VMware vSphere: Troubleshooting v8

Days: 5

Description: This five-day training course provides you with the knowledge, skills, and abilities to achieve competence in troubleshooting the VMware vSphere® 8 environment. This course increases your skill level and competence in using the command-line interface, VMware vSphere® Client™, log files, and other tools to analyze and solve problems.

Prerequisites: This course has the following prerequisites:

- VCP-DCV certification

- VMware vSphere: Install, Configure, Manage

- VMware vSphere: Operate, Scale and Secure

Audience:

- System administrators
- System engineers

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 common vSphere log files

- Identify networking issues based on reported symptoms

- Validate and troubleshoot the reported networking issue

- Identify the root cause of networking issue

- Implement the appropriate resolution to recover from networking problems

- Analyze storage failure scenarios using a logical troubleshooting methodology

- identify the root cause of storage failure

- Apply the appropriate resolution to resolve storage failure problems

- Troubleshoot vSphere cluster failure scenarios

- Analyze possible vSphere cluster failure causes

- Diagnose common VMware vSphere® High Availability problems and provide solutions

- Identify and validate VMware ESXi™ host and VMware vCenter® problems

- Analyze failure scenarios of ESXi host and vCenter problems

- Select the correct resolution for the failure of ESXi host and vCenter problems

- Troubleshoot virtual machine problems, including migration problems, snapshot problems, and connection problems

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- Troubleshoot performance problems with vSphere components

OUTLINE:

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 troubleshooting methodology to logically diagnose faults and improve troubleshooting efficiency

MODULE 3: TROUBLESHOOTING TOOLS

- Discuss the various methods to run commands
- Discuss the various ways to access ESXi Shell
- Use commands to view, configure, and manage your vSphere components
- Use the vSphere CLI
- Use ESXCLI commands from the vSphere CLI
- Use Data Center CLI commands
- Identify the best tool for command-line interface troubleshooting
- Identify important log files for troubleshooting vCenter Server and ESXi
- Describe the benefits and capabilities of VMware Skyline™
- Explain how VMware Skyline works
- Describe VMware Skyline™ Health
- Describe VMware Skyline Advisor™

MODULE 4: TROUBLESHOOTING VIRTUAL NETWORKING

- Analyze and troubleshoot standard switch problems
- Analyze and troubleshoot virtual machine connectivity problems
- Analyze and troubleshoot management network problems
- Analyze and troubleshoot distributed switch problems

MODULE 5: TROUBLESHOOTING STORAGE

- Discuss the vSphere storage architecture
- Identify the possible causes of problems in the various types of datastores
- Analyze the common storage connectivity and configuration problems
- Discuss the possible storage problems causes
- Solve the storage connectivity problems, correct misconfigurations, and restore LUN visibility
- Review vSphere storage architecture and functionality necessary to troubleshoot storage problems
- Use ESXi and Linux commands to troubleshoot storage problems
- Analyze log file entries to identify the root cause of storage problems
- Investigate ESXi storage issues
- Troubleshoot VM snapshots
- Troubleshoot storage performance problems
- Review multipathing

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- Identify the common causes of missing paths, including PDL and APD conditions

- Solve the missing path problems between hosts and storage devices

MODULE 6: TROUBLESHOOTING VSPHERE CLUSTERS

- Identify and troubleshoot vSphere HA problems

- Analyze and solve vSphere vMotion problems

- Diagnose and troubleshoot common vSphere DRS problems

MODULE 7: TROUBLESHOOTING VIRTUAL MACHINES

- Discuss virtual machine files and disk content IDs

- 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 solve vCenter Server service problems

- Diagnose and troubleshoot vCenter Server database problems

- Use vCenter Server Appliance shell and the Bash shell to identify and solve problems

- Identify and troubleshoot ESXi host problems