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STEP-BY-STEP GUIDES
MAKE YOUR PC PERFECT



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Windows Help & Advice

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**SECURE
YOUR PC**

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& MELTDOWN
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**MINING
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YOU NEED TO
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NEW TECH TESTED & RATED

- LENOVO YOGA 920 • BITDEFENDER BOX 2
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Windows Help & Advice

Welcome

Speed. We always want more of it when running Windows and apps on our PCs – and in our lead feature on page 11, you'll find a collection of 20 brilliant, and free, tools that will help your machine run faster than smoother than it ever has before.

To get even more performance out of your PC turn to page 58 where you'll learn some nifty tips, tricks and techniques that will help Windows boot faster and run more smoothly, and we'll show you how create lightweight,

up-to-date Windows 10 media for the next time you decide to start over and reinstall it from scratch.

We have your computing needs covered in our Explore section, starting on page 25, too. Here you'll find step-by-step guides on everything from beefing up your PC's security settings to easily editing your home movies. Plus we'll show you how you can use Windows' Quick Assist feature to help family and friends with their PCs.

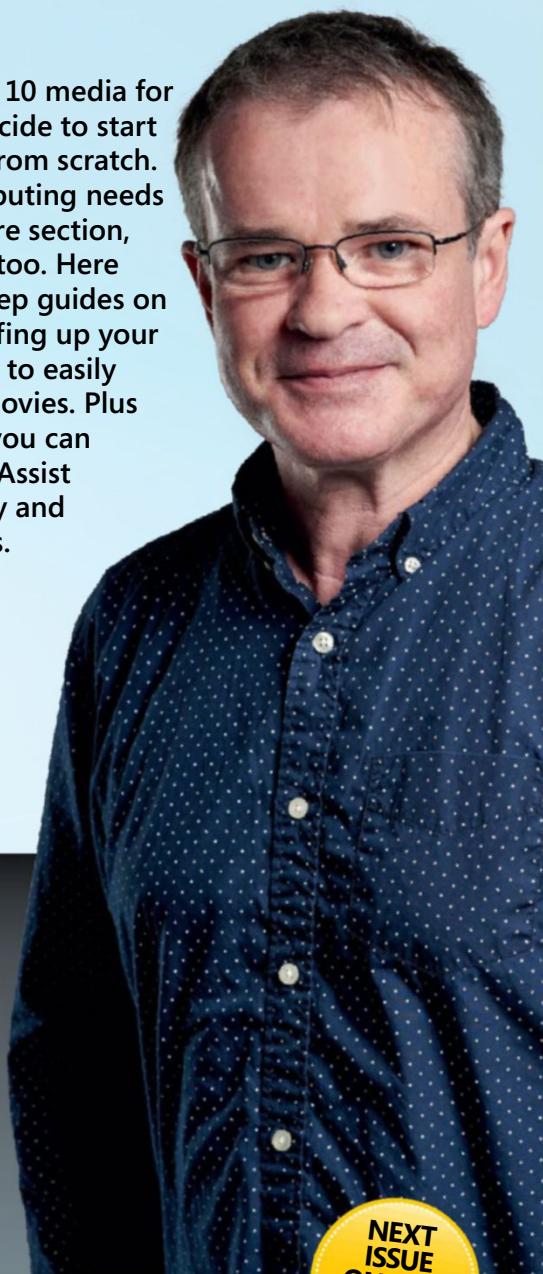
Enjoy the issue,

Rob Mead-Green Editor
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SUBSCRIBE TO THE MAG TODAY
AND SAVE – JUST TURN TO PAGE 22!

We pride ourselves in being the only magazine on the shelves to show you exactly how to get the very best from the Windows operating system, whether you're using Windows 10 or Windows 8.1. Also, don't forget to take a look at how you can read the magazine on your laptop, smartphone or tablet.



NEXT
ISSUE
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Windows Help & Advice

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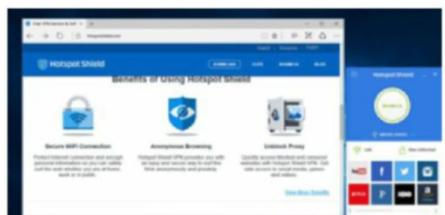
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GO FASTER FOR FREE

11 Find out how with our all-new optimisation guide



HOW TO MINE BITCOIN

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Discover

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ARM

A large, white, sans-serif font word "ARM" is printed diagonally across the front cover of a dark blue book. The book is positioned at an angle, showing its textured cover and the edge of the pages.

CHIP FLAWS Meltdown and Spectre directly affect a huge range of processors made in the last 20 years, including mobile CPUs from ARM.

Make your PC more secure How to beat the Spectre and Meltdown bugs

Fundamental flaws in the way processors work expose billions of devices worldwide – luckily there's an easy fix

A trio of security flaws discovered in the last year have rocked the technology world with their extent and scope, with billions of devices – from PCs to web servers, tablets to smartphones – potentially affected.

The flaws – Spectre Variant 1, Spectre Variant 2, and Meltdown – were found by a number of people including a member of Google's Project Zero, and have been present in chip designs for over 20 years, with CPUs from AMD, ARM, IBM and Intel directly affected.

The news has been described by some security experts as 'catastrophic' since hackers could use the flaws to access passwords, encryption keys and personal data, although no such exploits have been found in the wild.

PATCHES INCOMING

There's no need to panic yet, though. Although Spectre and Meltdown are hardware rather than software flaws,

device manufacturers have been working with CPU makers such as AMD and Intel to find workarounds, mainly in the form of software patches.

Microsoft has already issued a security update for Windows 10, as well as previous versions of the operating system. Windows 10 should download the update automatically, but to be sure, type 'windows update' in the search bar of the Taskbar, and select 'Check for updates.'

Download and install any new updates it finds.

Of the CPU flaws, Spectre poses both

the biggest risk, and is also the hardest to exploit. Ultimately, the only way to fix it may be to redesign the affected processors, although this should mean that future CPUs are immune from Spectre and Meltdown going forward.

Until then, the best way to stay safe is to make sure your PC – and any other devices you own – have the latest OS and security updates installed.

Spectre and Meltdown are hardware rather than software flaws

SNAPDRAGON LAPTOPS Using phone tech

The first Windows laptops to be powered by Qualcomm Snapdragon processors, typically found in smartphones, have started to emerge from hardware development labs, and they look impressive – not for their power (which is lacking a little) but for their portability, endurance, and the convenience of having 4G connectivity on board. Both HP and Lenovo will have announced their own machines by the time you read this; here's a look at Asus' NovaGo...



FLIP IT Most, if not all, of the new crop of Snapdragon laptops will be convertible tablets.



BETTER BATTERY The NovaGo can last for up to 22 hours on a single charge, and 30 days on standby.



WEIGHT ISSUES Asus' effort isn't the lightest at 1.4kg, but future laptops should get much lighter.

The Knowledge...



IKEA Trådfri

I don't need any more DIY furniture

Ah, yes, we completely understand. But this is something different: it's Ikea's first foray into the world of smart lighting. The Trådfri range consists of a whole bunch of bulbs and associated trinkets, and it's priced competitively with the likes of Philips' Hue. It's also dead easy to get started with.

How easy?

You don't even need to assemble a complex smart lighting setup; you can pick up a white LED bulb and a wireless dimmer for around £15. Pair the two together, and you've moved your light switch from your wall to your hand – and you have a dimmer, something which is an increasing rarity with modern bulbs.

What else can I do?

If you want to take your Trådfri setup further, you can add Ikea's Trådfri Gateway to your router. This talks to all the bulbs in your house, and gives you full control of them all from an app on your phone. There's also a ten-device remote control available, which makes the process of managing your lights super-simple.

Any colours?

You're not left out if you're looking for a more luminous experience – there's an RGB strand of the Trådfri on offer, and you can get full control of the colouration via the app. Zigbee integration means you can also, after a fashion, combine Ikea lights with Hue bulbs.

Zigbee? What's that?

It's a combined standard method of communication for smart home devices. All being well, if manufacturers adopt it, Zigbee will mean the smart home of tomorrow can be controlled by one app rather than a massive collection of them. But that does rather depend on everyone playing nice – Ikea has only recently added Zigbee support, so it's certainly something that can be tackled on after the fact.

Everyone's talking about

Forced device slowdown

Everyone thought the idea of planned obsolescence was a myth, but it's much closer to the truth...

Apple is in hot water. After discussion by iPhone users on Reddit, and a deeper investigation by Geekbench developer John Moore, the company was found to be deliberately slowing down devices with older batteries, often dropping them to less than half the speed of units with fresh batteries.

Ostensibly this was a move to improve stability; the software update that introduced the change was designed to stop random phone shutdowns. Apple, when discovered, admitted the practice and offered owners cut-price battery upgrades. Nonetheless, it's fired up a debate. Should companies be allowed to forcibly slow older hardware, even if it's for ultimately benevolent reasons?

The answer isn't clear, given how hard deliberate slowdown is to prove, but Apple's tactics have been seen as underhanded by some, including the members of multiple international class action lawsuits and criminal action filed by Halte à l'Obsolescence Programmée (Stop Planned Obsolescence) in France. The latter group is leaning on a 2015

French law that makes it illegal to "deliberately reduce the lifespan of a product to increase the rate of replacement". This is, technically, the opposite of what's happening – Apple appears to be attempting to increase the lifespan of older phones – but credit to the group for trying, at least.

The notion of planned obsolescence has been around for a while, and it's not hard to see why. Older machines, with newer operating systems or software, tend to run more slowly. In most cases, this isn't an Apple-style slowdown. It's down to more advanced software – programmed in a less efficient manner – not finding the power it needs to perform.

That's something no lawsuit is going to fix, although the increase in legal wrangling may make gadget makers – particularly those who also produce the software for their devices – think twice about the impact their updates will have on older devices, or be transparent about slowdowns. Maybe the end result will be that your next phone or laptop will last a lot longer...



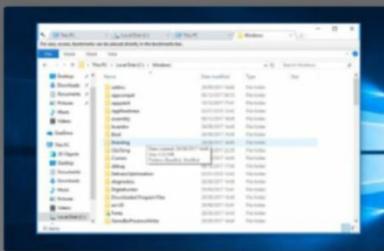
Download this...

Clover

en.ejje.me

Last issue we looked at the forthcoming Windows Sets feature, which groups your Windows into switchable tabs. If you just can't wait for that to arrive – and, realistically, nobody's sure when it's going to land – then Clover is an interesting alternative. It doesn't do everything Sets does, but it does add tabs to your File Explorer windows, meaning much less clutter when managing your files.

The installer interface is in Chinese (just hit the large button in the middle of the installer Window to set it off) but the rest is in English; once it's ensconced in your machine, you'll get Google Chrome-style tab management, including a bookmarks bar, dockable (and undockable) tabs, and the ability to click any folder with the middle button of your mouse to open a new tab there immediately. Once you've started using it, you'll never want to stop.



OVER LIKE CLOVER Tabs make file management an absolute breeze.

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THE 60-SECOND QUIZ

Pens at the ready, your time starts now!

1 Which unit of data storage is larger?

- A Gigabyte
- B Gibibyte
- C Megabyte

2 OK – which of these is smaller?

- A Petabyte
- B Yottabyte
- C Zettabyte

3 There are eight bits in a byte. How many in a nibble?

- A One and a half
- B Three
- C Four

4 1958's Setun was a Russian ternary computer. What units did it use?

- A Trytes
- B Bytes
- C Frights

5 How many 'trits' did that unit consist of?

- A Three
- B Six
- C None

6 Which of these has not been used to refer to a storage unit?

- A Dynner
- B Playte
- C Fyrk

Answers 1B, 2A, 3C, 4A, 5B, 6C

NEXT ISSUE ON SALE

Friday

02

March

Facts & figures

Rob Mead-Green reveals a host of fascinating digital facts



1.2 BILLION

Value of Dogecoin – an open-source cryptocurrency, which was originally created as a parody of 'real' cryptocurrencies, such as Bitcoin, and based on a meme about Shiba Inu dogs.



2.8 MILIKELVIN

Record low temperature achieved by the world's coolest-running computer chip. Scientists at the University of Basel in Germany used magnetic fields to eliminate heat from the specially developed nanoelectronics chip, which managed to run at near-absolute-zero temperatures for up to seven hours.



Number of people worldwide who now subscribe to Spotify's premium music streaming service, an increase of ten million since July 2017. Its nearest rival, Apple Music, has 30 million subscribers.

50TB

Amount of classified data stolen by a contractor at the US National Security Agency. The accused, who faces at least ten years in prison if found guilty, was working at the same firm where Edward Snowden was employed when he leaked top secret files in 2013.



Total sum spent by UK residents on movies, music and games in 2017, according to the Entertainment Retailers Association (ERA). 71.9 percent of that sum was spent on digital services such as Netflix, Sky, Amazon and Valve.

>> Incoming

The hottest new Windows hardware on the horizon



Intel NUC 8 Enthusiast

Price £TBC, www.intel.com

Intel's Next Unit of Computing (NUC) has always been about showcasing the chip giant's next generation technologies, and the NUC 8 Enthusiast barebones, small form factor PC is no exception.

Revealed at CES 2018, the NUC 8 Enthusiast comes with an eighth generation Intel Core i7 CPU, plus an AMD Radeon RX Vega M discrete graphics card – something that's surprising given the intense rivalry between Intel and AMD.

Measuring just 221x142x39mm, the NUC 8 Enthusiast is clearly ideal for stowing in the living room (it even offers a VESA wall mount) and is capable of handling both 4K graphics and Virtual Reality (VR) – all you need to do is add your own storage and RAM. There are two models available: an overclockable NUC8i7HVK and a non-overclockable NUC8i7HNK, both of which will go on sale this spring. Pricing has yet to be confirmed.



GO FASTER FOR FREE

Give your machine a much-needed burst of speed with this collection of tools for tweaking, optimising and reinstalling Windows

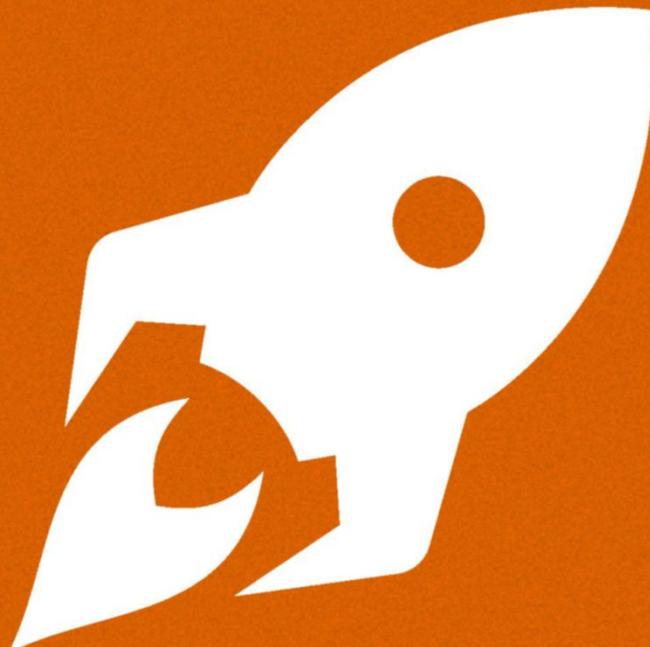


When it comes to outright speed, your PC never seems to have enough of it. Or to put it another way, it doesn't matter how smoothly it's running, your PC could always do with being that bit faster. Armed with the right know-how, you can fine-tune your PC to squeeze more performance from it, but the effort involved can be more than it's worth.

Which is where we come in. In this feature we've dug out 20 of the finest free tools we know that can help speed up your PC. We'll open by revealing lightweight alternatives to the bloated apps you've been using, and then we'll move on to

reveal our favourite tools for fine-tuning your system. Your hardware could use some optimisation too, so we've collected the best overclocking and tuning apps for pushing it beyond its limits. And finally, when you next bite the bullet and reinstall Windows, we reveal five tools that can help safeguard and speed up the process before running you through the steps you need to take to restore Windows to its pristine, like-new form, unencumbered by bloated apps and collected detritus.

Your computer is ready to take its performance to the next level with the help of our essential apps. Turn the page to get started with giving it a much-needed boost of speed.



Lightweight apps

Free up RAM and other system resources to help keep your PC running smoothly with these five alternatives

One of the downsides of the rapidly evolving computer market is that specifications have improved so fast that application makers have rarely felt the need to streamline their programs. Why spend time cutting back the fat when next year's PC will likely be twice as fast anyway?

That's fine if you've just bought a shiny new PC, but most of us like to keep our machines running for several years. Or perhaps you bought an entry level laptop or 2-in-1 device only to find 1GB RAM doesn't go half as far as it used to. Before you know it, opening Office or running your image editor seems to sap your PC of its strength, leaving it sluggish and barely responsive.

In this first section, we've identified five key apps that can bring Windows to its knees and dug out lightweight alternatives. Throw away Office, Photoshop and your bloated security tool and try these alternatives instead. They all make fewer demands on your PC's RAM and are engineered to work efficiently and smoothly, even on older and lower-powered machines.

WPS Office Free

Available from www.wps.com/office-free, this productivity suite is the perfect lightweight alternative to Microsoft Office. The free version replaces Word, Excel and PowerPoint and in addition to preserving the Office ribbon has some neat tricks of its own, such as multiple document tabs, enabling you to easily switch between two or more documents. There's seven-day version history for all the files that you create with it, enabling you to roll back easily. Plus there's a drag-and-drop tool for adjusting the layout of individual paragraphs in your documents.

Crucially WPS Office Free has a small footprint too, consuming noticeably less memory than Microsoft Office, and there's even a PDF to Word tool that can convert documents of up to five pages. The free version is ad-supported, but they're not too intrusive.

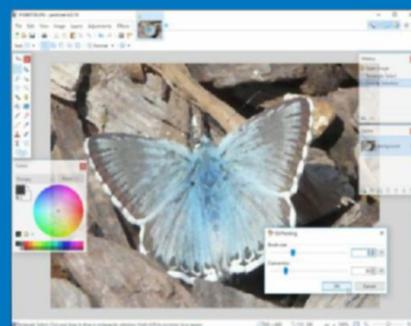
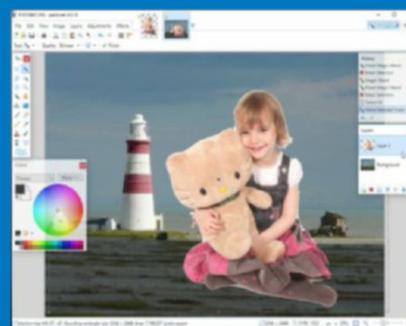


Faster, leaner image editing for free...

Paint.NET (www.getpaint.net) sits beautifully in the middle between Photoshop (too powerful and bloated) and Paint (too basic), offering the best features of the former without bringing your PC grinding to a halt.

In addition to the standard editing, compositing and colour-correction tools you'd expect, Paint.net also includes some powerful and useful options too.

For more fantastic – and free – Photoshop alternatives, turn to page 88 of this issue.



1 Multiple layers

Multi-layered images enable you to lay parts of one image on top of another for all kinds of creative effects. Paint.NET has full support for layers, with a transparency slider and choice of methods for blending one layer into another for the perfect image.

2 Powerful filters

Want to do something artistic with your photos? Paint.NET has built-in filters that offer a range of artistic effects, including rendering your photos in pencil, ink or oil paints. Other filters produce blurs, sharpen and distortion effects just like Photoshop.

