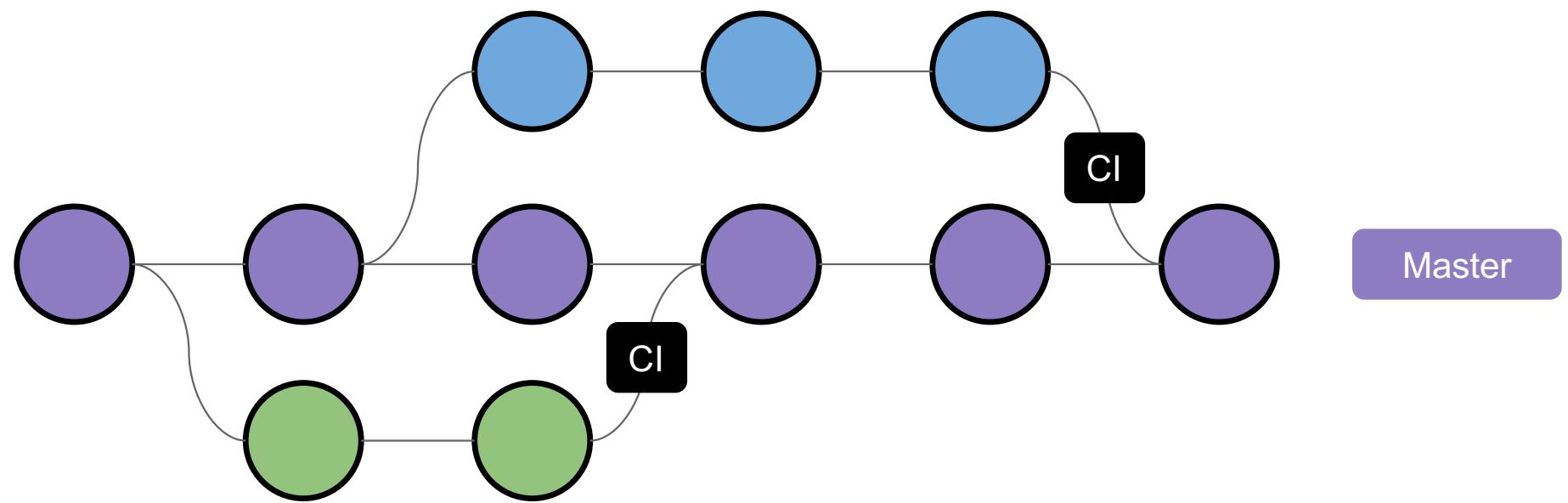


Integração Contínua

Prof. Matheus Sousa Faria

O que é?

Integração frequente
das diferentes
branches de trabalho



XP

eXtreme Programming

Testes automatizados

TDD
Testes unitários
Testes de Integração

Build automatizada

Build Testável
Build Contínua

Maior Frequência

Várias vezes ao dia
A cada commit (testes e build)

Benefícios e Boas Práticas

1. Build Automática
 2. Build Testável
 3. Commits diários na master
 4. Commits testados e funcionando na master
 5. Build rápida
 6. Deploy Automático
-

Integração
Contínua

!= Deploy Contínuo

Entrega contínua em
produção ao cliente

Deploy Contínuo

Entrega Contínua ! = Deploy Contínuo
(Continuous Delivery)

Entrega Contínua (Continuous Delivery)

A habilidade de gerar
uma build estável a
qualquer momento

Integração Contínua

(Continuous Integration)

Entrega Contínua

(Continuous Delivery)

Deploy Contínuo

(Continuous Deployment)

Desenvolvimento

Integração

Produção

Ferramentas



Travis CI



CODESHIP



Jenkins



GitLab CI



Bamboo



circleci



Travis CI



CODESHIP



Jenkins



GitLab CI



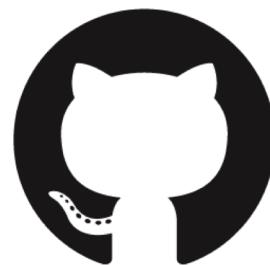
Bamboo



circleci



Travis CI



GitHub



Travis CI

.travis.yml

```
language: python

python:
  - "2.6"
  - "2.7"
  - "3.2"
  - "3.3"

install:
  - pip install .
  - pip install -r requirements.txt

script: pytest
```

YAML

Shell-like

Search all repositories 

colab / colab

 build passing

My Repositories +

Current Branches Build History Pull Requests

More options 

✓ colab/colab # 1273

⌚ Duration: 4 min 56 sec

📅 Finished: 9 months ago

✓ colab/colab-superarchives-p # 37

⌚ Duration: 1 min 57 sec

📅 Finished: 10 months ago

✓ colab/colab-gitlab-plugin # 251

⌚ Duration: 1 min 50 sec

📅 Finished: 11 months ago

✓ colab/colab-noosfero-plugin # 149

⌚ Duration: 2 min 21 sec

📅 Finished: 11 months ago

✓ plugin_settings_variables # 1272 passed

Added support for settings variables on plugin config file

Matheus Fernandes

⌚ 6 min 5 sec

📅 9 months ago 

✓ plugin_helpers # 1270 passed

Added plugin helpers tests

Matheus Fernandes

⌚ 5 min 22 sec

📅 9 months ago 

✗ plugin_helpers # 1269 failed

Added plugin helpers tests

Matheus Fernandes

⌚ 5 min 7 sec

📅 9 months ago 

✓ master # 1268 passed

Merge pull request #148 from colab/detach_super_archive

Charles Oliveira

⌚ 5 min 12 sec

📅 10 months ago 

✓ detach_super_archive # 1266 passed

Fixed tests

Matheus Fernandes

⌚ 4 min 44 sec

📅 10 months ago 

✗ detach_super_archive # 1264 failed

Fixed tests

Matheus Fernandes

⌚ 4 min 33 sec

📅 10 months ago 

✗ detach_super_archive # 1262 failed

Fixed tests

Matheus Fernandes

⌚ 2 min 47 sec

📅 10 months ago 

✓ **plugin_settings_variables** Added support for settings variables on plugin config file

Signed-off-by: Matheus Fernandes <matheus.souza.fernandes@gmail.com>

Commit 3c8bbbe

Compare 3c8bbbbedda83

Branch plugin_settings_variables

Matheus Fernandes authored and committed

→ #1272 passed

Ran for 6 min 5 sec

9 months ago

 Restart build

Job log

View config

 Remove log

 Raw log

1 Using worker: worker-linux-docker-03303d85.prod.travis-ci.org:travis-linux-8

2

► 3 Build system information

system_info

70

► 71 \$ export DEBIAN_FRONTEND=noninteractive

fix.CVE-2015-7547

► 110 \$ git clone --depth=50 --branch=plugin_settings_variables https://github.com/colab/colab.git colab/colab

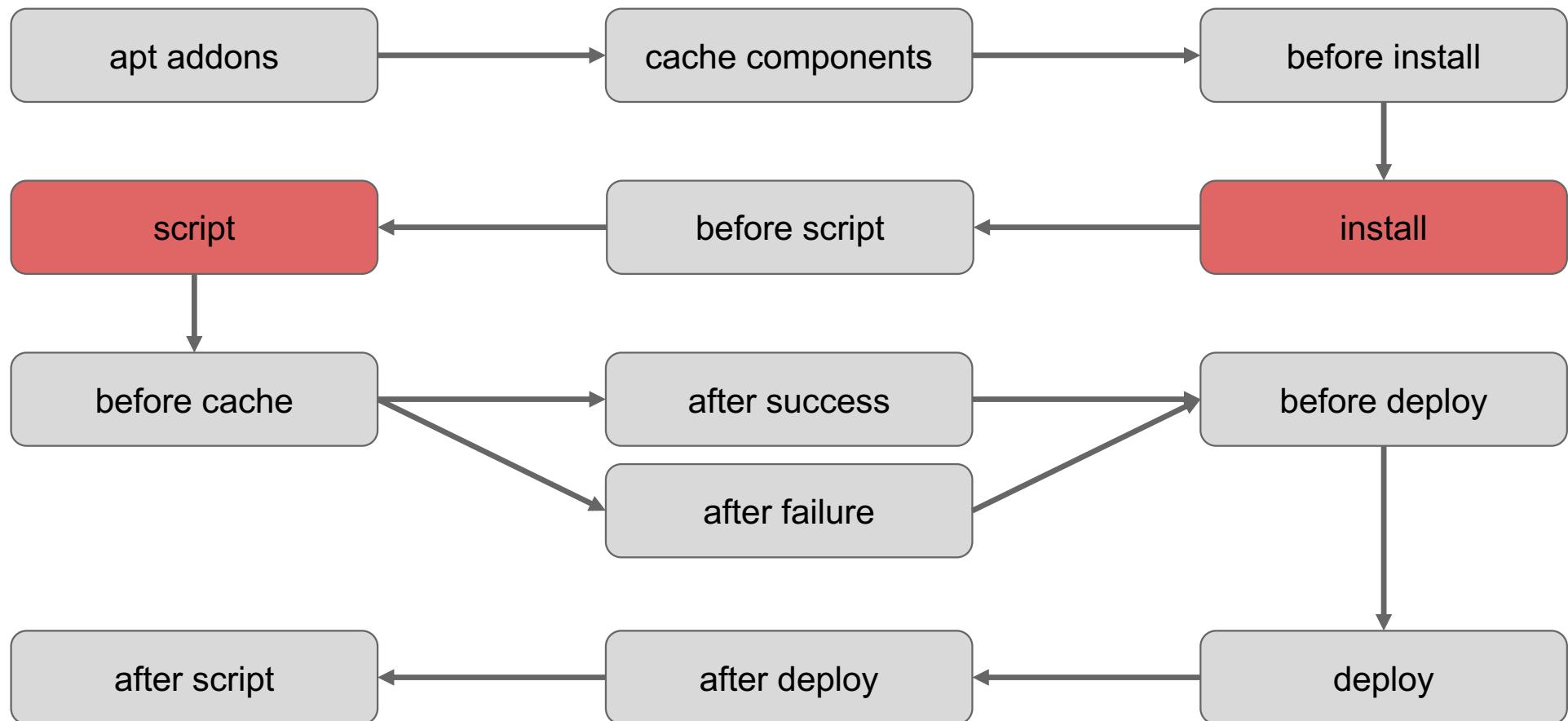
git.checkout

0.97s

► 121 Installing APT Packages (BETA)

apt

Travis Lifecycle



Travis Lifecycle

apt addons



Exclusivo
do Ubuntu

addons:

apt:

sources:

