Course Overview

This four-day course is a combination of the VMware vSphere: Skills for Operators course and the VMware vRealize Operations for Administrators course. The two-day, VMware vSphere: Skills for Operators training course, is for operators and administrators who create and manage virtual machines. This course provides you with an understanding of VMware virtual machine features in VMware vSphere® 6.7. By combining lecture and hands-on labs, you gain the skills required to work effectively with VMware virtual machines. The two-day, VMware vRealize Operations for Administrators course, is designed for data center administrators who are responsible for the day-to-day management of a VMware vSphere® environment using VMware vRealize® Operations™. This course will teach you how to use vRealize Operations as a forensic and predictive tool. The course is based on VMware ESXi™ 6.7, VMware vCenter Server® 6.7, and vRealize Operations 7.0.

Course Objectives

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

- Describe virtualization, virtual machines, and vSphere components
- Describe the concepts of server, network, storage, and desktop virtualization
- Deploy, configure, clone, and manage virtual machines
- Use VMware vCenter Server® to monitor virtual machine resource usage
- Use VMware vSphere® vMotion® and VMware vSphere® Storage vMotion® to migrate virtual machines
- Use VMware vSphere® Distributed Resource Scheduler™ and VMware vSphere® High Availability to optimize the performance of your vSphere virtual environment
- Identify features and benefits of vRealize Operations
- Use interface features to assess and troubleshoot operational issues
- Recognize how to use vRealize Operations components to build scalability and availability
- Recognize effective ways to optimize performance and capacity in data centers
- Troubleshoot and manage issues and configurations using alerts and dashboards
- Create policies to meet the operational needs of your environment

Target Audience

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

Prerequisites

This course has the following prerequisites:

- System administration experience on Microsoft, Linux, and Solaris
- Understanding of basic network and storage concepts
- System administration experience with vSphere deployments
This class requires completion of one of the following courses:

- VMware vSphere: Install, Configure, Manage [V6.x]
- VMware vSphere: Optimize and Scale [V6.x]

## Course Delivery Options

- Classroom
- Live Online
- Onsite

## Product Alignment

- ESXi 6.7
- vCenter Server 6.7
- vRealize Operations 7.0
Course Modules

1 Course Introduction
   • Introductions and course logistics
   • Course objectives

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

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
   • 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

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

6 Virtual Storage
   • Describe vSphere storage technologies and datastores

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

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

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

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

11 Introduction to vRealize Operations
    • Describe how vRealize Operations is used to manage the software-defined data center
    • Describe the features and benefits of vRealize Operations

12 vRealize Operations Concepts
    • Navigate the main pages of the product user interface
    • Use the product UI and the admin UI
    • Use tags, applications, and groups to group related objects in the environment
13 vRealize Operations Architecture
- Describe the function of the components in a node
- Describe the roles in a vRealize Operations cluster

14 Performance Optimization
- Assess the performance of your environment to determine which data centers need optimization
- Define the business and operational intents for your data centers
- Automate the process of optimizing and balancing workloads in your data centers
- Report on the results of your optimization efforts

15 Capacity Optimization
- Define capacity planning terminology and capacity planning models
- Assess the overall capacity of a data center and provide optimization recommendations
- Use what-if scenarios to plan for future capacity requirements
- Assess the cost of running the data centers in your environment

16 Troubleshooting and Managing Configurations
- Use predefined step-by-step workflows to troubleshoot different vSphere objects
- Assess your environment's compliance to standards
- View the configurations of vSphere objects in your environment
- Describe how logs can be accessed by integrating vRealize Operations with VMware vRealize® Log Insight™
- Use inventory trees on the Environment page to monitor vSphere objects
- Monitor the performance of the vRealize Operations instance

17 Policies
- Create policies for various types of workloads
- Explain how policy inheritance works

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