

VMware vSphere: Optimize & Scale

Duration: 5 Days **Course Code: VSOS** **Version: 7.0**

Overview:

This five-day VMware vSphere Optimize and Scale course teaches you advanced skills for configuring and maintaining a highly available and scalable virtual infrastructure. Through a mix of lecture and hands-on labs, you configure and optimize the VMware vSphere® 7 features that build a foundation for a truly scalable infrastructure, and you discuss when and where these features have the greatest effect.

Attend this course to deepen your understanding of vSphere and learn how its advanced features and controls can benefit your organization.

Product Alignment: ESXi 7vCenter Server 7

Remark: This training is also advised for students who want to be trained for vSphere v6.5 or v6.7. This training can also be used as preparation for a VMware VCP-Data Center Virtualization certification (VCP-DCV). If you work with, or are interested in a VMware vSphere 8 environment, we recommend you to attend [this training](#)

Target Audience:

Experienced system administrators System engineers System integrators

Objectives:

- By the end of the course, you should be able to meet the following objectives:
- Configure and manage vSphere networking and storage for a large and sophisticated enterprise
- Use VMware vSphere® Client™ to manage certificates
- Use Identity Federation to configure VMware vCenter Server® to use Microsoft ADFS
- Use VMware vSphere® Trust Authority™ to secure the infrastructure for encrypted VMs
- Use host profiles to manage VMware ESXi™ host compliance
- Create and manage a content library for deploying virtual machines
- Manage VM resource usage with resource pools
- Monitor and analyze key performance indicators for compute, storage, and networking resources for ESXi hosts
- Optimize the performance of ESXi and VMware vCenter Server®
- Discuss the purpose and capabilities of VMware vSphere® with Kubernetes and how it fits into the VMware Tanzu™ portfolio

Prerequisites:

You must complete one of the following prerequisites:

- Understanding of concepts presented in the VMware vSphere: Install, Configure, Manage [V7] - VSICM course
 - Equivalent knowledge and administration experience with ESXi and vCenter Server
- Experience with working at the command line is highly recommended.
- VSICM - VMware vSphere: Install, Configure, Manage

Follow-on-Courses:

- VSD - VMware vSphere: Design

Content:

1 Course Introduction	<ul style="list-style-type: none">• Describe identity federation and recognize its use cases	<ul style="list-style-type: none">• Use esxtop to monitor key storage performance metrics
<ul style="list-style-type: none">• Introductions and course logistics• Course objectives	<ul style="list-style-type: none">• Configure identity federation	8 Network Optimization
2 Network Scalability	<ul style="list-style-type: none">• Describe the benefits and use cases of vSphere Trust Authority• Configure vSphere Trust Authority• Use host profiles to manage ESXi configuration compliance• Manage and update VM templates in content libraries• Create and manage resource pools in a cluster	<ul style="list-style-type: none">• Explain performance features of network adapters• Explain the performance features of vSphere networking• Use esxtop to monitor key network performance metrics
<ul style="list-style-type: none">• Configure and manage vSphere distributed switches• Describe how VMware vSphere® Network I/O Control enhances performance• Explain distributed switch features such as port mirroring and NetFlow	5 CPU Optimization	9 vCenter Server Performance Optimization
3 Storage Scalability	<ul style="list-style-type: none">• Explain why VMware vSphere® VMFS is a high-performance, scalable file system• Explain VMware vSphere® Storage APIs - Array Integration, VMware vSphere® API for Storage	<ul style="list-style-type: none">• Describe the factors that influence vCenter Server performance• Use VMware vCenter® Server Appliance™ tools to monitor resource use
Awareness™, and vSphere APIs for I/O Filtering	<ul style="list-style-type: none">• Explain the CPU scheduler operation and other features that affect CPU performance• Explain NUMA and vNUMA support• Use esxtop to monitor key CPU performance metrics	10 Introduction to vSphere with Kubernetes
<ul style="list-style-type: none">• Configure and assign virtual machine storage policies• Create VMware vSAN™ storage policies• Configure VMware vSphere® Storage DRS™ and VMware vSphere® Storage I/O Control• Discuss vSphere support for NVMe and iSER	6 Memory Optimization	<ul style="list-style-type: none">• Differentiate between containers and virtual machines• Identify the parts of a container system• Recognize the basic architecture of Kubernetes• Describe a basic Kubernetes workflow• Describe the purpose of vSphere with Kubernetes and how it fits into the VMware Tanzu portfolio• Explain the vSphere with Kubernetes supervisor cluster
4 Host and Management Scalability	<ul style="list-style-type: none">• Explain ballooning, memory compression, and host-swapping techniques for memory reclamation when memory is overcommitted• Use esxtop to monitor key memory performance metrics	
<ul style="list-style-type: none">• Use the vSphere Client to manage vSphere certificates	7 Storage Optimization	<ul style="list-style-type: none">• Describe the Tanzu Kubernetes Grid service
	<ul style="list-style-type: none">• Describe storage queue types and other factors that affect storage performance	

Further Information:

For More information, or to book your course, please call us on 00 20 (0) 2 2269 1982 or 16142

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