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# VMware vSphere with Tanzu: Deploy, Configure, Manage [V8]

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## Zakres tematyczny

### 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 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 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

## 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