VMware vSphere with Tanzu: Deploy, Configure, Manage

Duration: 3 Days **Course Code: VMVKDM** **Version: 8**

Overview:

During this three-day course, you focus on deploying and managing VMware vSphere® with VMware Tanzu® in a VMware vSphere® 8 environment. You learn how vSphere with Tanzu provides services to deploy and manage virtual machines, vSphere Pods, Supervisor Services, and VMware Tanzu® Kubernetes Grid™ clusters. You will also gain experience with day 2 operations and life cycle management of a vSphere with Tanzu environment.

Product Alignment

- VMware vSphere® 8 Update 1
- VMware NSX® Advanced Load Balancer™ 22.1.3
- VMware Tanzu® Kubernetes Grid™ 2.0

Target Audience:

vSphere administrators and platform operators who are responsible for deploying and managing workloads and services in vSphere with Tanzu

Objectives:

- By the end of the course, you should be able to meet the following objectives:
- Describe how vSphere with Tanzu fits in the VMware Tanzu® portfolio
- Describe the vSphere with Tanzu concepts and architecture
- Describe vSphere with Tanzu on VMware NSX®
- Describe vSphere with Tanzu on VMware vSphere® Distributed Switch™
- List the load balancer solutions supported by vSphere with Tanzu
- Describe the vSphere with Tanzu storage components
- Deploy and manage Supervisors
- Describe vSphere Pod capabilities and components
- Deploy and configure Contour as a Supervisor Service
- Deploy and configure ExternalDNS as a Supervisor Service
- Deploy and configure Harbor as a Supervisor Service
- Deploy and manage Tanzu Kubernetes Grid workload clusters
- Deploy and manage virtual machines using the VM Service
- Deploy applications in a vSphere with Tanzu environment
- Perform a backup using Velero
- Use the vSphere UI and CLI to monitor the health of the vSphere with Tanzu environment
- Use logs and CLI commands to troubleshoot the vSphere with Tanzu environment

Prerequisites:

- Experience deploying and managing vSphere
- Understanding of Kubernetes and the Kubernetes cluster architecture

Attending one of the following courses is recommended:

- VMKFCO - Kubernetes Fundamentals and Cluster Operations
- VSICM - VMware vSphere: Install, Configure, Manage

Content:

1 Course Introduction

- Introductions and course logistics
- Course objectives

2 Introduction to Containers and Kubernetes

- Differentiate between containers and virtual machines
- Identify the parts of a container system
- List the steps in a basic Docker workflow
- Explain the importance of Kubernetes
- Identify the basic architecture of Kubernetes
- Describe a basic Kubernetes workflow

3 Introducing vSphere with Tanzu

- Describe vSphere with Tanzu
- Describe Tanzu Kubernetes Grid
- Describe VMware Tanzu® Mission Control
- Describe VMware Tanzu® for Kubernetes Operations
- Explain the purpose of vSphere with Tanzu
- Identify the capabilities of vSphere with Tanzu
- Describe the vSphere with Tanzu Supervisor
- Identify the components of the vSphere with Tanzu Supervisor
- Describe vSphere Namespaces
- Describe the Supervisor Services
- Describe the VM Service
- Describe Tanzu Kubernetes Grid clusters

4 vSphere with Tanzu Infrastructure

- Discuss storage concepts for vSphere with Tanzu
- Describe storage policies
- Describe content libraries
- Explain the Container Storage Interface plug-in functionalities
- Discuss storage for Tanzu Kubernetes Grid clusters
- Describe the vSAN Direct datastore for vSphere with Tanzu
- Identify the two network stacks available for vSphere with Tanzu deployments
- List the VDS components that vSphere with Tanzu supports
- List the NSX components that vSphere with Tanzu supports
- Outline the supported load balancer solutions by vSphere with Tanzu

5 vSphere with Tanzu Architecture

- Describe the Supervisor architecture
- List the different options for deploying the Supervisor
- Outline the requirements for deploying a Supervisor
- Outline the licensing requirements for the Supervisor
- Describe vSphere Namespaces
- List vSphere Namespace resources and Kubernetes object limits
- Define content libraries and VM images
- Explain VM classes
- Describe Kubernetes CLI Tools for vSphere
- List the different types of authentication available in vSphere with Tanzu
- Explain vSphere privileges
- Explain roles and permissions in vSphere Namespaces
- Explain Tanzu Kubernetes Grid RBAC
- List the Tanzu Kubernetes Grid authentication methods
- List the vSphere with Tanzu services and workloads
- Identify the supportability for vSphere with Tanzu services and workloads based on the Supervisor deployment types

6 vSphere with Tanzu Workloads and Services

- Describe the characteristics of vSphere Pods
- Identify the capabilities of vSphere Pods
- List the components of vSphere Pods
- Explain the concept of Supervisor Services
- Describe the Supervisor Services catalog and its available services
- Discuss how to add Supervisor Services

7 Day 2 Operations

- Explain how to view Kubernetes namespace events
- List the ways to monitor vSphere Pod, Tanzu Kubernetes Grid cluster, and VM performance and utilization
- Describe vSphere with Tanzu control plane certificate management
- Describe load balancer certificate management
- Describe the prerequisites and steps for updating vSphere with Tanzu
- Describe the Supervisor updates
- Describe the vSphere Namespace updates
- Describe the update process of Tanzu Kubernetes Grid clusters
- List the steps to back up the vSphere with Tanzu components
- Explain how to back up a Supervisor
- Define Velero Plugin for vSphere and standalone Velero
- Identify the steps to install Velero on workload clusters
- Explain how to back up and restore vSphere with Tanzu workloads with the Velero CLI
- Describe the various vSphere with Tanzu logs
- Explain how to generate a vSphere with Tanzu support bundle
- Explain how to use SSH to connect to Supervisor control plane nodes

and manage their life cycle
- Describe Tanzu Kubernetes Grid clusters
- List the components of Tanzu Kubernetes Grid
- List the options for deploying Tanzu Kubernetes Grid workload clusters
- List the different types of Tanzu Kubernetes Grid workload clusters
- Outline the requirements for deploying a Tanzu Kubernetes Grid workload cluster
- Describe the VM Service
- Explain the use cases of the VM Service
- List the VM Service parameters
- Outline the requirements for deploying a VM using the VM Service

Further Information:

For More information, or to book your course, please call us on 00 966 92000 9278

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