

Getting Started with Docker and Node

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Who am I

- Head of Server at **app press**
- Developing with Node.js for last 2 years
- Using Docker for internal systems for ~1 year
- Previous lives: System Admin, .NET developer

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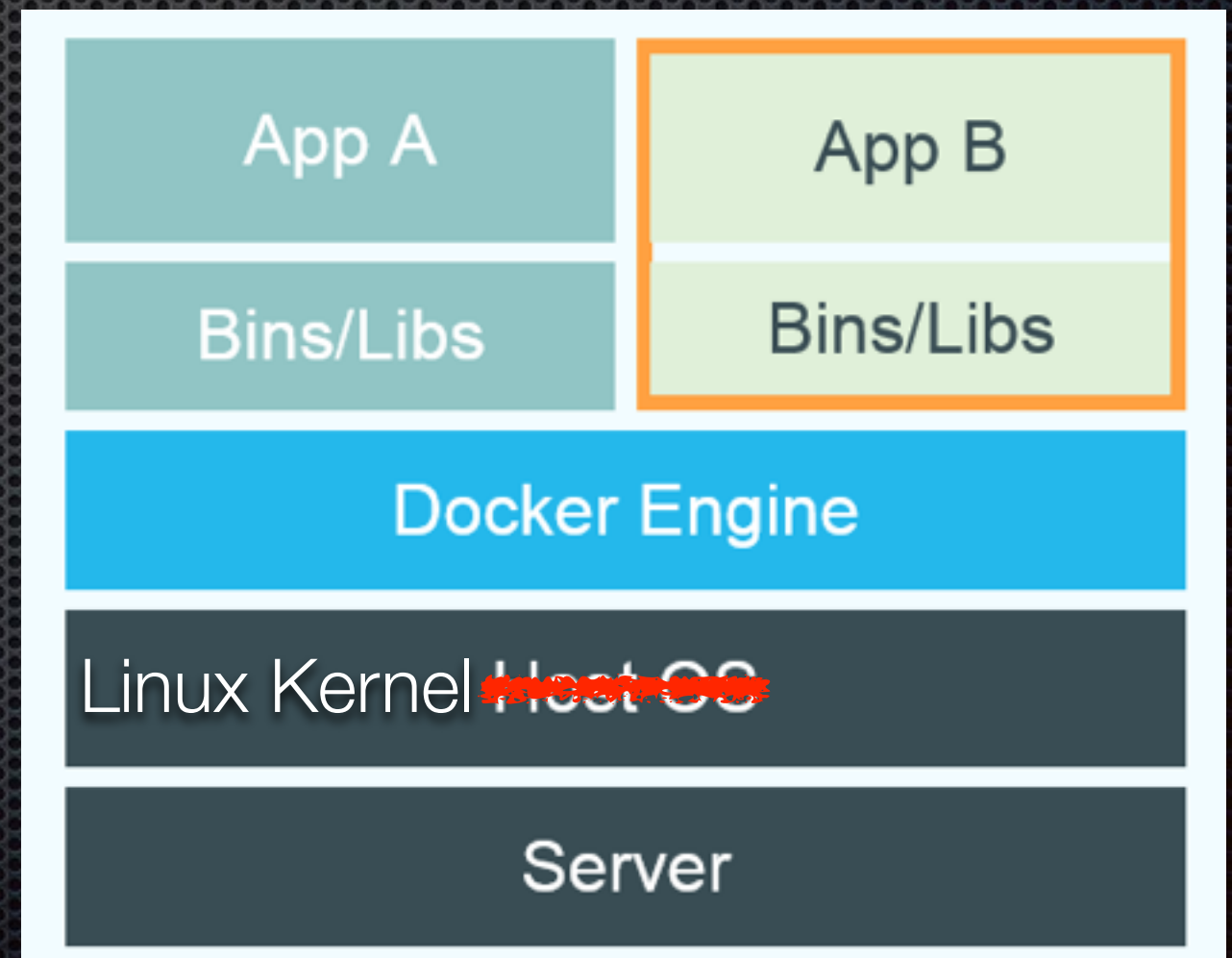
What is Docker?

