

# Basic Troubleshooting For Poor computer (PC) performance (for Microsoft Windows 2000 & XP)

*Note: The intended reader should be reasonably comfortable using the computer. If not, please seek out the help of a professional computer technician.*

At some point in the life of your workstation or laptop, you will experience performance problems. The symptoms can include exceptionally slow speed, error messages popping up on the screen or the worst 'the blue screen of death'. (In case you're one of the few people left in the world that hasn't experienced a blue screen, it's when your computer displays a large blue screen with cryptic error messages then completely halts your computer). If the computer begins to show any of these symptoms over a short period of time (within a couple days or weeks) there is some basic troubleshooting steps you can take that are likely to resolve the problem. These steps are put in a specific order so that if you can't get the problem resolved, a computer expert can use the information obtained from your efforts.

## 1) Memory

The first step of troubleshooting is to make sure your computer has enough memory. If your RAM (Random Access Memory) is less than 256 MB, you'll likely

need to increase your memory. You can determine the amount of physical RAM on your computer by going into the Control Panel and double-click on System.

Figure 1 shows where total memory is displayed.

If you have less than 256 MB, you can get additional memory from the manufacturer of your workstation.

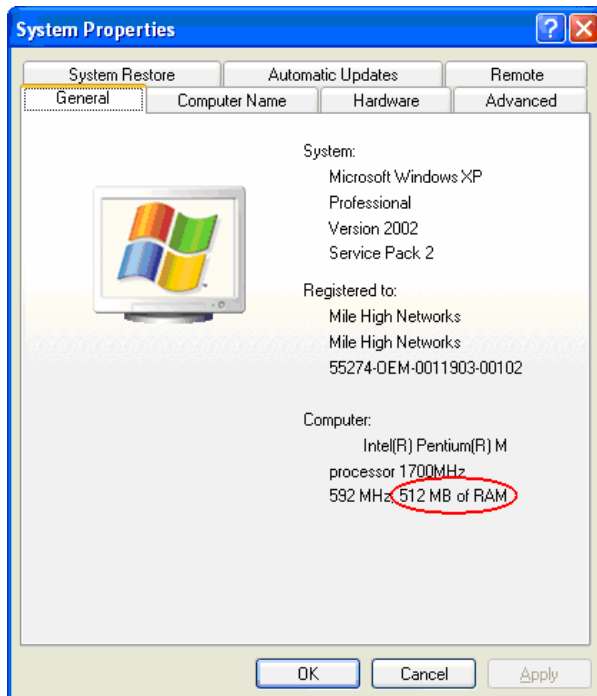
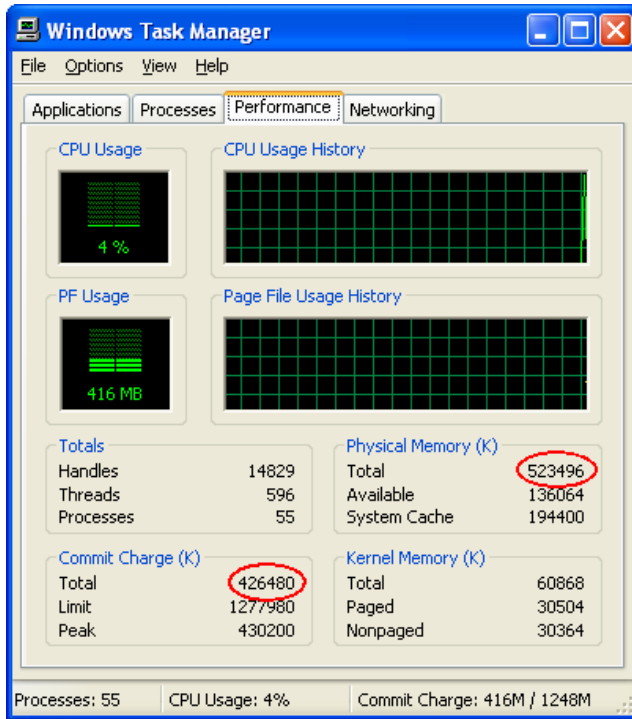


Figure 1.

