

## 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>• Additional resources</li> </ul>	<p><b>7 Storage Scalability</b></p> <ul style="list-style-type: none"> <li>• Explain vSphere storage APIs for array integration and storage awareness</li> <li>• Configure and assign virtual machine storage policies</li> <li>• Configure VMware vSphere® Storage DRS™ and VMware vSphere® Storage I/O Control</li> <li>• Create and use virtual volumes in vSphere</li> </ul>
<p><b>2 vSphere Security</b></p> <ul style="list-style-type: none"> <li>• Describe the features and benefits of VMware Platform Services Controller™</li> <li>• Configure ESXi host access and authorization</li> <li>• Secure ESXi, vCenter Server, and virtual machines</li> <li>• Upgrade ESXi and vCenter Server instances</li> </ul>	<p><b>8 Storage Optimization</b></p> <ul style="list-style-type: none"> <li>• Diagnose storage access problems</li> <li>• Configure VMware vSphere® Flash Read Cache™</li> <li>• Monitor key storage performance metrics</li> <li>• Troubleshoot common storage performance problems</li> </ul>
<p><b>3 VMware Management Resources</b></p> <ul style="list-style-type: none"> <li>• Understand the purpose of VMware vSphere® Command-Line Interface commands</li> <li>• Discuss options for running vSphere CLI commands</li> <li>• Deploy and configure vSphere Management Assistant</li> <li>• Use vmware-cmd for virtual machine operations</li> </ul>	<p><b>9 CPU Optimization</b></p> <ul style="list-style-type: none"> <li>• Explain the CPU scheduler operation, NUMA support, and other features that affect CPU performance</li> <li>• Monitor key CPU performance metrics</li> <li>• Troubleshoot common CPU performance problems</li> </ul>
<p><b>4 Performance in a Virtualized Environment</b></p> <ul style="list-style-type: none"> <li>• Review the vSphere performance troubleshooting methodology</li> <li>• Explain software and hardware virtualization techniques and their effects on performance</li> <li>• Use vSphere performance monitoring tools</li> </ul>	<p><b>10 Memory Optimization</b></p> <ul style="list-style-type: none"> <li>• Explain ballooning, memory compression, and host swapping techniques for memory reclamation when memory is overcommitted</li> <li>• Monitor key memory performance metrics</li> <li>• Troubleshoot common memory performance problems</li> </ul>
<p><b>5 Network Scalability</b></p> <ul style="list-style-type: none"> <li>• Configure and manage vSphere distributed switches</li> <li>• Migrate virtual machines from standard switches to distributed switches</li> <li>• Explain distributed switch features such as port mirroring, LACP, QoS tagging, and NetFlow</li> </ul>	<p><b>11 Virtual Machine and Cluster Optimization</b></p> <ul style="list-style-type: none"> <li>• Describe guidelines for optimizing virtual machine configuration</li> <li>• Discuss how vGPU usage affects virtual machine performance</li> <li>• Discuss guidelines for using resource allocation settings</li> <li>• Discuss guidelines for using resource pools</li> <li>• Discuss guidelines for using vSphere DRS clusters</li> <li>• Troubleshoot common vSphere cluster problems</li> </ul>
<p><b>6 Network Optimization</b></p> <ul style="list-style-type: none"> <li>• Explain the performance features of network adapters</li> <li>• Explain the performance features of vSphere networking</li> <li>• Monitor key network performance metrics</li> <li>• Use vSphere Management Assistant to manage virtual network configurations</li> <li>• Troubleshoot common network performance problems</li> </ul>	<p><b>12 Host and Management Scalability</b></p> <ul style="list-style-type: none"> <li>• Describe and use host profiles</li> <li>• Define and use content libraries</li> <li>• Use VMware vSphere® PowerCLI™</li> <li>• Use Virtual Machine Converter</li> <li>• Use VMware vSphere® ESXi™ Image Builder CLI and vSphere Auto Deploy</li> </ul>

