

Module Title : VMware vSphere: Troubleshooting Workshop [6.7]

Duration : 5 days

Overview

This five-day, 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.

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

Target 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].

Certifications

This course prepares you for the following certification:

- VMware Certified Professional 6.5 – Data Center Virtualization (VCP6.5-DCV)

Course Modules

1 Course Introduction

- Introductions and course logistics
- Course objectives

2 Introduction to Troubleshooting

- 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 examples of troubleshooting

3 Troubleshooting Tools

- 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

4 Networking

- Identify the symptoms of network-related problems

- Analyze and resolve standard switch and distributed switch problems
- Analyze virtual machine connectivity problems and fix them
- Examine common management network connectivity problems and restore configurations
- Identify and prevent potential problems

5 Storage

- Troubleshoot storage (iSCSI, NFS, VMware vSphere® VMFS, VMware vSAN™, and VMware vSphere® Virtual Volumes™) connectivity problems
- Analyze storage-related logs
- 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

6 vSphere Clusters

- Identify and recover from problems related to vSphere HA
- Analyze 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

7 Virtual Machines

- Analyze 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

8 vCenter Server and ESXi

- 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
- 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