VMware vSphere v7 with Tanzu – Deploy and Manage

Description

During course, you focus on deploying and managing VMware vSphere® with Tanzu. You learn about how vSphere with Tanzu can be used to orchestrate the delivery of Kubernetes clusters and containerized applications in a vSphere environment.

Course Content
Module 1: Course Introduction

- Introductions and course logistics
- Course objectives

Module 2: Introduction to Containers and Kubernetes

- Describe virtual machines and containers
- Describe container hosts
- Describe container engines
- Describe Dockerfile
- Describe container images
- Describe image registry
- Describe the purpose and functionality of Kubernetes
- Describe YAML manifest files
- Explain pods
- Explain Replica Sets
- Explain services
- Explain deployments
- Explain network policies

Module 3: Introduction to vSphere with Tanzu

- Introduce the Cloud Native Computing Foundation
- Introduce the VMware Tanzu™ portfolio
- Describe the purpose and functionality of vSphere with Tanzu
- Describe the capabilities of vSphere with Tanzu
- Describe the components of vSphere with Tanzu
- Contrast vSphere with Tanzu to traditional Kubernetes
- Describe the requirements for vSphere with Tanzu
- Describe the NSX components required for vSphere with Tanzu
- Describe the network topology of vSphere with Tanzu
- Explain the networking requirements of vSphere with Tanzu
- Compare NSX networking objects with Kubernetes networking objects
- Describe the kubectl command line interface

Module 4: vSphere with Tanzu Core Services

- Explain the architecture of the vSphere with Tanzu core services
- Describe the use cases of vSphere with Tanzu

- Enable vSphere with Tanzu
- Deploy Harbor Registry
- Describe a vSphere with Tanzu namespace
- Describe resource quotas
- Explain authentication and authorization to vSphere with Tanzu
- Create a namespace
- Use kubectl to interact with vSphere with Tanzu
- Describe using kubectl pod deployment
- Explain scaling a pod deployment
- Explain deleting pods
- Use kubectl to deploy a pod
- Use kubectl to scale a pod
- Describe a Container Storage Interface
- Explain VM Storage Policies and Persistent Volumes
- Monitor Cloud Native Storage
- Create a Persistent Volume
- Describe the NSX Container Plugin
- Explain Supervisor Cluster Network Topology
- Explain Container Objects in NSX
- Describe Kubernetes Services
- Describe Kubernetes Network Policies
- Describe vSphere with Tanzu on vSphere Distributed Switch
- Describe Harbor Image Registry
- Explain Harbor integration with vSphere with Tanzu
- Enable Harbor
- Push container images to Harbor
- Deploy containers from Harbor

Module 5: VMware Tanzu Kubernetes Grid service

- Introduce Kubernetes Cluster API
- Explain Tanzu Kubernetes Grid service
- Describe the use cases for Tanzu Kubernetes Grid clusters
- Describe enabling Tanzu Kubernetes Clusters
- Deploy a Tanzu Kubernetes Cluster
- Scale a Tanzu Kubernetes Cluster
- Explain the life cycle of Tanzu Kubernetes Clusters
- Deploy pods to a Tanzu Kubernetes Cluster
- Describe monitoring of Tanzu Kubernetes Clusters

Module 6: Monitoring and Troubleshooting

- Describe the monitoring tools for vSphere with Tanzu
- Describe the troubleshooting tools for vSphere with Tanzu
- Describe VMware vRealize® Operations Manager™ integration
- Describe VMware Tanzu Mission Control
- Describe the integration between vSphere with Tanzu and VMware Tanzu Mission Control
- Describe vCenter Server events
- Describe vSphere with Tanzu events
- Describe gathering vSphere with Tanzu support log bundles

Module 7: vSphere with Tanzu Life Cycle

- Introduce Kubernetes version
- Explain Kubernetes release cadence
- Describe vSphere with Tanzu life cycle
- Describe NSX component life cycle
- Describe vSphere with Tanzu Certificate Management

Lab / Exercises

- Official VMware Labs and exercices

Documentation

- Digital courseware included

Participant profiles

- Experienced system administrators and experienced system integrators responsible for designing and implementing vSphere with Tanzu.

Prerequisites

- Experience working at the command line is helpful
- This course requires completion the following courses: VMware vSphere: Install, Configure, Manage or VMware vSphere: Optimize and Scale and VMware NSX-T Data Center: Install, Configure, Manage

Objectives

- Describe vSphere with Tanzu and use cases in on-premises environments
- Deploy vSphere with Tanzu
- Describe VMware Tanzu Mission Control
- Describe the VMware NSX® networking requirements for vSphere with Tanzu.
- Describe vSphere with Tanzu on NSX-T Data Center
- Describe vSphere with Tanzu on vSphere Distributed Switch
- Create and manage vSphere with Tanzu namespaces
- Deploy and run container applications on vSphere with Tanzu
- Deploy and configure Harbor
- Describe the VMware Tanzu™ Kubernetes Grid™ service
- Deploy a Tanzu Kubernetes Grid cluster
- Deploy and run container applications on a Tanzu Kubernetes Grid cluster
- Describe the vSphere with Tanzu lifecycle
- Use logs and CLI commands to monitor and troubleshoot vSphere with Tanzu

Niveau
Intermédiaire
Classroom Registration Price (CHF)
3350
Virtual Classroom Registration Price (CHF)
3350
Duration (in Days)
3
Reference
VMW-VSPHKDM