# Speed ??up Mac - not difficult

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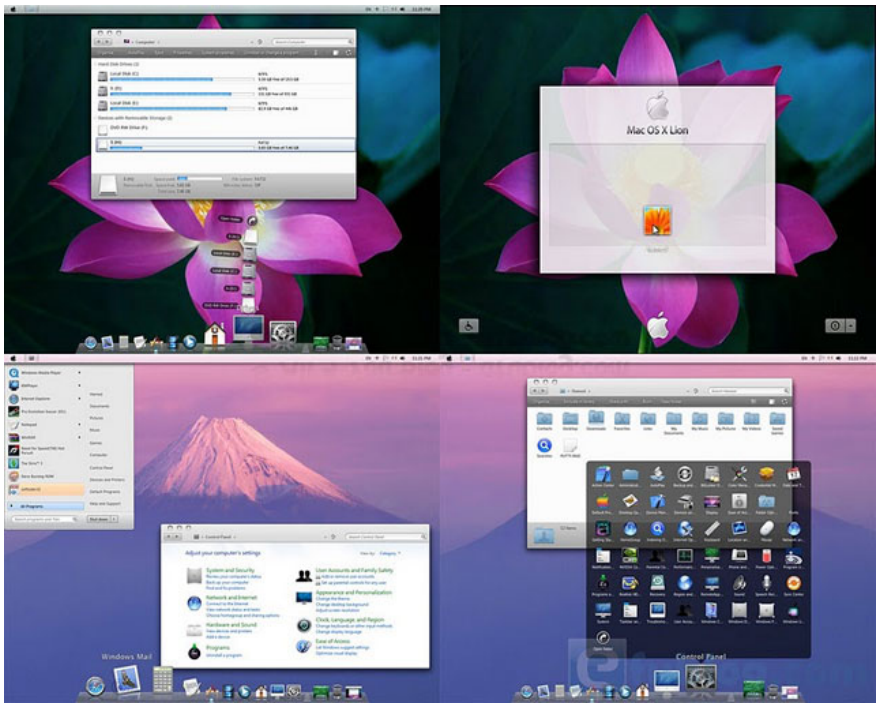



In many cases, users just need to reboot their computer and everything will be resolved, but in fact there are many tips to help you speed up your beloved Mac in both ' *hard* ' aspects. and ' *soft* '.

## HARDWARE

### 1. Keep the device cool

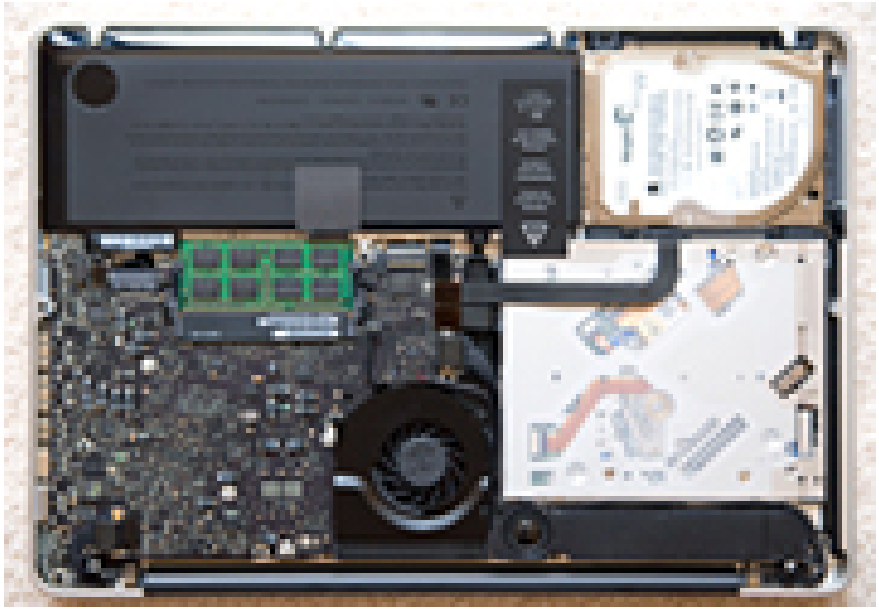
Temperature is always an enemy to computer performance and durability. In fact, regardless of whether the Mac or PC, a computer will run much smoother if the component temperature is low. With OS X, you can download and use smcFanControl, which allows you to adjust the fan speed proportional to the temperature or even fixed to a certain extent (including turning off or forcing the fan to operate at Max speed). Of course, if you keep the fan spinning at maximum continuous (about 6000 rpm) in the Macbook line, it will make the system more

