

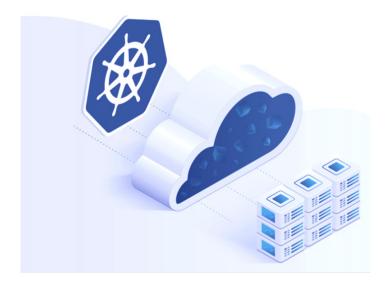


# Lab 1 Build your first Kubernetes Cluster



#### Lab 1

#### **Build your first Kubernetes Cluster**







#### 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



#### **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.



#### **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:

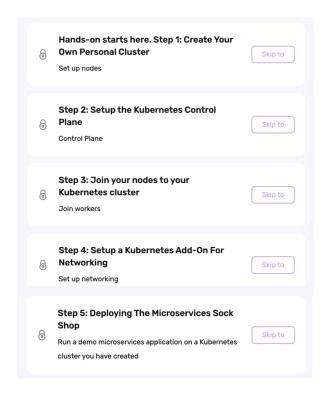
- Ready your server
- Set up the cluster
- Ensure Kubernetes is running in the cluster
- Join nodes
- Set a Kubernetes add-on for networking features and policy
- Run a demo microservices app on the cluster you created





### **Lab 1 – Hands on Summary**









## Thank You