

SERVER-SIDE SWIFT
IN PRODUCTION

ISOMORPHIC RENDERING

THE BEST OF BOTH WORLDS
REDUCE LOAD (SERVER-SIDE RENDERING)
LOADS ARE VERY FAST (CLIENT-SIDE
RENDERING)

PAGE CONTENT IS USEFUL FOR BOTS, SEARCH ENGINES AND CRAZY
PEOPLE



@KSMANDERSEN





SPIL
PRISEN
2018



SERVER-SIDE SWIFT
IN PRODUCTION

IS IT READY?

IT DEPENDS

LET'S GRADE VAPOR

- Performance A+

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- Performance A+
- Stability A-

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- Framework and language changes C

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- Eco-system E/F

LET'S GRADE VAPOR

- Performance A+
- Stability A-
- Framework and language changes C
- Eco-system E/F
- Community A-

SECURITY

HEADERS

- Cross-site Scripting (XSS)
 - SSL downgrade
 - Content Injection
 - Click-jacking

👉 [brokenhandsio/VaporSecurityHeaders](https://github.com/brokenhandsio/VaporSecurityHeaders)

SSL

LETSENCRYPT.ORG

SSL

LETSENCRYPT.ORG

- Remember Strict-Transport-Security (HSTS)
 - Auto-renewal
- Wildcard certificates (introduced in march)