SumatraPDF

Looking for the lightest, fastest way to view PDF files outside your web browser? Sumatra PDF (www.sumatrapdfreader.org) takes up just 5MB of RAM and can read several eBook formats – including ePUB and the Kindle-friendly MOBI – too.

It's lacking in features – you can't create PDFs from other files, for example – but because it's available in portable form, it's worth adding to your toolkit so when you want to read, search or print a PDF or other eBook file, you can save time and use this. Should you need more features, install Foxit Reader (www.foxitsoftware.com/pdf-reader/) – in fact, why not run both side-by-side with SumatraPDF your default reader, using Foxit only when you need features such as creating PDFs from other documents?



MPC-HC

One area where your computer can be brought grinding to a halt is when you fire up your media player. MPC-HC (<https://mpc-hc.org/>) isn't just a lightweight media player capable of playing a wide range of video formats, it can play DVDs and some Blu-rays too. It's not short on features either: a Favourites menu enables you to create shortcuts to frequently watched films; you can apply various filters to improve playback quality; and it supports subtitles. It even supports video capture devices, so you can stream digital TV from a compatible tuner.

While you can play music through MPC-HC, we recommend the similarly lightweight and easy-to-use MusicBee (<https://getmusicbee.com/>).



3 3D Rotate/Zoom

Want to recompose your image? Select Layers > 'Rotate/Zoom...'. You'll find sliders for zooming, panning and rotating your picture in both 2D and pseudo 3D. Tick 'Preserve background' to try and fill in the backdrop when 'rolling' in 3D.

2 Plug-in support

Paint.NET also includes support for hundreds of specially designed plug-ins – visit www.getpaint.net/doc/latest/InstallPlugins.html for details. These add extra filters and tools, such as Photoshop file support and a Shadow/Highlights recovery tool.

Bitdefender Antivirus

If your PC is creaking under the demands of your bloated security package, or you're looking to protect a low-powered device like your Windows-powered 2-in-1 tablet, then Bitdefender Antivirus (www.bitdefender.co.uk/solutions/free.html) has your back. Better still, its lightweight interface and minimal demands don't come at the expense of protection – it regularly scores highly at AV-TEST.

Tune up your system

Discover how to streamline your PC for an extra burst of speed with the help of these powerful – and free – apps

Windows has been designed for maximum compatibility, which means that while it'll run on a wide range of PCs, it's not been particularly optimised for any of them. This is where the selection of apps in this part of the feature come into play. They give you the tools required to speed up your PC

in several different ways. As is usually the case with apps, less is more – there's no point recommending 100 apps whose combined demands outweigh the benefits of using them in the first place, which is why we've pared this down to five apps.

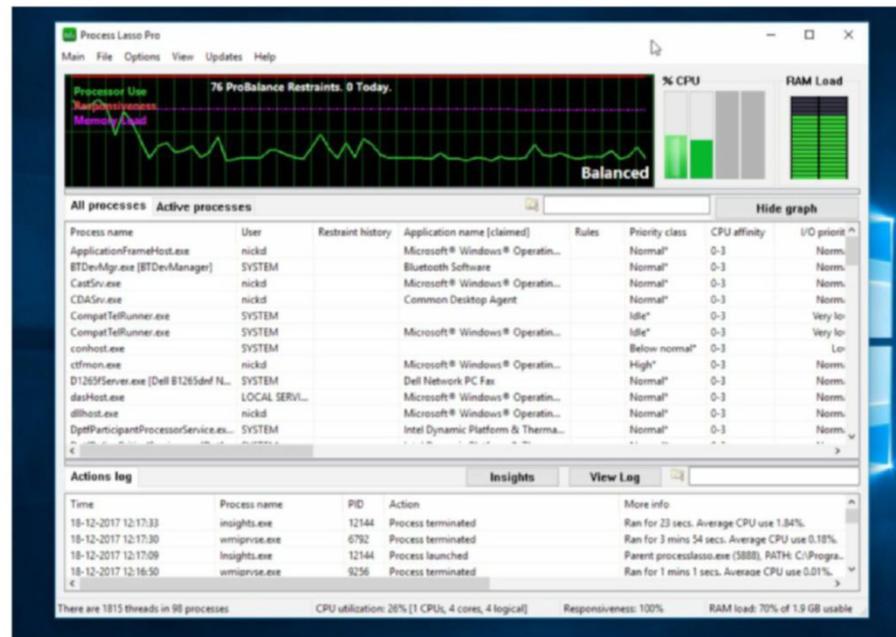
You'll find our favourite tool for managing startup, enabling you to both monitor and improve the way Windows

loads. If you're frequently blighted by lockups, then Process Lasso will keep those runaway programs in check. There's also a safe tool for tweaking low-level Services to free up more system resources, JetBoost for temporarily halting unnecessary processes when running games or other demanding applications, and a handy defrag tool to build on Windows' own.

Process Lasso

If your machine frequently appears to stop responding or grinds to a halt momentarily, then the culprit is usually a program or system process that's making excessive demands on your system to the detriment of the dozens of other running programs and processes, including Windows itself.

This problem is particularly acute on older or lower-powered PCs with 2GB of RAM or less where there's less memory to go around. Process Lasso (<https://bitsum.com/>) is designed to monitor your PC's processes – when it detects one making runaway demands, it reins it in by temporarily lowering its priority to ensure your PC keeps running smoothly. The free version includes all the core functionality, or upgrade for more features: a lifetime single user licence for the Pro version costs £27. Home Pro (£34.88) covers every PC in your home.

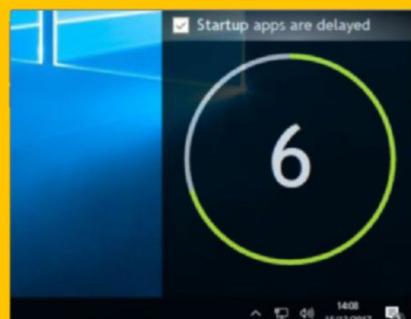


Monitor and improve Windows startup...

BootRacer (www.greatis.com/bootracer/) has become our go-to app for managing startup. Not only does it enable you to see which programs are launching with Windows, it times everything too, enabling you to keep an eye on the boot process and giving you a heads up should some resource-sapping program suddenly insert itself into the start-up process. Here's a quick rundown of its key features.



1 Time your start
The first thing BootRacer does is measure your start time from the moment your PC is switched on until your start-up apps finish loading. This helps you identify bottlenecks at different points of the process, so you can target your troubleshooting.

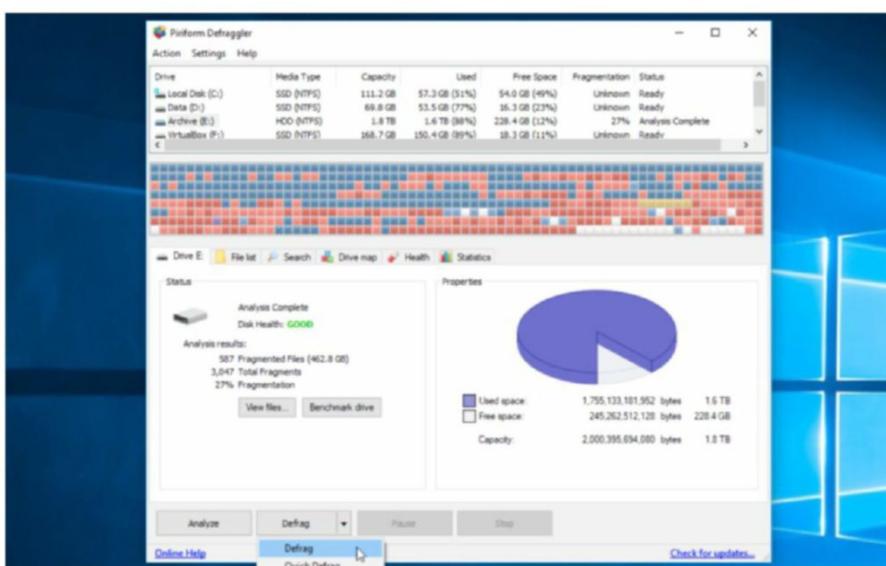
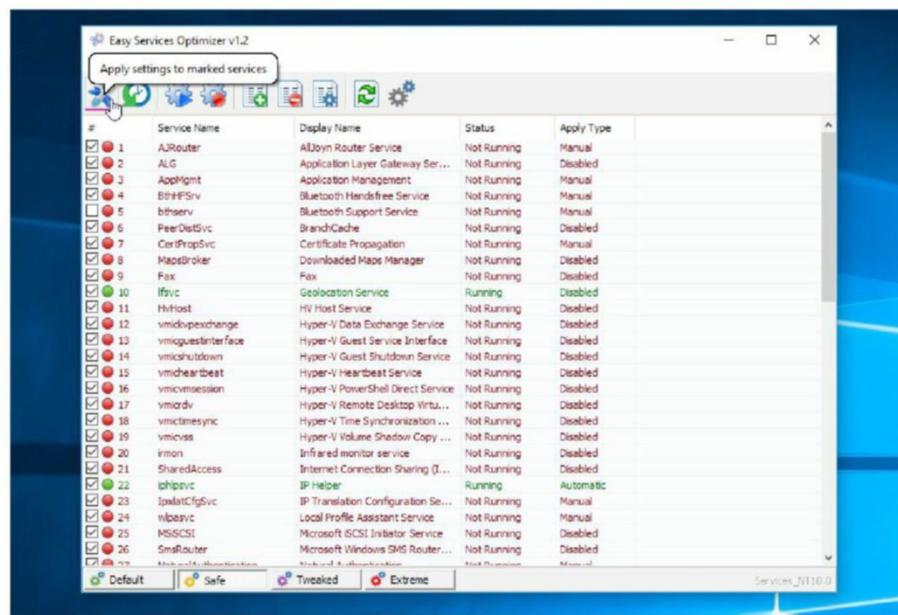


2 Delayed start
BootRacer also inserts a delay of ten seconds to the start-up process to give Windows a chance to finish loading before any start-up programs are launched. This helps stop your PC from being overwhelmed by demands for system resources.

Easy Service Optimizer

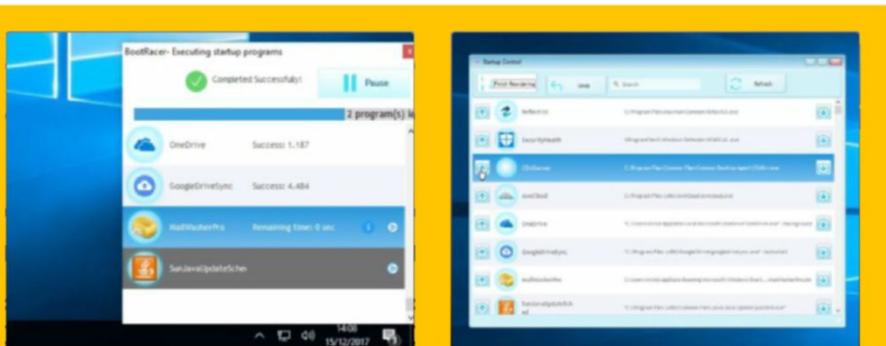
Services are special low-level programs that run in the background performing numerous functions. Each one uses its share of system resources and – armed with the right know-how – you can selectively disable them to free up memory and processor time. But why do it by hand when Easy Service Optimizer (www.sordum.org/8637/) can do the hard work for you?

The program provides three presets: Safe, Tweaked and Extreme. For most people, Safe is best – it's a 'no-risk' option and you can easily revert to Default if things stop working as they should. Advanced users can go further, and the app enables you to manually tweak individual Services too.



Defraggler

If you're still running Windows off a traditional platter-based hard drive, then keeping it defragged is a must. Windows' own Disk Defragmenter does a good enough job, particularly in Windows 10, but if you want to squeeze even more performance out of your drive, then Defraggler (www.piriform.com) is the tool to turn to. Not only can you opt to move large files to the end of the drive to help speed up performance, Defraggler enables you to defrag individual files and folders too – perfect for quickly defragging a single file without tying up your PC for hours. Defraggler also offers an Optimise option for SSDs, which manually wipes space marked for deletion to boost drive performance.



3 Staggered loading

Furthermore, BootRacer also loads programs in sequence, one after the other – again to balance the demands on your PC. Click the three-line ‘hamburger’ button to reveal a list of all the programs that are loading, along with their respective start-up times.

2 Monitor and manage apps

Click 'Startup Control' from the main program to manage start-up programs. You can disable or delete them from here, and rearrange their running order – for example, to get fast-loading programs launched first.



JetBoost

JetBoost (www.bluesprig.com/jetboost.html) is a tool that quickly shuts down unnecessary services and programs on a temporary basis only. For example, if you play demanding games or encode HD video, JetBoost can deliver a speed boost for the duration, then restore everything for normal operation after – all via its one-click button. Also handy for silencing intrusive apps and notifications while you work.

Overclock your PC

Push your PC's components to their limits and deliver noticeable speed improvements with these hardware-tuning apps

While there's no substitute for hardware upgrades to deliver the ultimate performance fillip, the fact remains it's likely that various components in your PC aren't being pushed to their absolute limits. By default, many components are configured in a conservative fashion, but armed with

the right tools you can start squeezing them that little bit further.

It's worth noting that overclocking – the process for speeding up your processor, RAM and graphics – will ultimately shorten the lifespan of these components, particularly if their core temperature rises. Thankfully, our recommended tools have built-in fail-safes and monitoring mechanisms

so you can check that your tweaks aren't going to bring your PC to its knees.

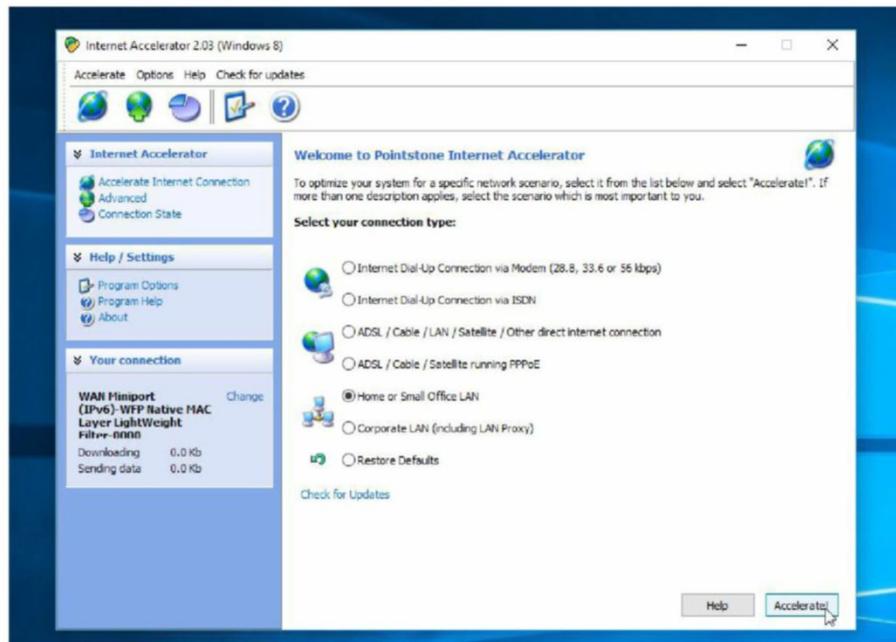
You'll also find out how to speed up other hardware areas too – this time without introducing undue stress. Expect to deliver minor speed bumps to your solid-state drives (SSDs) and Internet connection – also make sure you update your drivers to ensure the latest, fastest ones are in place.

Internet Accelerator 2

This free tool, which you can download from www.pointstone.com/products/InternetAccelerator, will work best on older machines running Windows 7 or earlier. It's designed to make it easy to tweak various Windows settings relating to your network connection, which can have a positive effect on various Internet-related activities.

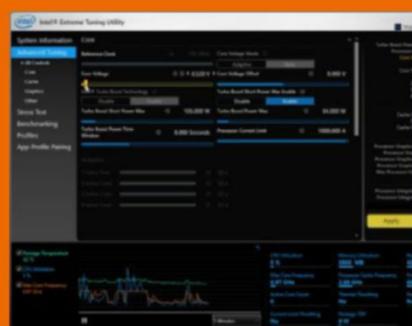
Internet Accelerator 2 won't physically increase the speed of your connection, but it will optimise your settings to make full use of the available bandwidth. It ensures your downloads, web browsing and so on are going as fast as they're able to.

To use it, select your setup type (home or small office LAN for most), then click 'Accelerate!' to see if you can speed things up.



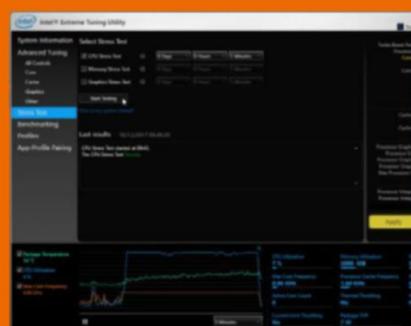
Overclock your PC

One way you can speed things up is by overclocking your processor so both it and your RAM run faster than they were designed to. There are dangers with this approach – overheating can shorten your components' lives – but official tools help to minimise the danger. AMD users should install AMD Overdrive (www.amd.com/overdrive); Intel users should download and install the Extreme Tuning Utility (<http://bit.ly/extrtunutil>).



1 Overclocking made easy

Your overclocking options with Intel's utility vary according to the processor you have – some will be incredibly limited, others will offer more scope. If supported, the utility will also enable you to overclock the onboard graphics.



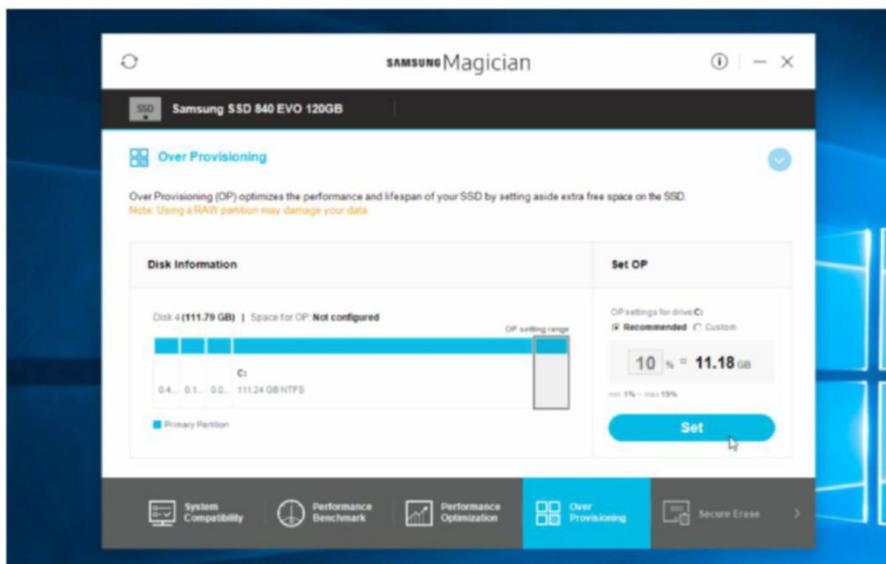
2 Test your overclock

After tweaking your settings (visit <http://bit.ly/pcgoclock> for a detailed guide courtesy of PC Gamer), select Stress Test to perform a five-minute stress test across processor, memory and/or graphics depending on what you overclock.

MSI Afterburner

Overclocking your graphics card won't turn it into the latest model, but it can improve performance to make barely playable games run that bit more smoothly. If your PC comes with an AMD or NVIDIA graphics chip, then MSI Afterburner (www.msi.com/page/afterburner) has your back.

