

## VMware vSphere : Fast Track v7

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This intensive, extended-hours training course focuses on installing, configuring, and managing VMware vSphere® 7.

This course combines the content of the VMware vSphere: Install, Configure, Manage course with advanced tasks and skills for configuring a highly available and scalable virtual infrastructure. The course is based on VMware ESXi™ 6.7 and VMware vCenter Server™ 6.7. Completion of this course satisfies the prerequisite for taking the VMware® Certified Professional 6 exam.

Students who complete this course may enroll in any of several more advanced vSphere courses.

#### Détails

- **Code** : FTVM
- **Durée** : 5 jours ( 35 heures )
- **Public**
  - Experienced system administrators
- **Pré-requis**
  - Have a basic understanding of virtualization concepts

#### Objectifs

- Configure and manage ESXi networking and storage
- Create, configure, migrate, manage, and monitor virtual machines and virtual appliances
- Use VMware vCenter Converter™ Standalone
- Manage user access to the VMware virtual infrastructure
- Use vCenter Server to monitor resource usage

#### Programme

##### 1 Course Introduction

- Introductions and course logistics
- Course objectives

##### 2 Introduction to VMware Virtualization

- Introduce virtualization and vSphere components
- Explain the concepts of server, network, and storage virtualization
- Describe where vSphere fits into the cloud architecture
- Install and use vSphere user interfaces
- Describe the ESXi architecture and configure various ESXi settings

##### 3 Creating Virtual Machines

- Introduce virtual machines, virtual machine hardware, and virtual machine files
- Deploy a single virtual machine

##### 4 VMware vCenter Server

- Introduce vCenter Server architecture
- Manage vCenter Server inventory objects and licenses

##### 5 Configuring and Managing Virtual Networks

- Describe, create, and manage a standard virtual switch
- Describe and modify standard virtual switch properties
- Configure virtual switch load-balancing algorithms

##### 6 Configuring and Managing Virtual Storage

- Introduce storage protocols and device names

- Configure ESXi with iSCSI, NFS, and Fibre Channel storage
- Create and manage VMware vSphere® VMFS datastores
- Introduce VMware vSphere® Storage Appliance

##### 7 Virtual Machine Management

- Use templates and cloning to deploy virtual machines
- Modify and manage virtual machines
- Create and manage virtual machine snapshots
- Perform VMware vSphere vMotion® and vSphere Storage vMotion migrations
- Create a vSphere vApp
- Use VMware vCenter Converter™ Standalone to hot-clone a system

##### 8 Access and Authentication Control

- Control user access through roles and permissions
- Discuss ESXi host access and authentication
- Integrate ESXi with Active Directory
- Introduce VMware® vShield™ products

##### 9 Resource Management and Monitoring

- Introduce virtual CPU and memory concepts
- Describe methods for optimizing CPU and memory usage
- Configure and manage resource pools
- Use vCenter Server performance graphs and alarms to monitor resource usage

## 10 High Availability and Fault Tolerance

- Explain the vSphere High Availability architecture
- Configure and manage a vSphere HA cluster
- Set vSphere HA advanced parameters
- Enable vSphere Fault Tolerance (FT) on a virtual machine

## 11 Host Scalability

- Use Host Profiles to manage ESXi configuration compliance
- Configure and manage a vSphere Distributed Resource Scheduler™ cluster (DRS)
- Configure Enhanced vMotion Compatibility
- Use vSphere HA and DRS together
- Configure and manage vSphere Distributed Power Management (vSphere DPM)

## 12 Network Scalability

- Create, configure, and manage vSphere distributed switches, network connections, and port groups
- Discuss distributed virtual switch features, such as PVLANs, discovery protocols, Network I/O Control, NetFlow, and port mirroring

## 13 Storage Scalability

- Describe VMware vSphere® Storage APIs – Array Integration and Storage Awareness
- Explain profile-driven storage
- Add a storage policy to a virtual machine storage profile
- Introduce storage I/O control
- Create a datastore cluster
- Configure Storage DRS™

## 14 Data Protection

- Discuss a strategy for backing up ESXi hosts and vCenter Server
- Introduce the VMware® Data Recovery appliance
- Discuss solutions for efficiently backing up virtual machines

## 15 Patch Management

- Use VMware vSphere® Update Manager™ to manage ESXi patching
- Install Update Manager and the Update Manager plug-in
- Create patch baselines
- Scan and remediate hosts

## 16 VMware vSphere Management Assistant

- Describe VMware vSphere® Management Assistant (vMA)
- Configure vMA
- Discuss the VMware vSphere® Command-Line Interface command set
- Perform command-line operations for host management, network management, storage management, and performance monitoring

## 17 Installing VMware Components

- Use vCenter Linked Mode to manage multiple vCenter Server inventories
- Introduce ESXi installation
- Describe boot-from-SAN requirements
- Describe vCenter Server hardware, software, and database requirements
- Install vCenter Server (Windows-based)
- Introduce vCenter Server Appliance
- Install and configure vCenter Server Appliance
- Use Image Builder to create an ESXi installation image
- Use Auto Deploy to deploy a stateless ESXi host

## Modalités

- **Type d'action** :Acquisition des connaissances
- **Moyens de la formation** :Formation présentielle – 1 poste par stagiaire – 1 vidéo projecteur – Support de cours fourni à chaque stagiaire
- **Modalités pédagogiques** :Exposés – Cas pratiques – Synthèse
- **Validation** :Exercices de validation – Attestation de stages