



VMware vSphere: Optimize and Scale [V6.0] H9P77S

VMware vSphere: Optimize and Scale is designed for experienced VMware vSphere® users. It teaches 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 discuss when and where these features have the greatest effect.

Note: This course is based on beta software.

VMware vSphere: Optimize and Scale [V6.0]

Price USD \$4,500

Links to local schedules, pricing and registration [US/Canada](#)
[Mexico/Latin America](#)
[Brazil](#)

HPE course # H9P77S

Category VMware

Duration 5 days

Special note

- Purchase method(s): 5 units of HPE Training Credits for VMware Services ([HF386E/A/D](#)), or Credit Card, or Purchase Order or VMware PSO credits

Audience

- Experienced system administrators
- Systems engineers
- System integrators

Prerequisites

Completion of one of the following courses:

- VMware vSphere: Install, Configure, Manage [5.5 or 6]
- VMware vSphere: Fast Track
- Equivalent knowledge and administration experience with ESXi and vCenter Server
- Experience working at the command prompt is highly recommended

Course 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
- 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

Course outline

Module 1: Course Introduction

- Introductions and course logistics
- Course objectives
- Additional resources

Module 2: Mware Management Resources

- Understand the purpose of VMware vSphere® Command-Line Interface commands
- Discuss options for running vSphere CLI commands
- Deploy and configure vSphere Management Assistant
- Use vmware-cmd for virtual machine operations

Module 3: vSphere Security

- Describe the features and benefits of the Platform Services Controller
- Configure ESXi host access and authorization
- Secure ESXi, vCenter Server, and virtual machines

Module 4: Performance in a Virtualized Environment

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

Module 5: Network Scalability

- Create, configure, and manage vSphere distributed switches
- Migrate virtual machines from standard switches to distributed switches
- Explain distributed switch features such as port mirroring, LACP, QoS tagging, and NetFlow

Module 6: Network Performance Troubleshooting

- Explain the performance features of network adapters
- Explain the performance features of vSphere networking
- Monitor key network performance metrics
- Use vSphere Management Assistant to manage virtual network configurations
- Troubleshoot common network performance problems

Module 7: 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

Module 8: Storage Optimization

- Diagnose storage access problems
- Configure VMware vSphere® Flash Read Cache™
- Monitor key storage performance metrics
- Troubleshoot common storage performance problems

Module 9: CPU Performance

- Explain the CPU scheduler operation, NUMA support, and other features that affect CPU performance
- Monitor key CPU performance metrics
- Troubleshoot common CPU performance problems

Module 10: Memory Performance

- Explain ballooning, memory compression, and host swapping techniques for memory reclamation when memory is overcommitted
- Monitor key memory performance metrics
- Troubleshoot common memory performance problems

Module 11: Virtual Machine and Cluster Optimization

- Describe guidelines for optimizing virtual machine configuration
- Discuss how vGPU usage affects virtual machine performance
- Discuss guidelines for using resource allocation settings
- Discuss guidelines for using resource pools
- Discuss guidelines for using vSphere DRS clusters
- Troubleshoot common vSphere cluster problems

Module 12: Host and Management Scalability

- Describe and use host profiles
- Define and use content libraries
- Upgrade ESXi and vCenter Server instances
- Use VMware vSphere® PowerCLI™
- Use Virtual Machine Converter
- Use VMware vSphere® ESXi™ Image Builder CLI and vSphere Auto Deploy

Learn more at

hpe.com/us/training/vmware

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