Hewlett Packard Enterprise

VMware vSphere: Install, Configure, Manage [V8] H62D5S

HPE course number	H62D5S
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® 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.

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Audience

- System administrators
- System engineers

Prerequisites

System administration experience on Microsoft Windows or Linux operating systems is a prerequisite for this course.

Course objectives

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

- 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

Detailed course outline

1. Course Introduction	• Introduction 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 High Availability (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

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