



Title	VMware vSphere™ 5 Essential Skills
Summary	<p>Class formats available:</p> <ul style="list-style-type: none"> • Instructor Led Class • Remote Instruction (online learning) • Private / Onsite for groups of 3 or more
Length	2 Days (16 hours of instruction)
Overview	<p>This fully-interactive, hands-on class places students directly in to a real VMware vSphere 5 datacenter, using real servers and Infrastructure as a Service (IaaS) Cloud Computing resources.</p> <p>Upon completion, students will have the skills required to use, manage and deploy Virtual Machines in a VMware vSphere 5 datacenter environment with VMware ESXi™ 5 and VMware vCenter™ Server 5</p>
Objectives	<ul style="list-style-type: none"> • Build Virtual Machines from an ISO image • Create a Template and deploy Virtual Machines • Use Operating System guest customization (Sysprep, Customization Specification) • Import and use a Virtual Appliance (OVF/OVA) • Manage Virtual Machines • Use vCenter Server Performance Charts to monitor Virtual Machines • Use vMotion and Storage vMotion to migrate Virtual Machines and disks • Problem solving with Virtual Machines (is it VMware or is it Windows?) <p>Each objective will be reinforced with a total of 24 Step-by-Step Labs (SBS Labs)!</p>
Who should attend?	Administrators, operators and help-desk personnel who are responsible for working directly with Virtual Machines in a VMware vSphere 5 environment.
Prerequisites	Administration with Microsoft Windows operating systems
Outline	<p>Module 1. Introduction and Overview</p> <p style="padding-left: 20px;">SBS LAB I. Connecting to the datacenter</p> <p>Module 2. Grounds for Virtualization</p> <ul style="list-style-type: none"> • What is VMware vSphere <p>Module 3. Building Virtual Machines</p> <p style="padding-left: 20px;">SBS LAB I. Configuring a new Virtual Machine</p> <p style="padding-left: 20px;">SBS LAB II. Installing a guest operating system from ISO image</p> <p style="padding-left: 20px;">SBS LAB III. Install VMware Tools</p> <p style="padding-left: 20px;">SBS LAB IV. Time management in Virtual Machines (VMware Tools, Windows Time, NTP)</p> <p style="padding-left: 20px;">SBS LAB V. Understanding and using snapshots correctly</p> <p style="padding-left: 20px;">SBS LAB VI. Create a live clone of a Virtual Machine</p> <p style="padding-left: 20px;">SBS LAB VII. Edit Virtual Machine settings (memory, disk, network)</p> <p>Module 4. 10 Best Practices For Business-Critical Virtual Machines</p> <p style="padding-left: 20px;">SBS LAB I. Create a Virtual Machine for use with business-critical apps such as SQL or SAP</p> <p style="padding-left: 20px;">SBS LAB II. Using VMware <i>vmxnet3</i> and <i>pvscsi</i> drivers</p> <p>Module 5. Using Templates</p> <p style="padding-left: 20px;">SBS LAB I. Convert / clone Virtual Machine to Template</p> <p style="padding-left: 20px;">SBS LAB II. Creating and editing an operating system customization speciation (Sysprep)</p> <p style="padding-left: 20px;">SBS LAB III. Deploy Virtual Machines from Template</p> <p>Module 6. Virtual Appliances</p>



- SBS LAB I.** Import a Virtual Appliance
- SBS LAB II.** Configure Virtual Appliance storage and networking
- Module 7.** Virtual Machine resource management and monitoring
 - SBS LAB I.** Setting Virtual Machine resource allocation (shares, reservations, limits)
 - SBS LAB II.** Monitoring Virtual Machine resource utilization with vCenter
 - SBS LAB III.** Creating and using Resource Pools
- Module 8.** Virtual Machine Location and Live migration
 - Understanding the prerequisites of vMotion
 - SBS LAB I.** Migrate a Virtual Machine live with vMotion
 - SBS LAB II.** Migrate a Virtual Machine disk with Storage vMotion
- Module 9.** Troubleshooting Virtual Machines
 - SBS LAB I.** Understanding the origin of the problem - "Is it Windows or is it VMware?"
 - SBS LAB II.** Diagnosing CPU Constraint to the Virtual Machine (not enough CPU allocated)
 - SBS LAB III.** Diagnosing CPU constraint to the Environment (not enough resources available)
 - SBS LAB IV.** Diagnosing networking issues within the VM