

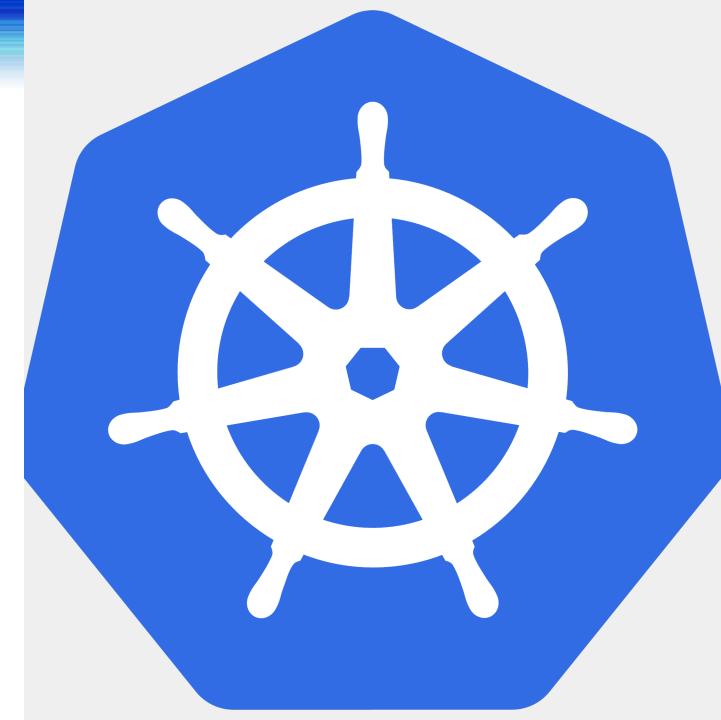


Kubernetes Basics

ReplicaSets and Deployments

Agenda

- 1. What are ReplicaSets
- 2. ReplicaSet Components
- 3. What are Deployments
- 4. Deployment Components







What are ReplicaSets





What are ReplicaSets

- The purpose of a ReplicaSet is designed to maintain a set of Pods running
- They are used to guarantee the availability a specific number of Pods

```
apiVersion: apps/v1
kind: ReplicaSet
metadata:
 name: pod-1
 namespace: namespace-1
  labels:
    type: webserver
spec:
  selector:
   matchLabels:
      type: webserver
   metadata:
      labels:
        type: webserver
      - name: nginx
        image: nginx:1.14.2
```



ReplicaSets Components





ReplicaSet Components

These are the common fields that are needed for a ReplicaSet:

- apiVersion will be "apps/v1"
- kind will be "ReplicaSet"
- metadata generally a "name" is assigned
- spec this will have the specifications that make up a ReplicaSet
 - replicas this represents the number of pods

- selector this is a label selector
- template
 - metadata
 - labels
 - spec this will have the specifications that make up a particular pod
 - containers these fields make up the components needed for a container



What are Deployments





What are Deployments

- Deployments allows you to do updates to Pods and ReplicaSets declaratively
- Deployments allow you to outline the desired state and the Deployment Controller changes the current state to the new desired state
- Allows for Deployments to be rolled back to a previous Deployment if the Deployment is unstable

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: website-deployment
  labels:
    app: website
spec:
  replicas: 3
  selector:
    matchLabels:
      app: website
    metadata:
        app: website
      containers:
      - name: nginx
        image: nginx:1.14.2
        - containerPort: 80
```



Deployment Components





Deployment Components

These are the common fields that are needed for a Deployment:

- apiVersion will be "apps/v1"
- kind will be "Deployment"
- metadata generally a "name" is assigned
- spec this will have the specifications that make up a Deployment
 - replicas this represents the number of pods

- selector this is a label selector
- template
 - metadata
 - labels
 - spec this will have the specifications that make up a particular pod
 - containers these fields make up the components needed for a container







Thankyou

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