

VMware vSphere: Optimize and Scale [V6.5]

Duration: 5 Days · **Training format:** Virtual Classroom / Online

Description

This five-day course will teach you advanced skills for configuring and maintaining a highly available and scalable virtual infrastructure. Through a mix of lecture and hands-on labs, you will configure and optimize the vSphere features that build a foundation for a truly scalable infrastructure, and you will discuss when and where these features have the greatest effect. Anyone who is ready to take their understanding of vSphere to a deeper level and learn how to use advanced features and controls will greatly benefit from this course.

Delegates will learn how to

- Configure and manage ESXi networking and storage for a large and sophisticated enterprise
- Manage changes to the vSphere environment
- Optimize the performance of all vSphere components
- Harden the vSphere environment against security threats
- Use VMware vSphere® Client™, VMware vSphere® Web Client, and VMware vSphere® ESXi™ Shell to manage vSphere
- Use VMware vSphere® Auto Deploy™ to provision ESXi hosts
- Use VMware vRealize® Log Insight™ to monitor system logs
- Deploy VMware vCenter® Server Appliance™ to be highly available and optimized for performance

Outline

Course Introduction

- Introductions and course logistics
- Course objectives
- Identify additional resources for after this course
- Identify other VMware Education offerings

Network Scalability

- Configure and manage vSphere distributed switches

- Explain distributed switch features such as port mirroring, LACP, QoS tagging, and NetFlow

Storage Scalability

- Explain vSphere storage APIs for array integration and storage awareness
- Configure and assign virtual machine storage policies
- Configure VMware vSphere Storage DRS and VMware vSphere Storage I/O Control
- Create and use virtual volumes in vSphere

Host and Management Scalability

- Explain the uses of VMware vCenter® Converter™
- Define and use content libraries
- Describe and use host profiles
- Describe and use VMware vSphere® ESXi™ Image Builder CLI and vSphere Auto Deploy

CPU Optimization

- Explain the CPU scheduler operation, NUMA support, and other features that affect CPU performance
- Use esxtop to monitor key CPU performance metrics

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

Storage Optimization

- Describe factors that affect storage performance
- Use esxtop to monitor key storage performance metrics

Network Optimization

- Explain the performance features of network adapters
- Explain the performance features of vSphere networking
- Use esxtop to monitor key network performance metrics

Analyzing vSphere

- Explain how Proactive DRS enhances virtual machine availability
- Use vRealize Log Insight to identify and troubleshoot issues

vCenter Server Availability and Performance

- Explain the native high availability feature of vCenter Server and VMware Platform

Services Controller

- Configure vCenter Server and Platform Services Controller high availability
- Understand what factors influence vCenter Server performance

vSphere Security

- Configure ESXi host access and authorization
- Secure ESXi, vCenter Server, and virtual machines
- Use VMware Certificate Authority to configure vSphere certificate management
- Configure vSphere to encrypt virtual machines, core dumps, and VMware vSphere vMotion

Prerequisites

VMware vSphere 6.5: Install, Configure, Manage