

Szkolenie: HPE

VMware vSphere: Optimize and Scale plus Troubleshooting Fast Track



## Cel szkolenia:

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

- Configure and manage vSphere networking and storage for a large and sophisticated enterprise
- Manage changes to the vSphere environment
- Optimize the performance of all vSphere components
- Use VMware vSphere® ESXi™ Shell and VMware vSphere® Command-Line Interface to manage vSphere
- Harden the vSphere environment against security threats
- Use VMware vSphere® Client™, the command-line interface, and log files to diagnose and correct problems in vSphere
- Troubleshoot networking, storage, VMware vCenter Server®, VMware ESXi™ host, vSphere cluster, VMware vSphere® vMotion®, and virtual machine problems

## Audience

- Experienced system administrators
- System engineers
- System integrators

## Plan szkolenia:

- Course Introduction
  - Introductions and course logistics
  - Course objectives
- Introduction to Troubleshooting
  - Identify the effects of a system problem
  - Define the scope of troubleshooting
  - Use a structured approach
  - Understand the principles of troubleshooting
  - Follow a logical troubleshooting procedure
  - Examine examples of troubleshooting

- Troubleshooting Tools
  - Use command-line tools to identify and troubleshoot problems
  - Use vSphere CLI
  - Find and interpret important log files
  - Use VMware vRealize® Log Insight™ for log aggregation, efficient log search, and problem analysis
- Network Optimization
  - Explain the performance features of network adapters
  - Explain the performance features of vSphere networking
  - Use esxtop to monitor key network performance metrics
- Networking Troubleshooting
  - Identify the symptoms of network-related problems
  - 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
  - Identify and prevent potential problems
- Storage Optimization
  - Describe storage queue types and other factors that affect storage performance
  - Use esxtop to monitor key storage performance metrics
- Storage Troubleshooting
  - Troubleshoot storage (iSCSI, NFS, VMware vSphere® VMFS, VMware vSAN™, and VMware vSphere® Virtual Volumes™) connectivity problems
  - Analyze storage-related logs
  - Analyze hardware malfunction and software misconfiguration scenarios
  - Identify multipathing-related problems, including permanent device loss (PDL) and all paths down (APD)
  - Analyze possible causes, recover from the faulty conditions, and restore storage visibility
- 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
- 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
- vCenter Server Performance Optimization
  - Describe the factors that influence vCenter Server performance

- Use VMware vCenter® Server Appliance™ tools to monitor resource usage
- vSphere Cluster Troubleshooting
  - Identify and recover from problems related to VMware vSphere® High Availability
  - Analyze and troubleshoot various types of vSphere vMotion problems related to virtual machine migrations
  - Discuss and recover from VMware vSphere® Distributed Resource Scheduler™ problems to achieve proper function and balanced resource use
  - Examine vSphere cluster failure scenarios and possible solutions
- Virtual Machine Troubleshooting
  - Analyze 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
- vSphere Security
  - Configure ESXi host access and authorization
  - Secure ESXi, vCenter Server, and virtual machines
  - Use VMware Certificate Authority to configure vSphere certificate management
  - Configure vSphere to encrypt virtual machines, core dumps and VMware vSphere® vMotion® migrations
- vCenter Server and ESXi Troubleshooting
  - Understand 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
  - Analyze and fix problems with vCenter Server services
  - Analyze 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

## Wymagania:

This course requires completion of one of the following prerequisites:

- Understanding of concepts presented in the VMware vSphere®: Install, Configure, Manage [V6.7] course
- Equivalent knowledge and administration experience with ESXi and vCenter Server

## Poziom trudności



## Certyfikaty:

After completing the course, participants receive a certificate of completion of course.

## Prowadzący:

Authorized VMware Trainer.