

# VMware vSphere: Install, Configure, Manage

## Delivery Methods

- Classroom
- Live Online
- Onsite

## Course Duration

- Five (5) extended days of instructor-led classroom training
- 55% lecture, 45% hands-on lab

## Target Audience

- System administrators
- Systems engineers

## Course Suitability

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Administrator | <input type="checkbox"/> Expert                  |
| <input checked="" type="checkbox"/> Engineer      | <input checked="" type="checkbox"/> Advanced     |
| <input type="checkbox"/> Architect                | <input checked="" type="checkbox"/> Professional |
|   | <input type="checkbox"/> Fundamentals            |

## Prerequisites

- System administration experience on Microsoft Windows or Linux operating systems
- Understanding of concepts presented in the [VMware Data Center Virtualization Fundamentals](#) course for [VCA-DCV certification](#)

## Certifications

For more information, go to [VMware Certification](#).

## Pricing

Contact your VMware representative or a VMware Authorized Training Center for pricing information.

## More Information

Courses are conveniently scheduled around the world. Go to [VMware Education](#) to find the class that is right for you.



## Course Overview

VMware vSphere: Install, Configure, Manage is our best-selling course. It features intensive hands-on training that focuses on installing, configuring, and managing VMware vSphere® 6, which includes VMware ESXi™ 6 and VMware vCenter Server™ 6. This course prepares you to administer a vSphere infrastructure for an organization of any size and forms the foundation for most other VMware technologies in the software-defined data center.

This course meets the prerequisite for advanced vSphere courses, which can be found at [www.vmware.com/education](http://www.vmware.com/education).

## Course Objectives

By the end of the course, you should be able to meet the following objectives:

- Describe the software-defined data center
- Deploy an ESXi host and create virtual machines
- Describe vCenter Server architecture
- Deploy a vCenter Server instance or VMware vCenter Server™ Appliance™
- Use vCenter Server to manage an ESXi host
- Configure and manage vSphere infrastructure with VMware vSphere® Client™ and VMware vSphere® Web Client
- Configure virtual networks with vSphere standard switches
- Use vCenter Server to manage various types of host storage: VMware vSphere® VMFS, NFS, virtual SAN, and Virtual Volumes
- Manage virtual machines, templates, clones, and snapshots
- Create a vApp
- Describe and use the content library
- Migrate virtual machines with VMware vSphere® vMotion®
- Use VMware vSphere® Storage vMotion® to migrate virtual machine storage
- Monitor resource usage and manage resource pools
- Use VMware vRealize™ Operations Manager™ to identify and solve issues through analytics and alerts
- Manage VMware vSphere® High Availability and VMware vSphere® Fault Tolerance
- Use VMware vSphere® Replication™ and VMware vSphere® Data Protection™ to replicate virtual machines and perform data recovery
- Use VMware vSphere® Distributed Resource Scheduler™ clusters to improve host scalability
- Use vSphere distributed switches to improve network scalability
- Use VMware vSphere® Update Manager™ to apply patches and perform basic troubleshooting of ESXi hosts, virtual machines, and vCenter Server operations

## Course Modules

<p><b>1 Course Introduction</b></p> <ul style="list-style-type: none"> <li>• Introductions and course logistics</li> <li>• Course objectives</li> <li>• References and resources</li> </ul>	<p><b>7 Virtual Machine Management</b></p> <ul style="list-style-type: none"> <li>• Use templates and cloning to deploy new virtual machines</li> <li>• Modify and manage virtual machines</li> <li>• Perform vSphere vMotion and vSphere Storage vMotion migrations</li> <li>• Create and manage virtual machine snapshots</li> <li>• Create vApps</li> <li>• Introduce the types of content libraries and how to deploy and use them</li> </ul>
<p><b>2 Software-Defined Data Center</b></p> <ul style="list-style-type: none"> <li>• Introduce components of the software-defined data center</li> <li>• Describe where vSphere fits into the cloud architecture</li> <li>• Install and use vSphere Client</li> <li>• Overview of ESXi</li> </ul>	<p><b>8 Resource Management and Monitoring</b></p> <ul style="list-style-type: none"> <li>• Introduce virtual CPU and memory concepts</li> <li>• Configure and manage resource pools</li> <li>• Describe methods for optimizing CPU and memory usage</li> <li>• Use various tools to monitor resource usage</li> <li>• Create and use alarms to report certain conditions or events</li> <li>• Identify and troubleshoot virtual machine resource issues</li> <li>• Introduce vRealize Operations Manager for data center monitoring and management</li> </ul>
<p><b>3 Creating Virtual Machines</b></p> <ul style="list-style-type: none"> <li>• Introduce virtual machines, virtual machine hardware, and virtual machine files</li> <li>• Create and work with virtual machines and templates</li> </ul>	<p><b>9 vSphere HA and vSphere Fault Tolerance</b></p> <ul style="list-style-type: none"> <li>• Explain the vSphere HA architecture</li> <li>• Configure and manage a vSphere HA cluster</li> <li>• Use vSphere HA advanced parameters</li> <li>• Introduce vSphere Fault Tolerance</li> <li>• Enable vSphere Fault Tolerance on virtual machines</li> <li>• Introduce vSphere Replication</li> <li>• Use vSphere Data Protection to back up and restore data</li> </ul>
<p><b>4 vCenter Server</b></p> <ul style="list-style-type: none"> <li>• Introduce the vCenter Server architecture</li> <li>• Deploy and configure vCenter Server Appliance</li> <li>• Use vSphere Web Client</li> <li>• Manage vCenter Server inventory objects and licenses</li> </ul>	<p><b>10 Host Scalability</b></p> <ul style="list-style-type: none"> <li>• Describe the functions and benefits of a vSphere DRS cluster</li> <li>• Configure and manage a vSphere DRS cluster</li> <li>• Work with affinity and anti-affinity rules</li> <li>• Use vSphere HA and vSphere DRS together for business continuity</li> </ul>
<p><b>5 Configuring and Managing Virtual Networks</b></p> <ul style="list-style-type: none"> <li>• Describe, create, and manage standard switches</li> <li>• Configure virtual switch security and load-balancing policies</li> <li>• Create, configure, and manage vSphere distributed switches, network connections, and port groups</li> </ul>	<p><b>11 vSphere Update Manager and Host Maintenance</b></p> <ul style="list-style-type: none"> <li>• Use vSphere Update Manager to manage ESXi patching</li> <li>• Install vSphere Update Manager and the vSphere Update Manager plug-in</li> <li>• Create patch baselines</li> <li>• Use host profiles to manage host configuration compliance</li> <li>• Scan and remediate hosts</li> </ul>
<p><b>6 Configuring and Managing Virtual Storage</b></p> <ul style="list-style-type: none"> <li>• Introduce storage protocols and storage device types</li> <li>• Discuss ESXi hosts using iSCSI and NFS storage</li> <li>• Create and manage VMFS and NFS datastores</li> <li>• Introduce VMware Virtual SAN™</li> <li>• Introduce Virtual Volumes</li> </ul>	<p><b>12 Installing vSphere Components</b></p> <ul style="list-style-type: none"> <li>• Install ESXi</li> <li>• Introduce vCenter Server deployment options</li> <li>• Describe vCenter Server hardware, software, and database requirements</li> <li>• Discuss installation of vCenter Server Appliance and a vCenter Server instance</li> <li>• Demonstrate vCenter Server installation</li> </ul>



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