

VMware vSphere: Fast Track [V8]

Duration 5 Days

COURSE DESCRIPTION

This five-day, intensive course takes you from introductory to advanced VMware vSphere® 8 management skills. Building on the installation and configuration content from VMware's best-selling course, you will also develop the advanced skills needed to manage and maintain a highly available and scalable virtual infrastructure. Through a mix of lecture and hands-on labs, you will install, configure, and manage vSphere 8. You will explore the features that build a foundation for a truly scalable infrastructure and discuss when and where these features have the greatest effect. This course prepares you to administer a vSphere infrastructure for an organization of any size using vSphere 8, which includes VMware ESXi® 8 and VMware vCenter® 8.

COURSE OBJECTIVES

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

- Install and configure ESXi hosts
- Deploy and configure vCenter
- Use the VMware vSphere® Client® to create the vCenter inventory and assign roles to vCenter users
- Configure VMware vCenter Server® High Availability
- Configure and manage a VMware Tools® repository
- Create content libraries for managing templates and deploying virtual machines
- Create and configure virtual networks using vSphere standard switches and distributed switches
- Create and configure datastores using storage technologies supported by vSphere
- Manage virtual machine resource use
- Migrate virtual machines with VMware vSphere® vMotion® and VMware vSphere® Storage vMotion®
- Monitor the performance of vCenter, ESXi, and VMs in the vSphere Client
- Create and configure a vSphere cluster that is enabled with VMware vSphere High Availability and VMware vSphere Distributed Resource Scheduler®
- Manage VM resource usage with resource pools
- Use vSphere Configuration Profiles to manage VMware ESXi host compliance
- Manage the life cycle of vSphere to keep vCenter, ESXi hosts, and virtual machines up to date
- Configure and manage vSphere networking and storage for a large and sophisticated enterprise

COURSE OUTLINE

Module 1: Course Introduction

- Introductions and course logistics
- Course objectives

Module 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
- Install an ESXi host

Module 3: vCenter Management

- Recognize ESXi hosts communication with vCenter
- Deploy VMware 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 vSphere tasks and events
- Create a vCenter backup schedule
- Recognize the importance of vCenter Server High Availability
- Explain how vCenter Server High Availability works

Module 4: Configure and Manage 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

Module 5: Configure and Manage vSphere Storage

- Recognize vSphere storage technologies
- Identify types of vSphere datastores
- List Fibre Channel components
- Describe iSCSI addressing
- Configure iSCSI storage on ESXi
- Create and manage VMware vSphere® VMFS datastores
- Configure and manage NFS datastores
- Describe the architecture and requirements of a VMware vSAN® configuration
- Discuss vSphere support for NVMe and iSER Technologies

Module 6: 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

Module 7: 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

- Recognize the role of a VMware Tools repository
- Configure a VMware Tools repository
- Recognize the backup and restore solution for VMs

Module 8: vSphere Monitoring

- Monitor the key factors that can affect a virtual machine's performance
- Describe the factors that influence vCenter performance
- Use vCenter tools to monitor resource use
- Create custom alarms in vCenter
- Describe the benefits and capabilities of VMware Skyline®
- Recognize uses for VMware Skyline Advisor® Pro

Module 9: Deploying and Configuring vSphere Cluster

- Use Cluster Quickstart to enable vSphere cluster services and configure the cluster
- 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 different types of failures
- Identify options for configuring network redundancy in a vSphere HA cluster
- Recognize the use cases for various vSphere HA settings
- Configure a cluster enabled for vSphere DRS and vSphere HA
- Recognize when to use VMware vSphere® Fault Tolerance
- Describe the function of the vSphere Cluster Services (vCLS)
- Recognize operations that might disrupt the healthy functioning of vCLS VMs

Module 10: ESXi Operations

- Create and manage resource pools in a cluster
- Describe how scalable shares work
- Recognize the benefits of using vSphere Configuration Profiles configuration profiles
- Use vSphere Configuration Profiles to manage ESXi configuration compliance

Module 11: Managing the vSphere Lifecycle

- Generate vCenter interoperability reports
- Recognize features of VMware vSphere® Lifecycle Manager®
- Describe ESXi images and image depots
- Enable vSphere Lifecycle Manager in a vSphere cluster
- Validate ESXi host compliance against a cluster image and remediate ESXi hosts using vSphere Lifecycle Manager
- Describe vSphere Lifecycle Manager automatic recommendations
- Use vSphere Lifecycle Manager to upgrade VMware Tools and VM hardware

Module 12: Network Operations

- Configure and manage vSphere distributed switches
- Describe how VMware vSphere Network I/O Control enhances performance
- Define VMware vSphere® Distributed Services Engine®
- Describe the use cases and benefits of vSphere Distributed Services Engine

Module 13: Storage Operations

- Describe how vSphere Storage APIs – Array Integration helps storage arrays integrate with vSphere
- Describe how vSphere API for Storage Awareness ensures that a VM's storage requirements are met

- Describe storage policy-based management
- Explain how Storage I/O Control and vSphere Storage DRS complement each other
- Configure VMware vSphere® Storage I/O Control

WHO SHOULD ATTEND

- System administrators
- System engineers

PREREQUISITES

This course has the following prerequisites:

- System administration experience on Microsoft Windows or Linux operating systems
- Understanding of basic datacenter infrastructure, enterprise networking, and storage concepts

CERTIFICATION

Attending this course meets the training requirement to achieve the following certification:

- VMware Certified Professional – Data Center Virtualization (VCP-DCV)