**General Troubleshooting Tips**

General tips to keep in mind

There are many different things that could cause a problem with your computer. No matter what's causing the issue, troubleshooting will always be a process of **trial and error**—in some cases, you may need to use several different approaches before you can find a solution; other problems may be easy to fix. We recommend starting by using the following tips.

* **Write down your steps**: Once you start troubleshooting, you may want to **write down** each step you take. This way, you'll be able to remember exactly what you've done and can avoid repeating the same mistakes. If you end up asking other people for help, it will be much easier if they know exactly what you've tried already.
* **Take notes about error messages**: If your computer gives you an **error message**, be sure to write down as much information as possible. You may be able to use this information later to find out if other people are having the same error.
* **Always check the cables**: If you're having trouble with a specific piece of computer **hardware**, such as your monitor or keyboard, an easy first step is to check all related cables to make sure they're properly connected.
* **Restart the computer**: When all else fails, one of the best things to try is to **restart the computer**. This can solve a lot of basic issues you may experience with your computer.
1. **Don't panic.**

Relax. Take a breath. Many computer problems appear more serious than they really are. It may look like the computer has crashed and all your data is lost forever. But there are a host of problems that keep you from reaching your data or the network that can be fixed, sometimes in a matter of minutes. That's not to say catastrophic data loss doesn’t happen – it can, but not very often.

1. **Make sure there really is a problem.** **Can't start your computer? Check the basics**.
	1. Examine the cables, connectors, and power cords to make sure they're plugged in securely. Often times a loose cable or connector (power, network, keyboard, mouse, speaker, monitor cable, etc.) is the cause of the problem.
	2. If you're using a power strip or a surge protector, make sure it's on and that it works. Remember that a surge protector may not be working because it is designed to self-destruct. When an electric jolt is too much, your surge protector takes the hit saving your more expensive hardware from the voltage.
	3. Try plugging something else directly into the electrical outlet to make sure there isn't a power problem.
	4. Check to see if your monitor is on. Sounds silly, but it has solved my own problem more than once.
2. **Can’t get on to the network or the Internet?**

1.  Check to see if anyone else around you is having a similar problem**.** If so, there may be a service outage affecting a wider area

2.      Check to make sure the network cable is connected to both the computer and the wall or modem.

3.      Check where the network cable connection is made to the back of the computer, you should see a little green light right where the cable connects. If the light isn’t on or flashing, then you are not getting a signal to the computer. If rebooting doesn’t fix it, contact the Help Desk or your ISP.

1. **Error Messages - Write them down.**
	1. What tipped you off to the problem? Sometimes it's an error code or message displayed on screen. Be sure to write it down — it may describe the problem and how serious it is. Be sure todocument the exact wording of any error messages. This can make the job of the Help Desk much faster.
	2. Other times you get no warning — everything just freezes. Message or no message, be sure **to** note what was going on when the problem occurred. Were you starting your computer? Were you on the Windows Desktop? Were you in a particular application? Surfing the Web?
2. **Think about what changed recently on your computer.**

Try to pinpoint when the trouble first started. Did the problem coincide with any recent changes?

* 1. Did you change any settings? If you did you might want to change them back the way they were.
	2. Have any peripherals been added or removed recently (such as a printer or external Memory Card reader?)
	3. Has anyone else been using your computer recently?
	4. Have you downloaded anything off the Web? File sharing and free MP3’s are an easy way to get a virus on your machine.
1. **The computer is on but**…

**1 Everything on the screen is frozen and the keyboard and mouse are not responding**.

Try tapping on the Num Lock key. It’s located on the right-hand side of the keyboard above the number 7. While tapping the Num Lock key, notice whether or not the Num Lock light goes on and off. If it doesn’t, the computer is completely locked up. You’ll have to restart the computer. If the light does go off and on, wait a minute before giving up hope. It may come back to life on its own.

