VMware vSphere: Install, Configure, Manage

Course Overview

This five-day course features intensive hands-on training that focuses on installing, configuring, and managing VMware vSphere® 6.7, which includes VMware ESXi™ 6.7 and VMware vCenter Server® 6.7. This course prepares you to administer a vSphere infrastructure for an organization of any size. It is the foundation for most other VMware technologies in the software-defined data center.

Course Objectives

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

- Describe the software-defined data center
- Explain the vSphere components and their function in the infrastructure
- Add ESXi hosts to a VMware vCenter® Server Appliance™ instance
- Manage vCenter Server Appliance
- Use a local content library as an ISO store, and deploy a virtual machine
- Describe vCenter Server architecture
- Use vCenter Server to manage an ESXi host
- Configure and manage vSphere infrastructure with VMware Host Client™ and VMware vSphere® Client™
- Describe virtual networks with vSphere standard switches
- Configure standard switch policies
- Use vCenter Server to manage various types of host storage: VMware vSphere® VMFS, NFS, iSCSI, and RDM
- Examine the features and functions of Fibre Channel and VMware vSAN™
- Manage virtual machines, templates, clones, and snapshots
- Migrate virtual machines with VMware vSphere® vMotion®
- Migrate virtual machine storage with VMware vSphere® Storage vMotion®
- Monitor resource usage, and manage resource pools
- Discuss the VMware vSphere® High Availability cluster architecture
- Configure vSphere HA
- Manage vSphere HA and VMware vSphere® Fault Tolerance
- Use VMware vSphere® Replication™ and VMware vSphere® Data Protection™ to replicate virtual machines and perform data recovery
- Use VMware vSphere® Distributed Resource Scheduler™ clusters to improve host scalability
- Use VMware vSphere® Update Manager™ to apply patches and perform basic troubleshooting of ESXi hosts, virtual machines, and vCenter Server operations
- Identify troubleshooting methodology to logically diagnose faults and improve troubleshooting efficiency

Target Audience

- System administrators
- System engineers

Prerequisites

This course has the following prerequisites:

- System administration experience on Microsoft Windows or Linux operating systems

Certifications

This course prepares you for the following certification:

- VMware Certified Professional 6.5 – Data Center Virtualization (VCP6.5-DCV)

Course Delivery Options

- Classroom
- Live Online
- Onsite

Product Alignment

- ESXi 6.7
- vCenter Server 6.7

Course Modules

1 Course Introduction
- Introductions and course logistics
- Course objectives
- Describe the content of the course
- Gain a complete picture of the VMware certification system
- Familiarize yourself with the benefits of the VMware Education Learning Zone
- Identify additional resources

2 Introduction to vSphere and the Software-Defined Data Center
- Describe how vSphere fits into the software-defined data center and the cloud infrastructure
- Explain how vSphere interacts with CPUs, memory, networks, and storage
- Use vSphere Client to access and manage your vCenter Server system and ESXi host
- Compare virtual machine hardware version 14 to other versions
- Identify the virtual network adapters, and describe the enhanced VMXNET3
- Compare the types of virtual disk provisioning
- Identify the advantages of ESXi Quick Boot

3 Creating Virtual Machines
- Create, provision, and remove a virtual machine
- Explain the importance of VMware Tools™
- Describe how to import a virtual appliance OVF template
- Manage VMware Tools
- Explain troubleshooting OS installation and VMware Tools

4 vCenter Server
- Describe the vCenter Server architecture
- Discuss how ESXi hosts communicate with vCenter Server
- Identify the vCenter Server services, components, and modules
- Access and configure vCenter Server Appliance
- Use vSphere Client to manage the vCenter Server inventory
- Describe the rules for applying permissions
- Create a custom role in vCenter Server
- Create a backup schedule
- Restore vCenter Server Appliance from backup
- Monitor vCenter Server Appliance

5 Configuring and Managing Virtual Networks
- Describe, create, and manage standard switches
- Configure virtual switch security and load-balancing policies
- Compare vSphere distributed switches and standard switches
- Describe the virtual switch connection types
- Describe the new TCP/IP stack architecture
- Use VLANs with standard switches

6 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 VMware vSphere® VMFS and NFS datastores
- Describe the new features of VMFS 6.5
- Identify the advantages of VMware vSAN™
- Describe guest file encryption

7 Virtual Machine Management
- Use templates and cloning to deploy new virtual machines
- Modify and manage virtual machines
- Clone a virtual machine
- Upgrade virtual machine hardware to version 14
- Remove virtual machines from the vCenter Server inventory and datastore
- Use customization specification files to customize a new virtual machine
- Perform vSphere vMotion and vSphere Storage vMotion migrations
- Create and manage virtual machine snapshots
- Create, clone, and export vApps
- Identify the types of content libraries and how to deploy and use them

8 Resource Management and Monitoring
- Discuss CPU and memory concepts in a virtualized environment
- Describe what overcommitment of a resource means
- Identify additional technologies that improve memory usage
- Configure and manage resource pools
- Describe methods for optimizing CPU and memory usage
- Use various tools to monitor resource usage
- Create and use alarms to report certain conditions or events

9 vSphere HA, vSphere Fault Tolerance, and Protecting Data
- Explain the vSphere HA architecture
- Configure and manage a vSphere HA cluster
- Use vSphere HA advanced parameters
- Enforce infrastructural or intra-app dependencies during failover
- Describe vSphere HA heartbeat networks and datastore heartbeats
- Examine the features and functions of vSphere Fault Tolerance

- Enable vSphere Fault Tolerance on virtual machines
- Support vSphere Fault Tolerance interoperability with vSAN
- Examine enhanced consolidation of vSphere Fault Tolerance virtual machines
- Examine the features and functions of vSphere Replication

10 vSphere DRS

- Describe the functions of a vSphere DRS cluster
- Create a vSphere DRS cluster
- View information about a vSphere DRS cluster
- Configure virtual machine affinity, DRS groups, and VM-host affinity rules
- Remove a host from a vSphere DRS cluster

11 vSphere Update Manager

- Describe the new architecture, components, and capabilities of vSphere Update Manager
- Use vSphere Update Manager to manage the patching of ESXi, virtual machines, and vApps
- Install vSphere Update Manager and the vSphere Update Manager plug-in
- Create patch baselines
- Use host profiles to manage host configuration compliance
- Examine the features and functions of vSphere Update Manager EAM integration
- Integrate vSphere Update Manager with vSphere DRS
- Scan and remediate hosts

12 vSphere Troubleshooting

- Define the scope of troubleshooting
- Use a structured approach to solve configuration and operational problems
- Identify troubleshooting methodology to logically diagnose faults and improve troubleshooting efficiency

Contact

If you have questions or need help registering for this course, click here.

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