

# VMware vSphere® 6.0 Ultimate Bootcamp

REDEFINING  
VIRTUALIZATION

- Five (5) 10 hour days of intense instruction with no outside distractions
- Personal access to the top virtualization experts in the industry
- Each student is provided their own dedicated server to practice on
- 50 + labs to hone skills and give a 360° perspective on how to build and maintain virtual environments. Labs include: vMotion, Storage vMotion, High Availability (HA), Data Recovery, Hot Add, Enhanced vMotion Compatibility (EVC), Distributed Resource Scheduler (DRS), Storage DRS, Network I/O Control, New esxcli, NetFlow monitoring, ESXi 6.0 Firewall, Host Profiles, Policy Driven Storage, VMFS-5 and many other virtualization technologies
- Install, configure, deploy, secure, analyze, consolidate and design virtual networks from A-Z
- Learn to apply third party solutions to simplify processes and make the job easier
- Post mentoring from the best virtualization instructors in the industry
- The Certified Virtualization Expert® certification establishes credentials with employers

## COURSE SUMMARY

*\*This course is based on Release Candidate software.*

VMware vSphere® 6.0 is a vital component of the VMware vCloud Suite®. Currently it is the industry leading virtualization technology platform accelerating the shift to cloud computing. The Ultimate Bootcamp® has become known to be the most comprehensive VMware training course in the industry. This course combines several popular VMware vSphere classes into one concentrated delivery, saving time and money while providing an in depth look at VMware's latest version release (6.0) in an accelerated learning format designed to immerse the student into the new features inherent to version 6.0.

The VMware vSphere Ultimate Bootcamp course maximizes the students' training experience with hands-on VMware vSphere labs based upon real-world scenarios and conducted with state-of-the art equipment. The Ultimate Bootcamp imparts students with the knowledge and skills necessary to maximize efficiency in the work place. The class will prepare the student to achieve the Certified Virtualization Expert 6.0 (CVE6.0) certification, which will demonstrate practical VMware vSphere knowledge and skills as a certified professional.

## REAL-WORLD EXPERIENCE

Taught by leading experts in the field of virtual technologies, students will gain key insights into:

- The constant evolution of cloud based datacenters
- Software defined datacenter
- Hybrid cloud modeling
- New improved technologies
- Setting up and managing multiple hosts
- Mastering vCenter services
- Maximizing datacenter efficiency while maintaining VMware licensing compliance policies

Students attain not only knowledge, but experience utilizing vSphere 6.0 technologies along with 3rd party applications providing skills that directly translate to real-world ability.



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vmware LABS



## LEARN IT! DO IT! KNOW IT!<sup>SM</sup>

### Work on VMware HCL Hardware & Perform Real World Labs

Each student is assigned their own dedicated server or complete vPod with 24 hour access during the Bootcamp week. Students will perform all labs on hardware you find in a real data centers and not PCs like you find in other VMware® Training courses. Having 24/5 unlimited access to a real world data center means the student can leverage the learning experience by revisiting labs where other courses have limited hours and access to servers. This flexibility allows students to learn at their own pace without time constraints or distractions.



### Qualified Instructors Make A Difference

The Ultimate Bootcamp® instructors are not just instructors. They are also consultants who have performed small, medium, and large consolidation projects, and who have real world experience using the virtualization technology and techniques that they teach. Bringing this experience into the classroom gives the student a real training experience not found in other 9-5 training programs. Students are able to work on their own, bring their questions into the classroom, and ask the "What If" questions that they are working on in their own live environment.

### Essential Third Party Tools

Any job is easy when you have the right tools. In the Ultimate Bootcamp® the student will be introduced to and learn how to apply third party tools that when utilized in conjunction with VMware®, will not only enhance students' skills, but also simplify processes, optimize efficiency, and make their jobs that much easier.

### Quality "Resourceware" and Follow-on Continuing Education

The Ultimate Bootcamp® includes a 1000+ page course manual and over 50 labs, the most of any training program available, leading to 50% of the class time spent learning through hands-on labs. The Ultimate Bootcamp® courseware is intuitively designed to help the student easily move through the chapters regardless of their level of experience and will serve as a reference source even after the class. This unique feature of all Ultimate Bootcamps® is what attracts so many students looking for a great training experience.

## Course Objectives

Students will learn:

- About all of the new and exciting features of VMware vSphere® 6.0
- Foundational terms and concepts concerning virtualization
- How to install, configure & support ESXi 6.0, vCenter Server 6.0, vCenter™ 6.0 Platform Services Controller, VMware Certificate Authority and VMware Endpoint Certificate Services
- The use of new Content Libraries
- How to configure Virtual Networking including vNetwork Distributed Switches, vDS backup & restore, VLANs, PVLANs and how to support VMotion & iSCSI Multipathing, LACP
- P2V, V2V, V2P, and P2P methods and techniques
- Server Consolidation procedures and reasoning
- Tools to support a virtual infrastructure – VMware Flings, RVTools, Veeam, and more
- VMotion™, Cross-vCenter Server systems migration, Storage VMotion, Distributed Power Mgt (DPM), Update Manager, Power Mgmt, Virtual Volumes (VVols), Fault Tolerance, Clustering – DRS/HA, SDRS, vSphere App HA, Multi vCPU FT Virtual Machines, etc.
- Troubleshooting and Best Practices within a Virtual Enterprise including vRealize Ops Manager
- How to perform backups & replication in the ESXi environment – Data Protection (vDP) & 3rd party solutions, vSphere Replication
- How to use the Command Line Interface for supporting ESXi Servers - ESXi commands
- How to configure and optimize storage - FC, iSCSI, NFS, Multipathing, Thin Provisioning, Flash Read Cache and VSAN

24/5 Access to a real datacenter!