**2        Pressing Alt + F4**

If a software program stops working or freezes up, try pressing the ALT+F4 keys to close the window that you’re currently working in. This can shut down a frozen window and bring the computer back to life. If the keyboard is frozen as well, you’ll have to restart the computer.

**3        The “Blue Screen” has appeared.**

The dreaded “Blue Screen of Death”. There’s not a lot to be done except to restart the machine. If it keeps occurring, this is an indication of a major problem with the computer.

**4        The computer is on, but there is no** **sound.**

Is there a speaker icon next to the clock on the taskbar? (It’s in the lower right side of the screen) If you can find it, double click the **speaker** icon to bring up the audio controls for the computer. See if any of the volume controls have been muted or turned all the way down. Uncheck any **Mute** boxes that are selected.

**5        The computer is on, but the** **keyboard doesn’t work**

Swap the keyboard or try plugging the keyboard into another computer. If it doesn't work on the other computer, there is likely something wrong with the keyboard. If it does work on the other computer, there is likely something wrong on the computer or the connection to the computer.

**6        CTRL-ALT-DEL**

When you press the Ctrl-Alt-Delete buttons together, you will bring up a control panel where you can select “Task Manager” and see if any of the programs are shown as “not responding”. You may be able to shut down the offending program from there. If you can’t get to this screen, you’ll have to restart the computer.

1. **Restarting can do wonders.**

Don’t just pull the plug!
A simple restart may clear up the problem. Go to the Start Menu and select Shutdown. Didn't work? It's time to try a forced restart — with, unfortunately, no way to save your work — by pressing the keys **CTRL-ALT-DEL** simultaneously twice in a row.

If that didn't work, you have no choice: you have to turn the computer off manually with the power switch. Hold the power button down (for about 5 -10 seconds) and the computer will shut down. Wait at least 10 seconds for the hard drive to stop spinning and then restart the machine.

If the computer starts up, start the applications you were using when the crash occurred. Some programs, like Microsoft Word, make timed backups of your work and may bring up recovered files. If the program notifies you that there is a “recovered document” save the file under a different name and compare them to your previously saved files.

**Four common scenarios that occur with Windows-based desktops:**

1. Computer won't power up
2. Computer powers up but monitor is blank
3. Computer won't boot from hard drive
4. Windows won't start up properly

To troubleshoot your computer, follow the steps in each section below in order. If these steps fail to address the issue you are encountering, you will need to seek advice from a professional.

The troubleshooting tips provided here address basic, often-overlooked problems that do not require you to open your computer's case, handle hardware components, or delve deeper into Windows' core. Remember that your goal here is to solve an existing problem, not create a new one. If you feel uncomfortable performing a certain action, call in someone with more expertise.

**Computer Won't Power Up**

Checklist

* Is the PC's power cable plugged firmly into a wall socket or power strip, and is the power strip on? If so, try plugging the PC or the power strip into another wall socket. Likewise, check that the power cable is firmly connected to the PC's power-supply outlet.
* Is the power supply (the part on the computer to which the cable is attached) switched to the "on" position? Does the PC also have a voltage setting, and if does, did it get changed to an incorrect setting?
* If all the above fails, attach a known working power cable to the PC's power supply. Plug it in and try to power on again.
* Unplug all external devices from the PC, such as printers and scanners, except the monitor. If the computer powers on without the devices, add the peripherals back one at a time until you can identify the problem device.

**Computer Powers Up but Monitor Is Blank**

Checklist:

* Is the monitor plugged firmly into a working wall socket or power strip, and is the power strip turned on? If so, try plugging the PC or power strip into another wall socket.
* Is the monitor's power button switched to the "on" position?
* Are the monitor's brightness and contrast controls properly adjusted?
* Is the monitor cable plugged firmly into the back of the display, and is the pinned end tightly screwed into the video output on the back of the computer's case? Try removing the existing cable and replace it with a known working one.
* Obtain a working monitor and hook it up to your PC. If this new display works, contact a technician or buy a new monitor. If the monitor doesn't work, your video card may not be working, and you will need a professional to diagnose the problem more closely.

