

## VMware vSphere Fast Track



### Course Outline

#### Module 1: Course Introduction

- Introductions and course logistics
- Course objectives

#### Module 2: Software-Defined Data Center

- Introduce virtualization and vSphere components
- Explain the concepts of server, network, and storage virtualization
- Describe where vSphere fits into the cloud architecture
- Install and use vSphere user interfaces
- Describe the ESXi architecture and configure various ESXi settings

#### Module 3: Creating Virtual Machines

- Introduce virtual machines, virtual machine hardware, and virtual machine files
- Deploy a single virtual machine

#### Module 4: VMware vCenter Server

- Introduce vCenter Server architecture
- Introduce vCenter Server Appliance
- Install and configure vCenter Server Appliance
- Using the VMware vSphere Web Client
- Configuring VMware vCenter Single Sign-On
- Manage vCenter Server inventory objects and licenses

#### Module 5: Configuring and Managing Virtual Networks

- Describe, create, and manage a standard switch
- Describe and modify standard switch properties
- Describe the NIC teaming of a standard switch port group

#### Module 6: Configuring and Managing Virtual Storage

- Introduce storage protocols and device names
- Configure ESXi with iSCSI, NFS, and Fibre Channel storage
- Create and manage VMware vSphere VMFS datastores
- Introduce VMware Virtual SAN datastores

## **Module 7: Virtual Machine Management**

- Use templates and cloning to deploy virtual machines
- Modify and manage virtual machines
- Create and manage virtual machine snapshots
- Perform VMware vSphere vMotion and VMware vSphere Storage vMotion migrations
- Create a VMware vSphere vApp

## **Module 8: Access and Authentication Control**

- Control user access through roles and permissions
- Discuss ESXi host access and authentication
- Integrate ESXi with Active Directory

## **Module 9: Resource Management and Monitoring**

- Introduce virtual CPU and memory concepts
- Describe methods for optimizing CPU and memory usage
- Configure and manage resource pools
- Use vCenter Server performance graphs and alarms to monitor resource usage

## **Module 10: High Availability and Fault Tolerance**

- Explain the vSphere HA architecture
- Configure and manage a vSphere HA cluster
- Set vSphere HA advanced parameters
- Enable vSphere FT on a virtual machine
- Describe VMware vSphere Replication

## **Module 11: Network Scalability**

- Create, configure, and manage vSphere distributed switches, network connections, and port groups
- Discuss distributed switch features, such as private VLANs, discovery protocols, VMware vSphere Network I/O Control, NetFlow, and port mirroring

## **Module 12: Host Scalability**

- Use host profiles to manage ESXi configuration compliance
- Configure and manage a VMware vSphere Distributed Resource Scheduler cluster
- Configure Enhanced vMotion Compatibility
- Use vSphere HA and vSphere DRS together

## **Module 13: Storage Scalability**

- Describe VMware vSphere Storage APIs - Array Integration and Storage Awareness
- Explain policy-driven storage
- Add a storage policy to a virtual machine storage profile
- Introduce VMware vSphere Storage I/O Control
- Create a datastore cluster
- Configure Storage DRS

## **Module 14: Patch Management**

- Use vSphere Update Manager to manage ESXi patching
- Install vSphere Update Manager and the vSphere Update Manager plug-in
- Create patch baselines
- Scan and remediate hosts

## **Module 15: VMware Management Resources**

- Describe vSphere Management Assistant

11200 Rockville Pike, Suite 220 Rockville, MD 20852 | **Phone:** 301-984-7400 | **Fax:** 301-984-7401

**Web:** [www.asmed.com](http://www.asmed.com) | **E-mail:** [info@asmed.com](mailto:info@asmed.com)

- Configure vSphere Management Assistant
- Discuss the VMware vSphere Command-Line Interface command set
- Perform command-line operations for host management, network management, storage management, and performance monitoring

## **Module 16: Installing VMware Components**

- Describe vCenter Linked Mode to manage multiple vCenter Server inventories
- Introduce ESXi installation
- Describe boot-from-SAN requirements
- Describe vCenter Server hardware, software, and database requirements
- Install vCenter Server (Windows-based)

## **Module 17: Host and Management Scalability**

- Configure and manage VMware vSphere Distributed Power Management
- Use VMware vSphere PowerCLI
- Use vSphere ESXi Image Builder CLI to create an ESXi installation image
- Use vSphere Auto Deploy to deploy a stateless ESXi host