



VMware Infrastructure 3 Install and Configure

VI3

Length
4 days

Format
Lecture/lab

Track
Support

Version
3.5

Course Description

In this hands-on training course, you will explore installation, configuration, and management of VMware Infrastructure 3, which consists of VMware ESX Server and VMware VirtualCenter. Troubleshooting guidance, best practices, and lab exercises are interspersed throughout, and upon completion of the course, you can take the examination to become a VMware Certified Professional.

Who Should Attend

Systems administrators and systems integrators who are responsible for deploying and supporting VMware.

Required Prerequisites

- Basic knowledge of operating system administration (Windows, Unix, Linux, or others) is strongly recommended

Related Training

- VMware Infrastructure 3: Deploy, Secure, and Analyze
- VMware Infrastructure 3: Fast Track

Learning Objectives

After you complete this course, you will be able to:

- Describe VMware Infrastructure 3 features
- Install ESX Server
- Configure ESX Server networking and storage
- Install and configure VirtualCenter
- Control user access to the VMware infrastructure
- Deploy and manage virtual machines using VirtualCenter
- Allocate and monitor virtual machines' resources
- Ensure high availability of applications



Learning
Solutions

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Module 1: Introduction

- What Virtual Infrastructure Is
- VMware Infrastructure

Module 2: Virtual Infrastructure

Overview

- Virtualization
- A Virtual Machine
- How Virtualization Works
- Virtualization using a Bare-Metal Hypervisor
- ESX Server Architecture
- Using VMware Infrastructure in a Data Center

Module 3: ESX Server Installation

- ESX Server Physical Setup
- Hardware Prerequisites
- Partitioning an x86 Disk
- After Installation Is Complete
- ESX Server Physical Console After Install
- VMware Infrastructure (VI) Client
- Single-Host Licensing

Module 4: Networking

- Virtual Switches
- Network Connections
- Virtual Switch Property: Ports
- Virtual Switch Property: Network Adapters
- Port Group Property: VLANs
- Virtual Switch and Port Group Policies
- Security Policy
- Traffic-Shaping Policy
- NIC Teaming Policy
- Load-Balancing
- Detecting and Handling Network Failure

Module 5: Storage

- How Fibre Channel is used with ESX Server
- Addressing SAN LUNs in the VMkernel
- Making SAN Storage Available to ESX Server
- How iSCSI is used with ESX Server
- How iSCSI Storage Authenticates the ESX Server
- iSCSI Software and Hardware Initiators
- VMFS
- Multipathing with Fibre Channel
- Multipathing with iSCSI
- Manage Multiple Paths
- How NAS/NFS is used with ESX Server
- Addressing and Access Control with NFS

Module 6: VirtualCenter Installation

- VirtualCenter Components
- VirtualCenter Architecture
- Hardware and Software Prerequisites
- VirtualCenter Database
- VMware License Server (Centralized Licensing)
- VirtualCenter Server Services
- VI Client Overview
- ESX Server and VirtualCenter Communication
- Managing Across Geographies
- Backup Strategy for VirtualCenter Server
- VirtualCenter Inventory: Multiple Data Centers
- VirtualCenter Inventory: Clusters

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Module 7: Virtual Machine Creation and Management

- Files that Make Up a Virtual Machine
- Display a Virtual Machine's Files using the VI Client
- Virtual Machine Virtual Hardware
- Virtual Machine Console
- Install Guest Operating System into a Virtual Machine
- Deploy a Virtual Machine from Template
- Clone a Virtual Machine
- Guest Operating System Customization
- Deploying Across Datacenters
- Virtual Appliances
- VMware Converter Enterprise
- Hot Cloning
- Cold Cloning
- Importing a Server
- Move VM Between ESX Servers: Cold Migration
- Modify Virtual Machine Settings
- Guided Consolidation

Module 8: Virtual Infrastructure Access Control

- Security Model Overview
- Defining Users and Groups
- Privileges and Roles
- Permissions
- VirtualCenter Security Model
- ESX Server Security Model
- Web Access

Module 9: Resource Management

- How Virtual Machines Compete for Resources
- Resource Pool
- Configuring a Pool's Resources
- Move VM Between ESX Servers: VMotion Migration
- How VMotion Works
- Virtual Machine Requirements for VMotion
- Host Requirements for VMotion
- What a DRS Cluster Is
- Create a DRS Cluster
- Best Practices for DRS
- Resource Pools in a DRS Cluster
- Delegated Administration
- Monitor Cluster Usage
- Planned Downtime: Maintenance Mode

Module 10: Resource Monitoring

- Systems for Optimizing VM Resource Use
- Monitoring Virtual Machine Performance
- Performance-Tuning Methodology
- Monitoring VM Resource Use with Performance Graphs
- Tools for Improving VM CPU and Memory Performance
- Monitoring Using Performance-Based Alarms



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Course Outline

Module 11: Data and Availability Protection

- Backup Strategies
- What To Back Up
- General Guidelines for Virtual Machine Backups
- Virtual Machine High Availability
- Clustering Inside VMs for High Availability

Module 12: Planning VI Deployment

- ESX Server 3 Hardware Support
- ESX Server Sizing
- Booting ESX from a Fibre Channel or iSCSI SAN LUN
- VirtualCenter Deployment
- Storage Considerations
- Storage Comparison: Fibre Channel, NAS, iSCSI



Learning
Solutions