

Overview

This hands-on trainings course explores installation, configuration, and management of VMware vSphere®, which consists of VMware ESXi™ and VMware vCenter Server™. The course is based on ESXi 5.0 and vCenter Server 5.0. Completion of this course satisfies the prerequisite for taking the VMware® Certified Professional 5 exam.

Students who complete this course may enroll in any of several more advanced vSphere courses. For advanced course options, see www.vmware.com/education.

Course Objectives

At the end of the course, you should gain an understanding of the functionality in vSphere 5 and be able to do the following:

- Install and configure ESXi
- Install and configure vCenter Server components
- Configure and manage ESXi networking and storage using vCenter Server
- Deploy, manage, and migrate virtual machines
- Manage user access to the VMware infrastructure
- Use vCenter Server to monitor resource usage
- Use vCenter Server to increase scalability
- Use VMware vCenter™ Update Manager to apply ESXi patches
- Use vCenter Server to manage higher availability and data protection

Target Audience

- System administrators
- Systems engineers
- Operators responsible for ESXi and vCenter Serve

Prerequisites

System administration experience on Microsoft Windows or Linux operating systems.

Course Modules

1. Course Introduction
 - Introductions and course logistics
 - Course objectives
2. Introduction to VMware Virtualization
 - Introduce virtualization, virtual machines, and vSphere components
 - Explain the concepts of server, network, and storage virtualization
 - Describe where vSphere fits into the cloud architecture
 - Install and use vSphere user interfaces
3. Create Virtual Machines
 - Introduce virtual machines, virtual machine hardware, and virtual machine files
 - Deploy a single virtual machine
4. VMware vCenter Server
 - Introduce vCenter Server architecture
 - Introduce vCenter Server appliance
 - Configure and manage vCenter Server appliance
 - Manage vCenter Server inventory objects and licenses
5. Configure and Manage Virtual Networks
 - Describe, create, and manage a standard virtual switch
 - Describe and modify standard virtual switch properties
 - Configure virtual switch load-balancing algorithms
6. Configure and Manage Virtual Storage
 - Introduce storage protocols and device names
 - Configure ESXi with iSCSI, NFS, and Fibre Channel storage
 - Create and manage vSphere datastores
 - Deploy and manage the VMware vSphere® Storage Appliance
7. Virtual Machine Management
 - Deploy virtual machines using templates and cloning
 - Modify and manage virtual machines
 - Create and manage virtual machine snapshots
 - Perform VMware vSphere® vMotion® and Storage vMotion migrations
 - Create a vSphere vApp

8. Data Protection
 - Discuss a strategy for backing up ESXi hosts and vCenter Server
 - Introduce the VMware Data Recovery appliance
 - Discuss solutions for backing up virtual machines efficiently
9. Access and Authentication Control
 - Control user access through roles and permissions
 - Configure and manage the ESXi firewall
 - Configure ESXi lockdown mode
 - Integrate ESXi with Active Directory
 - Introduce VMware vShield Zones
10. Resource Management and Monitoring
 - Introduce virtual CPU and memory concepts
 - Describe methods for optimizing CPU and memory usage
 - Configure and manage resource pools
 - Monitor resource usage using vCenter Server performance graphs and alarms
11. High Availability and Fault Tolerance
 - Introduce new vSphere High Availability (HA) architecture
 - Configure and manage a vSphere High Availability cluster
 - Introduce VMware Fault Toleranc
12. Scalability
 - Configure and manage a VMware Distributed Resource Scheduler (DRS) cluster
 - Configure Enhanced vMotion Compatibility
 - Use vSphere HA and DRS together
13. Patch Management
 - Manage ESXi patching using vCenter Update Manager
 - Install Update Manager and Update Manager plug-in
 - Create patch baselines
 - Scan and remediate hosts
14. Installing VMware Components
 - Introduce ESXi installation
 - Describe boot from SAN requirements
 - Introduce vCenter Server deployment options
 - Describe vCenter Server hardware, software, and database requirements
 - Install vCenter Server (Windows based)