

RE: Virtual memory

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Hi,

You can configure virtual memory in windows xp and thereby improve the performance by following the instructions in the article given below:

<http://support.microsoft.com/default.aspx?scid=kb:en-us:308417&Product=winxp>

<http://support.microsoft.com/default.aspx?scid=kb:en-us:314482&Product=winxp>

or

How to set performance options in Windows XP

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INTRODUCTION

Windows allocates resources according to its settings and manages devices accordingly. You can use the System tool in Control Panel to change performance options that control how programs use memory, including paging file size, or environment variables that tell your computer where to find some types of information.

This article describes how to set the performance options for your computer.

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MORE INFORMATION

How to manage processor time

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Windows manages system processing. Windows can allocate tasks between processors and manage multiple processes on a single processor. However, you can set Windows to allocate more processor time to the program that you are currently running. The added processor time causes programs to respond more quickly. Or, if you have background programs such as printing or disk backup that you want to run while you work, you can have Windows share processor resources equally between background and foreground programs.

Note You must be logged on as an administrator to the local computer or have the correct network credentials to make certain changes in System.

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How to change the performance of foreground and background programs

Click Start, click Run, and then type `sysdm.cpl` in the Open box.

Click the Advanced tab, and then click Settings under Performance.

Click the Advanced tab, and then use one of the following methods under Processor scheduling:

Click Programs to assign more processor resources to the foreground program than the background program.

Click Background services to assign equal amounts of processor resources to all programs.

Notes

If you click Programs, the foreground program runs more smoothly and responds more quickly. If you want a background task such as a Backup utility to run faster, click Background services.

The Programs option allocates short, variable time slices (quanta) to running programs, and the Background services option assigns long, fixed quanta.

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How to manage computer memory

When your computer is running low on RAM, and you must have more RAM immediately, Windows uses hard disk space to simulate RAM. This is known as virtual memory. It is also known as the paging file. This is similar to the UNIX swapfile. By default, the virtual memory paging file (named `pagefile.sys`) that is created during installation is 1.5 times the RAM on your computer.

You can optimize virtual memory use by dividing the space between multiple drives and by removing space from slow or heavily accessed drives. To best optimize your virtual memory space, divide it among as many physical hard drives as possible. When you select drives, follow these guidelines:

Try to avoid having a paging file on the same drive as the system files.

Avoid putting a paging file on a fault-tolerant drive such as a mirrored volume or a RAID-5 volume. Paging files do not require fault-tolerance, and some fault-tolerant computers experience slow data writes because they write data to multiple locations.

Do not put multiple paging files on different partitions on the same physical disk drive.

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How to change the size of the virtual memory paging file

You must be logged on as an administrator or as a member of the

Administrators group to complete this procedure. If your computer is connected to a network, network policy settings may also prevent you from completing this procedure.

Click Start, click Run, and then type sysdm.cpl in the Open box.

Click the Advanced tab, and then click Settings under Performance.

Click the Advanced tab, and then click Change under Virtual memory.

Under Drive [Volume Label], click the drive that contains the paging file that you want to change.

Under Paging file size for selected drive, click Custom size, type a new paging file size in megabytes (MB) in the Initial size (MB) or Maximum size (MB) box, and then click Set.

If you decrease the size of either the initial or maximum paging file settings, you must restart your computer to see the effects of those changes. When you increase the paging file size, you typically do not have to restart your computer.

Notes

To have Windows select the best paging file size, click System managed size. The recommended minimum size is equivalent to 1.5 times the RAM on your computer, and 3 times that figure for the maximum size. For example, if you have 256 MB of RAM, the minimum size is 384 MB, and the maximum size is 1152 MB.

For best performance, do not set the initial size to less than the minimum recommended size under Total paging file size for all drives. The recommended size is equivalent to 1.5 times the RAM on your computer. It is good practice to leave the paging file at its recommended size. However, you may increase its size if you frequently use programs that use much memory.

To delete a paging file, set both the initial size and the maximum size to zero, or click No paging file. We strongly recommend that you do not disable or delete the paging file.

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How to optimize the memory usage

You can optimize your computer's memory usage. If you use your computer primarily as a workstation instead of as a server, you can devote more memory to your programs. Your programs will work faster and your system cache size will remain the default size that came with Windows XP. You can also set aside more computer memory for a larger system cache if your computer is used primarily as a server, or if you use programs that require a larger cache.

Click Start, click Run, and then type sysdm.cpl in the Open box.

Click the Advanced tab, and then click Settings under Performance.

Click the Advanced tab, and then use one of the following methods under Memory usage:

Click Programs if you use your computer primarily as a workstation instead of as a server. This option allocates more memory to your programs.

Click System cache if your computer is used primarily as a server or if you use programs that use a larger cache.

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How to change the visual effects

Windows provides several options to set the visual effects of your

computer. For example, you can show shadows under menus. Shadows give menus a 3-D look. You can configure Windows to display all the contents of a window while you move the window on your screen. To make large text more readable, you can display the smooth edges of screen fonts.

Windows provides options to turn on all the settings (for best appearance), or none of the settings (for best computer performance). You can also restore the default settings.

To change the visual effects, follow these steps:

Click Start, click Run, and then type `sysdm.cpl` in the Open box.

Click the Advanced tab, and then under Performance, click Settings.

Click the Visual Effects tab, and then use one of the following methods:

Click Adjust for best performance to have Windows automatically adjust the settings for best performance.

Click Adjust for best appearance to have Windows automatically adjust the settings for best appearance.

Click Custom, and then select the check boxes for those items that you want to turn on. Clear the check boxes for the items that you want to turn off.

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Glossary

background program A background program is a program that runs while the user is working on another task. The computer's microprocessor assigns fewer resources to background programs than to foreground programs.

environment variable An environment variable is a string of environment information such as a drive, path, or file name that is associated with a symbolic name that Windows can use. You use System in Control Panel or the `set` command at the command prompt to define environment variables.

foreground program A foreground program is a program that runs in the active window (the upper-most window with the highlighted title bar). The foreground program responds to commands that the user issues.

mirrored volume A mirrored volume is a fault-tolerant volume that duplicates data on two physical disks. A mirrored volume provides data redundancy by using two identical volumes. These volumes are known as mirrors. They duplicate the information that the volume contains. A mirror is always located on a different disk. If one of the physical disks fails, the data on the failed disk becomes unavailable, but the system continues to operate in the mirror on the remaining disk. You can create mirrored volumes only on dynamic disks.

partition A partition is part of a physical disk that functions as if it were a physically separate disk. After you create a partition, you must format it and assign it a drive letter before you can store data on it. On basic disks, partitions are known as basic volumes. Basic volumes include primary partitions and logical drives. On dynamic disks, partitions are known as dynamic volumes. Dynamic volumes include simple, striped, spanned, mirrored, and RAID-5 volumes.

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RAID-5 volume A RAID-5 volume is a fault-tolerant volume with data and parity striped intermittently across three or more physical disks. Parity is a calculated value that is used to reconstruct data after a failure. If a part of a physical disk fails, Windows recreates the data that was on the failed part from the remaining data and parity. You can create RAID-5 volumes only on dynamic disks, and you cannot mirror or extend RAID-5 volumes.

Hope this helps.

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