

Kubernetes

DETAILS

- Audience: developers, IS teams, system and network administrators
- Duration : 3 days
- Location: on site or remotely
- Attendees : 1 to 8
- Prerequisites :
 - Be comfortable with containers
 - Network architecture

KEY OBJECTIVES

- Understand container images
- Apply Cloud Native application concepts and architectures
- Learn how to work with Kubernetes resource definitions

TEACHER



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ABOUT THIS TRAINING

This training is intended for system administrators or developers wishing to understand how Kubernetes can help them optimize and make the management of their applications more reliable by applying the proven principles of Cloud Native.

During this three-day session, after installing your Kubernetes cluster, you will learn how to design, configure and expose Cloud Native applications.

TRAINING CONTENT

Installing and configuring a Kubernetes cluster

- Install a multi-node cluster
- Access control and security
- Resource governance and segmentation
- Cluster update

Application design and creation

- Define, create, and modify container images
- Understanding Jobs and CronJobs
- Understand multi-container Pod models (sidecar, init...)
- Use persistent and ephemeral volumes

Deploy apps

- Implement deployment strategies using Kubernetes primitives
- Understanding Deployments
- Application update strategies
- Helm package management to deploy existing packages

Application monitoring and maintenance

- Understanding API deprecation
- Probes and monitoring of the status of services (Health checks)
- Kubernetes Application Monitoring
- Container logs
- Debugging in Kubernetes

Application environment, configuration and security

- Custom Resources (CRD)
- Authentication and Authorization
- Understand and define resource requirements
- Understanding ConfigMaps
- Create and Consume Secrets
- Service accounts
- Security contexts

Services and networks

- Network policies
- Access to applications via services
- Use Ingress Rules

RELATED TRAINING

- Kubernetes with Azure (3 days)