

# VMware vSphere: Optimize and Scale [V7]

Kód kurzu: VMWVSOS7

Tento pětidenní kurz vás naučí pokročilé dovednosti pro konfiguraci a údržbu vysoce dostupné a škálovatelné virtuální infrastruktury. Prostřednictvím kombinace prezentace a praktických labů konfiguruje a optimalizuje funkce VMware vSphere® 7, které vytvářejí základ pro skutečně škálovatelnou infrastrukturu. Můžete diskutovat o tom, kdy a kde tyto funkce mají největší účinek. Zúčastněte se tohoto kurzu, abyste prohloubili své porozumění vSphere a zjistili, jak jeho pokročilé funkce a ovládací prvky mohou prospět vaší organizaci.

Pobočka	Dnů	Cena kurzu	ITB
Praha	5	55 000 Kč	0
Bratislava	5	2 250 €	0

Uvedené ceny jsou bez DPH.

## Termíny kurzu

Datum	Dnů	Cena kurzu	Typ výuky	Jazyk výuky	Lokalita
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Uvedené ceny jsou bez DPH.

## Pro koho je kurz určen

Experienced system administrators, system engineers, and system integrators

## Co Vás naučíme

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

## Požadované vstupní znalosti

You must complete one of the following prerequisites:

- Understanding of concepts presented in the VMware vSphere: Install, Configure, Manage [V7] course
- Equivalent knowledge and administration experience with ESXi and vCenter Server

Experience with working at the command line is highly recommended.

## Studijní materiály

Studijní materiál VMware

## Osnova kurzu

### 1 Course Introduction

- Introductions and course logistics
- Course objectives

### 2 Network Scalability

- Configure and manage vSphere distributed switches

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- Describe how VMware vSphere® Network I/O Control enhances performance
  - Explain distributed switch features such as port mirroring and NetFlow
- ### 3 Storage Scalability
- Explain why VMware vSphere® VMFS is a high-performance, scalable file system
  - Explain VMware vSphere® Storage APIs - Array Integration, VMware vSphere® API for Storage Awareness™, and vSphere APIs for I/O Filtering
  - Configure and assign virtual machine storage policies
  - Create VMware vSAN™ storage policies
  - Configure VMware vSphere® Storage DRST™ and VMware vSphere® Storage I/O Control
  - Discuss vSphere support for NVMe and iSER
- ### 4 Host and Management Scalability
- Use the vSphere Client to manage vSphere certificates
  - Describe identity federation and recognize its use cases
  - Configure identity federation
  - 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
- ### 5 CPU Optimization
- 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
- ### 6 Memory Optimization
- Explain ballooning, memory compression, and host-swapping techniques for memory reclamation when memory is overcommitted
  - Use esxtop to monitor key memory performance metrics
- ### 7 Storage Optimization
- Describe storage queue types and other factors that affect storage performance
  - Use esxtop to monitor key storage performance metrics
- ### 8 Network Optimization
- Explain performance features of network adapters
  - Explain the performance features of vSphere networking
  - Use esxtop to monitor key network performance metrics
- ### 9 vCenter Server Performance Optimization
- Describe the factors that influence vCenter Server performance
  - Use VMware vCenter® Server Appliance™ tools to monitor resource use

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## 10 Introduction to vSphere with Kubernetes

- 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
- Describe the Tanzu Kubernetes Grid service

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