Mildain Solutions

VMware vSphere: Skills for Operators [V6.7]

Summary:

- Formats: **Classroom**, **Live Online**, **Onsite**

- Length: 2 Days

Overview:

This two-day 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.

Product Alignment
• ESXi 6.7
• vCenter Server 6.7

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

Intended 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

Outline:

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