DEPLOYMENT

This, Jen, is The Internet

DEPLOYMENT

- Vapor Cloud
 - Docker
 - Heroku
 - Dokku

VAPOR CLOUD

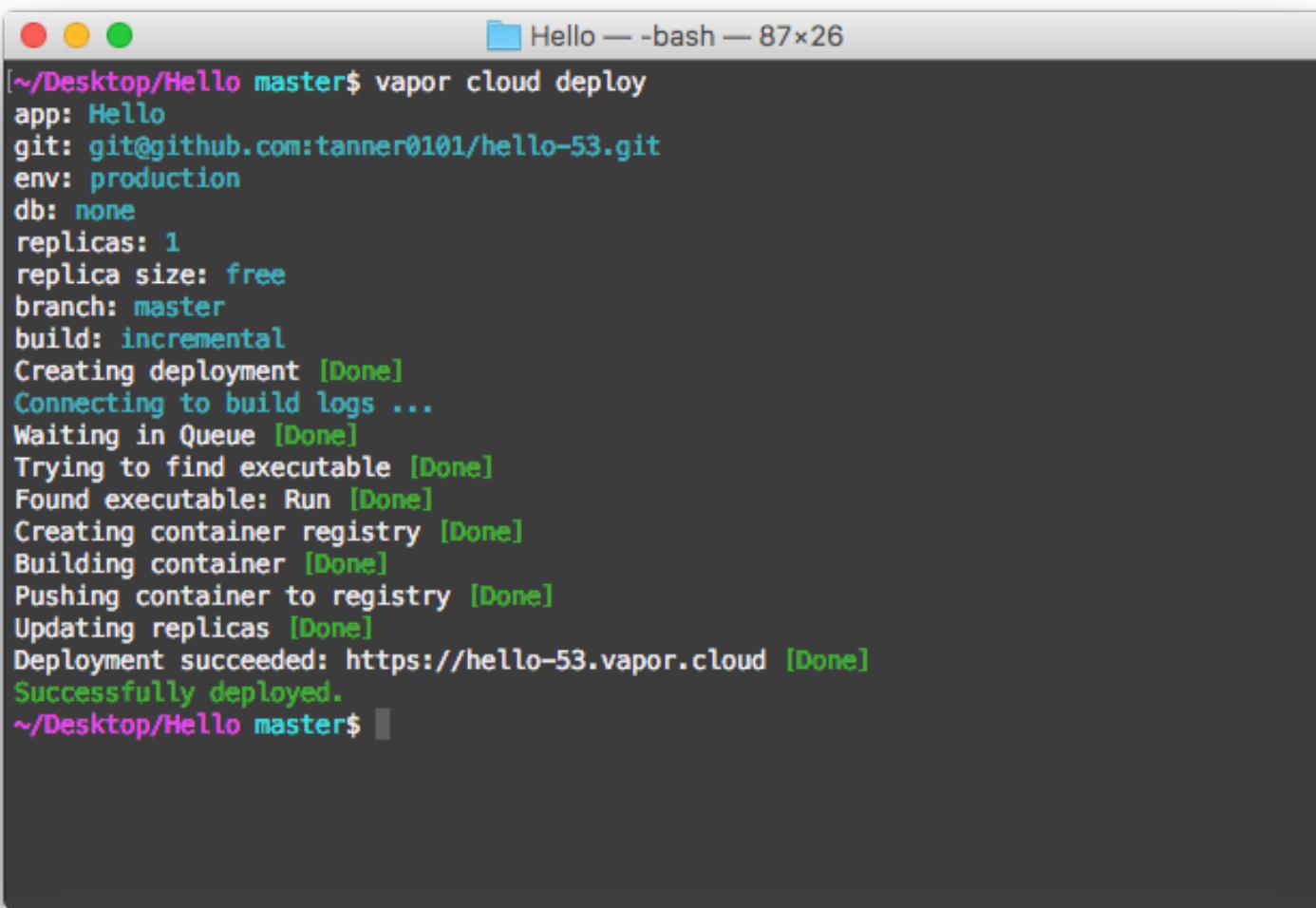
VAPOR CLOUD

- Designed specifically for Vapor by the Vapor team
- Reasonable pricing with a free plan
 - Well-documented
 - Great CLI support

VAPOR CLOUD

- Highly scalable
- Caching with Redis
- Zero-downtime deploys
 - Monitoring & Metrics
- Easy S3 & CDN integration

VAPOR CLOUD



```
[~/Desktop/Hello master$ vapor cloud deploy
app: Hello
git: git@github.com:tanner0101/hello-53.git
env: production
db: none
replicas: 1
replica size: free
branch: master
build: incremental
Creating deployment [Done]
Connecting to build logs ...
Waiting in Queue [Done]
Trying to find executable [Done]
Found executable: Run [Done]
Creating container registry [Done]
Building container [Done]
Pushing container to registry [Done]
Updating replicas [Done]
Deployment succeeded: https://hello-53.vapor.cloud [Done]
Successfully deployed.
~/Desktop/Hello master$ ]
```

DOCKER

DOCKER

- Runs everywhere
 - Open Source
- Endlessly configurable
- Run on Linode for \$5

