



VMW-ICM

VMware vSphere: Install, Configure, Manage [V 8.0]



Overview.

This five-day course features intensive hands-on training that focuses on installing, configuring, and managing VMware vSphere 8, which includes VMware ESXi 8 and VMware vCenter 8. This course prepares you to administer a vSphere infrastructure for an organization of any size.

This course is the foundation for most VMware technologies in the software-defined data center.

Objectives.

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.
- Create 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.
- Create content libraries for managing templates and deploying virtual machines.
- Manage virtual machine resource allocation.
- Migrate virtual machines with vSphere vMotion and vSphere Storage vMotion.

- Create and configure a vSphere cluster that is enabled with vSphere High Availability (HA) and vSphere Distributed Resource Scheduler.
- Manage the life cycle of vSphere to keep vCenter, ESXi hosts, and virtual machines up to date.

Target Audience.

- System administrators.
- System engineers.

Prerequisites.

This course has the following prerequisites:

- System administration experience on Microsoft Windows or Linux operating systems.

Certification.

Attending this course meets the training requirement to achieve the following certification:

- VMware Certified Professional – Data Center Virtualization (VCP-DCV).

Course Modules.

Module 1: Course Introduction.

- Introductions and course logistics.
- Course objectives.

Module 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.

Module 3: Installing and Configuring ESXi.

- Install an ESXi host.
- Recognize ESXi user account best practices.
- Configure the ESXi host settings using the DCUI and VMware Host Client.

Module 4: Deploying and Configuring vCenter.

- 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 vCenter logs and events.

Module 5: Configuring 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.

Module 6: Configuring 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.

Module 7: 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.

Module 8: 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.
- 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.

Module 9: Deploying and Configuring vSphere Clusters.

- Create a vSphere cluster enabled for vSphere DRS and vSphere HA.
- 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 various types of failures.
- Identify options for configuring network redundancy in a vSphere HA cluster.
- Recognize vSphere HA design considerations.
- Recognize the use cases for various vSphere HA settings.
- Configure a vSphere HA cluster.
- Recognize when to use vSphere Fault Tolerance.

Module 10: Managing the vSphere Lifecycle.

- Enable vSphere Lifecycle Manager in a vSphere cluster.
- Describe features of the vCenter Update Planner.
- Run vCenter upgrade prechecks and interoperability reports.
- Recognize features of vSphere Lifecycle Manager.
- Distinguish between managing hosts using baselines and managing hosts using images.
- Describe how to update hosts using baselines.
- Describe ESXi images.
- Validate ESXi host compliance against a cluster image and update ESXi hosts.
- Update ESXi hosts using vSphere Lifecycle Manager.
- Describe vSphere Lifecycle Manager automatic recommendations.
- Use vSphere Lifecycle Manager to upgrade VMware Tools and VM hardware.

