



Enterprise Computing Solutions - Education Services

TRAINING OFFERING

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CODE:	DURÉE:	PRIX H.T.:
VMW_KFCO	28 Hours (4 Jours)	€2,760.00

Description

This four-day course is the first step in learning about Containers and Kubernetes Fundamentals and Cluster Operations. Through a series of lectures and lab exercises, the fundamental concepts of containers and Kubernetes are presented and put to practice by containerizing and deploying a two-tier application into Kubernetes.

Objectifs

By the end of the course, you should be able to meet the following objectives:

- Build, test, and publish Docker container images
- Become familiar with YAML files that define Kubernetes objects
- Understand Kubernetes core user-facing concepts, including pods, services, and deployments
- Use kubectl, the Kubernetes CLI, and become familiar with its commands and options
- Understand the architecture of Kubernetes (Control plane and its components, worker nodes, and kubelet)
- Learn how to troubleshoot issues with deployments on Kubernetes
- Apply resource requests, limits, and probes to deployments
- Manage dynamic application configuration using ConfigMaps and Secrets
- Deploy other workloads, including DaemonSets, Jobs, and CronJobs
- Learn about user-facing security using SecurityContext, RBAC, and NetworkPolicies

Audience

Anyone who is preparing to build and run Kubernetes clusters

Prérequis

- Linux concepts and command line proficiency
- General networking proficiency

Programme

1. Course Introduction:
 - Introductions and objectives
2. Containers:
 - What and Why containers
 - Building images
 - Running containers
 - Registry and image management
3. Kubernetes Overview:
 - Kubernetes project
 - Plugin interfaces
 - Building Kubernetes
 - Kubectl CLI
4. Beyond Kubernetes Basics:
 - Kubernetes objects
 - YAML
 - Pods, replicas, and deployments
 - Services
 - Deployment management
 - Rolling updates

- Controlling deployments
 - Pod and container configurations
5. Kubernetes Networking:
- Networking within a pod
 - Pod-to-Pod Networking
 - Services to Pods
 - ClusterIP, NodePort, and LoadBalancer
 - Ingress controllers
 - Service Discovery via DNS
6. Stateful Applications in Kubernetes:
- Stateless versus Stateful
 - Volumes
 - Persistent volumes claims
 - StorageClasses
 - StatefulSets
7. Additional Kubernetes Considerations:
- Dynamic configuration
 - ConfigMaps
 - Secrets
 - Jobs, CronJobs
8. Security:
- Network policy
 - Applying a NetworkPolicy
 - SecurityContext
 - runAsUser/Group
 - Service accounts
 - Role-based access control
9. Logging and Monitoring:
- Logging for various objects
 - Sidecar logging
 - Node logging
 - Audit logging
 - Monitoring architecture
 - Monitoring solutions
 - Octant
 - VMware vRealize® Operations Manager™
10. Cluster Operations:
- Onboarding new applications
 - Backups
 - Upgrading
 - Drain and cordon commands
 - Impact of an upgrade to running applications
 - Troubleshooting commands
 - VMware Tanzu™ portfolio overview

Dates de session

Date	Lieu	Time Zone	Langue	Type	Garanti	PRIX H.T.
24 Aug 2026	Virtual Classroom	CEDT	French	Instructor Led Online		€2,760.00

Informations Complémentaires

[Cette formation est également disponible sous forme de formation sur site. Veuillez nous contacter pour en savoir plus.](#)