- ubuntu-toolchain-r-test

packages:

- gcc-4.8
- g++-4.8
- cmake

Travis Lifecycle

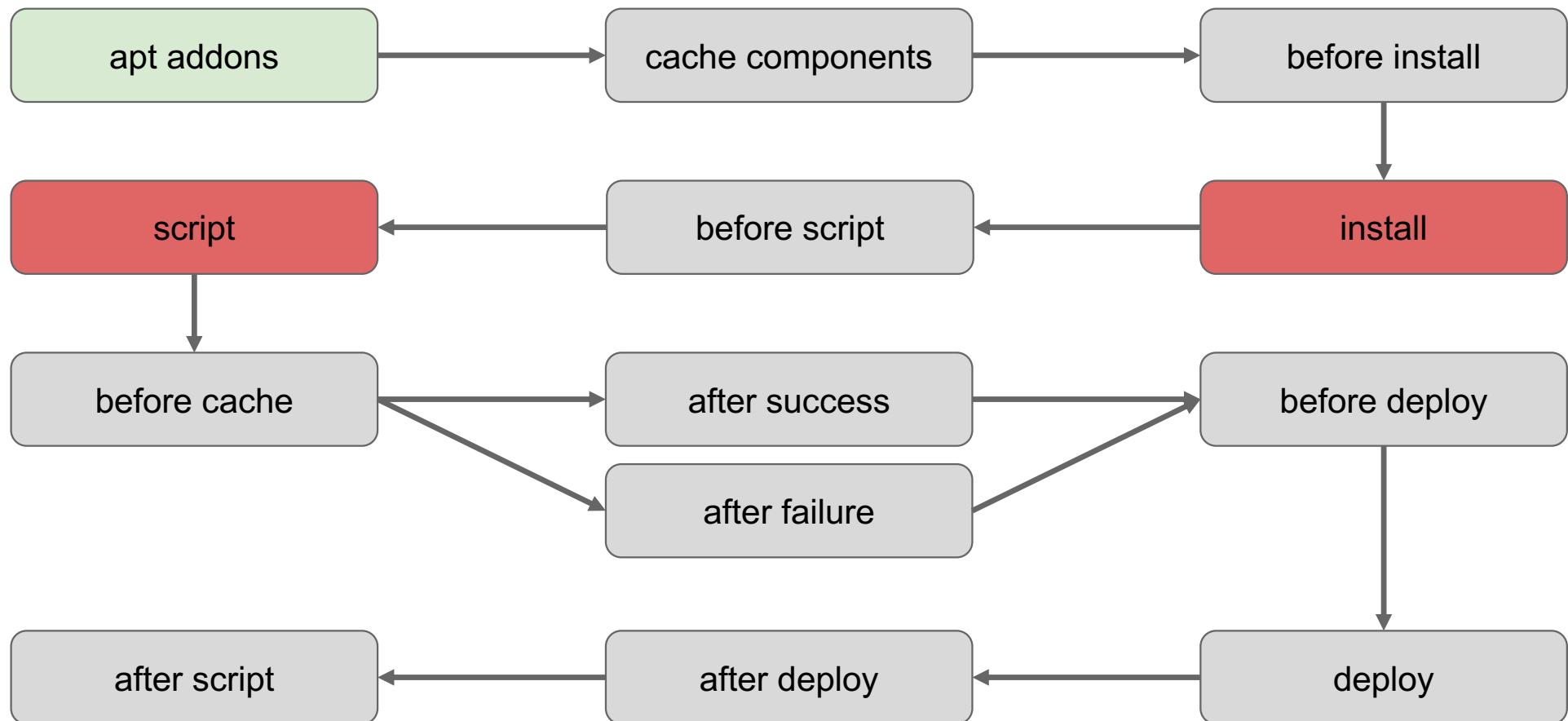
apt addons



Exclusivo
do Ubuntu

```
addons:  
  apt:  
    sources:  
      - deadsnakes  
      - sourceline: 'ppa:ubuntu-toolchain-r/test'  
      - sourceline: 'deb https://packagecloud.io/chef/stable/ubuntu/precise main'  
        key_url: 'https://packagecloud.io/gpg.key'
```

Travis Lifecycle



Travis Lifecycle

Marcar o que deve ser salvo após a build



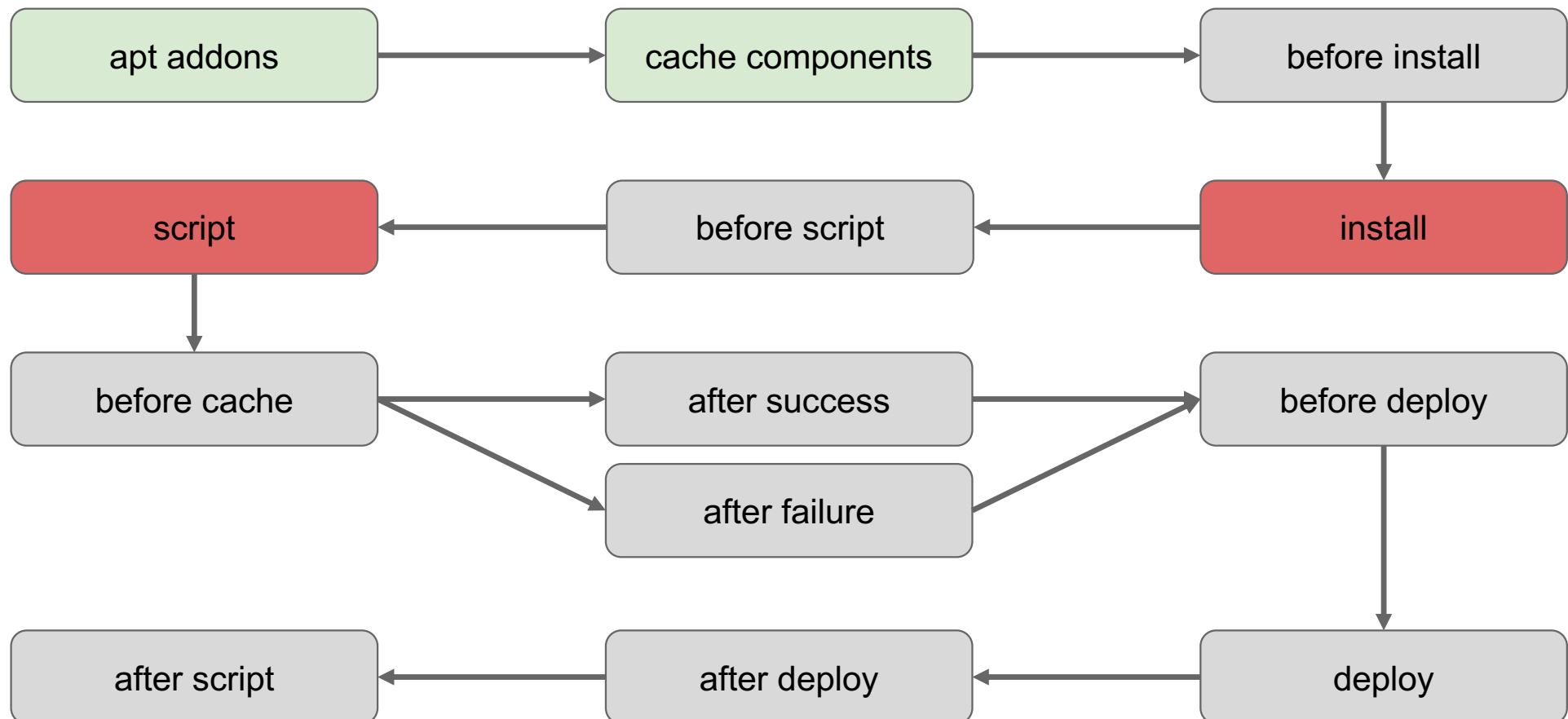
Evita downloads lentos durante a build

```
cache:  
- bundler  
- cocoapods
```

```
cache:  
directories:  
- $HOME/.cache/pip
```