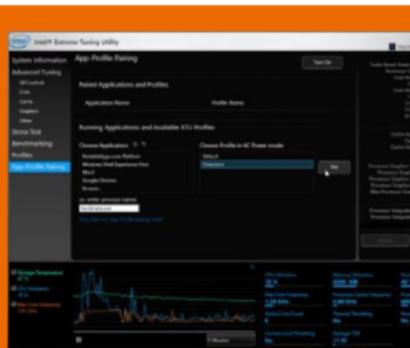
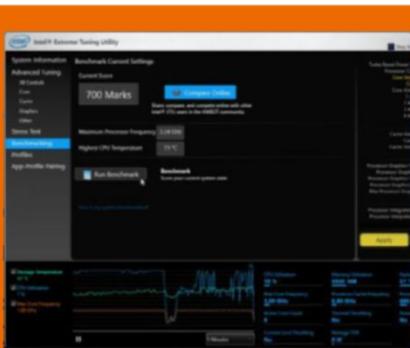
It works by enabling you to tweak your chip's clock frequency and voltage while also giving you control over any onboard fans to help to try and minimise the temperature increase. Better still, there are real-time monitors to show you the effects of your overclock too. Remember – you risk damaging your graphics card by overclocking, so use with care (if at all).



Solid-state drive (SSD) utilities

Is your SSD drive running to its maximum? Make sure to visit your drive manufacturer to download and install any software tools. These alert you to health issues, provide firmware updates, and may offer settings to tweak performance. For example, Samsung Magician (<http://bit.ly/2CUTU7>) offers a Rapid Mode switch as well as Over Provisioning, which reserves free space on your SSD to further aid performance and lengthen its lifespan.

Similar tools can be found for OCZ (<http://bit.ly/2DnDgU4>), SanDisk (<http://bit.ly/2CT9Fk3>) and Crucial (<http://bit.ly/2CQDlym>) among others.



3 Benchmark it

Select 'Benchmarking' to run a quick series of benchmarks to see the effects of your overclocking – benchmark before you start, and perform three benchmarks at a time, taking an average to give you a more accurate result.

2 App-Profile Pairing

Click 'Save' under Advanced Tuning to create a profile of your overclocked settings. Pair this profile with a specific app under App-Profile Pairing, so your PC is only overclocked when needed – for example, when playing games or HD video editing.

Motherboard tools

If you self-built your PC, or know its motherboard make and model (find it with CPU-Z at www.cpuid.com), visit the manufacturer's website where you may find alternative tools for tuning or overclocking your system. Examples include A-Tuning (ASRock), AI Suite 3 (Asus) and OC Genie (MSI). You'll also find the latest drivers here too, some of which may also help to improve your PC's performance.

Reinstall tools

Ensure your next Windows reinstall goes without a hitch with the help of these essential tools and utilities

When you next come to reinstall Windows, it pays to take precautions before you begin in the form of various backups – File History is essential for your personal data, but what about your program settings and how about a fail-safe backup in the event of a botched reinstall or forgotten file?

The reinstall process is also a good excuse to make changes to the way you organise data on your PC's main internal and external drives, while you'll also want to make sure that you have the latest versions of the Windows installation files to save you a lengthy post-install update process.

All these potential problems are covered by our favourite reinstall tools.

You'll find the best drive backup tool in the business rubs shoulders with our favourite free partition editor and the Windows Media Creation Tool, which ensures you have the latest version of Windows 8.1 or 10 on your PC.

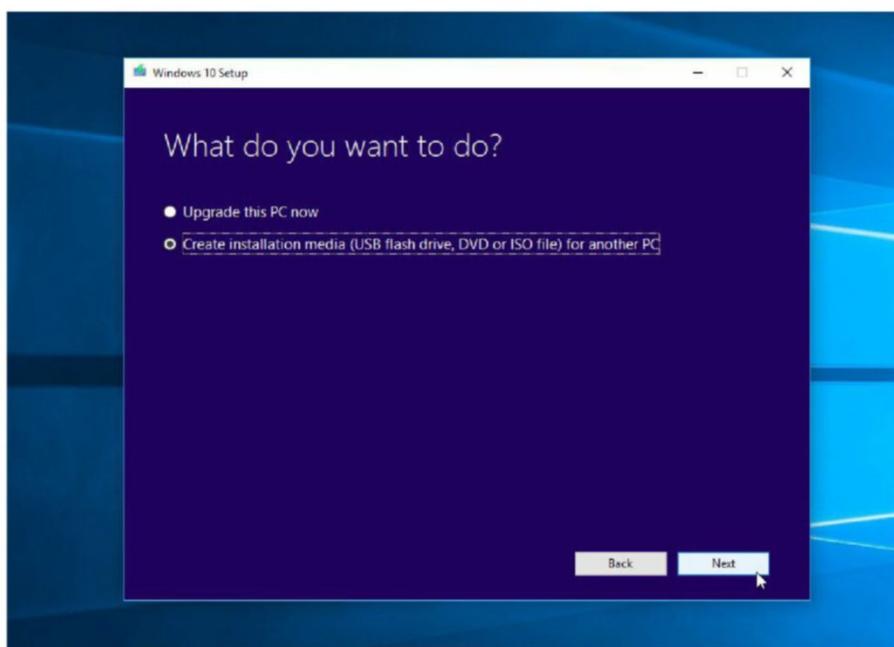
Throw in a couple of other handy applications and your next Windows reinstall just got a whole lot simpler (never mind safer).

Windows Media Creation Tool

The days of relying on an increasingly out-of-date installation disc are long gone. Simply download the Windows Media Creation Tool for Windows 8.1 (www.microsoft.com/software-download/windows8) or Windows 10 (www.microsoft.com/software-download/windows10) and it will walk you through the process of creating your reinstall media, either on DVD or a USB flash drive.

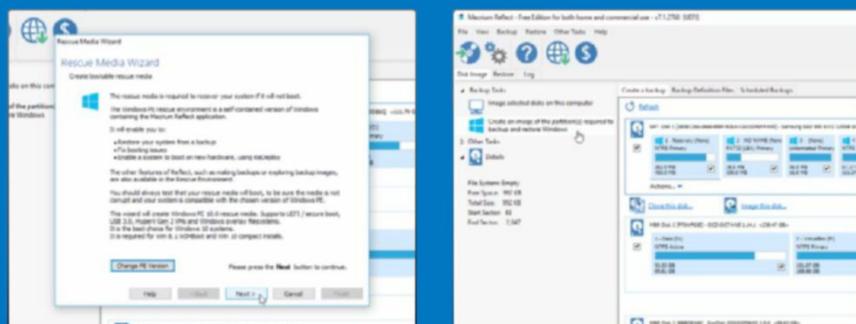
Better still, the Windows Media Creation Tool will also download the latest installation files first – which means if you reinstall Windows 10, for example, you'll get it with the Fall Creators Update already applied.

Always create fresh media prior to reinstalling Windows to ensure you have the latest version.



Take a backup with Macrium Reflect Free

Reinstalling Windows from scratch is a one-way process. Once you've formatted the drive and reinstalled Windows everything you once had is gone. What happens if you forget a key file or setting, or the reinstall process goes wrong and you want to roll things back? Don't worry, Macrium Reflect Free (www.macrium.com/reflectfree.aspx) is just the tool for you – here's how you can use it to protect yourself and your PC files.



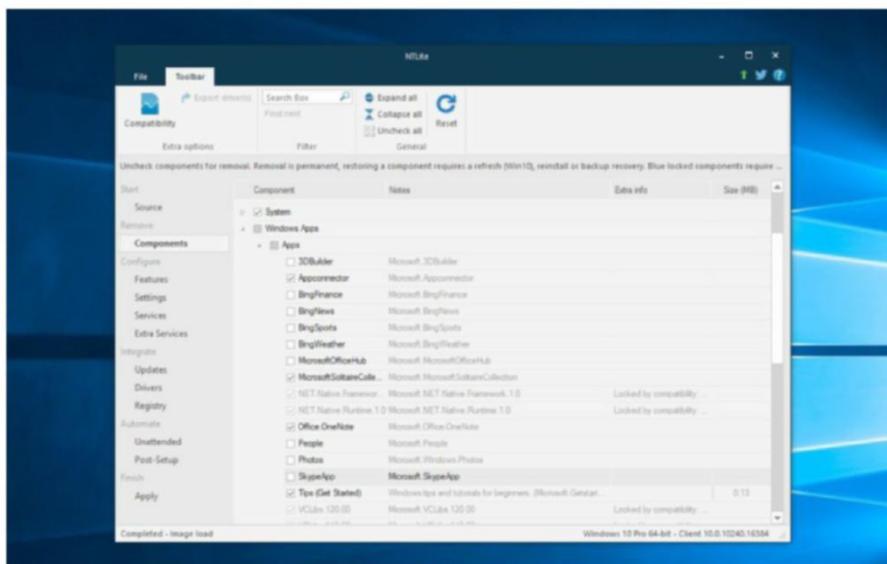
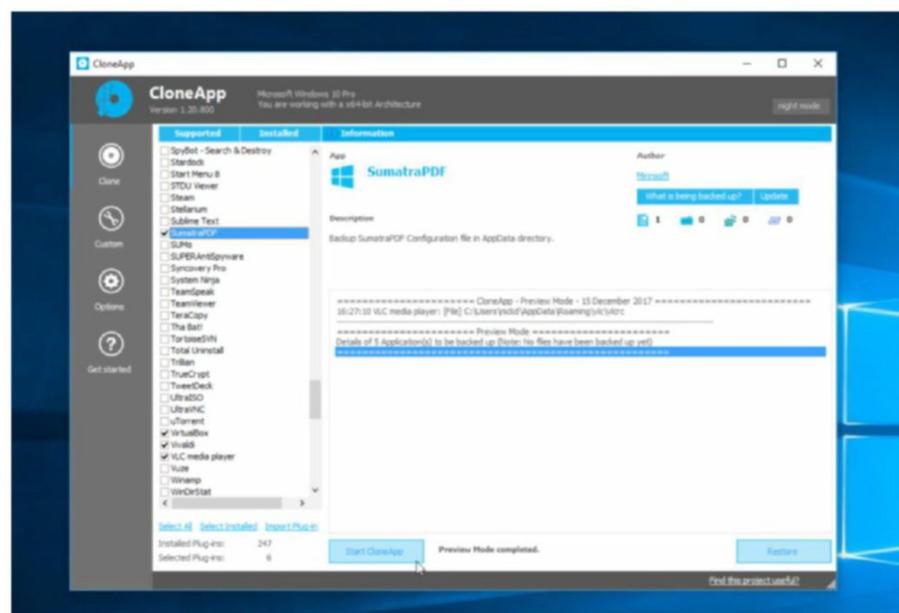
1 Sort rescue media
Launch Macrium Reflect Free and choose Other Tasks > Create Rescue Media to create a bootable DVD or USB flash drive you can use to recover your Windows installation should something go catastrophically wrong with your PC.

2 Back up partitions
Once done, click the 'Create an image of the partition(s) required to backup and restore Windows' button – Macrium will automatically select your Windows partition along with any boot partitions required to boot your PC.

CloneApp

One of the most time-consuming tasks after reinstalling Windows is restoring program settings. CloneApp (www.mirinsoft.com) allows you to selectively backup key directories and Registry settings where apps store their preferences. Nearly 250 program and Windows settings are plugged into the program – just locate your app, tick the box and it'll back everything up, but you can also add your own custom files and Registry entries too.

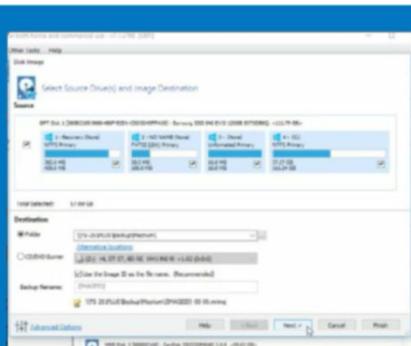
Once Windows and your apps have been reinstalled, just launch CloneApp and click Restore to put everything back again. To selectively restore program settings, open the CloneApp\Backup directory and remove any settings you want to exclude before running CloneApp.



NTLite

Advanced users may feel frustrated at constantly having to tweak Windows after installation. NTLite makes it possible to build customised Windows 7, 8.1 or 10 installation media that not only has all the latest updates included (a boon for Windows 7 users), but which is tailored to your needs: you can integrate specific driver packages, remove unwanted Windows components (with built-in safety mechanisms to protect you from inadvertently removing stuff you might need) and perform various tweaks.

Certain features are restricted in the free edition – purchase the full version for €40 (£36) and you can even perform these tweaks to your current Windows installation, for example.



3 Choose a location

Click the ellipsis (...) next to Folder under Destination to select a suitable folder on your backup drive. Click 'Advanced Options' and tick 'Verify image...' under Auto Verify Image, before clicking OK followed by Next.

2 Check and backup

Ignore the Schedules screen – this is a one-time fail-safe backup prior to reinstallation. Click 'Next', review the backup settings and click Finish. Untick 'Save backup...' and click OK for Macrium to back up and verify the image.

Partition Assistant

AOMEI's Partition Assistant Standard (www.aomeitech.com/aomei-partition-assistant.html) enables you to divide up your PC's storage drive into two or more partitions. Why partition your drive? Doing so enables you to separate your personal data – documents, photos and so on – from Windows and your apps. When you next come to reinstall Windows, your files are already safely stored on another drive.

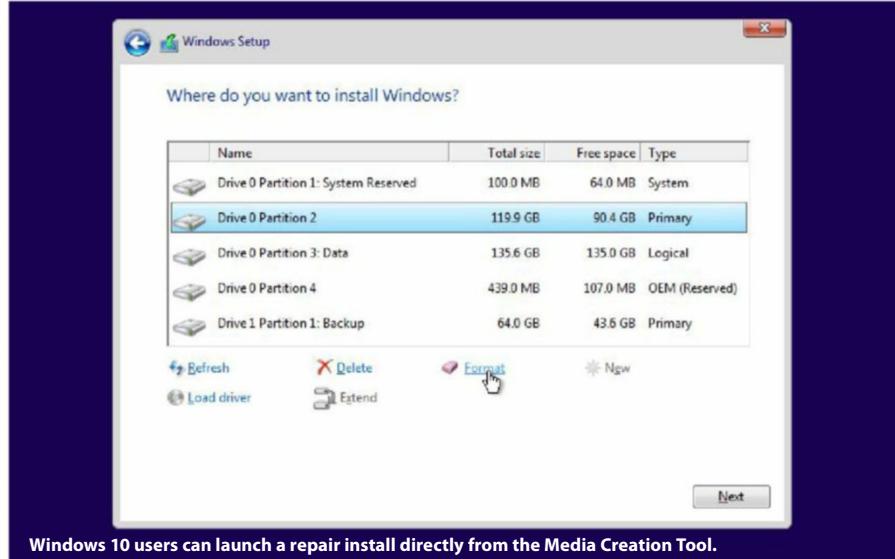
A full, destructive reinstall

If you're looking to wipe the slate clean, or need to recover from major issues, the nuclear option is always the best one

Reinstalling Windows from scratch – namely, wiping your system drive completely clean to install a brand, spanking new (and fresh) version of Windows on to it – is the ultimate choice for anyone looking to revive a slow-running PC or resolve a major, non-hardware issue, such as those caused by malware or a clogged up computer. In this final section we'll step you through the entire process.

Ideally you should have a recent and full backup of your PC, created using either File History or the Windows Backup and Restore tool before you begin, that way you'll lose the minimum of content. A full reinstall really is destructive – nothing left on your C drive will exist once you've finished. You should ensure you have the latest installation media for your target version of Windows – see our section on the Windows Media Creation Tool on page 18 for tips on how to do this. This will ensure a cleaner, more up-to-date installation from the off, thus saving you time bringing it fully up to date once the installation has completed.

It's also worth sourcing networking and graphics drivers now rather than relying on Windows to provide them for you – in most cases, they should be built in, but not always. Consult your PC or motherboard manufacturer's website for these, or visit your Wi-Fi adaptor or



Windows 10 users can launch a repair install directly from the Media Creation Tool.

graphics card manufacturer's site – download them to your backup drive.

Other things to consider: uninstall any products that require activation now – this should deactivate the licences and enable you to use them with your new install without any issues. Also, be sure to have product keys and program installers to hand.

STARTING THE REINSTALL PROCESS

A full destructive reinstall should always be started by booting from your installation media, be it a DVD or USB

flash drive. The actual reinstall process doesn't differ much across Windows 7, 8.1 or 10. You'll be asked to verify your language, location and keyboard are set



Windows 7 and 8.1 users will find a large number of updates waiting to be installed after reinstalling.

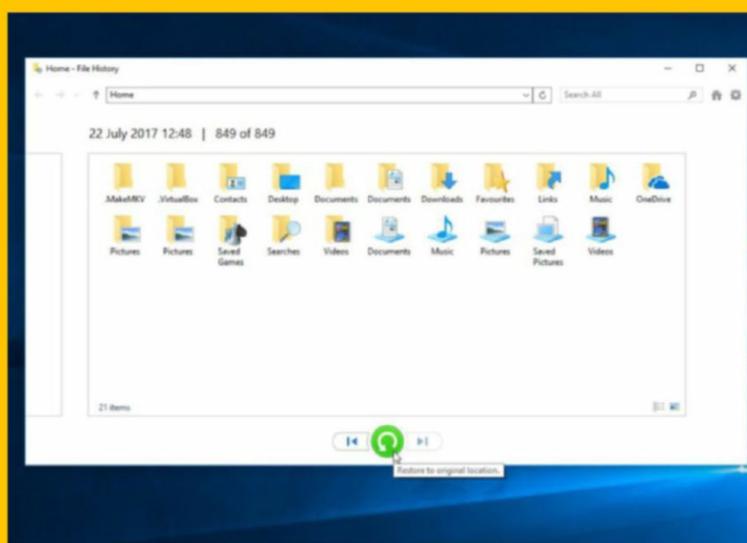
Restore programs, settings and data

Once Windows has been reinstalled, open Windows Update to bring Windows fully up to date – don't be surprised if there are hundreds of updates still to apply in the case of Windows 7 and 8.1. Once it's fully up to date, consider reinstalling Macrium Reflect Free (see page 18) and taking your first drive image – a vanilla backup you can restore in future instead of reinstalling Windows itself.

If you followed the advice on page 19, you should now be able to reinstall your core apps using CloneApp from your PC's data drive. If you click the Restore button, every single

program setting you backed up will be restored – if there are any backup settings you don't want to restore, select Options to locate the backup folder, then open it and move any program folders you want to ignore out of the folder temporarily before clicking the Restore button. Once that's done, take your second Macrium Reflect Free backup.

Finally, open File History or the Windows Backup and Restore tool and take steps to restore any data you backed up, then make sure that either tool is configured to carry on backing up all your precious files going forward.



correctly, then it's a case of clicking Install Now. If prompted, enter your product key or click Skip if you're running Windows 10 on a PC you upgraded during the free period. When asked what type of installation you wish to perform, choose the Custom option.

Next comes potentially the trickiest part of the process. A list of drives and partitions will appear – you need to select the one Windows is currently installed on. By default, it should be detected and selected, but verify it's correct before clicking Format (click the advanced Drive Options button if it's not visible). Click 'OK', then once formatted, verify the drive is still selected and click Next.

