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**Learning Style: Virtual Classroom**

**Technology: VMware**

**Difficulty: Intermediate**

**Course Duration: 5 Days**

## VMware vSphere: Install, Configure, Manage 8.0



### About this Course:

VMware vSphere 8 Administration Course, an immersive five-day learning journey designed to equip you with the essential skills to effectively install, configure, and manage VMware vSphere 8. In this intensive hands-on training, you will delve into the world of virtualization, focusing on the deployment and administration of

VMware ESXi™ 8 and VMware vCenter® 8. By the end of this course, you'll be well-prepared to oversee vSphere infrastructures for organizations of all sizes.

## Course Objectives:

- Install and configure ESXi hosts
- Deploy and configure vCenter
- Use the vSphere Client to create the vCenter inventory and assign roles to vCenter users
- Create virtual networks using vSphere standard switches and distributed switches
- Create and configure datastores using storage technologies supported by vSphere
- Use the vSphere® Client™ to create virtual machines, templates, clones, and snapshots
- Create content libraries for managing templates and deploying virtual machines
- Manage virtual machine resource allocation
- Migrate virtual machines with VMware vSphere® vMotion® and VMware vSphere® Storage vMotion®
- Create and configure a vSphere cluster that is enabled with VMware vSphere® High Availability and VMware vSphere® Distributed Resource Scheduler™
- Manage the life cycle of vSphere to keep vCenter, ESXi hosts, and virtual machines up to date

## Audience:

- System administrators
- System engineers

## Prerequisites:

System administration experience on Microsoft Windows or Linux operating systems

## Course Outline:

**Module 1:** Course Introduction

**Module 2:** vSphere and Virtualization Overview

## Learning objectives

- Explain basic virtualization concepts
- Describe how vSphere fits in the software-defined data center and the cloud infrastructure
- Recognize the user interfaces for accessing vSphere
- Explain how vSphere interacts with CPUs, memory, networks, storage, and GPUs

### **Module 3: Installing and Configuring ESX**

#### **Learning Objectives**

- Install an ESXi host
- Recognize ESXi user account best practices
- Configure the ESXi host settings using the DCUI and VMware Host Client

### **Module 4: Deploying and Configuring vCenter**

#### **Learning Objectives**

- Recognize ESXi hosts communication with vCenter
- Deploy vCenter Server Appliance • Configure vCenter settings
- Use the vSphere Client to add and manage license keys
- Create and organize vCenter inventory objects
- Recognize the rules for applying vCenter permissions
- View vCenter logs and events

### **Module 5: Configuring vSphere Networking.**

#### **Learning Objectives**

- Configure and view standard switch configurations
- Configure and view distributed switch configurations
- Recognize the difference between standard switches and distributed switches
- Explain how to set networking policies on standard and distributed switches

### **Module 6: Configuring vSphere Storage**

#### **Learning Objectives**

- Recognize vSphere storage technologies
- Identify types of vSphere datastores
- Describe Fibre Channel components and addressing
- Describe iSCSI components and addressing
- Configure iSCSI storage on ESXi • Create and manage VMFS datastores • Configure and manage NFS datastores

### **Module 7: Deploying Virtual Machines**

#### **Learning Objectives**

- Create and provision VMs
- Explain the importance of VMware Tools
- Identify the files that make up a VM
- Recognize the components of a VM
- Navigate the vSphere Client and examine VM settings and options
- Modify VMs by dynamically increasing resources
- Create VM templates and deploy VMs from them
- Clone VMs • Create customization specifications for guest operating systems
- Create local, published, and subscribed content libraries
- Deploy VMs from content libraries
- Manage multiple versions of VM templates in content libraries

## **Module 8: Managing Virtual Machines**

### **Learning Objectives**

Recognize the types of VM migrations that you can perform within a vCenter instance and across vCenter instances.

- Migrate VMs using vSphere vMotion
- Describe the role of Enhanced vMotion Compatibility in migrations
- Migrate VMs using vSphere Storage vMotion
- Take a snapshot of a VM • Manage, consolidate, and delete snapshots
- Describe CPU and memory concepts in relation to a virtualized environment
- Describe how VMs compete for resources • Define CPU and memory shares, reservations, and limits

## **Module 9: Deploying and Configuring vSphere Clusters**

### **Learning Objectives**

- Create a vSphere cluster enabled for vSphere DRS and vSphere HA
- View information about a vSphere cluster
- Explain how vSphere DRS determines VM placement on hosts in the cluster
- Recognize use cases for vSphere DRS settings
- Monitor a vSphere DRS cluster
- Describe how vSphere HA responds to various types of failures
- Identify options for configuring network redundancy in a vSphere HA cluster
- Recognize vSphere HA design considerations
- Recognize the use cases for various vSphere HA settings
- Configure a vSphere HA cluster • Recognize when to use vSphere Fault Tolerance

## **Module 10: Managing vSphere Lifecycle**

### **Learning Objectives**

- Enable vSphere Lifecycle Manager in a vSphere cluster
- Describe features of the vCenter Update Planner

- Run vCenter upgrade prechecks and interoperability reports
- Recognize features of VMware vSphere® Lifecycle Manager™
- Distinguish between managing hosts using baselines and managing hosts using images
- Describe how to update hosts using baselines
- Describe ESXi images • Validate ESXi host compliance against a cluster image and update ESXi hosts
- Update ESXi hosts using vSphere Lifecycle Manager
- Describe vSphere Lifecycle Manager automatic recommendations
- Use vSphere Lifecycle Manager to upgrade VMware Tools and VM hardware

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