

**VMware vSphere: Operate, Scale, Secure**

**Course Number:** VM-104  
**Duration:** 5 days

**Overview**

This VMware vSphere training course teaches attendees how to operate, scale, and secure a virtual infrastructure in VMware vSphere® 8. Students learn how to build a solid foundation for a scalable infrastructure and leverage VMware vSphere's advanced features and controls.

**Prerequisites**

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

**Materials**

All attendees receive the official VMware courseware for this course.

**Software Needed on Each Student PC**

A modern web browser and an Internet connection free of restrictive firewalls, so that the student can connect by SSH and Remote Desktop (RDP) into the virtual environment for the training.

**Objectives**

* Configure and manage a VMware Tools Repository
* Configure vSphere Replication and recover replicated VMs
* Manage VM resource usage with resource pools
* Configure and manage vSphere networking and storage for a large and sophisticated enterprise
* Configure vCenter High Availability
* Use host profiles to manage VMware ESXi host compliance
* Use the vSphere Client to manage certificates
* Monitor the vCenter, ESXi, and VMs performance in the vSphere client
* Secure vCenter, ESXi, and VMs in your vSphere environment
* Use VMware vSphere Trust Authority to secure the infrastructure for encrypted VMs
* Use Identity Federation to configure the vCenter to use external identity sources

**Outline**

* Introduction
* Virtual Machine Operations
  + Recognize the role of a VMware Tools Repository
  + Configure a VMware Tools Repository
  + Recognize the backup and restore solution for VMs
  + Identify the components in the vSphere Replication architecture
  + Deploy and configure vSphere Replication
  + Recover replicated VMs
* vSphere Cluster Operations
  + Create and manage resource pools in a cluster
  + Describe how scalable shares work
  + Describe the function of the vCLS
  + Recognize operations that might disrupt the healthy functioning of vCLS VMs
* Network Operations
  + Configure and manage vSphere distributed switches
  + Describe how VMware vSphere Network I/O Control enhances performance
  + Explain distributed switch features such as port mirroring and NetFlow
  + Define vSphere Distributed Services Engine
  + Describe the use cases and benefits of vSphere Distributed Services Engine
* Storage Operations
  + Discuss vSphere support for NVMe and iSER technologies
  + Describe the architecture and requirements of vSAN configuration
  + Describe storage policy-based management
  + Recognize components in the vSphere Virtual Volumes architecture
  + Configure Storage I/O Control
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* Conclusion