VMware vSphere: Bootcamp

Delivery Methods

- Classroom
- Onsite

Course Duration

- Five (5) days of instructor-led classroom training
- 60% lecture, 40% hands-on lab

Target Audience

- Experienced system administrators
- Systems engineers
- System integrators

Course Suitability

☒ Administrator ☐ Expert
☒ Engineer ☒ Advanced
☐ Architect ☒ Professional
☐ Fundamentals

Prerequisites

- System administration experience on Microsoft Windows or Linux operating systems
- Understanding of concepts presented in the VMware Data Center Virtualization Fundamentals course for VCA-DCV certification

Certifications

This course qualifies you for both the VCP6 Foundations and VCP6-DCV certifications. For more information, go to VMware Certification.

Pricing

Contact your VMware representative or a VMware Authorized Training Center for pricing information.

More Information

Courses are conveniently scheduled around the world. Go to VMware Education to find the class that is right for you.

Course Overview

VMware vSphere®: Bootcamp is an intensive combination of our best-selling vSphere courses. This course is a hands-on training course delivered in two parts across five days of extended hours. Part one focuses on installing, configuring, and managing vSphere 6, which includes VMware ESXi™ 6.0 and VMware vCenter Server™ 6.0. Part two builds advanced skills for configuring and maintaining a highly available and scalable virtual infrastructure.

Course Objectives

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

Part 1

- Describe the software-defined data center
- Deploy an ESXi host and create virtual machines
- Describe the vCenter Server architecture
- Deploy a vCenter Server instance or VMware vCenter Server™ Appliance™
- Use vCenter Server to manage an ESXi host
- Configure and manage vSphere infrastructure with VMware vSphere® Client™ and VMware vSphere® Web Client
- Configure virtual networks with vSphere standard switches
- Use vCenter Server to manage various types of host storage
- Manage virtual machines, templates, clones, and snapshots
- Create a vApp
- Describe and use the content library
- Migrate virtual machines with VMware vSphere® vMotion®
- Use VMware vSphere® Storage vMotion® to migrate virtual machine storage
- Monitor resource usage and manage resource pools
- Manage VMware vSphere® High Availability and VMware vSphere® Fault Tolerance
- Use VMware vSphere® Distributed Resource Scheduler™ clusters to improve host scalability
- Use vSphere distributed switches to improve network scalability
- Use VMware vSphere™ Update Manager™ to apply patches
- Perform basic troubleshooting of ESXi hosts, virtual machines, and vCenter Server operations

Part 2

- Configure and manage ESXi networking and storage for a large and sophisticated enterprise
- Manage changes to the vSphere environment
- Optimize the performance of all vSphere components
- Harden the vSphere environment against security threats
- Troubleshoot operational faults and identify their root causes
- Use VMware vSphere® ESXi™ Shell and VMware vSphere® Management Assistant to manage vSphere
- Use VMware vSphere® Auto Deploy™ to provision ESXi hosts

Course Modules
Part 1: Install, Configure, and Manage

1 Course Introduction
- Introductions and course logistics
- Course objectives

2 Software-Defined Data Center
- Introduce components of the software-defined data center
- Describe where vSphere fits into the cloud architecture
- Install and use vSphere Client
- Overview of ESXi

3 Creating Virtual Machines
- Introduce virtual machines, virtual machine hardware, and virtual machine files
- Create and work with virtual machines

4 vCenter Server
- Introduce the vCenter Server architecture
- Deploy and configure vCenter Server Appliance
- Install and use vSphere Web Client
- Manage vCenter Server inventory objects and licenses

5 Configuring and Managing Virtual Networks
- Describe, create, and manage standard switches
- Describe and modify standard switch properties
- Configure virtual switch load-balancing algorithms
- Create, configure, and manage vSphere distributed switches, network connections, and port groups

6 Configuring and Managing Virtual Storage
- Introduce storage protocols and storage device names
- Discuss ESXi with iSCSI, NFS, and Fibre Channel storage
- Create and manage VMware vSphere® VMFS datastores
- Introduce VMware Virtual SAN™

7 Virtual Machine Management
- Use templates and cloning to deploy virtual machines
- Modify and manage virtual machines
- Perform vSphere vMotion and vSphere Storage vMotion migrations
- Create and manage virtual machine snapshots
- Create a vApp
- Introduce the various types of content libraries and how to deploy and use them

8 Resource Management and Monitoring
- Introduce virtual CPU and memory concepts
- Configure and manage resource pools
- Describe methods for optimizing CPU and memory usage
- Use vCenter Server performance graphs and alarms to monitor resource usage
- Create and use alarms to report certain conditions or events

9 vSphere HA and vSphere Fault Tolerance
- Explain the vSphere HA architecture
- Configure and manage a vSphere HA cluster
- Use vSphere HA advanced parameters
- Introduce vSphere Fault Tolerance
- Enable vSphere Fault Tolerance on virtual machines

10 Host Scalability
- Describe the functions of a vSphere DRS cluster
- Configure and manage a vSphere DRS cluster
- Work with affinity and anti-affinity rules
- Use vSphere HA and vSphere DRS together

11 vSphere Update Manager and Host Maintenance
- Use vSphere Update Manager to manage ESXi patching
- Install vSphere Update Manager and the vSphere Update Manager plug-in
- Create patch baselines
- Use host profiles to manage ESXi configuration compliance
- Scan and remediate hosts

vmware®

Part 2: Optimize and Scale

1 VMware Management Resources
- Understand the purpose of VMware vSphere® Command-Line Interface commands
- Discuss options for running vSphere CLI commands
- Deploy and configure vSphere Management Assistant
- Use vmware-cmd for virtual machine operations

2 vSphere Security
- Configure ESXi host access and authentication
- Secure ESXi, vCenter Server, and virtual machines

3 Performance in a Virtualized Environment
- Review the vSphere performance troubleshooting methodology
- Explain software and hardware virtualization techniques and their effects on performance
- Use vSphere performance monitoring tools

4 Network Scalability
- Explain distributed switch features such as port mirroring, LACP, QoS tagging, and NetFlow

5 Network Performance Troubleshooting
- Explain the performance features of network adapters
- Explain the performance features of vSphere networking
- Monitor key network performance metrics
- Use vSphere Management Assistant to manage virtual network configurations
- Troubleshoot common network performance problems

6 Storage Scalability
- Explain VMware vSphere® Storage APIs - Array Integration and VMware vSphere® API for Storage Awareness™
- Configure and assign virtual machine storage policies
- Configure VMware vSphere® Storage DRS™ and VMware vSphere® Storage I/O Control

7 Storage Optimization
- Diagnose storage access problems
- Configure VMware vSphere® Flash Read Cache™
- Monitor key storage performance metrics
- Troubleshoot common storage performance problems

8 CPU Performance
- Explain the CPU scheduler operation, NUMA support, and other features that affect CPU performance
- Monitor key CPU performance metrics
- Troubleshoot common CPU performance problems

9 Memory Performance
- Monitor key memory performance metrics
- Troubleshoot common memory performance problems

10 Virtual Machine and Cluster Optimization
- Describe guidelines for optimizing virtual machine configuration
- Discuss how vGPU usage affects virtual machine performance
- Troubleshoot common vSphere cluster problems

11 Host and Management Scalability
- Describe and use host profiles
- Use VMware vSphere® PowerCLI™
- Use Virtual Machine Converter
- Use VMware vSphere® ESXi™ Image Builder CLI and vSphere Auto Deploy

vmware®