



RubyConf Brasil 2016

WHY USE DOCKER AND COMPOSE IN YOUR CI?

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What are we going to talk about?

- CD and CI?
- Docker and Compose
 - What are them?
 - Benefits
 - Difference with other techs
- Recommendations

Hi! / Oi!



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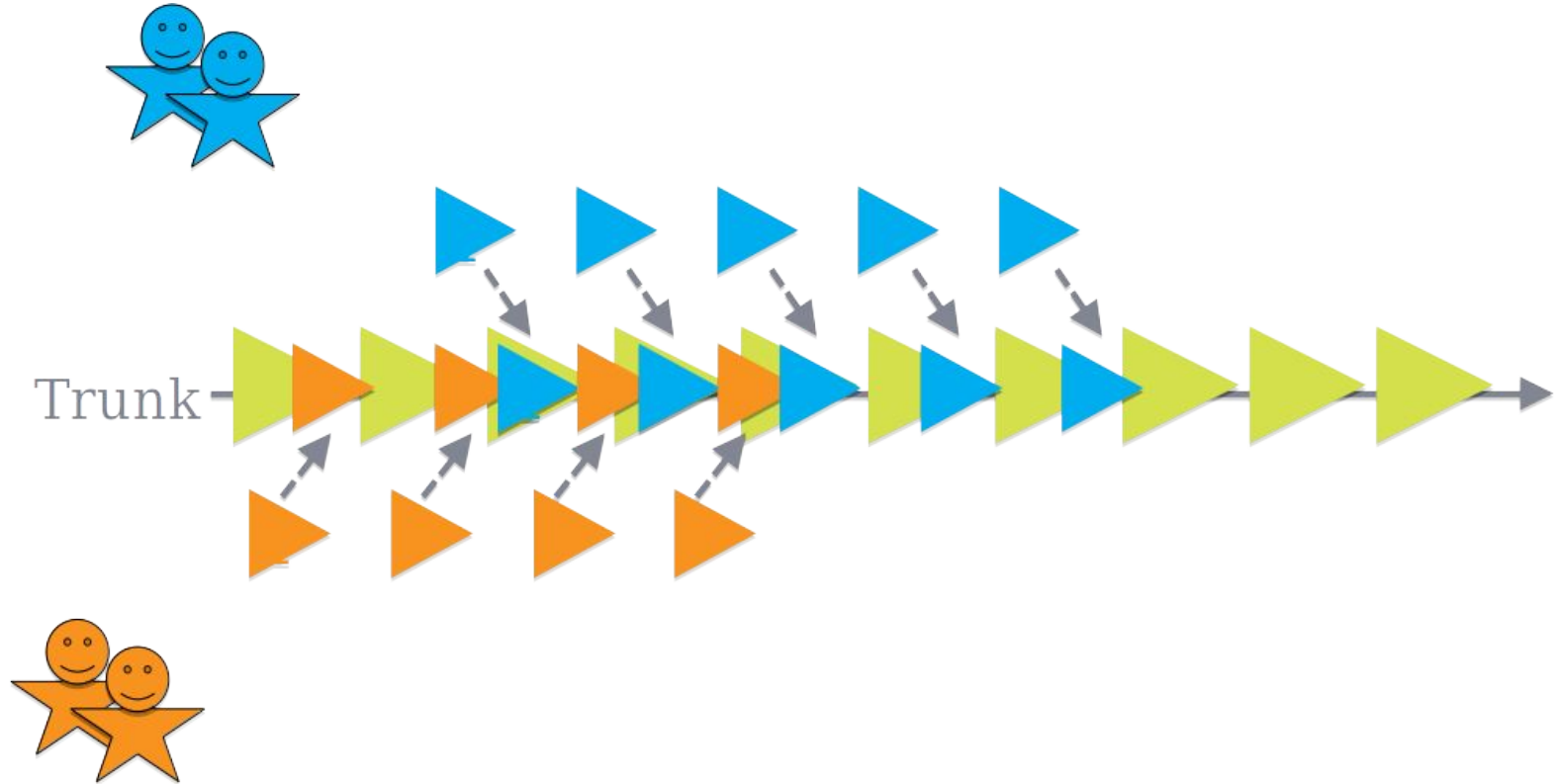
Python, Ruby, HTML, CSS

