

## VMware vSphere: What's New

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### COURSE DETAILS

<b>Course Code:</b>	VM-VSWN
<b>Delivery Type:</b>	Instructor-Led
<b>Duration:</b>	3 days

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### 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 VMware vSphere® 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 VMware vSphere® Distributed Resource Scheduler™ 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.

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### COURSE CONTENT

In this three-day, hands-on training course, you explore the new features and enhancements in VMware vCenter Server® 7.0 and VMware ESXi™ 7.0. 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.

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### COURSE OBJECTIVES

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

- Recognize the importance of key features and enhancements in vSphere 6.7 update releases and vSphere 7
  - Migrate a vCenter Server system for Windows to VMware vCenter® Server Appliance™ 7.0
  - Upgrade a vCenter Server instance to vSphere 7
  - Describe vCenter Server, VMware ESXi™, storage, network, virtual machine, and security enhancements in vSphere 7
  - Update templates in the content library
  - Use Identity Federation to configure vCenter Server to use external identity sources
  - Use the VMware vSphere® Client™ to manage certificates
  - Use VMware vSphere® Trust Authority™ to secure the infrastructure for encrypted VMs
  - Use VMware vSphere® Lifecycle Manager™ to manage vSphere deployments and updates
  - Describe the cloning and migration operations on encrypted VMs
  - Describe the purpose of scalable shares and the improvements to vSphere DRS
  - Describe how to change the IP address or FQDN of vCenter Server
  - Identify new hardware device support in ESXi 7.0
  - Recognize the enhancements available with VM compatibility version 17
  - Recognize the enhancements available with VM compatibility version 18
  - Recognize the importance of containers and Kubernetes in a modern data center
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### COURSE OUTLINE

#### 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 7.0
- Migrate a Windows vCenter Server instance to vCenter Server Appliance 7.0
- Identify enhancements to vCenter Server Appliance
- Upgrade an ESXi host to version 7.0

#### 3 Management Enhancements

- Recognize how to create and apply vCenter Server profiles
  - 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
  - Identify enhancements to the vCenter Server file-based backup
  - Identify enhancements to tools provided by the vSphere Client Developer Center
  - Describe prefix-based MAC address allocation
  - Identify VMware NSX-T™ logical switches and their properties in the vSphere Client
  - Use virtual distributed port groups to connect to NSX-T Data Center logical switches
  - Use vSphere Bitfusion to support artificial intelligence and machine learning based workloads
  - Describe version control and management of VM templates in Content Library
  - Perform a VM template in-place update in Content Library
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- Describe identity federation and recognize its use cases
  - Configure identity federation
  - Manage certificates using the vSphere Client
  - Explain the benefits and capabilities of VMware Skyline™
- 4 ESXi Enhancements
- Recognize the enhancements made to ESXi security
  - Identify hardware support updates in ESXi 7.0
  - Describe the support for AMD SEV-ES in vSphere 7
  - Recognize layout changes in the ESXi 7.0 system storage partitions
  - Describe the enhancements made to ESXi timekeeping options in vSphere 7
  - Describe the enhancement to vSphere vMotion in vSphere 7
- 5 VM Enhancements
- Identify the characteristics of VM compatibility level for ESXi 7.0
  - Describe the support provided for new virtual devices in vSphere 7
  - Recognize improvements to guest customization
  - Migrate VMs with attached 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 in vSphere 7
  - Describe support for iSER in vSphere 7
  - Identify VMware vSAN™ enhancements for vSphere 7
- 7 Security Enhancements
- Describe the enhancements to cloning, migration, and encryption operations
  - Identify the enhancements to the VM encryption architecture in vSphere 7
  - Recognize new VM encryption events and alarms
  - Describe the benefits and use cases of VMware vSphere® Trust Authority™
  - Explain the general architecture of vSphere Trust Authority
  - Configure vSphere Trust Authority
- 8 Cluster Enhancements
- Recognize how to configure clusters using the vSphere Cluster Quickstart workflow
  - Recognize improvements to vSphere DRS
  - Identify improvements to vSphere ESX Agent Manager
  - Describe scalable shares
  - Configure VMware vSphere® DirectPath I/O™
- 9 vSphere Lifecycle Management
- Describe features of vCenter Server Update Planner
  - Run vCenter Server upgrade prechecks and interoperability reports
  - Describe vSphere Lifecycle Manager
  - Compare vSphere Lifecycle Manager to vSphere Update Manager
  - Identify the components of an ESXi image
  - Describe vSphere Lifecycle Manager and NSX-T Data Center integration
  - Define a cluster image and update ESXi hosts using vSphere Lifecycle Manager
- 10 Introduction to VMware vSphere® with Tanzu
- Differentiate between containers and virtual machines
  - Identify the parts of a container system
  - Recognize the steps in a basic Docker workflow
  - Explain the importance of Kubernetes
  - Recognize the basic architecture of Kubernetes
  - Describe a basic Kubernetes workflow
  - Identify the capabilities and benefits of vSphere with Tanzu

## **VMware vSphere: What's New**

- Describe the Tanzu Kubernetes Grid Service
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### **WHO SHOULD ATTEND**

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