Kubernetes Basics
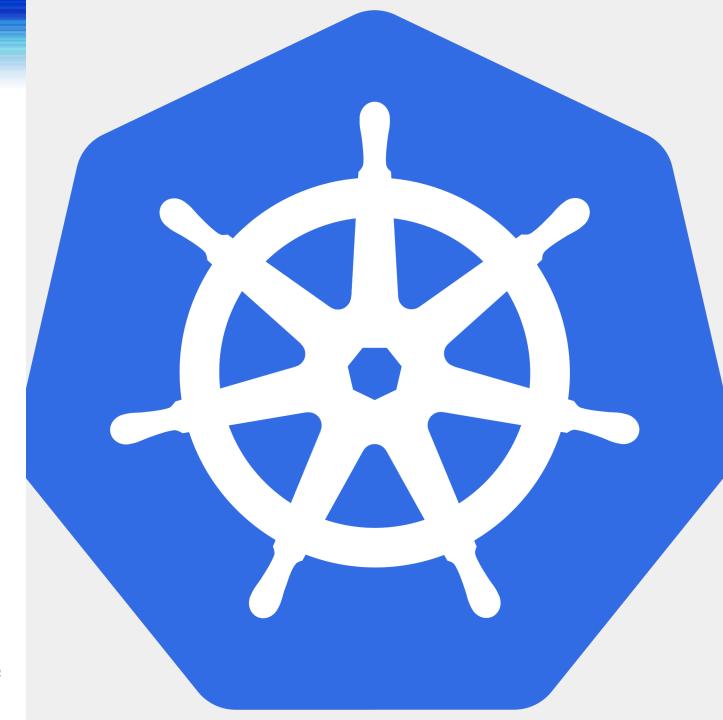
Kubernetes Objects

Agenda

1. Overview

2. Names and UIDs

3. Labels

4. Namespaces

5. Annotation

Kubernetes Objects

Kubernetes Objects

- Kubernetes Objects are entities in the Kubernetes cluster

- These collective objects make up the state of the Kubernetes cluster

Kubernetes Objects:

- Names and UIDs

- Labels and Selectors

- Namespaces

- Annotations

- Field Selectors

- Finalizers

- Owners and Dependents

In this section

- Review some of the common core Kubernetes Objects:
    - Names and UIDs
    - Labels
    - Namespaces
    - Annotation

Names and UIDs

Names

- Each resource can have a unique name within the same namespace bound by the type of the resource

- Name is a subsection of the metadata section

- UID or unique identifiers are a Kubernetes generated unique string to identify resources

- Every resourced created through out the life of the cluster will each get a UID

```yaml
apiVersion: v1
kind: Pod
metadata:
  name: nginx
spec:
  containers:
  - name: nginx
    image: nginx:1.14.2
    ports:
    - containerPort: 80
```

Labels

Labels

- Labels are a key/value pair assigned to a resource

- Labels are a subsection of the metadata section

- Designed to allow users to assign meaningful context to resources

- Each key need to be unique for any resource

```yaml
apiVersion: v1
kind: Pod
metadata:
  name: nginx
  labels:
    environment: development
    app: website
spec:
  containers:
  - name: nginx
    image: nginx:1.14.2
    ports:
    - containerPort: 80
```

Namespaces

Namespaces

— Namespaces are objects that allow for grouping and isolating resources within a Kubernetes cluster

— As mentioned before Names need to be unique within a specific Namespace

— Grouping by Namespaces only applies to objects that can be applied to a namespace

```
kind: Namespace
apiVersion: v1
metadata:
  name: devnamespace
  labels:
    name: devnamespace
```

Annotations

Annotations

- Look somewhat like Labels as they are both key value pairs

- Designed to add non-identifying meta data to objects

- Designed to allow tools and libraries to retrieve this data

```
kind: Namespace
apiVersion: v1
metadata:
  name: devnamespace
  labels:
    name: devnamespace
  annotations:
    use: dev-namespace
```

Thank you

For more information, contact SUSE at:

+1 800 796 3700 (U.S./Canada)

Frankenstrasse 146

90461 Nürnberg

www.suse.com

Copyright © SUSE