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Hi, I'm @danguita

Let's talk about software containers

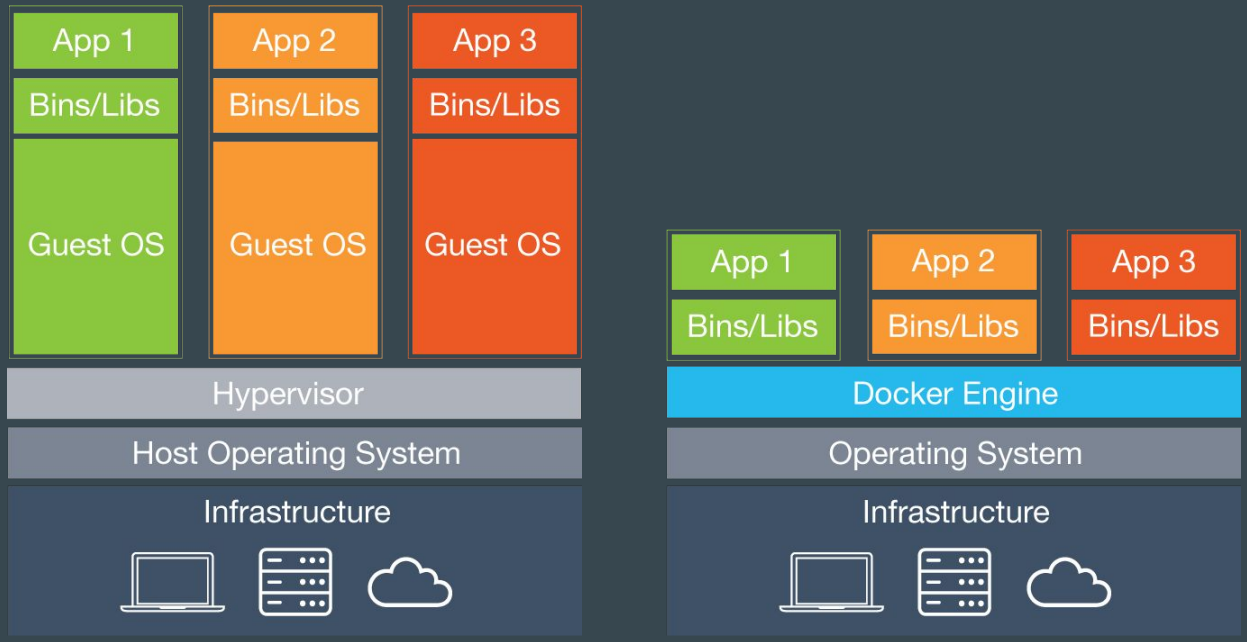
"It works on my machine"

Why Docker?

Provides a widely adopted and easy-to-use interface to lightweight Linux Containers

Why Docker?

Virtual Machine model vs Docker Engine model



Source: http://docker.com

Minimal overhead ❤️

Docker Engine

Daemon

- Manages containers
- Exposes a REST-ish API

Client

```
$ docker ps
$ docker images
$ docker run
  ...
```

Docker Machine

Image vs Container

```
$ docker images
$ docker build
$ docker pull
$ docker push
$ docker commit
$ docker rmi
```

Immutable, snapshot of a container

```
$ docker ps
$ docker run
$ docker start
$ docker stop
$ docker rm
```

Running instance of an image

Docker Registry

MY FIRST CONTAINER

Gluing things together

Docker Compose

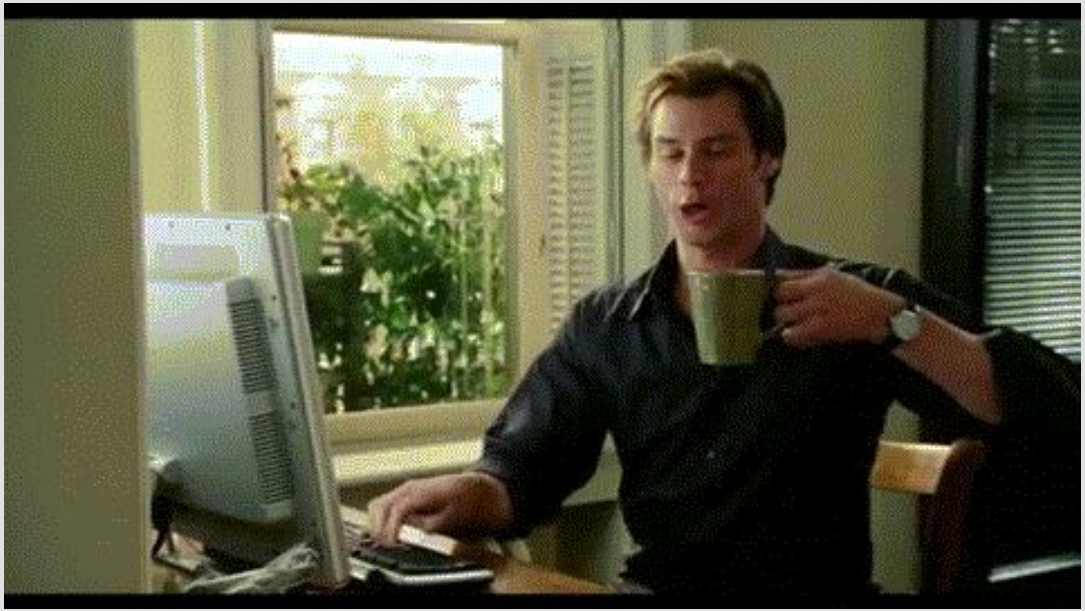
- Multi-container set up
- Wraps Docker CLI
- Image building
- Links
- Volumes
- Ports
- Scaling

```
$ docker-compose up
$ docker-compose ps web
$ docker-compose logs web
$ docker-compose scale web=5
  ...
```

docker-compose.yml

```
api:
  image: ...
  command: ...
  environment: ...
  volumes: ...
  links: ...
  ports: ...

frontend: ...
sidekiq: ...
postgres: ...
elasticsearch: ...
memcached: ...
redis: ...
haproxy: ...
```



MOAR CONTAINERS!

Real-world advantages

- Easy Continuous Integration / Delivery
- Consistency across environments
- Portability
- Isolated scalability
- Rapid deployment
- Instant (micro-)service oriented architecture
- Clustering

Legos for cloud computing

Clustering

Tooling

- Docker Swarm
- Kubernetes

Platforms

- Amazon EC2 Container service
- Google Container Engine

This is just the beginning

Thank you

Q&A

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