Training: The Linux Foundation
CKA Certified Kubernetes Administrator

THE LINUX FOUNDATION AUTHORIZED TRAINING PARTNER

TRAINING GOALS:



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

Overview

The Certified Kubernetes Administrator (CKA) program was created by The Linux Foundation and the Cloud Native Computing Foundation (CNCF) as a part of their ongoing effort to help develop the Kubernetes ecosystem. As one of the highest velocity open source projects, Kubernetes use is exploding.

There are no pre-requisites for this exam.

Exam Delivery: Online

Duration of Exam: 3 Hours

Certification Valid: 3 Years

Version of Software: Kubernetes v1.14

Includes:

- 12 Month Exam Eligibility
- Free Exam Retake
- PDF Certificate

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Domains & Competencies

The CKA Certification focuses on the skills required to be a successful Kubernetes Administrator in industry today.
The CKA Certification exam includes these general domains and their weights on the exam:

Application Lifecycle Management – 8%

- Understand deployments and how to perform rolling update and rollbacks
- Know various ways to configure applications
- Know how to scale applications
- Understand the primitives necessary to create a self-healing application

Installation, Configuration & Validation – 12%

- Design a Kubernetes Cluster
- Install Kubernetes Masters and Nodes
- Configure secure cluster communications
- Configure a highly-available Kubernetes cluster
- Know where to get the Kubernetes release binaries
- Provision underlying infrastructure to deploy a Kubernetes cluster
- Choose a network solution
- Choose your Kubernetes infrastructure configuration
- Run end-to-end tests on your cluster
- Analyze end-to-end test results
- Run Node end-to-end Tests
- Install and use kubeadm to install, configure, and manage Kubernetes clusters

Core Concepts – 19%

- Understand the Kubernetes API primitives
- Understand the Kubernetes cluster architecture
- Understand Services and other network primitives

Networking – 11%

- Understand the networking configuration on the cluster nodes
- Understand Pod networking concepts
- Understand Service Networking
- Deploy and configure network load balancer
- Know how to use Ingress rules

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- Know how to configure and use the cluster DNS
- Understand CNI

Scheduling – 5%

- Use label selectors to schedule Pods
- Understand the role of DaemonSets
- Understand how resource limits can affect Pod scheduling
- Understand how to run multiple schedulers and how to configure Pods to use them
- Manually schedule a pod without a scheduler
- Display scheduler events

Security – 12%

- Know how to configure authentication and authorization
- Understand Kubernetes security primitives
- Know how to configure network policies
- Create and manage TLS certificates for cluster components
- Work with images securely
- Define security contexts
- Secure persistent key value store

Cluster Maintenance – 11%

- Understand Kubernetes cluster upgrade process
- Facilitate operating system upgrades
- Implement backup and restore methodologies

Logging / Monitoring – 5%

- Understand how to monitor all cluster components
- Understand how to monitor applications
- Manage cluster component logs
- Manage application logs

Storage – 7%

- Understand persistent volumes and know how to create them
- Understand access modes for volumes
- Understand persistent volume claims primitive
- Understand Kubernetes storage objects

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- Know how to configure applications with persistent storage

Troubleshooting – 10%

- Troubleshoot application failure
- Troubleshoot control plane failure
- Troubleshoot worker node failure
- Troubleshoot networking

Exam details

This exam is an online, proctored, performance-based test that requires solving multiple issues from a command line running Kubernetes. Candidates have 3 hours to complete the tasks.

The exam is based on Kubernetes v1.14

Additional information

LFS458 Kubernetes Administration training is an excellent preparation for the Certified Kubernetes Administrator (CKA) exam.

Policies & Resources

Please review the Candidate Handbook, Curriculum Overview and Exam Tips along with other recommended resources below.

- Candidate Handbook
- Curriculum Overview
- Exam Tips
- Frequently Asked Questions
- Certification and Confidentiality Agreement
- Verify Certification
- CKA Reseller FAQs

Difficulty level



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