VMware vSphere: What's New 5.5 to 6.7 (VMWN-5.5 to 6.5)

Modality: Virtual Classroom

Duration: 3 Days

SATV Value:

CLC:

NATU:

SUBSCRIPTION: No

About this course:

The VMware vSphere course is a three-day training course, with which you learn about the new features and the upgrades the already existing ones of VMware vCenter Server® 6.7 and VMware ESXi™ 6.7.

This course comprises of real-world scenarios, hands-on experiments, and interactive lectures for you to learn in a better manner. The course covers the skills and knowledge that you need for the implementation and configuration of VMware vSphere 6.7.

A VMware Administrator on average earns $79,681 annually.

Course Objective:

After completing the course, students shall be able to:

- Identify and explain the benefits of new and existing features of vSphere 6.0, 6.5, and 6.7
- Skills for viewing and configuring VMware vSphere® Client™, VMware Host Client™, and the VMware vCenter® Server Appliance™
- Transfer vCenter Server system for Windows to vCenter Server Appliance 6.7
- Upgrade vCenter Server and vCenter Server to version 6.7
- Upgrade ESXi host
- Configure a library to sync Virtual Machines, vApps, and ISO images
- Deploy virtual machines from a content library
- Enhance ESXi Security with an ESXi host
- Upgrade VMware to the latest software and hardware VMware Tools version
- Configure NFS- and iSCSI-backed virtual volumes to operate independently of the platform
- Implement strong storage policies for virtual machines and virtual volume datastores
- Register and create an encrypted virtual machine with vServer Center
- Create a distributed switch and use VMware vSphere® Network I/O Control to allocate bandwidth for a virtual machine
- Activate VMware vCenter Server® High Availability

Audience:

The target audience for this course is:

- System architects
- System administrators
- IT managers
- VMware partners
- Candidates who want to learn how to implement and manage vSphere architecture

Prerequisite:

To enroll for this course, students must complete one of the following certifications or acquire knowledge equivalent to it:

- VMware vSphere: Install, Configure, Manage
- VMware vSphere: Fast Track
- VMware vSphere: What's New
- VMware vSphere: Troubleshooting
- Experience with working at the command line is helpful.
- The course material presumes that you can perform the following tasks with no assistance or guidance before enrolling in this course:
- Install and configure ESX or ESXi
- Install vCenter Server
- Create vCenter Server objects, such as data centers and folders
- Create and manage vCenter Server roles and permissions
- Create and modify a standard switch
- Create and modify a distributed switch
- Connect an ESX/ESXi host to NAS, iSCSI, or Fibre Channel storage
- Create a VMware vSphere® VMFS datastore
- Enable vSphere vMotion on an ESX/ESXi host
- Use a wizard or a template to create a virtual machine
- Modify a virtual machine's hardware
- Migrate a virtual machine with vSphere vMotion
- Migrate a virtual machine with VMware vSphere® Storage vMotion®
- Configure and manage a VMware vSphere® Distributed Resource Scheduler™ cluster with resource pools
- Configure and manage a VMware vSphere® High Availability cluster

In case of not fulfilling the criteria, VMware recommends to enroll for the VMware vSphere: Install, Configure, Manage [V6.7] course.

Course Outline:

Module 1 Course Introduction

- Introductions and course logistics
- Course objectives

Module 2 Management Enhancements

- Differentiate the vSphere clients
- Use vSphere Client to view the vSphere environment
- Use VMware Host Client to view the vSphere environment
- Describe the vSphere 6.0, 6.5, and 6.7 enhancements to vCenter Server Appliance
- Describe the new features of vSphere 6.7
- Discuss methods for vCenter Server Appliance Backup and Restore
- Manage a vCenter Server Appliance by using the command-line shell interface
- Describe how vCenter Server High Availability works
- Describe how VMware Platform Services Controller™ high availability works
- Configure and test vCenter Server High Availability
- Summarize the purpose of content libraries in a vSphere environment
- Create a local content library
- Subscribe to a published content library
- Deploy virtual machines from a content library

Module 3 vCenter Server Upgrade and Migration

- Determine the appropriate upgrade path for a vCenter Server deployment
- Upgrade a vCenter Server Appliance instance to vCenter Server Appliance 6.7
- Upgrade a vCenter Server instance to vCenter Server 6.7
- Determine the appropriate migration path for a vCenter Server deployment
- Describe the new migration features of vCenter Server 6.7
- Migrate a vCenter Server instance for Windows to vCenter Server Appliance 6.7
- Describe Platform Services Controller High Availability deployment options
- Describe Enhanced Linked Mode with embedded Platform Services Controllers
- Use Embedded Linked Mode to link multiple vCenter Server systems
- Use Cross SSO Domain repointing to move and consolidate vCenter Server systems from different domains into one domain