Learning about Devops

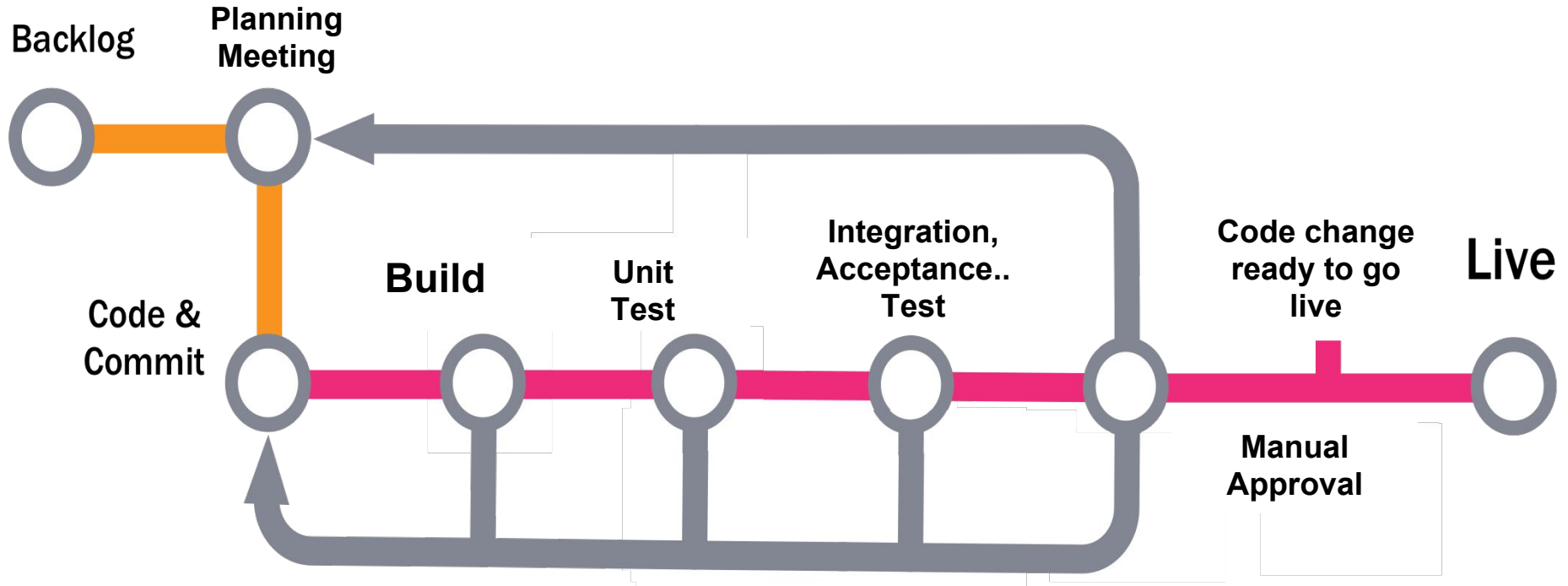
CI and CD?

What is this? Concepts and importance in deployment

Trunk based development



Here is where CI go into scene



The practices

- Automate the build
- Every commit should build on an integration machine
- Test in a clone of the production environment
- Make it easy for anyone to get the latest executable
- Automate deployment

Continuous Deployment is closely related to Continuous Integration and refers to the release into production of software that passes the automated tests.

What is CD?

“Continuous Delivery is a software development discipline where you build software in such a way that the software can be released to production at any time”

- Martin Fowler.