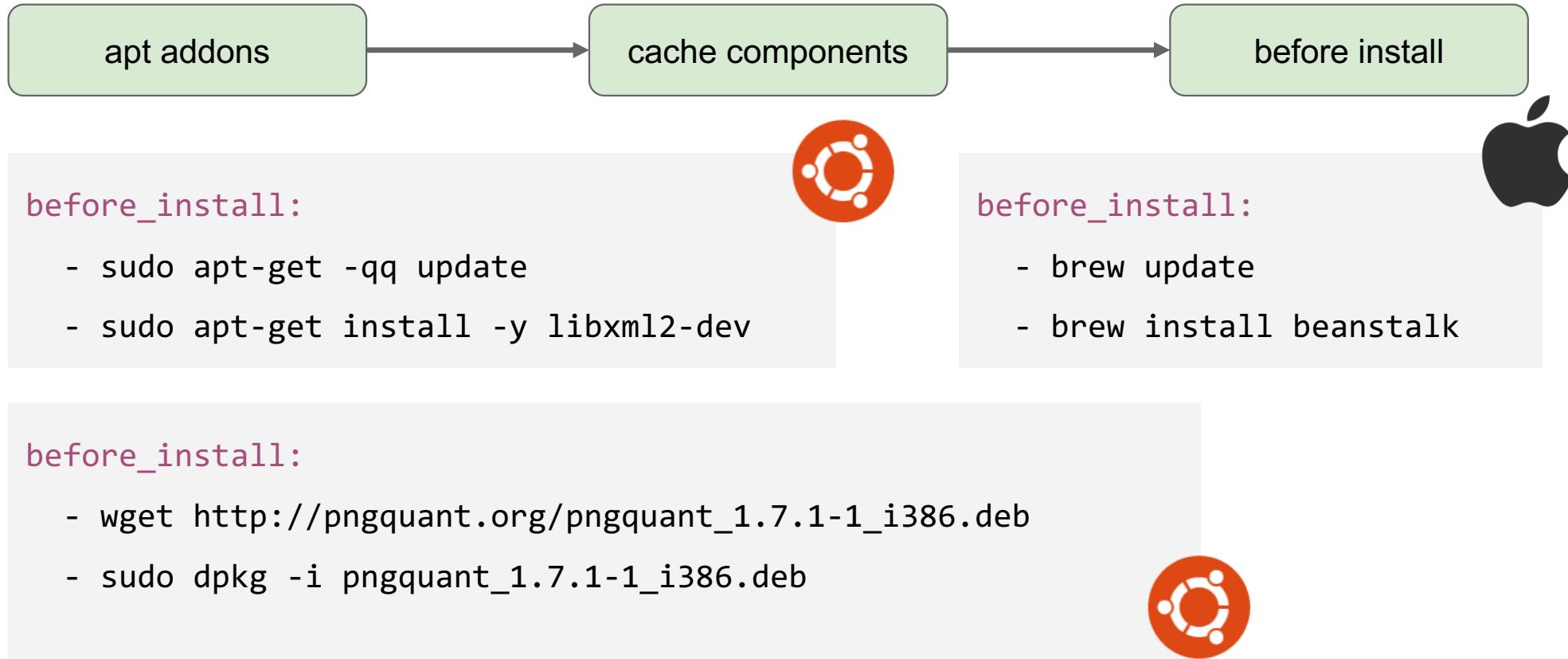
```
cache:  
bundler: true  
directories:  
- node_modules # NPM packages
```

Travis Lifecycle



Travis Lifecycle

Install para qualquer SO



Múltiplos Sistemas Operacionais



Trusty

Precise

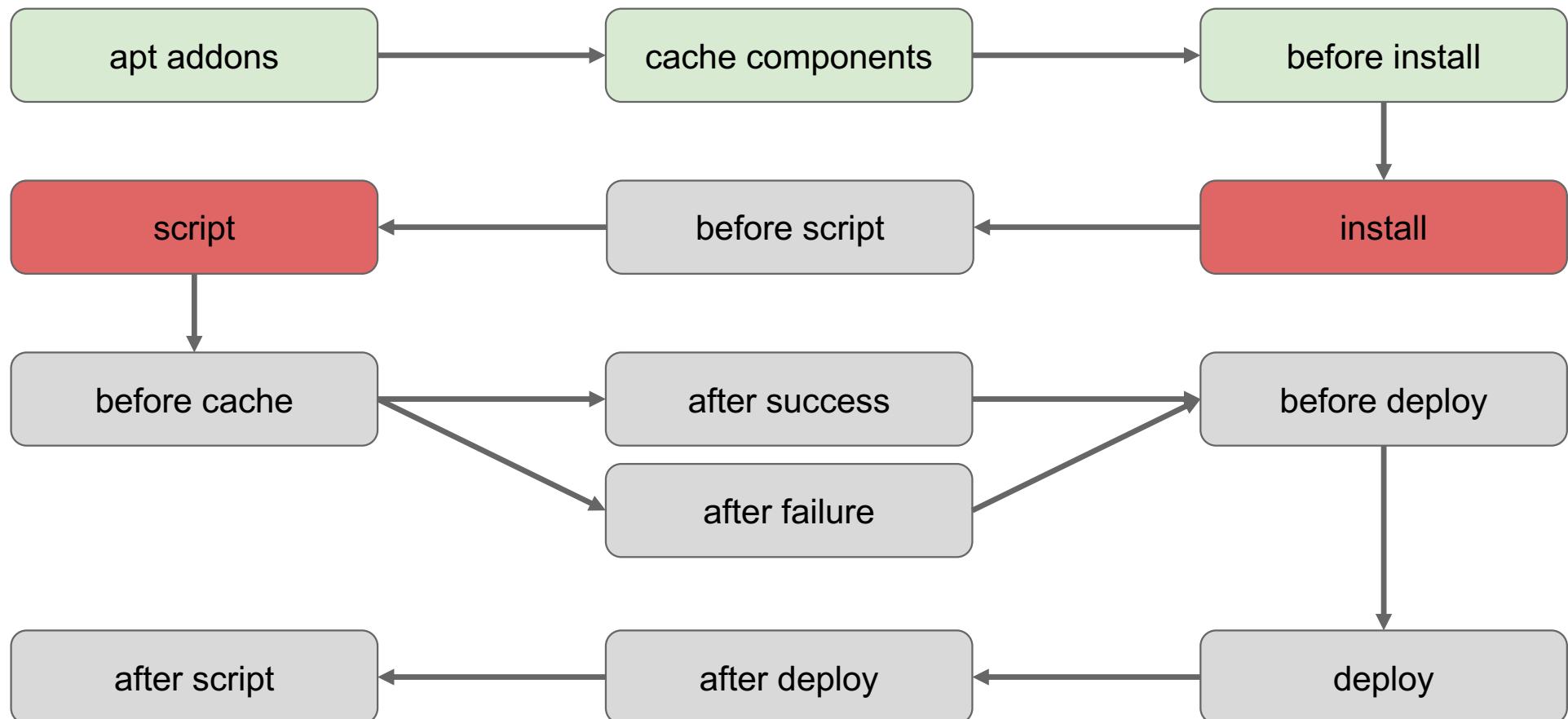


10.11.6

os:

