

## VMWARE VSPHERE: TROUBLESHOOTING [V7]

Course Duration: 5 days; Instructor-led

### WHAT YOU WILL LEARN

This five-day, hands-on training course provides you with the advanced knowledge, skills, and abilities to achieve competence in troubleshooting the VMware vSphere® 7.x environment. This workshop increases your skill and competence in using the command-line interface, VMware vSphere® Client™, log files, 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 vSphere: Fast Track [V6.x] or [V7]
- VMware vSphere: Install, Configure, Manage [V6.x] or [V7]
- VMware vSphere: Optimize and Scale [V6.x] or [V7]
- Equivalent knowledge and administration experience with ESXi and vCenter Server
- Experience in working with a command-line interface is highly recommended.

### METHODOLOGY

This program will be conducted with interactive lectures, PowerPoint presentation, discussion, and practical exercise.

### COURSE OBJECTIVES

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

- Introduce troubleshooting principles and procedures
- Use command-line interfaces, log files, and the vSphere Client to diagnose and resolve problems in the vSphere environment
- Explain the purpose of key vSphere log files
- Identify networking problems based on reported symptoms, validate, and troubleshoot the reported problem, identify the root cause, and implement the appropriate resolution

- Analyze storage failure scenarios using a logical troubleshooting methodology, identify the root cause, and apply the appropriate resolution to resolve the problem
- Troubleshoot vSphere cluster failure scenarios and analyze possible causes
- Diagnose common VMware vSphere® High Availability problems and provide solutions
- Identify and validate VMware ESXi™ host and VMware vCenter Server® problems, analyze failure scenarios, and select the correct resolution
- Troubleshoot virtual machine problems, including migration problems, snapshot problems, and connection problem
- Troubleshoot performance problems with vSphere components

### COURSE OUTLINES

#### Module 1: Course Introduction

- Introductions and course logistics
- Course objectives

#### Module 2: Introduction to Troubleshooting

- Define the scope of troubleshooting
- Use a structured approach to solve configuration and operational problems
- Apply a troubleshooting methodology to logically diagnose faults and improve troubleshooting efficiency

#### Module 3: Troubleshooting Tools

- Use command-line tools (such as ESXCLI) to identify and troubleshoot vSphere problems
- Identify important vSphere log files and interpret the log file contents

#### Module 4: Troubleshooting Virtual Networking

- 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



### **Module 5: Troubleshooting Storage**

- Troubleshoot and resolve storage (iSCSI, NFS, and VMware vSphere® VMFS) connectivity and configuration problems
- Analyze and resolve common VM snapshot problems
- Identify and resolve multipathing-related problems, including common causes of permanent device loss
- (PDL) and all paths down (APD) event problems

### **Module 6: Troubleshooting vSphere Clusters**

- Identify and recover from problems related to vSphere HA
- Analyze and resolve VMware vSphere® vMotion® configuration and operational problems
- Analyze and resolve common VMware vSphere® Distributed Resource Scheduler™ problems

### **Module 7: Troubleshooting Virtual Machines**

- Identify, analyze, and solve virtual machine snapshot problems
- Troubleshoot virtual machine power-on problems
- Identify possible causes and troubleshoot virtual machine connection state problems
- Diagnose and recover from VMware Tools™ installation failures

### **Module 8: Troubleshooting vCenter Server and ESXi**

- Analyze and fix problems with vCenter Server services
- Diagnose and troubleshoot vCenter Server database problems
- Examine ESXi host and vCenter Server failure scenarios and resolve the problems