Hewlett Packard Enterprise

VMware vSphere - Install, Configure, Manage [V7] HM9P6S

HPE course number	HM9P6S
Course length	5 days
Delivery mode	ILT, VILT
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This course features intensive hands-on training that focuses on installing, configuring, and managing VMware vSphere® 7, which includes VMware ESXi™ 7 and VMware vCenter Server® 7. This course prepares you to administer a vSphere infrastructure for an organization of any size. This course is the foundation for most of the other VMware technologies in the software-defined data center.

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*Realize Technology Value with Training, IDC Infographic 2037, Sponsored by Hewlett Packard Enterprise, 2019

Audience

- System administrators
- System engineers

Prerequisites

System administration experience on Microsoft Windows or Linux operating systems

Course objectives

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

- Describe the software-defined data center (SDDC)
- Explain the vSphere components and their function in the infrastructure
- Install and configure VMware ESXi hosts
- Deploy and configure VMware vCenter® Server Appliance™
- Use VMware vSphere Client™ to manage the vCenter Server inventory and the vCenter Server configuration
- Manage, monitor, back up, and protect vCenter Server Appliance

- Create virtual networks with vSphere standard switches
- Describe the storage technologies supported by vSphere
- Configure virtual storage using iSCSI and NFS storage
- Create and manage VMware vSphere VMFS datastores
- Use the vSphere Client to create virtual machines, templates, clones, and snapshots
- Create a content library and deploy virtual machines from templates in the library
- Manage virtual machine resource use
- Migrate virtual machines with VMware vSphere vMotion® and VMware vSphere Storage vMotion
- Create and manage a vSphere cluster that is enabled with VMware vSphere High Availability and VMware vSphere Distributed Resource Scheduler™
- Discuss solutions for managing the vSphere life cycle
- Use VMware vSphere Update Manager™ to apply patches and perform upgrades to ESXi hosts and virtual machines

Detailed course outline

Course Introduction	• Introductions and course logistics	• Course objectives
Introduction to vSphere and the Software-Defined Data Center	• Explain basic virtualization concepts • Describe how vSphere fits into the software-defined data center and the cloud infrastructure • Explain how vSphere interacts with CPUs, memory, networks, and storage	• Recognize the user interfaces for accessing the vCenter Server system and ESXi hosts • Use VMware Host Client™ to access and manage ESXi host
Virtual Machines	• Create and remove a virtual machine • Provision a virtual machine with virtual devices	• Identify the files that make up a virtual machine • Explain the importance of VMware Tools™
vCenter Server	• Describe the vCenter Server architecture • Discuss how ESXi hosts communicate with vCenter Server • Deploy and configure vCenter Server Appliance • Use the vSphere Client to manage the vCenter Server inventory • Add data center, organizational objects, and hosts to vCenter Server	• Use roles and permissions to enable users to access objects in the vCenter Server inventory • Back up vCenter Server Appliance • Monitor vCenter Server tasks, events, and appliance health • Use vCenter Server High Availability to protect a vCenter Server Appliance
Configuring and Managing Virtual Networks	• Create and manage standard switches • Describe the virtual switch connection types	• Configure virtual switch security, traffic-shaping and load-balancing policies • Compare vSphere distributed switches and standard switches
Configuring and Managing Virtual Storage	• Identify storage protocols and storage device types • Discuss ESXi hosts using iSCSI, NFS, and fibre channel storage • Create and manage VMFS and NFS datastores	• Explain how multipathing works with iSCSI, NFS, and fibre channel storage • Deploy virtual machines on a VMware vSAN™ datastore
Virtual Machine Management	• Use templates and cloning to deploy new virtual machines • Modify and manage virtual machines • Create a content library and deploy virtual machines from templates in the library • Dynamically increase the size of a virtual disk	• Use customization specification files to customize a new virtual machine • Perform vSphere vMotion and vSphere Storage vMotion migrations • Create and manage virtual machine snapshots • Examine the features and functions of VMware vSphere Replication™

Resource Management and Monitoring	• Discuss CPU and memory concepts in a virtualized environment	• Use various tools to monitor resource use
	• Describe what over commitment of a resource means	• Create and use alarms to report certain conditions or events
	• Describe methods for optimizing CPU and memory usage	
vSphere Cluster	• Describe options for making a vSphere environment highly available	• Configure a vSphere cluster using ESXi Cluster Quickstart
	• Explain the vSphere HA architecture	• Describe the functions of a vSphere DRS cluster
	• Configure and manage a vSphere HA cluster	• Create a vSphere DRS cluster
	• Examine the features and functions of VMware vSphere Fault Tolerance	
vSphere Lifecycle	• Describe how VMware vSphere Lifecycle Manager™ works	• Use vSphere Lifecycle Manager to update ESXi hosts in a cluster

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