pcsnet

VMWA-13 - KUBERNETES FUNDAMENTALS AND CLUSTER OPERATIONS
Categoria: **VMware**

INFORMAZIONI SUL CORSO

Durata:
4 Giorni

Categoria:
VMware

Qualifica Istruttore:
VMware Certified
Instructor

Dedicato a:
Professionista IT

Produttore:
VMware

OBIETTIVI

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

PREREQUISITI

- Linux concepts and command line proficiency
- General networking proficiency

CONTENUTI

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

INFO

Materiale didattico: Materiale didattico ufficiale VMware in formato digitale
Costo materiale didattico: incluso nel prezzo del corso a Calendario
Natura del corso: Operativo (previsti lab su PC)