

VMware vSphere: Advanced Fast Track

Delivery Methods

- Instructor-led training
- Live-online
- Onsite training

Course Duration

- Five extended-days of instructor-led training
- 35% lecture, 65% hands-on lab

Target Audience

System administrators, systems engineers, consultants, or help desk personnel who need the knowledge, skills, and abilities to troubleshoot performance, configuration, or operational problems in vSphere deployments

Prerequisites

Completion of one of the following courses:

- VMware vSphere: Install, Configure, Manage
- VMware vSphere: Fast Track
- VMware vSphere: What's New

Or equivalent knowledge and administration experience with ESX/ESXi and vCenter Server

Pricing

Contact your VMware representative or a VMware Authorized Training Center for pricing information.

More Information

Courses are conveniently scheduled around the world. Please visit www.vmware.com/education to find the class that is right for you.

Onsite training is also available for customers who prefer to bring a VMware Certified Instructor to their own facilities. For additional information about onsite classes, including facility requirements, contact www.vmware.com/education

Course Overview

This fast-paced, extended-hour, lab-intensive course includes the content of the VMware vSphere: Manage for Performance and VMware vSphere: Troubleshooting courses. This course provides the knowledge and skills necessary to make fundamental design decisions that enhance performance and meet performance goals in a deployed VMware vSphere™ installation. This course also provides the knowledge, skills, and abilities to achieve competence in troubleshooting the vSphere virtual infrastructure.

This course includes a prepaid voucher for the VMware Certified Advanced Professional 4 – Datacenter Administrator examination.

Course Objectives

At the end of the course, you will be able to do the following:

- Use vSphere tools to monitor the performance of VMware ESX™/ESXi hosts
- Diagnose performance problems relating to CPU, memory, network, and storage on an ESX/ESXi host
- Apply guidelines for monitoring application performance
- Use the VMware vSphere Client and command-line utilities to diagnose and rectify ESX/ESXi, VMware vMotion™, VMware Storage vMotion, VMware High Availability, VMware Distributed Resource Scheduler, and virtual machine power-on problems
- Use ESXi technical support mode to diagnose and rectify problems on ESXi
- Create and use a network packet capture utility to capture and display virtual switch network traffic

Manage for Performance Modules

1	Course Introduction <ul style="list-style-type: none"> • Introductions and course logistics • Course objectives 	6	Network Performance <ul style="list-style-type: none"> • Discuss the performance features of modern network adapters • Monitor key network performance metrics • Troubleshoot common network performance problems
2	Performance in a Virtualized Environment <ul style="list-style-type: none"> • Discuss the vSphere performance troubleshooting methodology • Discuss software and hardware virtualization techniques and their impact on performance • Monitor performance using vCenter Server performance charts and the ESX/ESXi resxtp command 	7	Storage Performance <ul style="list-style-type: none"> • Discuss how storage protocols, VMware vStorage VMFS configuration, load balancing, and queuing affect performance • Monitor key storage performance metrics • Troubleshoot common storage performance problems
3	CPU Performance <ul style="list-style-type: none"> • Discuss the CPU scheduler and other features that have an impact on CPU performance • Monitor key CPU performance metrics • Troubleshoot common CPU performance problems 	8	Virtual Machine Performance <ul style="list-style-type: none"> • Discuss guidelines for configuring a virtual machine for optimal performance
4	Memory Performance <ul style="list-style-type: none"> • Discuss memory reclamation techniques and memory overcommitment • Monitor key memory performance metrics • Troubleshoot common memory performance problems 	9	Application Performance <ul style="list-style-type: none"> • Discuss tools and guidelines for application performance
5	Guidelines for DRS and Resource Controls <ul style="list-style-type: none"> • Discuss performance guidelines for DRS clusters, resource pools, and resource allocation settings 		



VMware, Inc. 3401 Hillview Avenue Palo Alto CA 94304 USA Tel 877-486-9273 Fax 650-427-5001 www.vmware.com

© 2011 VMware, Inc. All rights reserved. The product or workshop materials is protected by U.S. and international copyright and intellectual property laws. VMware products are covered by one or more patents listed at <http://www.vmware.com/download/patents.html>. VMware is a registered trademark or trademark of VMware, Inc. in the United States and/or other jurisdictions. All other marks and names mentioned herein may be trademarks of their respective companies.

