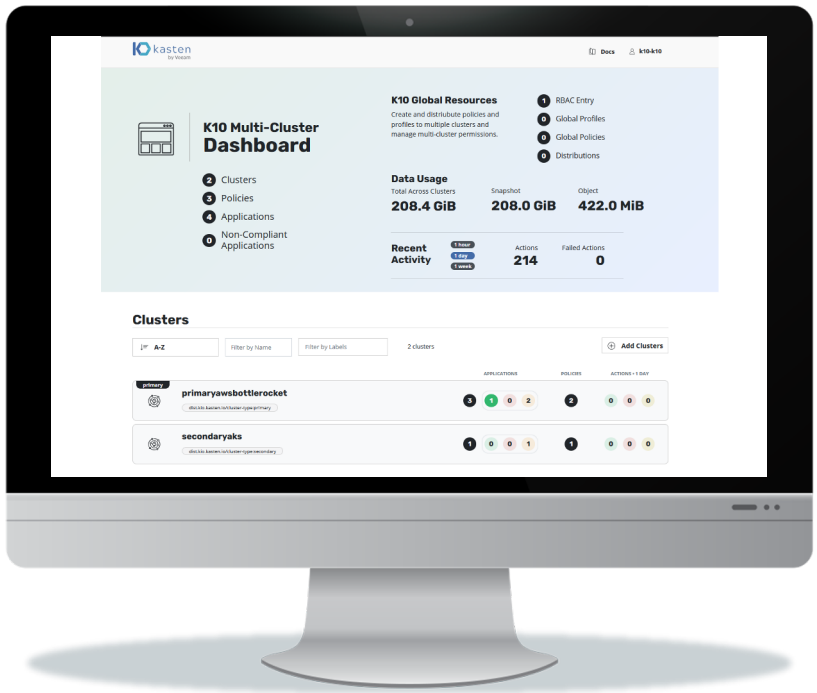
Kasten Learning Site

Lab 1 Build your first Kubernetes Cluster

Lab 1
Kubernetes Terminology Review and Building a Cluster



Objectives

- Review K8s basics and 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 Cluster

Pre-work requirements

For all users

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

For advanced users

- K10 documentation
- Free K10 download

Learning kasten.io by Veeam

Lab 1 - part 1
Key Kubernetes Terminology Review

Kubernetes Native

- 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.

Lab 1- part 2
Building a Cluster

Objectives

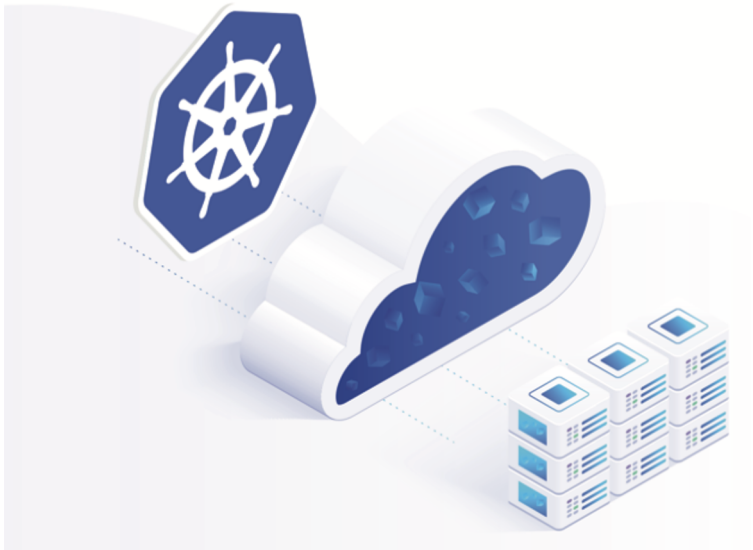
- This section will cover Kubernetes commands needed to set up a Kubernetes cluster, a very basic and necessary step in the Kubernetes journey.

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

Learning kasten.io by Veeam

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

Skip to

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

Skip to

Learning kasten.io by Veeam

Thank you