VMware vSphere: Manage for Performance

Overview

This hands-on training course explores the management of performance in a VMware vSphere™ environment. It provides the knowledge and skills necessary to make fundamental design decisions that enhance performance and to meet performance goals in an already-deployed vSphere installation. The course is based on VMware® ESX™ 4.0, ESXi 4.0, and vCenter™ Server 4.0.

Course Objectives

At the end of the course, you should be able to:

- Explain the performance impact of using different monitor modes
- Use vSphere tools to monitor the performance of ESX/ESXi hosts
- Diagnose performance problems relating to CPU, memory, network, and storage on an ESX/ESXi host
- Discuss how to achieve an optimal virtual machine configuration
- Discuss guidelines for monitoring application performance

Target Audience

System administrators, systems engineers, and consultants responsible for managing the performance of a vSphere installation

Prerequisites

This is an advanced course. Required prerequisites include the completion of one of the following:

- VMware vSphere 4: Install, Configure, Manage
- VMware vSphere: Fast Track
- VMware vSphere 4: What's New
- Equivalent knowledge and administration experience with ESX/ESXi and vCenter Server

Experience with working at the command prompt is highly recommended.

Pricing and Scope

- Three (3) days of instructor-led classroom training
- 60% lecture and 40% hands-on lab
- Individual enrollment available at convenient locations worldwide at http://www.vmware.com/education
- Contact your VMware representative for pricing information.
- Onsite training is available for companies that want the benefits of instructor-led classes without travel.
- Contact VMware Education to discuss facility requirements for onsite training at education@vmware.com.

Course Outline

Module 1: Course Introduction

Module 2: Performance in a Virtualized Environment

- 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 resxtop command

Module 3: CPU Performance

- Discuss the CPU scheduler and other features that have an impact on CPU performance
- Monitor key CPU performance metrics
- Troubleshoot common CPU performance problems

Module 4: Memory Performance

- Discuss memory reclamation techniques and memory overcommitment
- Monitor key memory performance metrics
- Troubleshoot common memory performance problems

Module 5: Guidelines for DRS and Resource Controls

- Discuss performance guidelines for DRS clusters, resource pools, and resource allocation settings

Module 6: Network Performance

- Discuss the performance features of modern network adapters
- Monitor key network performance metrics
- Troubleshoot common network performance problems

Module 7: Storage Performance

- Discuss how storage protocols, VMware vStorage VMFS configuration, load balancing, and queuing affect performance
- Monitor key storage performance metrics
- Troubleshoot common storage performance problems

Module 8: Virtual Machine Performance

- Discuss guidelines for configuring a virtual machine for optimal performance

Module 9: Application Performance

- Discuss tools and guidelines for application performance

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