

VMware vSphere: What's New [V5.5 to V6.7] H9TG0S

HPE course number	H9TG0S
Course length	3 Days
Delivery mode	ILT, VILT
View schedule, local pricing, and register	View now
View related courses	View now

Why HPE Education Services?

- IDC MarketScape leader 5 years running for IT education and training*
- Recognized by IDC for leading with global coverage, unmatched technical expertise, and targeted education consulting services*
- Key partnerships with industry leaders OpenStack®, VMware®, Linux®, Microsoft®, ITIL®, PMI, CSA, and SUSE
- Complete continuum of training delivery options—self-paced eLearning, custom education consulting, traditional classroom, video on-demand instruction, live virtual instructor-led with hands-on lab, dedicated onsite training
- Simplified purchase option with HPE Training Credits

In this hands-on training course, you will explore the new features and enhancements in VMware vCenter Server® 6.7 and VMware ESXi™ 6.7. Real-world use-case deployment scenarios, hands-on lab exercises, and lectures will teach you the skills that you need to effectively implement and configure VMware vSphere® 6.7. This course is recommended for customers who want to deploy vSphere 6.7 into their existing vSphere environment.

Audience

System architects, system administrators, IT managers, VMware partners, and individuals responsible for implementing and managing vSphere architectures

Prerequisites

This course requires completion of one the following courses, or equivalent knowledge and administration experience with VMware ESX®/ESXi and vCenter Server:

- VMware vSphere: Install, Configure, Manage
- VMware vSphere: Fast Track
- VMware vSphere: What's New

VMware vSphere: Troubleshooting_Experience 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 VMware 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

If you cannot complete these tasks, VMware recommends that you instead take the VMware vSphere: Install, Configure, Manage [V6.7] course.

Detailed 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 how to back up and restore vCenter Server Appliance
- Explain how to patch vCenter Server Appliance
- Describe the new features of vSphere 6.7
- Summarize the purpose of content libraries in a vSphere environment
- Discuss the vSphere requirements for content libraries
- Create a local content library
- Subscribe to a published content library
- Deploy virtual machines from a content library
- Describe how vCenter Server High Availability works
- Describe how VMware Platform Services Controller™ high availability works
- Configure vCenter Server High Availability

Module 3: vCenter Architecture Upgrade and Migration

- Describe the new architecture features of vCenter Server
- Choose between a distributed configuration and an embedded configuration, based on your requirements
- Determine the appropriate upgrade path for a vCenter Server deployment
- Upgrade a vCenter Server Appliance 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 Windows vCenter Server 5.5 to vCenter Server Appliance 6.7

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 enhancements to vSphere 6.5 scalability and performance
- 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

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™

Module 6: Storage Enhancements

- Describe vSphere 6.x support for NFS
 - Describe the VMFS6 datastore
 - Describe the upgrade procedure from VMFS5 to VMFS6
 - Describe the VMFS6 enhancements in vSphere 6.7
 - Describe the benefits of using virtual volumes
 - Describe per-virtual machine, policy-based policy management
 - Describe how VMDK data operations are offloaded to storage arrays through VMware vSphere® API for Storage Awareness™
 - Describe how VMware vSphere® Virtual Volumes™ is used with Windows Server Failover Clustering
 - Describe the VMware vSAN™ enhancements in the following areas:
 - Scalability
 - Performance
 - Availability
 - Space efficiency
 - Operational
 - Usability
 - Describe the interoperability enhancements to VMware vSphere® Storage DRS™ and VMware vSphere® Storage I/O Control
 - Describe the enhancements to vSphere Storage DRS and Storage I/O Control that improve adherence to configured maximums and reservations
-

Module 7: Security Enhancements

- Discuss the improvements to lockdown settings
- Describe the addition of smart-card authentication
- Explain the changes that enhance user accountability
- Plan for secure boot support for ESXi hosts
- Describe the security enhancements
- Deploy enhanced vCenter Server events and alarms and vSphere logging
- Describe the vSphere 6.7 features for monitoring vCenter Server Appliance
- Use encryption in your vSphere environment
- Encrypt virtual machines
- Explain how to back up encrypted virtual machines
- Encrypt core dumps
- Enable encrypted vSphere vMotion migration
- Describe the virtual TPM feature in vSphere 6.7
- List the core security modules that are part of VMware Platform Services Controller™
- 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
- Describe the primary services provided by the VMware Endpoint Certificate Store component
- Define VMware CA certificate replacement options
- Describe ESXi certificate replacement options
- Discuss certificate-based guest authentication

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 6.0
- 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 in vSphere 6.5
- Describe the improvement of vSphere HA orchestrated restarts

Learn more at
hpe.com/ww/learnvmware

Follow us:

