

# VMware vSphere: What's New

## Course Overview

In this three-day, hands-on training course, you explore the new features and enhancements in VMware vCenter Server® 7 and VMware ESXi™ 7. Real-world use-case deployment scenarios, hands-on lab exercises, and lectures teach you the skills that you need to effectively implement and configure VMware vSphere® 7.

This course is recommended for customers who want to deploy vSphere 7 in their existing vSphere environment.

## Course Objectives

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

- List and describe the importance of key features and enhancements in vSphere 6.7 update releases and vSphere 7
- Determine the proper upgrade path for a vCenter Server instance and upgrade VMware vCenter® Server Appliance™ to version 7
- Migrate a Windows vCenter Server system to vCenter Server Appliance 7
- Manage and update VM templates located in content libraries
- Use Identity Federation to configure vCenter Server to use Microsoft ADFS
- Use the VMware vSphere® Client™ to manage certificates
- Describe vCenter Server, VMware ESXi™, storage, network, virtual machine, and security enhancements in vSphere 7
- Use VMware vSphere® Trust Authority™ to secure the infrastructure for encrypted VMs
- Demonstrate the Quickstart feature of the ESXi cluster
- Recognize improvements to VMware vSphere® Distributed Resource Scheduler™
- Use vSphere Lifecycle Manager to manage vSphere deployments, updates, and configurations
- Discuss the purpose and capabilities of VMware vSphere® with Kubernetes and how it fits into the VMware Tanzu™ portfolio

## Target Audience

System architects, system administrators, IT managers, VMware partners, and individuals responsible for implementing and managing vSphere architectures

## Prerequisites

This course requires completion of one the following courses or equivalent knowledge and administration experience with ESXi and vCenter Server:

- VMware vSphere: Install, Configure, Manage
- VMware vSphere: Optimize and Scale
- VMware vSphere: Fast Track

- VMware vSphere: Troubleshooting

The course material presumes that you can perform the following tasks with no assistance or guidance before enrolling in this course:

- Install and configure ESXi
- Install vCenter Server
- Create vCenter Server objects, such as data centers and folders
- Create and manage vCenter Server roles and permissions
- Create and modify a standard switch
- Create and modify a distributed switch
- Connect an ESXi host to NAS, iSCSI, or Fibre Channel storage
- Create a VMFS datastore
- Use a content library template to create a virtual machine
- Modify a virtual machine's hardware
- Migrate a virtual machine with VMware vSphere® vMotion® and VMware vSphere® Storage vMotion®
- Configure and manage a vSphere DRS cluster
- Configure and manage a VMware vSphere® High Availability cluster
- Use VMware vSphere® Update Manager™ to apply patches and perform upgrades to ESXi hosts and VMs

If you cannot complete these tasks, VMware recommends that you instead take the VMware vSphere: Install, Configure, Manage [V7] course.

## Certifications

Attendance of this course allows candidates who hold a valid VCP-DCV 2019 to upgrade to VCP-DCV 2020 without taking the certification exam.

## Course Delivery Options

- Classroom
- Live Online
- [Onsite](#)

## Product Alignment

- ESXi 7
- vCenter Server 7



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## Course Modules

### 1 Course Introduction

- Introductions and course logistics
- Course objectives

### 2 Installation and Upgrade

- Describe the new vCenter Server Appliance deployment model
- Upgrade a vCenter Server Appliance instance to vCenter Server Appliance 7
- Migrate a Windows vCenter Server instance to vCenter Server Appliance 7
- Describe the enhancements to vCenter Server Appliance

### 3 Management Enhancements

- Identify the scaling and performance improvements for vCenter Server Appliance
- Describe the support provided for dynamic DNS
- Recognize how to change the IP address or FQDN of vCenter Server
- Describe prefix-based MAC address allocation
- Perform a VM template in-place update in Content Library
- Describe identity federation and recognize its use cases
- Configure identity federation
- Manage certificates using the vSphere Client
- Identify VMware NSX-TTM logical switches and their properties in the vSphere Client
- Explain the benefits of using VMware Skyline™ to proactively monitor your environment

### 4 ESXi Enhancements

- Upgrade an ESXi host to version 7
- List the enhancements introduced with ESXi 7
- Describe new device support for ESXi hosts
- Describe support for Precision Time Protocol

### 5 VM Enhancements

- Discuss the new functionality, virtual devices, and VM maximums supported by VM compatibility version 17
- Describe the enhancements to guest customization

- Perform a vSphere vMotion migration of VMs with remote devices

### 6 Storage Enhancements

- Describe the enhancements to NVMe support
- Describe the enhancements to VMware Pluggable Storage Architecture
- Describe the purpose of the High-Performance Plug-in
- Describe the support for iSER
- Recognize the changes made to the ESXi system storage layout
- Describe the support for CAB deployment of WSFC in vSphere 6.7 and later
- List the enhancements made to vSAN

### 7 Security Enhancements

- Describe the enhancements to the VM encryption feature
- Describe the enhancements to cloning, migration, and encryption operations
- Describe the benefits and use cases of vSphere Trust Authority
- Configure vSphere Trust Authority

### 8 Cluster Enhancements

- Demonstrate the Quickstart feature of the ESXi cluster
- Recognize improvements to vSphere DRS
- Describe use cases for scalable shares

### 9 vSphere Lifecycle Management

- Use vCenter Server Update Planner to run vCenter Server upgrade prechecks
- Compare vSphere Lifecycle Manager to vSphere Update Manager
- Manage and update ESXi hosts using vSphere Lifecycle Manager

### 10 Introduction to vSphere with Kubernetes

- Differentiate between containers and virtual machines
- Identify the parts of a container system
- Recognize the basic architecture of Kubernetes
- Describe a basic Kubernetes workflow



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- Describe the purpose of vSphere with Kubernetes and how it fits into the VMware Tanzu portfolio
- Explain the vSphere with Kubernetes supervisor cluster
- Describe the Tanzu Kubernetes grid service



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