

VMware vSphere 4.1 Ultimate Boot Camp

Course Summary

Description

Ultimate Bootcamps® give the student in-depth skills training through hands-on experience with state-of-the-art equipment. The focus of the CVE 4.1® training is to instill the knowledge required for the student to do their job efficiently and effectively first. To accomplish this, the Bootcamp provides a comprehensive, A-Z training experience, starting from the installation of the licensed product to real world troubleshooting scenarios. The course's focus is not limited only to learning and harnessing the power of VMware®, but the entire concept of virtualization, 3rd party tools, and technologies that will enhance VMware® capabilities and increase the student's virtualization expertise.

Objectives

At the end of this course, students will be able to:

- Understand all of the new and exciting features of VMware® vSphere 4.1
- Understand foundational terms and concepts concerning virtualization
- Install, configure, and support ESX Server 4 and vCenter 4
- Configure Virtual Machines, templates, and clones
- Configure Virtual networking including vNetwork Distributed Switches & vShield Zones & how to support VMotion & iSCSI Multipathing.
- Use P2V, V2V, V2P, and P2P methods and techniques
- Use Server Consolidation procedures and reasoning
- Use Tools to support a virtual infrastructure -VMware®, PlateSpin®, Vizioncore™, Veeam, and more
- Use VMotion™, Storage VMotion, Distributed Power Mgt (DPM), Update Manager, Power Mgmt, Guided Consolidation, Fault Tolerance, Clustering – DRS/HA, etc.
- Use Best Practices within a Virtual Enterprise
- Perform backups in the ESX environment –Service Console and Virtual Machines – VCB and Data Recovery
- Use the Command Line Interface for supporting ESX & ESXi Servers - ESX commands
- Configure and optimize storage - FC, iSCSI, NFS, Multipathing, and Thin Provisioning

Topics

- Course Intro & Methodology (HOL)
- Virtualization Overview
- Planning & Installing ESXi 4
- Using Tools to Administer a VMware Environment
- Configuring Networking
- Configuring Storage
- VirtualCenter and License Server
- VM Creation and Configuration & Snapshots
- Security and Permissions
- Server and VM Monitoring
- Advanced ESX and VirtualCenter Management
- Patching and Upgrading ESX
- Disaster Recovery and Backup

Duration

Five days

Due to the nature of this material, this document refers to numerous hardware and software products by their trade names. References to other companies and their products are for informational purposes only, and all trademarks are the properties of their respective companies. It is not the intent of ProTech Professional Technical Services, Inc. to use any of these names generically

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Course Outline

- I. Course Intro & Methodology (HOL)**
- II. Virtualization Overview**
- III. Planning & Installing ESXi 4**
 - A. Planning ESX 4 Server Deployment
 - B. Deployment Guidelines
 - C. ESX 4 Installation (HOL)
 - D. ESXi 4 Server Install (HOL)
 - E. Configuring Hostname Resolution and NTP *HOL
 - F. Troubleshooting ESX 4 Server
- IV. Using Tools to Administer a VMware Environment**
 - A. Overview of 3rd Party Tools (HOL)
 - B. ESX/ESXI Management (vSphere Client, vCLI, Putty,PowerCLI, Web) (HOL)
 - C. Troubleshooting the vSphere Client (VIC)
- V. Configuring Networking**
 - A. Create & Modify Virtual Networks (HOL)
 - B. Create & Modify Virtual Networks using CLI (HOL)
- VI. Configuring Storage**
 - A. Storage Concepts
 - B. iSCSI Storage (GUI & Cmd Line) (HOL)
 - C. Fibre Channel Storage (GUI & Cmd Line)
 - D. VMFS Datastores (GUI & Cmd Line) (HOL)
 - E. NAS Storage and NFS Datastores (GUI & Cmd Line) (HOL)
 - F. Raw Device Mapping (RDM) (HOL)
- VII. vCenter Server 4 and Licensing**
 - A. Licensing
 - B. vCenter Server 4 Installation (HOL)
 - C. vCenter Server 4 Inventory (HOL)
 - D. Managing vCenter Server 4
 - E. Planning vCenter Server 4 Deployment
 - F. Troubleshooting vCenter
 - G. Server 4 Deployment Troubleshooting the vSphere
- VIII. VM Creation and Configuration & Snapshots**
 - A. Create a VM (HOL)
 - B. Create Multiple VMs, Templates & Clones (HOL)
 - C. Virtual Appliances *HOL
 - D. VMware vCenter Converter 4 (P2V, V2V) (HOL)
 - E. Manage VMs (HOL)
 - F. Virtual Machine Startup / Shutdown
 - G. Virtual Machine Snapshots (HOL)
 - H. Web Access (HOL)
 - I. Troubleshooting Virtual Machines
- IX. Security and Permissions**
 - A. Security Overview (HOL)
 - B. User Access (HOL)
 - C. ESX AD Integration (HOL)
 - D. Managing Firewalls (HOL)
 - E. Advanced Security: SSH & SUDO (HOL)
- X. Advanced ESX and VirtualCenter Management**
 - A. Configuring Resource Pools (HOL)
 - B. Configuring VMotion (HOL)
 - C. Storage VMotion (HOL)
 - D. Distributed Resource Scheduler (DRS) (HOL)
 - E. Resource Pools in DRS Clusters (HOL)
 - F. Host Profiles (HOL)
 - G. vNetwork Distributed Virtual Switch (HOL)
 - H. Cisco Nexus 1000v Virtual Switch
- XI. Patching and Upgrading ESX**
 - A. Patching ESX Server 4 (HOL)
 - B. Upgrades and Migrations (HOL)
 - C. Update Manager (HOL)
 - D. Upgrading from ESX 3.x to ESX 4.x (HOL)
- XII. Disaster Recovery and Backup**
 - A. Site Recovery Manager (SRM)
 - B. High Availability (HA) (HOL)
- H. Client (HOL)**

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Course Outline (cont'd)

- C. VMware Fault Tolerance
- D. Microsoft Clustering
- E. Backup Strategies
- F. Using VCB Command Line Utilities (HOL)
- G. VMware Data Recovery (HOL)
- H. Third Party Backups (HOL)

XIII. Server and VM Monitoring

- A. Tools for Optimization
- B. Monitor VM Performance (HOL)
- C. Configuring Alarms (HOL)
- D. Collecting Log Files (HOL)

XIV. Installing and Configuring ESXi

- A. ESXi 4 Server Install (HOL)
- B. Managing ESXi 4 with VIC
- C. Managing ESXi 4 through VirtualCenter