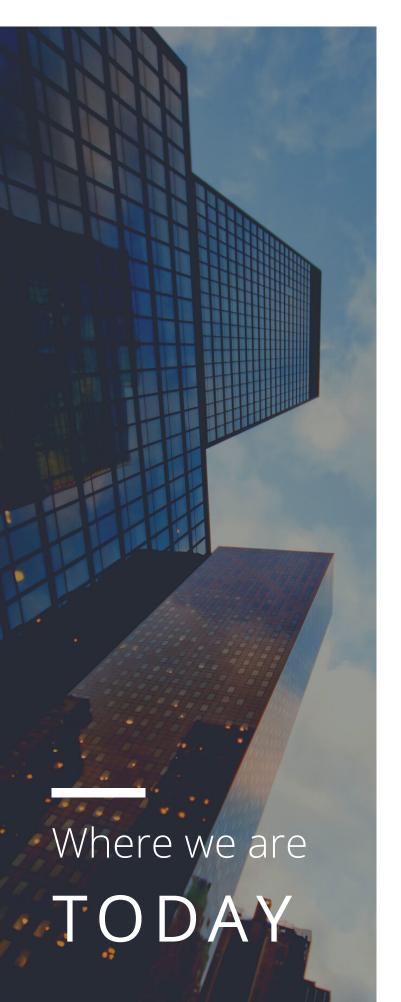


CLOUD NATIVE COMPUTING FOUNDATION

CERTIFIED KUBERNETES ADMINISTRATOR





Certified Kubernetes Administrator

EXAM Overview

The purpose of the Certified Kubernetes Administrator (CKA) program is to provide assurance that CKAs have the skills, knowledge, and competency to perform the responsibilities of Kubernetes administrators.

A solid understanding of containers, and Docker in particular, will be of value. If you are not comfortable with Docker, you are encouraged to take our Docker Deep Dive training program.



PAGE | 03 NETWORK NUTS

Certified Kubernetes Administrator

Cluster Architecture, Installation & Configuration - 25%

- Manage role based access control (RBAC)
- Use Kubeadm to install a basic cluster
- Manage a highly-available Kubernetes cluster
- Provision underlying infrastructure to deploy a Kubernetes cluster
- Perform a version upgrade on a Kubernetes cluster using Kubeadm
- Implement etcd backup and restore

Workloads & Scheduling - 15%

- Understand deployments and how to perform rolling update and rollbacks
- Use ConfigMaps and Secrets to configure applications
- Know how to scale applications
- Understand the primitives used to create robust, self-healing, application deployments
- Understand how resource limits can affect Pod scheduling
- Awareness of manifest management and common templating tools

Services & Networking - 20%

- Understand host networking configuration on the cluster nodes
- Understand connectivity between Pods
- Understand ClusterIP, NodePort, LoadBalancer service types and endpoints
- Know how to use Ingress controllers and Ingress resources
- Know how to configure and use CoreDNS
- Choose an appropriate container network interface plugin





PAGE | 04 NETWORK NUTS

Certified Kubernetes Administrator

Storage - 10%

- Understand storage classes, persistent volumes
- Understand volume mode, access modes and reclaim policies for volumes
- Understand persistent volume claims primitive
- Know how to configure applications with persistent storage

Troubleshooting - 30%

- Evaluate cluster and node logging
- Understand how to monitor applications
- Manage container stdout & stderr logs
- Troubleshoot application failure
- Troubleshoot cluster component failure
- Troubleshoot networking



