

VMware vSphere: Optimize and Scale 5.1

This training course, for experienced VMware vSphere® personnel, teaches advanced skills for configuring and maintaining a highly available and scalable virtual infrastructure. The course is based on VMware vSphere® ESXi™ 5.1 and VMware® vCenter Server™ 5.1.

SKU: VPND-VSOPTIMIZE

Class Duration: 5 days

Associated Certifications: VCAP5-DCA: VMware Certified Advanced Professional – Datacenter Administration [V5] certification

What you'll learn

- 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
- Troubleshoot operational faults and identify their root causes
- Use VMware vSphere ESXi Shell and VMware vSphere Management Assistant to manage vSphere
- Use VMware vSphere Auto Deploy to provision ESXi hosts
- 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
- Troubleshoot operational faults and identify their root causes
- Use VMware vSphere ESXi Shell and VMware vSphere Management Assistant to manage vSphere
- Use VMware vSphere Auto Deploy to provision ESXi hosts

Who Should attend

- Experienced system administrators and system integrators

Prerequisites

Knowledge and administration experience with ESXi and vCenter Server Experience working at the command prompt is highly recommended or completion of one of the following courses:

- VMware vSphere: Install, Configure, Manage
- VMware vSphere: Fast Track

Follow-On Courses

- VMware vSphere: Design Workshop

Course Outline

1 Course Introduction

- Introductions and course logistics
- Course objectives

2 VMware Management Resources

- Configure vMA
- Understand the esxcli and vicfg commands
- Configure ESXi technical support mode and SSH access
- Understand important ESXi and vCenter Server log files

3 Performance in a Virtualized Environment

- Understand the vSphere performance troubleshooting methodology
- Understand software and hardware virtualization techniques and their effects on performance
- Use vSphere performance monitoring tools

4 Network Scalability

- Create, configure, and manage vSphere distributed switches
- Migrate virtual machines from standard switches to distributed switches
- Understand distributed switch features such as PVLANs, VMware vSphere® Network I/O Control, port mirroring, and NetFlow

5 Network Optimization

- Understand performance features of network adapters
- Understand performance features of vSphere networking
- Monitor key network performance metrics
- Use vMA to manage virtual network configuration
- Troubleshoot common network performance problems

6 Storage Scalability

- Configure storage multipathing
- Understand vSphere storage APIs for array integration and storage awareness
- Explain profile-driven storage
- Add a storage policy to a virtual machine storage profile
- Describe VMware vSphere® Storage DRS™ operation
- Configure Storage DRS and VMware vSphere® Storage I/O Control

7 Storage Optimization

- Diagnose storage access problems
- Understand how storage protocols, VMware vSphere® VMFS configuration, load balancing, and queuing affect performance
- Monitor key storage performance metrics
- Use vMA to manage virtual storage
- Troubleshoot common storage performance problems

8 CPU Optimization

- Understand CPU scheduler and other features that affect CPU performance
- Monitor key CPU performance metrics
- Troubleshoot common CPU performance problems

9 Memory Optimization

- Understand memory reclamation techniques and overcommitment
- Monitor key memory performance metrics
- Troubleshoot common memory performance problems

10 Virtual Machine and Cluster Optimization

- Understand performance guidelines for virtual machines, resource allocation settings, VMware vSphere® Distributed Resource Scheduler™ clusters, resource pools, and VMware vSphere® High Availability admission control policies
- Troubleshoot virtual machine power-on failures

- Troubleshoot vSphere cluster problems

11 Host and Management Scalability

- Understand how vCenter Linked Mode manages multiple vCenter Server inventories
- Explain VMware vSphere® Distributed Power Management™
- Use Host Profiles to manage ESXi configuration compliance
- Use VMware vSphere® PowerCLI™ to perform vSphere administrative tasks
- Use Image Builder to create an ESXi installation image
- Use vSphere Auto Deploy to provision ESXi hosts