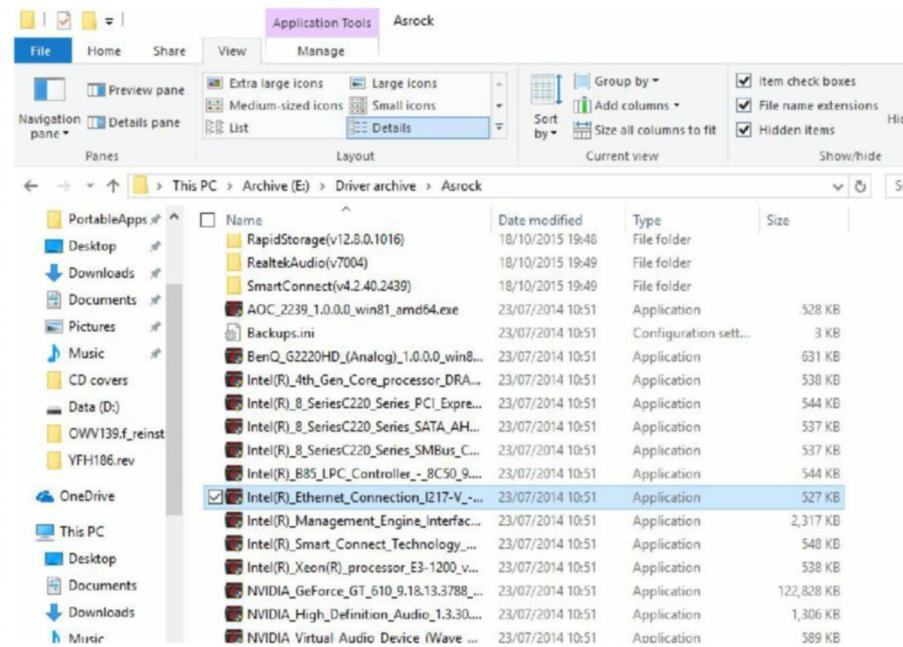
That's the technical stuff pretty much done. You'll see a checklist of tasks to be performed – just sit back and wait. One thing to note: when Windows reboots, you may see the 'press any key' prompt again to boot from CD or DVD. Don't press anything if that happens, just let the installer continue.

"Next comes potentially the trickiest part of the process. A list of drives and partitions will appear – you need to select the one Windows is currently installed on"

SET UP POST-INSTALL

The post-setup prompt begins with Windows 7 users being prompted for their product key, then it's a case of setting up a user account and you're off and running. Windows 8.1 users will get an Express Settings prompt – be sure to click the option to customise these and go through them carefully.

Post-Creators Update, Windows 10 no longer gives you an Express Settings option. For now, confirm your location and keyboard, set up your network if



Make sure you've got network and graphics drivers sourced.

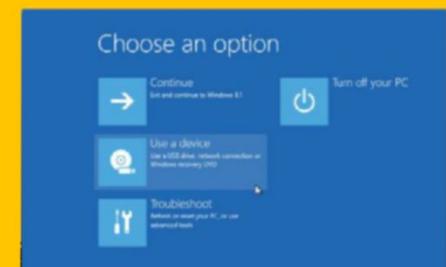
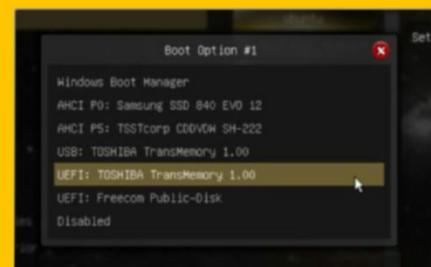
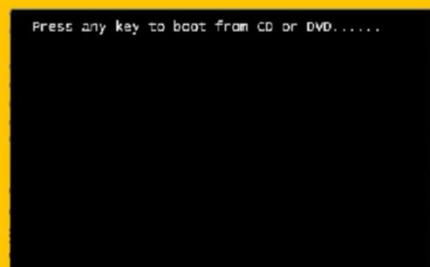
required and choose 'personal use' when prompted. You can either sign in with your Microsoft account or click 'Offline account' > 'Maybe later' if you plan to stick with the old-style Windows 7 local user account.

If you opt for the Microsoft account option now is a good time to set up a PIN to speed up future logins (note: the PIN is tied, specifically, to this PC, and you can always bypass it using your regular account password should you forget it at any point).

You'll then be asked to set up Cortana – this is where Windows 10's notorious privacy settings come into play, so review all of the options carefully, flicking the slider to Off for any you don't need or use.

That's the end of the setup process – Windows will now configure itself based on each of your choices and you'll see a series of messages appear on-screen. Eventually, when all is ready, you'll find yourself back at the familiar Windows desktop screen. ■

Start the install process



1 Reboot for media

If you're running Windows 7, or have Fast Boot disabled, insert your boot media and start your PC. Look for a 'Press any key to boot from CD or DVD' option – even if you have booted from a USB flash drive. Press any key on your keyboard and you should find that the Windows install process starts.

2 Tweak boot options

If you boot back into Windows, restart your PC again, but this time press a key, such as [F11], when prompted to open a boot menu. Once you have done so, select your boot media – choosing UEFI if that option appears – to boot; otherwise, enter setup so that you can change the boot device order.

3 Windows 8.1/10

If Fast Boot is enabled on your computer, open Settings in Windows and then navigate to 'Update & recovery' > Recovery, then click 'Restart now' under 'Advanced start-up'. When the boot options appear, choose 'Use a device' to select the USB flash drive or DVD you created from the list that appears.



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Explore

► WINDOWS TIPS ► INTERNET ADVICE ► EXCITING NEW PROJECTS

Welcome



In this month's Explore section you'll discover all kinds of exciting ways to do more with your PC – from easily editing your home movies (page 26) to getting your laptop ready for life on the go (page 36).

We'll also show you how to make your PC more secure (page 32); and how you can solve those tricky Wi-Fi problems – whether you're dogged by patchy coverage or slow connection speeds (page 38). You'll also discover how to troubleshoot and fix a family or friend's PC with Windows' Quick Assist (page 42).

Rob Mead-Green

Editor

rob.mead-green@futurenet.com

Full listing...

- 26** Easily edit your home movies with Premiere Elements 2018
- 29** Smurf smarter with Vivaldi
- 32** Make sure your PC is sure as can be with our ultimate guide
- 36** Get your laptop ready for life on the go with these tips and tricks
- 38** Extend your wireless broadband range with this step-by-step guide
- 40** Get things done with the Microsoft To-Do app
- 42** Get remote access to a family or friend's PC with Quick Assist

Your guide
Ian Evenden says...

"Premiere Elements 2018 makes editing your home movies easy and fun!"

*Turn to page 26
to find out more*



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Customise Windows to work your way

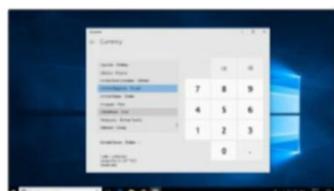
We all know how to do the basics but getting the most from Windows isn't always easy. Our dedication to the operating system means you get the very best tips and tricks for all versions of Windows.

Get more from your favourite websites

We all have our list of favourite sites but often we miss out on great features because they're difficult to use or hidden from sight. We'll show you how to do more online, for a more satisfying web life.

Discover new programs with our help

From speed-up and security software to superb photo apps, there's always something new to try on your PC. The Windows Store in Windows 10 and Windows 8.1 is packed with software to download.



Learn how to...

Easily edit your home movies



Your guide *Ian Evenden* says...

"With Premiere Elements 2018, it's easy to turn those phone videos into something more professional"

At a glance

Skill level...

- ▶ Anyone can do it
Straightforward
Tricky in parts

Suitable for...

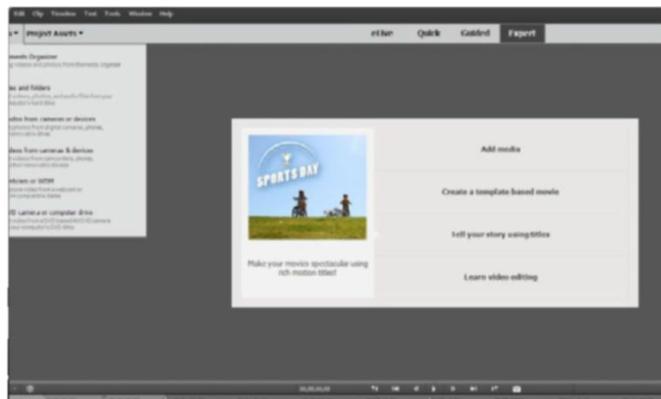
- Windows 10
- Windows 8.1
- Windows 7

Video editing is rather a different beast to photo editing. Not only can you apply effects and corrections to your movies as you would a photograph, but you also get to piece together a narrative and enhance it with audio, titles and more.

This means a video editing app will look and feel different to a photo editor. If you've never used one before, it can feel very much like being thrown in the deep end and then being expected to swim. It can be rather intimidating if you don't know what you're doing.

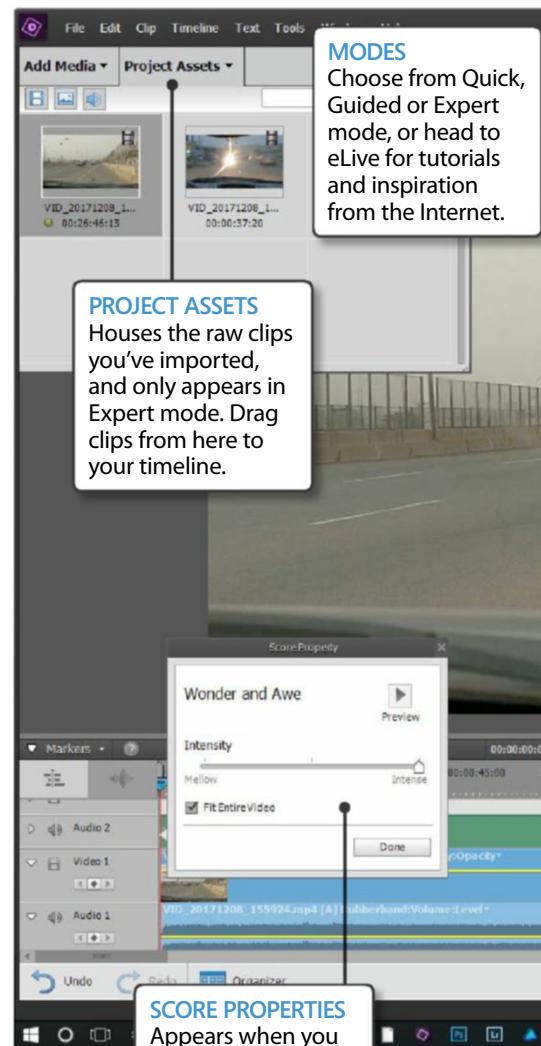
Adobe's Premiere Elements 2018 app comes with tutorials that teach you how it works and, even better, is available as a 30-day free trial. With its Guided mode, you'll be able to follow tutorials for all skill levels, from getting started with the app to adding animated graphics to your movies. Let's take a look.

Step-by-step Edit your home-made videos



1 Add your media

The first thing you need to do is import your video files into Premiere Elements. Well, first you have to shoot some footage, but we'll assume you've done that. You can import footage from your camera, a DVD, or from files on your PC. You can also use the Elements Organizer, a useful companion app that takes a lot of the hard work out of organising your media files on your PC.

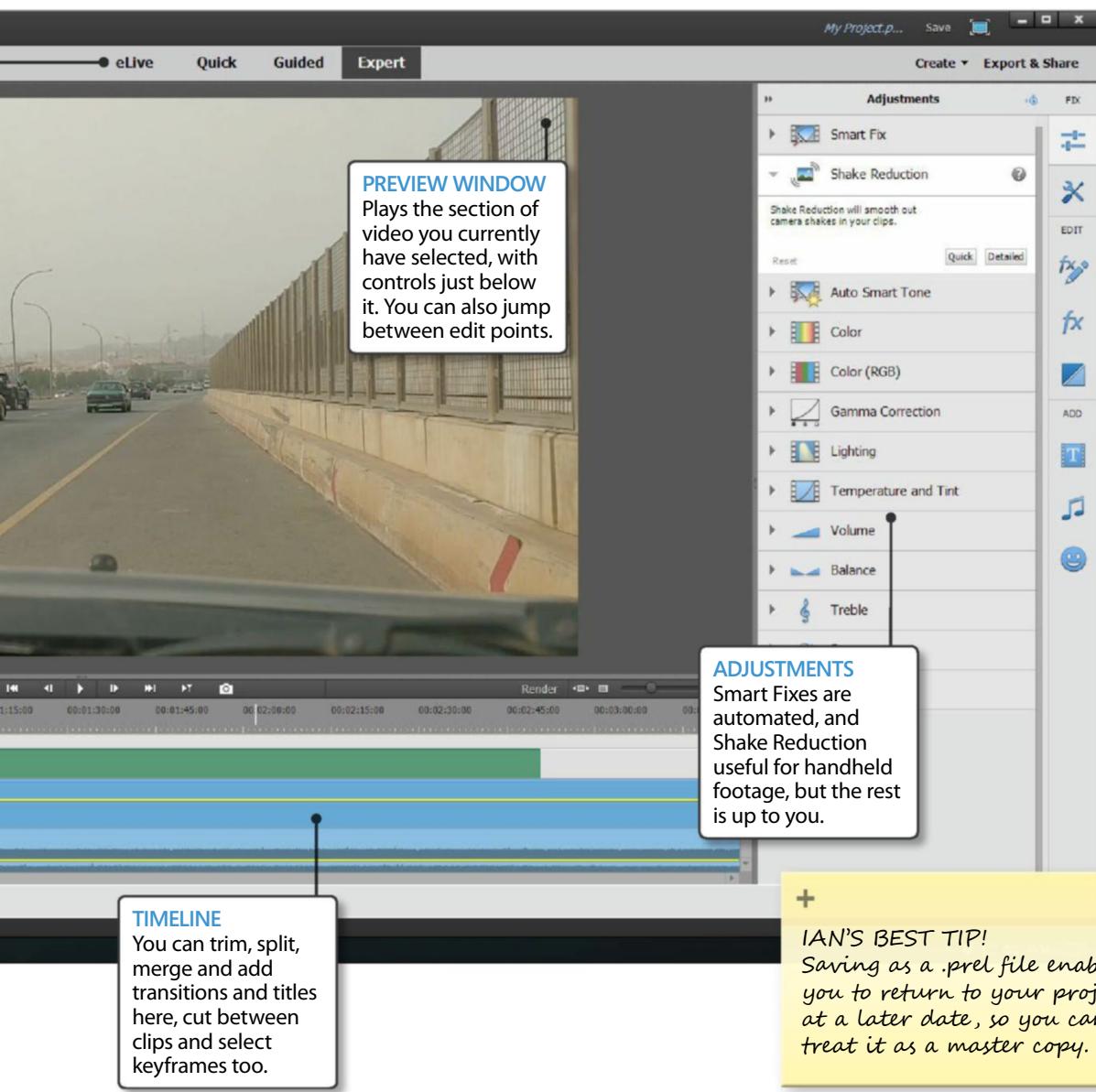


SCORE PROPERTIES
Appears when you add an audio track. Set the intensity of the track, or stretch it out so fits the length of your video.



2 Meet the Timeline

The first thing you'll notice when you've imported a video clip is the way it appears on the **Timeline** at the bottom of the interface. You can drop more clips onto the Timeline, dragging them from the Project Assets box if you're in Expert mode, or using File > Add Media From to tack them onto the end of your timeline if you're in the other two modes – Quick or Guided.



3 Current Time Indicator

Editing your movie then becomes like a sculpture, removing the bits you don't want to reveal the artwork within the block of stone. The red line on the Timeline is your Current Time Indicator (CTI) which progresses through your movie as you play it in the preview window, and shows you exactly where you are. Moving it left and right previews different sections of your video.



4 Trimming

To snip footage from the beginning or end of your video, move your mouse pointer to the end or start of the timeline, until it becomes a double-headed arrow with a red square bracket on it. With this pointer, drag into your clip either from the left (start) or right (end) to select the footage to be trimmed. Release the button and the timeline will reflect the new start/end point.



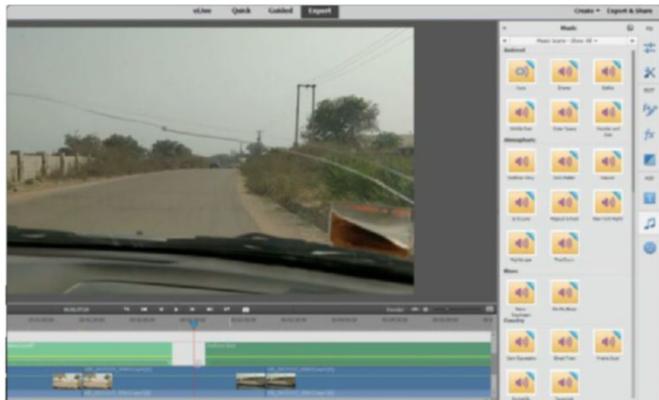
5 Splitting a clip

Splitting a clip makes it into two separate ones that can be adjusted independently. Move the CTI to a point in your Timeline you'd like to insert a split, and click the scissors icon that appears next to the red line. The areas to the left and right of the CTI will change colour. Now you've split the clip, you can trim the newly created ends, insert a transition between the two, or do both.



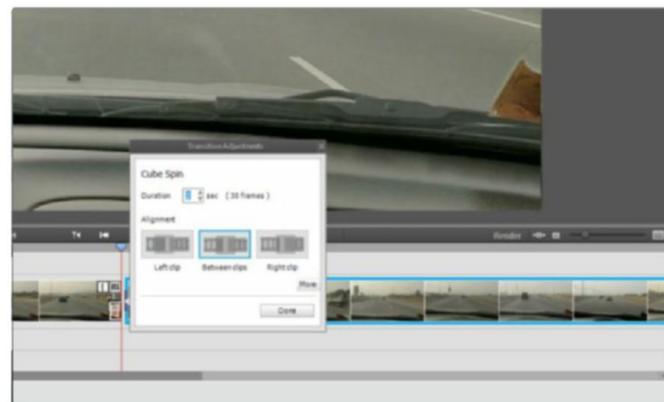
7 Add titles

Titles and Text lives on the right toolbar, looking like a 'T' on a filmstrip. Click this, and a panel opens with a huge selection of text styles for your titles. Some of them need to be downloaded if you've not used them before, so make sure you're connected to the Internet. Drag your chosen style to the beginning of your clip, or after a prologue section, and put end credits at the end.



9 Audio

There are many audio clips in Premiere Elements. Click the Audio button on the right, looking like a musical note, and drag them onto the audio part of your Timeline. Again, they may need to download first. Once on the Timeline, audio clips are treated like video clips, and can be split and trimmed to fit. If you find one you like, a single checkbox makes it last the length of your movie.



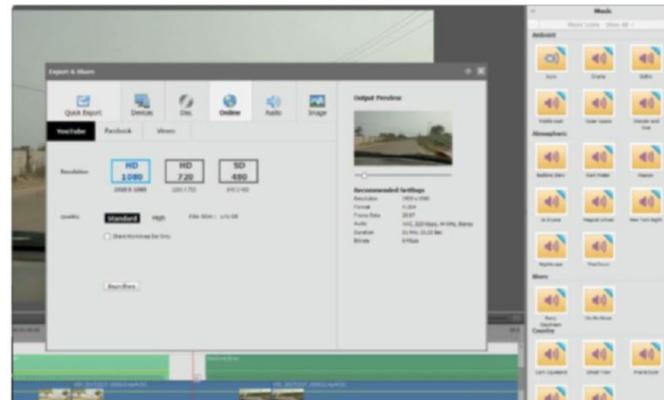
6 Transitions

A transition is a way of moving from one scene to the next. Open the Transitions panel from the right-hand toolbar – it looks like two triangles in shades of blue. Choose the transition you want from the selection on offer, and drop it between two clips on your Timeline. It can be hard to see, but it appears as a thicker blue line across your video Timeline. Drag the CTI to preview it.



