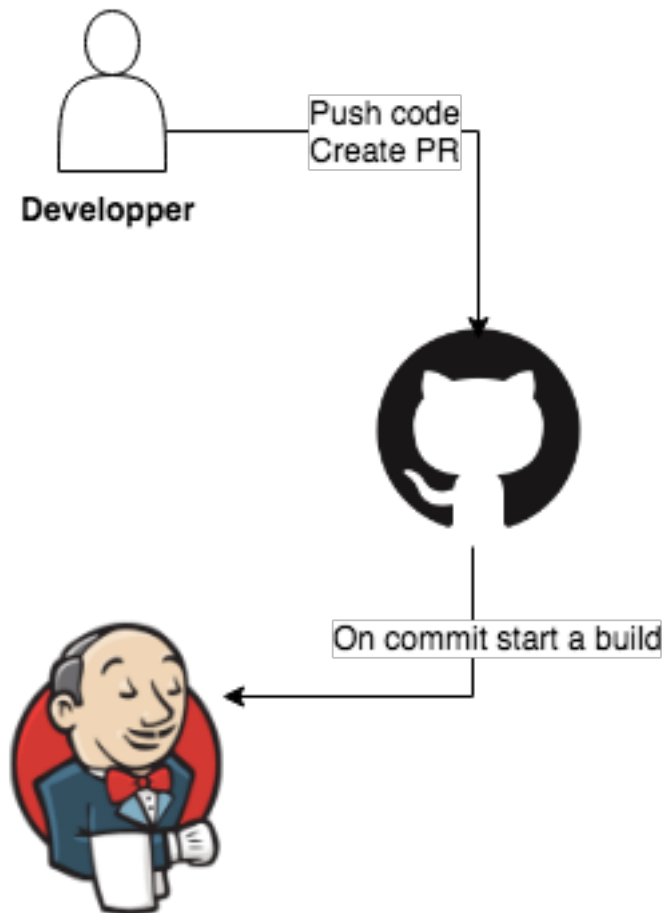
# NOTRE FLOW – PUSH TO MERGE

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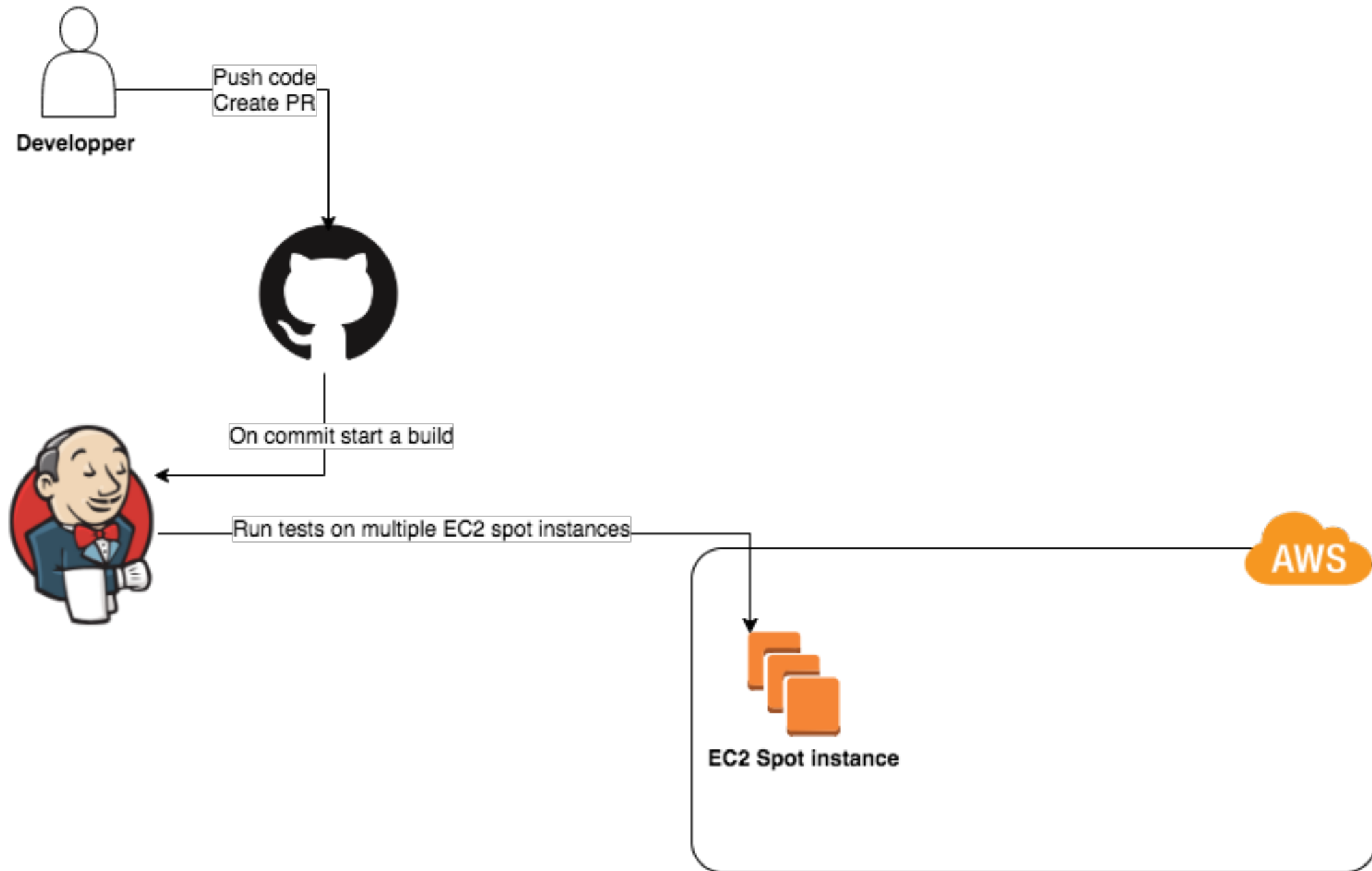
# NOTRE FLOW – PUSH TO MERGE

