Certified Kubernetes Security Specialist (CKS)

Category: Networking & Security | **Vendor:** CNCF

Duration: 40.00 hours (5 days) **32.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format:	Instructor Led - Online
Certification:	Certified Kubernetes Security Specialist (CKS)
Related Exam:	CKS

Course Overview

This class prepares students for the Certified Kubernetes Security Specialist (CKS) exam. Kubernetes is a Cloud Orchestration Platform providing reliability, replication, and stabilitywhile maximizing resource utilization for applications and services. By the conclusion of this hands-on, vendor agnostic training you will be equipped with a thorough understanding ofcloud security fundamentals, along with the knowledge, skills and abilities to secure a Kubernetes cluster, detect threats, and properly resolve a security catastrophe. This courseincludes hands-on instruction which develops skills and knowledge for securing container-based applications and Kubernetes platforms, during build, deployment, and runtime. We prioritizecovering all objectives and concepts necessary for passing the Certified Kubernetes Security Specialist (CKS) exam. You will be provided the components necessary to assemble your ownhigh availability Kubernetes environment and harden it for your security needs.

About This Course

This class prepares students for the Certified Kubernetes Security Specialist (CKS) exam. Kubernetes is a Cloud Orchestration Platform providing reliability, replication, and stabilitywhile maximizing resource utilization for applications and services. By the conclusion of this hands-on, vendor agnostic training you will be equipped with a thorough understanding ofcloud security fundamentals, along with the knowledge, skills and abilities to secure a Kubernetes cluster, detect threats, and properly resolve a security catastrophe. This courseincludes hands-on instruction which develops skills and knowledge for securing container-based applications and Kubernetes platforms, during build, deployment, and runtime. We prioritizecovering all objectives and concepts necessary for passing the Certified Kubernetes Security Specialist (CKS) exam. You will be provided the components necessary to assemble your ownhigh availability Kubernetes environment and harden it for your security needs.

Who Should Attend

Security Professionals working with Kubernetes Clusters

Container Orchestration Engineers

DevOps Professionals

Learning Outcomes

Upon successful completion of this course, participants will be able to:

In this course, students will learn and practice essential Kubernetes concepts and tasks in the following sections:

Cloud Security Fundamentals

Cluster Hardening

System Hardening

Minimize Microservice Vulnerabilities

Supply Chain Security

Disaster Recovery

Secure Back-up and Restore

Detailed Course Outline

Learning Your Environment

- Underlying Infrastructure
- Using Vim
- Tmux

Cloud Security Primer

- Basic Principles
- Threat Analysis
- Approach
- CIS Benchmarks

Securing your Kubernetes Cluster

- Kubernetes Architecture
- Pods and the Control Plane
- Kubernetes Security Concepts

Install Kubernetes using kubeadm

- Configure Network Plugin Requirements
- Kubeadm Basic Cluster
- Installing Kubeadm
- Join Node to Cluster
- Kubeadm Token
- Manage Kubeadm Tokens
- Kubeadm Cluster Upgrade

Securing the kube-apiserver

- Configuring the kube-apiserver
- Enable Audit Logging
- Falco
- Deploy Falco to Monitor System Calls
- Enable Pod Security Policies
- Encrypt Data at Rest
- Encryption Configuration
- Benchmark Cluster with Kube-Bench
- Kube-Bench

Securing ETCD

- ETCD Isolation
- ETCD Disaster Recovery
- ETCD Snapshot and Restore

Purge Kubernetes

- Purge Kubeadm
- 3Purge Kubeadm

Image Scanning

- Container Essentials
- Secure Containers
- Creating a Docker Image
- Scanning with Trivy
- Trivy
- Snyk Security

Manually Installing Kubernetes

- Kubernetes the Alta3 Way
- Deploy Kubernetes the Alta3 Way
- Validate your Kubernetes Installation
- Sonobuoy K8s Validation Test

Kubectl (Optional)

- Kubectl get and sorting
- kubectl get
- kubectl describe

Labels (Optional)

- Labels
- Labels and Selectors
- Annotations
- Insert an Annotation

Securing your Application

- Scan a Running Container
- Tracee
- Security Contexts for Pods
- Understanding Security Contexts
- AppArmor Profiles
- AppArmor
- Isolate Container Kernels
- gVisor

Pod Security

- Pod Security Policies
- Deploy a PSP
- Pod Security Standards
- Enable PSS

Open Policy Agent (OPA)

- Admission Controller
- Create a LimitRange
- Open Policy Agent
- Policy as Code
- Deploy Gatekeeper

User Administration

- Contexts
- Contexts
- Authentication and Authorization
- Role Based Access Control
- Role Based Access Control
- RBAC Distributing Access
- Service Accounts
- Limit Pod Service Accounts

Securing Secrets

- Secrets
- Create and Consume Secrets
- Hashicorp Vault
- Deploy Vault

Securing the Network

- Networking Plugins
- NetworkPolicy
- Deploy a NetworkPolicy
- mTLS
- Linkerd
- mTLS with istio
- istio

Threat Detection

- Active Threat Analysis
- Host Intrusion Detection
- Deploy OSSEC
- Network Intrusion Detection
- Deploy Suricata
- Physical Intrusion Detection

Disaster Recovery

- Harsh Reality of Security
- Deploy a Response Plan
- Kasten K10 Backups
- Deploy K10

□□ Certification Path

Certified Kubernetes Security Specialist (CKS)

Exam: CKS

Additional Course Details

Nexus Humans Certified Kubernetes Security Specialist (CKS) training program is a workshop that presents an invigorating mix of sessions, lessons, and masterclasses meticulously crafted to propel your learning expedition forward.

This immersive bootcamp-style experience boasts interactive lectures, hands-on labs, and collaborative hackathons, all strategically designed to fortify fundamental concepts.

Guided by seasoned coaches, each session offers priceless insights and practical skills crucial for honing your expertise. Whether you're stepping into the realm of professional skills or a seasoned professional, this comprehensive course ensures you're equipped with the knowledge and prowess necessary for success.

While we feel this is the best course for the Certified Kubernetes Security Specialist (CKS) course and one of our Top 10 we encourage you to read the course outline to make sure it is the right content for you.

Additionally, private sessions, closed classes or dedicated events are available both live online and at our training centres in Dublin and London, as well as at your offices anywhere in the UK, Ireland or across EMEA.

Frequently Asked Questions

Q: What delivery options are available for Certified Kubernetes Security Specialist (CKS)?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: What certification does this course prepare me for?

The Certified Kubernetes Security Specialist (CKS) course helps prepare you for the Certified Kubernetes Security Specialist (CKS) certification path.

Q: Which exam does this course prepare me for?

This course prepares you for the CKS official exam. You can take this exam at any exam center across United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online wherever you are located.

Q: How many CPD hours does this course provide?

The 5-day Certified Kubernetes Security Specialist (CKS) course provides up to 32.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Certified Kubernetes Security Specialist (CKS) training?

The training takes place over 5 day(s), with each day lasting approximately 40.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Certified Kubernetes Security Specialist (CKS)?

Yes, we provide corporate training, dedicated training, and closed classes for Certified Kubernetes Security Specialist (CKS). Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: Why choose Nexus Human for Certified Kubernetes Security Specialist (CKS)?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Certified Kubernetes Security Specialist (CKS) training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

Nexus Human

Professional Training & Development

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