Course name: vSphere: Troubleshooting Workshop [V6] (VCP6-DCV)

Course code: VT-SP-TW6-EN

Introduction

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.

Participant profile

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 working with a command-line interface is highly recommended.

Goal description

- Use vSphere Web Client, the command-line interface, and logs to diagnose and resolve problems in the vSphere environment
- Introduce troubleshooting principals and procedures
- Troubleshoot networking issues and recover from them
- Analyze 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.

Course duration and form

- 35 hours (5 days x 7 hours), including lectures and exercises.

Course plan

1. Course Introduction
   a. Understand the course objectives
   b. Understand the scope and topics covered by the course
   c. Become familiar with online technical resources
   d. Become familiar with the VMware education system and certification tracks
2. Introduction to Troubleshooting
   a. Identify the effects of a system problem
   b. Define the troubleshooting scope
   c. Use a structured approach
   d. Understand the troubleshooting principals
   e. Follow a logical troubleshooting procedure
   f. Troubleshooting examples
3. Troubleshooting Tools
   a. Use command-line tools to identify and troubleshoot problems
   b. Use VMware vSphere® Management Assistant
   c. Locate and interpret important log files
   d. Export relevant log files for technical support
   e. Use vRealize Log Insight for log aggregation and problem analysis
   f. Use vRealize Log Insight for efficient log search
4. Networking
   a. Identify the symptoms of network-related problems
   b. Analyze and resolve standard and distributed switch issues
   c. Analyze virtual machine connectivity issues and restore them
   d. Examine common management network connectivity issues and restore configurations
   e. Identify and prevent potential problems
5. Storage
   a. Troubleshoot storage (iSCSI, NFS, VMFS, and VSAN) connectivity problems
   b. Analyze hardware malfunction and software misconfiguration scenarios
   c. Identify multipathing-related issues, including PDL and APD
   d. Analyze possible causes, recover from the faulty conditions, and restore storage visibility
6. vSphere Clusters
   a. Identify and recover from vSphere HA related issues
   b. Analyze and troubleshoot various types of vSphere vMotion issues related to virtual machine migrations
   c. Discuss and recover from vSphere DRS problems to achieve proper function and balanced resource use
   d. Examine vSphere cluster failure scenarios and possible solutions
7. vCenter Server and ESXi
   a. Understand the vCenter Server and Platform Services Controller (PSC) architecture in vSphere 6
   b. Identify and resolve authentication issues
   c. Troubleshoot VMware Certificate Authority (VMCA) and certificate store issues
   d. Analyze and fix vCenter Server services issues
   e. Examine ESXi host and vCenter Server failure scenarios and resolve the issues
8. Virtual Machines
   a. Analyze and resolve common virtual machine snapshot issues
   b. Identify possible causes and resolve virtual machine power-on issues
   c. Troubleshoot virtual machine connection state issues
   d. Resolve problems seen during VMware Tools™ installations
   e. Discuss content library and identify common misconfigurations
   f. Examine failure scenarios and provide solutions