comfortable but the noise will increase and the battery life will decrease slightly. . The use of laptop cooling pads is able to lift the base slightly (to help better heat dissipation).

## 2. Increase RAM capacity

Although not as demanding as Windows, Mac systems in general and computers running OS X will still benefit from more RAM. By default, most Macs currently have 4GB of RAM (even for Mac laptops), so this upgrade is sometimes only necessary if you regularly use multiple applications or your needs are using the same " *Heavy* " applications like Final Cut, Photoshop, Lightroom . Apple allows to upgrade the Macbook laptops up to 8GB of RAM, while with desktops or workstations (Mac Pro), this level is much higher. As for the Macbook Air, because the design is focused on thin and light with memory chips soldered straight to the board, upgrading RAM is not feasible. If you need 4GB of RAM on the new Macbook Air, you must purchase the configuration upgrade line from the factory.

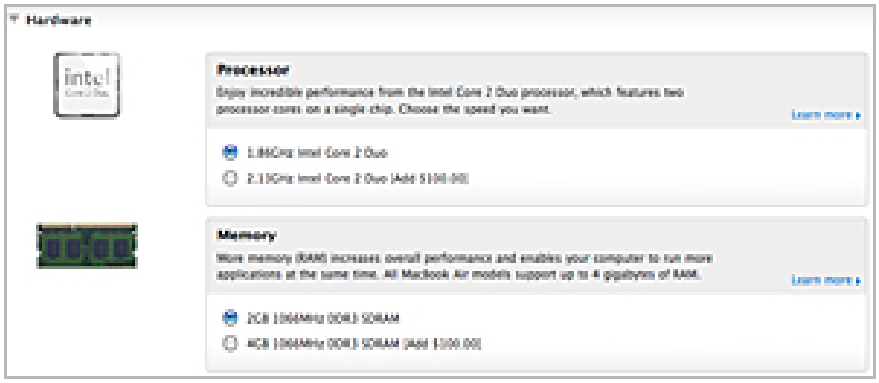
## 3. Replace hard disk and review SSD



Also, pay attention to the available disk space. If the main disk has less than 10% left and you can't clean up any more, consider adding a new hard disk. Except for Macbook Air, which uses a modular storage hard disk like the iPad, all Macbooks use 2.5 "SATA hard drives, while iMac / Mac Pro desktops use 3.5" SATA discs, so Upgrade is easy. Of course, SSDs are always worth considering if financial conditions allow. Extremely high read / write speeds of SSDs allow applications to operate much more efficiently.

**Note:** For data storage needs, you can use USB or IEEE 1394 hard disks. However, in the 2011 Macbook Pro version and later Mac series with Thunderbolt ports, you can consider choosing the type. Hard disk with this interface to achieve higher performance (a lot). Thunderbolt reached 10Gbps in theory, higher than USB 3.0. Currently, Western Digital, LaCie . are planning to release hard disk products that support the new Thunderbolt standard.

