

VMware Data Center Virtualization: Core Technical Skills



Course Description

This four-day, hands-on training course is an introduction to VMware vSphere®. In this course, you acquire the skills needed to perform Day 2 operational tasks that are typically assigned to the roles of operator or junior administrator in a vSphere environment.

Course Duration:

4 days

Prerequisites:

- Working knowledge of operating systems
- Understanding of basic network, storage, and computer hardware concepts

Objectives:

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

- Describe virtualization and virtual machines
- Describe vSphere components and the software-defined data center (SDDC)
- Explain the concepts of server, network, and storage virtualization
- Monitor network and datastore configurations in VMware vSphere® Client™
- Deploy, configure, and clone virtual machines
- Migrate, monitor, and manage virtual machines
- Monitor tasks and events in VMware vSphere® Client™
- Recognize how vSphere DRS and VMware vSphere® High Availability improve performance and availability of a vSphere cluster

Course Outline:

1. Course Introduction
 - Introductions and course logistics
 - Course objectives
2. Virtualization and vSphere Concepts
 - Describe how virtual machines (VMs) work
 - Recognize the purpose of a hypervisor
 - Describe how VMs share resources in a virtualized environment
 - Recognize the components of an SDDC
 - Describe the relationship between vSphere, the SDDC, and cloud computing
 - Recognize the functions of the components in a vSphere environment
 - Access and view vSphere graphical user interfaces
 - Identify VMware solutions that integrate with vSphere in the SDDC
3. Navigating the vSphere Client
 - View and organize the inventory objects managed by vCenter Server
 - Add and assign vSphere licenses
 - Change the log level of vCenter Server
 - Edit the startup policy of ESXi services

- Describe how vCenter Server roles and permissions work
 - Add permissions to virtual machines
4. Lifecycle of Virtual Machines
 - Add and remove VM virtual hardware components
 - Identify the purpose of different VM files
 - Configure VM settings
 - Create and delete virtual machines
 - Recognize the benefits of installing VMware Tools™
 - Install VMware Tools into a guest operating system
 - Upgrade VMware Tools and VM hardware compatibility
 5. vSphere Networking
 - Describe virtual networking
 - Recognize ways that virtual switches connect VMs and ESXi hosts to the network
 - View components and properties of a vSphere standard switch configuration
 - View a vSphere distributed switch configuration in vSphere Client
 - Recognize when and how to use the settings for the security networking policy
 - Recognize when and how to use the settings for the traffic shaping networking policy
 - Describe how the NIC teaming and failover policy helps maintain network connectivity
 - Perform basic checks to diagnose VM connectivity issues
 6. vSphere Storage
 - Describe the function of a datastore
 - Recognize types of vSphere datastores
 - View datastore information in vSphere Client
 - Monitor datastore usage in vSphere Client
 7. Virtual Machine Management
 - Recognize the benefits of using VM templates
 - Create and update a VM template
 - Deploy a VM from an existing template
 - Clone a virtual machine
 - Recognize how to use guest OS customization specifications
 - Deploy VMs from a content library
 - Deploy a virtual appliance from an OVF template
 - Perform a hot and cold migrations of VMs
 - Identify requirements for using VMware vSphere® Storage vMotion®
 - Perform a vSphere Storage vMotion migration
 - Identify use cases for VM snapshots
 - Create and manage snapshots of a virtual machine
 8. Resource Monitoring
 - Recognize the purpose of each type of VM resource control
 - Configure the resource allocation settings of a VM
 - Observe the behavior of virtual machines with different share values
 - Manage and acknowledge vSphere alarms
 - Use performance charts to monitor VM CPU and memory usage
 - Monitor tasks and events in vSphere Client
 9. vSphere Clusters
 - View information about the services that a vSphere cluster offers
 - Recognize how vSphere HA responds to different types of failures
 - Monitor vSphere HA during a host failure

- Describe how vSphere DRS works
- Interpret DRS scores given to VMs
- Recognize how to apply the appropriate vSphere DRS automation and migration threshold levels
- Describe how vSphere Fault Tolerance works
- Recognize how Enhanced vMotion Compatibility works

Who Should Attend

Technical professionals with basic system administration skills and operators responsible for managing virtual machines using VMware ESXi™ and VMware vCenter Server®