vSphere ICM 7 - VMware vSphere: Install, Configure, Manage

COURSE OVERVIEW:

This five-day course features intensive hands-on training that focuses on installing, configuring, and managing VMware vSphere 7, which includes VMware ESXi 7 and VMware vCenter Server 7. This course prepares you to administer a vSphere infrastructure for an organization of any size. This course is the foundation for most of the other VMware technologies in the software-defined data center.

WHO WILL BENEFIT FROM THIS COURSE?
- System Administrators
- System Engineers

PREREQUISITES:

System administration experience on Microsoft Windows or Linux operating systems.

COURSE OBJECTIVES:

By the end of the course, you should be able to meet the following objectives:
- Describe the software-defined data center
- Explain the vSphere components and their function in the infrastructure
- Add ESXi hosts to a VMware vCenter Server Appliance instance
- Manage vCenter Server Appliance
- Use a local content library as an ISO store, and deploy a virtual machine
- Describe vCenter Server architecture
- Use vCenter Server to manage an ESXi host
- Configure and manage vSphere infrastructure with VMware Host Client and VMware vSphere Client
- Describe virtual networks with vSphere standard switches
- Configure standard switch policies
- Use vCenter Server to manage various types of host storage: VMware vSphere VMFS, NFS, iSCSI, and RDM
- Examine the features and functions of Fibre Channel and VMware vSAN
- Manage virtual machines, templates, clones, and snapshots
- Migrate virtual machines with VMware vSphere vMotion
- Migrate virtual machine storage with VMware vSphere Storage vMotion
- Monitor resource usage, and manage resource pools
- Discuss the VMware vSphere High Availability (vSphere HA) cluster architecture
- Configure vSphere HA
- Manage vSphere HA and VMware vSphere Fault Tolerance
- Use VMware vSphere Replication and VMware vSphere Data Protection to replicate virtual machines and perform data recovery
- Use VMware vSphere Distributed Resource Scheduler clusters to improve host scalability
- Use VMware vSphere Update Manager to apply patches and perform basic troubleshooting of ESXi hosts, virtual machines, and vCenter Server operations
- Identify troubleshooting methodology to logically diagnose faults and improve troubleshooting efficiency

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COURSE OUTLINE:

Course Introduction

- Introductions and course logistics
- Course objectives

Introduction to vSphere and the Software-Defined Data Center

- Explain basic virtualization concepts
- Describe how vSphere fits into the software-defined data center and the cloud infrastructure
- Explain how vSphere interacts with CPUs, memory, networks, and storage
- Recognize the user interfaces for accessing the vCenter Server system and ESXi hosts
- Use VMware Host Client™ to access and manage ESXi host

Virtual Machines

- Create and remove a virtual machine
- Provision a virtual machine with virtual devices
- Identify the files that make up a virtual machine
- Explain the importance of VMware Tools™

vCenter Server

- Describe the vCenter Server architecture
- Discuss how ESXi hosts communicate with vCenter Server
- Deploy and configure vCenter Server Appliance
- Use the vSphere Client to manage the vCenter Server inventory
- Add data center, organizational objects, and hosts to vCenter Server
- Use roles and permissions to enable users to access objects in the vCenter Server inventory
- Back up vCenter Server Appliance
- Monitor vCenter Server tasks, events, and appliance health
- Use vCenter Server High Availability to protect a vCenter Server Appliance

Configuring and Managing Virtual Networks

- Create and manage standard switches
- Describe the virtual switch connection types
- Configure virtual switch security, traffic-shaping and load-balancing policies
- Compare vSphere distributed switches and standard switches

Configuring and Managing Virtual Storage

- Identify storage protocols and storage device types
- Discuss ESXi hosts using iSCSI, NFS, and Fibre Channel storage
- Create and manage VMFS and NFS datastores
- Explain how multipathing works with iSCSI, NFS, and Fibre Channel storage
- Deploy virtual machines on a VMware vSAN™ datastore

Virtual Machine Management

- Use templates and cloning to deploy new virtual machines
- Modify and manage virtual machines
- Create a content library and deploy virtual machines from templates in the library
- Dynamically increase the size of a virtual disk

- Use customization specification files to customize a new virtual machine
- Perform vSphere vMotion and vSphere Storage vMotion migrations
- Create and manage virtual machine snapshots
- Examine the features and functions of VMware vSphere® Replication™

Resource Management and Monitoring
- Discuss CPU and memory concepts in a virtualized environment
- Describe what overcommitment of a resource means
- Describe methods for optimizing CPU and memory usage
- Use various tools to monitor resource use
- Create and use alarms to report certain conditions or events

vSphere Cluster
- Describe options for making a vSphere environment highly available
- Explain the vSphere HA architecture
- Configure and manage a vSphere HA cluster
- Examine the features and functions of VMware vSphere® Fault Tolerance
- Configure a vSphere cluster using ESXi Cluster Quickstart
- Describe the functions of a vSphere DRS cluster
- Create a vSphere DRS cluster

vSphere Lifecycle
- Describe how VMware vSphere® Lifecycle Manager™ works
- Use vSphere Lifecycle Manager to update ESXi hosts in a cluster

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Sunset Learning Institute (SLI) has been an innovative leader in developing and delivering authorized technical training since 1996. Our goal is to help our customers optimize their cloud technology investments by providing convenient, high quality technical training that our customers can rely on. We empower students to master their desired technologies for their unique environments.

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- Sunset Learning has won numerous Instructor Excellence and Instructor Quality Distinction awards since 2012

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- The goal of our instructors during class is ensure students understand the material, guide them through our labs and encourage questions and interactive discussions.

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