

# € TRAINING

Kubernetes Certified Developer



16 - 20 December 2024  
London (UK)  
Landmark Office Space



# Kubernetes Certified Developer

REF: B2220 DATE: 16 - 20 December 2024 Venue: London (UK) - Landmark Office Space Fee: 5850 Euro

## Introduction:

This program is designed to prepare participants for the certification exam only.

This training program provides participants with essential knowledge and skills to become a Certified Kubernetes Developer. It empowers them to understand Kubernetes fundamentals, application design principles, and best practices for developing cloud-native applications.

## Program Objectives:

At the end of this program, participants will be able to:

- Understand Kubernetes architecture and core components.
- Design and develop applications for Kubernetes environments.
- Implement best practices for deploying, managing, and scaling applications on Kubernetes.
- Prepare for the Certified Kubernetes Application Developer CKAD exam.

## Targeted Audience:

- Software Developers.
- DevOps Engineers.
- IT Professionals involved in containerized application development.
- Personnel preparing for the CKAD certification exam.

## Program Outline:

### Unit 1:

#### Introduction to Kubernetes:

- Overview of Kubernetes and container orchestration.
- Kubernetes architecture and core components.
- Kubernetes vs. traditional deployment approaches.
- Kubernetes ecosystem and tools overview.

- Getting started with Kubernetes development environment.

## Unit 2:

### Kubernetes Application Design:

- Design principles for cloud-native applications.
- Containerization and Docker basics.
- Kubernetes Pod design and configuration.
- Service discovery and load balancing in Kubernetes.
- ConfigMaps and Secrets management.

## Unit 3:

### Kubernetes Application Development:

- Deploying applications using Kubernetes Deployments.
- Managing application state with StatefulSets.
- Jobs and CronJobs for batch processing.
- Using Helm for Kubernetes package management.
- Multi-container Pods and sidecar patterns.

## Unit 4:

### Kubernetes Application Observability:

- Monitoring applications with Prometheus and Grafana.
- Logging best practices in Kubernetes environments.
- Application health checks and readiness probes.
- Troubleshooting and debugging applications on Kubernetes.
- Kubernetes Dashboard and other monitoring tools.

## Unit 5:

### Advanced Kubernetes Concepts:



- Kubernetes networking: Services, Ingress, and Network Policies.
- Pod security policies and RBAC Role-Based Access Control.
- Persistent storage options in Kubernetes.
- Integrating CI/CD pipelines with Kubernetes.
- Future trends and innovations in Kubernetes and container orchestration.
- Prepare for the exam.

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