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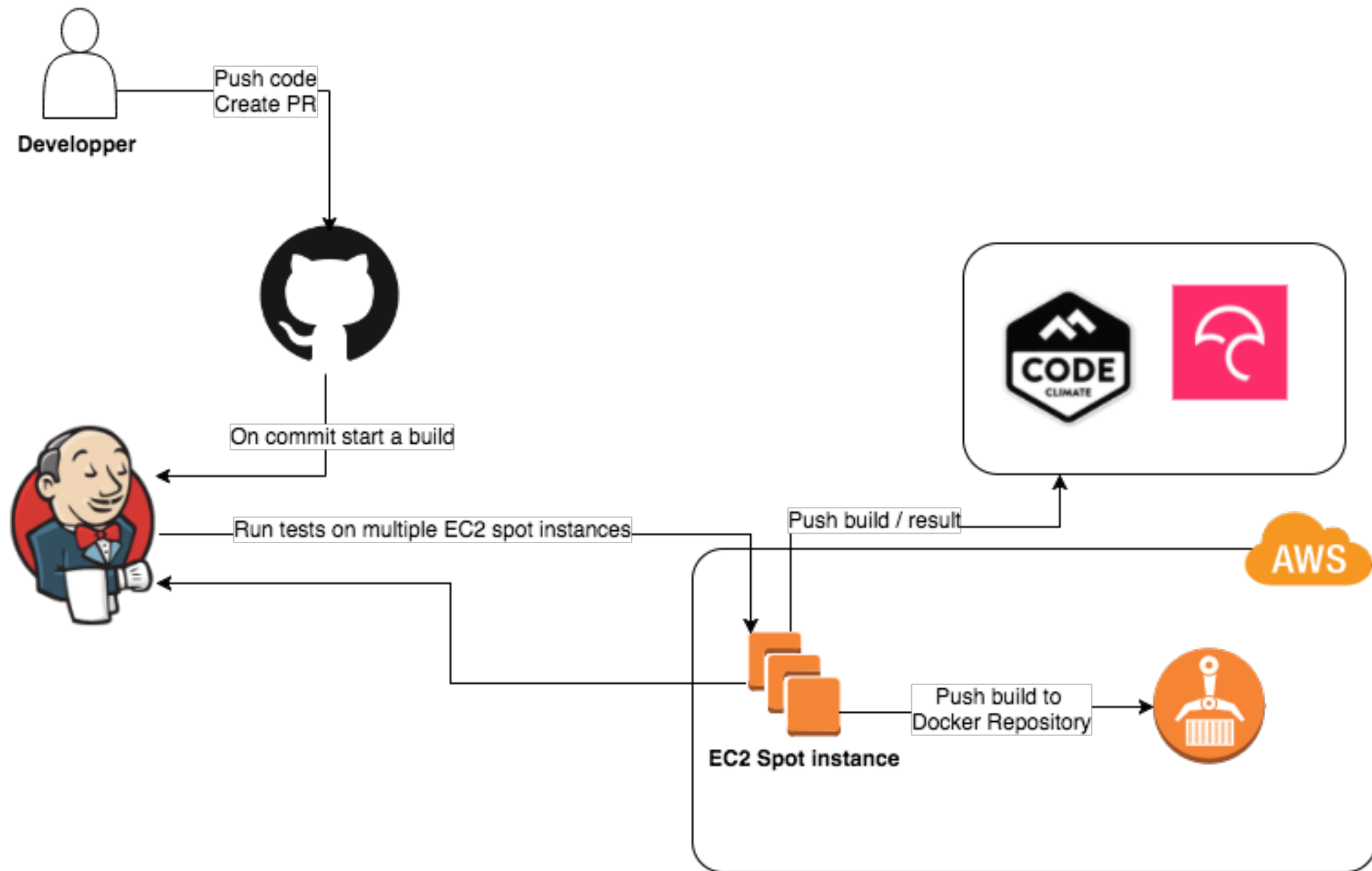
# NOTRE FLOW – PUSH TO MERGE

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# NOTRE FLOW – PUSH TO MERGE

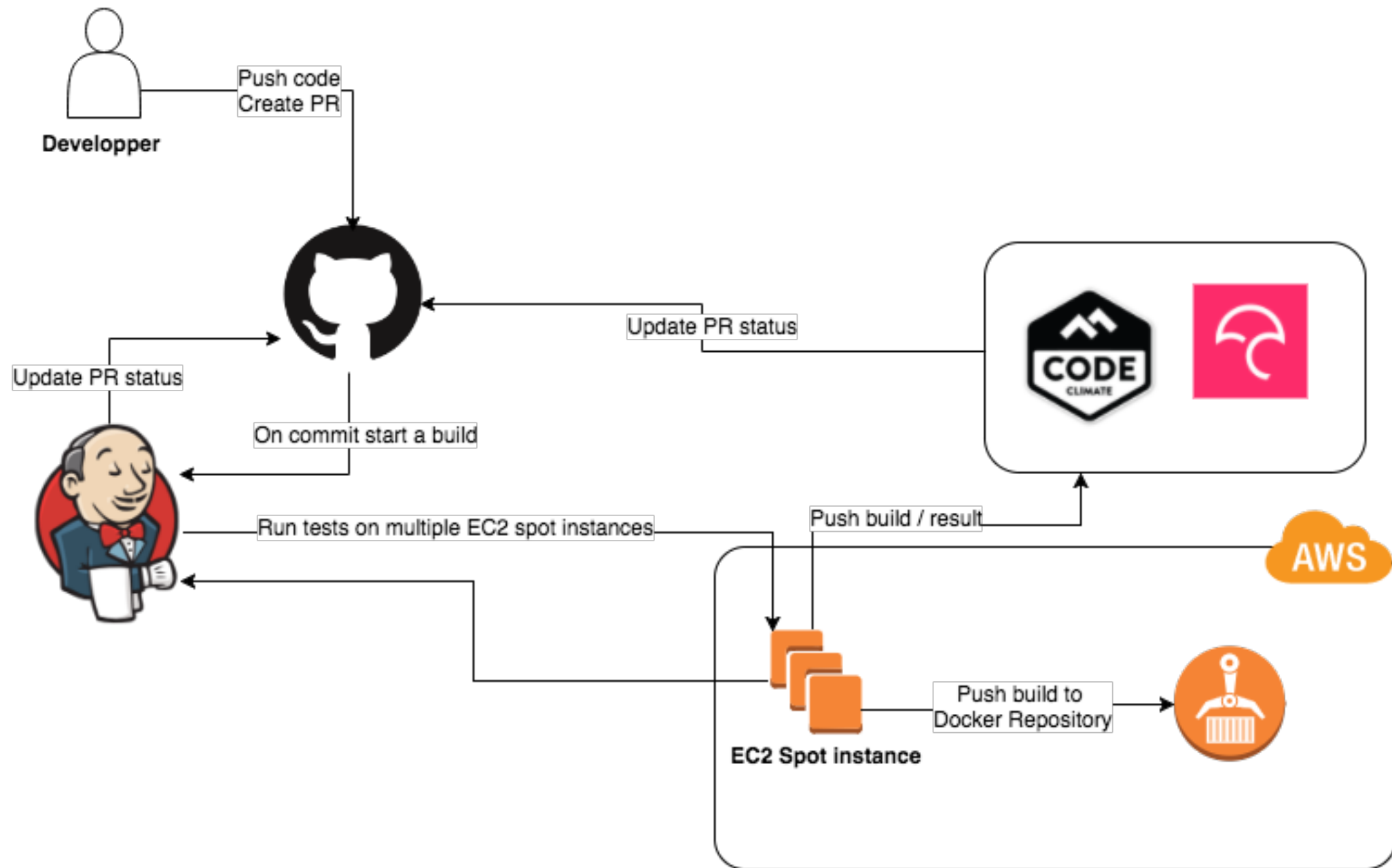
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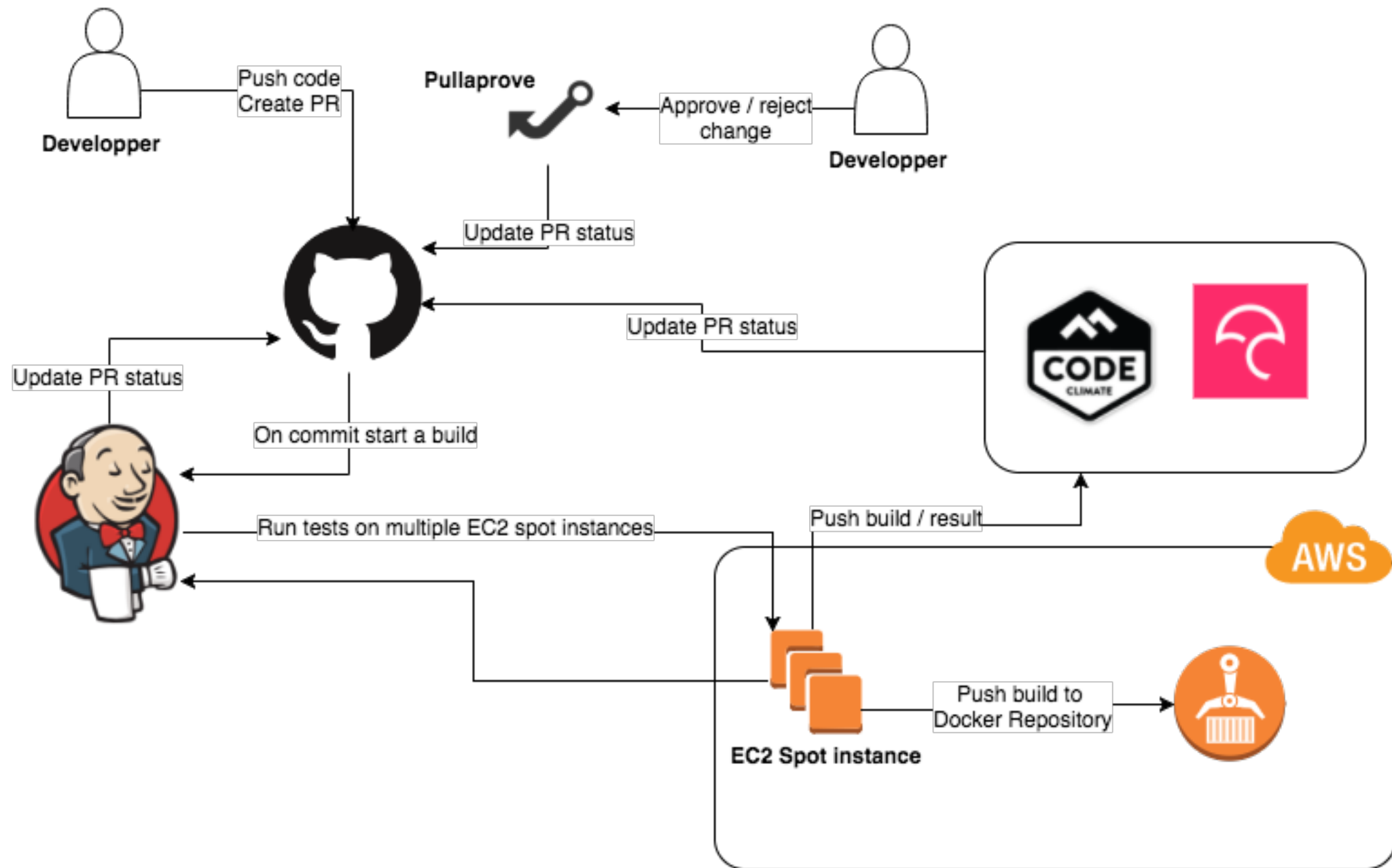
# NOTRE FLOW – PUSH TO MERGE

