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® 7, which includes VMware ESXi™ 7 and VMware vCenter Server® 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 (SDDC)
• Explain the vSphere components and their function in the infrastructure
• Install and configure ESXi hosts
• Deploy and configure VMware vCenter® Server Appliance™
• Use VMware vSphere® Client™ to manage the vCenter Server inventory and the vCenter Server configuration
• Manage, monitor, back up, and protect vCenter Server Appliance
• Create virtual networks with vSphere standard switches
• Describe the storage technologies supported by vSphere
• Configure virtual storage using iSCSI and NFS storage
• Create and manage VMware vSphere® VMFS datastores
• Use the vSphere Client to create virtual machines, templates, clones, and snapshots
• Create a content library and deploy virtual machines from templates in the library
• Manage virtual machine resource use
• Migrate virtual machines with VMware vSphere® vMotion® and VMware vSphere® Storage vMotion®
• Create and manage a vSphere cluster that is enabled with VMware vSphere® High Availability and VMware vSphere® Distributed Resource Scheduler™
• Discuss solutions for managing the vSphere life cycle
• Use VMware vSphere® Lifecycle Manager™ to perform upgrades to ESXi hosts and virtual machines

Target Audience
• System administrators
• System engineers
Prerequisites
This course has the following prerequisites:

• System administration experience on Microsoft Windows or Linux operating systems

Certifications
Attending this course meets the training requirement to achieve the following certification:

• **VMware Certified Professional – Data Center Virtualization (VCP-DCV)**

Course Delivery Options

• Classroom
• Live Online
• **Onsite**
• **On Demand**

Product Alignment

• VMware ESXi 7.0
• VMware vCenter Server 7.0
Course Modules

1  Course Introduction
   •  Introductions and course logistics
   •  Course objectives

2  Introduction to vSphere and the Software-Defined Data Center
   •  Explain basic virtualization concepts
   •  Describe how vSphere fits into the software-defined data center and the cloud infrastructure
   •  Explain how vSphere interacts with CPUs, memory, networks, and storage
   •  Recognize the user interfaces for accessing the vCenter Server system and ESXi hosts
   •  Describe the ESXi host architecture
   •  Navigate the Direct Console User Interface (DCUI) to configure an ESXi host
   •  Recognize ESXi host user account best practices
   •  Install an ESXi host
   •  Use VMware Host Client™ to configure ESXi host settings

3  Virtual Machines
   •  Create and provision a virtual machine
   •  Explain the importance of VMware Tools™
   •  Install VMware Tools
   •  Identify the files that make up a VM
   •  Recognize the components of a VM
   •  Recognize virtual devices supported by a VM
   •  Describe the benefits and use cases for containers
   •  Identify the parts of a container system

4  vCenter Server
   •  Describe the vCenter Server architecture
   •  Discuss how ESXi hosts communicate with vCenter Server
   •  Deploy and configure vCenter Server Appliance
   •  Use vSphere Client to manage the vCenter Server inventory
   •  Add data center, organizational objects, and hosts to vCenter Server
   •  Use roles and permissions to enable users to access objects in the vCenter Server inventory
   •  Back up vCenter Server Appliance

5  Configuring and Managing Virtual Networks
   •  Create and manage standard switches
   •  Describe the virtual switch connection types
   •  Configure virtual switch security, traffic-shaping, and load-balancing policies
   •  Compare vSphere distributed switches and standard switches

6  Configuring and Managing Virtual Storage
   •  Identify storage protocols and storage device types
   •  Discuss ESXi hosts using iSCSI, NFS, and Fibre Channel storage
   •  Create and manage VMFS and NFS datastores
   •  Explain how multipathing works with iSCSI, NFS, and Fibre Channel storage
   •  Recognize the components of a VMware vSAN™ configuration

7  Virtual Machine Management
   •  Use templates and cloning to deploy new virtual machines
   •  Modify and manage virtual machines
   •  Create a content library and deploy virtual machines from templates in the library
   •  Use customization specification files to customize a new virtual machine
   •  Perform vSphere vMotion and vSphere Storage vMotion migrations
   •  Describe the Enhanced vMotion Compatibility feature
   •  Create and manage virtual machine snapshots
   •  Examine the features and functions of VMware vSphere® Replication™
   •  Describe the benefits of VMware vSphere® Storage APIs – Data Protection

8  Resource Management and Monitoring
   •  Discuss CPU and memory concepts in a virtualized environment
   •  Monitor vCenter Server tasks, events, and appliance health
   •  Use VMware vCenter Server® High Availability to protect a vCenter Server Appliance
• Describe what overcommitment of a resource means
• Describe methods for optimizing CPU and memory usage
• Use various tools to monitor resource use
• Create and use alarms to report certain conditions or events

9 vSphere Clusters
• Describe the functions of a vSphere DRS cluster
• Create a vSphere DRS cluster
• Monitor a vSphere cluster configuration
• Describe options for making a vSphere environment highly available
• Explain the vSphere HA architecture
• Configure and manage a vSphere HA cluster
• Examine the features and functions of VMware vSphere® Fault Tolerance

10 vSphere Lifecycle Management
• Recognize the importance of vCenter Server Update Planner
• Describe how VMware vSphere® Lifecycle Manager™ works
• Describe how to update ESXi hosts using baselines
• Validate ESXi host compliance using a cluster image
• Describe how to upgrade VMware Tools and VM hardware

Contact
If you have questions or need help registering for this course, click here.