

Data Center Virtualization Fundamentals [V6]

I. Overview:

This eLearning course on Data Center Virtualization will provide you with a fundamental understanding of VMware's Data Center Virtualization products. The course also takes you through the components and features of vSphere 6.0, and shows how the vSphere 6.0 product line helps resolve business and IT challenges commonly faced by organizations.

The course will start by providing an overview of Data Center Virtualization with VMware vSphere, its components, capabilities, and benefits. We'll then look at the components of vSphere that accomplish Data Center Virtualization. Finally, we'll see how vSphere 6.0 products help resolve common data center challenges.

II. Duration: 03 hours

III. Training methods: e-Learning.

IV. Objectives:

At the end of this course, you should be able to:

- Identify the need for Data Center Virtualization.
- Describe the components and features of vSphere 6.0.
- Describe how VMware's products help solve business and technical challenges with regard to Data Center Virtualization.

V. Course outlines:

1. Course Introduction

- Course Overview
- Course Objectives
- Course Outline

2. Introduction to Data Center Virtualization with VMware vSphere

- VMware Vision
- Virtualization Overview
- Virtualization: The Foundation of Cloud Computing
- Data Center Virtualization Overview
- Introduction to Virtual Machines
- Virtual Machine Capabilities
- Hypervisor
- ESXi Hypervisor
- vSphere 6.0
- Capabilities and Benefits of vSphere 6.0

3. Components of VMware vSphere

- vSphere 6.0: Overview and Architecture
- Topology of vSphere 6.0 Data Center
- vSphere 6.0 Configuration Maximums
- vCenter Server
- vCenter Server Features
 - Certificate Management
 - Alarms and Alerts
 - Monitoring Features

- Template Management
- Linked Mode Deployment
- Storage Features in vSphere
 - Shared Storage
 - Storage Protocols
 - Datastores
 - Virtual SAN
 - Virtual Volumes
- Networking Features in vSphere
 - Virtual Networking
 - Virtual Switches
 - Virtual Switch Types
 - Introduction to NSX
- vSphere Resource Management Features
 - vMotion
 - Distributed Resource Scheduler (DRS)
 - Distributed Power Management (DPM)
 - Storage vMotion
 - Storage DRS
 - Storage I/O Control
 - Network I/O Control
- vSphere Availability Features
 - vSphere Data Protection
 - High Availability
 - Fault Tolerance
 - vSphere Replication
- Data Center Virtualization Products: Overview
 - vSphere with Operations Management
 - vRealize Suite
 - Software-Defined Storage – Virtual SAN
 - Software-Defined Networking - NSX
 - Big Data Extensions
 - VMware Integrated OpenStack (VIO)
 - Cloud Services - vCloud Air
 - Hyperconverged Offerings (EVO:RACK and EVO:RAIL)

4. vSphere Solutions to Data Center Challenges

- Availability Challenges
- Scalability Challenges
- Management Challenges
- Optimization Challenges
- Application Upgrade Challenges
- Cloud Challenges