

VMware vSphere: Troubleshooting Workshop [V6.7]

Duration: 5 Days

Overview:

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

Target Audience:

- System Administrators
- System Integrators

Pre-requisites:

This course requires completion of one of the following prerequisites:

- VMware Certified Professional 6.5- Data Center Virtualisation (VCP6.5-DCV)
- VMware vSphere: Fast Track [V6.5]
- VMware vSphere: Install, Configure, Manage [V6.7]
- Equivalent knowledge and administration experience with ESXi and vCenter Server
- Experience in working with a command-line interface is highly recommended, as is completion of VMware vSphere: Optimize and Scale [V6.7]

Module 1: Course Introduction

Lessons:

- Introductions and course logistics
- Course objectives

Module 2: Introduction to Troubleshooting

Lessons:

- Identify the effects of a system problem
- Define the scope of troubleshooting
- Use a structured approach
- Discuss the principles of troubleshooting
- Follow a logical troubleshooting procedure
- Examine example of troubleshooting

Module 3: Troubleshooting Tools

Lessons:

- Use command-line tools to identify and troubleshoot problems
- Use vSphere CLI
- Find and interpret important log files
- Use vRealize Log Insight for log aggregation, efficient log search, and problem analysis

Module 4: Networking

Lessons:

- Identify the symptoms of network-related problems
- Analyse and resolve standard switch and distributed switch problems
- Analyse virtual machine connectivity problems and fix them
- Examine common management network connectivity problems and restore configurations
- Identify and prevent potential problems

Module 5: Storage

Lessons:

- Troubleshoot storage (iSCSI, NFS, VMware vSphere® VMFS, VMware vSAN™ and VMware vSphere® Virtual Volumes™) connectivity problems
- Analyse storage-related logs
- Analyse hardware malfunction and software misconfiguration scenarios
- Identify multipathing-related problems, including permanent device loss (PDL) and all paths down (APD)
- Analyse possible causes, recover from faulty conditions, and restore storage visibility

Module 6: vSphere Clusters

Lessons:

- Identify and recover from problems related to vSphere HA
- Analyse and troubleshoot various types of vSphere vMotion problems 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

Module 7: Virtual Machines

Lessons:

- Analyse and resolve common virtual machine snapshot problems
- Identify possible causes and resolve virtual machine power-on problems
- Troubleshoot virtual machine connection state problems
- Resolve problems seen during VMware Tools™ installations
- Examine failure scenarios and provide solutions

Module 8: vCenter Server and ESXi

Lessons:

- Describe the vCenter Server and VMware Platform Services Controller™ architecture in vSphere 6.x
- Identify and resolve authentication problems
- Troubleshoot VMware Certificate Authority and certificate problems
- Analyse and fix problems with vCenter Server services
- Analyse and fix vCenter Server database problems
- Identify VMware vCenter Server® High Availability problems
- Examine ESXi host and vCenter Server failure scenarios and resolve the problems

Course Objectives:

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

- Use vSphere Client, the command-line interface, and logs to diagnose and resolve problems in the vSphere environment.
- Introduce troubleshooting principles and procedures
- Use VMware vSphere® Command-Line interface to diagnose and resolve problems in the vSphere environment
- Troubleshoot networking problems and recover from these problems
- Analyse storage failure scenarios and resolve the problems
- Troubleshoot vSphere cluster failure scenarios and analyse possible causes
- Diagnose common VMware vSphere® High Availability problems and provide solutions
- Troubleshoot problems related to virtual machine migration (VMware vSphere® vMotion®), and improve resource use (VMware vSphere® Distributed Resource Scheduler™)
- Troubleshoot VMware vCenter Server® problems
- Identify VMware ESXi™ host problems, analyse failure scenarios, and correct them
- Troubleshoot faulty virtual machines, including installation problems, snapshot problems and connection problems.
- Certifications: VMware Certified Professional 6.5 – Data Center Virtualisation (VCP6.5-DCV)