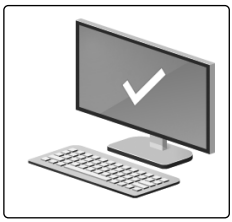
Regularly Follow These Simple Steps to Keep Your PC Working at its Best

This article shows you how to:

- ✓ Keep your PC's vital software up-to-date
- ✓ Clear out unnecessary files and optimise your hard drive
- ✓ Keep your portable PC's battery in tip-top condition



Given the opportunity, modern computers do a lot to take care of themselves. Even so, they do still need a little help in some departments – and, depending on how your use your PC, perhaps you're not always giving it the opportunity it needs to do its own 'housekeeping'?

In this article, I'll suggest a regular maintenance routine to follow which will help to keep your PC running smoothly for years to come.

Your Monthly PC Tune-up Guide

Your PC likes to be left idle for a while!

If there's one thing a computer really likes, it's to be left alone. Not constantly of course – you have work to do! – but for a few hours every week or two.

When it's left idle for a while, your PC will get on with a few housekeeping tasks that it doesn't do while you're using it, because it doesn't want to disturb you. To give you a couple of examples, it will optimise your hard drive and run an anti-malware scan, both of which we'll come back to on page 9.

Leave it alone rather than switching it off

The question is, do you give it that opportunity? If you tend to switch it on, work solidly and then switch it off again, it might be months since your PC had the chance to do its own housekeeping. In that case, my first suggestion is to get into the habit of giving your PC a little time on its own: every so often, when you've finished working, just leave the PC running for a couple of hours. (If it's notebook or tablet PC, you could combine that with exercising its battery, as explained on page 14.)

Clean up and optimise your PC

Even so, just like your car, your PC benefits from some regular hands-on maintenance. It's nothing too technical: you won't have to get intimate with its inner workings. It's largely about getting things updated, cleaned-up and optimised, and almost all of it takes place right from your computer's screen.

Do this about once a month

In this article, I'm going to recommend a five-step maintenance routine which you should follow roughly once a month. You don't have to be too precise about the timing, though: if you want to follow some of the steps more often, that certainly won't hurt. And if your PC doesn't get a great deal of use, following this routine every two or three months would be fine. For each of the five tasks, as well as telling you what to do, I'll also explain why you're doing it and what benefit it has.

Task 1: Update Windows and Other Essential Software

Boost your PC's security

The first and most important part of your maintenance routine is to get your software updated. There are plenty of good reasons for doing this, but the one that matters most is security: new threats are being discovered all the time, and software makers respond by releasing updates which provide extra protection.

The most important element to keep updated is Windows, which is obviously at the heart of everything your computer does, followed closely by any programs that access the Internet or open files you've downloaded – web browsers, email programs, media players and so on.

Many of these programs update themselves, more or less automatically, so this task should be a lot quicker and simpler than it may sound, but it's still wise to do it: it's a chance to check you really are receiving the updates you should.

Make sure Windows is up-to-date

Get Windows updated

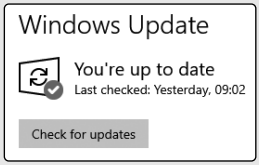
This task doesn't apply to Windows 7, for which updates are coming to an end in January 2020. For Windows 10 and 8.1, follow the appropriate steps below:

- **Windows 10:**

1. Press (Windows) + (I) (the letter 'i') to open the Settings app and click on **Update & Security.**
2. You may immediately see a list of one or more updates that are beginning to install themselves automatically, which is ideal.
3. If not, have a look at the date and time shown beside the words 'Last checked'. You should see that Windows checked for updates sometime within the last couple of days. If the last check occurred more

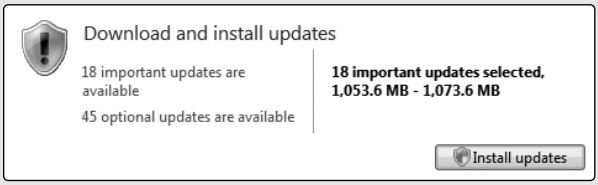
Check for new updates

than two days ago, click the **Check for updates** button and – if any updates are found – the rest will happen automatically.