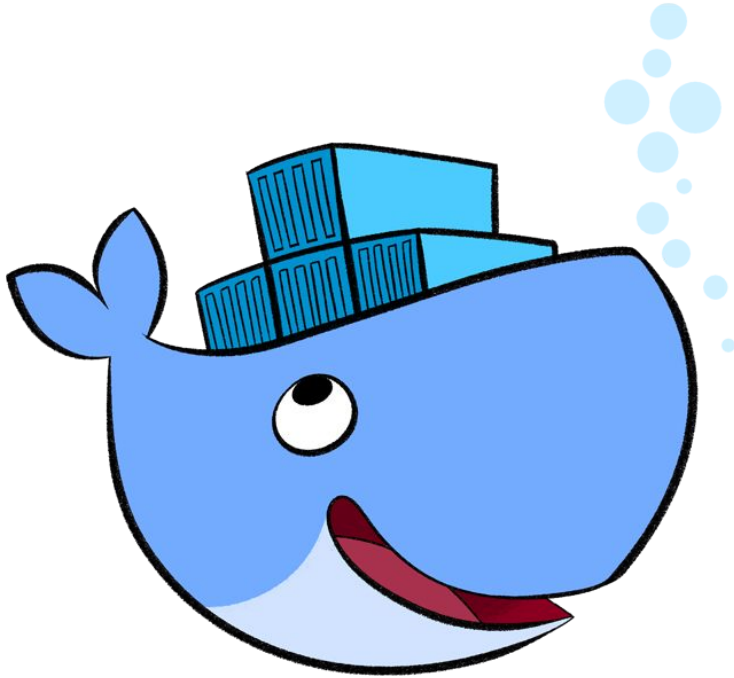
Main principles and practices

- Create a repeatable, reliable way to release software
- Everybody is responsible for the delivery process
- Automate almost everything

Docker and Compose

What are and how can it help you in CD?

Docker



- Docker is an open-source platform to package and distribute applications quickly
- It create lightweight and portable containers to run on any machine.
- It is independent of the Linux distribution of the host machine

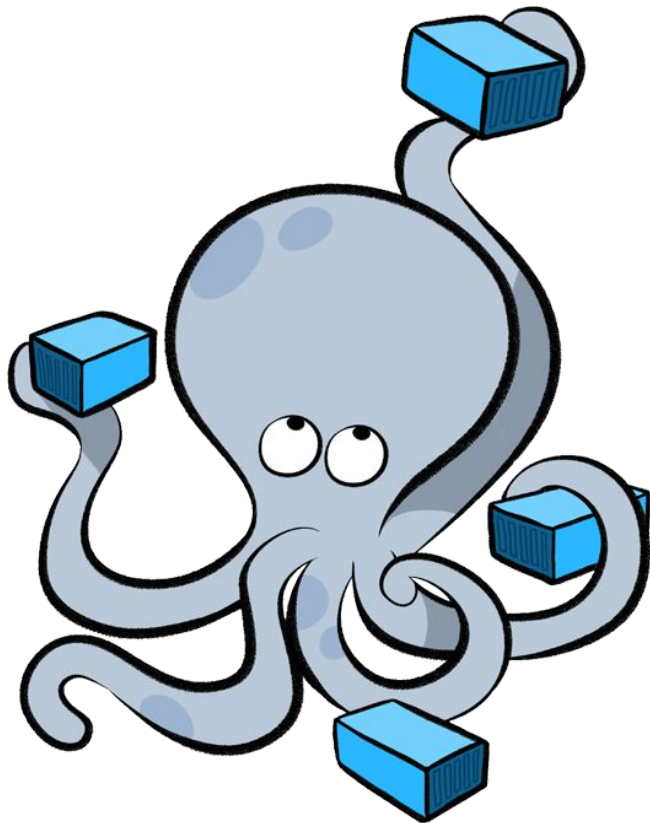
Dockerfile

```
1 FROM ruby:2.3-alpine
2
3 WORKDIR /app
4 COPY Gemfile /app
5 RUN bundle install
6 COPY . /app
7 EXPOSE 9292
8
9 CMD ["rackup", "--host", "0.0.0.0"]
10
```

