

Enterprise Computing Solutions - Education Services

TRAINING OFFERING

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Kubernetes Fundamentals and Cluster Operations

Kod: Czas trwania: Cena netto:

VMW_KFCO 32 Hours (4 days) zł7,600.00

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.

Cel szkolenia

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

Uczestnicy

Anyone who is preparing to build and run Kubernetes clusters

Wymagania wstępne

- · Linux concepts and command line proficiency
- · General networking proficiency

Program szkolenia

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

Terminy

Na żądanie. Prosimy o kontakt

Dodatkowe informacje

Jeśli interesują Cię inne szkolenia tego producenta - skontaktuj się z nami.