- **Windows 8.1:**

1. Right-click the Start button (or press ⊞ + X) and choose **Control Panel** from the menu that appears.
2. In the Control Panel window, click on **System and Security**, then click on **Windows Update.**
3. In the main section of the page, do you see the words 'Download and install updates' and an 'Install updates' button? If so, click on **Install updates** and wait while Windows downloads and installs the updates that are waiting.



See if any updates are available

4. If there's no sign that updates are waiting to be installed, have a look at the date and time shown beside 'Most recent check for updates'. You should see that Windows checked for updates sometime within the last couple of days. If the last check for updates occurred more than two days ago, click the words **Check for updates** at the left of the window and wait while the check is carried out: if you find that updates are available, click the **Install updates** button and wait while the updates are downloaded and installed.

Update your anti-virus program

Windows Defender is automatically updated

Your anti-virus program is your first line of defence against the Internet's threats, so it's vital to keep this updated. If you're using Windows Defender, the anti-virus program built into Windows 10 and 8.1, that's kept updated via Windows Update, so you've just checked that by following the steps above.

Update other anti-virus programs

If you're using a different anti-virus program – perhaps something from AVG, Norton, McAfee or Kaspersky, it should be keeping itself updated automatically, but it's wise to check. The precise steps will vary from one program to another, but have a look among the little icons near the clock on your taskbar and you should find the one belonging to your anti-virus program. Click or double-click this icon to see its window and you should see a fairly-obvious button or tab you can click to check for updates.

Update your web browser

Ensure your web browser is protecting you

As well as giving you access to web pages, your web browser also helps to protect you from them, so it's important to keep this as up-to-date as possible.

Again, if you're using a Microsoft browser – Internet Explorer, or Microsoft Edge in Windows 10 – the browser is being updated via Windows Update, which you checked earlier. If not, you're probably using one of these two:

Update Firefox

- **Mozilla Firefox:** click the 'Open menu' button (three horizontal lines) at the far right of the toolbar, then click on **Help** followed by **About Firefox.** In the dialog that opens, you might see the words 'Firefox is up to date', which is fine – you can click the **x** in the dialog's top-right corner to close it. Otherwise, Firefox will automatically download and install the update that's waiting.

Update Chrome

- **Google Chrome:** click the three vertical dots at the far-right of the toolbar, move the mouse to **Help** and choose **About Google Chrome.** In the tabbed page that opens, Chrome will automatically check for updates and begin installing any that are waiting.

Update other Internet-related programs

Other programs to keep updated

Once again, Microsoft programs such as Office and Windows Media Player are handled by Windows Update, but do you use other programs which access the Internet (such as an email program) or open files you download (such as a PDF reader or media player)? If so, it's wise to get those updated too.

As always, the steps will vary from one program to another, but a good place to look is on the **Help** menu (if the program has one): you'll often find a **Check for updates** item there; if you don't, look for an **About** item which will often lead to a button that lets you check for updates.

Task 2: Give Your Hard Drive a Regular Clean-out

Your PC gains a build-up of unnecessary files

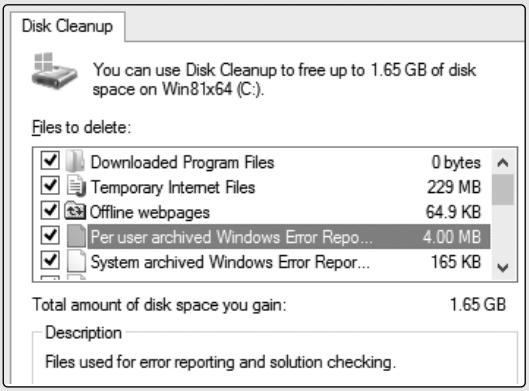
In your PC's day-to-day running, your hard drive builds up a sizeable collection of unnecessary files. These can amount to many gigabytes, and contribute to gradually slowing down your PC's performance.

