KOENIG
step forward

KOENIG SOLUTIONS · COURSE OUTLINE

Kubernetes and Cloud Security Associate (KCSA)

Learn to secure Kubernetes clusters and cloud environments, from architecture and RBAC to compliance, testing and production monitoring.

10
MODULES

41
TOPICS

COURSE OVERVIEW

This course covers cloud computing fundamentals, service and deployment models, and core cloud security principles, followed by Kubernetes architecture, components, networking and installation. It then addresses cluster setup, administration, monitoring, logging, backup and recovery, alongside cloud security threats, controls and identity and access management. Further modules examine Kubernetes security practices and RBAC, networking and service discovery, cloud native security, and compliance requirements. The course concludes with security testing types and tools, and managing security, incident response and governance in production environments.

WHO THIS COURSE IS FOR

- **Cloud Engineers**
- **Kubernetes Administrators**
- **Security Engineers**
- **DevOps Engineers**
- **Compliance Officers**
- **Site Reliability Engineers**

LEARNING OBJECTIVES

- Explain cloud computing fundamentals, service and deployment models
- Describe Kubernetes architecture, components and networking concepts
- Configure Kubernetes clusters, including setup and administration
- Apply monitoring, logging, backup and recovery for clusters
- Identify cloud security threats, risks and controls
- Implement Kubernetes RBAC and security best practices
- Analyse cloud native security principles and challenges
- Evaluate compliance controls and security testing approaches

COURSE SYLLABUS

10 Modules, 41 Topics

I

Introduction to Cloud Computing

TOPICS

Cloud Computing Fundamentals · Cloud Service Models · Cloud Deployment Models · Cloud Security Principles

II

Introduction to Kubernetes

TOPICS

Kubernetes Architecture · Kubernetes Components and Concepts · Kubernetes Networking · Kubernetes Security · Kubernetes Installation and Configuration

III

Kubernetes Cluster Management

TOPICS

Kubernetes Cluster Setup · Kubernetes Cluster Administration · Kubernetes Cluster Monitoring and Logging · Kubernetes Cluster Backup and Recovery

IV

Cloud Security

TOPICS

Cloud Security Fundamentals · Cloud Security Threats and Risks · Cloud Security Controls and Best Practices · Identity and Access Management in the Cloud

V

Kubernetes Security

TOPICS

Kubernetes Security Challenges · Kubernetes Security Best Practices · Kubernetes RBAC (Role-Based Access Control) · Kubernetes Security Tools

VI

Kubernetes Networking and Service Discovery

TOPICS

Kubernetes Networking Overview · Kubernetes Network Policies · Kubernetes Service Discovery · Kubernetes Load Balancing

VII

Cloud Native Security

TOPICS

Cloud Native Security Principles · Cloud Native Security Controls · Cloud Native Security Challenges · Cloud Native Security Best Practices

VIII

Kubernetes and Cloud Compliance

TOPICS

- Kubernetes and Cloud Compliance Overview
- Kubernetes and Cloud Compliance Controls
- Kubernetes and Cloud Compliance Challenges
- Kubernetes and Cloud Compliance Best Practices

IX

Kubernetes and Cloud Security Testing

TOPICS

- Kubernetes and Cloud Security Testing Overview
- Kubernetes and Cloud Security Testing Types
- Kubernetes and Cloud Security Testing Tools
- Kubernetes and Cloud Security Testing Best Practices

X

Kubernetes and Cloud Security in Production

TOPICS

- Kubernetes and Cloud Security in Production Overview
- Kubernetes and Cloud Security Monitoring
- Kubernetes and Cloud Incident Response
- Kubernetes and Cloud Security Governance

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

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