

TITLE	DURATION
VMware vSphere: Install, Configure, Manage [V5.0]	40H

Overview This hands-on training 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

- Objectives**
- 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

- Who Should Attend?**
- System administrators
 - Systems engineers
 - Operators responsible for ESXi and vCenter Server

Prerequisites System administration experience on Microsoft Windows or Linux operating systems

- Outline**
- Course Introduction**
- Introductions and course logistics
 - Course objectives
- 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

Virtual Machines

- Introduce virtual machines, virtual machine hardware, and virtual machine files
- Deploy a single virtual machine and virtual machine appliance

VMware vCenter Server

- Identify vCenter Server and database requirements
- Describe vCenter Server architecture
- Deploy a vCenter Server appliance
- View and create vCenter Server inventory objects

Configure and Manage Virtual Networks

- Describe, create, and manage a standard virtual switch
- Describe and modify standard virtual switch properties

Configure and Manage vSphere Storage

- Configure ESXi with iSCSI, NFS, and Fibre Channel storage
- Create and manage vSphere datastores
- Configure, deploy, and manage the VMware Virtual Storage Appliance

Virtual Machine Management

- Deploy virtual machines using templates, cloning, and VMware vCenter Converter™
- Modify and manage virtual machines
- Create and manage virtual machine snapshots
- Perform VMware vMotion® and Storage vMotion migrations

Access and Authentication Control

- Control user access through roles and permissions
- Configure and manage the ESXi firewall
- Integrate ESXi with Active Directory
- Introduce vShield Zones

Resource Management and Monitoring

- Control virtual machine access to CPU, memory, and I/O resources
- Introduce VMkernel methods for optimizing CPU and memory usage
- Monitor resource usage using vCenter Server performance graphs and alarms

Data Protection

- Discuss strategies for backing up ESXi hosts
- Introduce the backup/recovery APIs
- Discuss strategies for backing up virtual machines

High Availability and Fault Tolerance

- Configure and manage a VMware High Availability (HA) cluster
- Configure fault-tolerant virtual machines using VMware Fault Tolerance

Scalability

- Configure and manage a VMware Distributed Resource Scheduler (DRS) cluster
- Configuring Enhanced vMotion Compatibility
- Using VMware HA and DRS together

Patch Management

- Manage ESXi patching and patch compliance using vCenter Update Manager

Installing VMware vSphere 5 Components

- Introduce ESXi Installable installation
- Introduce vCenter Server installation
- Additional vCenter Server module installation