Even if you have 256 MB of RAM, you may still be running out when using your software applications. The best way to check is by viewing the Performance



Monitor which can be accessed by pressing the Ctrl-Alt-Del buttons and choosing Task Manager. Under the Performance Tab compare the Physical Memory Total with the Commit Charge Total. See Figure 2.

If the Commit Charge Total is equal to or greater than the Physical Memory Total, then your workstation is running out of memory and you need to upgrade your RAM.

Figure 2

Chart for recording memory information

Total RAM: \_\_\_\_\_

Total Physical Memory: \_\_\_\_\_

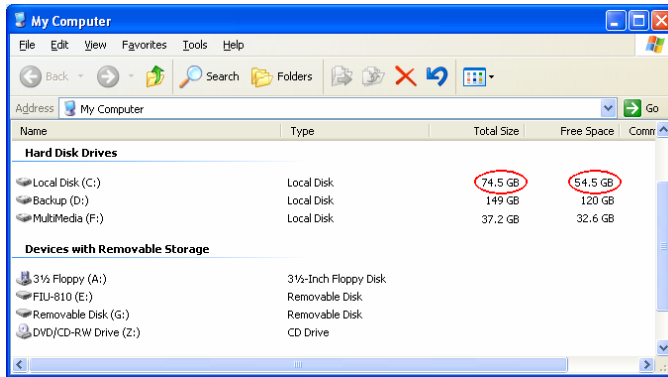
Total Commit Charge: \_\_\_\_\_

Difference (Physical – Commit) \_\_\_\_\_

Note: If Difference is a negative number, additional memory is needed.

## 2) Hard Drive Check

If you are running out of hard drive space, it could cause the computer to run slow. Double-click on My Computer (or launch Windows Explorer). Select My Computer in the left and go to the View menu and choose the Details option. In



the right pane under the Hard Disk Drive section, compare the Total Size to the Free Space in the columns to the far right. See Figure 3. If there's less than 10% remaining disk space on any drive, delete old data on that drive until it's above 10%.

Figure 3

Chart for recording drive information

Total Drive Size: \_\_\_\_\_

Free Space: \_\_\_\_\_

Free Space / Total Size: \_\_\_\_\_

Note: If percent is less than 10%, clean up the drive or by another one.

If you decide to delete files, then you'll need to de-fragment the disk when you're done. This tool can be found in Programs – Accessories – System Tools – Disk Defragmenter. Run the Defragment option (Found in the Action menu in XP).

## 3) Log Errors and Warnings

There's a possibility that whatever is causing the problem is listed in the event logs. You can check them by right-clicking on My Computer and choose Manage. Under System Tools – Event Viewer, you'll have three logs: Application, Security and System. See Figure 4. Check all three logs for any Errors (red circles with an X in the middle). If you find any errors, each one needs to be corrected to make sure they aren't causing your problems. You may need to get technical help with any errors you don't understand or recognize. If you've recently installed programs or hardware they may be creating the errors in the log files. If so, continue with the next step to remove those potential issues.

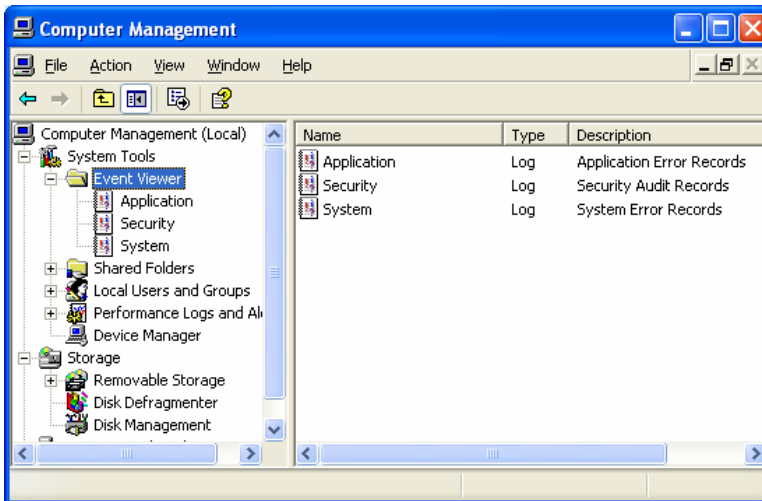


Figure 4

#### 4) Recently installed programs or hardware.

If you've made it to this step, then lack of resources are not the issue so think back to the time the problem began and determine if you changed anything on the laptop. This could include major configuration settings, newly installed applications or hardware. If any changes were made to the configuration, they need to be changed back. Newly installed software should be removed by using the Add/Remove Programs in the Control Panel.

