

Hands-On

VMware vSphere: Install, Configure, Manage V5.0



Course Description

This Hands-On training course explores installation, configuration, and management of VMware vSphere, which consists of VMware ESXi and VMware vCenter Server. The course is based on ESXi 5.0 and vCenter Server 5.0.

Students Will Learn

- **Install and configure ESXi**
- **Install and configure vCenter Server components**
- **Configure and manage ESXi networking and storage using vCenter Server**
- **Deploy, manage, and migrate virtual machines**
- **Manage user access to the VMware infrastructure**
- **Use vCenter Server to monitor resource usage**
- **Use vCenter Server to increase scalability**
- **Use VMware vCenter Update Manager to apply ESXi patches**
- **Use vCenter Server to manage higher availability and data protection**

Target Audience

System administrators
Systems engineers
Operators responsible for ESXi and vCenter Server

Prerequisites

System administration experience on Microsoft Windows or Linux operating systems

Course Outline

1 Course Introduction

Introductions and course logistics
Course objectives

2 Introduction to VMware Virtualization

Introduce virtualization, virtual machines, 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

3 Create 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
Introduce vCenter Server appliance
Configure and manage vCenter Server appliance
Manage vCenter Server inventory objects and licenses

5 Configure and Manage Virtual Networks

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

6 Configure and Manage Virtual Storage

Introduce storage protocols and device names
Configure ESXi with iSCSI, NFS, and Fibre Channel storage
Create and manage vSphere datastores
Deploy and manage the VMware vSphere Storage Appliance

7 Virtual Machine Management

Deploy virtual machines using templates and cloning
Modify and manage virtual machines
Create and manage virtual machine snapshots
Perform VMware vSphere vMotion and Storage vMotion migrations
Create a vSphere vApp

8 Data Protection

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

9 Access and Authentication Control

Control user access through roles and permissions
Configure and manage the ESXi firewall
Configure ESXi lockdown mode

Integrate ESXi with Active Directory
Introduce VMware vShield Zones

10 Resource Management and Monitoring

Introduce virtual CPU and memory concepts
Describe methods for optimizing CPU and memory usage
Configure and manage resource pools
Monitor resource usage using vCenter Server performance graphs and alarms

11 High Availability and Fault Tolerance

Introduce new vSphere High Availability (HA) architecture
Configure and manage a vSphere High Availability cluster
Introduce VMware Fault Tolerance

12 Scalability

Configure and manage a VMware Distributed Resource Scheduler (DRS) cluster
Configure Enhanced vMotion Compatibility
Use vSphere HA and DRS together

13 Patch Management

Manage ESXi patching using vCenter Update Manager
Install Update Manager and Update Manager plug-in
Create patch baselines
Scan and remediate hosts

14 Installing VMware Components

Introduce ESXi installation
Describe boot from SAN requirements
Introduce vCenter Server deployment options
Describe vCenter Server hardware, software, and database requirements
Install vCenter Server (Windows based)

Delivery Method

Instructor-Led with numerous Hands-On labs and exercises.

Equipment Requirements

(This apply's to our hands-on courses only)

BTS always provides equipment to have a very successful Hands-On course. BTS also encourages all attendees to bring their own equipment to the course. This will provide attendees the opportunity to incorporate their own gear into the labs and gain valuable training using their specific equipment.

Course Length

5 Days