VMware vSphere: What's New

Course Description

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 Duration:

2 days

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
- 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.

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

Course Outline:

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 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® 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+

Who Should Attend

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