Application Deployment With Kubernetes

Hello

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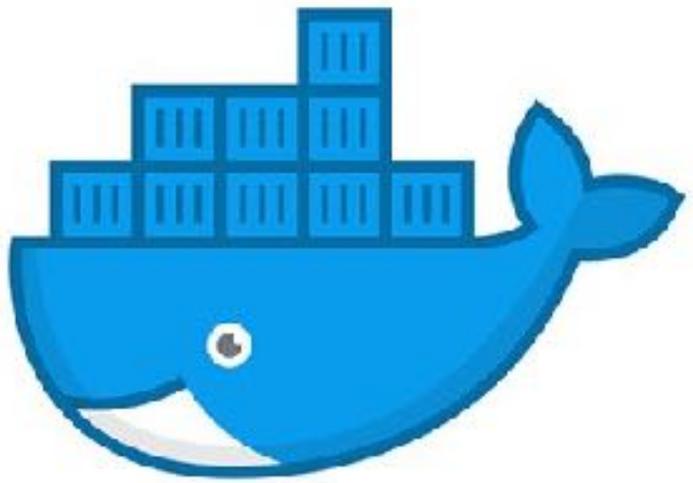
- SRE @LOVOO since Sep. 2017

Goals

- Deploy service
- Upgrades & downgrades
- Staged dev & prod deployments

Tools

- go
- docker
- kubectl
- helm



Kubernetes

- Production-Grade Container Orchestration
- Automated container deployment, scaling, and management

https://kubernetes.io/

The Server

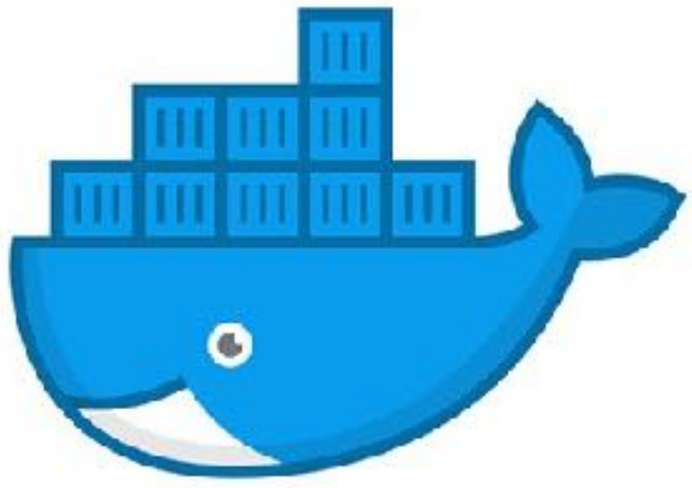
- Written in go
- Simple REST server
- Returns “Hello World”

Demo

Code

Container

- Package binary
- Dockerfile
- docker build & push



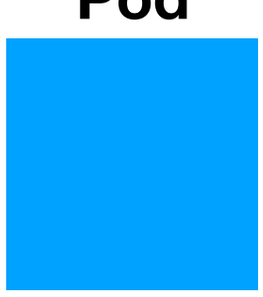
Demo

Container

Kubernetes Objects

https://kubernetes.io/docs/concepts/

Kubernetes Objects



https://kubernetes.io/docs/concepts/

Kubernetes Objects

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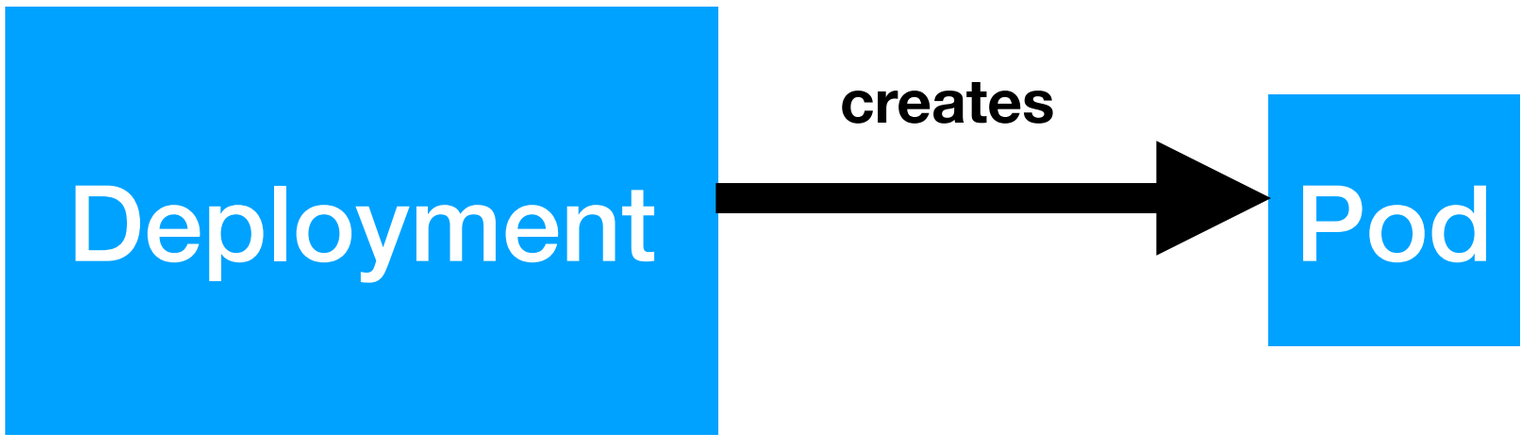
Kubernetes Objects

