VMware vSphere: Install, Configure, Manage [V5.5]

1. Course Introduction   **30 mins**
   - o Introductions and course logistics
   - o Course objectives

2. Virtualized Data Center   **30 Mins**
   - o Introduce components of the virtualized data center
   - o Describe where vSphere fits into the cloud architecture
   - o Install and use vSphere Client

3. Creating Virtual Machines   **1 Hour**
   - o Introduce virtual machines, virtual machine hardware, and virtual machine files
   - o Deploy a single virtual machine

4. VMware vCenter Server   **2 hours**
   - o Introduce the vCenter Server architecture
   - o Introduce VMware® vCenter™ Single Sign-On™
   - o Install and use vSphere Web Client
   - o Introduce VMware® vCenter™ Server Appliance™
   - o Configure and manage vCenter Server Appliance
   - o Manage vCenter Server inventory objects and licenses

5. Configuring and Managing Virtual Networks   **4 hours**
   - o Describe, create, and manage a standard switch
   - o Describe and modify standard switch properties
   - o Configure virtual switch load-balancing algorithms

6. Configuring and Managing Virtual Storage   **4 hours**
   - o Introduce storage protocols and device names
   - o Configure ESXi with iSCSI, NFS, and Fibre Channel storage
   - o Create and manage vSphere datastores
   - o Deploy and manage VMware® Virtual SAN™

7. Virtual Machine Management   **8 hours**
   - o Use templates and cloning to deploy virtual machines
   - o Modify and manage virtual machines
   - o Create and manage virtual machine snapshots

- o Perform vSphere vMotion and vSphere Storage vMotion migrations
- o Create a VMware vSphere® vApp™

8. Access and Authentication Control   **2 hours**
    - o Control user access through roles and permissions
    - o Configure and manage the ESXi firewall
    - o Configure ESXi lockdown mode
    - o Integrate ESXi with Active Directory

9. Resource Management and Monitoring   **3 hours**
    - o Introduce virtual CPU and memory concepts
    - o Describe methods for optimizing CPU and memory usage
    - o Configure and manage resource pools
    - o Monitor resource usage using vCenter Server performance graphs and alarms

10. High Availability and Fault Tolerance   **5 Hours**
    - o Introduce the new vSphere High Availability architecture
    - o Configure and manage a vSphere HA cluster
    - o Introduce vSphere Fault Tolerance
    - o Describe VMware vSphere® Replication

11. Scalability   **2 Hours**
    - o Configure and manage a VMware vSphere® Distributed Resource Scheduler™ (DRS) cluster
    - o Configure Enhanced vMotion Compatibility
    - o Use vSphere HA and DRS together

12. Patch Management   **2 Hours**
    - 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 Scan and remediate hosts

13. Installing VMware Components   **8 Hours**
    - o Introduce ESXi installation
    - o Describe boot-from-SAN requirements
    - o Introduce vCenter Server deployment options
    - o Describe vCenter Server hardware, software, and database requirements
    - o Install vCenter Server (Windows-based)