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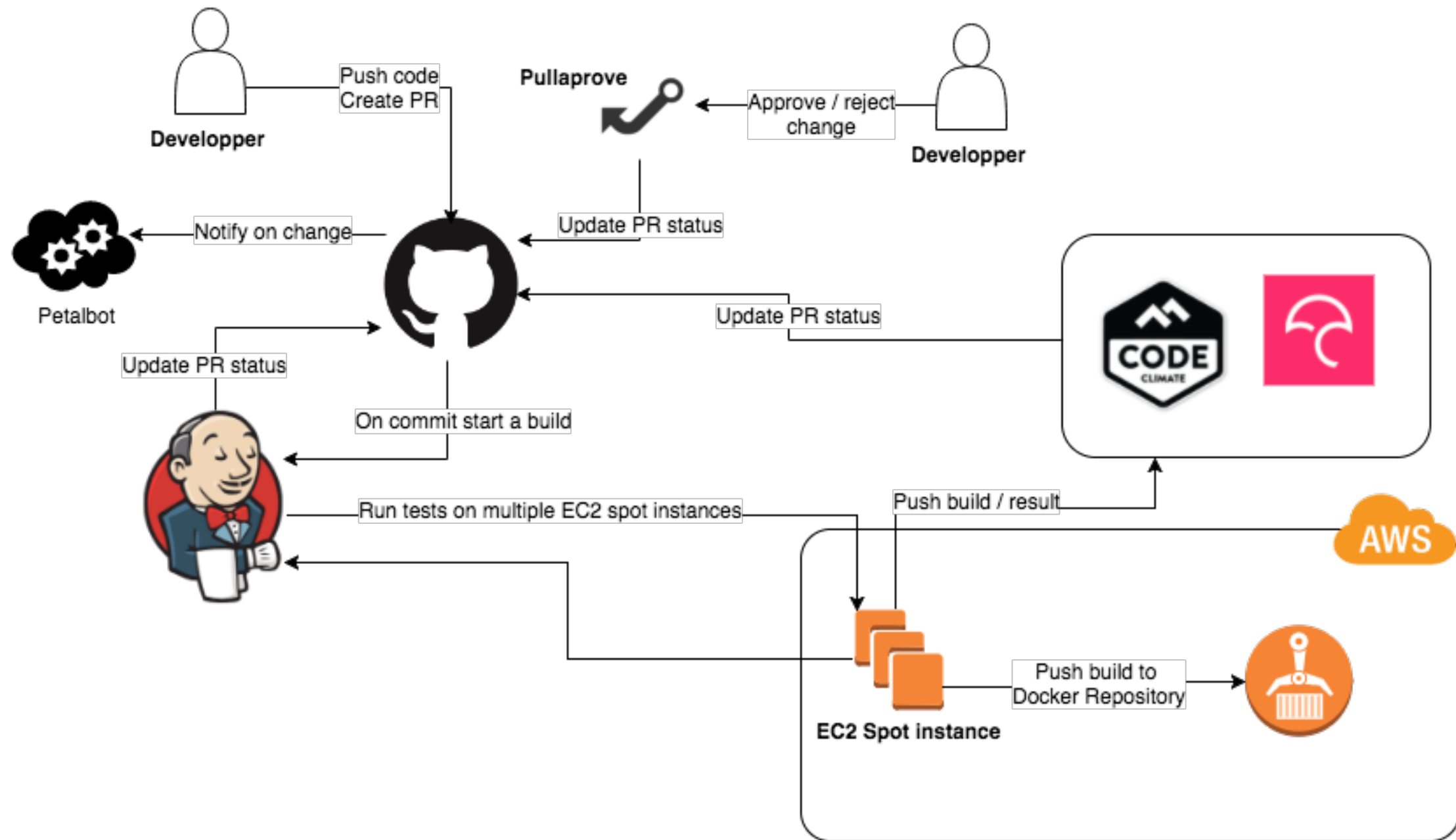
# NOTRE FLOW – PUSH TO MERGE

.....



