



One of the more common issues with computers is that they tend to slow down over time. There are many reasons for this and often many things that can be done to restore much of the speed they once had.

There are several different aspects of computer slow down, and it is important to observe which areas are slow in order to remedy the situation. The most common aspects include:

- 1) It takes forever for the computer to start up
- 2) It takes forever for the computer to shut down
- 3) It takes forever to launch a specific application
- 4) It takes forever to get a response on the internet
- 5) When playing a video stream, it often stops and starts

Here are typical issues that often are the main source of computer slow down:

### Too many programs and processes running

Your computer can only do so many things at once. If you keep many programs open at once, you might be consuming the majority of resources on the computer, causing everything to slow down. Often, there are many programs and processes running in the background that you don't want or need. These may be due to viruses, old programs that weren't completely removed, freeware or trialware that came with your computer, and administrative tasks that could be run when you aren't actively using the computer.

Each operating system and application update typically increases the amount of memory (RAM) required. Running many things simultaneously also constrains available memory. Computers love lots of memory, which thankfully is a fairly inexpensive and simple to install upgrade. In general, the more memory you have, the better.

### Hard disk issues

If your hard disk is 90% or more full, the operating system will not run efficiently. There are many things that can be deleted, such as old programs, old data, temporary files, etc. You can also move your large files such as pictures, music libraries, and videos, off of your primary hard drive and onto an external drive or into the cloud.

In Windows, disk fragmentation is also a problem over time, but there are many utilities available that will defrag the disk (remember to always back up your important data first).

(Note: in the past I have written about the difference between RAM and disk as well as disk fragmentation. If you would like another copy of these past articles, just let me know).

# Windows Registry

The Windows operating system maintains an internal database called the registry. Over time, it can get cluttered with old data, which causes everything to slow down since many processes on your computer must reference the registry. Again, there are utilities available to clean this up.

# Internet issues

If everything is running pretty well except for your web browser, then a common cause is all the items you have chosen over time to include within your browser. These are called add-ins and can dramatically slow down your browser, especially when launching it.

Another issue might be that you are subscribing to an internet service that just does not provide adequate throughput for your needs. A conversation with AT&T or Comcast might be in order to first have them test your connection to verify there are no external issues, and then discuss how much more a faster connection would cost you.

If you are trying to stream video over a wireless connection and it is starting and stopping, then you might be too far away from your wireless access point or you might be experiencing wireless interference.

### **Processor Speed**

If all of the above issues have been addressed, and you still aren't happy with the speed of your computer, then it might simply be time to buy a new one. Processors and computer internals advance at a rapid pace. What might have been a very fast computer 4 or 5 years ago, is a very slow computer by today's standards. Simply upgrading the processor and mother board is typically not a viable or cost-effective option - better to buy a new computer and migrate over your data. Keep in mind, you will need your application installation programs to move those, otherwise you will likely have to buy new copies.

As always, I hope you have found this information useful. If you do not wish to receive these emails in the future, let me know.

All the best! Steve (650-222-4140)