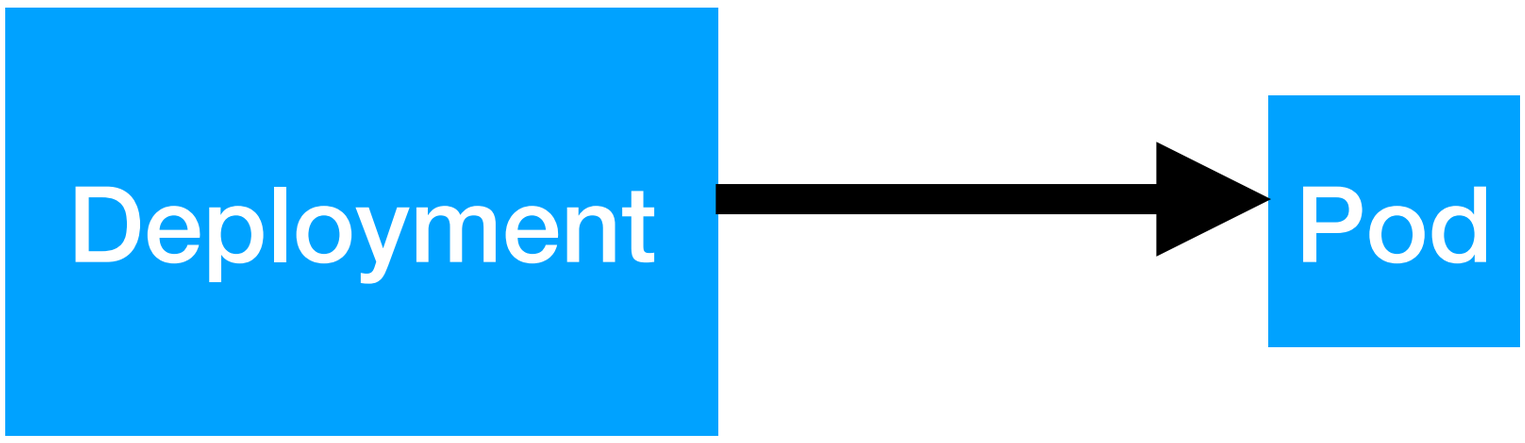


https://kubernetes.io/docs/concepts/

Demo

Deployment

Kubernetes Objects



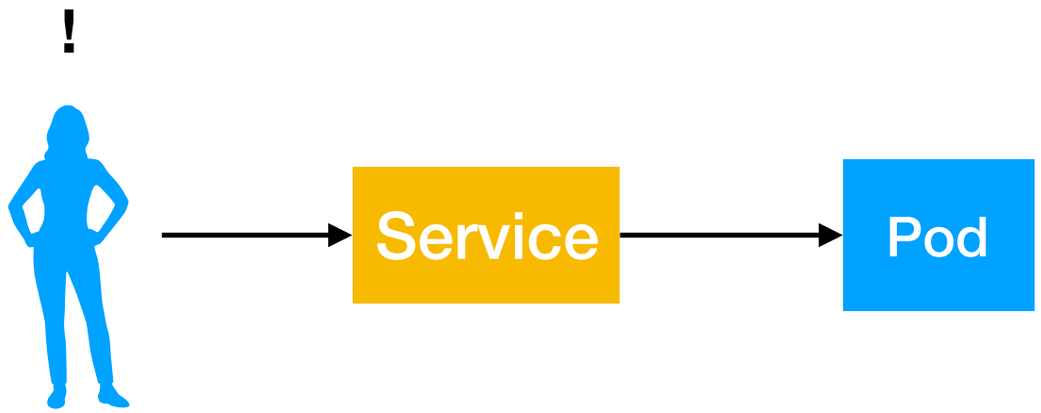
https://kubernetes.io/docs/concepts/

Kubernetes Objects

Pod

https://kubernetes.io/docs/concepts/

Kubernetes Objects



https://kubernetes.io/docs/concepts/

Demo

Service

Recap

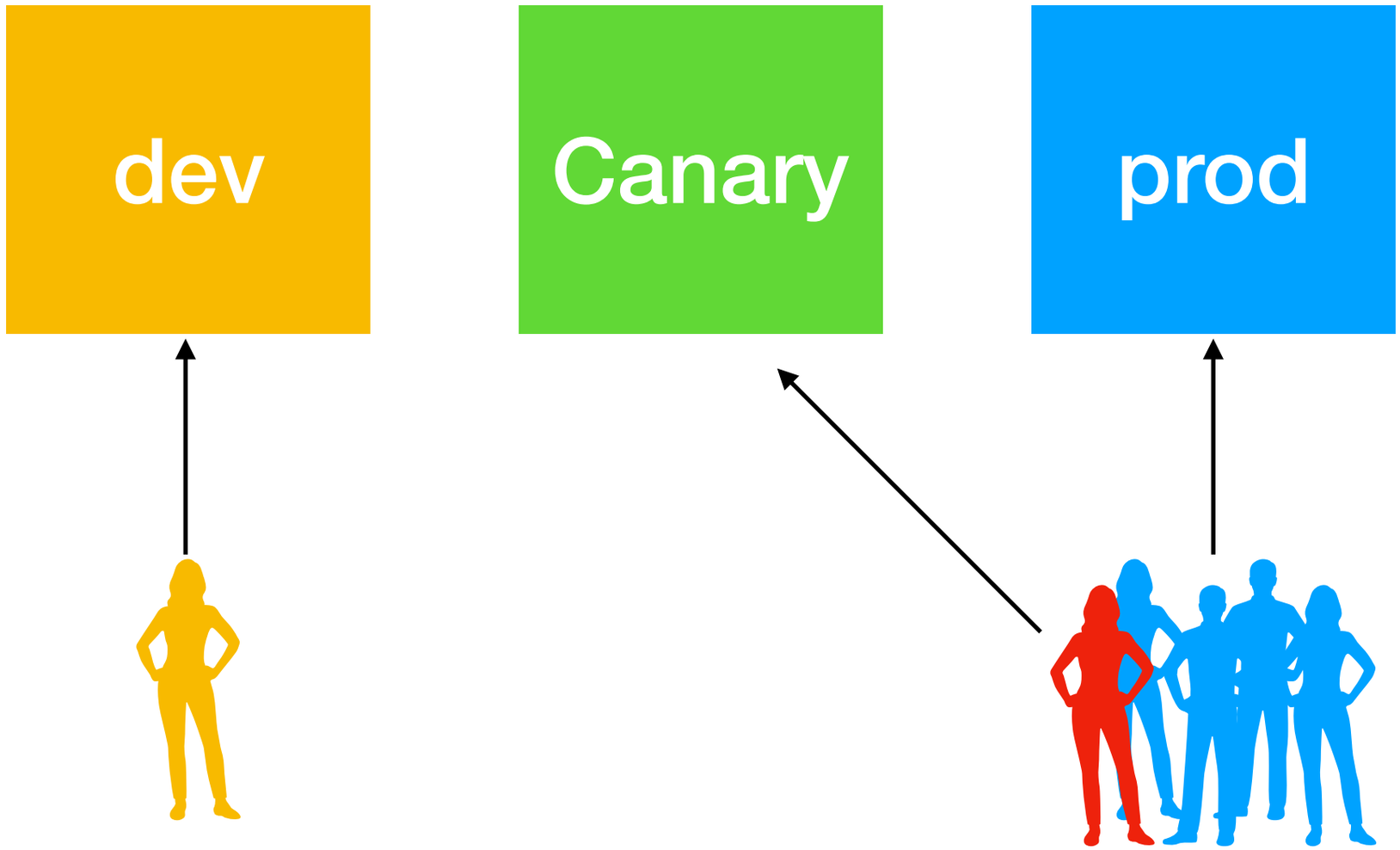
- **Pod**
  - one or more containers that share storage and memory
- **Deployment**
  - Describe desired state
  - Deployment controller changes current state
- **Service**
  - route traffic to specific pod(s)

Deployment Stages

- Develop
- Canary
- Production

Deployment Stages

Deployment Stages



One More Resource

- **Namespace**
  - Virtual clusters backed by the same physical cluster

https://kubernetes.io/docs/concepts/

Helm

- “The package manager for Kubernetes”
- Define, install, and upgrade applications
- Templating Kubernetes manifests

https://helm.sh

Demo

Helm

Thank you!

We are hiring!!

https://jobs.lovoo.com

One more thing!

https://decompiled.de/

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April 6 – Parkhotel Dresden
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