

# VMware vSphere: What's New

## Course Overview

In this 2-day course, you will explore the new features and enhancements in VMware vCenter® 8.0, VMware ESXi™ 8.0, and VMware vSphere® 8.0. Through use-case scenarios, demonstrations, labs, and simulations, you develop skills to implement and configure vSphere 8.0.

## 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 8.0
- Describe the purpose of VMware vSphere® Distributed Services Engine™
- Use VMware vSphere® Lifecycle Manager™ to update an ESXi host that has a data processing unit (DPU)
- Identify devices supported for system storage on ESXi 8.0
- Recognize enhancements to VM hardware compatibility settings
- Recognize changes related to vSphere Memory Monitoring and Remediation that improve VMware vSphere® Distributed Resource Scheduler™
- Describe the new virtual non-uniform memory access (vNUMA) topology settings in the VMware vSphere® Client™
- Use vSphere Lifecycle Manager and VMware vSphere® Auto Deploy™ to manage configuration specifications for hosts in a cluster
- Recognize vSphere Lifecycle Manager and Auto Deploy enhancements in vSphere 8.0
- Describe new cluster management features in Tanzu Kubernetes Grid 2.0
- Recognize the cloud benefits that VMware vSphere+ brings to on-premises workloads
- Identify discontinued or deprecated features and technology in vSphere 8.0

## Target Audience

System architects, system administrators, IT managers, VMware partners, and individuals responsible for implementing and managing vSphere architectures who want to deploy vSphere 8.0 into their existing vSphere environment.

## Prerequisites

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

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



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- Experience with working at the command line is helpful.

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 Lifecycle Manager to 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 \[V8\]](#) course.

### Course Delivery Options

- Classroom
- Live Online

### Product Alignment

- VMware ESXi 8.0
- VMware vCenter Server 8.0

## Course Modules

### 1 Course Introduction

- Introductions and course logistics
- Course objectives

### 2 Artificial Intelligence and Machine Learning

- Describe how device groups support AI and ML in vSphere 8.0
- Describe how device virtualization extensions support AI and ML in vSphere 8.0

### 3 vSphere Distributed Services Engine

- Describe the benefits of Distributed Services Engine
- Explain how Distributed Services Engine works
- Recognize use cases for Distributed Services Engine
- Install ESXi on a host equipped with a DPU
- View DPU information in the vSphere Client
- Add an ESXi host equipped with a DPU to a cluster
- Use vSphere Lifecycle Manager to update an ESXi host that contains a DPU
- Create a vSphere distributed switch for network offloads
- Add a host with a DPU to the vSphere distributed switch
- Configure a VM to use uniform passthrough mode

### 4 vSphere and vCenter Management

- Describe improvements to the communication between vCenter and ESXi hosts
- Describe enhancements to the vCenter recovery process

### 5 ESXi Enhancements

- Describe the function of the central configuration store in ESXi
- Explain how ConfigStore affects interaction with ESXi configuration files
- Recognize the supported system storage partition configuration on ESXi 8.0
- Identify devices supported for system storage on ESXi 8.0
- Configure an RDMA host local device on ESXi 8.0

### 6 vSphere Storage

- Describe the VMware vSAN<sub>i</sub> Express Storage Architecture
- Recognize the benefits of using vSAN Express Storage Architecture
- Describe the benefits of using NVMe
- Recognize the support for NVMe devices in vSphere 8.0

### 7 Guest OS and Workloads

- Review the enhancements of the latest virtual hardware versions
- Describe the features introduced with virtual hardware version 20
- Identify the snapshot modes of NVDIMM devices

### 8 Resource Management

- View energy and carbon emission metrics in VMware vRealize<sup>®</sup> Operations Manager™
- Describe the vSphere Memory Monitoring and Remediation (vMMR) functionality
- Describe how vMMR enhances the performance of DRS

### 9 Security and Compliance

- Describe how to manage vTPM secrets when cloning a VM
- Manage OVF templates for VMs configured with vTPM
- Deploy an OVF template with vTPM
- Describe the enhancements to trusted binary enforcement in ESXi
- Describe ESXi 8.0 enhanced security features

### 10 vSphere Lifecycle Manager

- Describe the enhancements to life cycle management of standalone ESXi hosts
- Manage the configuration profiles of ESXi hosts in a cluster
- Use Auto Deploy to boot a host with the desired image and configuration specifications
- Upgrade multiple ESXi hosts in a cluster in parallel
- Stage an ESXi host image before remediation

- 11 **Auto Deploy**
  - Manage custom host certificates using Auto Deploy
- 12 **vSphere with Tanzu**
  - Describe the features of VMware Tanzu® Kubernetes Grid™ 2.0
- 13 **Announcing vSphere+**
  - Describe the functionality and benefits of vSphere+