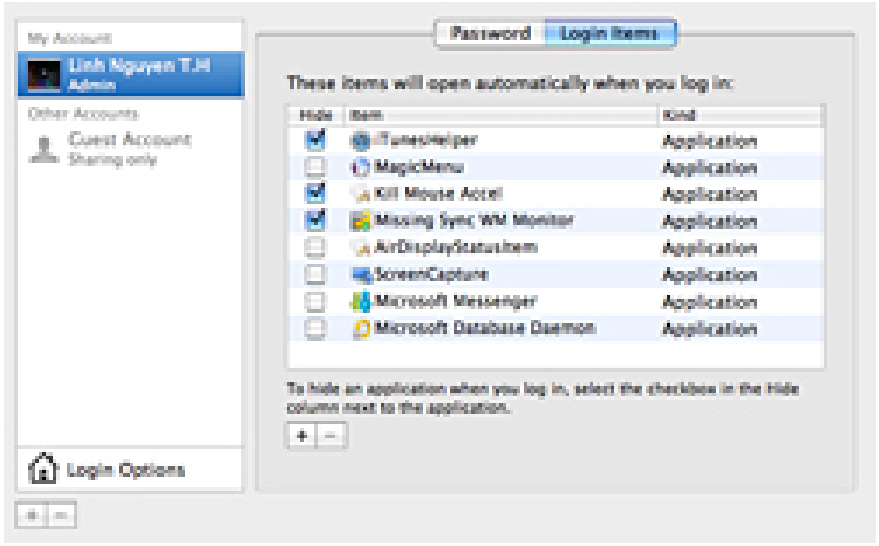
## 4. A few notes about graphics cards and processors




While hard disks (SATA) and RAM (both shared SODIMM) can be upgraded quite easily on the Mac, the graphics card and processor are a different problem. For most popular Macs like the iMac or Macbook (Pro / Air), upgrading the CPU and graphics card is impossible because they are soldered straight to the motherboard of the machine. Therefore, you need to take note to offer a high configuration line option if necessary right from the time of purchase. With the Mac Pro, although the upgrade of the graphics card is feasible, for the system to work, you will need the card provided by Apple itself. Some users have ' *tips* ' to edit the BIOS to use other brand cards, but this is not an easy task and is not recommended.

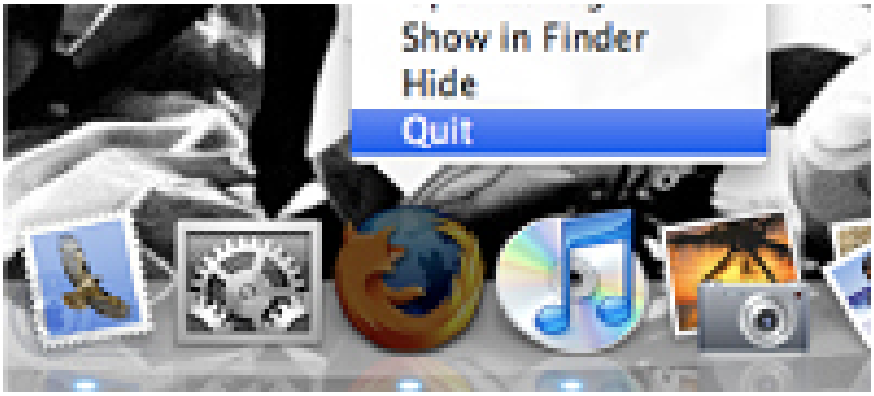
# "SOFT" TIP

## 1. Clean up Startup objects




Some applications put them into the Startup list, which allows them to start at the same time as OS X. You can remove them to save CPU memory and processing resources. The list of objects will be activated with the operating system included in the **Apple Menu** . **System Preferences** . **Accounts** . **Login Items** . To remove an object from the list, select the object and click the ' - ' button below. However, you have to make sure that you know what to remove because sometimes there are those who take on important tasks for the system or some software you use often.

## 2. Exit the unused application completely




One of the " *mistakes* " that Windows users have when switching to Mac is often that Mac applications often don't close completely when you click the red **X** button on windows as in Windows. Although this will help to quickly open the application when it needs to be faster, it will definitely consume resources. In addition to CPU and memory, the opening of the application also forces the hard disk to operate continuously in the role of virtual memory, causing the hard disk to consume memory and resolve unnecessary tasks. Mac OS X uses a small notation below the Dock bar to mark open applications.

