

VMware vSphere: Troubleshooting Workshop [V6.7] H9TG3S

HPE course number	H9TG3S
Course length	5 Days
Delivery mode	ILT, VILT
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Why HPE Education Services?

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This 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 analyze and solve problems.

Audience

- System administrators
- System integrators

Prerequisites

This course requires completion of one of the following prerequisites:

VMware Certified Professional 6.5 – Data Center Virtualization (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]

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
- Analyze storage failure scenarios and resolve the problems
- Troubleshoot vSphere cluster failure scenarios and analyze 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, analyze failure scenarios, and correct them
- Troubleshoot faulty virtual machines, including installation problems, snapshot problems, and connection problems

*Realize Technology Value with Training, IDC Infographic 2037, Sponsored by HPE, October 2017

Detailed course outline

Module 1: Course Introduction	<ul style="list-style-type: none"> • Introductions and course logistics 	<ul style="list-style-type: none"> • Course objectives
Module 2: Introduction to Troubleshooting	<ul style="list-style-type: none"> • Identify the effects of a system problem • Define the scope of troubleshooting • Use a structured approach 	<ul style="list-style-type: none"> • Discuss the principles of troubleshooting • Follow a logical troubleshooting procedure • Examine examples of troubleshooting
Module 3: Troubleshooting Tools	<ul style="list-style-type: none"> • Use command-line tools to identify and troubleshoot problems • Use vSphere CLI 	<ul style="list-style-type: none"> • Find and interpret important log files • Use vRealize Log Insight for log aggregation, efficient log search, and problem analysis
Module 4: Networking	<ul style="list-style-type: none"> • Identify the symptoms of network-related problems • Analyze and resolve standard switch and distributed switch problems 	<ul style="list-style-type: none"> • Analyze virtual machine connectivity problems and fix them • Examine common management network connectivity problems and restore configurations • Identify and prevent potential problems
Module 5: Storage	<ul style="list-style-type: none"> • Troubleshoot storage (iSCSI, NFS, VMware vSphere® VMFS, VMware vSAN™, and VMware vSphere® Virtual Volumes™) connectivity problems • Analyze storage-related logs 	<ul style="list-style-type: none"> • Analyze hardware malfunction and software misconfiguration scenarios • Identify multipathing-related problems, including permanent device loss (PDL) and all paths down (APD) • Analyze possible causes, recover from faulty conditions, and restore storage visibility
Module 6: vSphere Clusters	<ul style="list-style-type: none"> • Identify and recover from problems related to vSphere HA • Analyze and troubleshoot various types of vSphere vMotion problems related to virtual machine migrations 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Analyze and resolve common virtual machine snapshot problems • Identify possible causes and resolve virtual machine power-on problems • Troubleshoot virtual machine connection state problems 	<ul style="list-style-type: none"> • Resolve problems seen during VMware Tools™ installations • Examine failure scenarios and provide solutions
Module 8: vCenter Server and ESXi	<ul style="list-style-type: none"> • 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 • Analyze and fix problems with vCenter Server services 	<ul style="list-style-type: none"> • Analyze 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

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