



VMW-TSHOOT

VMware vSphere: Troubleshooting [V 8]



Overview.

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.

Objectives.

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

- Describe troubleshooting principles and procedures.
- Use the vSphere Client, the command line, and log files to configure, diagnose, and correct problems in vSphere.
- Explain the key vSphere log files from troubleshooting perspective.
- Describe the benefits and capabilities of VMware Skyline.
- Identify the networking issues by examining the reported symptoms, and troubleshoot the reported problems.
- Identify the storage issues by examining the reported symptoms, and troubleshoot the reported problems.
- Troubleshoot vSphere cluster failure scenarios and analyze possible causes.
- Diagnose common VMware vSphere® High Availability (vSphere HA) problems and provide solutions.
- Troubleshoot virtual machine problems, including migration problems, snapshot problems, and connectivity problems.
- Identify VMware ESXi™ host and VMware vCenter Server® problems, analyze failure scenarios, and find resolutions.

- Troubleshoot performance problems with vSphere components.

Target Audience.

- System architects and system administrators.

Prerequisites.

This course requires completion of one the following courses:

- VMware vSphere: Fast Track.
- VMware vSphere: Install, Configure, Manage.
- VMware vSphere: Operate, Scale and Secure.

The course material presumes that you can perform the following tasks with no assistance or guidance before enrolling in this course:

- Install and configure ESXi.
- Install vCenter.
- Create vCenter Server objects, such as data centers and folders.
- Create and modify a standard switch.
- Create and modify a distributed switch.
- Connect an ESXi host to NAS, iSCSI, or Fibre Channel storage.
- Create a VMware vSphere® VMFS datastore.
- Modify a virtual machine's hardware.
- Migrate a virtual machine with VMware vSphere® vMotion® and VMware vSphere® Storage vMotion®.
- Configure and manage a VMware vSphere® Distributed Resource Scheduler™ cluster.

- Configure and manage a VMware vSphere HA cluster.
- Basic knowledge of command line tools like ESXCLI, DCLI, and PowerCLI.

If you cannot complete these tasks, VMware recommends that you take the VMware vSphere: Install, Configure, Manage [V8] course instead.

Course Modules.

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 diagnose faults and make troubleshooting efficient.

Module 3: Troubleshooting Tools.

- Identify the utilities and tools used to run commands.
- Identify how to access the vSphere ESXi shell.
- Run commands to view, configure, and manage vSphere components.
- Use Standalone ESXCLI for troubleshooting.
- Run ESXCLI commands from the Standalone ESXCLI tool.
- Use Data Center CLI commands for troubleshooting.
- Run commands to view, configure, and manage your vSphere components.
- Identify the best tool to use for CLI troubleshooting.
- Locate important log files.
- Identify how to use log files in troubleshooting.
- Describe the benefits and capabilities of VMware Skyline™.
- Explain how VMware Skyline works at a high-level.
- Identify the types of health information provided by Skyline™ Health.
- Identify uses for VMware Skyline™ Advisor.
- Describe the support bundle REST API.
- Use the support bundle REST API.

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.

- Recognize components in the vSphere storage architecture.
- Identify the possible causes of problems in the various types of datastores.
- Analyze the common storage connectivity and configuration problems and discuss the possible causes.
- Resolve the storage connectivity problems, correct misconfigurations, and restore LUN visibility.
- Analyze log file entries to identify the root cause of storage problems.
- Use ESXi and Linux commands to troubleshoot storage problems.
- Investigate ESXi storage issues.
- Troubleshoot virtual machine snapshots.
- Troubleshoot storage performance problems.
- Recognize how multipathing works.
- Identify the common causes of missing paths.
- Resolve the missing path problems between hosts and storage devices.

Module 6: Troubleshooting vSphere Clusters.

- Identify and troubleshoot potential vSphere HA problems.
- Analyze and solve vSphere potential vMotion problems.
- Diagnose and troubleshoot potential vSphere DRS problems.

Module 7: Troubleshooting Virtual Machines.

- Describe virtual machine files.
- Identify, analyze, and solve virtual machine snapshot problems.
- Discuss virtual machine files and disk content IDs.
- 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 resolve vCenter service problems.
- Diagnose and troubleshoot vCenter database problems.
- Use vCenter appliance shell and the Bash shell to identify and solve problems.
- Identify and troubleshoot ESXi host problems.