

VMWare VSphere 6.0 Ultimate Bootcamp

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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.

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Course description: This series covers everything you need to know about the VMware vSphere 6.0 Ultimate Bootcamp. Students will learn about virtualization, planning and installing ESXi, using tools to administer a VMware environment, vCenter Server 6.0 and licensing, configuring networking, configuring storage, VM creation, configuration, and snapshots, security and permissions, server and VM monitoring, advanced ESXi and vCenter server management, patching and upgrading ESXi, and disaster recovery and backup.

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
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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
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Planning vCenter Server Deployment

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- 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

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- vCenter 6.0 Installation
- vCenter Server 6.0 Single Server
- External PSC Only (Windows)

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- vCenter Server 6.0 for Embedded PSC (Linux)
- vCenter Server 6.0 Post Install
- VIC Plugins Post UM Install
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- vSphere Web Client
- vSphere Web Client Requirements
- Using vSphere Web Client 6.0
- Getting Started
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vCenter Server Inventory

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- 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
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Managing vCenter Server

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- Scheduled Tasks
- Events
- Sessions
- Tasks, Alarms, and Work in Progress
- System Logs
- Flings at VMWare Labs
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- Refreshing vCenter Server
- Monitoring Hardware 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
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- Networking Terms
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- Network Connection in ESXi
- Add and Edit Networking
- Standard Virtual Switches
- Add Physical NICs

- Custom MAC Addresses
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- Cisco Discovery Protocols on vSS
- Modifying vSS Properties
- Ports: 5.5 and Higher
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- VLAN Implementations
- Set VLAN Configuration
- Standard vSwitch Protection and VLANs
- Standard Policy Settings: Security
- Standard Policy Exceptions: Traffic Shaping
- Standard Policy Exceptions: NIC Teaming
- Network Failing and NIC Teaming Options
- Load Balancing Methods
- IP Hash Load Balancing Requirements
- Port Group: Override vSwitch Failover Order
- Multiple Policies Applied to a Single Team
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- Network I/O Control
- NIOC Best Practices
- Create NetFlow
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- Cisco Nexus 1000v Virtual Switch
- Nexus 1000v Architecture
- IBM Distributed Virtual Switch 5000V

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- Device and Path Naming
- VAAI
- Storage APIs: Array Integration
- Multipathing
- Storage APIs: Multipathing
- Path Selection Considerations
- Viewing Multipath from VIC
- Viewing Multipathing: Web Client
- Third Party NMP using VIC
- All Paths Down
- APD Updates in 5.1 and 5.5
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- SIOC Enhancements in 5.1
- SIOC Setup in Web Client
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- iSCSI Overview and Terms for ESX/ESXi
- ESX/ESXi and iSCSI SAN Environment and Addressing
- Hardware vs. Software Initiators
- Multipathing with iSCSI
- Multipathing with Software-Based iSCSI
- iSCSI Software Initiator Networking and Config
- Jumbo Frames
- CHAP Authentication
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- Fibre Channel Terms for ESXi
- SAN Environment and Addressing
- Multipathing with Fibre Channel
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- VMFS Updates in 5.5
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- Viewing and Creating a VMFS-5 Datastore
- Extending a VMFS Datastore Using Extents
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- NFS on Windows 2003 R2 and Higher
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- RDM Compatibility Modes
- Raw Device Mapping Benefits
- Raw Device Mapping
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- VSAN
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- VSAN Architecture
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- vSphere Virtual Volumes: Architecture
- vSphere Virtual Volumes: Characteristics
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