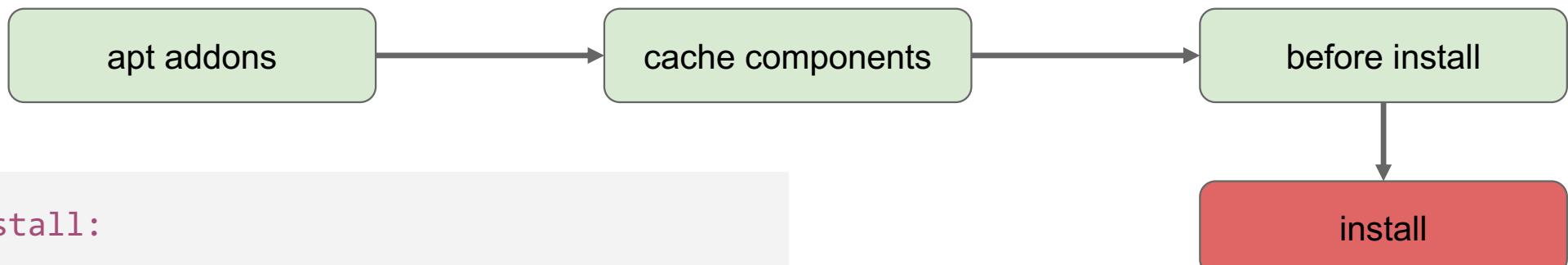
- linux
- OSX

Travis Lifecycle



Travis Lifecycle

Install dedicado ao projeto



`install:`

- `bundle install --path vendor/bundle`
- `npm install`

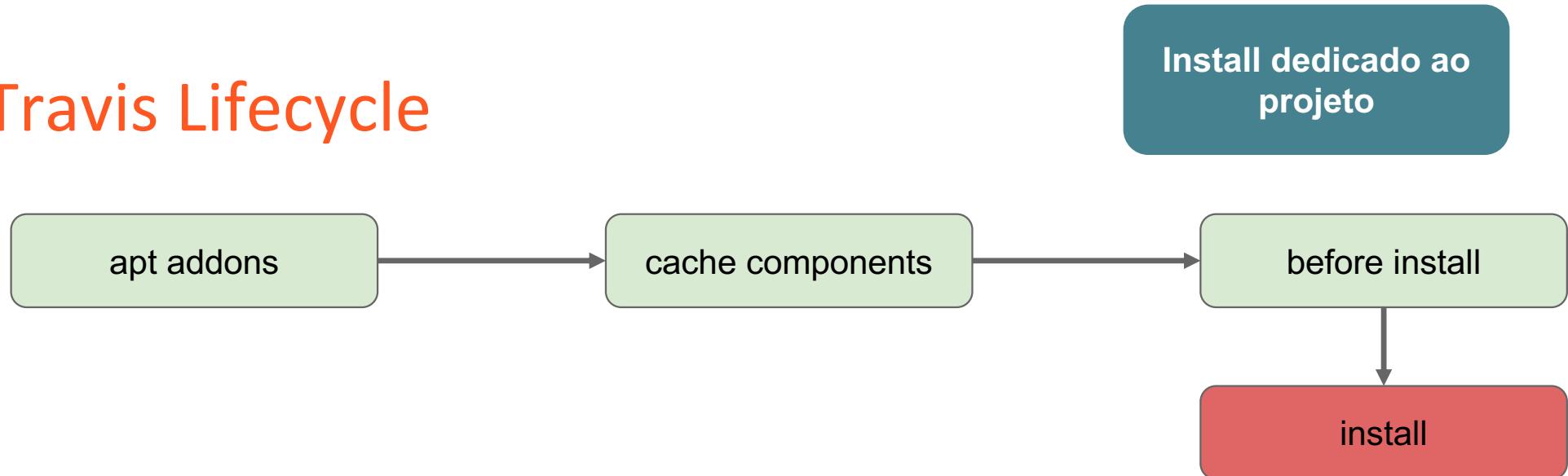
`install: true`

Pula o install

`install: ./install-dependencies.sh`

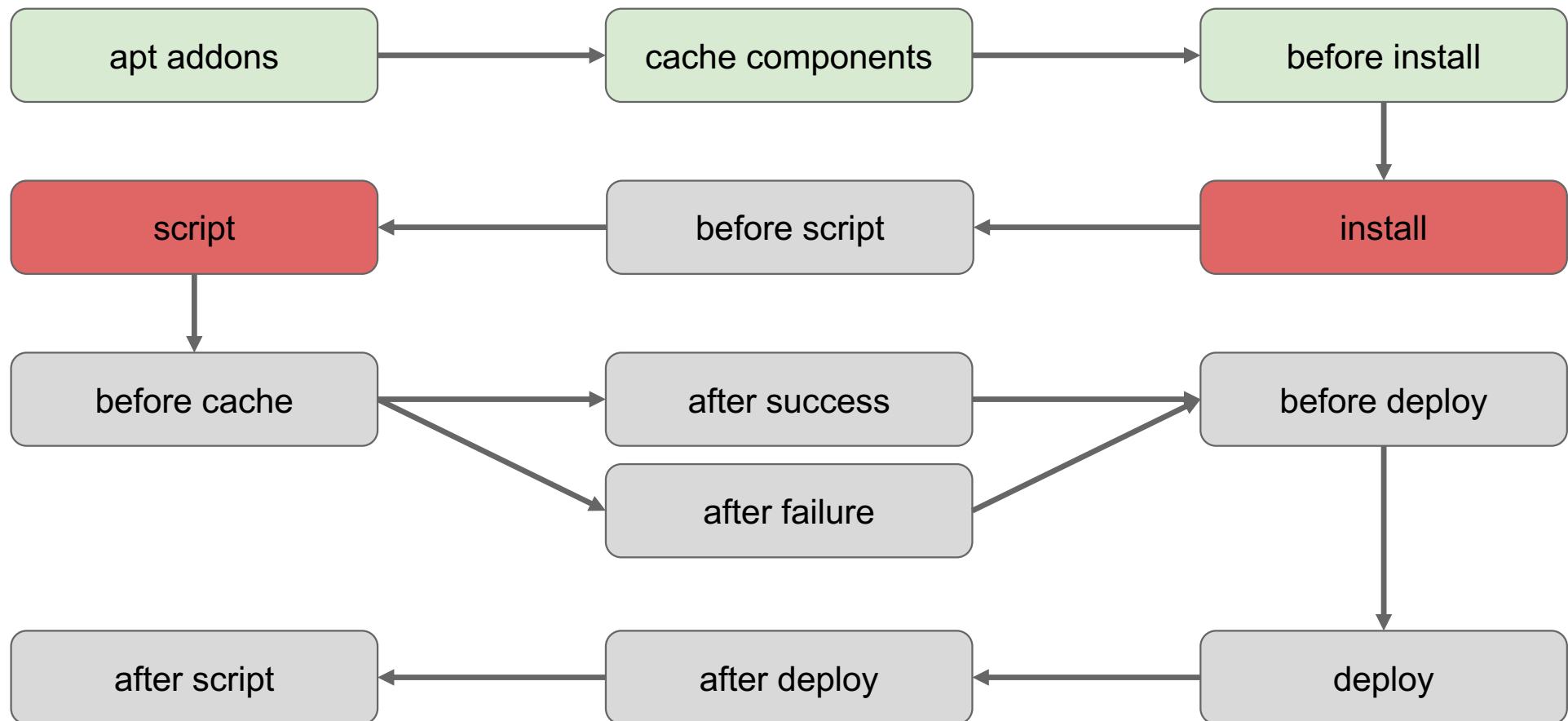
Deve ter o `#!/usr/bin/env sh`

Travis Lifecycle

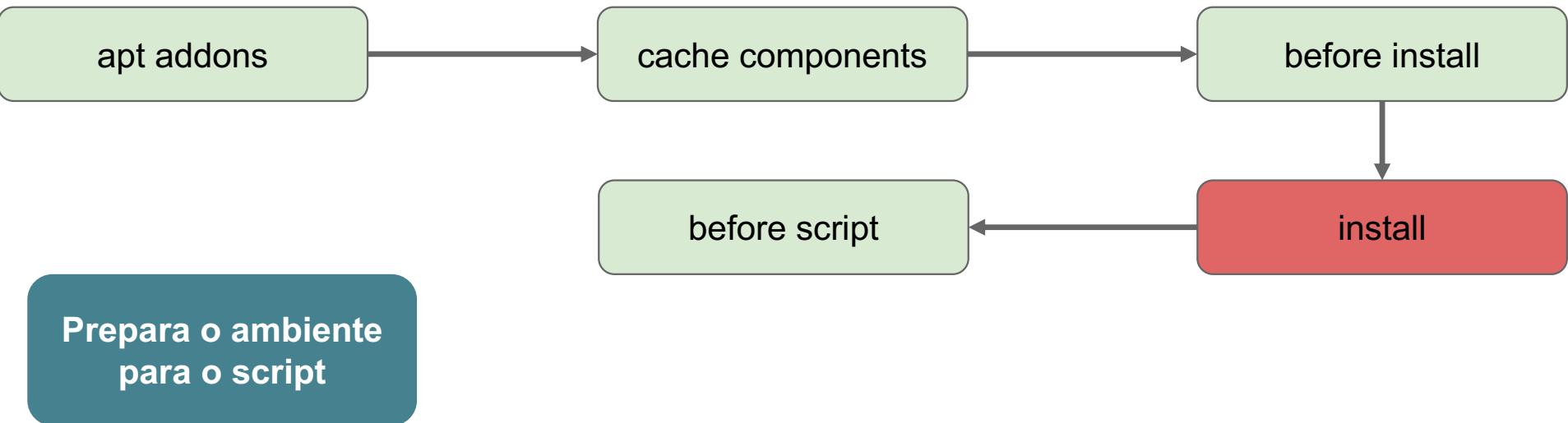


```
install:  
- if [ $TRAVIS_OS_NAME = linux ]; then sudo apt-get install foo; else brew install bar; fi
```

Travis Lifecycle



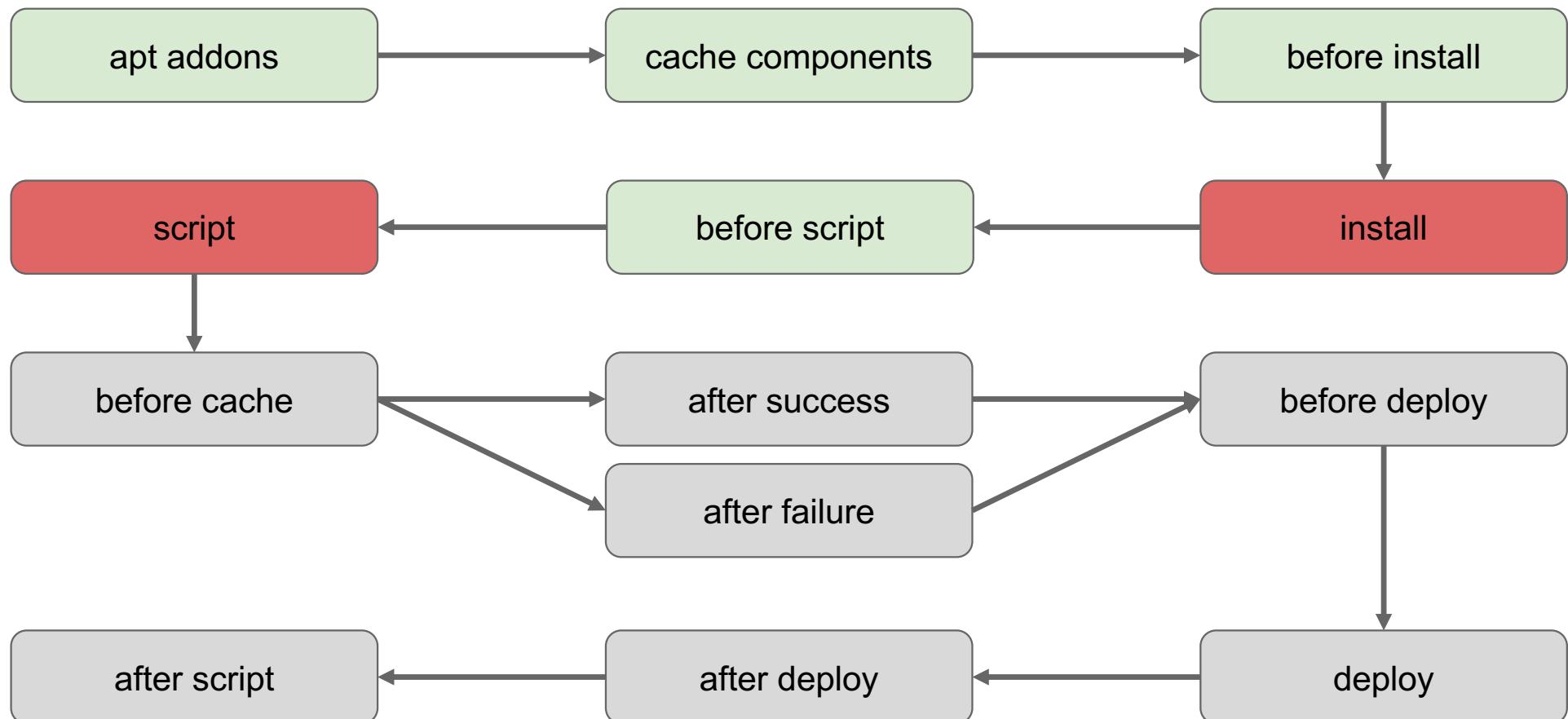
Travis Lifecycle



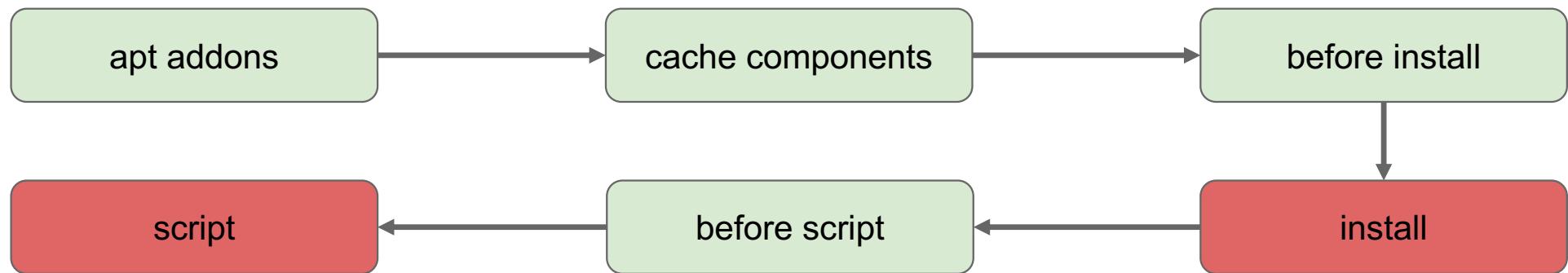
before_script:

```
- cp config/database.yml.travis config/database.yml
```