Gemfile

```
1 source 'https://rubygems.org'
2
3 gem 'cuba', '~> 3.8'
4 gem 'tilt', '~> 2.0', '>= 2.0.5'
5 gem 'redis', '~>3.2'
```

Docker Compose

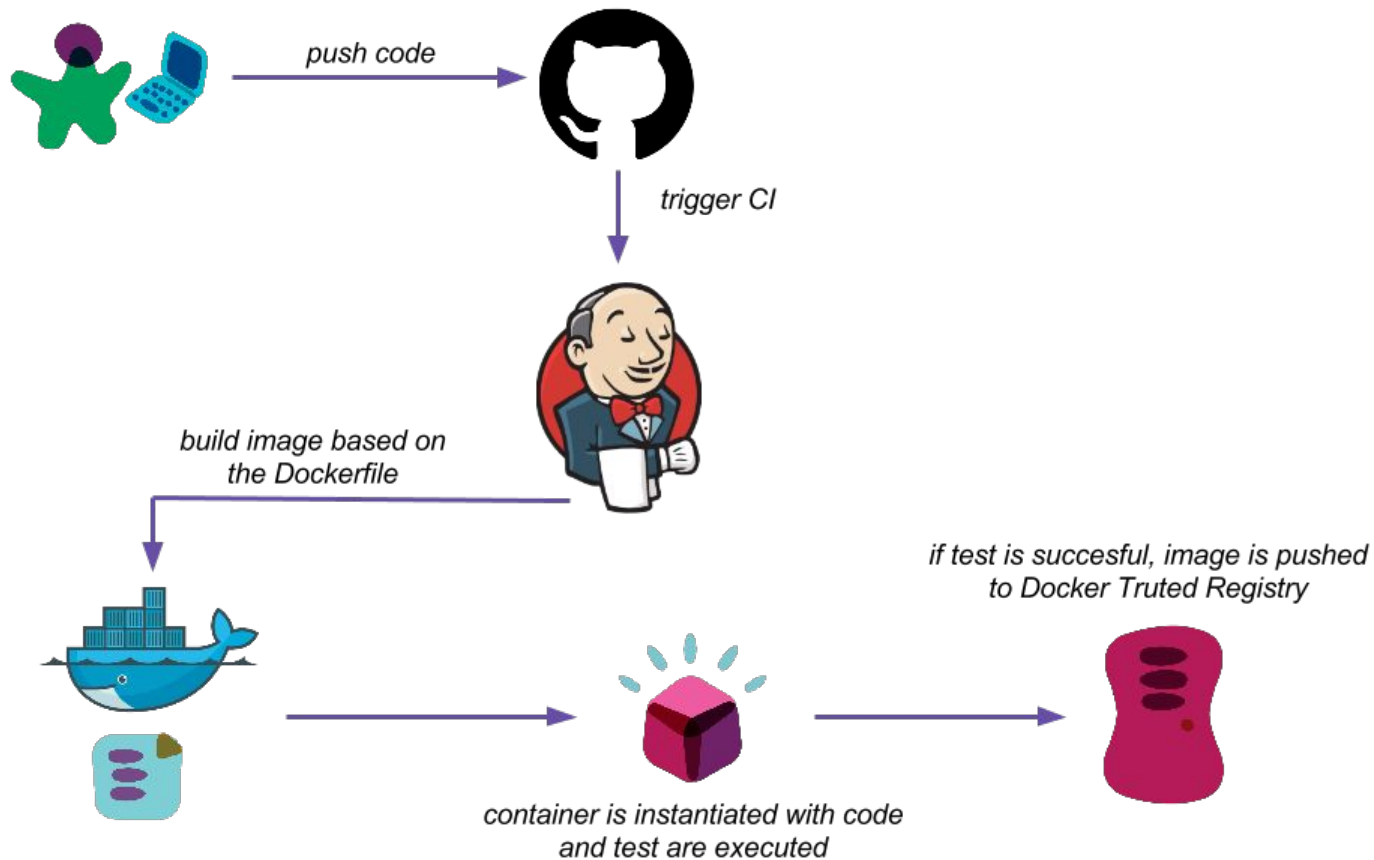


- Compose is a tool for the definition and implementation of multi-Docker container applications
- Through a configuration file and a single command, create and start all predefined services