VMware warrants that it will perform these workshop services in a reasonable manner using generally accepted industry standards and practices. THE EXPRESS WARRANTY SET FORTH IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED, STATUTORY OR OTHERWISE INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE SERVICES AND DELIVERABLES PROVIDED BY VMWARE, OR AS TO THE RESULTS WHICH MAY BE OBTAINED THEREFROM. VMWARE WILL NOT BE LIABLE FOR ANY THIRD-PARTY SERVICES OR PRODUCTS IDENTIFIED OR REFERRED TO CUSTOMER. All materials provided in this workshop are copyrighted by VMware ("Workshop Materials"). VMware grants the customer of this workshop a license to use and make reasonable copies of any Workshop Materials strictly for the purpose of facilitating such company's internal understanding, utilization and operation of its licensed VMware product(s). Except as set forth expressly in the sentence above, there is no transfer of any intellectual property rights or any other license granted under the terms of this workshop. If you are located in the United States, the VMware contracting entity for the service will be VMware, Inc., and if outside of the United States, the VMware contracting entity will be VMware International Limited.

Troubleshooting Modules

<p>1 Course Introduction</p> <ul style="list-style-type: none"> • Introductions and course logistics • Course objectives 	<p>5 Management Troubleshooting</p> <ul style="list-style-type: none"> • Troubleshoot vSphere management components
<p>2 ESXi Command-Line Troubleshooting Methods</p> <ul style="list-style-type: none"> • Install and use the VMware vSphere Management Assistant • Learn common vSphere command-line interface commands and syntax • Configure ESXi technical support mode and Secure Shell (SSH) access 	<p>6 Storage Troubleshooting</p> <ul style="list-style-type: none"> • View, configure, and diagnose storage-access problems • Configure iSCSI authentication and digests
<p>3 ESX, ESXi, and vCenter Server Log Files</p> <ul style="list-style-type: none"> • View ESX, ESXi, and vCenter Server log files • Configure a centralized ESX/ESXi log host 	<p>7 vMotion Troubleshooting</p> <ul style="list-style-type: none"> • Troubleshoot vMotion and Storage vMotion errors
<p>4 Network Troubleshooting</p> <ul style="list-style-type: none"> • Identify and configure vNetwork components • Configure and use a network traffic packet capture utility 	<p>8 VMware Infrastructure Troubleshooting</p> <ul style="list-style-type: none"> • Troubleshoot DRS cluster errors with shares, pools, and limits • Troubleshoot VMware HA cluster errors with slot calculations, admission control, and host monitoring • Review virtual machine power-on requirements • Troubleshoot virtual machine power-on failures



VMware, Inc. 3401 Hillview Avenue Palo Alto CA 94304 USA Tel 877-486-9273 Fax 650-427-5001 www.vmware.com

© 2011 VMware, Inc. All rights reserved. The product or workshop materials is protected by U.S. and international copyright and intellectual property laws. VMware products are covered by one or more patents listed at <http://www.vmware.com/download/patents.html>. VMware is a registered trademark or trademark of VMware, Inc. in the United States and/or other jurisdictions. All other marks and names mentioned herein may be trademarks of their respective companies.

VMware warrants that it will perform these workshop services in a reasonable manner using generally accepted industry standards and practices. THE EXPRESS WARRANTY SET FORTH IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED, STATUTORY OR OTHERWISE INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE SERVICES AND DELIVERABLES PROVIDED BY VMWARE, OR AS TO THE RESULTS WHICH MAY BE OBTAINED THEREFROM. VMWARE WILL NOT BE LIABLE FOR ANY THIRD-PARTY SERVICES OR PRODUCTS IDENTIFIED OR REFERRED TO CUSTOMER. All materials provided in this workshop are copyrighted by VMware ("Workshop Materials"). VMware grants the customer of this workshop a license to use and make reasonable copies of any Workshop Materials strictly for the purpose of facilitating such company's internal understanding, utilization and operation of its licensed VMware product(s). Except as set forth expressly in the sentence above, there is no transfer of any intellectual property rights or any other license granted under the terms of this workshop. If you are located in the United States, the VMware contracting entity for the service will be VMware, Inc., and if outside of the United States, the VMware contracting entity will be VMware International Limited.