VMware vSphere: Troubleshooting Workshop

Course Overview

This hands-on training workshop provides you with the advanced knowledge, skills, and abilities to achieve competence in troubleshooting the VMware vSphere® 6 environment. This workshop increases your skill and competence in using the command-line interface, VMware vSphere® Web Client, VMware vRealize® Log Insight™, and other tools to analyze and solve problems.

This workshop is based on VMware ESXi™ 6 and VMware vCenter Server™ 6.

For students who want more in-depth vSphere training, VMware Education offers a variety of other courses. For advanced course options, go to http://www.vmware.com/education.

Course Objectives

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

- Use vSphere Web Client, the command-line interface, and logs to diagnose and resolve problems in the vSphere environment
- Introduce troubleshooting principles and procedures
- Troubleshoot networking issues and recover from these issues
- Analyze storage failure scenarios and resolve the issues
- Troubleshoot vSphere cluster failure scenarios and analyze possible causes
- Diagnose common VMware vSphere® High Availability issues and provide solutions
- Troubleshoot problems related to virtual machine migration (VMware vSphere® vMotion®) and improve resource use (VMware vSphere® Distributed Resource Scheduler™)
- Troubleshoot vCenter Server issues
- Identify ESXi host issues, analyze failure scenarios, and correct them
- Troubleshoot faulty virtual machines, including installation issues, snapshot issues, connection issues, and more
## Course Modules

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<th>Course Module</th>
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| **1 Course Introduction** | - Understand the course objectives  
- Understand the scope and topics covered by the course  
- Become familiar with online technical resources  
- Become familiar with the VMware education system and certification tracks |
| **2 Introduction to Troubleshooting** | - Identify the effects of a system problem  
- Define the troubleshooting scope  
- Use a structured approach  
- Understand the troubleshooting principles  
- Follow a logical troubleshooting procedure  
- Troubleshooting examples |
| **3 Troubleshooting Tools** | - Use command-line tools to identify and troubleshoot problems  
- Use VMware vSphere® Management Assistant  
- Find and interpret important log files  
- Export relevant log files for technical support  
- Use vRealize Log Insight for log aggregation and problem analysis  
- Use vRealize Log Insight for efficient log search |
| **4 Networking** | - Identify the symptoms of network-related problems  
- Analyze and resolve standard and distributed switch issues  
- Analyze virtual machine connectivity issues and restore them  
- Examine common management network connectivity issues and restore configurations  
- Identify and prevent potential problems |
| **5 Storage** | - Troubleshoot storage (iSCSI, NFS, VMware vSphere® VMFS, and VMware Virtual SAN™) connectivity problems  
- Analyze hardware malfunction and software misconfiguration scenarios  
- Identify multipathing-related issues, including PDL and APD  
- Analyze possible causes, recover from the faulty conditions, and restore storage visibility |
| **6 vSphere Clusters** | - Identify and recover from issues related to vSphere HA  
- Analyze and troubleshoot various types of vSphere vMotion issues related to virtual machine migrations  
- Discuss and recover from vSphere DRS problems to achieve proper function and balanced resource use  
- Examine vSphere cluster failure scenarios and possible solutions |
| **7 vCenter Server and ESXi** | - Understand the vCenter Server and VMware Platform Services Controller™ architecture in vSphere 6  
- Identify and resolve authentication issues  
- Troubleshoot VMware Certificate Authority and certificate store issues  
- Analyze and fix vCenter Server services issues  
- Examine ESXi host and vCenter Server failure scenarios and resolve the issues |
| **8 Virtual Machines** | - Analyze and resolve common virtual machine snapshot issues  
- Identify possible causes and resolve virtual machine power-on issues  
- Troubleshoot virtual machine connection state issues  
- Resolve problems seen during VMware Tools™ installations  
- Examine failure scenarios and provide solutions |