docker-compose.yml

```
1 version: '2'
2
3 services:
4   app:
5     build: .
6     ports:
7       - "9292:9292"
8     links:
9       - redis
10  db:
11    image: redis
12
```

CI Workflow

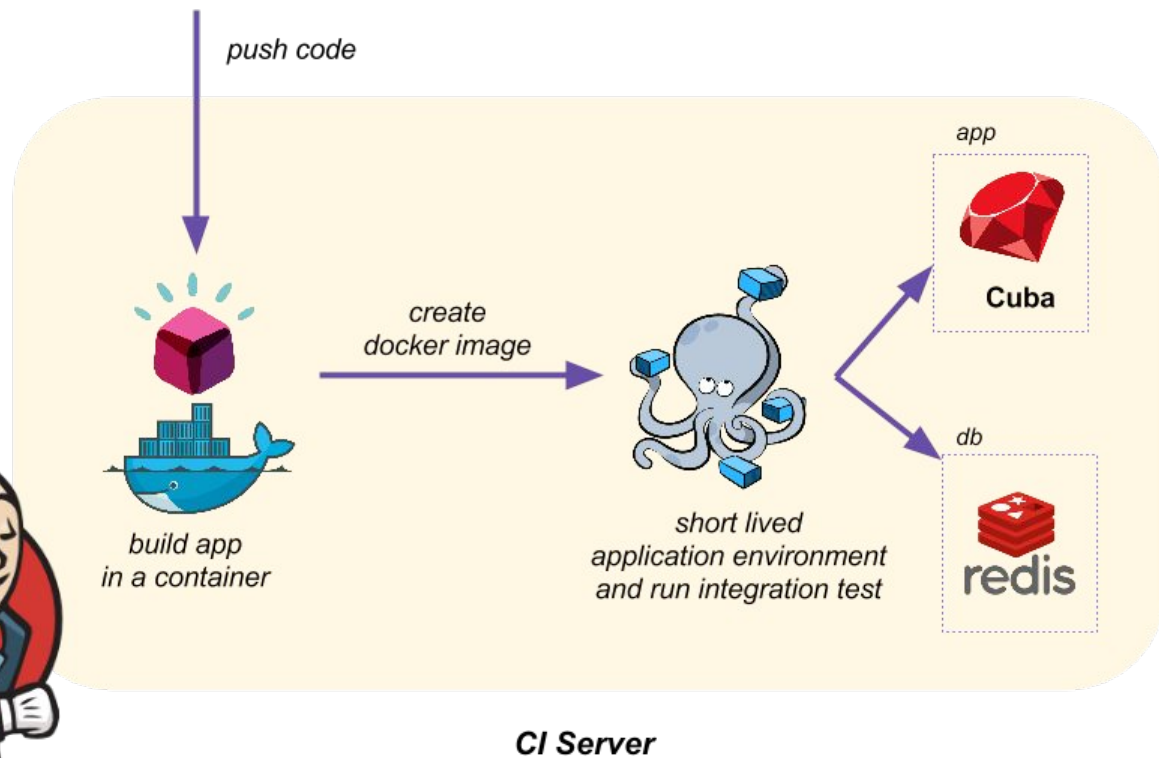


Registry

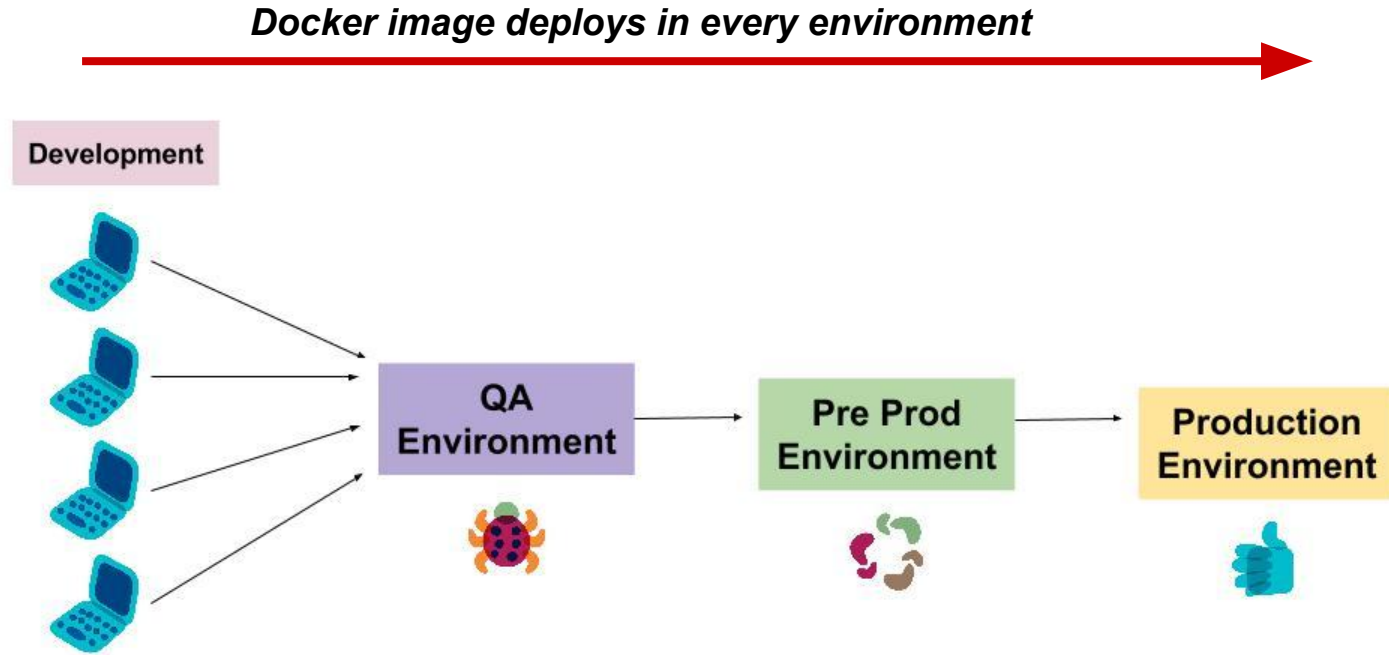


Is a server side application that stores and lets you distribute Docker images.

And Docker Compose?



The same in different environments



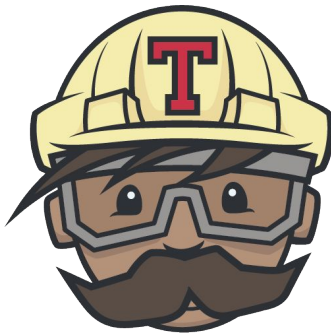
Using docker and docker compose

- Deploy all your application needs
- Automated testing
- Dedicated container for each application
- Reduce time and costs
- Stability and resilience

VMs vs. Containers

- VM is a completely virtualized environment that only abstracts the physical hardware.
- VM comes with its own BIOS, virtualized network adapters, disk storage, CPU and a complete operating system.
- Container abstraction happens at the operating system level.
- Each user shares the same operating system, kernel instance, network connection and base file system, each instance of the application will run within a separate user space.

Supports docker



Recommendations

To think before choosing a technology

- . Is it the best for your project requirements?
- . Spike before choosing.
- . Do CD, if you are not doing it yet.

Thanks/Obrigada

For feedback or questions:
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Find slides in:
<https://github.com/carlast22/workshop-docker-compose>

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