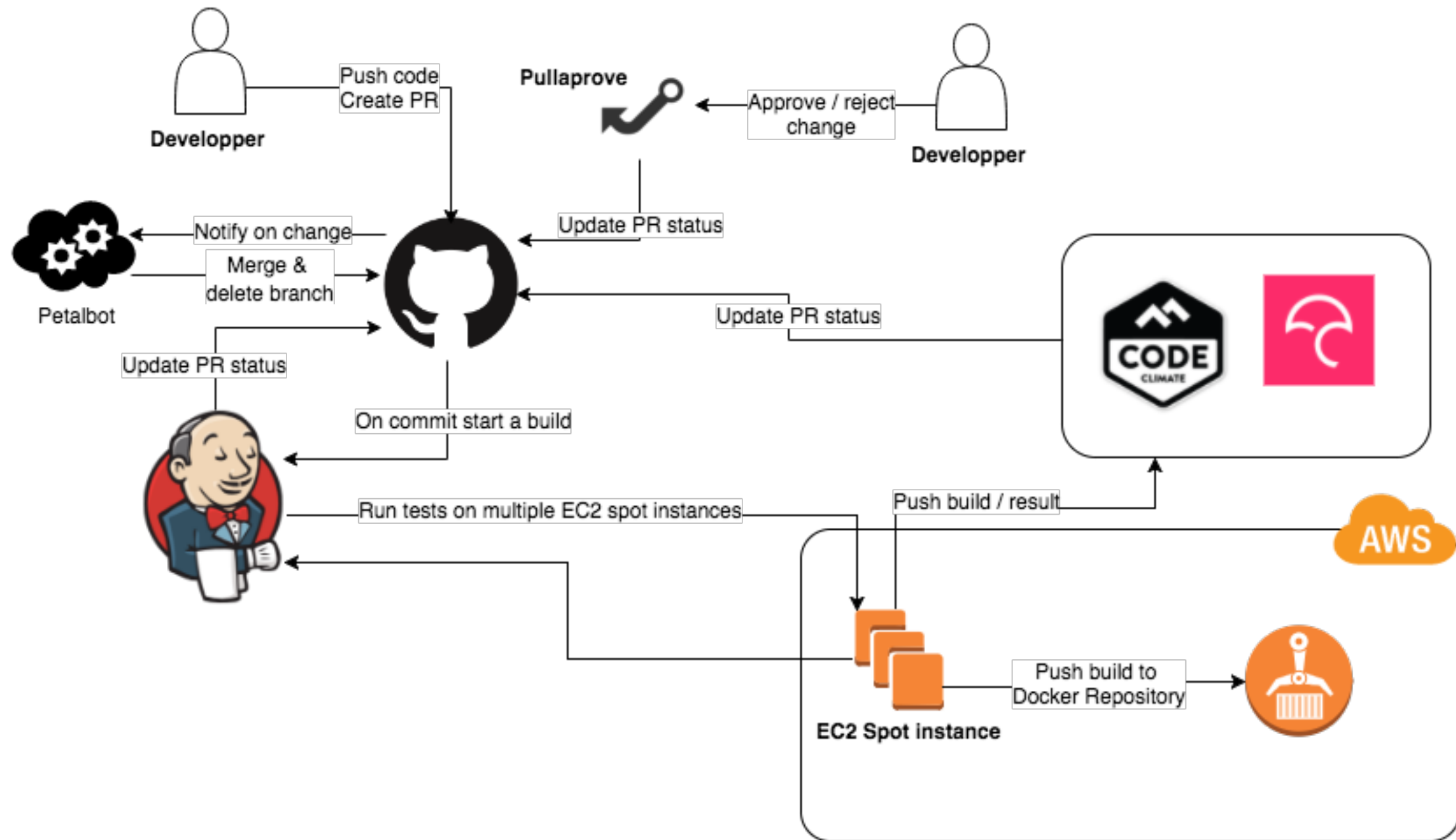
# NOTRE FLOW – PUSH TO MERGE

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# NOTRE FLOW – PUSH TO MERGE

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# NOTRE FLOW – PUSH TO MERGE

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# NOTRE FLOW – MERGE TO PROD

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# NOTRE FLOW – MERGE TO PROD

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- changement dans master => **build**



# NOTRE FLOW – MERGE TO PROD

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- changement dans master => build
- Build de master **vert** => deploy

# NOTRE FLOW – MERGE TO PROD

.....

- changement dans master => build
- Build



**SAFETY FIRST!**

When lounging on your sofa, always remember to wear a helmet.

# NOTRE FLOW – MERGE TO PROD

---

- changement dans master => build
- Build de master **vert** => deploy

# NOTRE FLOW – MERGE TO PROD

---

- changement dans master => build
- Build de master **vert** => deploy
- Open deployment hours: 10am to 4pm - lundi à vendredi

# NOTRE FLOW – MERGE TO PROD – RAILS

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# NOTRE FLOW – MERGE TO PROD – RAILS

---

```
#!/bin/bash
export BRANCH=master
export stage=production

docker build -t petalmd/capistrano .
docker run --rm -e BRANCH=$BRANCH \
    petalmd/capistrano bundle exec cap $stage deploy:rolling
```

# NOTRE FLOW – MERGE TO PROD – RAILS

---

```
#!/bin/bash
export BRANCH=master
export stage=production

docker build -t petalmd/capistrano .
docker run --rm -e BRANCH=$BRANCH \
    petalmd/capistrano bundle exec cap $stage deploy:rolling

# petalmd/capistrano
FROM ruby:2.3.1

COPY . /src
WORKDIR /src

RUN bundle
```



# NOTRE FLOW – MERGE TO PROD – RAILS

---

```
#!/bin/bash
export BRANCH=master
export stage=production

docker build -t petalmd/capistrano .
docker run --rm -e BRANCH=$BRANCH \
    petalmd/capistrano bundle exec cap $stage deploy:rolling
```

```
# petalmd/capistrano
```

```
FROM ruby:2.3.1
```

```
COPY . /src
```

```
WORKDIR /src
```

```
RUN bundle
```

```
# Gemfile
```

```
source 'https://rubygems.org'
```

```
gem 'capistrano', '~> 3.6'
```

```
gem 'capistrano-rails', '~> 1.1'
```

```
gem 'capistrano-bundler'
```

```
gem 'capistrano-sidekiq'
```

```
gem 'whenever', '~> 0.9.0'
```