An engine which uses the container features of the Linux kernel to wrap up everything needed to run an application in an easily distributable form: containers

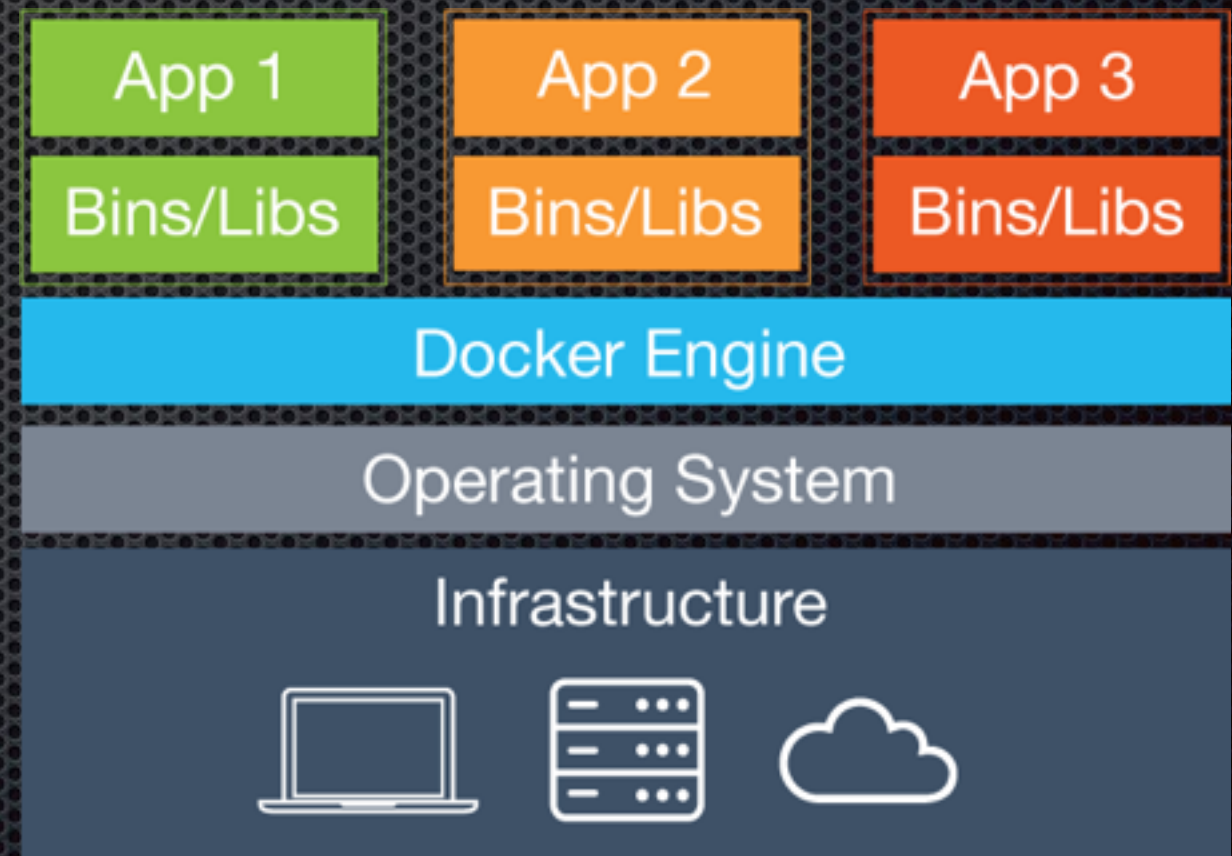
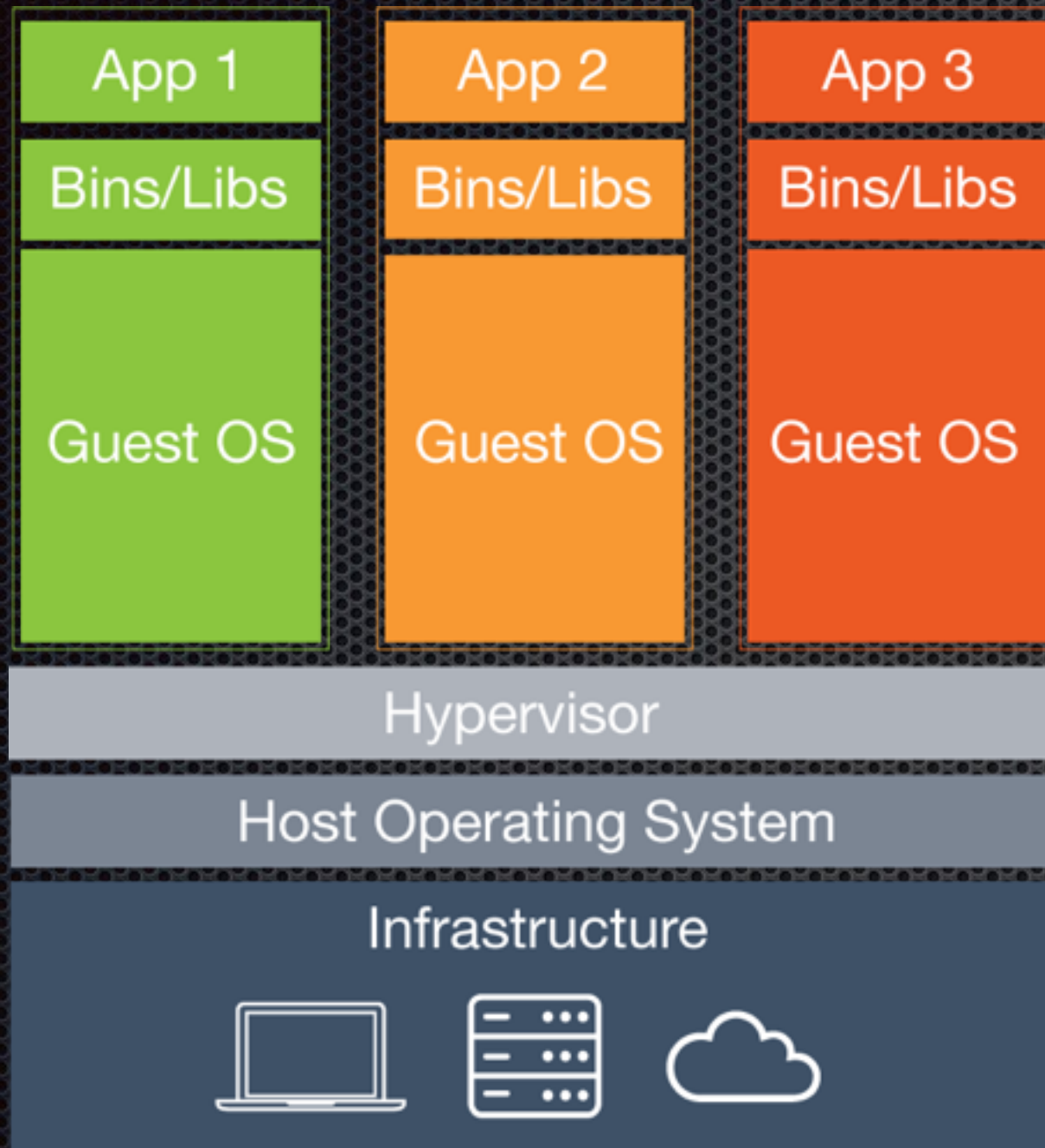
Docker was inspired by:

- Solaris zones (~2004)
- FreeBSD jails (~2003)

Open sourced in 2013



VMs vs. Containers



Docker Images

A set of layers that describe the files and configuration which can be run as a container

Layers are created for each change made from the previous layer

Images can be used as the starting point for other images

Docker Hub is the npm of Docker

Docker Images

Images are the distributable package
for containers

Docker Containers

Containers are a running instance of an image

Containers can have:

- a name
- exposed network ports
- mounted folders or containers
- links to other containers

Docker Containers

Containers are a running instance of your application

Building an Image

Dockerfiles describe how the image should be built

Also defines how the application will be started when the container is run

All override-able when starting the container

Demo Time

Let's containerize an app

Why Docker?

Makes it easy to create a distributable, uniform environment for your application

Makes it easier to run multiple applications on the same server with isolation

Provides the base to allow for easy scaling

More fine grain control on exposed network ports

Why Not Docker?

Extra complexity that might be overkill for small applications

Immature tooling, which is getting better

Security and maintenance concerns

Node Specific Tips

- Run `npm install --production` when building your image
- Don't name all of your entry points `app.js`
- Instead of cluster, use multiple containers
- Leverage base images to support easy Node upgrades

Thanks!

Slides and demo code:

<https://github.com/JoeDoyle23/sfnode-docker-node>