Module 4 ESXi Upgrade and Enhancements

- Determine the appropriate upgrade method for an ESXi host
- Describe the procedure for upgrading an ESXi 5.5, 6.0, or 6.5 host to an ESXi 6.7 host
- Discuss the additional features to support hot-plug and SMART solid-state drives
- Describe the new capabilities of Host Profiles introduced in vSphere 6.5
- Describe the vSphere 6.7 Quick Boot feature
- Describe the VMware vSphere® Update Manager™ EAM integration
- Describe vSphere 6.7 persistent memory feature
- Describe how Per-VM Enhanced vMotion Compatibility (EVC) provides greater VM mobility
- Discuss how virtual machines and applications to leverage high-performance physical GPU hardware
- Discuss how Instant Clone technology enables the rapid deployment of similar virtual machines

Module 5 Virtual Machine Enhancements

- Discuss how virtual hardware 11, 13, and 14 extend virtual machine resource configurations
- Describe how the VMXNET3 adapter optimizes network traffic
- Discuss how hot-add memory is distributed across NUMA nodes in vSphere 6.x
- Describe the benefits of VMware vSphere® Integrated Containers™
- Upgrade Virtual Machines

Module 6 Storage Enhancements

- Describe vSphere 6.x support for NFS
- Describe VMware vSphere® VMFS6 datastore
- Explain the advantages of SEsparse format for environments where many tenants share storage
- Discuss support for 4Kn (4K native) storage devices
- Explain how VMware vSphere® API for Storage Awareness™ can ensure that a VM's storage requirements are met
- Describe the interoperability enhancements to VMware vSphere® Storage DRS™ and VMware vSphere® Storage I/O Control
- Describe how vSphere Storage DRS and Storage I/O Control improves adherence to configured maximums and reservations
- Describe the VMware vSAN enhancements
- Describe how VMDK data operations are offloaded to storage arrays through VMware vSphere® API for Storage Awareness™
- Describe per-virtual machine, policy-based policy management

Module 7 Security Enhancements

- Use encryption in your vSphere environment
- Encrypt virtual machines in your vSphere environment
- Explain how to back up encrypted virtual machines
- Enable encrypted vSphere vMotion migration
- Discuss the improvements to lockdown settings
- Describe the addition of smart-card authentication
- Explain the changes that enhance user accountability
- Describe secure boot support for ESXi hosts
- Describe the security enhancements introduced in vSphere 6.7
- Enable Federal Information Processing Standard (FIPS) 140-2 mode in your vSphere environment
- Enable a virtual TPM device in your vSphere environment
- Discuss support for Virtualization Based Security (VBS) in your vSphere environment
- Deploy enhanced vCenter Server events and alarms and vSphere logging
- Describe the vSphere features for monitoring vCenter Server Appliance
- List the VMware certificate management components
- Describe certificate use changes in vSphere 6.0
- Describe the primary services provided by the VMware Certificate Authority component
- Contrast using VMware certificate authority (CA) with using and external CA

Module 8 Network Enhancements

- Use Network I/O Control
- Upgrade Network I/O Control to version 3
- Enable network resource management on VMware vSphere® Distributed Switch™
- Configure bandwidth allocation for system and virtual machine traffic based on shares and reservation
- Discuss IPv6 support in vSphere 6.x
- Explain how the gateway per vmknic feature works and how it is configured
- Explain the new ERSPAN headers supported in vSphere 6.5 and how they are configured
- Describe the areas where performance improvements were made in vSphere 6.5

Module 9 Availability Enhancements

- Describe the TCP/IP stack for vSphere vMotion that was introduced in vSphere 6.0
- Explain the changes that make vSphere vMotion migrations across high-latency networks possible
- Discuss the requirements for migrating a virtual machine across vCenter Server instances
- Explain how VMware vSphere® Fault Tolerance in vSphere 6.0 supports virtual machines with multiple virtual CPUs
- Describe how vSphere Fault Tolerance maintains the secondary virtual machine in a ready state
- Explain the mechanism by which the primary virtual machine is determined
- Discuss the improvements made in handling all paths down (APD) and permanent device lost (PDL) conditions
- Describe the increased scalability of vSphere HA
- Explain the additional compatibility supported by vSphere HA
- Explain the enhancement of vSphere HA admission control and orchestrated restarts
- Describe advanced vSphere DRS options
- Increase VM and workload uptime with Predictive DRS
- Discuss how Proactive HA helps reduce VM downtime
- Reduce the need for vSphere HA with Proactive HA