# NOTRE FLOW – MERGE TO PROD – JS / STATIC APP

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# NOTRE FLOW – MERGE TO PROD – JS / STATIC APP

---

- Build de master créé un **dist** (webpack)

# NOTRE FLOW – MERGE TO PROD – JS / STATIC APP

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- Build de master crée un **dist** (webpack)
- Ansible upload le dist

```
---  
- name: Upload project in production  
  copy: src="{{ path }}" dest="/var/www/apps/petalmd.web/{{ version }}/dist"  
  
- name: Update link  
  command: ln -fTs /var/www/apps/petalmd.web/{{ version }} /var/www/apps/petalmd.web/current  
  
- name: Keep the last 10 builds  
  shell: ls -dt /var/www/apps/petalmd.web/* | grep -v "current" | tail -n +11 | xargs rm -rf
```

# NOTRE FLOW – MERGE TO PROD – IOS

.....

# NOTRE FLOW – MERGE TO PROD – IOS

---

```
bundle exec fastlane pods  
bundle exec fastlane version
```

# NOTRE FLOW – MERGE TO PROD – IOS

---

```
bundle exec fastlane pods
bundle exec fastlane version

lane :version do
  version = ENV['IOS_VERSION']
  build   = ENV['BUILD_ID']

  raise 'Build number or build tag missing' if version.nil? || build.nil?

  increment_version_number version_number: version
  increment_build_number  build_number: Integer(build)
end
```



# NOTRE FLOW – MERGE TO PROD – IOS

---

```
bundle exec fastlane pods
bundle exec fastlane version

lane :version do
  version = ENV['IOS_VERSION']
  build   = ENV['BUILD_ID']

  raise 'Build number or build tag missing' if version.nil? || build.nil?

  increment_version_number version_number: version
  increment_build_number  build_number: Integer(build)
end

# Use the next patch version number
ENV['IOS_VERSION'] = `
  git describe --tags --abbrev=0 --match 'releases/*' | \
  cut -d '/' -f 2
`.strip.to_version.bump!.to_s
```

# NOTRE FLOW – MERGE TO PROD – IOS

.....

# NOTRE FLOW – MERGE TO PROD – IOS

---

```
bundle exec fastlane prod
```

# NOTRE FLOW – MERGE TO PROD – IOS

---

```
bundle exec fastlane prod
```

```
lane :prod do
```

```
  # Create an iOS iTunes Connect build
```

```
  gym workspace: ENV['IOS_WORKSPACE'],
```

```
    scheme: ENV['IOS_SCHEME'],
```

```
    configuration: ENV['IOS_CONFIGURATION'],
```

```
    export_method: 'app-store',
```

```
    provisioning_profile_path: './fastlane/provisioning/AppS
```

```
  pilot changelog: ENV['IOS_VERSION'],
```

```
    skip_submission: true,
```

```
    team_name: "Petal Solutions Inc.",
```

```
    skip_waiting_for_build_processing: true
```

```
end
```

# NOTRE FLOW – MERGE TO PROD

---



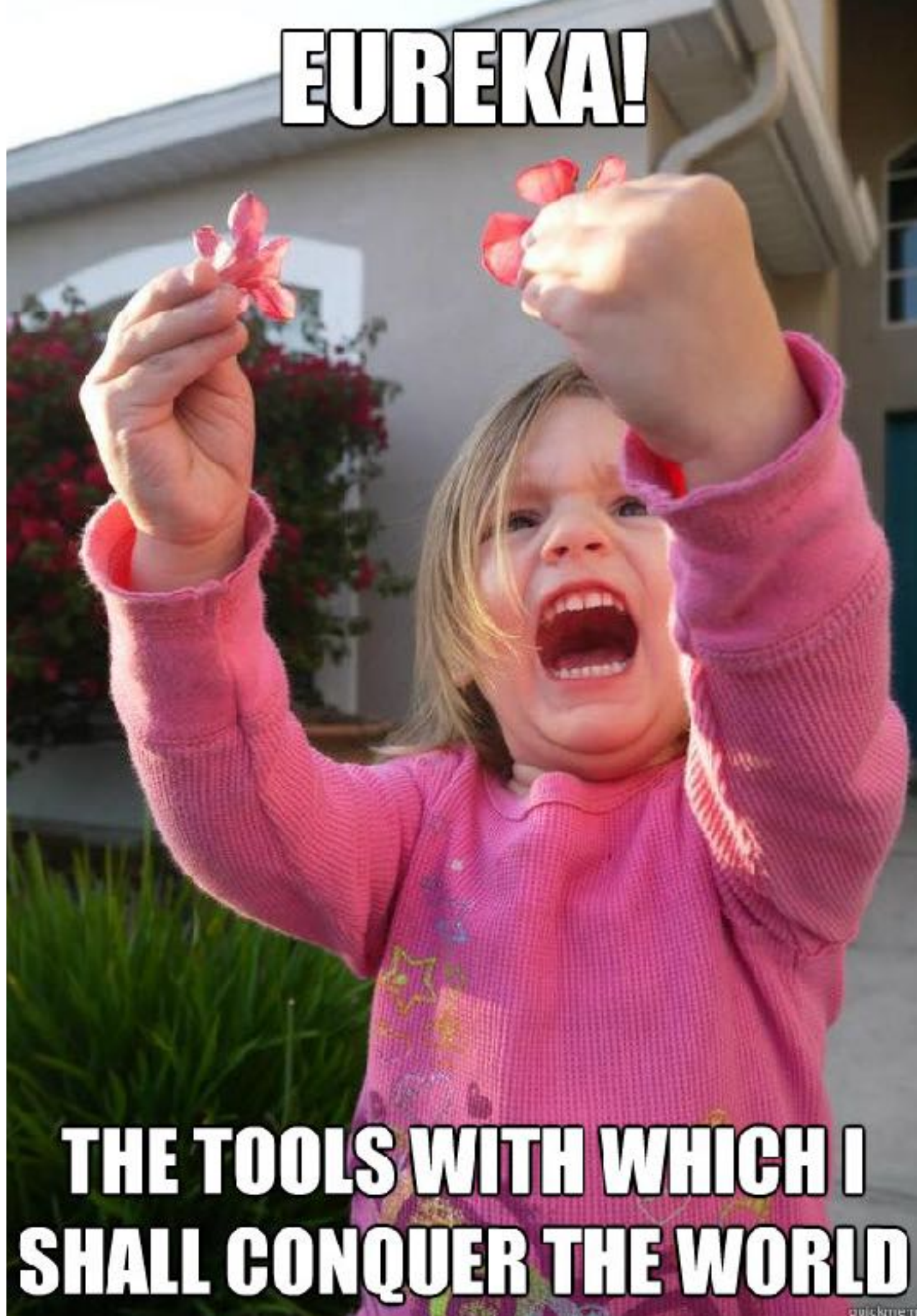


# NOS OUTILS

---

*Et pourquoi on les  
a choisi*

**EUREKA!**



**THE TOOLS WITH WHICH I  
SHALL CONQUER THE WORLD**

# NOS OUTILS



# NOS OUTILS

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➤ Github





# NOS OUTILS

---

- Github
- Jenkins



**Oops!**



# NOS OUTILS

---

- Github
- Jenkins
- Codecov



**Oops!**



# NOS OUTILS

---

- Github
- Jenkins
- Codecov
- PullApprove



**Oops!**



# NOS OUTILS – GITHUB

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- Beaucoup d'intégrations
- Version cloud qui fonctionne
- Status check sur les Pull Requests
- Leur mascotte est vraiment top





# NOS OUTILS – GITHUB



Some checks haven't completed yet

3 failing, 1 pending, and 1 successful checks

[Hide all checks](#)



Jenkins2 - e2e — Build finished.

