New Horizons®

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