

Certified Kubernetes Administrator (CKA)

Build, run and fix Kubernetes clusters from the command line — the way the CKA exam tests you.

DURATION

3 days · 24 hours

LEVEL

Intermediate

CURRICULUM

9 modules · 9 labs

DELIVERY

Live online, Onsite,
Corporate

Course overview

The CKA exam does not ask you to recognise the right answer — it gives you a terminal and a broken or incomplete cluster and asks you to fix it within a time limit. This course is designed around that reality. Almost every topic is practised hands-on in your own multi-node cluster.

Day one covers cluster architecture and installation: control-plane components, kubeadm, upgrades, etcd backup and restore, and role-based access control. Day two focuses on workloads and scheduling — Deployments, DaemonSets, StatefulSets, ConfigMaps and Secrets, resource requests and limits, taints, tolerations and affinity — followed by persistent storage with volumes, claims and storage classes.

Day three is about services and networking — Services, Ingress and the Gateway API, network policies and cluster DNS — and then troubleshooting, which carries the most weight on the exam. You will diagnose failing nodes, crashed pods, broken networking and misconfigured control-plane components under time pressure.

Throughout the course you will build the kubectl habits that save minutes in the exam: imperative commands, generating YAML, using the documentation efficiently and verifying your work.

This course is aligned to the CKA exam curriculum published by The Linux Foundation and CNCF. The exam is performance-based and online proctored; please confirm the current curriculum and Kubernetes version before booking.

Highlights

- 24 hours of live, trainer-led sessions
- Your own multi-node cluster for every lab
- kubeadm install, upgrade and etcd backup
- Timed troubleshooting drills in exam style
- kubectl speed techniques for a hands-on exam

What's included

- Dedicated multi-node lab cluster per learner
- Cluster install and upgrade with kubeadm
- etcd backup and restore practice
- Troubleshooting drills against the clock
- kubectl shortcuts and documentation navigation
- Mock tasks in the style of the exam
- Course completion certificate from Ace Skills Consulting
- Post-training doubt support

Who this course is for

Who should attend

- System administrators running container platforms
- DevOps and platform engineers
- Cloud engineers managing EKS, AKS or GKE
- Site reliability engineers

Prerequisites

- Confident with the Linux command line and a text editor such as vim
- Working knowledge of containers (our Docker course or equivalent)
- Basic networking: IP, ports, DNS

Detailed curriculum — 3 days, 24 hours, 9 modules, 9 hands-on labs

Day 1 Cluster Architecture, Installation and Security

8 hours

1.1 Kubernetes architecture

- Control plane and node components
- Static pods
- API server request flow
- Container runtimes and CRI

1.2 Installing and upgrading

- kubeadm init and join
- Upgrading a cluster version by version
- Highly available control planes
- Helm and Kustomize for cluster components

LAB Build a three-node cluster with kubeadm · 60 min

LAB Upgrade the cluster one minor version · 40 min

1.3 etcd and access control

- etcd backup and restore
- Roles, ClusterRoles and bindings
- Users, service accounts and kubeconfig
- CRDs and operators overview

LAB Back up and restore etcd · 35 min

LAB Grant scoped RBAC to a service account · 30 min

Day 2 Workloads, Scheduling and Storage

8 hours

2.1 Workloads

- Pods and multi-container patterns
- DaemonSets and StatefulSets
- ConfigMaps and Secrets
- Deployments, rollouts and rollbacks
- Jobs and CronJobs

LAB Roll out and roll back a Deployment · 40 min

2.2 Scheduling

- Requests, limits and quotas
- Taints and tolerations
- Autoscaling overview
- Node selectors and affinity
- Priority and preemption

LAB Control pod placement with affinity and taints · 40 min

2.3 Storage

- Volumes
- Storage classes and dynamic provisioning
- Persistent volumes and claims
- Access modes and reclaim policies

LAB Provision persistent storage for a stateful app · 40 min

3.1 Services and networking

- ClusterIP, NodePort and LoadBalancer
- CoreDNS
- CNI plugins
- Ingress and Gateway API
- Network policies

LAB Expose an app with Ingress and lock it down with network policies · 50 min

3.2 Troubleshooting

- Application failures
- Node failures
- Logs, events and metrics
- Control-plane failures
- Network failures

LAB Timed troubleshooting drill: five broken clusters · 75 min

3.3 Exam readiness

- Exam environment and rules
- Context switching and verification
- Mock tasks with review

Skills and tools

Skills you will build



Tools used in class



Certification exam

This course is aligned to the exam below and prepares you for it. The exam itself is booked and taken with the vendor.

Exam	Certified Kubernetes Administrator (CKA)
Exam code	CKA
Duration	120 minutes
Format	Performance-based / lab
Delivery	Online proctored
Official page	https://training.linuxfoundation.org/certification/certified-kubernetes-administrator-cka/

Exam skill areas covered

- Cluster architecture, installation and configuration
- Workloads and scheduling
- Services and networking
- Storage
- Troubleshooting

Exam details are pending verification. Confirm the current exam code, format and fee on the official vendor page before booking.

Frequently asked questions

What is the CKA exam like?

It is a performance-based, online-proctored exam: you solve practical tasks on live clusters from a command line within the time limit.

Can I use documentation during the exam?

The exam rules have allowed access to the official Kubernetes documentation. Check the current candidate handbook before your exam, and we practise navigating the docs quickly in class.

Do I need to know Docker first?

You need container basics. If you have never built an image, take our Docker course or a short self-study first.

Will this help with managed Kubernetes like EKS or AKS?

Yes. The concepts are the same; managed services simply operate the control plane for you.

Should I take CKA or CKAD first?

Choose CKA if you operate clusters and CKAD if you mainly deploy applications. CKA is also required before CKS.

Book a batch or talk to an advisor

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