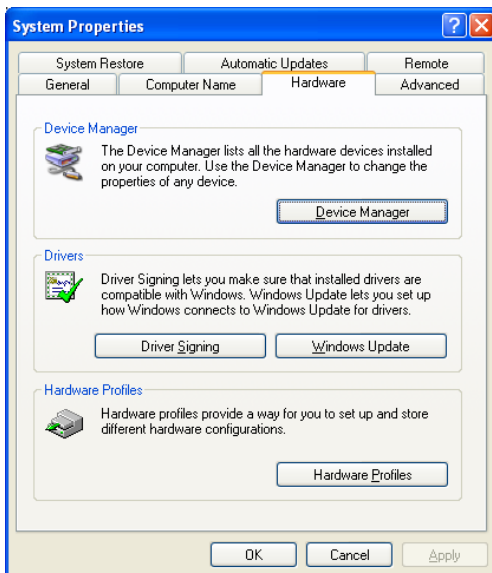


Figure 5

Hardware additions can be removed by using the Device Manager located in Systems application (in the Control Panel). To remove the hardware, go to the Hardware tab and chose Device Manager. See Figure 5. Select the newly added hardware, right-click on the hardware and choose uninstall. Once you've uninstalled it, remove the actual piece of hardware from the computer so that Windows doesn't try to reload it.

After removing all the changes you previously made, reboot the computer to determine if the problem has gone away. If it has not, continue with the next step.

## 5) Install Service Packs

Microsoft will likely have new service packs and security updates available for your computer. Using your web browser, go to <http://update.microsoft.com>. The website will display “Checking if your computer has the latest version ...”. If you’ve never checked for updates on the website before, you may be prompted to install Windows Update software. If so, allow the software to install. See figure.



After a couple of seconds, the update process will give you the choice of Express or Custom, choose Express. It will now begin scanning for updates. Once done, choose Download and Install Now. The length of time it takes download the updates depends on your internet connection speed. Once the updates are complete, reboot your computer.

If you are very far behind on your updates, you’ll need to run the process again. Some updates require others to occur first so you’ll need to check to see if there are additional updates by going back to <http://update.microsoft.com>. Keep re-running the update process until the web page indicates there aren’t any more updates available.

Once the final set of updates are complete, reboot your computer and check to see if your problem has gone away. If it hasn’t run go to the next step.

## 6) Update Antivirus software

If a virus has crept into your computer, it could be causing performance problems. You may already have antivirus software installed; however, if it’s not configured correctly you may not be scanning for every virus. Check the version of the virus signature file. Depending on the program, the version (typically the date) can be found in the help menu or status area. If the date of the signature file is more than a few days old, then you need to check for more recent updates. Once you’ve updated your signature files, run a full system scan on your computer to check for viruses.

If you don’t have an antivirus program or don’t trust that yours is working correctly, you can download a 30-day free trial from Trend Micro at [www.trendmicro.com/offers/ms-wsc/english.asp](http://www.trendmicro.com/offers/ms-wsc/english.asp). Before installing Trend Micro you need to remove any other antivirus program so that the two don’t conflict with each other.

## **7) Update Spyware software**

Like viruses, spyware can cause havoc on your computer and just like antivirus programs, there are signature files that need to be updated. Once you've ensured the signature files are current, run an entire system scan and clean up any spyware you find. If you don't currently have a spyware program, you can download a free version at [www.spybot.info/en/download/index.html](http://www.spybot.info/en/download/index.html).

## **Wrap Up**

Once the workstation becomes stable and performs at expected speeds, reload any applications and hardware removed during step 4. If the problem comes back, then you know the new software or hardware caused the problems. Either permanently removed them or contact the manufacturer for proper resolution.

Following these seven steps will solve a vast majority of slowness and stability problems on your workstation. If none of these steps resolve the issue, you may need to talk to a computer expert.