8 Custom text

The text adjustments panel can be opened by double-clicking your titles on the Timeline. Select the existing filler text to replace it with your own, then either choose a font and size from Text, or pick from one of the previews on the Style panel. Animation is the next one over, and lets you fade your text in, appearing letter by letter, or perhaps spinning onto the screen.



10 Save and export

Saving your project gives you a .prel file, which only opens in Premiere Elements. To play your movie somewhere else, you'll need to export it. Choose 'Export and Share' from the File menu, and in the window that appears you'll find presets for devices and video sites, such as TVs, phones, YouTube or Facebook. Custom settings are available too. Give it a name and hit Save. ■

Learn how to...

Get started with Vivaldi

It might not be the biggest name in web browsers, but Vivaldi's range of unique features definitely make it worth a look

You might be more used to surfing the web using programs such as Internet Explorer, Edge, Mozilla Firefox and Google Chrome, but they're not the only browsers out there.

Vivaldi is a relatively new arrival on the scene, having been around for less than two years, but it's no slouch. Its web page

rendering engine, known as Blink, is precisely the same as the one used in Google Chrome, and it includes a host of features you won't find anywhere else.

It's a web browser built to keep you organised, to help you browse in comfort, and help you do more: it's compatible with most of the extensions available to

Google Chrome, for example, barring those that change Chrome's user interface, so you can really make it your own.

Admittedly Vivaldi is not particularly popular yet, grabbing only a 0.04 percent share of the world browser market, but don't let that stop you giving it a try – we'll walk you through its key features here.

Step-by-step Install and master Vivaldi



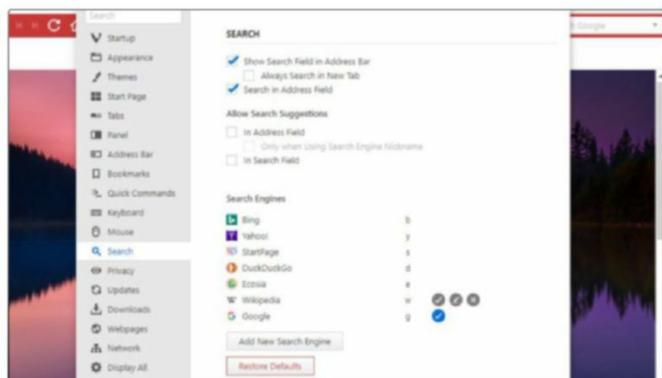
1 Get the browser

In whatever web browser you like – we're using Edge – head to www.vivaldi.com and click the big Free Download button to set Vivaldi on its way to you. Once it's downloaded, run the installer and click the 'Accept and Install' button to confirm that you agree with the terms of service and unpack Vivaldi onto your PC. When everything is complete, Vivaldi will run for the first time.



2 Early choices

Your first choice is to select Vivaldi's colour scheme. The browser will change colour as you use it, depending on the page you're viewing, so pick a base scheme which you're comfortable with – maybe steer clear of Hot Pink. Next, select where your browser tabs appear; you'll be used to them being at the top, and since this takes the least screen space, stick to this option for now.

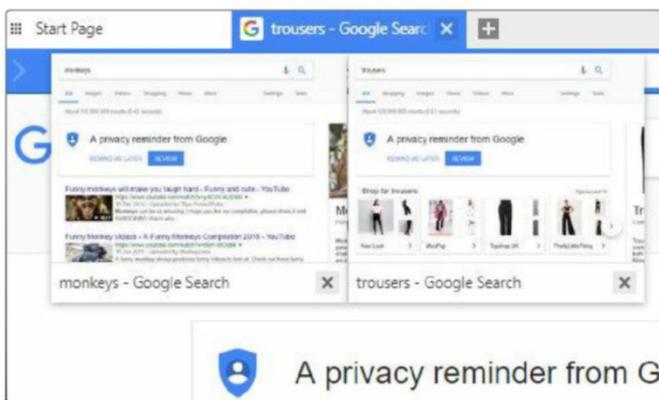


3 Touch ups

Next you'll be able to pick a background for the Vivaldi start page, then click the Get In Touch button to see more options. Vivaldi is built on, and for, its community. For now just click Start Browsing to see Vivaldi's opening page, called Speed Dial. There's a lot here you won't want, so clean it out by hovering over any unwanted links and clicking the '-' icon at their top right corner.

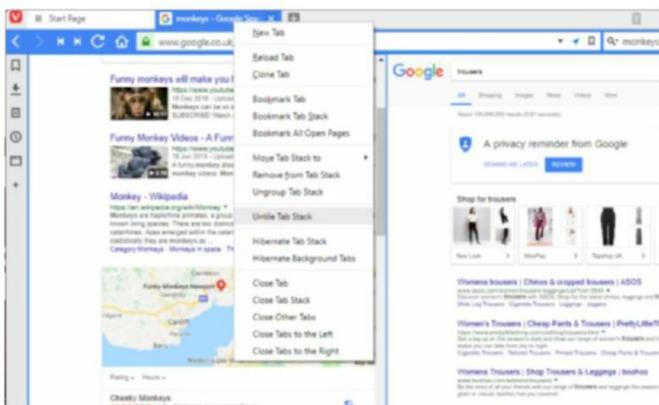
4 Set it up

Click the cog in the bottom-right corner of the Vivaldi window, head to the Search tab, and set Google as your default search engine. You'll see a bunch of keyboard shortcuts next to each search engine here; if you ever want to search, for instance, Bing, you can just type its shortcut followed by a space in the search or address bars at the top, then add your query.



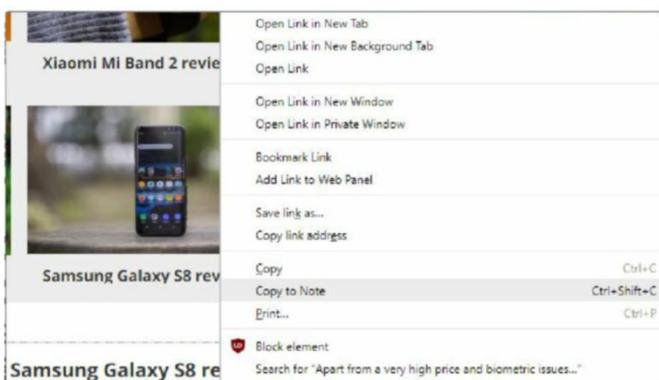
5 Stack 'em up

The way Vivaldi handles tabs is one of its best assets. To see how it works search Google for something, then open a new tab with the '+' button in the tabs bar and search for something else. Right-click one of the tabs, then select 'stack tabs by host'. This consolidates everything from Google into a single tab – to switch between them, hover over that tab and pick the one you want.



6 Tiling tabs

One of the most irritating things about most web browsers is using several pages side by side; comparing information from one web page to another often involves a lot of clicking – not so in Vivaldi. Right-click your tab stack and select Tile Tab Stack to split your browser window in two; repeat the action and select Untile Tab Stack to go back when you're done.



7 Make a note

Tiling isn't the only way to keep information handy. If you're doing research, Vivaldi's Note function is hugely useful. Highlight some text on a web page by clicking and dragging it, right-click the highlighted text, and select 'Copy to Note'. Not only does this copy the text, it also takes a screenshot of the page you're looking at for later reference. You can sort your notes into folders, too.

TOP TABS
Managing tabs is at the heart of Vivaldi. Tabs don't have to be placed at the top – you can put them wherever you like.

SUPER SIDEBAR
In Vivaldi, you can access bookmarks, downloads, web history and notes without ever leaving your current page.

CUSTOM TOOLS
Use the '+' button and you can add your own sidebar apps; point Vivaldi at a suitable web page to keep it handy.

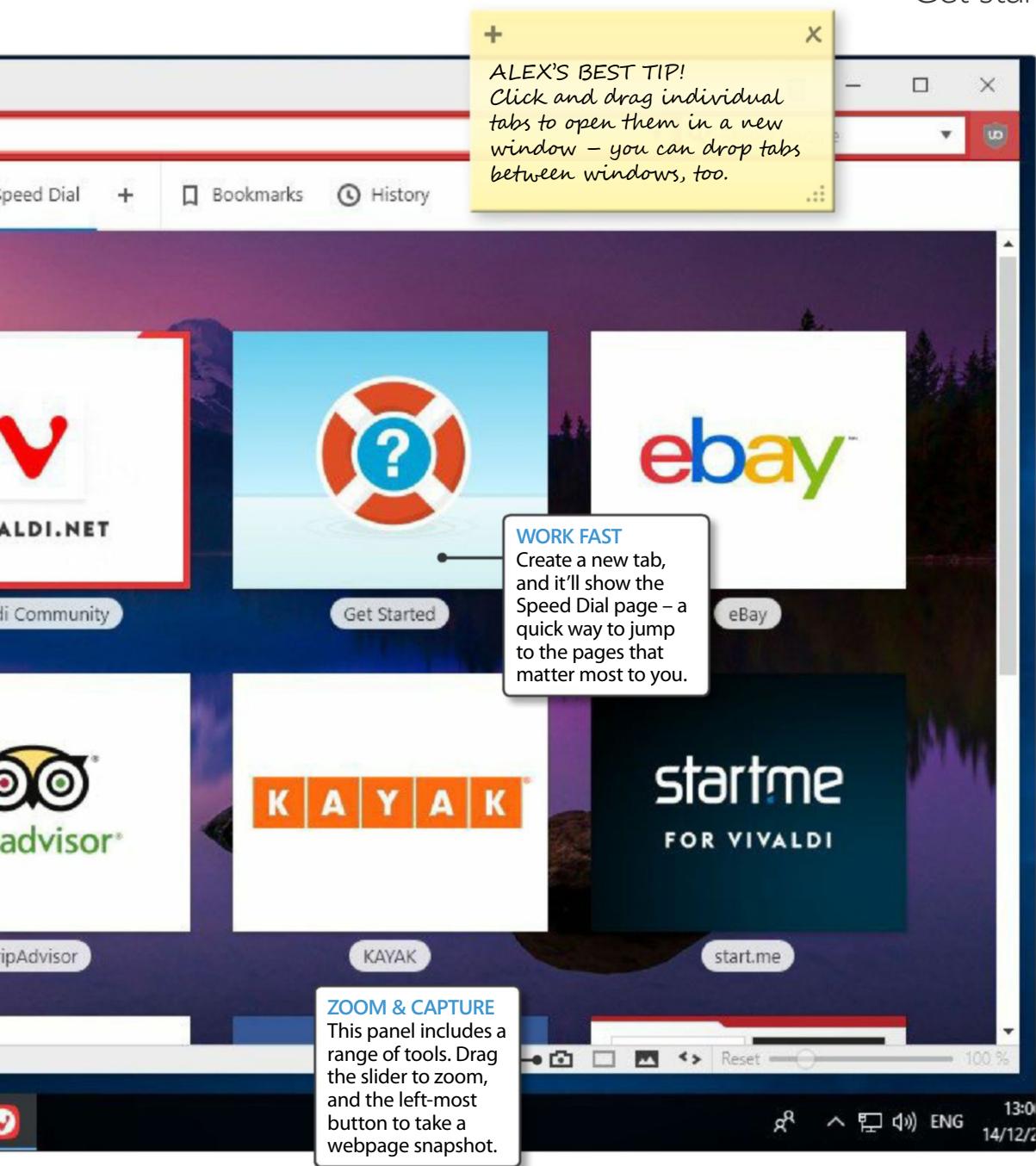
FINE CONTROL
Vivaldi's settings are super deep and built for making intricate changes – this is web browsing exactly as you like it.

JBL Link 20 Google Assistant smart speaker review
By Andrew Williams an hour ago
★★★★★
A smart home speaker you can also take out to the park, can the JBL Link 20 match its flexibility with sound quality?

Xiaomi Mi Band 2 review

8 Pin it up

Pinning a tab by right-clicking it and selecting Pin Tab (note this only works with single tabs, not stacks) reduces it in size and pushes it to the left of your tab list. A pinned tab can't be closed until you unpin it, so it's kept safe – perfect for keeping your email or social media pages handy when working on something slightly less distracting, or packing more tabs into less space.



Jargon buster!

► Rendering engine

A web browser uses a rendering engine to turn the raw code of the web into the pages you see. Different rendering engines can handle certain elements slightly differently from others.

► Extensions

Add capabilities to any web browser, including features such as ad blocking.

► Tabs

Rather than covering your screen in a cascade of windows, tabs keep your open pages organised in a sensible way.

At a glance

Skill level...

Anyone can do it

► Straightforward

Tricky in parts

Suitable for...

Windows 10

Windows 8.1

Windows 7

A screenshot of the Chrome Web Store search results for 'ublock origin'. The first result is 'uBlock Origin' by Raymond Hill (gohlil). The page shows a brief description: 'Finally, an efficient blocker. Easy on CPU and memory.', a 'Read more' button, and two 'Add to Chrome' buttons (for Windows and Mac). On the left, there's a sidebar with filters like 'Runs Offline', 'Free', and 'Available for Android'. At the bottom, there are rating statistics: 4.5 stars, 10,000+ reviews, and 5 upvotes.

A screenshot of the Vivaldi browser window showing a webpage with a large 'STAR WARS' logo. On the right side, a 'Page Actions' panel is open with a list of checkboxes for various features: Filter Black and White, Content Blocker, CSS Debugger, Filter Grayscale, Filter Intensity, Filter Invert, Filter Obscure, Filter Sepia, Fonts Monospace, Highlight Focus, Highlight Hover, Skewed Images, Transform 3D, Reader View, and Transitions Removed. Some checkboxes are checked, while others are not.

9 Extend it

Click the 'V' icon at the top-left corner of the window, and head to Tools > Extensions. You'll have no add-ons installed at this point, but click the link to head to the Chrome web store. Find the extension you want (note: visual add-ons likely won't work), click the Add button, then 'Add extension', and it'll install, creating a new icon to the right of the search box.

10 Easy reading

Take a look at the icons along the bottom bar of the Vivaldi window. On the right, there's a size slider, so you can zoom a page in or out, and just to the left of that is a button which fires off a list of options, some of which are useful – the sepia filter can calm down busy pages, and there's a content blocker on offer – and some less useful. Do you really need to view web pages in 3D? ■

Learn how to...

Make your PC more secure



Your guide [Matt Hanson](#) says...

"Ensure every part of Windows 10 is as secure as can be with this ultimate guide"

At a glance

Skill level...

Anyone can do it

► Straightforward

Tricky in parts

Suitable for...

 Windows 10

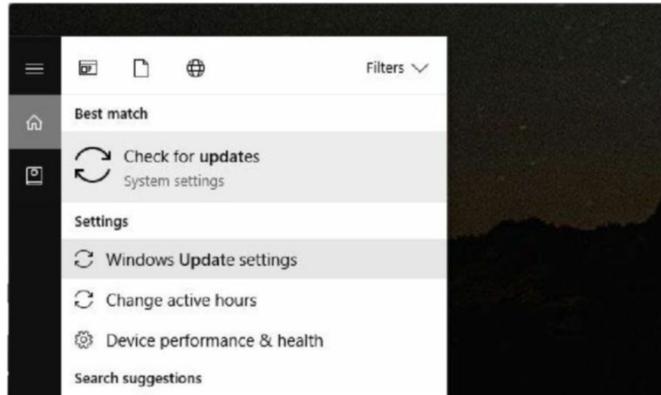
 Windows 8.1

 Windows 7

Windows 10 is the safest and most secure version Microsoft has ever made, thanks in part to the inclusion of the built-in anti-virus software Windows Defender, which does an excellent job of keeping your Windows 10 device protected right out of the box. However, there are still a number of things you can do to ensure your PC is completely safe, and that's where this guide comes in.

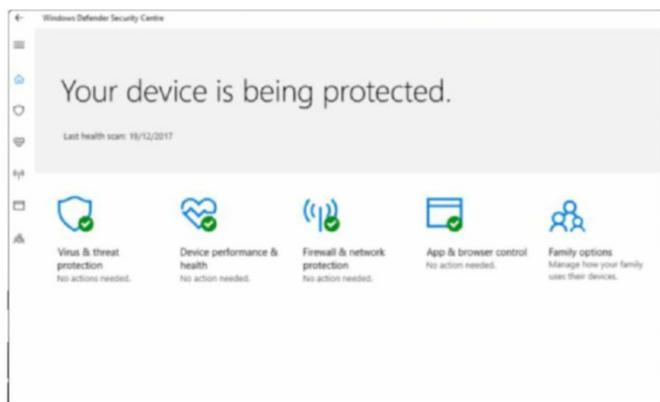
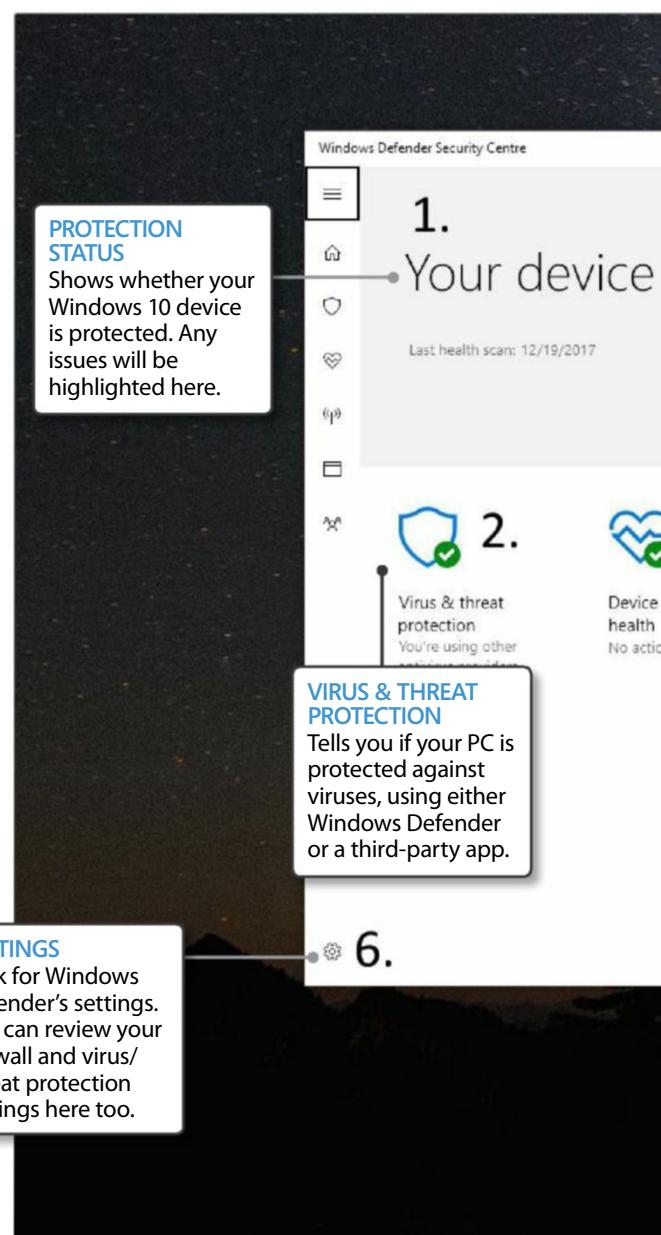
Windows 10 is becoming the most popular operating system in the world, and that means that virus makers are increasingly looking to target the software. We'll show you how to browse the web safely and securely using Windows 10's tools. We'll also help you set up a virtual private network (VPN), which will give you an even greater level of privacy and security when browsing the Internet, and we'll help you correctly set Windows 10's default settings.

