



**Enterprise Computing Solutions - Education Services**

## **TRAINING OFFERING**

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# VMware vSphere with Kubernetes: Deploy and Manage [V7]

CODE:	LENGTH:	PRICE:
VMW_VSKDM7	24 Hours (3 days)	€2,250.00

## Description

During this 3-day course, you focus on deploying and managing VMware vSphere® with Kubernetes. You learn about how vSphere with Kubernetes can be used to orchestrate the delivery of Kubernetes clusters and containerized applications in a VMware vSphere® environment.

## Objectives

By the end of the course, you should be able to meet the following objectives:

- Describe vSphere with Kubernetes and use cases in on-premises environments
- Deploy vSphere with Kubernetes
- Describe the VMware NSX® networking requirements for vSphere with Kubernetes.
- Create and manage vSphere with Kubernetes namespaces
- Deploy and run container applications on vSphere with Kubernetes
- Deploy and configure VMware 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 Kubernetes lifecycle
- Use logs and CLI commands to monitor and troubleshoot vSphere with Kubernetes

## Audience

Experienced system administrators and system integrators responsible for designing and implementing vSphere with Kubernetes

## Prerequisites

This course requires completion of one of the following courses: • VMware vSphere: Install, Configure, Manage [V6.x]

- VMware vSphere: Optimize and Scale [V6.x]
  - VMware vSphere: Install, Configure, Manage [V7]
  - VMware vSphere: Optimize and Scale [V7]
- Experience working at the command line is helpful.

This course requires that a student be able to perform the following tasks with no assistance or guidance before enrolling in this course:

DATASHEET | 2 VMware vSphere with Kubernetes: Deploy & Manage • Create VMware vCenter Server® objects, such as data centers and folders • Create a virtual machine using a wizard or a template • Modify a virtual machine's hardware • Migrate a virtual machine with VMware vSphere® vMotion® • Migrate a virtual machine with VMware vSphere® Storage vMotion® • Configure and manage a vSphere DRS cluster with resource pools • Configure and manage a VMware vSphere® High Availability cluster

If you cannot perform all of these tasks, VMware recommends that you complete one of the prerequisite courses before enrolling in VMware vSphere with Kubernetes: Deploy & Manage.

## Programme

- 1 Course Introduction • Introductions and course logistics • Course objectives
- 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 Manifest YAML files • Explain Pod YAML files • Explain ReplicaSets • Explain Services • Explain Deployments
- 3 Introduction to vSphere with Kubernetes • Describe the purpose and functionality of vSphere with Kubernetes • Explain the integration with VMware Tanzu™ Mission Control™ • Describe the capabilities of vSphere with Kubernetes • Describe the components of vSphere with Kubernetes • Contrast vSphere with Kubernetes to traditional Kubernetes • Describe the requirements for vSphere with Kubernetes • Prepare a vSphere cluster for vSphere with Kubernetes • Describe the NSX components required for vSphere with Kubernetes • Describe the network topology of vSphere with Kubernetes

- Explain the networking requirements of vSphere with Kubernetes
- Compare NSX networking objects with Kubernetes networking objects 4 vSphere with Kubernetes Core Services
- Explain the architecture of the vSphere with Kubernetes Core Services • Describe the Container Service
- Describe the Volume Service • Describe the Network Service • Describe the Registry Service
- Describe the use cases of vSphere with Kubernetes • Enable vSphere with Kubernetes • Deploy VMware Harbor Registry
- 5 vSphere with Kubernetes Namespaces • Describe a vSphere with Kubernetes namespace
- Contrast a vSphere with Kubernetes namespace to a traditional Kubernetes namespace • Describe Resource Quotas
- Explain Authentication and Authorization to vSphere with Kubernetes • Explain the use cases of namespaces
- Create a namespace • Describe kubectl • Use kubectl to interact with vSphere with Kubernetes
- Describe using kubectl pod deployment • Explain scaling a pod deployment • Explain managing pod lifecycle
- Explain deleting pods • Use kubectl to deploy a pod • Use kubectl to scale a pod • Use kubectl to switch between namespaces
- 6 VMware Tanzu Kubernetes Grid service • Explain Tanzu Kubernetes Grid service
- Describe the use cases for Tanzu Kubernetes Grid clusters • Describe the integration with Tanzu Mission Control
- Explain the lifecycle of Tanzu Kubernetes Grid clusters • Deploy Tanzu Kubernetes Grid cluster
- Deploy pods to a Tanzu Kubernetes Grid cluster 7 Monitoring and Troubleshooting
- Describe the monitoring tools for vSphere with Kubernetes • Describe the troubleshooting tools for vSphere with Kubernetes
- Explain cluster, node, and namespace health • Explain usage and capacity monitoring • Describe vCenter Server events
- Describe vSphere with Kubernetes events • Gather support information 8 vSphere with Kubernetes Lifecycle
- Describe the vSphere with Kubernetes lifecycle • Describe the Tanzu Kubernetes Grid lifecycle
- Describe scaling a vSphere with Kubernetes cluster • Update vSphere with Kubernetes • Update Tanzu Kubernetes Grid clusters
- Remove vSphere with Kubernetes

## Session Dates

Date	Location	Time Zone	Language	Type	Guaranteed	PRICE
08 May 2024	Virtual Classroom (GMT / UTC)	BST	English	Instructor Led Online		€2,350.00
23 Sep 2024	Virtual Classroom (GMT / UTC)	BST	English	Instructor Led Online		€2,350.00
25 Nov 2024	Virtual Classroom (GMT / UTC)	GMT	English	Instructor Led Online		€2,350.00

## Additional Information

This training is also available as onsite training. [Please contact us to find out more.](#)