[Details](#)



codecov/patch — 28.57% of diff hit (target 60.00%)

Required

[Details](#)



codecov/project — 67.24% (-0.03%) compared to 9...

Required

[Details](#)



code-review/pullapprove — Approval required by g...

Required

[Details](#)



Jenkins2 - build — Build finished.

Required

[Details](#)

5 checks passed



Jenkins2 - build Build finished.

[Details](#)



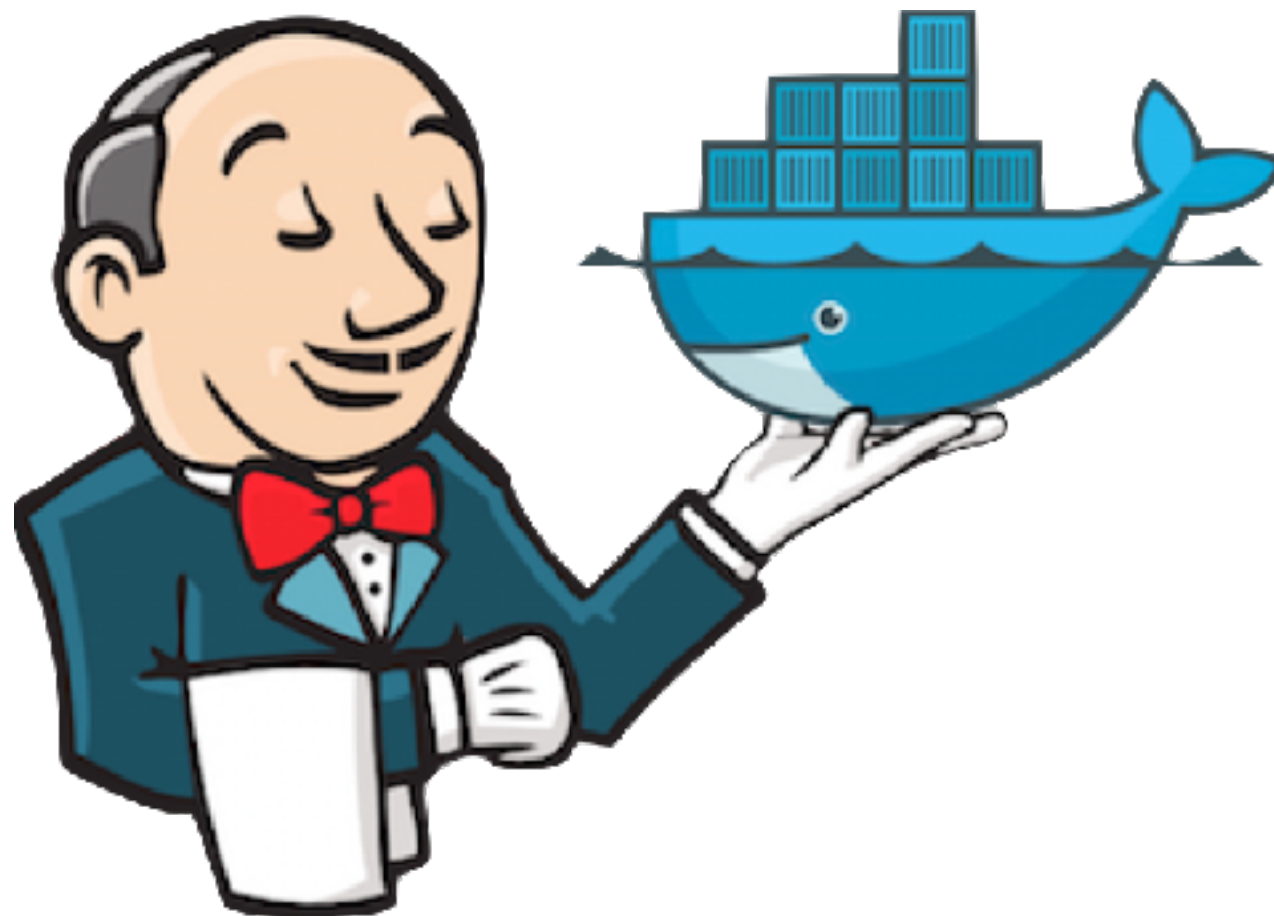
Jenkins2 - e2e Build finished.

[Details](#)

# NOS OUTILS – JENKINS

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- Scale vraiment facilement et bien
- Beaucoup moins cher qu'un outil cloud (CircleCI, Travis, etc)
- Intégration Github, permet de relancer les builds avec un commentaire



