

Course Outline

VMware vSphere: Fast Track [V8.0] Course VSFT8: 5 Days Instructor Led

About this course

This five-day, extended hour course takes you from introductory to advanced VMware vSphere® 8 management skills. Building on the installation and configuration content from our best-selling course, you will also develop 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 Server® 8.

Audience profile

The primary audience for this course is as follows:

- System Administrators
- System Engineers

The knowledge and skills that the learner should have before attending this course are as follows:

- System administration experience on Microsoft Windows or Linux operating systems

At course completion

After completing this course, students will 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
- Configure vCenter High Availability
- Create and configure 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
- Configure and manage a VMware Tools Repository
- Create content libraries for managing templates and deploying virtual machines
- Manage virtual machine resource use
- Migrate virtual machines with vSphere vMotion and vSphere Storage vMotion
- Create and configure a vSphere cluster that is enabled with vSphere High Availability and vSphere Distributed Resource Scheduler
- 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
- Use host profiles to manage VMware ESXi host compliance
- Monitor the vCenter, ESXi, and VMs performance in the vSphere client

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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 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 High Availability
- Explain how vCenter High Availability works

Module 4: 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

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- 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 5: 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 6: Configure and Manage 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
- Discuss vSphere support for NVMe and iSER technologies

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

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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 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 vSphere Fault Tolerance
- Describe the function of the vCLS
- Recognize operations that might disrupt the healthy functioning of vCLS VMs

Module 10: ESXi Operations

- Use host profiles to manage ESXi configuration compliance
- Recognize the benefits of using configuration profiles

Module 11: Managing the vSphere Lifecycle

- Generate vCenter interoperability reports
- Recognize features of 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

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Module 12: Network Operations

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

Module 13: Storage Operations

- Describe the architecture and requirements of vSAN configuration
- Describe storage policy-based management
- Recognize components in the vSphere Virtual Volumes architecture
- Configure Storage I/O Control