Please note this symbol and close the applications that are no longer in use. With " *stubborn* " software, you can press **Option** (Alt) when right-clicking on the icon and selecting **Force Quit** .

**Note** , like Windows Explorer is responsible for many important Windows services, the **Finder** X application on OS X must also be " *open* " continuously. Therefore, do not be surprised if every attempt to turn off this application is not possible.

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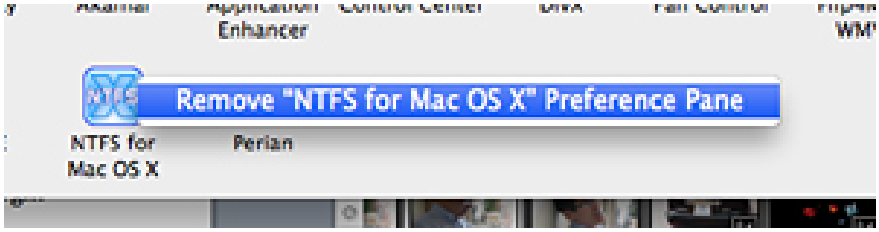
## 3. Clean up System Preferences




In the System Preferences window, you will see the **Other** section, which is dedicated to third-party software manufacturers' applications. You can count on how many objects you have in this section and if the list is too long you should consider simplifying them. To do this, you can right-click and select **Remove** or delete the file with the corresponding name in the folder: " **~ / Library / PreferencePanes** ". You may also consider transferring the file to another folder in case you need to use it later. This trick will require you to enter the admin password to confirm.

Also, within System Preferences, you can turn off some of Apple's ' *generous* ' features that come with OS X such as Bluetooth, Universal Access (support for people with disabilities), speech recognition (Speech

Recognition), and split Internet Sharing (Internet Sharing) . Although they all provide useful features, not everything you use. Therefore, turning them off will not only improve battery life for laptops, but also save CPU and RAM resources.

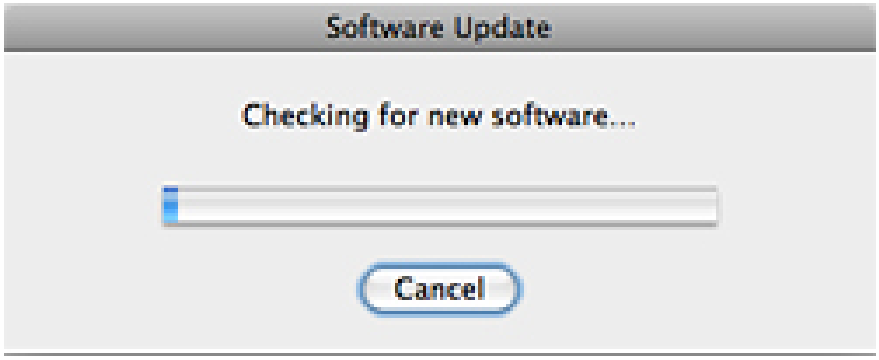
## 4. Check the foundation of the software and clean up

If you use a Mac with an Intel CPU, you may encounter software that runs on the ' **Rosetta** ' translator. This is a very effective translator for software designed on the PowerPC processor platform to run on a new Intel processor. However, this will cause the performance of the software to be reduced due to continuous "translation". Most PowerPC software now has new versions or updates, allowing to run directly on the new platform. Some small utilities like the Update App Widget can help you check this quickly. The Mac OS X **Activity Monitor itself** also lets you know a Rosetta-based or Universal application (for the new Intel processor).

