

# VMware vSphere: Troubleshooting Workshop [V6.5]

## Description

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® Web Client, VMware vRealize® Log Insight™, and other tools to analyze and solve problems.

### Delegates will learn how to

- 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 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 and improve resource use
- 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, connection problems, and more

# Outline

## Course Introduction

- Introductions and course logistics
- Course objectives
- Describe the content of this course
- Gain a complete picture of the VMware certification system
- Familiarize yourself with the benefits of the VMware Education Learning Zone
- Identify additional resources

## Introduction to Troubleshooting

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

## Troubleshooting Tools

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

## 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

## Storage

- Troubleshoot storage 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 the faulty conditions, and restore storage visibility

### **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

### **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

### **vCenter Server and ESXi**

- Understand 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

## Prerequisites

VMware vSphere 6.5: Install, Configure, Manage