**Computer Won't Boot from Hard Drive**

Checklist:

* Make sure there are no bootable media such as DVDs or flash drives inserted in the computer.
* Remove all external drives or devices and try restarting the computer.
* If you receive a series of beeps or error messages, write them down, as they could be instrumental in diagnosing your problem.
* Listen to make sure your hard drive is spinning. If you hear a "clicking" sound, your hard-drive no longer works, and you will need to replace it.

**Try this first**

I know it sounds like a no-brainer, but before you do anything else, restart your computer.

Regularly checking for operating system updates is important, because forgetting to do so could significantly impair your PC’s performance.

While you’re at it, make sure that your operating system is fully updated by running Windows Update. Neglecting updates could deprive you of important bug and performance fixes.

If you’re having problems with a peripheral, try switching it on and off. If that doesn’t work, try disconnecting and reconnecting the device. As a last resort, download the latest drivers and perform a full reinstall.

**My computer is too slow**

The first step to fixing a slow computer is to verify that your machine is the actual source of the problem. Videos that seem to buffer forever, and websites that take ages to load, may not be your computer’s fault. Many people mistakenly identify a slow system as the problem when “it’s actually not the computer, [but] their broadband connection.” See “**Downloads are taking forever**” below for instructions on how to use Speedtest.net to diagnose a slow connection.

If the problem is your PC, check whether you have plenty of free space on the hard drive holding your operating system. Windows needs room to create files while your system is running. If your hard drive is maxed out, performance suffers. Now is the perfect time to clear some space.

If your computer’s operating system resides on an overstuffed C: drive, clearing out some space could boost OS performance.

**Downloads are taking forever**

Speedtest.net is your best friend when you're having connectivity problems. Run a speed test to see what your download and upload speeds are—ideally they should be at least 50 percent of your Internet service provider’s advertised speeds, with a ping under 100 milliseconds.

If the speeds seem solid, make sure that you aren’t inadvertently downloading or uploading anything. Many torrent downloading programs run in the background and minimize into the system tray instead of the taskbar.

A good speed test should give you an accurate assessment of your ping, download speed, and upload speed.

Check your network hardware. Updates for network cards aren’t all that common, but if your card’s manufacturer offers a newer driver, download it. Resetting your router and modem can help with connection problems, too. Most routers and modems have reset buttons, but pulling the power cable for a second or two can do the same thing. Don’t cut the power for much longer, or the hardware may reset itself to factory defaults.

Still having problems? Call your ISP, which can tell you whether the problem is on your end. As a last-ditch measure, the ISP could reset the master connection to your home.

**My machine keeps restarting**

Hardware problems are hard to diagnose and solve. First, confirm that you aren’t just getting the latest wave of Windows updates, which can automatically restart your computer during installation. Then work on updating all of your critical system drivers. Your graphics card, motherboard, and network card drivers are crucial.

Sometimes it can be viruses, sometimes it can be adware, sometimes it can be overheating, and sometimes it can be something as simple as making sure your video card is updated.

Is your computer making weird noises? If you’re lucky all you’ll need to do is give the machine a thorough cleaning. Modern computers have safeguards that shut down the system if a component is overheating, which can be the cause of frequent restarts when you’re running resource-intensive programs or video games.

**Pop-up ads are appearing on my desktop**

If you’re not running your Web browser and are still getting pop-up ads on your desktop, you’ve most likely installed adware—a program that displays unwanted ads. Although benevolent adware exists, most of the time adware is up to no good. Getting rid of it isn't easy. There’s a ton of little system-utility tools out there that promise to clean up everything, with names like PC Speed-up, PC Speed Pro and PC Speedifier. A lot of times those programs are not going to do much. Some programs will work, others are snake oil.

Avoid downloading programs that offer to speed up your PC or clean up your registry. Instead, use a trustworthy adware scanner like the free version of Malwarebytes' Anti-Malware tool.