Also, the problem is that every Mac software has two separate parts to run well on both platforms. Because of this, your Mac will need only one of two parts, and the unused part will never need to be activated. If you remove the unused part, you can save significant hard disk space. Two utilities called Xslimmer and Monolingual (free) will help you handle this quickly. In addition, Monilingual also allows you to remove less frequently used languages ??such as languages ??and characters of African countries, Catalan, Farsi, Klington character sets . to save hard disk and software loading time. .

You should also remember that the System Framework should not be removed, otherwise many dangerous problems will appear.

## 5. Always update the system




Although updating the operating system may make many users afraid, especially when this often requires downloading lots of data and restarting is annoying but this is an effective task to ensure performance and Stability for the machine. Apple is constantly making patches (including available bugs and potential bugs that could harm the system). Sometimes, performance enhancements or troubleshooting of operating system hardware issues are also released, typically patches to improve the performance of recent graphics cards for Snow Leopard to increase Speeding up 3D games and Mac-based graphics applications. Updating the system for Mac is simple and similar to Windows Update for Windows. Just click the apple icon on the main menu of OS X and select **Software Update** .

**Note** , **Permission** fixes for Mac can be considered . regular oil changes for cars and motorcycles, especially after every major upgrade to OS X. This helps the system operate. more stable and minimize problems due to

updating and installing new software. To do this, open **Disk Utility** , select the **First Aid** tab, select the drive and click the corresponding **Repair Disk Permissions** .

## 6. Be wary of memory leaks

With the incredible stability of OS X and the support of the ' *hard* ' features of Mac, many users are practically ' *impartial* ' to keep their computers running continuously (sometimes up to several weeks) without restart. This leads to the need for just one application that does not manage memory well, causing the main memory of the machine to constantly be lost (leak), something that often happens to browsers and entertainment applications. Whether Firefox or Safari with multiple browser tabs (tabs) and plugins can use up to GB of RAM is not uncommon. Of course, turning them off and then on again restores the occupied memory, making the software then run better but obviously restarting it will be much more effective sometimes because this action is not just bring OS X's virtual memory system back to default but also clean up more " *junk* ".


## 7. Refine the Widget

Since OS X 10.4 (Tiger code name), Apple has added **Dashboard** with interesting small widgets (Widgets) to support user use more conveniently. You can find hundreds of types of widgets on the Internet and most of them are free utilities. However, if you open too many things at the same time, your computer will become especially sluggish even if the Dashboard is running in the background. Therefore, you should carefully calculate and retain only the most important ones such as Calculator, iStats, Converter . Some functional widgets like Deep Sleep can only be activated when used. In addition, the system optimization utilities such as MainMenu, Onyx or TinkerTool can . turn off the Dashboard as well if the user requests it.

Similar to Task Manager in Windows, Activity Monitor in OSX will allow you to identify hidden performance killer. You open the Activity Monitor by accessing the Applications.Utilities.Activity Monitor or typing ' **activity** ' on the Quick Look box. The Activity Monitor will inform you in detail all the active tasks, threads and the amount of resources they use. So you can know what is consuming RAM or unintended CPU usage for processing.

## 8. Clean up the hard disk regularly


Even if you own an extremely large hard disk, the more data in it will be inversely proportional to the performance of the machine due to CPU and RAM being used on data management tasks. IPhoto, iMovie, iWeb, iTunes . huge libraries will make your device not only sluggish when running the corresponding application but also in normal tasks. In particular, when the hard disk is full, it will make it almost inactive.

There are new users who switch to Macs often do not pay attention to emptying the recycle bin periodically (Trash) and this will make the hard drive run out quickly. Meanwhile, the feature of Mac OS X is to use the free space of the hard disk to make virtual memory and every operation of the operating system depends a lot on it. So if you start to feel that the operating system has become sluggish, you should check the hard disk first. Maintaining a hard disk at a level of less than 90% will ensure stable operation of the computer. Some tools like Filelight, GrandPerspective, OmniDiskSweeper can display your hard disk requisition diagram to find out the ' *culprit* ' takes up the most capacity. Good luck.