

# VMware vSphere: Fast Track [V8]

Course code: VMW\_FTCK

This five-day, extended-hour course will take you from basic to advanced knowledge of managing VMware vSphere® 8. Building on the installation and configuration content from our best-selling ICM course, you'll also develop the advanced skills needed to manage and maintain a highly available and scalable virtual infrastructure. Through a combination of lectures and hands-on exercises, you'll install, configure, and manage vSphere 8. You'll explore the features that form the foundation of a truly scalable infrastructure, and discuss when and where those features have the greatest impact. This course prepares you to manage a vSphere infrastructure for any size organization using vSphere 8, which includes VMware ESXi™ 8 and VMware vCenter Server® 8.

## Who is the course for

- System administrators
- System engineers

## What we teach you

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 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

## Required skills

This course has the following prerequisites:

- System administration experience on Microsoft Windows or Linux operating systems

## Course outline

### 1 Course Introduction

- Introductions and course logistics
- Course objectives

### 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

### 3 vCenter Management

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- 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
- #### 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
- #### 5 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
- #### 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
- #### 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

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- 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

## 8 vSphere Cluster Management

- 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

## 9 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

## 10 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

## 11 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

## 12 ESXi Operations

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

## 13 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

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