To put this right, Windows includes a built-in tool named Disk Clean-up, and this is an essential tool to include in your regular maintenance routine. Here's how to use it:

1. Open File Explorer (known as Windows Explorer in Windows 7) by pressing ⊞ + E.

2. Do you see icons for your PC's drives in this window? If not, click on **This PC** (in Windows 10 or 8.1) or **Computer** (in Windows 7) at the left of the window.
3. Now right-click the icon for your hard drive, whose name ends with (C:), and choose **Properties.**
4. In the dialog that appears, just below the pie chart, click the **Disk Clean-up** (or **Disk Cleanup**) button.
5. After a short wait while Disk Clean-up examines your hard drive, you'll see its main window. At the bottom of this window, click the button labelled **Clean up system files.** This entails another wait, but it means you'll be able to do a more comprehensive clean-up than you would have otherwise.

Choose the option to clean up system files too



6. The window is simple to use. In the list, you simply tick off the items you want to delete, and my suggestion is to tick almost everything. There are just three items that shouldn't be ticked:
   - **Downloads:** you probably don't want to delete all the files you've downloaded, so we'll look at this separately in a moment.

Tick items you want deleted

- **Recycle Bin:** you'd rather not empty the Recycle Bin without having a look through it first, just in case it contains files you deleted by accident.
- **Thumbnails:** these are the tiny versions of your photos you see when looking at your Pictures folder (among others). If you did delete all these, they'd gradually be recreated again next time you returned to that folder, so there's no point in deleting them in the first place!

Windows deletes the unwanted files

7. With all the remaining items ticked, click **OK.** A message box will ask if you're sure you want to permanently delete these files. You definitely are sure, so click on **Delete Files.** You'll briefly see Windows' progress in deleting these files, and when that little window closes the job is complete.

Clean up your Downloads folder

Your downloads could waste a lot of space

Files you download from websites land in your personal 'Downloads' folder, and that's where they stay unless you delete them. Over time, these files could easily add up to tens or hundreds of megabytes, making this a good candidate for a clean-up. There are various ways to reach this folder, but a straightforward one is to press (⊞) + (R) to open the Run dialog, type **downloads** and press (Enter).

Check what you want to keep and delete the rest

If there are documents you've downloaded in this folder, and you want to keep them, it's wise to move them to your 'Documents' folder to organise them in a more practical location. The same goes for any programs you've downloaded for which you want to keep the setup program handy in case you need it again. Those are the exception, though: quite likely, there's nothing in this folder you want to keep, so you can simply select everything and delete it. As well as clearing out unwanted files, it makes it easier to spot newer files you download when you open this folder.

Task 3: Scan and Optimise Your PC

Make sure your PC is handling important jobs

I mentioned earlier that when your PC is left running but unused, your PC takes the opportunity to get on with housekeeping chores that might disturb you if you were actively trying to get some work done. In this task, we'll make sure those really are getting done, and run them now if necessary.

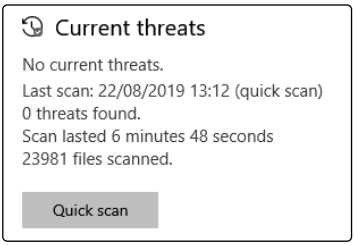
Scan your PC for viruses and malware

Has it been scanning for malware?

Every few days at least, your anti-virus software should scan your PC and make sure it hasn't picked up any malware. It may well give you some kind of notification on the screen when it's done that. If you don't recall seeing one of those lately, it's wise to check this is happening and, if necessary, run a scan now.

