Enterprise Computing Solutions - Education Services

TRAINING OFFERING

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VMware vSphere: Install Configure Manage plus Optimize and Scale Fast Track [V6.5]

CODE:	LENGTH:	PRICE:
VM-VS-ICM-PO -FT-6.5	40 Hours (5 days)	$6,475.00

Description

This intensive, extended-hours course takes you from introductory to advanced VMware vSphere® management skills.
Building on the installation and configuration content from our best-selling course, you will also develop advanced skills needed to manage and maintain a highly available and scalable virtual infrastructure.
Through a mix of lecture and hands-on labs, you will install, configure, and optimize vSphere 6.5.
You will explore the features that build a foundation for a truly scalable infrastructure, and discuss when and where these features have the greatest effect.
This course prepares you to administer a vSphere infrastructure for an organization of any size using vSphere 6.5, which includes VMware ESXi™ 6.5 and VMware vCenter Server® 6.5.

Objectives

By the end of the course, you should be able to meet the following objectives:
• Describe the software-defined data center
• Deploy an ESXi host and create virtual machines
• Describe the vCenter Server architecture
• Deploy VMware vCenter® Server Appliance™
• Back up and restore vCenter Server
• Deploy vCenter Server Appliance to be highly available
• Use vCenter Server to manage an ESXi host
• Configure and manage the vSphere infrastructure with VMware vSphere® Client™ and VMware vSphere® Web Client
• Configure virtual networks with vSphere standard switches
• Use vSphere distributed switches to improve network scalability
• Use vCenter Server to manage various types of storage
• Manage virtual machines, templates, clones, and snapshots
• Perform basic troubleshooting of ESXi hosts, virtual machines, and vCenter Server
• Create a vApp
• Describe and use the content library
• Migrate virtual machines with VMware vSphere® vMotion®
• Use VMware vSphere® Storage vMotion® to migrate virtual machine storage
• Monitor resource usage and manage resource pools
• Manage VMware vSphere® High Availability and VMware vSphere® Fault Tolerance
• Use VMware vSphere® Replication™ and VMware vSphere® Data Protection™ to replicate virtual machines and perform data recovery
• Use VMware vSphere® Distributed Resource Scheduler™ clusters to improve host scalability
• Use VMware vSphere® Update Manager™ to apply patches and perform upgrades
• Configure and manage ESXi networking and storage for a large and sophisticated enterprise
• Configure and use virtual machine storage policies
• Configure VMware vSphere® Storage I/O Control
• Configure VMware vSphere® Storage DRS™
• Encrypt virtual machines for additional security

Audience

• System administrators
• System engineers

Prerequisites

This course requires the following prerequisites:
• System administration experience on Microsoft Windows or Linux operating systems

Programme

Module 1: Course Introduction
• Introductions and course logistics
• Course objectives
• Describe the content of this course
• Gain a complete picture of the VMware certification system
• Familiarize yourself with the benefits of the VMware Education Learning Zone
• Identify additional resources

Module 2: Introduction to vSphere and the Software-Defined Data Center
• Describe the topology of a physical data center
• Explain the vSphere virtual infrastructure
• Define the files and components of virtual machines
• Describe the benefits of using virtual machines
• Explain the similarities and differences between physical architectures and virtual architectures
• Define the purpose of ESXi
• Define the purpose of vCenter Server
• Explain the software-defined data center
• Describe private, public, and hybrid clouds

Module 3: Creating Virtual Machines
• Introduce virtual machines, virtual machine hardware, and virtual machine files
• Identify the files that make up a virtual machine
• Discuss the latest virtual machine hardware and its features
• Describe virtual machine CPU, memory, disk, and network resource usage
• Explain the importance of VMware Tools™
• Discuss PCI pass-through, Direct I/O, remote direct memory access, and NVMe
• Deploy and configure virtual machines and templates
• Identify the virtual machine disk format

Module 4: vCenter Server
• Introduce the vCenter Server architecture
• Deploy and configure vCenter Server Appliance
• Use vSphere Web Client
• Backup and restore vCenter Server
• Examine vCenter Server permissions and roles
• Explain the vSphere HA architectures and features
• Examine the new vSphere authentication proxy
• Manage vCenter Server inventory objects and licenses
• Access and navigate the new vSphere clients

