

## VMware vSphere with Tanzu: Deploy, Configure, Manage

**Durée: 3 Jours**    **Réf de cours: VMVKDM**    **Version: 8.0**    **Méthodes d'apprentissage: Virtual Learning**

### Résumé:

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

### Public visé:

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

### Objectifs pédagogiques:

- 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

### Pré-requis:

- 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 : Installation, Configuration et Administration

## Contenu:

### 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

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## Autres moyens pédagogiques et de suivi:

- Compétence du formateur : Les experts qui animent la formation sont des spécialistes des matières abordées et ont au minimum cinq ans d'expérience d'animation. Nos équipes ont validé à la fois leurs connaissances techniques (certifications le cas échéant) ainsi que leur compétence pédagogique.
- Suivi d'exécution : Une feuille d'émargement par demi-journée de présence est signée par tous les participants et le formateur.
- En fin de formation, le participant est invité à s'auto-évaluer sur l'atteinte des objectifs énoncés, et à répondre à un questionnaire de satisfaction qui sera ensuite étudié par nos équipes pédagogiques en vue de maintenir et d'améliorer la qualité de nos prestations.

### Délais d'inscription :

- Vous pouvez vous inscrire sur l'une de nos sessions planifiées en inter-entreprises jusqu'à 5 jours ouvrés avant le début de la formation sous réserve de disponibilité de places et de labs le cas échéant.
- Votre place sera confirmée à la réception d'un devis ou ""booking form"" signé. Vous recevrez ensuite la convocation et les modalités d'accès en présentiel ou distanciel.
- Attention, si cette formation est éligible au Compte Personnel de Formation, vous devrez respecter un délai minimum et non négociable fixé à 11 jours ouvrés avant le début de la session pour vous inscrire via [moncompteformation.gouv.fr](http://moncompteformation.gouv.fr).

### Accueil des bénéficiaires :

- En cas de handicap : plus d'info sur [globalknowledge.fr/handicap](http://globalknowledge.fr/handicap)
- Le Règlement intérieur est disponible sur [globalknowledge.fr/reglement](http://globalknowledge.fr/reglement)