

## VMware vSphere: What's New V5.5 to V6.7

Duration: 3 Days

### Overview:

This three-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 analyse and solve problems.

### Target Audience:

- + System Administrators
- + System Integrators

### Pre-requisites:

This course requires completion of one of the following prerequisites:

- + VMware Certified Professional 6.5- Data Center Virtualisation (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: Optimise and Scale [V6.7]

### Module 1: Course Introduction

#### Lessons:

- + Introductions and course logistics
- + Course objectives

### Module 2: Introduction to Troubleshooting

#### Lessons:

- + 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 example of troubleshooting

### Module 3: Troubleshooting Tools

#### Lessons:

- + 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

### Module 4: Networking

#### Lessons:

- + Identify the symptoms of network-related problems
- + Analyse and resolve standard switch and distributed switch problems
- + Analyse virtual machine connectivity problems and fix them
- + Examine common management network connectivity problems and restore configurations
- + Identify and prevent potential problems

### Module 5: Storage

#### Lessons:

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

- + Analyse storage-related logs
- + Analyse hardware malfunction and software misconfiguration scenarios
- + Identify multipathing-related problems, including permanent device loss (PDL) and all paths down (APD)
- + Analyse possible causes, recover from faulty conditions, and restore storage visibility

### Module 6: vSphere Clusters

#### Lessons:

- + Identify and recover from problems related to vSphere HA
- + Analyse 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

### Module 7: Virtual Machines

#### Lessons:

- + Analyse 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

### Module 8: vCenter Server and ESXi

#### Lessons:

- + 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
- + Analyse and fix problems with vCenter Server services
- + Analyse 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

## 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
- ✦ Analyse storage failure scenarios and resolve the problems
- ✦ Troubleshoot vSphere cluster failure scenarios and analyse 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, analyse failure scenarios, and correct them
- ✦ Troubleshoot faulty virtual machines, including installation problems, snapshot problems and connection problems.
- ✦ Certifications: VMware Certified Professional 6.5 – Data Center Virtualisation (VCP6.5DCV)