

VMware vSphere® 8 Ultimate Bootcamp

Length: 5 Days

VMware vSphere® 8 is a vital component of the VMware vCloud Suite®. Currently, it is the industry-leading virtualization technology platform accelerating the shift to cloud computing. The Ultimate Bootcamp® has become known to be the most comprehensive VMware training course in the industry. This course combines several popular VMware vSphere classes into one concentrated delivery, saving time and money while providing an in-depth look at VMware's latest version release (8) in an accelerated learning format designed to immerse the student into the new features inherent to version 8.

The VMware vSphere Ultimate Bootcamp course maximizes the students' training experience with hands-on VMware vSphere labs based upon real-world scenarios and conducted with state-of-the-art equipment. The Ultimate Bootcamp imparts students with the knowledge and skills necessary to maximize efficiency in the workplace. The class will prepare the student to achieve the Certified Virtualization Expert 8 (CVE 8) certification, which will demonstrate practical VMware vSphere knowledge and skills as a certified professional.

Course Objectives

- Describe the software-defined data center
- Deploy an ESXi host and create virtual machines
- Describe the vCenter Server architecture
- Deploy a VMware vCenter Server™ Appliance™
- Use vCenter Server to manage an ESXi host
- Configure and manage vSphere infrastructure with NEW VMware vSphere® Client™ and NEW vSphere® Host Client
- Configure virtual networks with vSphere® standard switches
- Use vCenter Server to manage various types of host storage
- Manage virtual machines, templates, clones, vApps, and snapshots
- Describe new enhancements to NFS 4.1, VSAN & Virtual Volumes
- Describe and use the content library
- Manage changes to the vSphere environment
- 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

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- Describe Proactive HA, VM-level encryption, Network Aware DRS & Predictive DRS
- Use vSphere® distributed switches to improve network scalability
- Configure and manage ESXi networking and storage for a sophisticated enterprise
- Optimize the performance of all vSphere components
- Harden the vSphere® environment against security threats
- Use VMware vSphere® ESXi™ Shell to manage vSphere
- Describe BC/DR solutions vSphere® Replication & Site Recovery Manager
- Use NEW web-based Sphere® Update Manager™ to apply patches
- Use vSphere® Data Protection appliance to backup and restores virtual machines
- Describe proper steps and pathways for upgrades of previous versions of vSphere®
- Perform basic troubleshooting of ESXi hosts, virtual machines, and vCenter Server operations

Pre-requisites

- 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

Is thisCourse for me?

This course is ideal for

- Experienced system administrators
- Systems engineers
- System integrators

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Course Outline:

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Chapter 1: Course Introduction and Methodology

Chapter 2: Virtualization Overview in vSphere 8

1. Virtualization & Cloud Overview
2. Other VMware and 3rd Party Virtualization Products
3. What's New in vSphere 7 / 8 Overview

Chapter 3: Planning and Installing ESXi 8 (VMware vSphere Hypervisor)

1. Planning ESXi Host Deployment
2. vSphere 8 Deployment Guidelines
3. vSphere Hypervisor (ESXi) Installation (HOL)
4. Configuring Hostname Resolution and NTP (HOL)
5. Troubleshooting ESXi 8 Host

Chapter 4: Using Tools to Administer a VMware® Environment

1. Overview of 3rd Party Tools
2. ESXi Management (vSphere Client, esxcli, vCLI, Putty, PowerCLI) (HOL)
3. Linux Command Review
4. Troubleshooting Host/vCenter Connections

Chapter 5: vCenter™ Server 8 and Licensing

1. Demystifying vSphere Licensing
2. Planning vCenter Server Deployment
3. vCenter Server Installation (HOL)
4. vCenter Server Inventory (HOL)
5. Managing vCenter Server & new File based Backup/Restore (HOL)
6. Troubleshooting vCenter Server, License & Database

Chapter 6: Configuring Networking

1. Create & Modify Virtual Networks (HOL)

2. vSphere Distributed Virtual Switches & NIOC (HOL)
3. Create & Modify Virtual Networks using CLI (HOL)

Chapter 7: Configuring Storage

1. Storage Concepts, Storage Awareness & Profile Driven Storage
2. iSCSI Storage (GUI & Command Line) (HOL)
3. Fibre Channel Storage & Software FCoE (GUI & Command Line)
4. VMFS5 Datastores & new VMFS6 features like SEsparse (GUI & Command Line) (HOL)
5. NFS 3 & NFS 4.1 Datastores (GUI & Command Line) (HOL)
6. Raw Device Mapping (RDM) (HOL)
7. Solid State Disks (SSD)
8. vSphere Flash Read Cache
9. NVMe Storage
10. VMware Virtual SAN (VSAN) & vsanSparse snapshot
11. VMware Virtual Volumes & VASA 3.0 (VVols)

Chapter 8: VM Creation and Configuration & Snapshots

1. Create a VM (HOL)
2. Create Multiple VMs, Templates & Clones (HOL)
3. Virtual Appliances (HOL)
4. Configuration & Use of vApps
5. VMware vCenter™ Standalone Converter (P2V, V2V) (HOL)
6. Manage VMs, PCI pass-through, Direct I/O, remote direct memory access, and NVMe (HOL)
7. Virtual Machine Startup/Shutdown (HOL)
8. Virtual Machine Snapshots (HOL)
9. Troubleshooting Virtual Machines

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Chapter 9: Security and Permissions

1. Controlling User Access and Passwords (HOL)
2. ESXi AD Integration (HOL)
3. Managing ESXi Firewalls (GUI & Command Line) (HOL)
4. VMware Certificate Authority (VCA) & VMware Endpoint Certificate Services

Chapter 10: Server and VM Monitoring

1. Optimizing Resources
2. Resource Pools
3. Latency Sensitive Applications
4. Performance Monitoring (HOL)
5. Configuring Alarms (HOL)
6. ESXi, vCenter™ Logs and syslog, NetFlow, Port Mirroring, esxtop (HOL)

Chapter 11: Advanced ESXi and vCenter™ Management

- Storage VMotion (HOL)
- Configuring VMotion (Enhanced, Cross-vCenter, Long Distance) (HOL)
- Distributed Resource Scheduler (DRS) (HOL)
- DRS Cluster Monitoring (HOL)
- Storage Policy Based Management
- Storage Clusters & Storage DRS (SDRS) (HOL)
- Host Profiles (HOL)
- Enhanced Linked Mode

Chapter 12: Patching and Upgrading vSphere™ vCenter™ ESXi

1. Patching ESXi Standalone Hosts & VCSA (HOL)
2. Patching with Lifecycle Manager (HOL)

3. Upgrading & Migrations from earlier vSphere versions to vSphere 8

Chapter 13: Disaster Recovery, Backup and Deployment

1. vSphere Replication
2. High Availability (HA) & Fault Domain Manager (FDM) (HOL)
3. VM Fault Tolerance
4. Backup Strategies
5. Third Party Backup Solutions (HOL)