Running a full scan with credible antivirus software is your first step. If that program doesn’t find and remove the adware, turn to Malwarebytes Anti-Malware Free, a great utility for removing all types of malware. Just make sure to disable your standard antivirus software before running it.

Multiple antivirus programs working at the same time will often result in problems, You only want one active, real-time antivirus scanner installed, but it doesn’t hurt to run an additional ‘on demand’ virus or malware scanner.

Searching online for the name of the advertised product can sometimes yield solutions from fellow victims. If all else fails, there’s always the nuclear option: a complete system reinstall. It might take a long time, but it’s the only surefire way to remove adware or spyware. Remember to back up all your personal files.

**Google doesn’t look right**

Browser hijackers are a particularly nasty breed of malware. Such programs take over your Web browser and can stealthily redirect your Google searches and other queries to fake pages meant to steal your personal information or to further infect your system.

Running a real-time antivirus utility is the best way to stay safe. If your browser has already been hijacked, uninstall the browser and use your antivirus program in conjunction with Malwarebytes to remove the intruder.

**My Wi-Fi keeps disconnecting**

Spotty wireless connections can be a puzzler. Is it your computer? Your router? Your ISP? Try a few things before calling your Internet service provider.

Windows Network Diagnostics may not always solve your problem, but it will usually point you in the right direction.

Confirm that your computer is within range of your wireless router. Weak signals mean weak connections. Next, make sure your PC’s wireless card has the latest drivers. Try letting Windows troubleshoot for you by right-clicking the Wi-Fi icon in the taskbar and selecting *Troubleshoot problems*.

**I keep seeing ‘There is a problem with this website’s security certificate’**

Sometimes the biggest problems have the easiest fixes. According to support technicians, the lion’s share of issues are due to an incorrect system clock.

The problem is probably with your computer.

Website security certificates sync up with your computer’s clock. Old computers in particular run the risk of having a dead CMOS battery—the watch battery in your computer that keeps its system clock ticking. Click the clock in the system tray and select *Change date and time settings* to correct any issues.

**My printer won’t print**

Let’s assume that your printer’s drivers are up-to-date, and that it has enough paper and ink or toner to print. Try turning the printer off and on. Unplug the printer and plug it back in. Check your printer’s print queue by looking for the printer icon in the system tray and double-clicking it. The print queue shows you the status of each job as well as the general status of your printer.

The print queue is your best bet for troubleshooting printer problems—just make sure that ‘Use Printer Offline’ isn’t selected. Sometimes, printing while your printer is turned off can cause Windows to set your printer to work offline, and that can stall jobs sent later.

**I can’t open email attachments**

If you have ever encountered an attachment that you couldn’t open, it was probably because you didn’t have the software necessary to view the file.

If you don’t have Adobe Reader or another PDF-compatible program, you won’t be able to open PDF files.

The usual suspect is the .pdf file, for which you can download a free PDF reader. If your problem involves a different file format, a quick search on the attachment’s file extension (the three letters after the period in the filename) should tell you what type of program you need. If the attachment lacks a file extension (which might happen if it was renamed), adding it back should set things right.

**My favorite program isn’t working on my new PC**

Before you call tech support, make sure that the software you’re trying to run is compatible with your operating system. Older software might not function on Windows 8, and an app created for Mac OS X definitely won’t run on your Windows PC. A 32-bit program might run on your 64-bit operating system, but it doesn’t work the other way around.

Not all file types work on Windows. For example, files that have the .app extension run exclusively on Mac OS X.

If an online game balks, you might be missing the required plug-ins—Java and Flash are the usual culprits. Most browsers will alert you to install these items if necessary.

**When to throw in the towel**

Connect with tech support for “any problems that you aren’t comfortable addressing personally.” When in doubt, it’s better to steer clear of voiding a warranty or potentially damaging your system. Being aware of your own skill set and limitations is important, because it’s often easy to make matters worse. If you think the problem is too complicated, call up a more knowledgeable friend, or bite the bullet and work with a professional tech support service.