This class prepares the student for the Certified Virtualization Expert® Exam (CVE®) and the VMware vSphere® 6.x Advanced Administration course.

Get Certified!



*"I liked the content and labs for this class better than the class I took last year prior to my implementation. This course involved a lot more command line work...Being a GUI user this experience taught me that there is more to VMware® than just the GUI. I appreciate that and want to learn more!"*

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## COURSE OUTLINE

\* HOL (Hands-on Lab)

**\*\*Outline subject to change based on new features and final release.**

### Chapter 1: Course Introduction and Methodology (HOL)

### Chapter 2: Virtualization Overview and What's New in vSphere 6.0

1. Cloud Overview
  - a. How vSphere is utilized for the Cloud
2. Virtualization Overview
  - a. How it enables shifting to the Cloud
3. Features of 5.5 and 6.0
4. Software Defined Datacenter

### Chapter 3: Planning and Installing ESXi 6.0 (VMware vSphere Hypervisor)

1. Planning ESXi 6.0 Host Deployment
2. Deployment Guidelines
3. ESXi 6.0 Image Builder
4. vSphere 6.0 Auto Deploy (GUI & Command Line)
5. ESXi 6.0 Server Install (HOL)
6. Configuring Hostname Resolution and NTP (HOL)
7. Troubleshooting ESXi 6.0 Host

### Chapter 4: Using Tools to Administer a VMware® Environment

1. Overview of 3rd Party Tools
2. ESXi Management (vSphere Client, NEW V6.0 esxcli, vCLI, vMA, Putty, PowerCLI, Web) (HOL)
3. Linux Command Review
4. Troubleshooting the vSphere Client (VIC)

### Chapter 5: vCenter™ Server 6.0 and Licensing

1. Demystifying vSphere 5.x Licensing
2. vCenter Server 6.0 Installation (HOL)
3. vSphere 6.0 Web Client (HOL)
4. vCenter Server 6.0 Virtual Appliance
5. vCenter Server 6.0 Inventory (HOL)
6. Managing vCenter Server 6.0 (HOL)
7. Planning vCenter Server 6.0 Deployment
8. Troubleshooting vCenter Server 6.0 Deployment

### Chapter 6: Configuring Networking

1. Create & Modify Virtual Networks (HOL)
2. Create & Modify Virtual Networks using CLI (HOL)
3. vNetwork Distributed Virtual Switches & NIOC (HOL)
4. Network Monitoring and Troubleshooting (NetFlow, Port Mirror, LLDP, 802.1p Tagging)

### Chapter 7: Configuring Storage

1. Storage Concepts, Storage Awareness & Profile Driven Storage
2. Virtual Volumes, Storage Containers
3. iSCSI Storage (GUI & Command Line) (HOL)
4. Fibre Channel Storage & Software FCoE (GUI & Command Line)
5. VMFS Datastores (GUI & Command Line) (HOL)
6. Solid State Disks (SSD)

7. vSphere Flash Read Cache
8. NAS Storage and NFS Datastores (GUI & Command Line) (HOL)
9. Raw Device Mapping (RDM) (HOL)
10. VMware Virtual SAN (VSAN) 6.0
11. Storage & Management Solutions

### Chapter 8: VM Creation and Configuration & Snapshots

1. Create a VM (HOL)
2. Create Multiple VMs, Templates & Clones (HOL)
3. Virtual Appliances (HOL)
4. Configuration & Use of vApps
5. VMware vCenter™ Standalone Converter (P2V, V2V) (HOL)
6. Manage VMs (HOL)
7. Virtual Machine Startup/Shutdown (HOL)
8. Virtual Machine Snapshots (HOL)
9. Troubleshooting Virtual Machines

### Chapter 9: Security and Permissions

1. Controlling User Access and Passwords (HOL)
2. ESXi 6.0 AD Integration (HOL)
3. Managing ESXi 6.0 Firewalls (GUI & Command Line) (HOL)
4. VMware Certificate Authority (VCA) & VMware Endpoint Certificate Services
5. SSH Access
6. vCloud Networking & Security, VMSafe and vShield Zones
7. ESXi Lockdown Mode

### Chapter 10: Server and VM Monitoring

1. vRealize Operations Manager
2. Optimizing Resources
3. Resource Pools
4. Monitor VM Performance (HOL)
5. Configuring Alarms (HOL)
6. ESXi, vCenter™ Logs and syslog, NetFlow, Port Mirroring (HOL)

### Chapter 11: Advanced ESXi and vCenter™ Management

1. Storage Views
2. Storage VMotion (HOL)
3. Configuring VMotion (HOL)
4. Enhanced vMotion
5. Distributed Resource Scheduler (DRS) (HOL)
6. Resource Pools and Monitoring (HOL)
7. Storage Clusters & Storage DRS (SDRS) (HOL)
8. Cluster Monitoring
9. Host Profiles (HOL)
11. Linked Mode Group of vCenter™ Servers
12. vSphere Storage Appliance (VSA)

### Chapter 12: Patching and Upgrading vCenter™/ESX/ESXi

1. Patching ESXi 6.0 (HOL)
2. Patching with Update Manager (HOL)
3. Upgrading from ESXi 5.5 to ESXi 6.0

### Chapter 13: Disaster Recovery, Backup and Deployment

1. vSphere Replication 6.0
2. Site Recovery Manager 6.0 (SRM60)
3. High Availability (HA) & Fault Domain Manager (FDM) (HOL)
4. vSphere App HA
5. VM Fault Tolerance
6. Microsoft Clustering
7. Backup Strategies
8. VMware Data Protection 6.0 (includes Advanced) (HOL)
9. Third Party Backups (HOL)

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