Module 5: Configuring and Managing Virtual Networks
• Describe, create, and manage standard switches
• Configure virtual switch security and load-balancing policies
• Contrast and compare vSphere distributed switches and standard switches
• Describe the virtual switch connection types
• Describe the new TCP/IP stack architecture
• Use VLANs with standard switches

Module 6: Configuring and Managing Virtual Storage
• Introduce storage protocols and storage device types
• Discuss ESXi hosts using iSCSI, NFS, and Fibre Channel storage
• Create and manage VMware vSphere® VMFS and NFS datastores
• Describe the new features of VMFS 6.5
• Introduce VMware vSAN™
• Describe guest file encryption

Module7: Virtual Machine Management
• Use templates and cloning to deploy new virtual machines
• Modify and manage virtual machines
• Clone a virtual machine
• Upgrade virtual machine hardware to version 12
• Remove virtual machines from the vCenter Server inventory and datastore
• Use customization specification files to customize a new virtual machine
• Perform vSphere vMotion and vSphere Storage vMotion migrations
• Create and manage virtual machine snapshots
• Create, clone, and export vApps
• Introduce the types of content libraries and how to deploy and use them

Module 8: Resource Management and Monitoring
• Introduce virtual CPU and memory concepts
• Explain virtual memory reclamation techniques
• Describe virtual machine over commitment and resource competition
• Configure and manage resource pools
• Describe methods for optimizing CPU and memory usage
• Use various tools to monitor resource usage
• Create and use alarms to report certain conditions or events
• Describe and deploy resource pools
• Set reservations, limits, and shares
• Describe expandable reservations
• Schedule changes to resource settings
• Create, clone, and export vApps
• Use vCenter Server performance charts and esxtop to analyze vSphere performance

Module 9: vSphere HA, vSphere Fault Tolerance, and Protecting Data
• Explain the vSphere HA architecture
• Configure and manage a vSphere HA cluster
• Use vSphere HA advanced parameters
• Define cluster wide restart ordering capabilities
• Enforce infrastructural or intra-app dependencies during failover
• Describe vSphere HA heartbeat networks and datastore heartbeats
• Introduce vSphere Fault Tolerance
• Enable vSphere Fault Tolerance on virtual machines
• Support vSphere Fault Tolerance interoperability with vSAN
• Examine enhanced consolidation of vSphere Fault Tolerance virtual machines
• Introduce vSphere Replication
• Use vSphere Data Protection to back up and restore data
• Describe the high availability options for vCenter Server and VMware Platform Services Controller™
• Describe and use VMware vCenter Server® High Availability

Module 10: vSphere DRS
• Describe the functions and benefits of a vSphere DRS cluster
• Configure and manage a vSphere DRS cluster
• Work with affinity and anti-affinity rules
• Describe the new capabilities for what-if analysis and proactive vSphere DRS
• Highlight the evolution of vSphere DRS using predictive data from VMware vRealize® Operations Manager™
• Perform preemptive actions to prepare for CPU or memory changes
• Describe the vCenter Server embedded vSphere Update Manager, VMware vSphere® ESXi™ Image Builder CLI, and VMware vSphere® Auto Deploy™ capabilities
• Use vSphere HA and vSphere DRS together for business continuity
• Explain how Proactive DRS enhances virtual machine availability

Module 11: VSphere Update Manager
• Describe the new vSphere Update Manager architecture, components, and capabilities
• Use vSphere Update Manager to manage ESXi, virtual machine, and vApp patching
• Install vSphere Update Manager and the vSphere Update Manager plug-in
• Create patch baselines
• Use host profiles to manage host configuration compliance
• Scan and remediate hosts

Module 12: Network Scalability
• Configure and manage vSphere distributed switches
• Explain distributed switch features such as port mirroring, LACP, QoS tagging, and NetFlow

Module 13: Storage Scalability
• Explain VMware vSphere® Storage APIs - Array Integration and VMware vSphere® API for Storage Awareness™
• Configure and assign virtual machine storage policies
• Configure vSphere Storage DRS and vSphere Storage I/O Control

Module 14: Network Scalability
• Configure vSphere to encrypt virtual machines, core dumps, and vSphere vMotion migrations

Session Dates

On request. Please Contact Us

Additional Information

This training is also available as onsite training. Please contact us to find out more.