Step-by-step Master Windows' security settings



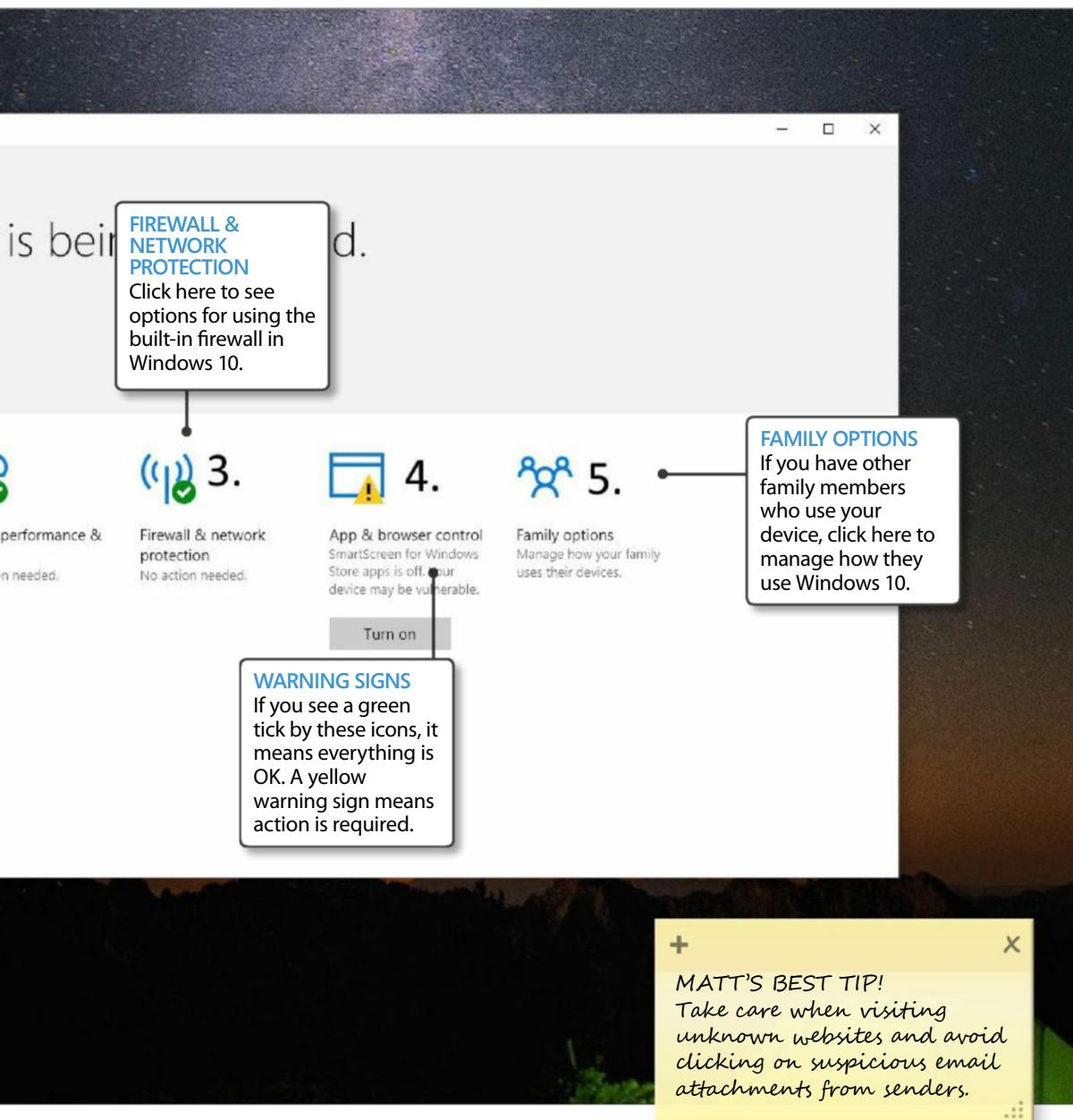
1 Make sure you're up-to-date

One of the most important ways of keeping Windows 10 secure is by ensuring that you have the latest updates installed. These updates often contain important protection against any new threats. Type 'updates' into the search box in Windows' **Taskbar**, then click 'Windows Update settings'. Click 'Check for updates' to make sure that Windows 10 is fully updated.



2 Configure Windows Defender

Windows Defender is Windows 10's built-in anti-virus software. It should be on by default, but to check type 'Windows Defender' into the search box in the Taskbar, and select 'Windows Defender Security Centre'. You'll see an overview of the security status of your device. You should see a green tick next to each section. If not, click the icon to find out what you need to do.



Jargon buster!

► VPN

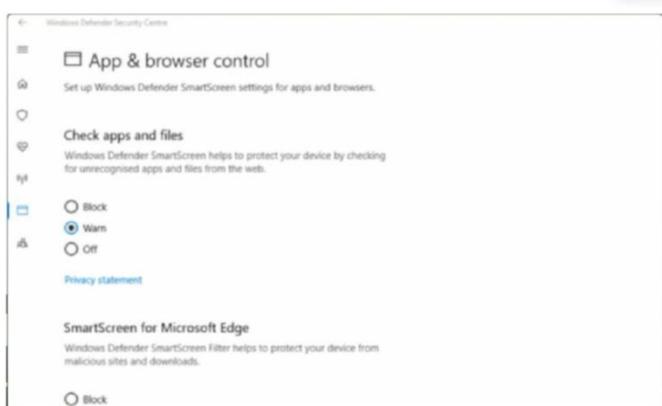
VPN stands for Virtual Private Network. By connecting to a private network, users can send and receive data securely, and because it's 'virtual' it means it doesn't need a physical network – it can just use your existing network or Internet connection.

► Biometrics

Biometrics is a way of securing your Windows 10 device using either your fingerprint or by scanning your face. It's an incredibly convenient – and secure – way of logging into Windows 10, as long as you have the right hardware. Many modern laptops come with fingerprint scanners or Windows Hello approved webcams.

► Taskbar

The Taskbar in Windows 10 runs along the bottom of your screen and houses the Start button, the Cortana search box, time and date information, network information and much more.



The best antivirus software of 2018

By Mike Williams November 16, 2017 Security software

Make sure your devices have the best antivirus protection going...

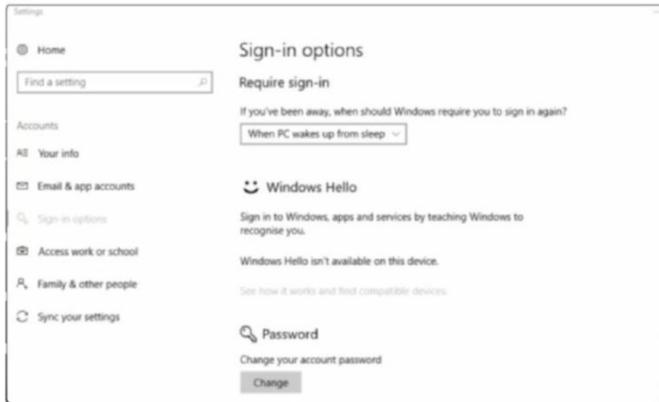


3 Make use of SmartScreen

SmartScreen is a tool that protects you against harmful files and websites. From the Windows Defender Security Centre app, click 'App & browser control'. You can set SmartScreen to warn you if you download a suspicious app or file, or visit a compromised website or, to be completely secure, select Block to automatically prevent potentially dangerous files or websites from opening.

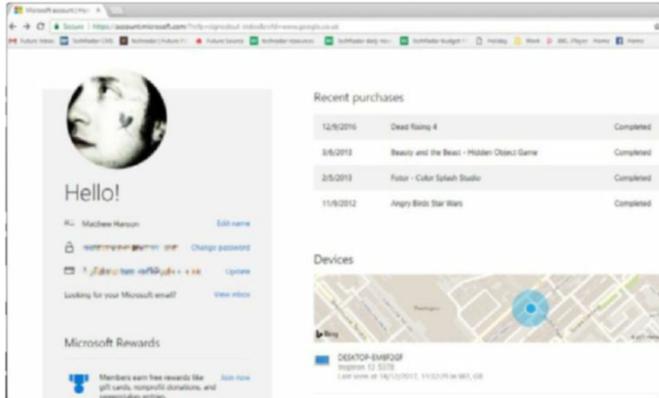
4 Using third party anti-virus software

Windows Defender will help keep your Windows 10 device secure, although it is a little basic. For anti-virus apps with more advanced security features, check out our pick of the best free solutions at <http://bit.ly/2CD1F7t>. For even more security a paid-for solution – which offers even more tools – may be best. Go to <http://bit.ly/2Cc1GhF> for our recommendations.



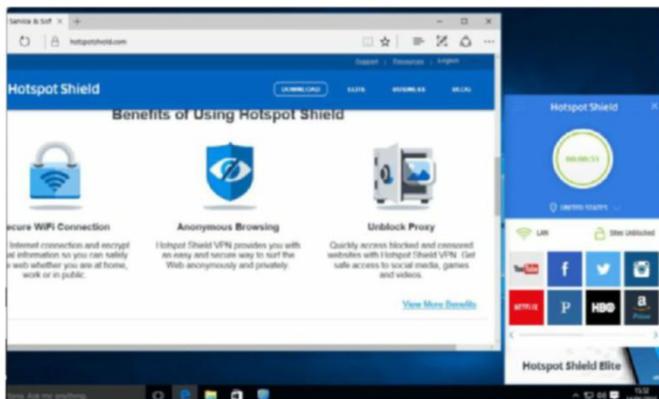
5 Bolster your sign-in

Using a strong password to log into Windows 10 will help keep you secure. If you haven't already set one, type 'sign-in' into the search box, then select 'Sign-in options'. From the window that appears you can change your password or add a PIN. If you have a webcam or fingerprint scanner, you can set up Windows Hello, which uses **biometrics** for logging into Windows 10.



7 Secure your Microsoft account

For the best Windows 10 experience you'll want to use a Microsoft account to sign into Windows 10. If you have one, go to <https://account.microsoft.com> to check your account. From here you can change your password, review purchases and change your payment methods. You can also see which devices are logged into your Microsoft account, and where they are.



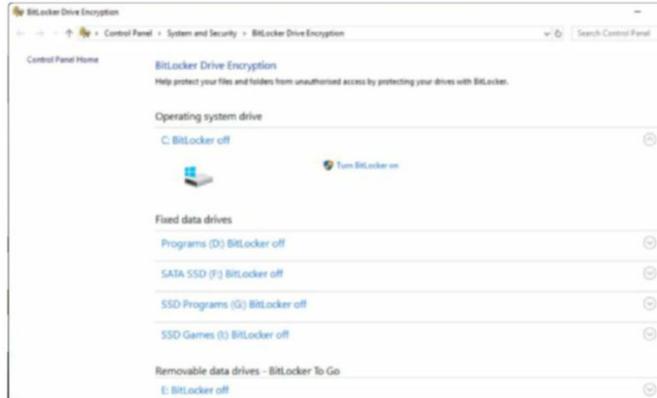
9 Use a VPN – Part one

For the ultimate in PC security, you can use a Virtual Private Network (**VPN**), which encrypts all your web traffic. To begin with you'll want to choose a VPN service to subscribe to. If you want to try a VPN, or only use it occasionally, a free version should be fine – see <http://bit.ly/2CFXfwR>. For a faster VPN experience head to <http://bit.ly/2CFVuzL> for a rundown of the best VPN services.



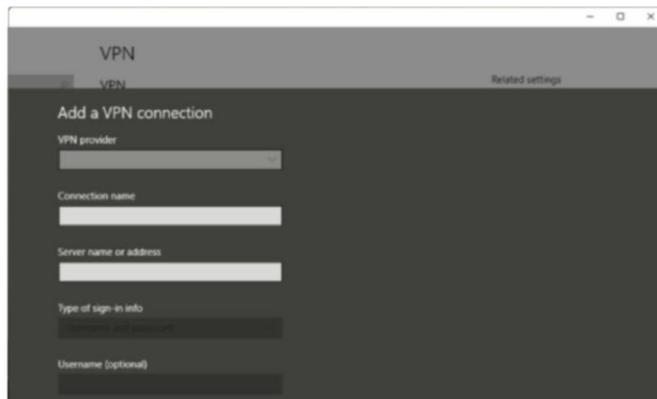
6 Check your privacy settings

When it was first released, Windows 10 got some flack for its default privacy settings. Since then Microsoft has implemented better privacy controls, but they're still worth investigating. Type 'privacy' into the search box, and click 'Privacy settings' from the results that appear. From there go through each option on the left-hand menu and set what you want to share accordingly.



8 Protect your files with BitLocker

BitLocker is a Windows 10 Pro feature that enables you to encrypt your hard drive. To activate it, type 'bitlocker' into the search box and press [Enter]. Choose the drives you want to encrypt, then click 'Turn BitLocker on'. Follow the instructions to create a password and/or USB key – you will need to use these to access Windows and your files once BitLocker's been set up.



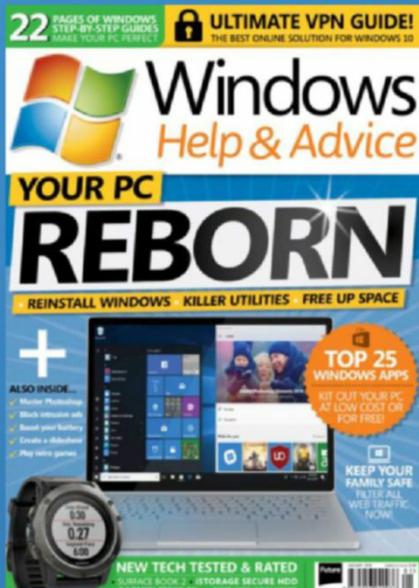
10 Use a VPN – Part two

Once you've signed up to a VPN service, head to Start > Settings. Select 'Network & Internet' then VPN and click 'Add a VPN connection'. Select 'Windows (built-in)' as the VPN provider, then fill in the rest of the boxes. Use the information you received when you signed up for the VPN. Once done, you can switch to the VPN by clicking on the network icon on the Taskbar. ■

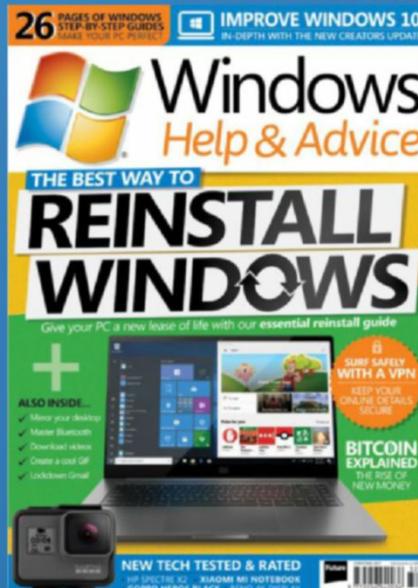
Back issues
Don't miss out!

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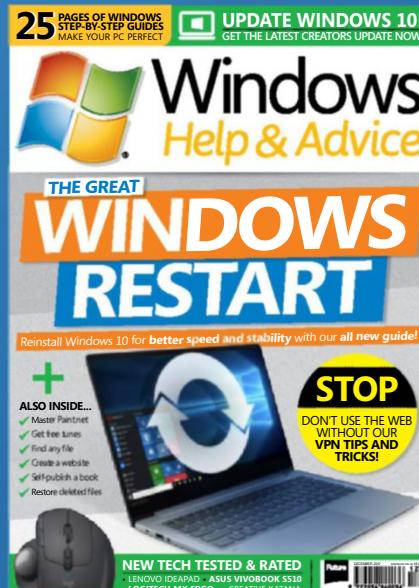
Our website stocks up to six months' worth of back issues – we deliver worldwide and all prices include shipping



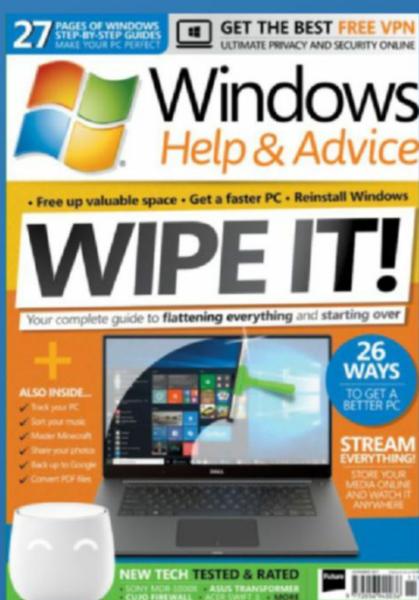
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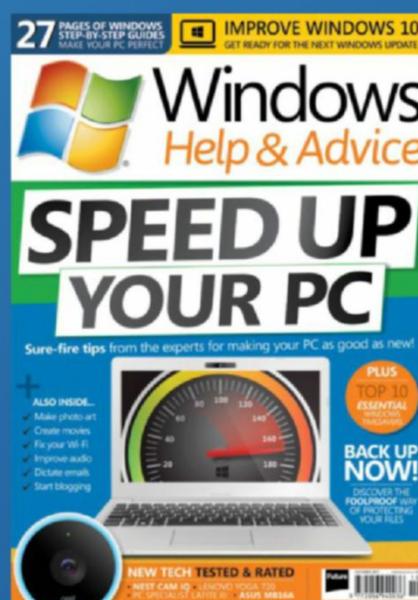
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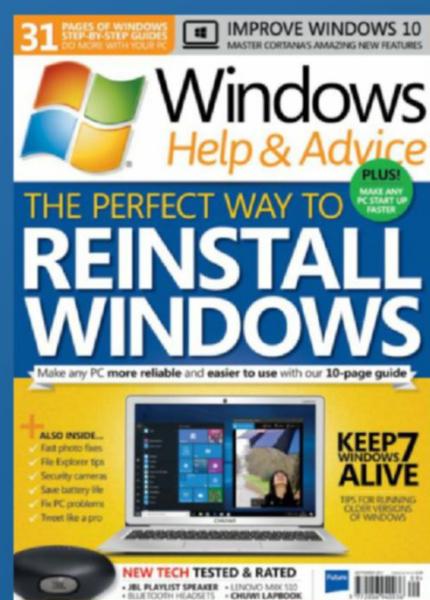
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Learn how to...

Travel smarter with your laptop



Your guide [Alex Cox](#) says...

"Anyone can toss a laptop into a bag, but clever travellers employ a few more tricks to get the most out of their PC on the move"

At a glance

Skill level...

Anyone can do it

► Straightforward

Tricky in parts

Suitable for...

