

# VMware vSphere: Troubleshooting Workshop [V6.0]

**Duration: 5 Days**

**Course Code: VTSW6**

## 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.

**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
- Analyse 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

**Intended Audience:**

- System administrators
- System integrators

**Prerequisites:** Required prerequisites include completion of one of the following:

- VMware Certified Professional 6 – Data Center Virtualization (VCP6-DCV)
- VMware vSphere: Fast Track [V6]
- VMware vSphere: Optimize and Scale [V6]
- Equivalent knowledge and administration experience with ESXi and vCenter Server

Experience in working with a command-line interface is highly recommended.

**Course Outline:**

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