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**Learning Style: Virtual Classroom**

**Provider: VMware**

**Difficulty: Intermediate**

**Course Duration: 2 Days**

## VMware vSphere: Skills for Operators 6.7



## About this course:

The VMware vSphere course is a two-day training course, which focuses solely on the needs of an operator or an administrator who wants to gain a comprehensive understanding of the VMware vCenter Server® 6.7.

This course comprises of real-world scenarios, hands-on experiments, and interactive lectures for you to learn in a better manner.

A VMware Administrator on average earns \$79,681 annually.

## Course Objectives:

At the end of this course, students shall be able to:

- List and explain virtualization, VMware, and vSphere along with their components
- List and explain server, network, storage, and desktop virtualization
- Skills for configuration, cloning, and management of virtual machines
- Monitor virtual machines with vCenter Server
- Use VMware vSphere® vApp(s)<sup>™</sup> for interoperating multiple machines and software applications
- Use VMware vSphere® vMotion® and VMware vSphere® Storage vMotion® to transition to virtual machines
- Use VMware vSphere® Distributed Resource Scheduler<sup>™</sup>, VMware vSphere® High Availability, VMware vSphere® Fault Tolerance, VMware vSphere® Data Protection<sup>™</sup>, and VMware vSphere® Replication<sup>™</sup>

## Audience:

The target audience of this course is system administrators who look after the virtual machines with ESXi and vCenter Server.

## Prerequisites:

Before enrolling for the course, students shall fulfill the following criteria:

- Working experience of Microsoft, Solaris, and Linux
- Strong concepts of networks and storage

## Course Outline:

### Module 1 Course Introduction

- Introductions and course logistics
- Course objectives

### Module 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

### **Module 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

### **Module 4 vCenter Server**

- Describe the vCenter Server architecture
- Discuss how ESXi hosts communicate with vCenter Server
- Use vSphere Client to manage the vCenter Server inventory
- Add data center and organizational objects to vCenter Server
- Add hosts to vCenter Server
- Discuss how to create custom inventory tags for inventory objects
- Monitor VMware vCenter® Server Appliance™
- Monitor vCenter Server Appliance for service and disk space usage
- Use vSphere alarms for resource exhaustion and service failures

### **Module 5 Configuring and Managing Virtual Networks**

- Describe the virtual switch connection types
- Configure and view standard switch configurations, such as virtual machine port group, VMkernel port, VLAN, and security features
- List the features comparison of standard and distributed switches

### **Module 6 Virtual Storage**

- Describe vSphere storage technologies and datastores

### **Module 7 Virtual Machine Management**

- Use templates and cloning to deploy new virtual machines
- Enable guest operating system customization by vCenter Server
- Upgrade a virtual machine's hardware
- Perform an instant clone of a VM
- Describe virtual machine settings and options
- Add a hot-pluggable device
- Dynamically increase the size of a virtual disk
- Add a raw device mapping (RDM) to a virtual machine
- Perform a vSphere vMotion migration
- Perform a vSphere Storage vMotion migration

## Module 8 Resource Management and Monitoring

- Use the performance-tuning methodology and resource monitoring tools
- Use performance charts to view and improve performance
- Monitor the key factors that can affect the virtual machine's performance: CPU, memory, disk, and network bandwidth use
- Create alarms with condition-based triggers
- Create alarms with event-based triggers
- View and acknowledge triggered alarms

## Module 9 vSphere HA

- Describe the options that you can configure to make your vSphere environment highly available
- Discuss the response of vSphere HA when an ESXi host, a virtual machine, or an application fails

## Module 10 vSphere DRS

- Describe the functions of a vSphere DRS cluster
- Create a vSphere DRS cluster
- View information about a vSphere DRS cluster
- Remove a host from a vSphere DRS cluster

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