

## **Modules:**

Total: 46 Hours

1. Course Introduction
  - o Introductions and course logistics
  - o Course objectives
  - o References and resources
  - 2 hours
2. Software-Defined Data Center
  - o Introduce components of the software-defined data center
  - o Describe where vSphere fits into the cloud architecture
  - o Install and use vSphere Client
  - o Overview of ESXi
  - 4 hours
3. Creating Virtual Machines
  - o Introduce virtual machines, virtual machine hardware, and virtual machine files
  - o Create and work with virtual machines and templates
  - 4 hours
4. vCenter Server
  - o Introduce the vCenter Server architecture
  - o Deploy and configure vCenter Server Appliance
  - o Use vSphere Web Client
  - o Manage vCenter Server inventory objects and licenses
  - 4 hour
5. Configuring and Managing Virtual Networks
  - o Describe, create, and manage standard switches
  - o Configure virtual switch security and load-balancing policies
  - o Create, configure, and manage vSphere distributed switches, network connections, and port groups
  - 4 hours
6. Configuring and Managing Virtual Storage
  - o Introduce storage protocols and storage device types
  - o Discuss ESXi hosts using iSCSI and NFS storage

- o Create and manage VMFS and NFS datastores
- o Introduce VMware Virtual SAN™
- o Introduce Virtual Volumes
- 4 hours
- 7. Virtual Machine Management
  - o Use templates and cloning to deploy new virtual machines
  - o Modify and manage virtual machines
  - o Perform vSphere vMotion and vSphere Storage vMotion migrations
  - o Create and manage virtual machine snapshots
  - o Create vApps
  - o Introduce the types of content libraries and how to deploy and use them
  - 4 hours
- 8. Resource Management and Monitoring
  - o Introduce virtual CPU and memory concepts
  - o Configure and manage resource pools
  - o Describe methods for optimizing CPU and memory usage
  - o Use various tools to monitor resource usage
  - o Create and use alarms to report certain conditions or events
  - o Identify and troubleshoot virtual machine resource issues
  - 4 hours
- 9. vSphere HA and vSphere Fault Tolerance
  - o Explain the vSphere HA architecture
  - o Configure and manage a vSphere HA cluster
  - o Use vSphere HA advanced parameters
  - o Introduce vSphere Fault Tolerance
  - o Enable vSphere Fault Tolerance on virtual machines
  - o Introduce vSphere Replication
  - o Use vSphere Data Protection to back up and restore data
  - 4 hours

10. Host Scalability
  - o Describe the functions and benefits of a vSphere DRS cluster
  - o Configure and manage a vSphere DRS cluster
  - o Work with affinity and anti-affinity rules
  - o Use vSphere HA and vSphere DRS together for business continuity
  - 4 hours
11. vSphere Update Manager and Host Maintenance
  - o Use vSphere Update Manager to manage ESXi patching
  - o Install vSphere Update Manager and the vSphere Update Manager plug-in
  - o Create patch baselines
  - o Use host profiles to manage host configuration compliance
  - o Scan and remediate hosts
  - 4 hours
12. Installing vSphere Components
  - o Install ESXi
  - o Introduce vCenter Server deployment options
  - o Describe vCenter Server hardware, software, and database requirements
  - o Discuss installation of vCenter Server Appliance and a vCenter Server instance
  - o Demonstrate vCenter Server installation
  - 4 hours