VMware vSphere: Optimize and Scale [V6.5]

Code: EDU-VSOS65
Length: 5 days
URL: View Online

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.

Skills Gained

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

- 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

Who Can Benefit

Experienced system administrators, System engineers, System integrators

Prerequisites

This course requires completion of one of the following prerequisites:

- Understanding of concepts presented in the VMware vSphere: Install, Configure, Manage [V6.5] course

- Equivalent knowledge and administration experience with ESXi and vCenter Server
- Experience with working at the command prompt is highly recommended

Course Details

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®

Schedule (as of 4)

Date	Location