

## **VMware vSphere: Optimize and Scale [V6.7]**

### 1 Course Introduction

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

### 2 Network Scalability

- Configure and manage vSphere distributed switches
- Describe how VMware vSphere® Network I/O Control enhances performance
- Explain distributed switch features such as port mirroring, LACP, QoS tagging, 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 vSAN storage policies
- Configure VMware vSphere® Storage DRS™ and VMware vSphere® Storage I/O Control

### 4 Host and Management Scalability

- Define and use content libraries
- Describe and use host profiles
- Describe and use VMware vSphere® ESXi™ Image Builder CLI and vSphere Auto Deploy

### 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 the 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 usage

### 10 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® migrations