# NOS OUTILS – JENKINS



# NOS OUTILS - JENKINS



jenkins / Github / selfpro #11



Branch master  
Commit bc74331

a minute  
10 hours ago

Changes by Julien Maitrehenry

Pipeline

Changes

Tests

Artifacts



Prepare env

Git clone

Build container

Run tests

Push image



Steps - Push image



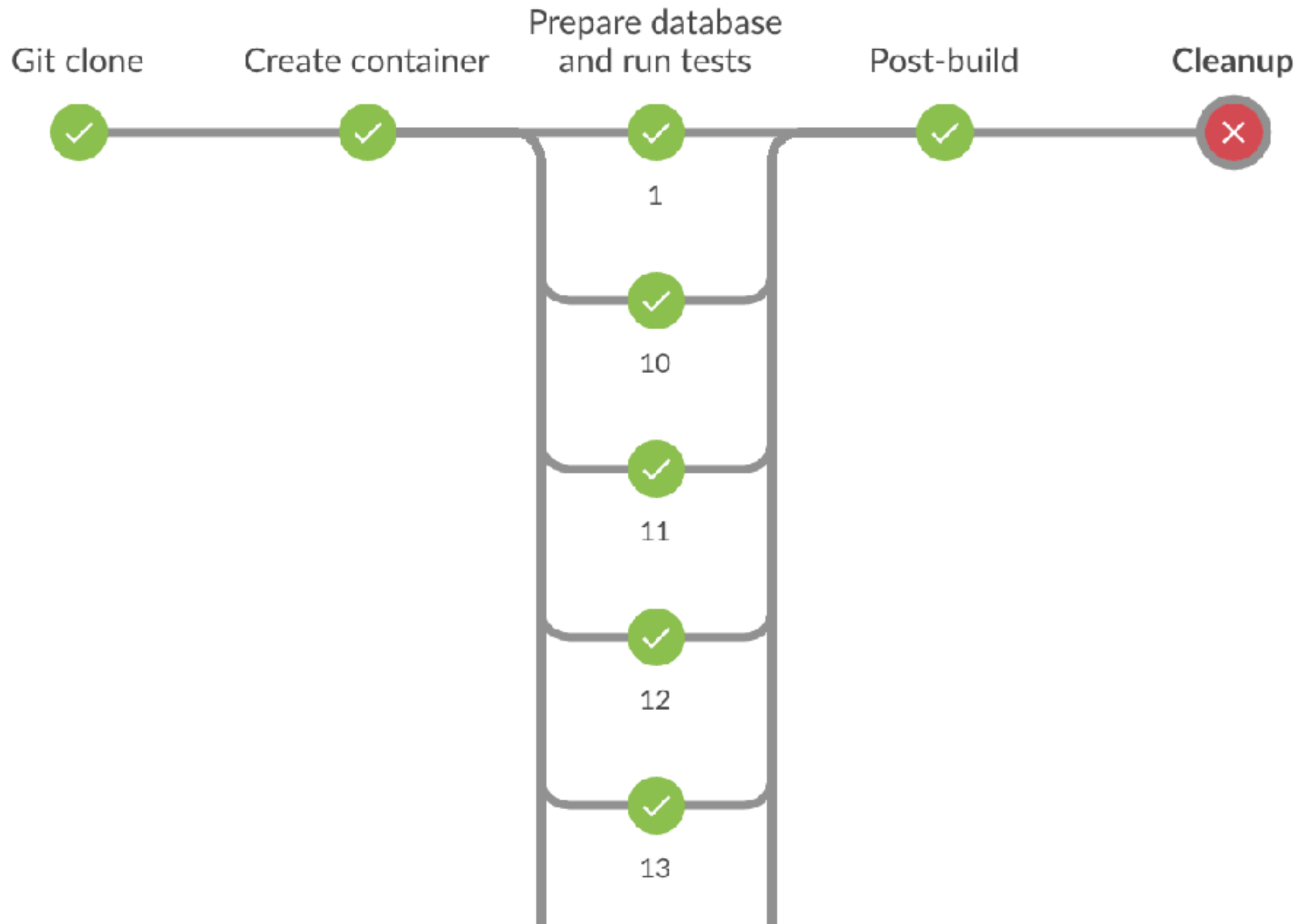
> Shell Script



# NOS OUTILS – JENKINS



# NOS OUTILS - JENKINS

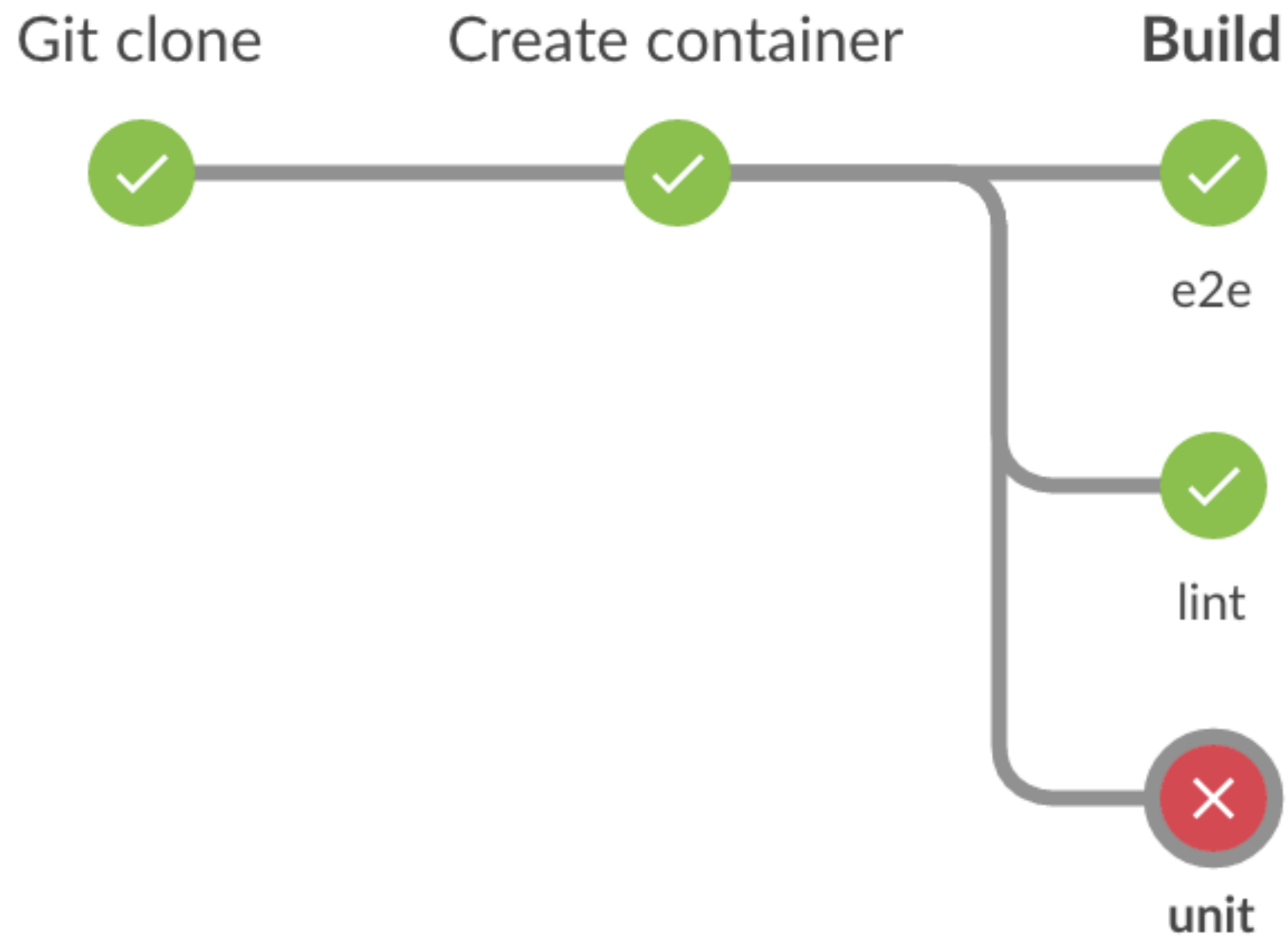


# NOS OUTILS – JENKINS



# NOS OUTILS - JENKINS

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# NOS OUTILS – JENKINS



# NOS OUTILS – JENKINS

---

```
node('master') {  
    stage 'Prepare env'  
    deleteDir()  
  
    stage 'Git clone'  
    checkout scm  
  
    stage 'Build container'  
    sh 'docker build -t petalmd/selfpro:$BUILD_NUMBER -f Dockerfile .'  
  
    stage 'Run tests'  
    sh 'docker run petalmd/selfpro:$BUILD_NUMBER sh -c "npm run tests && npm run coverage"'  
  
    stage 'Push image'  
    sh 'docker push petalmd/selfpro:$BUILD_NUMBER'  
}
```

