VMware vSphere v7 – Optimize and Scale plus Troubleshooting Fast Track

Description

This five-day, accelerated, hands-on training course is a blend of the VMware vSphere: Optimize and Scale and VMware vSphere: Troubleshooting courses. This Fast Track course includes topics from each of these advanced courses to equip experienced VMware administrators with the knowledge and skills to effectively optimize and troubleshoot vSphere at an expert level.

Classroom Registration Price (CHF)
6700
Virtual Classroom Registration Price (CHF)
6700
Course Content
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 Linux commands, vSphere CLI, ESXCLI) to identify and troubleshoot vSphere problems
- Identify important vSphere log files and interpret the log file contents

Module 4: Network Optimization

- Explain performance features of network adapters
- Explain the performance features of vSphere networking
- Use esxtop to monitor key network performance metrics

Module 5: 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 6: Storage Optimization

- Describe storage queue types and other factors that affect storage performance
- Use esxtop to monitor key storage performance metrics

Module 7: Troubleshooting Storage

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

Module 8: CPU Optimization

- Explain the CPU scheduler operation and other features that affect CPU performance
- Explain NUMA and vNUMA support
- Use esxtop to monitor key CPU performance metrics

Module 9: Memory Optimization

- Explain ballooning, memory compression, and host-swapping techniques for memory reclamation when memory is overcommitted
- Use esxtop to monitor key memory performance metrics

Module 10: 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 11: Troubleshooting Virtual Machines

- Identify possible causes and resolve virtual machine power-on problems
- Troubleshoot virtual machine connection state problems
- Resolve problems seen during VMware Tools™ installations

Module 12: vCenter Server Performance Optimization

- Describe the factors that influence vCenter Server performance
- Use VMware vCenter® Server Appliance™ tools to monitor resource use

Module 13: Troubleshooting vCenter Server and ESXi

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

Lab / Exercises

- Official VMware Labs and exercices

Documentation

- Digital courseware included

Participant profiles

- Experienced system administrators
- System engineers
- System integrators

Prerequisites

This course requires completion of one of the following prerequisites:

- VMware vSphere: Install, Configure, Manage [V7]
- Equivalent knowledge and administration experience with ESXi and vCenter Server
- Experience in working at the command prompt is highly recommended

Objectives

- Introduce troubleshooting principles and procedures
- Practice Linux commands that aid in the troubleshooting process
- 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
- Monitor and optimize compute, network, and storage performance on ESXi hosts
- Monitor and optimize vCenter Server performance
- 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 problems
- Troubleshoot performance problems with vSphere components

Niveau
Fondamental
Duration (in Days)
6
Reference
VMW-VSPHOSTFT