

Certified Kubernetes Administrator Training Course

About The Course

This course provides a basic introduction to Kubernetes for those who are new to this powerful technology. We will cover the basics of what containers are and what Kubernetes does. You will have the opportunity to build your own Kubernetes cluster and use it to run containers.

This course will provide you with the knowledge and hands-on experience that you will need in order to be a successful Kubernetes administrator in the real world and pass the CKA exam.

Prerequisites

Basic Linux bash knowledge is preferred but will be covered at the beginning of the course as well.

Laptop or Desktop with Internet Connection.

A basic understanding of Docker and YAML syntax.

Basic Networking

Intended Audience

This learning path is intended for anyone who needs to manage containers at scale. If you have a job title of Developer, Release Engineer, DevOps Engineer, or Site Reliability Engineer.

Course Content.

1. Docker Introduction

- Docker Architecture
- How to install DOCKER on LINUX|Windows|MAC
- Docker Basic Commands
- Docker Compose
- Docker Volumes
- Docker Swarm

2. Kubernetes architecture overview

- An overview of Kubernetes components
- The basic architecture of Kubernetes
- What is Master, Worker, Pods, Cluster

3. Kubernetes Resources overview

- Components of Master node
- API Server - for all communications (JSON over HTTP API)
- Scheduler - schedules pods on nodes
- Controller Manager - runs controllers
- Etcd - open-source, distributed key-value database from CoreOS
- Components of Worker node
- Kubelet
- Kube-proxy
- Container runtime

4. Getting Started | Options & How to use Kubernetes

- Options to Use/Install Kubernetes
- Online Kubernetes labs
- Kubernetes Playground
- Play with K8s

5. Kubernetes installation tools

- Minikube
- Kubeadm

6. Cloud-based Kubernetes services

- GKE - Google Kubernetes Engine
- AKS - Azure Kubernetes Service
- Amazon EKS

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8. Kubernetes - Services

- Cluster IP service
- Headless service
- NodePort service
- LoadBalancer service
- K8s Ingress

8. K8s - Configmaps & Secrets

9. K8s - Ingress

10. Storage & Volumes

- K8s storage overview
- Using Volumes
- Using persistent Volumes

11. K8s - Deployments

12. K8s - Statefulsets

13. K8s - CronJobs & Jobs

14. K8s - DaemonSets

15. K8s - Service Accounts

16. Summary

17. Setting up Cluster from Scratch

18. Certified Kubernetes Administrator (CKA) Practice Exams.