Travis Lifecycle



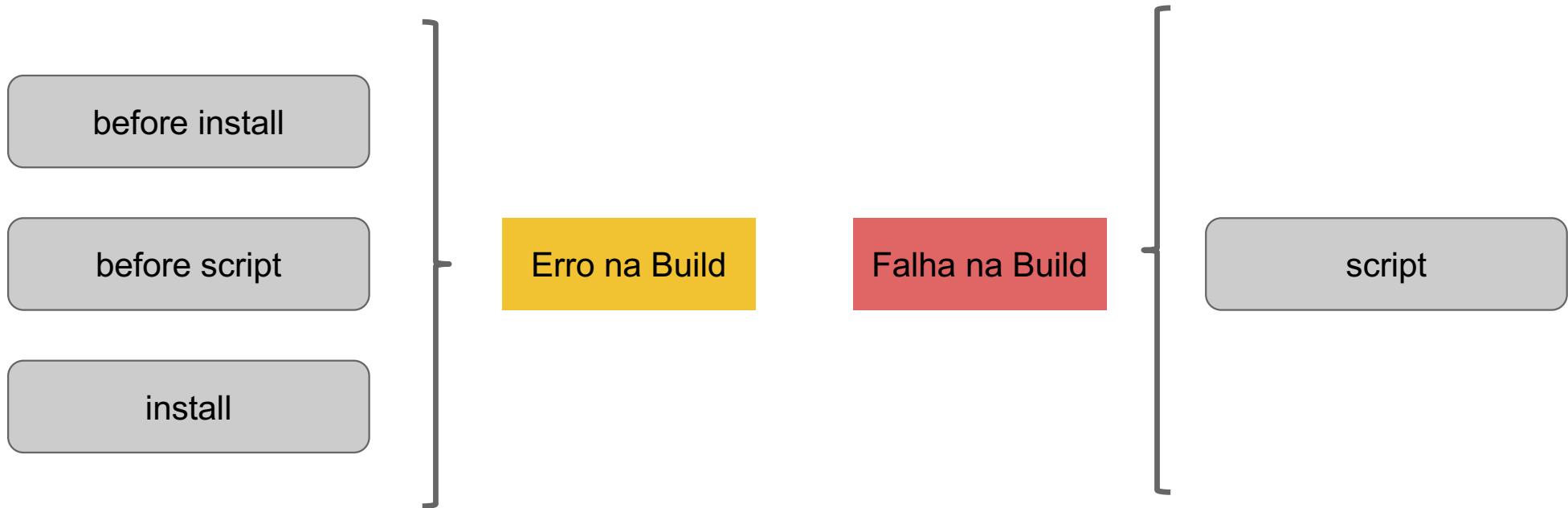
Travis Lifecycle



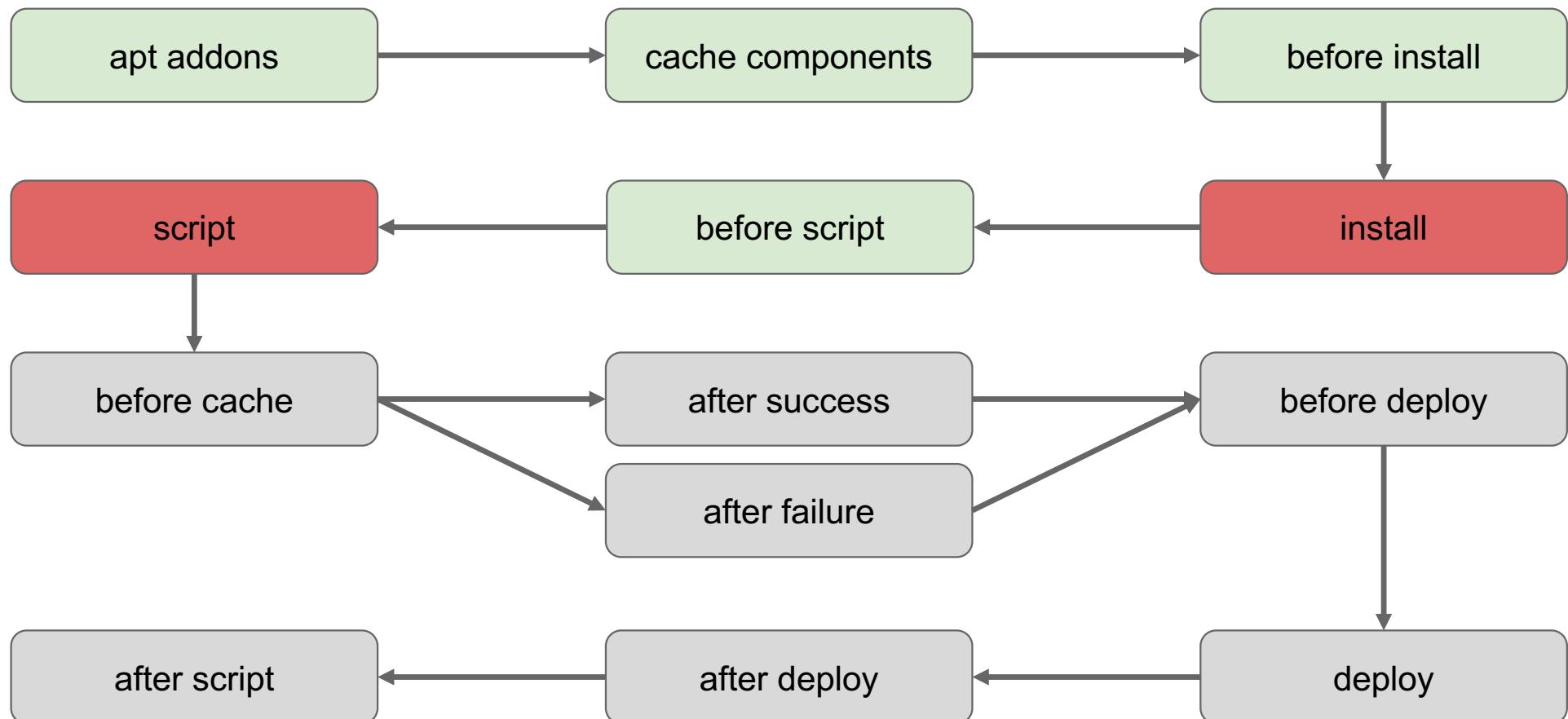
```
script:  
- python setup.py test  
- flake8 colab
```

Onde acontece a
build, testes, lint, ...

Status de Retorno

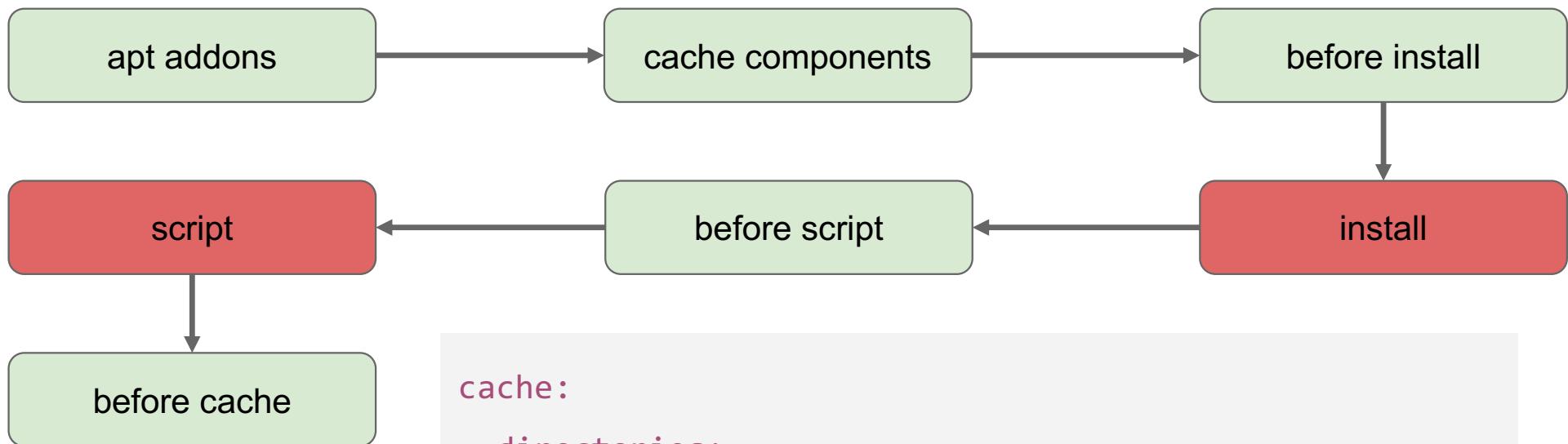


Travis Lifecycle



Travis Lifecycle

Acontece antes de
salvar o cache



cache:

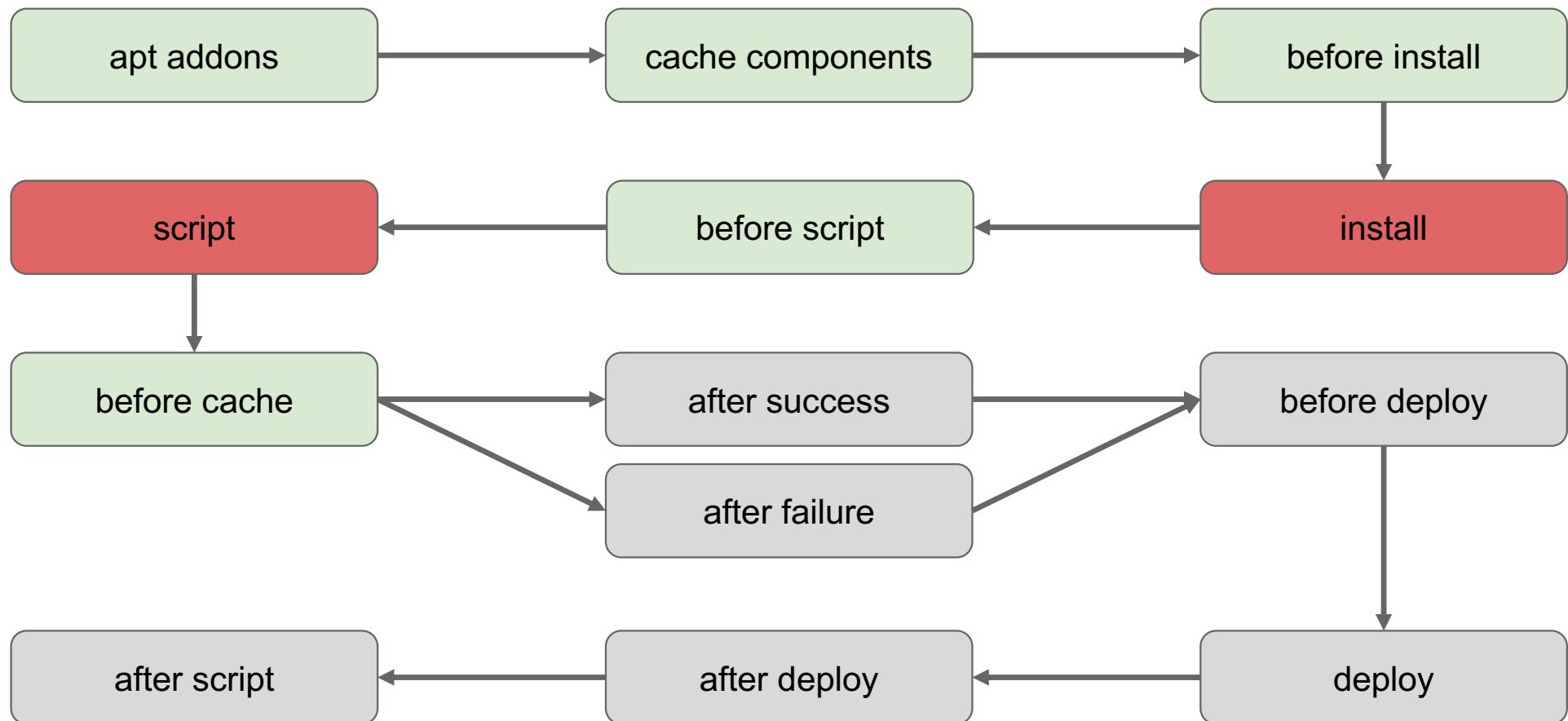
directories:

- \$HOME/.cache/pip

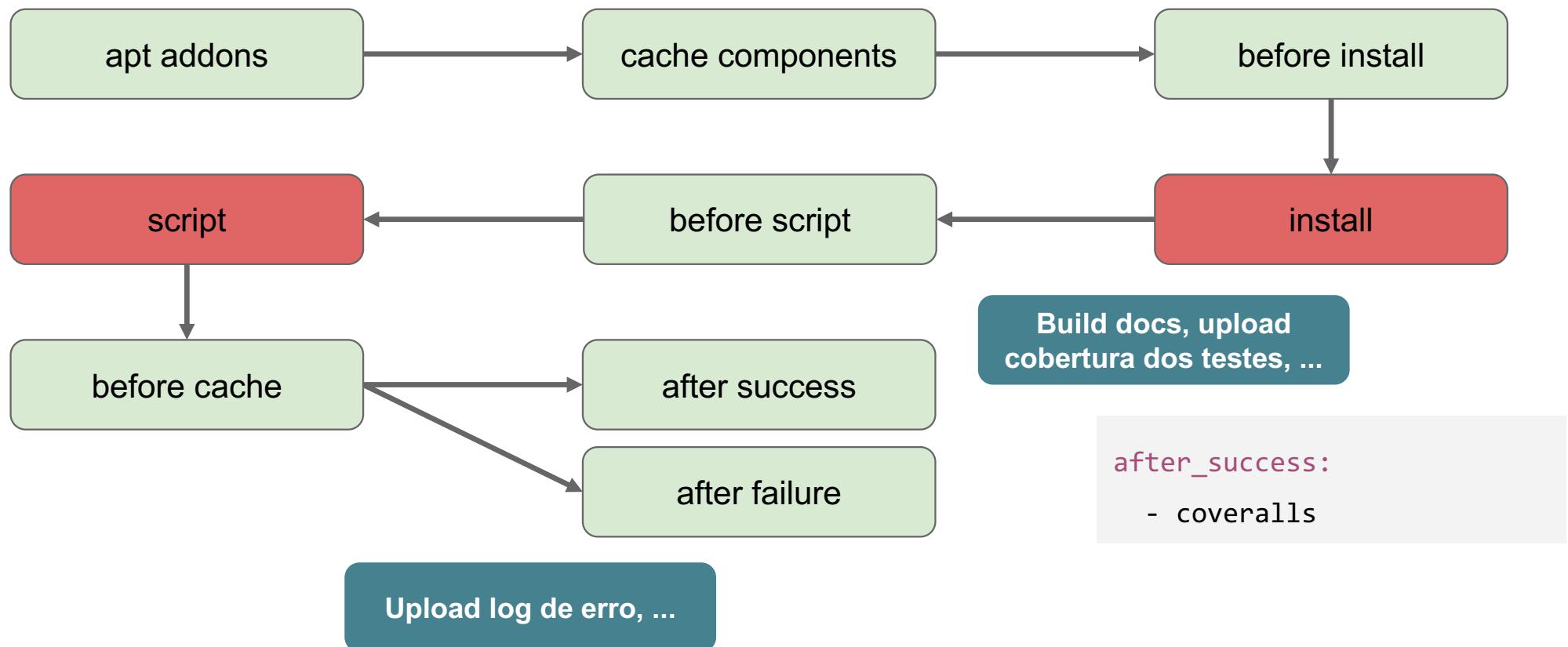
before_cache:

