

## Course Modules

### 1 Course Introduction

- Introductions and course logistics
- Course objectives
- References and resources

### 2 Software-Defined Data Center

- Introduce components of the software-defined data center
- Describe where vSphere fits into the cloud architecture
- Install and use vSphere Client
- Overview of ESXi

### 3 Creating Virtual Machines

- Introduce virtual machines, virtual machine hardware, and virtual machine files
- Create and work with virtual machines and templates

### 4 vCenter Server

- Introduce the vCenter Server architecture
- Deploy and configure vCenter Server Appliance
- Use vSphere Web Client
- Manage vCenter Server inventory objects and licenses

### 5 Configuring and Managing Virtual Networks

- Describe, create, and manage standard switches
- Configure virtual switch security and load-balancing policies
- Create, configure, and manage vSphere distributed switches, network connections, and port groups

### 6 Configuring and Managing Virtual Storage

- Introduce storage protocols and storage device types
- Discuss ESXi hosts using iSCSI and NFS storage
- Create and manage VMFS and NFS datastores
- Introduce VMware Virtual SAN™
- Introduce Virtual Volumes

### 7 Virtual Machine Management

- Use templates and cloning to deploy new virtual machines
- Modify and manage virtual machines
- Perform vSphere vMotion and vSphere Storage vMotion migrations
- Create and manage virtual machine snapshots
- Create vApps
- Introduce the types of content libraries and how to deploy and use them

### 8 Resource Management and Monitoring

- Introduce virtual CPU and memory concepts
- Configure and manage resource pools
- Describe methods for optimizing CPU and memory usage
- Use various tools to monitor resource usage
- Create and use alarms to report certain conditions or events
- Identify and troubleshoot virtual machine resource issues
- Introduce vRealize Operations Manager for data center monitoring and management

### 9 vSphere HA and vSphere Fault Tolerance □

- Explain the vSphere HA architecture
- Configure and manage a vSphere HA cluster
  - Use vSphere HA advanced parameters
  - Introduce vSphere Fault Tolerance
  - Enable vSphere Fault Tolerance on virtual machines
  - Introduce vSphere Replication
  - Use vSphere Data Protection to back up and restore data

### 10 Host Scalability

- Describe the functions and benefits of a vSphere DRS cluster
- Configure and manage a vSphere DRS cluster
- Work with affinity and anti-affinity rules
- Use vSphere HA and vSphere DRS together for business continuity

### 11 vSphere Update Manager and Host Maintenance □ Use vSphere Update Manager to manage ESXi patching

- Install vSphere Update Manager and the vSphere Update Manager plug-in
- Create patch baselines
- Use host profiles to manage host configuration compliance □ Scan and remediate hosts

### 12 Installing vSphere Components

- Install ESXi
- Introduce vCenter Server deployment options
- Describe vCenter Server hardware, software, and database requirements
- Discuss installation of vCenter Server Appliance and a vCenter Server instance
- Demonstrate vCenter Server installation