

€ TRAINING

Docker AND Kubernetes





Docker AND Kubernetes

Introduction:

Docker and Kubernetes are two of the most popular containerization platforms that are widely used for deploying, managing, and scaling applications in modern IT infrastructures. This 5-day training course will provide a comprehensive understanding of Docker and Kubernetes, along with practical examples of how to use them to deploy and manage containerized applications.

Course Objectives:

By the end of this course, participants will be able to:

- Understand the basics of containerization and Docker
- Use Docker to create and manage container images
- Deploy and manage containerized applications using Kubernetes
- Scale and orchestrate containerized applications in Kubernetes
- Monitor and troubleshoot containerized applications

Targeted Audience:

This course is designed for IT professionals who want to learn about containerization, Docker, and Kubernetes, including system administrators, network engineers, and IT managers.

Course Outlines:

Unit 1: Introduction to Containerization and Docker

- Overview of containerization
- Docker architecture and components
- Docker installation and configuration
- Docker images and containers
- Docker networking and storage

Unit 2: Docker Image Management and Deployment

- Creating Docker images
- Managing Docker images and containers
- Docker registries and repositories
- Deploying Docker containers
- Docker Compose

Unit 3: Introduction to Kubernetes

- Overview of Kubernetes
- Kubernetes architecture and components
- Kubernetes installation and configuration
- Kubernetes Pods

- Kubernetes Services

Unit 4: Kubernetes Deployment and Scaling

- Deploying applications in Kubernetes
- Kubernetes Deployments and ReplicaSets
- Kubernetes Scaling
- Kubernetes ConfigMaps and Secrets
- Kubernetes StatefulSets

Unit 5: Kubernetes Monitoring and Troubleshooting

- Kubernetes Logging and Monitoring
- Kubernetes Troubleshooting
- Kubernetes Health Checks and Probes
- Kubernetes Load Balancing
- Best Practices for Docker and Kubernetes