- rm -f \$HOME/.cache/pip/log/debug.log

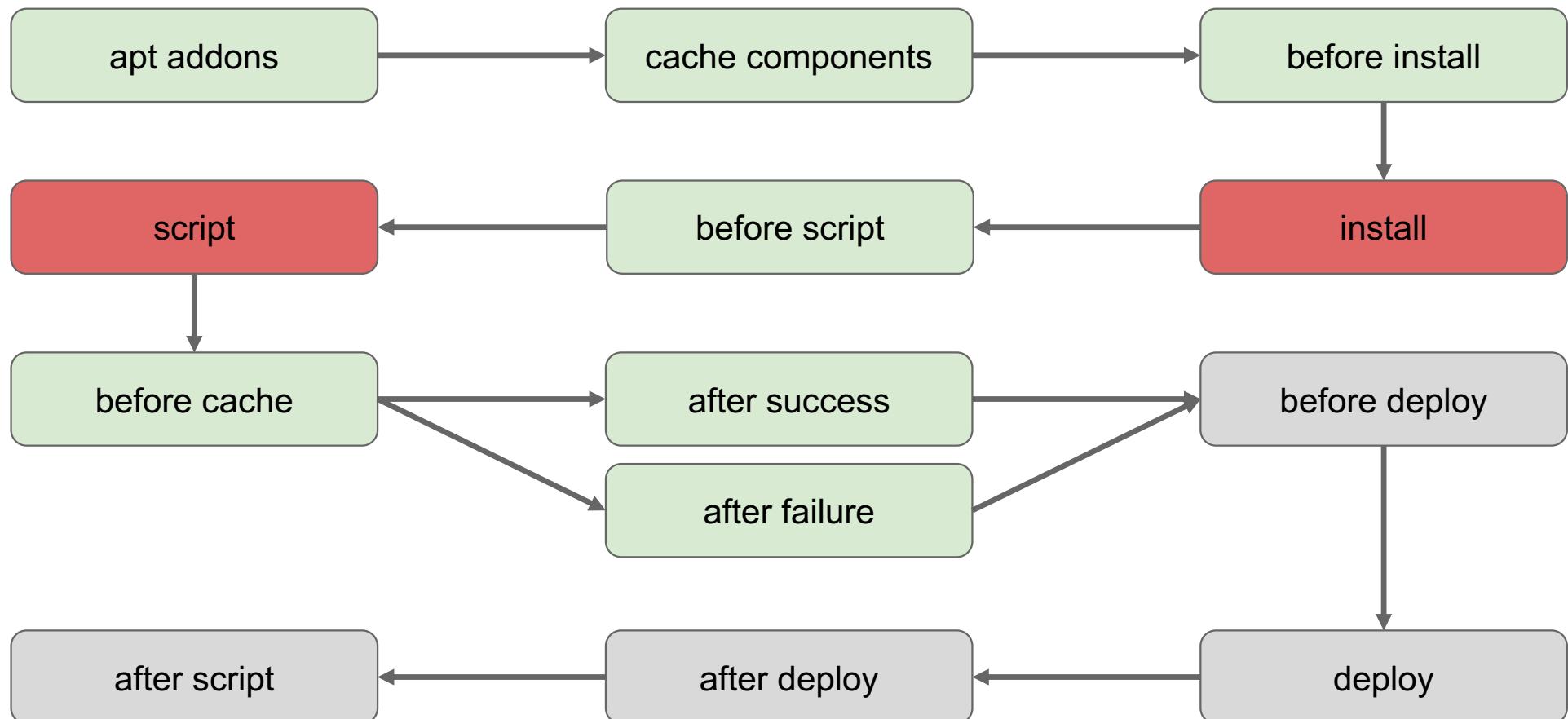
Travis Lifecycle



Travis Lifecycle



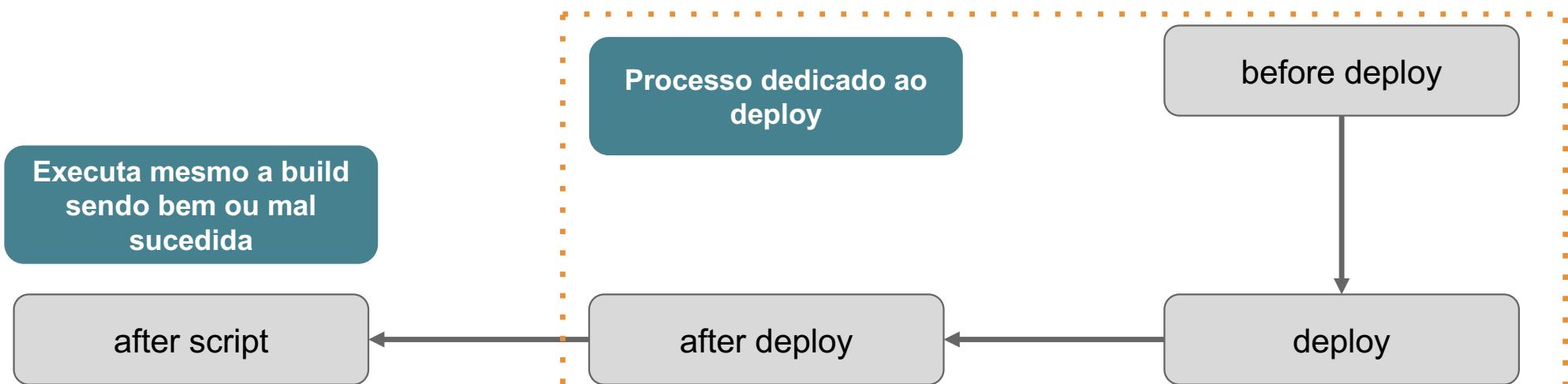
Travis Lifecycle



Travis Lifecycle



GitHub Pages



Travis Lifecycle

```
deploy:  
  provider: heroku  
  api_key: ...  
  
app:  
  master: my-app-staging  
  production: my-app-production
```

Entrega
Contínua



Geração da api_key

```
travis encrypt $(heroku auth:token) --add deploy.api_key
```

