Knowledge Base

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Troubleshooting virtual machine performance issues (1008360)

Symptoms

- The guest operating system boots slowly
- Applications running in virtual machines perform poorly
- Applications running in virtual machines take a long time to launch
- Applications running in virtual machines frequently become unresponsive
- Multi-user services have long transaction times or can handle less simultaneous users than expected

Purpose

This articles discusses identifying and resolving various issues that affect virtual machine performance running on VMware Workstation, ACE, Player, or Server.

Resolution

Each step below provides instructions and a link to a document, for performing the step and taking corrective action as necessary. The steps are ordered in the most appropriate sequence to isolate the issue and to identify the proper resolution. They are also ordered in the most appropriate sequence to minimize data loss. After completing each step, evaluate the virtual machine performance again. Work through each troubleshooting step in order, and do not skip a step.

1. Verify that the reduced performance is unexpected behavior. When a workload is virtualized it is common to see some performance reduction due to virtualization overhead. Troubleshoot a performance problem if you experience these conditions:

   - The virtual machine was previously working at acceptable performance levels but has since degraded
   - The virtual machine performs significantly slower than a similar setup on a physical computer
   - You want to optimize your virtual machines for the best performance possible

2. Verify that you are running the most recent version of the VMware product being used. For download information, see the VMware Download Center (http://downloads.vmware.com/d/info/desktop_downloads/vmware_workstation/8_0).

3. Check that VMware Tools is installed in the virtual machine and running the correct version. The version listed in the toolbox application must match the version of the product hosting the virtual machine. To access the toolbox, double-click the VMware icon in the notification area on the task bar, or run `vmware-toolbox` in Linux. Some VMware products indicate when the version does not match by displaying a message below the console view. For more information on installing VMware Tools, see Overview of VMware Tools (340) (search.do?cmd=displayKC&docType=kc&docTypeID=DT_KB_1_1&externalId=340).

4. Review the virtual machine's virtual hardware settings and verify that you have provided enough resources to the virtual machine, including memory and CPU resources. Use the average hardware requirements typically used in a physical machine for that operating system as a guide. Adjustments to the settings are required to factor-in the application load: higher for larger loads such as databases or multi-user services, and lower for less intense usage such as casual single-user application like e-mail or web clients. Consult your operating system and application documentation for more information.

5. Ensure that any antivirus software installed on the host is configured to exclude the virtual machine files from active scanning. Install antivirus software inside the virtual machine for proper virus protection. For more information, see Investigating busy hosted virtual machine files (1003849) (search.do?cmd=displayKC&docType=kc&docTypeID=DT_KB_1_1&externalId=1003849).

6. Check the storage sub-system on the host and verify that it is configured for optimal performance. For information, see Troubleshooting hosted disk I/O performance problems (1008885) (search.do?cmd=displayKC&docType=kc&docTypeID=DT_KB_1_1&externalId=1008885).

7. Verify that there are enough free resources on the host to satisfy the requirements of the virtual machine. In VMware hosted products resources must be shared by both the host operating system and all running guests. For more information, see Investigating hosted virtual machine resources (1003848) (search.do?cmd=displayKC&docType=kc&docTypeID=DT_KB_1_1&externalId=1003848).

8. Disable the CPU power management features on the host. In some cases, these features can cause CPU performance issue with virtual machines. For more information, see Virtual Machine Clock Reports Time Unpredictably on Multiprocessor Systems (2041) (search.do?cmd=displayKC&docType=kc&docTypeID=DT_KB_1_1&externalId=2041).

9. Verify that host networking issues are not impacting the performance of the virtual machine. For more information, see Verifying host networking speed (1009527) (search.do?cmd=displayKC&docType=kc&docTypeID=DT_KB_1_1&externalId=1009527).

10. Verify that the host operating system is working properly and is in a healthy state. When the host is not working correctly it may draw excessive resources from the guests. For more information, see Verifying the health of an operating system (1003956) (search.do?cmd=displayKC&docType=kc&docTypeID=DT_KB_1_1&externalId=1003956).

If the issue continues to exist after trying the steps in this article:

- Collect the VMware Support information. For more information, see Collecting diagnostic information for VMware products (1008524) (search.do?cmd=displayKC&docType=kc&docTypeID=DT_KB_1_1&externalId=1008524)
- File a support request with VMware Support and quote this Knowledge Base article ID (1008360) in the problem description. For more information, see How to Submit a Support Request (http://www.vmware.com/support/policies/howto.html).

Additional Information

For additional networking performance issues, see Performance issues in VMware Server with bridged networking on Windows Server 2003 and Windows 2008 hosts (1006619) (search.do?cmd=displayKC&docType=kc&docTypeID=DT_KB_1_1&externalId=1006619).

Tags

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Categories:
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Languages:
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Product(s):
VMware ACE
VMware Player
VMware Server
VMware Workstation