

TRAINING: VMware vSphere:Advanced Administration

LOCATIONS & TERMS: **Virtual Classroom, ENG**

**5 days**

#### **TRAINING GOALS:**

This five-day course provides hands-on training to equip students with a range of skills, from performing routine VMware vSphere 8 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. This course utilizes labs to teach students how to effectively navigate and manage vSphere. The course aligns fully with the VMware Certified Advanced Professional – Data Center Virtualization Deploy exam objectives.

#### **AUDIENCE**

- System administrators
- System engineers

#### **PREREQUISITES**

This course requires completion of the following prerequisites:

- VMware vSphere: Install, Configure, Manage
- VMware vSphere: Operate, Scale, and Secure
- Working knowledge of VMware vSAN™
- System administration experience on Microsoft Windows or Linux operating systems

#### **COURSE MODULES**

##### 1 Course Introduction

- Introductions and course logistics
- Course objectives

##### 2 Creating and Configuring Management Clusters

- Create a vSphere cluster for management workloads
- Activate vSphere cluster features that help to improve resource allocation and availability of virtual machines
- Use standard virtual switches to create networking in a cluster
- Select the appropriate vSphere storage types to meet requirements
- Configure iSCSI storage
- Configure VMFS and NFS datastores
- Recognize when to configure ESXi NTP and PTP support
- Recognize ESXi user account best practices
- Configure ESXi host settings
- Use vSphere configuration profiles to maintain consistent ESXi host configurations

##### 3 Creating and Configuring Production Clusters

- Use Cluster Quickstart to create a vSAN-activated cluster
- Configure advanced vSphere HA settings
- Configure the vCenter identity provider
- Assign specific permissions and roles to Active Directory Federation Services (ADFS) users
- Configure Enhanced vMotion Compatibility on a cluster and a VM

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- Perform a Cross vCenter Server migration•
- Use content libraries to share virtual machine templates between sites
- Manage VM and ESXi host resources using resource pools, scalable shares, and vSphere DRS rules
- 4 Troubleshooting vSphere and Backing Up Configurations
- Troubleshoot ESXi connectivity issues
- Troubleshoot ESXi storage issues
- Troubleshoot vSphere cluster issues
- Troubleshoot PowerCLI issues
- Generate vCenter and ESXi log bundles
- Back up vCenter
- Create a vCenter profile to standardize configurations in the environment
- 5 Lifecycle Management
- Troubleshoot upgrade-blocking issues
- Increase logging levels on vCenter
- Configure a VMware Tools™ shared repository
- Upgrade vCenter
- Upgrade ESXi
- Upgrade VMware Tools
- Upgrade virtual machine hardware compatibility
- 6 vSphere Security
- 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 certificates with trusted CA-signed certificates
- Reconfigure the primary network identifier for a vCenter instance

## CERTIFICATION

Attending this course is recommended to achieve the following certification:

- VMware Certified Advanced Professional – Data Center Virtualization Deploy (VCAP Deploy)

## OBJECTIVES

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

- Configure VMware vCenter® and VMware ESXi™
- Configure and manage a vSphere cluster solution for vSphere HA, vSphere DRS, and vSAN
- Configure vSphere storage and networking
- Perform lifecycle operations on vSphere components
- Troubleshoot vSphere infrastructure and connectivity issues
- Back up vCenter configurations
- Implement solutions for securing the vSphere infrastructure.