VMware vSphere: Advanced Administration Workshop

Course Description

This five-day course provides hands-on training to equip students with a range of skills: from performing routine VMware vSphere® 7 administrative tasks to complex vSphere operations and configurations. Through lab-based activities, students are immersed in real-life situations faced by VMBeans, a fictitious company. These situations expose students to real-life scenarios faced by companies that are building and scaling their virtual infrastructure. This course uses scenario-based lab exercises and does not provide guided step-by-step instructions. To complete the scenario-based lab exercises, you are required to analyze the task, research, and deduce the required solution. References and suggested documentation are provided.

Approximately 90% of the class is application-focused and taught through labs. The course aligns fully with the VMware Certified Advanced Professional – Data Center Virtualization Deploy exam objectives.

Course Duration:

5 days

Prerequisites:

This course requires the following prerequisites:

- Completion of VMware vSphere: Optimize and Scale [V7] course
- VMware Certified Professional – Data Center Virtualization (VCP-DCV) certification
- System administration experience on Microsoft Windows or Linux operating systems

Objectives:

By the end of the course, you should be able to meet the following objectives:

- Enable cluster features and configure vSphere storage and networking
- Use host profiles to automate host configurations
- Use Cluster Quickstart to create a VMware vSAN™ enabled cluster
- Configure the VMware vCenter Server® identity provider
- Troubleshoot host connectivity and storage connectivity
- Perform lifecycle operations on vSphere components
- Implement security hardening guidelines to vSphere and virtual machines

Course Outline:

1. Course Introduction
    - Introductions and course logistics
    - Course objectives
    - Introduction to fictitious company: VMBeans

2. Creating and Configuring Management Clusters
    - Enable cluster features that help to improve resource allocation and availability of virtual machines
    - Use standard virtual switches to create networking in a cluster
    - Recognize when to use VMware vSphere® vMotion®
    - Recognize requirements for using iSCSI

- Identify the purpose of iSCSI multipathing
- Select the appropriate vSphere storage types to meet requirements
- Recognize when to configure ESXi NTP support
- Recognize ESXi user account best practices
- Configure ESXi host settings
- Use host profiles appropriately

3. Creating and Configuring Productions Clusters
   - Use Cluster Quickstart to create a vSAN enabled cluster
   - Configure advanced vSphere HA settings
   - Recognize the benefits of Active Directory Federation Services (ADFS)
   - Configure the vCenter Server identity provider
   - Assign specific permissions and roles to ADFS users
   - Recognize how Enhanced vMotion Compatibility benefits VM mobility
   - Perform a Cross vCenter Server Migration
   - Use content libraries to share virtual machine templates between sites

4. Troubleshooting vSphere and Backing Up Configurations
   - Troubleshoot ESXi connectivity issues
   - Troubleshoot iSCSI storage issues
   - Troubleshoot vSphere cluster resources
   - Troubleshoot VMware PowerCLI™ issues
   - Back up vCenter Server

5. Lifecycle Management
   - Troubleshoot upgrade-blocking issues
   - Increase logging levels on vCenter Server
   - Configure a VMware Tools™ shared repository
   - Upgrade vCenter Server
   - Upgrade ESXi
   - Upgrade VMware Tools
   - Upgrade Virtual Machine Compatibility
   - Work with VM placement rules

6. vSphere Security
   - Manage advanced virtual machine configurations
   - Configure a key management server
   - Encrypt virtual machines using vSphere VM encryption
   - Secure VMs in transit with encrypted vSphere vMotion
   - Identify and implement different ESXi CPU scheduler options
   - Apply security hardening guidelines to ESXi hosts
   - Replace vCenter Server certificates with trusted CA-signed certificates
   - Deploy a new vCenter Server instance
   - Reconfigure the primary network identifier for vCenter Server

Who Should Attend

- System administrators
- System engineer