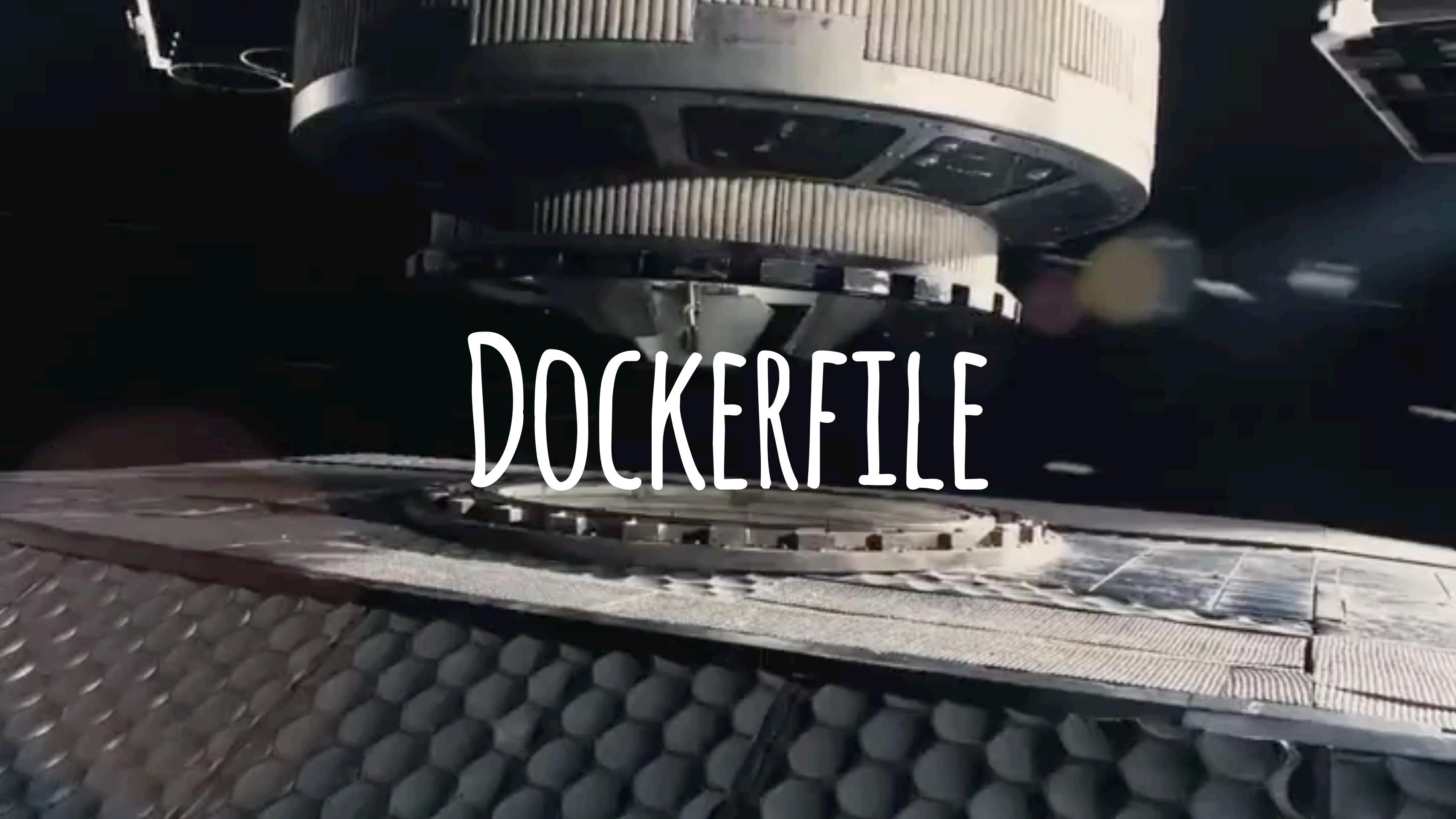
WTF IS DOCKER?

A large stack of shipping containers in various colors (green, red, blue) at a port terminal.

CONTAINERS



IMAGES



A black and white photograph of a vintage typewriter's keyboard and carriage mechanism. The keys are visible, along with the metal frame and the carriage return lever. The lighting is dramatic, highlighting the textures of the metal and the keys.

DOCKERFILE

DOCKERFILE

```
FROM swift:4.1 as builder
RUN apt-get -qq update && apt-get -q -y install \
    your-dependencies-here # e.g. libmysqlclient-dev
WORKDIR /app
COPY ..
RUN mkdir -p /build/lib && cp -R /usr/lib/swift/linux/*.so /build/lib
RUN swift build -c release && mv `swift build -c release --show-bin-path` /build/bin

FROM ubuntu:16.04
RUN apt-get -qq update && apt-get install -y \
    libicu55 libxml2 libbsd0 libcurl3 libatomic1 \
    your-release-dependencies-here \ # e.g. libmysqlclient20
    && rm -r /var/lib/apt/lists/*
WORKDIR /app
COPY Resources/ ./Resources/
COPY Public/ ./Public/
COPY --from=builder /build/bin/myappbinary .
COPY --from=builder /build/lib/* /usr/lib/
EXPOSE 8080
CMD ["./myappbinary", "serve", "--env", "production", "--hostname", "0.0.0.0"]
```

