VMware vSphere: Install, Configure, Manage [v5.5]

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Length:	35 Hours (5 days)
Introduction:	This hands-on training course explores installation, configuration, and management of VMware vSphere®, which consists of VMware ESXi™ and VMware® vCenter Server™. This course is based on versions of ESXi 5.5 and vCenter Server 5.5. Completion of this course satisfies the prerequisite for taking the VMware® Certified Professional 5 exam.
Prerequisites:	In addition to their professional experience, students who attend should have the following technical knowledge: ■ System administration experience on Microsoft Windows or Linux operating systems ■ Understanding of concepts presented in the VMware Data Center Virtualization Fundamentals course for VCA-DCV certification
Objectives:	At the end of the course, students will be able to: ■ Deploy an ESXi host ■ Deploy a vCenter Server instance ■ Deploy a vCenter Server appliance ■ Manage an ESXi host using vCenter Server ■ Manage ESXi storage using vCenter Server ■ Manage ESXi networking using vCenter Server ■ Manage virtual machines using vCenter Server ■ Deploy and manage thin-provisioned virtual machines ■ Migrate virtual machines with VMware vSphere® vMotion® ■ Manage vSphere infrastructure with VMware vSphere® Web Client and VMware vSphere® Client™ ■ Migrate virtual machines using VMware vSphere® Storage vMotion® ■ Manage access control using vCenter Server ■ Monitor resource usage using vCenter Server ■ Manage VMware vSphere® High Availability, VMware vSphere® Fault Tolerance, and VMware vSphere® Data Protection™ using vCenter Server ■ Apply patches using VMware vSphere®Update Manager™

Course Outline

I. Virtualized Data Center

A. Introduce components of the virtualized data center
B. Describe where vSphere fits into the cloud architecture
C. Introduce VMware® vCenter™ Single Sign-On™
D. Install and use vSphere Web Client

II. Creating Virtual Machines

A. Introduce virtual machines, virtual machine hardware, and virtual machine files
B. Deploy a single virtual machine

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III. VMware vCenter Server

A. Introduce the vCenter Server architecture
B. Introduce VMware® vCenter™ Server Appliance™
C. Configure and manage vCenter Server Appliance
D. Manage vCenter Server inventory objects and licenses

IV. Configuring and Managing Virtual Networks

A. Describe, create, and manage a standard switch
B. Describe and modify standard switch properties
C. Configure virtual switch load-balancing algorithms

V. Configuring and Managing Virtual Storage

A. Introduce storage protocols and device names
B. Configure ESXi with iSCSI, NFS, and Fibre Channel storage
C. Create and manage vSphere datastores
D. Deploy and manage VMware® Virtual SAN™

VI. Virtual Machine Management

A. Use templates and cloning to deploy virtual machines
B. Modify and manage virtual machines
C. Create and manage virtual machine snapshots
D. Perform vSphere vMotion and vSphere Storage vMotion migrations
E. Create a VMware vSphere® vApp™

VII. Access and Authentication Control

A. Control user access through roles and permissions
B. Configure and manage the ESXi firewall
C. Configure ESXi lockdown mode
D. Integrate ESXi with Active Directory

VIII. Resource Management and Monitoring

A. Introduce virtual CPU and memory concepts
B. Describe methods for optimizing CPU and memory usage
C. Configure and manage resource pools
D. Monitor resource usage using vCenter Server performance graphs and alarms

IX. High Availability and Fault Tolerance

A. Introduce the new vSphere High Availability architecture
B. Configure and manage a vSphere HA cluster
C. Introduce vSphere Fault Tolerance
D. Describe VMware vSphere® Replication

X. Scalability

A. Configure and manage a VMware vSphere® Distributed Resource Scheduler™ (DRS) cluster
B. Configure Enhanced vMotion Compatibility
C. Use vSphere HA and DRS together

XI. Patch Management

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

XII. Installing VMware Components

A. Introduce ESXi installation
B. Describe boot-from-SAN requirements
C. Introduce vCenter Server deployment options
D. Describe vCenter Server hardware, software, and database requirements
E. Install vCenter Server (Windows-based)