Processo dedicado ao
deploy

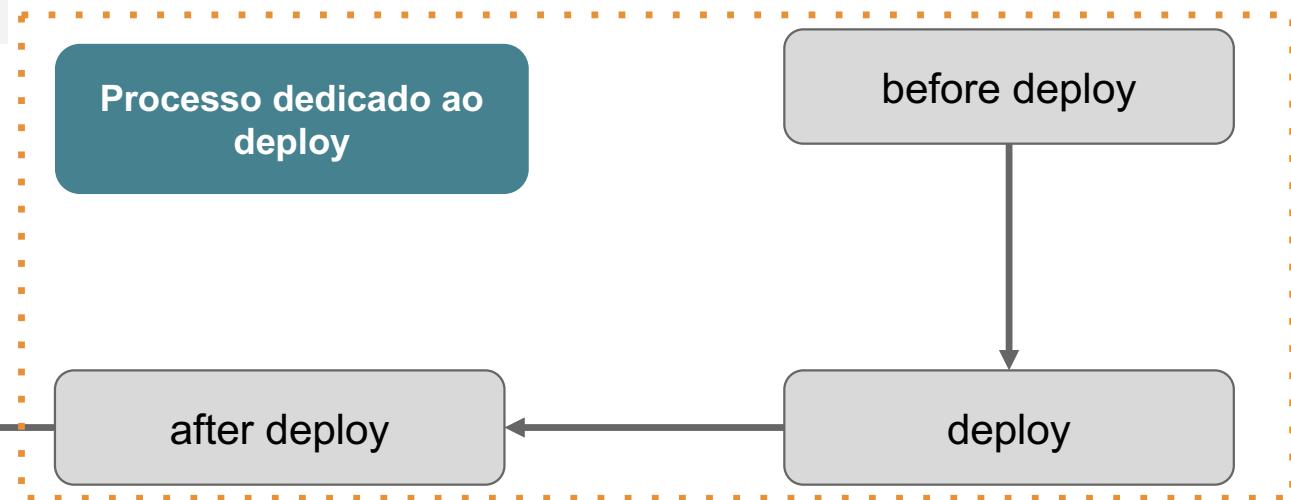
before deploy

Executa mesmo a build
sendo bem ou mal
sucedida

after script

after deploy

deploy

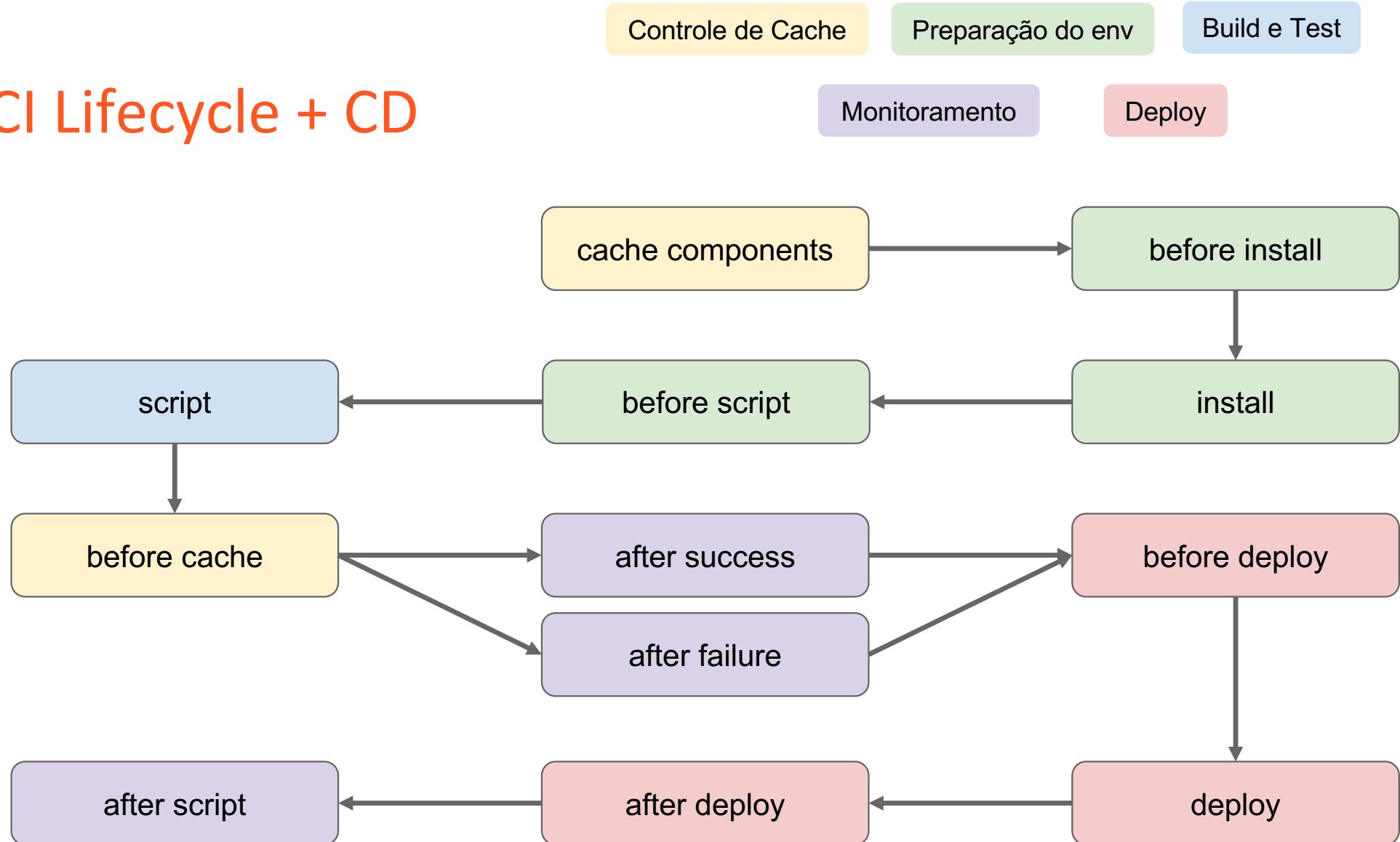


Validação do arquivo do Travis

Gem Travis

```
$ travis lint .travis.yml
```

CI Lifecycle + CD





Travis CI



CODESHIP



Jenkins



GitLab CI



Bamboo



circleci



Travis CI



CODESHIP



Jenkins



GitLab CI



Bamboo



circleci





circleci.yml

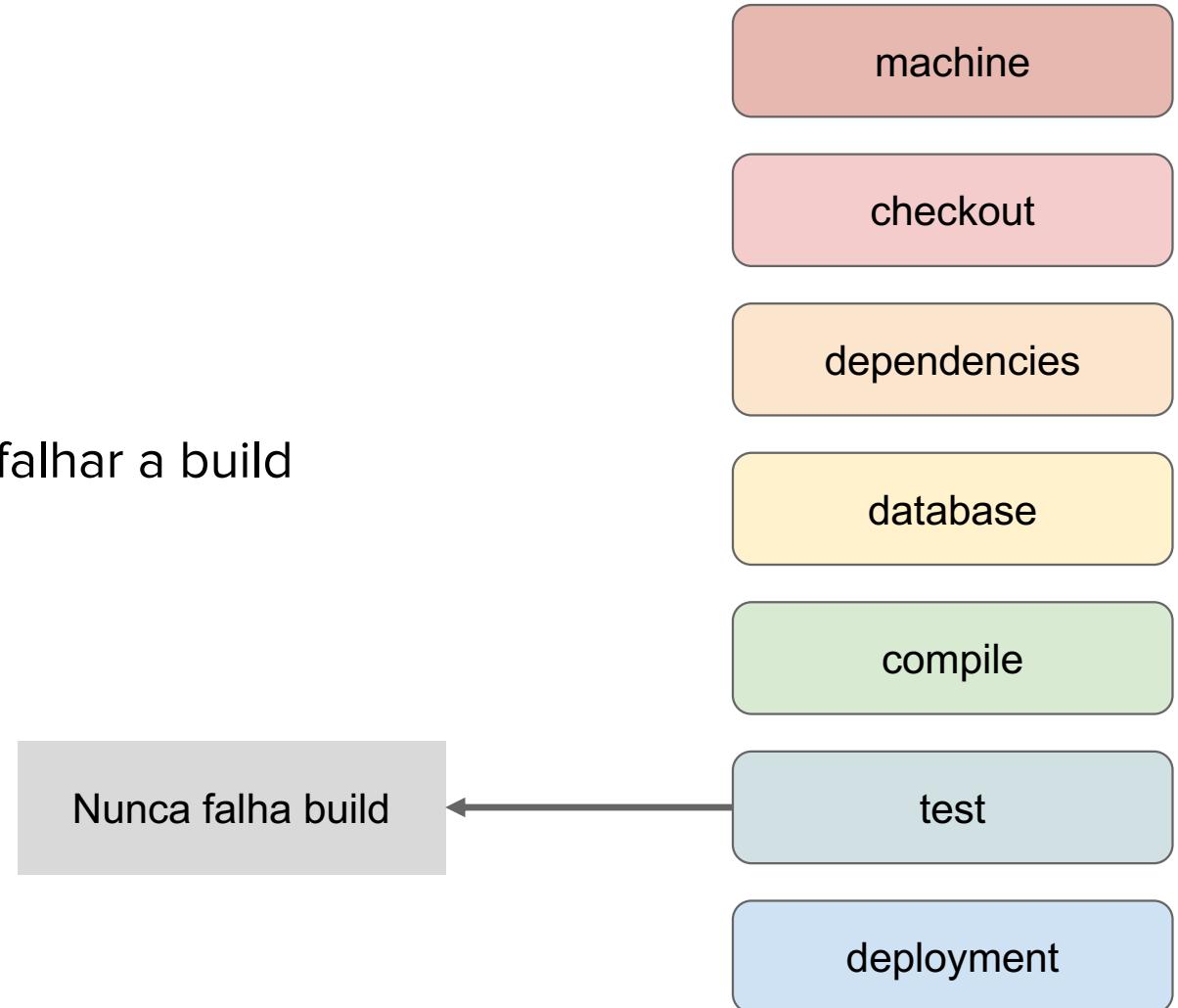
YAML

Shell-like

```
machine:  
  timezone:  
    America/Los_Angeles  
ruby:  
  version:  
    1.8.7-p358-falcon-perf  
checkout:  
  post:  
    - git submodule sync  
    - git submodule update --init  
dependencies:  
  pre:  
    - npm install coffeescript  
    - gem uninstall bundler  
    - gem install bundler --pre
```

Circle CI Lifecycle

- 7 seções
- Seriais
- Independentes
- Todas as seções podem falhar a build
 - 0 == sucesso
 - !0 == falha



Circle CI Lifecycle

```
machine:  
  
  timezone:  
    America/Los_Angeles  
  
  ruby:  
    version: 1.9.3-p0-falcon  
  
  hosts:  
    dev.circleci.com: 127.0.0.1  
    foobar: 1.2.3.4  
  
  environment:  
    foo: bar  
    baz: 123  
  
  services:  
    - cassandra  
    - elasticsearch  
    - rabbitmq-server  
    - redis
```

Configuração da
máquina de build

machine

Circle CI Lifecycle

machine

checkout

Obter o código no seu
estado correto

checkout:

post:

- git submodule sync
- git submodule update --init

Pode se utilizar o
default

Circle CI Lifecycle

```
dependencies:  
  
  pre:  
    - gem uninstall bundler  
    - gem install bundler --pre  
  
  override:  
    - npm install  
  
cache_directories:  
  - "assets/cache"  
  - "~/.circleci/assets/output"
```

Instalar as dependências
do projeto

machine

checkout

dependencies

Sobrescrever o padrão

Circle CI Lifecycle

```
database:  
override:  
  - mv config/database.ci.yml config/database.yml  
  - bundle exec rake db:create db:schema:load --trace
```

Configuração do banco de dados

machine

checkout

dependencies

database

Circle CI Lifecycle

```
compile:  
  
override:  
  - bundle exec middleman build --verbose  
  
test:  
  
override:  
  - phpunit my/special/subdirectory/tests
```

Comandos para uma build
customizada

machine

checkout

dependencies

database

compile

test

Circle CI Lifecycle

```
deployment:  
  staging:  
    branch: master  
  heroku:  
    appname: foo-bar-123
```



- Opicional
- Faz o deploy para um provider
- 1+ branches especificadas
- SSH keys registradas no CircleCI

machine

checkout

dependencies

database

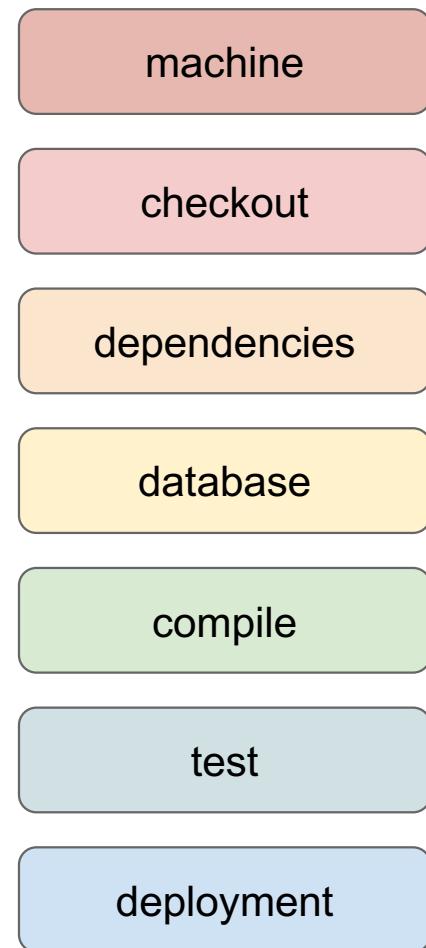
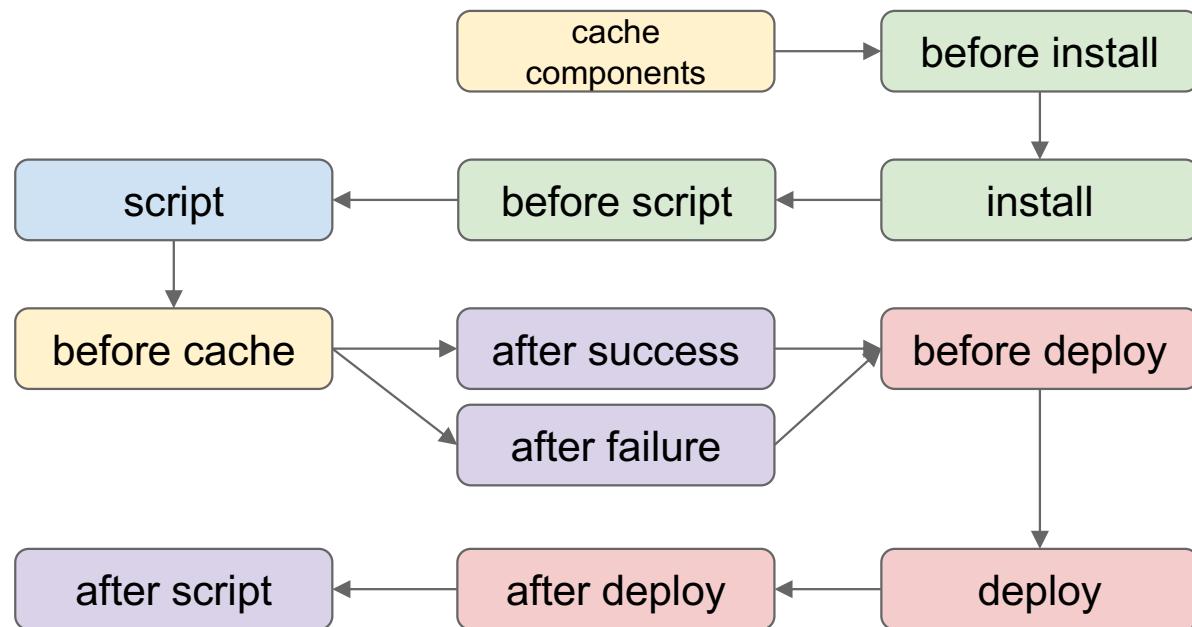
compile

test

deployment



Travis CI



Perguntas?
