

# VMware ESX Server 3.5 - Deploy, Secure & Analyze

- **Course Length:** 3 Days

## Course Overview

Our VMware ESX Server 3.5 - Deploy, Secure & Analyze course developed for the experienced VMware Infrastructure administrators, is a continuation of the VMware ESX Server 3.5 - Install & Configure course. This course addresses such topics as: Server Provisioning, Security in a VMware Virtualized Environment, Data Protection and High Availability, and Fault Analysis and Methodology.

## Prerequisites

Before attending this course, students should have completed the VMware ESX Server 3.5 - Install & Configure course.

## Audience

Our VMware ESX Server 3.5 - Deploy, Secure & Analyze course developed for the experienced VMware Infrastructure administrators, is a continuation of the VMware ESX Server 3.5 - Install & Configure course.

## Course Outline

### Course Introduction

3m

Course Introduction

### Module 01 - Server Provisioning

1h 16m

Server Provisioning

Course Objectives

D.S.A.

Scripted Installations: Overview

Scripted Installations: Third-Party Tools

Scripted Installation: Process

Scripted Installation: HTTP, FTP and NFS Considerations

Installations Script: Section Order

Directive Options and Commands

Licensing Considerations

Pre-Execution Scripts

Identifying the Correct NIC Adapter

Locating the Installation Script or Course Media

Individual Physical NIC Configuration

Creating Virtual Switches and Portgroups

ESX Storage Management Commands

Working With VMFS Volumes

VMFS Metadata

Growing Space on a VMFS Volume  
Determining Filesystem Usage  
The /etc Directory  
Log Files  
Setting Up the Service Console to an NTP Client  
Module 01 - Review

## **Module 02 - Security in a VMware Virtualized Environment**

2h 49m

Security in a VMware Virtualized Environment  
Zoning  
CHAP  
Access Control  
Securing Your Network  
ESX Server Configuration Via the Service Console  
Securing Your Network VMs  
Setting Your Security Profile  
Securing the Service Console  
VirtualCenter Firewall Placement  
Port Considerations  
Packet Forwarding/Receiving Parameters  
Service Console Firewall Considerations  
  
Working with Chains  
Important Firewall Configuration Commands  
Opening/Closing Individual Service Console Ports  
User Maintenance  
Username/Password Maintenance and Hacker Prevention  
SSH Considerations  
Root Account Access Considerations  
SSH Login Management  
Displaying Warning Messages and Monitoring User Access and Activity  
Working with the su and sudo Commands  
ESX Server Commands  
Limiting Root Account Access  
Controlling Access to Network Services  
Demo - Command Line Part 1  
Demo - Command Line Part 2  
Demo - PW Free Login  
Demo - Scripted Install  
Module 02 - Review

## **Module 03 - CPU and Memory Resource Allocation**

53m

CPU and Memory Resource Allocation  
Virtual Machine (VM) Resource Controls  
Reservation

Limit  
Shares  
Resource Management  
Resource Pools  
Resource Pool Restrictions and Considerations  
Demo - SSH Security  
Module 03 - Review

**Module 04 - Data Protection and High Availability**

1h 13m

Data Protection and High Availability  
VCB and the Backup Proxy Server  
VCB Backup Components  
Snapshots  
hostd Process  
File-Level Backups on MS Windows VMs  
Full VM Backups  
Command Line Utilities: Proxy Server vs. Service Console  
VCB Commands  
Full VM Backup Files  
More Useful Commands  
Restoration  
VM Backup Considerations  
Clustering and Restoration  
Demo - DRS  
Demo - High Availability  
Module 04 – Review

**Module 05 - Fault Analysis and Methodology**

1h 17m

Fault Analysis and Methodology  
ESX Server Boot Process  
The ESXCFG-BOOT Command  
Fallback Boot Mode and Kudzu  
Troubleshooting  
hostd  
Fully-Qualified Domain Names  
Proper DNS Setup  
Installation Precautions  
Diagnostics  
Increasing the Verbosity of the iSCSI Daemon  
The vmkping Command  
The vswif and esxcfg-vswif Commands  
Export Diagnostics Data  
The vc-support.wsf  
Manually SCP'ing Bundles From the ESX Server  
Properly Exporting Diagnostics Data

The esxtop Command  
The vm-support Command  
Memory and CPU Resources  
RCA  
Troubleshooting Tools  
Booting Your System Into Service Console Mode  
VMotion Migrations  
HA Cluster Hosts  
Increasing the Logging Level of vpxd.log  
Static IP Address Configuration  
DNS Configuration  
Troubleshooting Questions  
VirtualCenter Environment Variables  
Log File Diagnostics  
VirtualCenter Server Service Error Messages and Diagnostics  
Service Console Open Ports (and Associated Applications)  
Licensing  
VirtualCenter Database Troubleshooting and Diagnostics  
Module 05 - Review  
Course Closure

**Total Duration: 7h 31m**