



Enterprise Computing Solutions - Education Services

TRAINING OFFERING

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CODE: VMW_KFCO **DURÉE:** 32 Hours (4 Jours) **PRIX H.T.:** Prix sur demande

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

Préquis

- Linux concepts and command line proficiency
- General networking proficiency

Programme

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| <p>1. Course Introduction:</p> <ul style="list-style-type: none"> • Introductions and objectives <p>5. Kubernetes Networking:</p> <ul style="list-style-type: none"> • Networking within a pod • Pod-to-Pod Networking • Services to Pods • ClusterIP, NodePort, and LoadBalancer • Ingress controllers • Service Discovery via DNS | <p>2. Containers:</p> <ul style="list-style-type: none"> • What and Why containers • Building images • Running containers • Registry and image management <p>6. Stateful Applications in Kubernetes:</p> <ul style="list-style-type: none"> • Stateless versus Stateful • Volumes • Persistent volumes claims • StorageClasses • StatefulSets | <p>3. Kubernetes Overview:</p> <ul style="list-style-type: none"> • Kubernetes project • Plugin interfaces • Building Kubernetes • Kubectl CLI <p>7. Additional Kubernetes Considerations:</p> <ul style="list-style-type: none"> • Dynamic configuration • ConfigMaps • Secrets • Jobs, CronJobs | <p>4. Beyond Kubernetes Basics:</p> <ul style="list-style-type: none"> • Kubernetes objects • YAML • Pods, replicas, and deployments • Services • Deployment management • Rolling updates • Controlling deployments • Pod and container configurations |
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- 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

Sur demande. [Merci de nous contacter](#)

Informations Complémentaires

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