VMware vSphere 6, Part 1 of 5: Introduction

Meet the expert: Jeff has held a broad spectrum of positions within the IT>field for over 30 years. Jeff has owned and operated his own IT business and has installed and supported networks and data centers at almost every level of the IT world. Jeff has recently authored both courseware and exams for Microsoft. For over 15 years, Jeff has worked as a consultant and trainer with a focus on the design of Enterprise Architecture, as well as Windows and VMware networks.

Prerequisites: This course assumes that students are familiar with the basic use of Windows and common use of the mouse and keyboard. No prior experience with Office 365 is assumed.

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Course description: Welcome to VMware 6 Bootcamp. In this course we start with an introduction and methodology. Next we cover a virtualization overview and definitions about virtualization then moving on to planning and installing ESXi. Finally we will cover some of the tools of VMware and some third party tools as well as vCenter server and licensing.

Course outline:

Virtualization Paradigms
- Introduction
- The Software-Designed Datacenter
- vCloud Suite 6.0
- Why Virtualize?
- Simplifying Management
- VMWare TCO Comparison Calculator
- What Is Virtual Infrastructure?
- VMWare vSphere 6.0
- Type 1 and Type 2 Hypervisors
- What is a Virtual Machine?
- VMWare Horizon View 6.0
- VMWare Horizon FLEX
- VMWare Workstation Pro 12
- VMWare Fusion 8
- VMWare Workstation Player
- Other Hypervisors
- Conclusion
- Summary

Planning ESXi Deployment
- Introduction
- Physical Hardware Requirements
- vSphere Hypervisor 6.0
- VMWare ESXi 6.0
- Booting ESXi from a SAN LUN
- Linux, Windows, and ESX/ESXi
- Summary

Deployment Guidelines
- Introduction
- Overview of Deployment Planning
- ESXi Compatibility Guides
- Storage: Capacity and Performance
- VMWare Capacity Planner
- Summary

ESXi Installation
- Introduction
- vSphere Hypervisor 6.x Installable
- ESXi Installation Options
- Demo: Install ESXi 6.0
- Local Config of ESXi 6.0 using DCUI
- PXE Boot Server
- vSphere 6.x ESXi Image Builder CLI
- vSphere 5.x/6.x Auto Deploy Architecture
- Conclusion
- Summary

Troubleshooting ESXi
- Introduction
- Configuring DNS Settings
- Time Synchronization
- ESXi Host Health Check
- ESXi Host Boot Process
- Troubleshooting: hostd
- Troubleshooting ESXi CIM Management Agents
- Purple Screen of Death
- Summary

Overview of 3rd Party Tools
- Introduction
- WinSCP 5.x.x (Free)
- ISO Programs
- Xtravirt.com
- Foglight for Virtualization (Free Edition)
- Datastores and VSANs
- RVTools v3.7
- Other Tools
- Summary

ESXi Management
- Introduction
- Management Overview
- Direct Console User Interface
- vSphere Client and Management User Interface
- Managing with vSphere Web Client
- SSH Access
- Datastore Browser
- Troubleshooting Configuration
- Troubleshooting Options: ESXI 6.x
- CLI Commands
- vSphere Command Line Interface and Syntax
- vSphere Perl SDK for vSphere 6.0
- VMA
- PowerCLI 6.0 Release 1
- PowerGUI
- Summary

Linux Command Review and Troubleshooting
- Introduction
- Windows vs. Linux Commands
- Common CLI Options
- Working at the Command Line
- ESXi 6.0 Text Editor
- vSphere Client Logs
- Troubleshooting vSphere
- Conclusion
- Summary

Licensing
- Introduction
- Licensing Model
- vSphere Essentials 6.0 for Small Business
- License Types and Pricing
- Features Added in vSphere 5.1
- Windows Licensing Center
- Summary

Planning vCenter Server Deployment
- Introduction
- vCenter Server 6.x Summary
- vCenter Server 6.0 Specifications
- vCenter Database
- vCenter Server Virtual Appliance Specifications
- Comparing Windows Center 6.0 to vCSA 6.0
- vCenter Server 6.0 Host Functionality
- vCenter Server 5.1/5.5
- vCenter Server 6.0
- vCenter Server 6.0 Architecture
- Components of vCenter 6.0: PSC
- Components of vCenter 6.0: vCenter Server
- Topologies for vCenter 6.0
- vCenter Server 6.x Database Sizing
- Backup Strategy for vCenter Server
- Summary

vCenter Installation
- Introduction

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- vCenter 6.0 Installation
- vCenter Server 6.0 Single Server
- External PSC Only (Windows)
- vCenter Server 6.0 for External PSC (Windows)
- vCenter Server 6.0 for Embedded PSC (Linux)
- vCenter Server 6.0 Post Install
- VIC Plugins Post UM Install
- Summary

vSphere Web Client
- Introduction
- vSphere Web Client
- vSphere Web Client Requirements
- Using vSphere Web Client 6.0
- Getting Started
- Summary

vCenter Server Inventory
- Introduction
- vCenter Server Home Page
- Hosts and Clusters: Datacenters
- Hosts and Clusters: Folders and Clusters
- VMs and Templates: Subfolders
- vCenter Inventory: VMs/Templates Additional Info
- Storage: Folders and Datastores
- Networks: Postgroups and vDS
- Content Library Basics
- Create a Content Library
- Summary

Managing vCenter Server
- Introduction
- Scheduled Tasks
- Events
- Sessions
- Tasks, Alarms, and Work in Progress
- System Logs
- Flings at VMWare Labs
- Summary

Troubleshooting vCenter Server
- Introduction
- Refreshing vCenter Server
- Monitoring Harware Status
- Monitoring vCenter Server Status
- ESXi Host Agent Hangs
- vCenter Server Log Files
- vCenter Server Service Errors
- vCenter Server Standalone Mode
- vSphere Client Session Errors
- Summary