

# VMware vSphere: Install, Configure, Manage

## Course Overview

This five-day course features intensive hands-on training that focuses on installing, configuring, and managing VMware vSphere® 6.7, which includes VMware ESXi™ 6.7 and VMware vCenter Server® 6.7. This course prepares you to administer a vSphere infrastructure for an organization of any size.

This course is the foundation for most of the other VMware technologies in the software-defined data center.

## Course Objectives

By the end of the course, you should be able to meet the following objectives:

- Describe the software-defined data center
- Explain the vSphere components and their function in the infrastructure
- Add ESXi hosts to a VMware vCenter® Server Appliance™ instance
- Manage vCenter Server Appliance
- Use a local content library as an ISO store, and deploy a virtual machine
- Describe vCenter Server architecture
- Use vCenter Server to manage an ESXi host
- Configure and manage vSphere infrastructure with VMware Host Client™ and VMware vSphere® Client™
- Describe virtual networks with vSphere standard switches
- Configure standard switch policies
- Use vCenter Server to manage various types of host storage: VMware vSphere® VMFS, NFS, iSCSI, and RDM
- Examine the features and functions of Fibre Channel and VMware vSAN™
- Manage virtual machines, templates, clones, and snapshots
- Migrate virtual machines with VMware vSphere® vMotion®
- Migrate virtual machine storage with VMware vSphere® Storage vMotion®
- Monitor resource usage, and manage resource pools
- Discuss the VMware vSphere® High Availability (vSphere HA) cluster architecture
- Configure vSphere HA
- Manage vSphere HA and VMware vSphere® Fault Tolerance
- Use VMware vSphere® Replication™ and VMware vSphere® Data Protection™ to replicate virtual machines and perform data recovery
- Use VMware vSphere® Distributed Resource Scheduler™ clusters to improve host scalability
- Use VMware vSphere® Update Manager™ to apply patches and perform basic troubleshooting of ESXi hosts, virtual machines, and vCenter Server operations
- Identify troubleshooting methodology to logically diagnose faults and improve troubleshooting efficiency

## Target Audience

- System administrators
- System engineers

## Prerequisites

This course has the following prerequisites:

- System administration experience on Microsoft Windows or Linux operating systems

## Certifications

This course prepares you for the following certification:

- [VMware Certified Professional 6.5 – Data Center Virtualization \(VCP6.5-DCV\)](#)

## Course Delivery Options

- Classroom
- Live Online
- [Onsite](#)
- [On Demand](#)

## Product Alignment

- ESXi 6.7
- vCenter Server 6.7
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## Course Modules

- 1 Course Introduction
  - Introductions and course logistics
  - Course objectives
  - Describe the content of the course
  - Gain a complete picture of the VMware certification system
  - Familiarize yourself with the benefits of the VMware Education Learning Zone
  - Identify additional resources
- 2 Introduction to vSphere and the Software-Defined Data Center
  - Describe how vSphere fits into the software-defined data center and the cloud infrastructure
  - Explain how vSphere interacts with CPUs, memory, networks, and storage
  - Use vSphere Client to access and manage your vCenter Server system and ESXi host
  - Compare virtual machine hardware version 14 to other versions
  - Identify the virtual network adapters, and describe the enhanced VMXNET3
  - Compare the types of virtual disk provisioning
  - Install and configure ESXi host settings
  - Identify the advantages of ESXi Quick Boot
- 3 Creating Virtual Machines
  - Create, provision, and remove a virtual machine
  - Explain the importance of VMware Tools™
  - Describe how to import a virtual appliance OVF template
- 4 vCenter Server
  - Describe the vCenter Server architecture
  - Discuss how ESXi hosts communicate with vCenter Server
  - Access and configure vCenter Server Appliance
  - Use vSphere Client to manage the vCenter Server inventory
  - Add data center, organizational objects, and hosts to vCenter Server
  - Create custom inventory tags
  - Describe the rules for applying permissions
  - Create a custom role in vCenter Server
  - Create a vCenter Server Appliance backup schedule
  - Restore vCenter Server Appliance from a backup
  - Monitor vCenter Server Appliance
- 5 Configuring and Managing Virtual Networks
  - Describe, create, and manage standard switches
  - Configure virtual switch security, traffic-shaping and load-balancing policies
  - Compare vSphere distributed switches and standard switches
  - Describe the virtual switch connection types
- 6 Configuring and Managing Virtual Storage
  - Describe the new TCP/IP stack architecture
  - Use VLANs with standard switches
  - Identify storage protocols and storage device types
  - Discuss ESXi hosts using iSCSI, NFS, and Fibre Channel storage
  - Create and manage VMware vSphere® VMFS and NFS datastores
  - Explain how multipathing works with iSCSI, NFS, and Fibre Channel storage
  - Identify the advantages of VMware vSAN™
- 7 Virtual Machine Management
  - Use templates and cloning to deploy new virtual machines
  - Modify and manage virtual machines
  - Create an instant clone of a virtual machine
  - Identify the types of content libraries and how to deploy and use them
  - Add a hot-pluggable device
  - Dynamically increase the size of a virtual disk
  - Use customization specification files to customize a new virtual machine
  - Perform vSphere vMotion and vSphere Storage vMotion migrations
  - Create and manage virtual machine snapshots
- 8 Resource Management and Monitoring
  - Discuss CPU and memory concepts in a virtualized environment
  - Describe what overcommitment of a resource means
  - Identify additional technologies that improve memory usage
  - Configure and manage resource pools
  - Describe methods for optimizing CPU and memory usage
  - Use various tools to monitor resource usage
  - Create and use alarms to report certain conditions or events
- 9 vSphere HA, vSphere Fault Tolerance, and Protecting Data
  - Explain the vSphere HA architecture
  - Configure and manage a vSphere HA cluster
  - Use vSphere HA advanced parameters
  - Enforce infrastructural or intra-app dependencies during failover
  - Describe vSphere HA heartbeat networks and datastore heartbeats
  - Examine the features and functions of vSphere Fault Tolerance
  - Enable vSphere Fault Tolerance on virtual machines

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- Support vSphere Fault Tolerance interoperability with vSAN
- Examine enhanced consolidation of vSphere Fault Tolerance virtual machines
- Examine the features and functions of vSphere Replication

### 10 vSphere DRS

- Describe the functions of a vSphere DRS cluster
- Create a vSphere DRS cluster
- View information about a vSphere DRS cluster
- Configure virtual machine affinity, DRS groups, and VM-host affinity rules
- Remove a host from a vSphere DRS cluster

### 11 vSphere Update Manager

- Describe the architecture, components, and capabilities of vSphere Update Manager
- Use vSphere Update Manager to manage the patching of ESXi, virtual machines, and vApps
- Examine the features and functions of vSphere Update Manager EAM integration
- Integrate vSphere Update Manager with vSphere DRS

### 12 vSphere Troubleshooting

- Apply a troubleshooting methodology to logically diagnose faults and improve troubleshooting efficiency
- Review troubleshooting tools
- Find important log files
- Use vSphere Syslog Collector

## Contact

If you have questions or need help registering for this course, click [here](#).



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