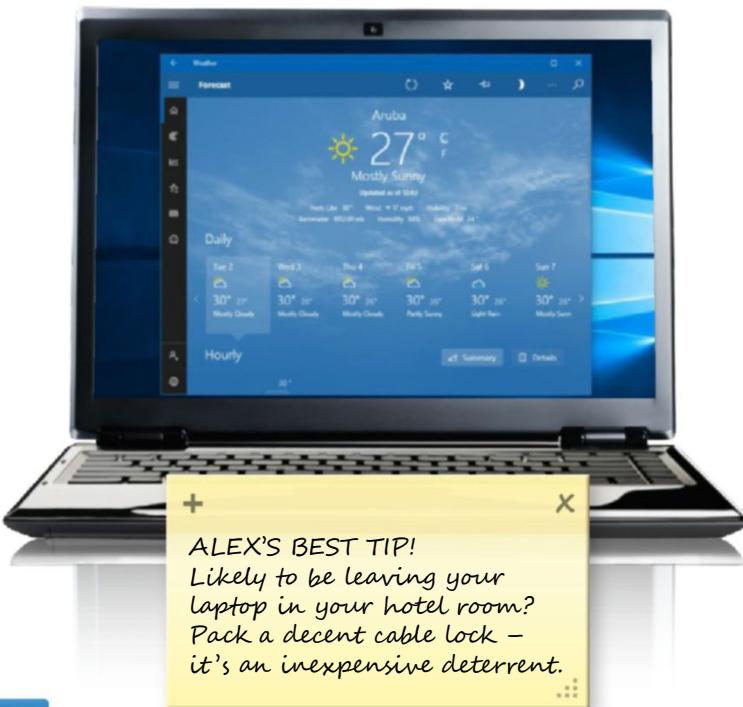
 Windows 10

 Windows 8.1

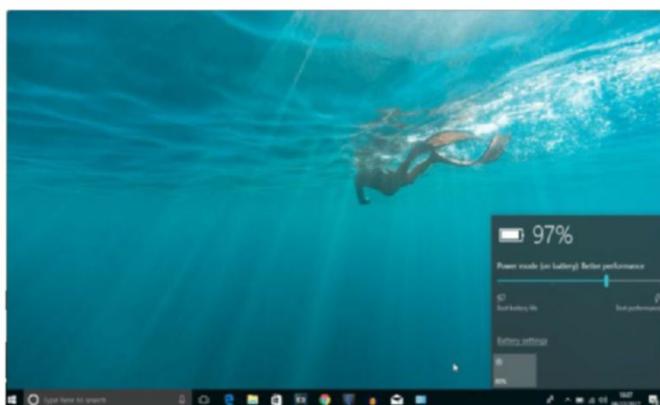
 Windows 7

When you're away from home, there's no need to disconnect from the digital world. You could rely on your phone, as we so often do, but taking your laptop out of the living room and onto the road is the best way to get everything done – from work to bigger-screen entertainment. This is particularly true if you're going further afield, but it's important not to take travel lightly.

Without the guarantee of Internet connectivity, you'll need to prepare a little before you leave. Without permanent power, pulling as much life out of your battery as possible is massively important. And carrying that laptop with you introduces other dangers, so a couple of steps to ensure your security is up to scratch go a long way. None of this takes a long time, none of it's difficult, but you'll be glad you've done it when the time comes.

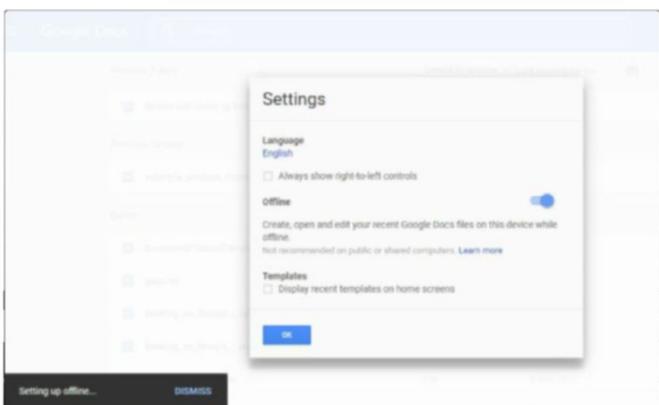


Step-by-step Get your laptop ready for life on the go



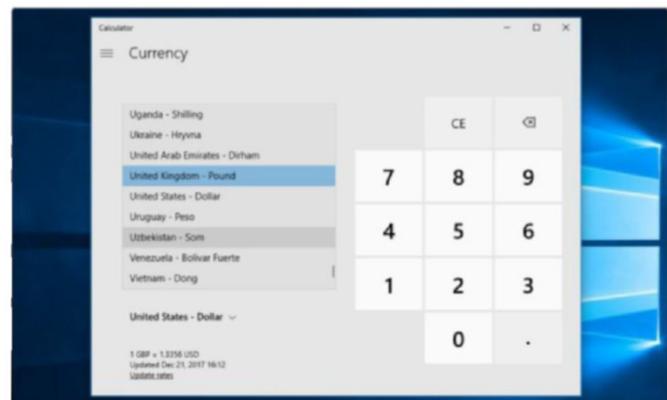
1 Manage your battery

By far the most obvious factor to consider when travelling is battery life. Even if you don't fancy creating a cut-down profile to maximise your juice, clicking the battery icon post-Fall Creators Update reveals a handy slider which allows you to balance your laptop's performance and power use. Pull it towards the left, and you'll get a few extra minutes in exchange for slightly less grunt.



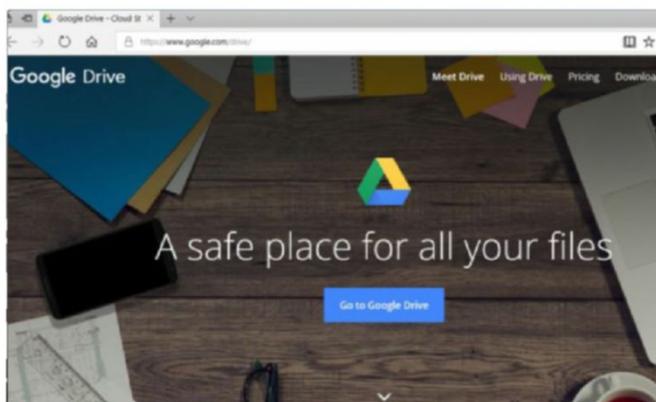
2 Offline apps

As our work habits change and we all begin to rely on cloud apps like Google Docs, losing them when not Internet-connected can be a big bind. Thankfully, it's possible to use Docs, Sheets and Slides offline. Just head to one of them in Google Chrome, click the three-line icon, the cog, then select Offline. Then set your key documents to be available offline by right-clicking them.



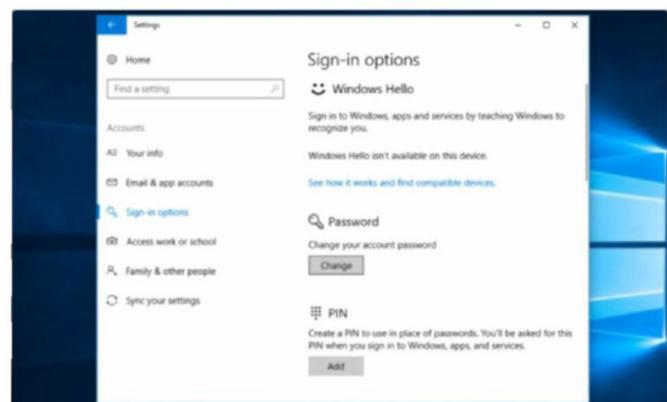
3 Watch the weather

Windows 10's built-in Weather app is probably set to your home location by default, but setting it to keep an eye on your destination is a great idea. Open it, click the Settings cog in the bottom-left corner, and type your destination in 'Launch location'. If you don't want to change the default, use the magnifying glass icon to search for a different locale as long as you're online.



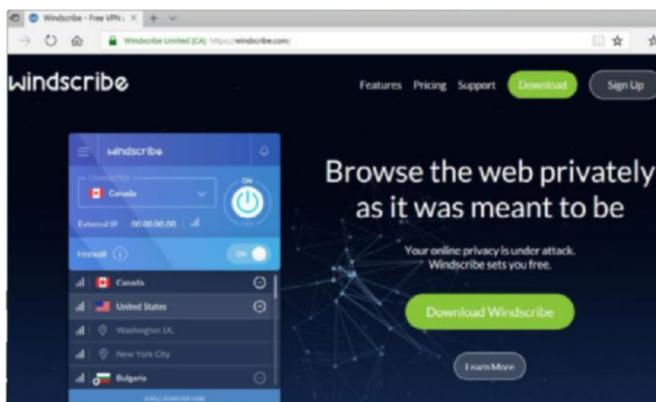
4 Convert currency

What's your money worth? Windows' Calculator app can tell you – and convert all kinds of other local units into a format you're comfortable with. Open it, click the three-line icon, and select Currency. Then use the drop-downs to switch between different currencies, and click one of the values to select the currency you're converting from. Note: update the rates before you leave!



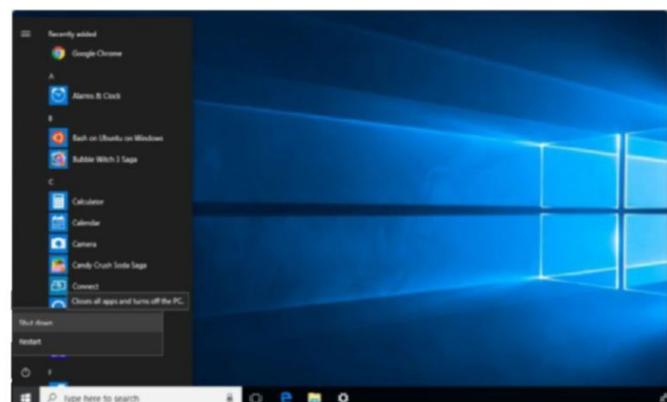
5 Back it up

That thing you're carrying? It's fragile. And if you rely on your laptop, having it smashed beyond repair in your luggage is not ideal. Before you go, make sure you've copied everything you care about to a cloud storage solution like Google Drive or to an external drive. Take a USB flash drive with you, and copy anything new – like photos – onto it, and keep it apart from your laptop.



6 Protect it

Worse than having your laptop break is having it stolen – particularly if it's not hardened enough to keep a would-be identity thief out. Change your password via Settings > Accounts > 'Sign-in options', and make sure it's secure by using a mixture of numbers, upper- and lower-case letters, and punctuation. If you use memorable words, make sure there's three or more in a row.



7 Watch the Wi-Fi

Be wary of public Wi-Fi – it's not unknown for spurious connections to eavesdrop on traffic and steal personal information. If you're likely to need Internet connectivity, make sure you pack appropriate protection in the form of a free VPN like Windscribe (windscribe.com). Launch it before you connect, and it'll make everything you do private and impossible to snoop on.

8 Keep it cool

When you're not using your laptop, don't just shut the lid. Switch it off by clicking the Start button, the power icon, and selecting Shut Down. Not only does this save a small amount of battery, it reduces the risk of the machine waking itself up in your bag – a poorly ventilated laptop is prone to overheating, and if you cook your PC you could lose your data or worse. ■

Learn how to...

Extend your wireless broadband range



Your guide *Dan Graham* says...

"Whether you have wireless woes or you just want to extend the range of your Wi-Fi network then you've come to the right place"

At a glance

Skill level...

Anyone can do it

► Straightforward

Tricky in parts

Suitable for...

 Windows 10

 Windows 8.1

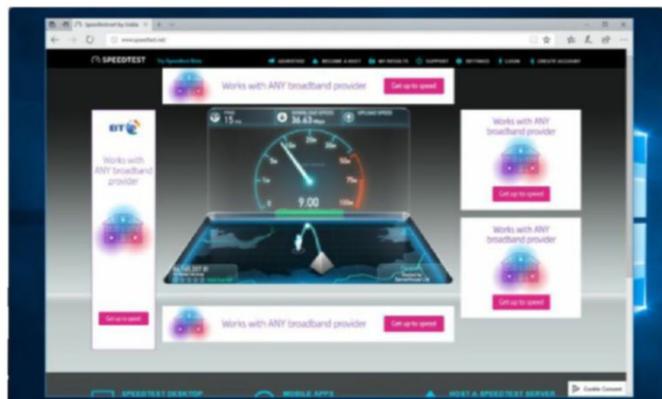
 Windows 7

A recent survey of UK broadband users revealed that 40 percent of us with slow Internet connections take no action and wait for any problems to fix themselves. However, there's no need to be so passive, because it's relatively easy to diagnose whether there is an issue with your Wi-Fi – or your Internet connection.

Often range-related issues can be a problem with the router and we'll give you some steps so you can easily diagnose these. But what if you want to extend the range of your network? We'll talk about that, too. And we'll talk you through solutions that don't need you to buy new hardware as well as those that do.

It's also worth ensuring your connection woes aren't device-specific. Older PCs especially are prone to getting so clogged up with stuff that they're mega slow, so test your connection on different devices.

Step-by-step How to diagnose wireless range issues



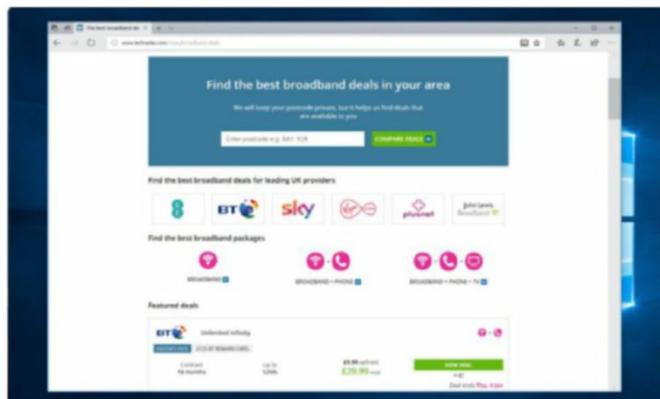
1 Test your broadband speed

If you're having problems with your network, then test your broadband speed. This will help you know how long a file takes to download and ensure you're not blaming your Wi-Fi for an issue that isn't there (or is to do with your ISP). Speedtest.net is one of the best sites for testing your broadband speed. You can see your ping speed as well as your download and upload speeds.



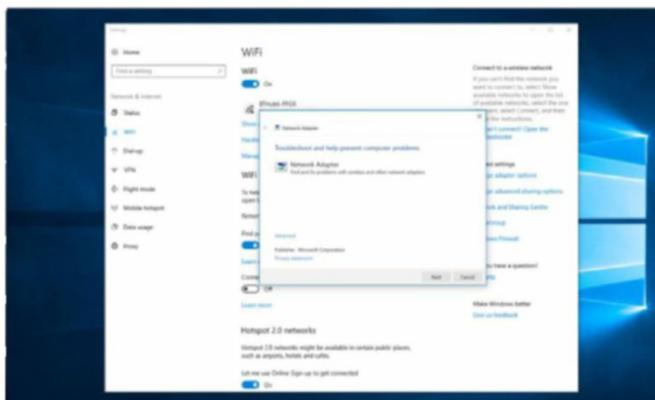
DAN'S BEST TIP!

Don't place your router near a fish tank; water is a killer for efficient Wi-Fi. Also try to put it in a central location.



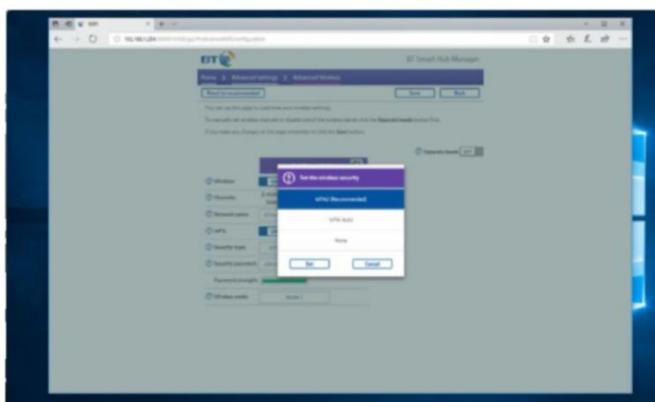
2 Is your problem speed not range?

If your broadband speed is OK – or not poor enough to affect your network, then move on to the steps that follow. If your broadband speed is poor, it maybe your broadband rather than Wi-Fi that's to blame – perhaps because you don't have fibre broadband or live a long way from the telephone exchange. If this is the case you might want to explore your options with your ISP.



3 The telltale signs

If the connection is intermittent, consider how far you are from the router at that point (see Step 7). If you run out of range then the network itself will drop out. It's also worth considering what kind of house you have. If it's big (more than four bedrooms, say) or tall (three storeys) then you will almost certainly need to invest in a device to extend your range (see Steps 8 and 9).



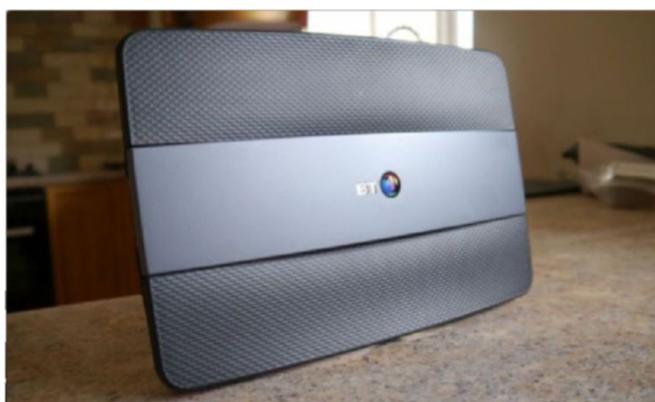
4 What router do you have?

The problem might not be with your broadband – it might be with your router. If you have a router that's less than five years old, you should expect it to easily cover a modern house. If your router is older, it's time for a replacement. We'd recommend replacing routers that aren't compatible with 802.11n at the very least. If your router has 802.11ac, it shouldn't have a problem.



5 Is there anybody else on your network?

You should ensure your network is password-protected. Is there any chance someone else could be using your Wi-Fi? If you have an open network you are asking for a slower connection. The only possible reason for having an open connection is if you live somewhere so remote that nobody is ever going to connect to your network. Generally, however, it is a no-no.



6 How old is your client device?

Make sure the device you're connecting to the Internet with has the latest software and Windows updates installed. It may not make a difference, but it's good to rule it out. If it's a particularly old device, then it may be less compatible with the latest connectivity standards, and this may make a difference to the range you can expect to achieve with it.



7 What about the position of your router?

If you're having issues in areas of your house you shouldn't be, consider changing the location of your router. Move it away from windows, shared walls and electrical appliances, especially any other telephony or wireless equipment. According to Post Office research, over a quarter of people have placed their router by the TV or an electrical appliance, which can slow Wi-Fi speeds.

8 What about extenders and Powerline?

If our steps so far haven't solved your problem, then consider an extender to target a particular area of your house. Options are available from vendors such as Belkin and Netgear and cost upwards of £20. You could also consider Powerline – some Powerline plugs also have Wi-Fi, again enabling you to target a specific area of your home with its own Wi-Fi network.

Learn how to...

Get things done with Microsoft To-Do



Your guide *Nate Drake* says...

"List, schedule and tick off day-to-day tasks with Microsoft To-Do, and sync to your mobile devices"

At a glance

Skill level...

► Anyone can do it

Straightforward

Tricky in parts

Suitable for...

