

€ TRAINING

Kubernetes Certified Developer

A group of four smiling professionals (three men and one woman) in a meeting setting, wearing white shirts, with a woman in a black top and necklace in the foreground. The background is a blurred office environment.

6 - 10 October 2024
Dubai (UAE)



Kubernetes Certified Developer

REF: B2220 DATE: 6 - 10 October 2024 Venue: Dubai (UAE) - Fee: 5310 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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