Check Windows Defender in Windows 10/8.1

In Windows 10 and 8.1, you're quite likely using the built-in Windows Defender. If so, here's what to do:



- **Windows 10:** open the Start menu, scroll down to the 'W' section and click on **Windows Security.** In the window that opens, click on **Virus & threat protection** and you'll see the date your PC was last scanned. If that was more than a few days ago, click the **Quick scan** button to scan your PC now.
- **Windows 8.1:** at the Start screen, type the word **defender** and click on **Windows Defender.** At the bottom of the window that opens, you'll see a note of when your PC was last scanned. If that was more than a few days ago, click the **Scan now** button to run a scan of your PC.

Check other anti-virus programs

If you're using Windows 7, or you're using a different anti-virus program in Windows 10 or 8.1, I can't give you exact steps to follow, but it should still be fairly straight-forward. As noted on page 5, you should find your anti-virus program's icon near the clock on the taskbar, and a click (or double-click) on this should display its window. Somewhere in that window you should see a note of when your PC was last scanned, together with a button you can click to run a scan now if necessary.

Optimise and speed up your hard drive

Increase your hard drive's performance

Another task that should be happening regularly is something called 'defragmentation', and this helps to keep your hard drive – and thus your whole PC – running smoothly. It does so by reorganising all the files on your hard disk for speedy access. This doesn't happen in any way you can see yourself – you'll still find all your files exactly where they were – but it makes a big difference to your computer.

The data of each file should be clustered together

Imagine your hard disk as being like a gramophone record, with data stored in the grooves, except that quite a lot of it is blank. When you save a new file, your PC looks for the last piece of data on the disk and puts the data from the new file straight after it. The next file you save will be placed after that, and so on, forming an endless spiralling chain of data.

Over time it splits into small fragments

One day, though, you delete a file, leaving a gap where that data used to be. So, next time you save a file it will be placed in that gap. However, perhaps this new file is bigger than the one you deleted: if so, some of it will fit into that gap and the rest will have to go at the end of the chain.

This can slow down your hard drive

This is going on constantly on your PC (because, as you discovered earlier in this article, it's not only you that creates and deletes files). As data is deleted and new data is stored, little pieces of file are being scattered around your hard disk, landing wherever there's a gap. This is a process

known as 'fragmentation' and it's ine-scapable – it's just the way hard drives work.

However, if it's allowed to continue unchecked for too long, this fragmentation can slow down your hard drive – and thus your whole PC – quite severely. Whenever a file is needed, your hard drive's mechanism has to scoot all over the place collecting tiny fragments of file rather than being able to sweep up the whole file in one move.

The cure is to 'defragment' the drive

The cure for this is to 'defragment' the disk by gathering all those little pieces back together again, and a program named Disk Defragmenter does just that. It can be a long job if your hard disk has become badly fragmented – it can easily take several hours – but this is why it's advisable to run this program regularly: keeping your hard disk defragmented should then take only a few minutes each month.

If your PC is recent enough to have a Solid State Drive (SSD), it doesn't need to be defragmented but it does need its own kind of 'optimisation' procedure to keep it working at full speed, and the same program handles this too. Even if you do have an SSD, you probably have an ordinary hard drive too, and that does still need to be defragmented.

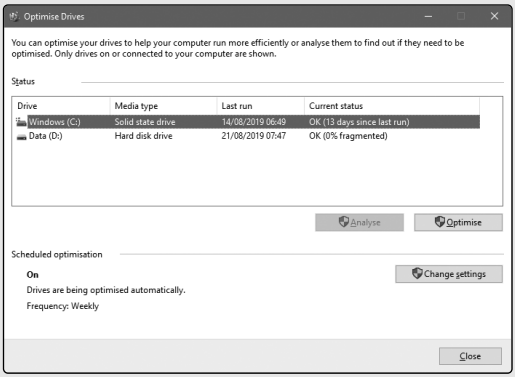
Here's how to start this program and set it working:

1. Open File Explorer (known as Windows Explorer in Windows 7) by pressing (⊞) + (E).
2. Do you see icons for your PC's drives in this window? If not, click on **This PC** (in Windows 10 or 8.1) or **Computer** (in Windows 7) at the left of the window.
3. Now right-click the icon for your hard drive, whose name ends with **(C:)**, and choose **Properties**.

