Lab 1
Build your first Kubernetes Cluster

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Build your first Kubernetes Cluster

KASTEN by Veeam

Objectives

- Review K8s application terminology
- Answer a series of initial challenge questions in the lab to ensure the user has mastered the Kubernetes terminology
- Use real keyboard commands to build an actual Kubernetes application

Pre-work requirements

For all

- Blog for Lab 1
- Kubernetes introduction slides
- Intro to Kubernetes
- Lab Series Overview slides

For advanced users

- Kasten K10 documentation
- Free Kasten K10 download

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Lab 1 – Part 1

Key Terminology Review

Terminology

K8s desired state – API

- High level overview of Kubernetes

Control Plane

- The backbone of Kubernetes

Pod

- The smallest deployable object in the Kubernetes object model

Replica Set

- Manages the number of running Pod replicas

Deployment

- Manages Pods and ReplicaSets

Service

- Abstracts a set of Pods

Namespace

- Divides your cluster

Volume

- A directory which is accessible to Pods Job
- Creates one or more Pods & retries execution of the Pods until a specified number of them successfully terminate.

DaemonSet

- Runs a Pod on all (or some) Nodes

StatefulSet

- Used to manage stateful applications.

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Lab 1 – Part 2
Hands on

Objectives

- This section will cover Kubernetes commands needed to set up a Kubernetes cluster, a very basic and necessary step in the Kubernetes journey.

What you will learn - commands needed to:

- Ready your server
- Set up the cluster
- Ensure Kubernetes is running in the cluster
- Join nodes
- Set a Kubernetes add-on for networking features and policy
- Run a demo microservices app on the cluster you created

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Lab 1 – Hands on Summary

Hands-on starts here. Step 1: Create Your Own Personal Cluster

Set up nodes

Skip to

Step 2: Setup the Kubernetes Control Plane

Control Plane

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Step 3: Join your nodes to your Kubernetes cluster

Join workers

Skip to

Step 4: Setup a Kubernetes Add-On For Networking

Set up networking

Skip to

Step 5: Deploying The Microservices Sock Shop

Run a demo microservices application on a Kubernetes cluster you have created

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Thank You