VMware vSphere: Install, Configure, Manage [V8]

Summary

Length: 40 hours Level: Experienced

This five-day course features intensive hands-on training that focuses on installing, configuring, and managing VMware vSphere 8, which includes VMware ESXi 8 and VMware vCenter 8. This course prepares you to administer a vSphere infrastructure for an organization of any size. This course is the foundation for most VMware technologies in the software-defined data center.

Learning Objectives

By the end of the course, you should be able to meet the following 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 vSphere vMotion and vSphere Storage vMotion
Create and configure a vSphere cluster that is enabled with vSphere High Availability (HA) and vSphere Distributed Resource Scheduler
Manage the life cycle of vSphere to keep vCenter, ESXi hosts, and virtual machines up to date

Course Outline

1. COURSE INTRODUCTION
   - Introductions and course logistics
   - Course objectives
2. VSPHERE AND VIRTUALIZATION OVERVIEW
   - 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
3. INSTALLING AND CONFIGURING ESXI
   - Install an ESXi host
   - Recognize ESXi user account best practices
   - Configure the ESXi host settings using the DCUI and VMware Host Client
4. DEPLOYING AND CONFIGURING VCENTER
   - 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

5. CONFIGURING VSPHERE NETWORKING
   - 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
6. CONFIGURING VSPHERE STORAGE
   - 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
7. DEPLOYING VIRTUAL MACHINES
   - 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

8. MANAGING VIRTUAL MACHINES

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

9. DEPLOYING AND CONFIGURING VSPHERE CLUSTERS

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

10. MANAGING THE VSPHERE LIFECYCLE

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 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

Audience

System administration experience on Microsoft Windows or Linux operating systems

Prerequisites

This course has the following prerequisites: System administration experience on Microsoft Windows or Linux operating systems