4. In the dialog that opens, switch to the **Tools** tab.
5. In Windows 10 or 8.1, click the **Optimise** button; in Windows 7, click the **Defragment Now** button.

See when drives were last checked

6. In the window that opens, you'll see a list of your PC's drives. For each drive in the list, have a look at the **Last run** date to see when it was last optimised. If it was more than a month ago, click that drive to select it and click the **Optimise** button (in Windows 10 or 8.1) or the **Defragment disk** button (in Windows 7).



Task 4: Clean Your Hardware Devices

This isn't a big job, and it's something you probably do already, but it includes an important task you may not have considered. Let's start with that one:

Make sure your PC can breathe!

- **Clean your PC's air vents:** your computer has vents for its fans, through which air is sucked to cool the internal components. All this sucking pulls dust and fluff towards those vents where it tends to get stuck and build up. If too much fluff collects over the vents, your PC will struggle for air, its components won't be cooled effectively,

and its fans will be running more-or-less constantly. The result is that your PC becomes hot and noisy, and those overworked fans can start to sound like an aeroplane taking off!

Remove fluff from the air vents

The solution is easy: just use tweezers to pull the dust and fluff away from the vents, doing your best not to push any inside. There will be a vent at the back of the tower case, but there may be other vents at the side and perhaps yet more at the front (possibly behind a flap or door).

Besides this important step, there are three more little cleaning tasks worth carrying out:

Clean the screen

- **Screen:** it's best to do this with the monitor switched off, partly for safety and partly so that you can see more clearly where the dust and marks are on the screen. Just give it a wipe over with a micro-fibre cloth (such as the type used for cleaning spectacles) or a cotton handkerchief. You can sprinkle a little water on the cloth, or use cleaning solution designed for computer screens, but don't spray any liquid directly on to the screen. If you do use a damp cloth, it's best to wait a couple of minutes for the screen to cool down after switching it off, otherwise the dampness from the cloth may simply dry on to the screen and leave it more smeary than it was before!

Dust the keyboard

- **Keyboard:** this is best done with the PC switched off (unless you can switch off the keyboard itself) to avoid sending unexpected keystrokes into the computer! A combination of turning the keyboard upside-down and shaking and tapping it, as well as blowing and wiping the keys, will get rid of the dust, hairs and crumbs it tends to gather.

Clean the base of the mouse

- **Mouse:** check the underside of the mouse for fluff and hairs. Those can interfere with the smooth movement of

the mouse itself on your desk, but they can also cover the sensor in its base and lead to the pointer stuttering or jumping around the screen. (While you're at it, now is also a good time to clean the area of the desk your mouse moves around on!).

Task 5: Exercise Your Notebook or Tablet Battery

Batteries need exercise to stay healthy

The batteries in notebook and tablet computers are fussy things: they like to be used. In fact, they insist on it! If the battery in a portable computer doesn't receive enough use, it will deteriorate to the point of giving you only a few minutes' use from a full charge.

A replacement battery for a notebook PC will set you back £30 or more; a tablet battery might be cheaper, but you'll probably need to pay someone to fit it.

Regularly use your portable PC on battery power

Of course, with the best will in the world, these batteries won't last forever, but it pays to squeeze your money's-worth from them, and it's easy to do. At least once a month, make sure you run your notebook or tablet on battery power to give its battery the exercise it needs. Keep using it this way (over several sessions, if necessary) until the battery has run right down. Then, before you're going to need to use it on battery power again, plug it into the mains and recharge it fully.

Another worthwhile tip for the battery's health is not to leave the notebook or tablet plugged into the mains permanently when you're not using it. That keeps the battery perpetually charged to 100%, which isn't good for it. Instead, once it's fully charged, unplug it and use it on battery power until its remaining power level drops to about 20% – 30%.