9 Ways to Speed Up Your PC

By following a few simple guidelines, you can maintain your computer and keep it running smoothly. This article discusses how to use the Windows tools to more efficiently maintain your computer and safeguard your privacy when you're online.

Hardware Problems May Cause a Slow Computer

Before you go too far in trying to diagnose a slow computer, make sure that your hardware is in order. That means unplugging your computer from the network (if it's on one) and restarting. Assuming that didn't make a difference, a little housekeeping may be in order. Dust accumulates readily in vent holes and inside the computer. Keep the ventilation ports as clear as possible. You can do this with a vacuum cleaner, a Q-tip, or compressed air. You may be surprised by what your computer has accumulated!

Proper airflow is exceptionally important to a computer. Newer processors are very small and powerful, but they can get hot. If the computer isn't receiving adequate ventilation – either because the vent holes are plugged with dust and debris, or because the fan isn't working – you can quickly run into performance problems due to overheating.

Also, don't assume that the fan you see on the back of the computer is the one you need to be concerned about. The fan you can see is usually associated with the power supply. To be sure, the power supply needs an operational fan and if the power supply fan isn't working you should replace the power supply, but the processor often has its own fan or cooling system. You need to make sure this is in good working order at all times. To inspect the processor fan, you'll need to crack open the computer case. Basic hand tools – notably a Philip's-head screwdriver should do the trick. Consult your owner's manual for more information on opening the case.

1. Free up disk space

The Disk Cleanup tool helps you free up space on your hard disk to improve the performance of your computer. The tool identifies files that you can safely delete, and then enables you to choose whether you want to delete some or all of the identified files.
Use Disk Cleanup to:

- Remove temporary Internet files.
- Remove downloaded program files (such as Microsoft ActiveX controls and Java applets).
- Empty the Recycle Bin.
- Remove Windows temporary files such as error reports.
- Remove optional Windows components that you don't use.
- Remove installed programs that you no longer use.
- Remove unused restore points and shadow copies from System Restore.

Schedule: Run weekly or schedule.

2. Speed up access to data – Defrag disk drives

Disk fragmentation slows the overall performance of your system. When files are fragmented, the computer must search the hard disk when the file is opened to piece it back together. The response time can be significantly longer.

Disk Defragmenter is a Windows utility that consolidates fragmented files and folders on your computer's hard disk so that each occupies a single space on the disk. With your files stored neatly end-to-end, without fragmentation, reading and writing to the disk speeds up.

When to run Disk Defragmenter
Schedule: In addition to running Disk Defragmenter at regular intervals—monthly is optimal—there are other times you should run it too, such as when:

- You add a large number of files.
- Your free disk space totals 15 percent or less.
- You install new programs or a new version of Windows.

If this is your first defrag, do it after the disk clean up twice, then a disk defrag, and then another disk clean up. It is suggested to defrag your hard drive weekly.
For best results, run defragmenter last after performing all other steps.

3. Detect and repair disk errors

In addition to running Disk Cleanup and Disk Defragmenter to optimize the performance of your computer, you can check the integrity of the files stored on your hard disk by running the Error Checking utility.

As you use your hard drive, it can develop bad sectors. Bad sectors slow down hard disk performance and sometimes make data writing (such as file saving) difficult, or even impossible. The Error Checking utility scans the hard drive for bad sectors, and scans for file system errors to see whether certain files or folders are misplaced.

Schedule: If you use your computer daily, you should run this utility once a week to help prevent data loss.

4. Protect your computer against spyware

Spyware collects personal information without letting you know and without asking for permission. From the Web sites you visit to usernames and passwords, spyware can put you and your confidential information at risk. In addition to privacy concerns, spyware can hamper your computer's performance. To combat spyware, you might want to consider using Microsoft Windows Defender, which is included in Windows 7 and Windows Vista, and is available as a free download for Microsoft XP SP2. Alternatively, there are other free anti-spyware software programs available.

Remove Spyware and Viruses

- Spyware and viruses are a leading cause of computer slowing.
- Update and run your spyware and virus software at least weekly.
- If you do not have tools installed to protect against malware, spyware, and viruses, download a free copy of AVG (free for personal use). Also, Microsoft's Windows Defender is a widely-used anti-spyware tool that is currently distributed freely for users with a "Genuine" copy of Windows. Windows Defender is also included with other Microsoft services and products such as Live OneCare and Vista.
- Download and install Mozilla Firefox from http://www.mozilla.com.   It will allow you to import all of your Internet Explorer settings, and is much less prone to malware than Microsoft Internet Explorer. It will prompt you with a "Set as Default Browser" message. Check "Don't show this again" and click "Yes". Firefox also has a cool feature to delete cookies, cache, and temporary internet files each time you close it. Use this. It can speed up your internet experience.
- If you have a particularly difficult infection, try using the Quick Virus Remover. It is a free utility that is not a replacement for commercial products, but can be helpful for removing some of the most common viruses.

Viral and malware infections are often the first conclusion that users jump to, often without scanning their computers. A reasonably competent anti-virus program can usually find some evidence of infection. If you've run your anti-virus program and it's coming up empty, there are a few reputable sites on the Internet that will scan your computer and give you some independent results. Be careful however. Some sites run fake anti-virus scanners in an effort to sell you products you don't need.

Trend Micro, a well-known name in anti-viral products, has an online scanner you can use to check or double-check the results of your virus scan.

Schedule: We recommend that anti-virus and ant-malware programs run daily and are always on when you are on-line.

5. Change display settings that take processing power

Windows XP, Vista and Windows 7 have settings for visual effects that make working with files, folders and applications more fun to look at or easier to read. These include animated menus and transparent windows. These use the processor heavily and slowdown the PC. Right-click the My Computer icon on the Desktop and click Properties. Click Performance, then Visual Effects. You can set the options for best look or best performance. Choose performance and see if it makes a difference.

6. Learn all about ReadyBoost

If you're using Windows 7 or Vista, you can use ReadyBoost to speed up your system. A new concept in adding memory to a system, it allows you to use non-volatile flash memory—like a USB flash drive or a memory card—to improve performance without having to add additional memory. This can be helpful. It indicates a possible need to install more permanent memory.

7. Stop unwanted Start-Up programs.

Disable any programs you do not want load automatically.
To stop unwanted Start-Up programs.

- Run msconfig.exe
- Choose startup tab
- Select and uncheck programs you don't want to run on startup
    - Open control panel, select Control Panel Home view, Programs: Change Start Up Programs. Make sure you start with your user programs, but look at all programs if necessary.
    - Disable any programs you do not want load automatically.

8. Consider adding memory if appropriate

Additional memory can speed up process time. However, it is not a guarantee. This option is the first option that definitely costs money. If the PC workstation is less than 3 years old, consider adding memory up to the maximum suggested by the vendor. Do not exceed the maximum, it will be unusable and can actually slow down performance. Also, try to keep all memory slots used with same size modules. For example, if you already have 2 512meg modules, do not add replace one of them with a 1 Gig module, and bring the total to 1.5 Gig. Mismatched memory or open slots can also slow down processing.

9. Perform a registry cleaning

It is not recommended, but you can try a registry cleaner if you want performance. These tools may increase speed, but can cause a multitude of other errors. Only do this as a last resort.

- Back up the registry first and take the copy off line.
- Make sure you list all programs that must work flawlessly so you can test them afterwards.
- Follow all instructions completely. Do not skip steps or try to speed up the process.