# NOS OUTILS – JENKINS



# NOS OUTILS – JENKINS

---

```
stage 'Build'
parallel ([
  unit: {
    node('docker') {
      sh '''
      #!/bin/bash
      docker run petal.web:$BUILD_NUMBER sh -c "npm run unit && npm run coverage"
      '''
    }
  },
  lint: {
    node('docker') {
      sh '''
      #!/bin/bash
      docker run petal.web:$BUILD_NUMBER sh -c "npm run lint"
      '''
    }
  }
])
```



# NOS OUTILS – CODECOV

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- Très bonne intégration avec Github
  - Status
  - Commentaire
- Plugin Chrome pour voir le coverage dans Github
- Facile à configurer



# NOS OUTILS – CODECOV

Changes from all commits ▾ 28 files ▾ +417 -135 80.59% (Diff 98.25%)

Unified Split Review changes ▾

2 app/serializers/events/meeting\_event\_serializer.rb

Coverage 93.10% (Diff 100.00%) View


```
@@ -18,7 +18,7 @@ def group
18 18     def attachments
19 19         if object.attachment_ids
20 20             attachment_ids = ::Attachment.where(id: object.attachment_ids)
21 -         ActiveModel::ArraySerializer.new(attachment_ids, each_serializer: AttachmentSerializer, root: false).as_json
21 +         ActiveModel::ArraySerializer.new(attachment_ids, each_serializer: ::AttachmentSerializer, root: false).as_json
22 22     else
23 23         []
24 24     end
```

- ✓

 **codecov/patch** — 98.24% of diff hit (target 80.00%)

Required

Details
- ✓

 **codecov/project** — 80.58% (+<.01%) compared to 2...

Required

Details

# NOS OUTILS – CODECOV



petalbot commented 6 hours ago



**Current coverage is 80.58% (diff: 98.24%)**

Merging [#776](#) into [master](#) will increase coverage by <.01%

@@	master	#776	diff @@
Files	1561	1561	
Lines	63718	63746	+28
Methods	0	0	
Messages	0	0	
Branches	0	0	
=====			
+ Hits	51345	51371	+26
- Misses	12373	12375	+2
Partials	0	0	



# NOS OUTILS – PULLAPPROVE

---

- Intégration Github
- Mettre des règles sur des *labels*
- Mettre des règles sur des fichiers
- Approbation via commentaire Github



Fix the favicon



f1b9e82

dparadis commented 4 days ago • edited



Approved

leads

approved

devs

approved

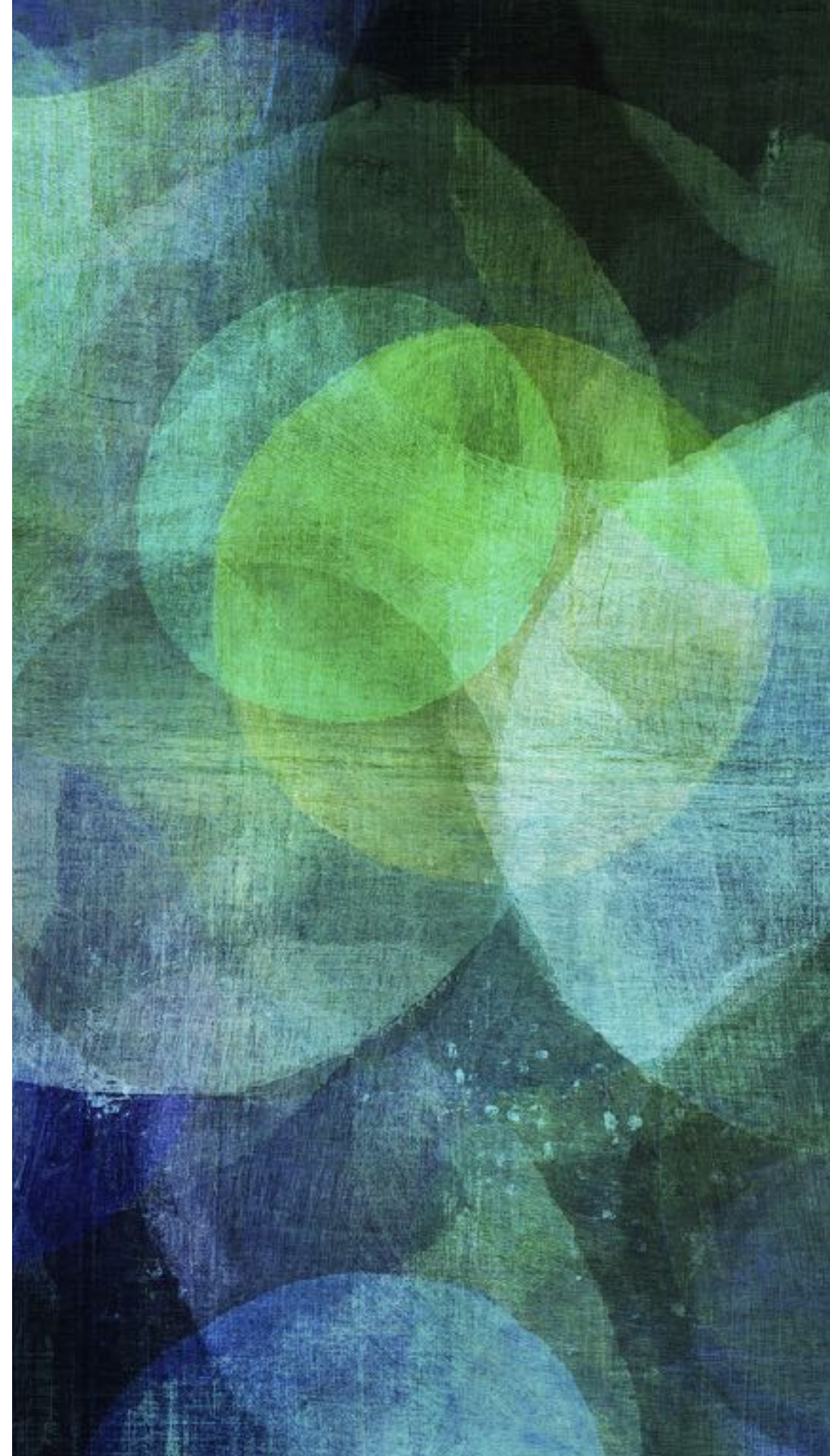


# Pull Approve



# BONUS

.....  
*Environnement de staging*





**Next step....**

**World Domination!!!**

**ASK**



**ALL THE QUESTIONS**