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# SPEEDING UP YOUR MAC

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It takes more than cleaning out files to get any computer to return to its original fast state.

You do have to identify what is slow, though. There are three areas.

#### 1 Starting up

Normally, starting up takes about two minutes with a standard hard drive, or about one minute with a solid state drive.

If any apps are being started during start up time, this slows down the computer. To get the best start-up time, close all apps before shutting down and remove non-essential apps from the login at startup. (System Preferences -> Users & Groups -> Login Items)

## 4 Opening apps

The first time you open any app after a start-up takes a very long time. Re-opening an app takes much less time. The only thing that can dramatically improve this time is a solid state drive.

## 6 Downloading/uploading files, or just browsing the Internet.

This is completely dependent on the speed of your Internet. Do a speed test (<u>speedtest.net</u>) to confirm your current speed. If it is consistently much slower than what you pay for, first power off and back on both your modem and your router (wait 20 seconds before powering back on). If it is still slow after that, call your provider.

And now, a little more detail:

Anytime you call Apple support for help, the first thing they want to know is what version of the operating system you are at. If you haven't installed all the latest updates, that would be the first thing they would want you to do. Although it is true that sometimes an update introduces a new bug, it is also true that updates actually improve how things work. Ensuring that you have the latest update is the first step to solving any problem.

Any problem that you're having might be due to something related to the user login that you work with. Create a new standard user. Login as that new user. Check to see if the problem goes away. If it does, then a completely different approach than what follows is needed, and that's for another time.

Running multiple applications at the same time normally is not a problem. Running any one application in the foreground does slow down any other application that is performing computations in the background. Typical users never have apps running in the background. But let's say that you just created a new movie and it started the rendering process, which takes time. You decide to open *Mail* or to browse the Internet. At that point, the rendering process will not only slow down, but your other app may not be as responsive either. Installing maximum memory can minimize this effect.

The number of widgets you have installed can make a difference since all widgets run in the background and take up computing power and memory. Remove any widget that isn't absolutely necessary to you.

The number of fonts you have loaded on the computer also makes a difference, but only in how fast an application starts up. It doesn't help to add fonts to any computer. It actually may help to reduce the number of fonts. Use the app *Font Book* to disable fonts. (Some fonts are required and can't be disabled. Unless you are into preparing documents with fancy fonts, you can disable all fonts that can be disabled leaving only the few that you actually do use.)

Font Finagler is an app that can clean out font cache files. Doing this, however, actually slows down starting up apps that previously created the font cache, but only for the first time that the app is opened. This might only be necessary if an app is misbehaving. Using Font Finagler does require an immediate restart.

Switching from one application to another may require the OS to save files and data to the internal drive, and standard hard drives are quite slow at this. Having a solid state drive installed can virtually eliminate the time required to do this swapping.

Cleaning out the Mac only reduces the amount of clutter you have. However, if your drive is nearly full (less than 20GB available), either clean out what you can or upgrade to a larger drive or install a second external drive for storing your files.

Clean up or completely empty out your Desktop. The more items you have in the Desktop, the slower the Mac runs. It is a misconception that having a lot of files and folders in the Desktop makes life easier. What makes life easier when using a Mac is learning how to use Spotlight to find stuff on your computer.

Not all hard disk drives (HDD) are the same. The spindle speed (the speed at which the disk rotates) matters. Most hard drives run at 5400 RPM. A hard drive that runs at 7200 RPM is considerably faster. A second aspect of hard drives is the size of the cache (which is actually RAM installed in the hard drive). The larger the cache, the less time it takes to swap data in and out. Hybrid drives (SSHD) are a combination of hard drive and solid state, meaning it has a very large capacity cache. A solid state drive (SSD) is best (it's all RAM) although a bit more expensive (prices are dropping dramatically). Not all SSDs are the same. The fastest SSD is a bit more expensive than a slower one. However, you might only notice the real difference in how long it takes to open an app the first time after logging in - and the difference will be in seconds.

A Mac is not like Windows that requires defragging (optimizing) the file system. Apple does not provide an app for defragging a Mac drive. Solid state drives, on the other hand, do require garbage collection (TRIM) and will slow down over time if proper garbage collection is not done. All newer SSDs have a built-in TRIM routine that runs without the need for any user intervention.

CleanMyMac is an application that safely cleans up files on a Mac. Some older Mac apps include code to run on older versions of the OS (this code is called Universal Binary), and having that additional code in the app only slows down the app. CleanMyMac can safely remove that code. CleanMyMac will also remove extra languages embedded in applications. Removing all unnecessary code from an app will make it start up faster and run more efficiently.

If you have installed an antivirus (A/V) application, this by itself will slow down your computer. The only A/V application that I recommend is Sophos Home (free version only), and not even that is required on a Mac. An A/V is only useful in the case where you receive a virus in an email (you won't know it is there) and then pass that email on to some Windows user - they now have the virus unless you use *Sophos* to find and clean that virus. If you have *McAfee* or *Norton* installed, I recommend removing them as they will definitely slow down your computer while emptying your pocket book. Remember: You are NOT safe by having *any* antivirus application running on your computer because none of them are 100% in finding and cleaning all viruses all the time. The reason Macs are safer than Windows is because the hackers won't spend time trying hack only 7% of the installed computers. It's called Return On Investment (ROI). If you want to be even safer, use a computer that runs Linux. Please note that both the Mac and Linux are based on Unix. When Microsoft converts to a Unix-based operating system, all bets are off.

If you have less than 8 GB of memory, upgrading to 8GB can improve the speed. The newer operating system upgrades requires more memory for best efficiency.

*Xbench* is an application that will test the performance of your computer. You will only know if what you do improves or degrades the performance of your computer by running *Xbench* before and after any change.

If you really want to see your Mac running at the same speed that it was when you bought it, do a complete re-install of the operating system. Chances are, something you have added to the original system is what is slowing it down. This actually isn't as disastrous as it sounds. If you have a Time Machine backup, you won't lose anything even if something goes terribly wrong - other than time. Complete instructions are found here: <a href="https://support.apple.com/en-us/HT204904">https://support.apple.com/en-us/HT204904</a>. If you choose to erase the disk before reinstalling, then after the install is complete you can restore from your Time Machine backup and be back where you started - and hopefully it will be a little bit faster and more efficient.