DEMYSTIFYING DOCKER



DOKKU

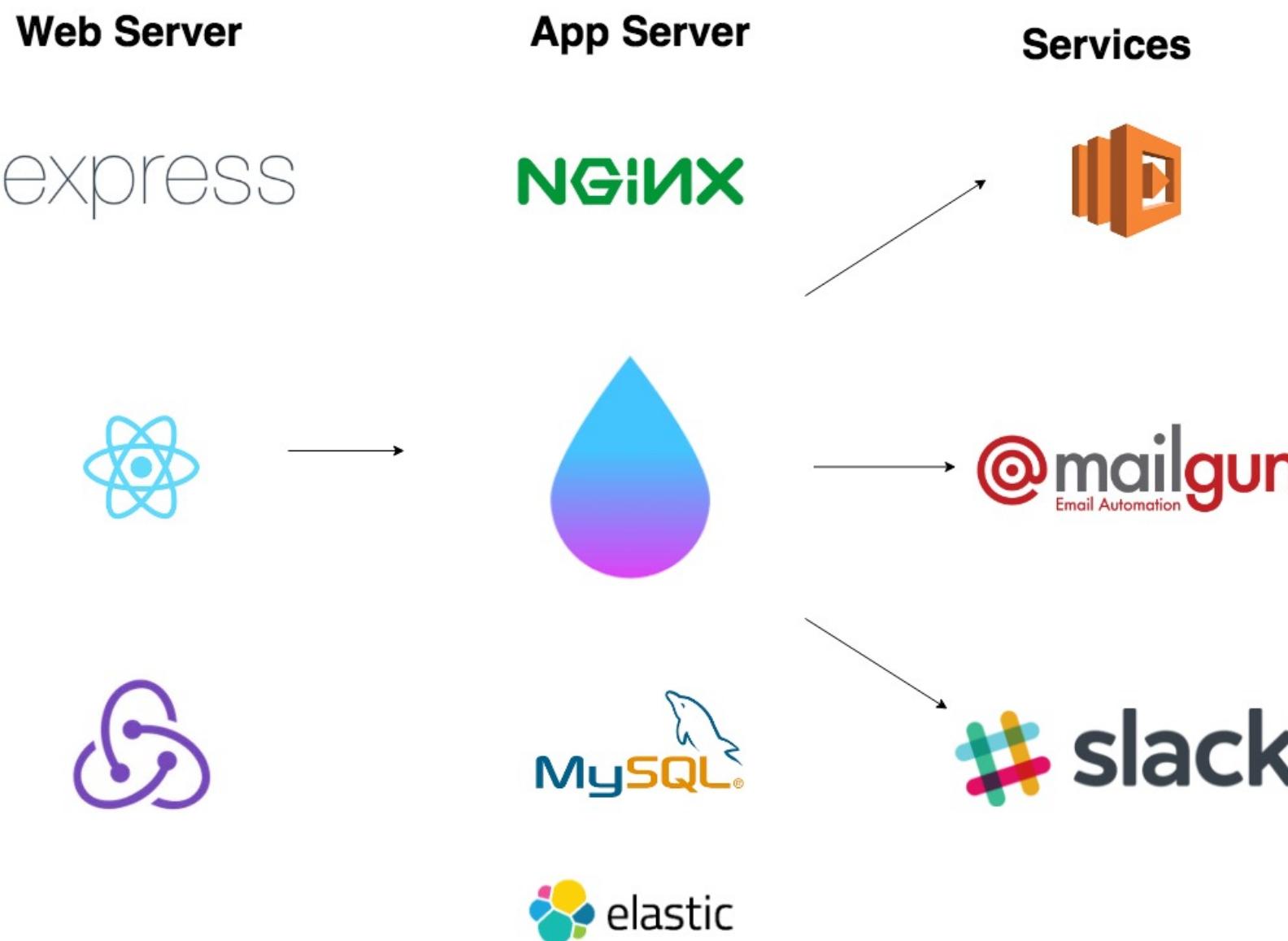
DOKKU

- Runs almost anywhere
 - Open Source
- Uses docker for infrastructure
 - Deploy with git

DOKKU

- Any Database you want: mysql / postgres / sqlite
- Automated Lets Encrypt enrollment and renewal
 - Many community plugins

OUR STACK



DOKKU

- Create a new Ubuntu16.04 server (DigitalOcean or Linode)
 - SSH in and run:

```
wget https://raw.githubusercontent.com/dokku/dokku/v0.12.4/bootstrap.sh
sudo DOKKU_TAG=v0.12.4 bash bootstrap.sh
dokku apps:create hello-vapor-3
dokku domains:add hello-vapor-3 your-domain
dokku plugin:install https://github.com/dokku/dokku-mysql.git mysql
dokku mysql:create hello-vapor-db
dokku mysql:link hello-vapor-db hello-vapor-3
```



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