Windows 10

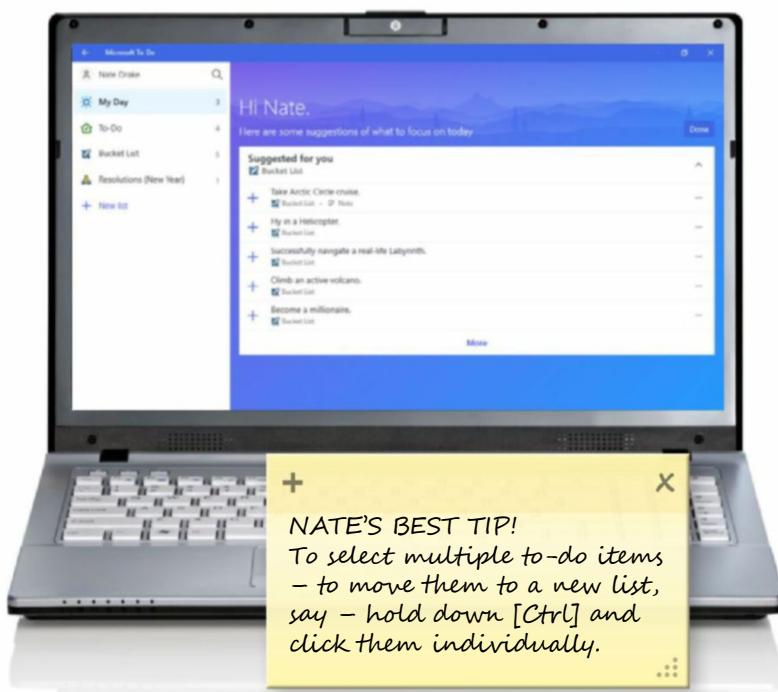
Windows 8.1

Windows 7

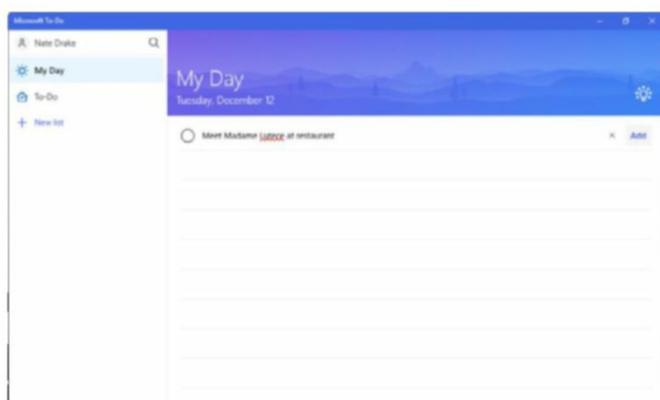
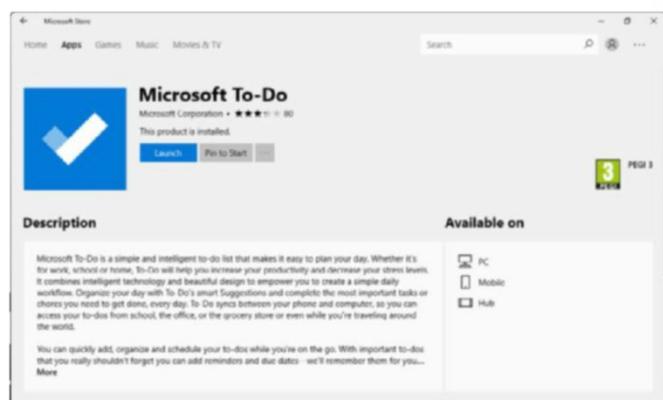
The team that gave the world Wunderlist has outdone itself once again with the powerful and free Microsoft To-Do. This app keeps your life organised by setting tasks to be completed either today or at a date you specify in the future. Just set yourself a reminder. If you find it difficult to wade through reams of items, take advantage of the handy lists feature, which enables you to categorise your tasks.

The app is also available for Android, iOS and Windows Phone and can sync automatically via your Microsoft account, provided you're signed in with the same account on all your devices.

Microsoft Outlook users will be pleased to hear that Microsoft To-Do can also sync with Outlook tasks, however it doesn't currently support advanced features, such as file attachments. See <http://bit.ly/2CcgJrQ> for more information.



Step-by-step Getting started with Microsoft To-Do



1 Install the app

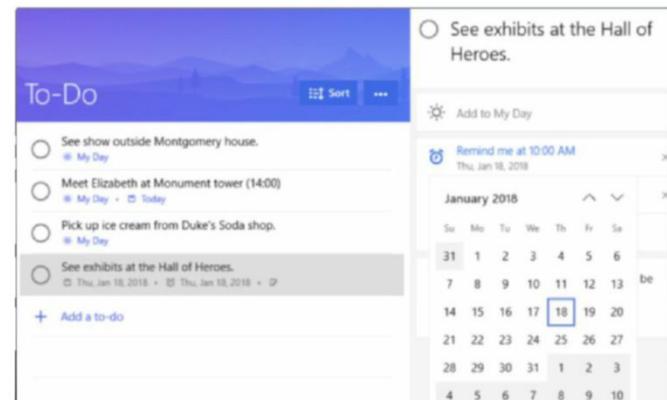
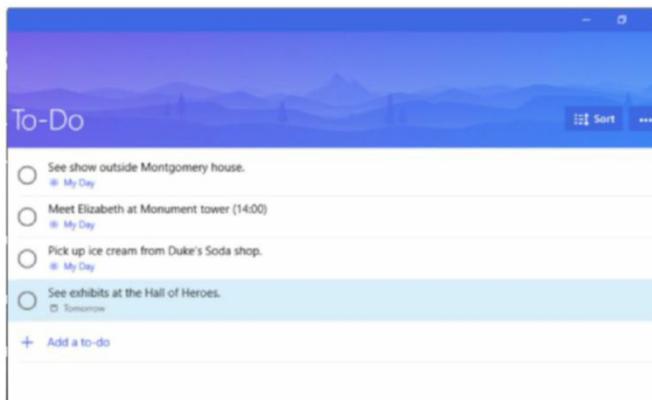
Click the Microsoft Store icon on your Taskbar and type 'To-Do' in the search bar at the top-right. The app should be listed automatically below the search bar. Click it to load the app page. Next, click the Get button on the page to download the app itself. Once installation is complete click the Launch button to open Microsoft To-Do. Click 'Pin to Start' to add it to the Start menu.

2 Add to your day

Once Microsoft To-Do launches click OK to dismiss the message informing you that every day is a fresh start. Click 'Add a to-do' to add your first item for today. Once you're done, click on Add on the right or press [Enter] to save your task. If your name appears incorrectly at the top left, click it, choose Sign Out and then 'Sign in' with your own Microsoft account.

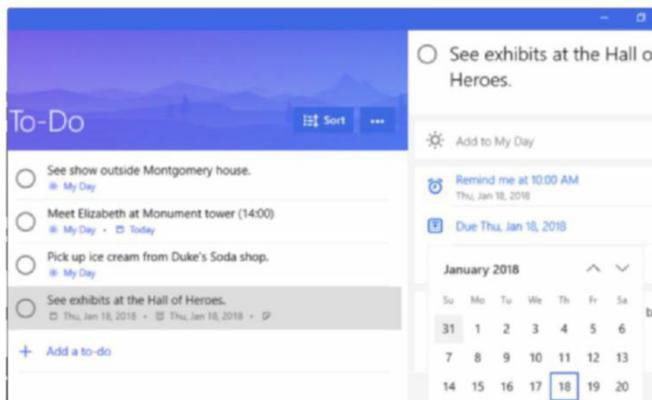
Explore

Get things done with Microsoft To-Do



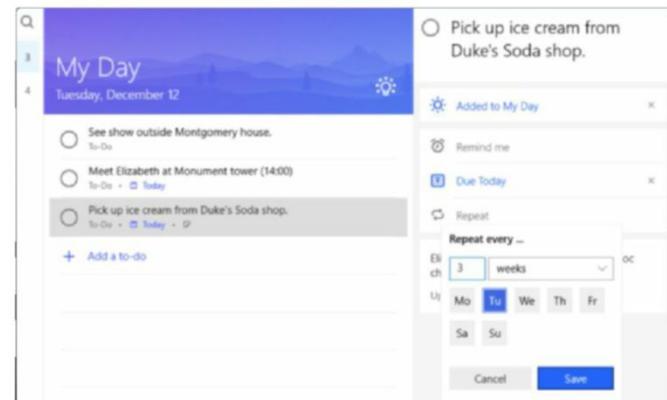
3 Add to your To-Do list

Click 'To-Do' in the left-hand pane to switch to your To-Do list. Any items you've added to My Day are still listed here but you can use To-Do to schedule less immediate tasks. These are created in exactly the same way as for My Day. To mark a task as complete click/touch to highlight it and then select the circle on the left. A green tick will appear next to completed tasks.



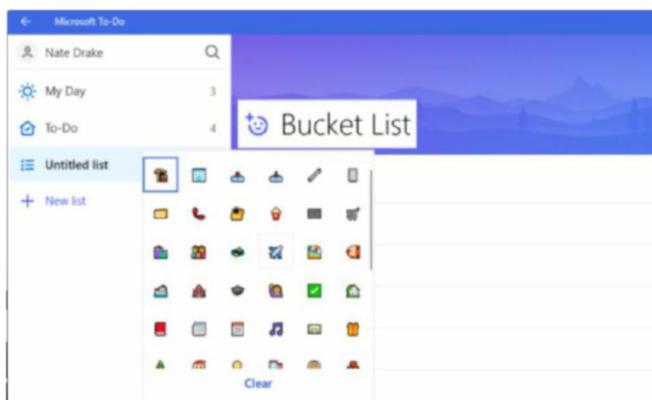
4 Set a reminder

If you click or press on a task, a new pane will open on the right of the screen. Choose 'Remind me' to schedule a reminder. Choose from the default options (today, tomorrow, next week). Alternatively select 'Pick a date & time' to choose a specific date from the pop-up calendar. The timer uses a 12-hour clock so be sure to set AM/PM correctly. Click 'Save' when you're done.



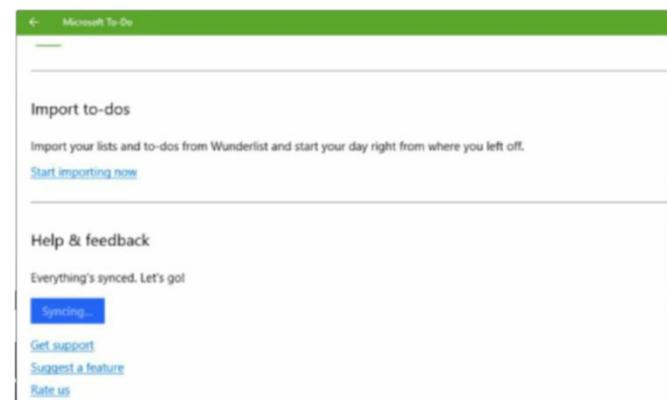
5 Add a due date

Due dates are distinct from reminders and are very useful. For instance, you can set a reminder to start revising for an exam on the 15th of the month and schedule it for the 25th. To do this, select any task and click 'Add due date'. Choose either Tomorrow or 'Next week'. If you prefer to 'Pick a Date', a pop-up calendar appears allowing you to do this in the same way as for a reminder.



6 Manage repeating events

If you have set a due date for an event, you'll see an option named Repeat appear underneath. Click this to choose to repeat an event daily, weekly, or monthly from that date. Select 'custom' to choose something more bespoke. For instance you may go for ice cream with your friend Elizabeth every three weeks. Use the drop-down menu to switch between days, weeks and months.



7 Add new lists

To add a new list, click '+ New list' on the left. Type a name for the list and press [Return] to confirm. Click the name itself at the top to edit the name. You can also click to add an emoji to distinguish your list from others. Click the ellipsis (...) button at the top right to set a new colourful theme for this list too. Add tasks in exactly the same way as before.

8 Syncing tasks

Mobile versions of Microsoft To-Do are available for Android, iOS and Windows Phone. If you install the mobile app and sign in with your Microsoft account, your lists and to-do items should sync automatically between devices. If this isn't happening click your account icon at the top left then Settings. Click the blue Sync button. Microsoft To-Do can also sync with Outlook tasks.

Learn how to...

Get remote access to a family or friend's PC



Your guide *Nick Peers* says...

"Struggling to fix a family or friend's PC over the phone? Quick Assist lets you take control of their computer over the Internet to provide tech support"

At a glance

Skill level...

Anyone can do it
► Straightforward
Tricky in parts

Suitable for...

Windows 10
Windows 8.1
Windows 7

If you're the go-to person in your family or circle of friends for technical support, you know how frustrating it can be – either you're expected to magically fix problems over the phone or you have to drag yourself in front of the afflicted PC to attempt to find a cure.

No more. Quick Assist is a feature introduced in the Anniversary Update of Windows 10 that enables you to easily take remote control of someone's PC from the comfort of your own computer, giving you the flexibility to investigate, diagnose and hopefully fix their problem. This step-by-step guide reveals how it works, and provides all the fail-safes your contacts will need to reassure them that they remain in control at all times. So log on with Quick Assist, make sure they're backed up, fix their problem and get them off your back once and for all.



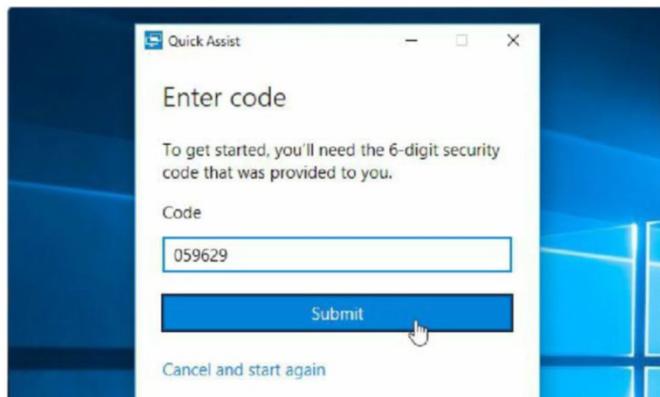
NICK'S BEST TIP!
If you're using an earlier version of Windows, try the free TeamViewer app (www.teamviewer.com).

Step-by-step Fix your friend's PC remotely



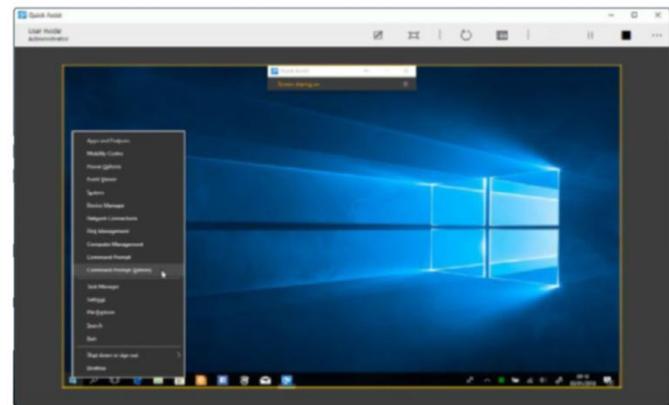
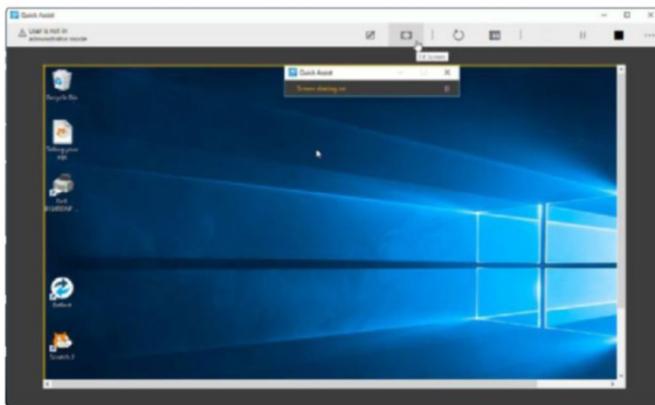
1 Launch Quick Assist

Click Search on your PC and type 'quick', then click Quick Assist to get started. Choose 'Give assistance' and sign in with your Microsoft account. Once signed in, a six-digit numerical code will appear – use one of the three options (clipboard to copy to secure message, email or 'Provide instructions' to communicate verbally over the phone) to convey the code to the person requiring help.



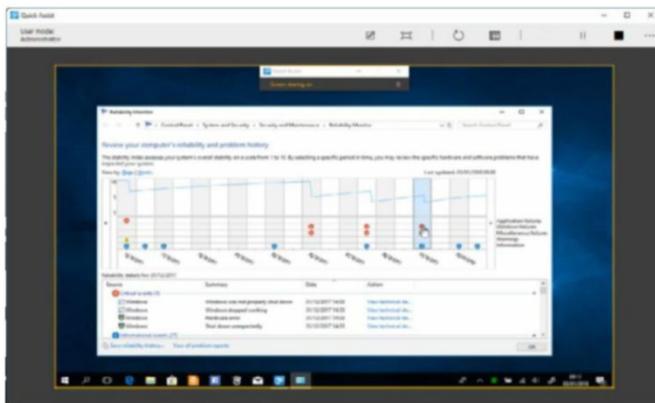
2 Connect to your PC

Your recipient needs to launch Quick Assist on their PC and choose 'Get assistance', then type in the six-digit code you've communicated from the previous step. Click 'Submit' and wait while a Connecting sign appears on both their and (eventually) your PC – this can take some time. They then need to read the warning before clicking Allow to complete the connection.



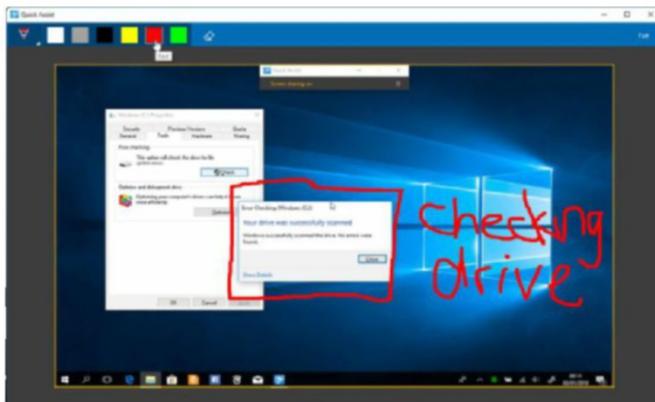
3 Set up desktop screen

Once connected, the person receiving help will see a Quick Assist screen at the top with 'Screen sharing on' displayed. You'll then see their screen appear in the main Quick Assist window. It's likely that the whole screen hasn't been displayed – either manually resize the program window in the usual manner or click the Fit Screen button as shown to fit it in the program window.



5 Attempt fixes

As you point, click and type – all of which can be viewed by the person you're helping, who can also continue to use their PC as normal (so you may need to ask them to step back if they're interfering with your troubleshooting) – you'll notice a slight lag. This is normal, and the extent of the delay will be down to the speed of your respective Internet connections.

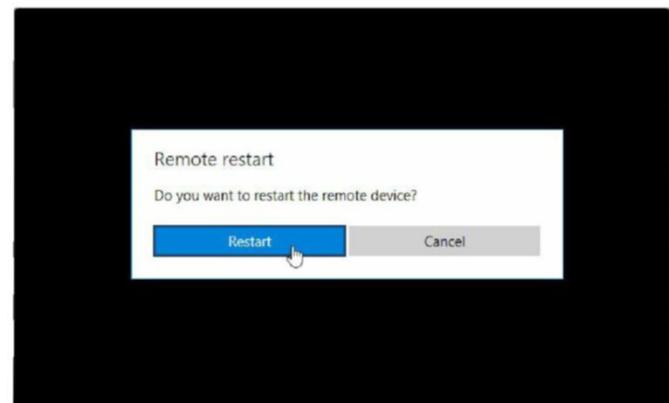


7 Other tools

There's a pen button at the top that should allow you to scribble on your friend's PC as you work on it – you can use this to communicate ideas, for example. Click the Eraser or Exit buttons to clear the marks. There's also a shortcut button that opens Task Manager on your friend's PC – you'll need this since pressing [Ctrl] + [Alt] + [Delete] will only open Task Manager on your own PC.

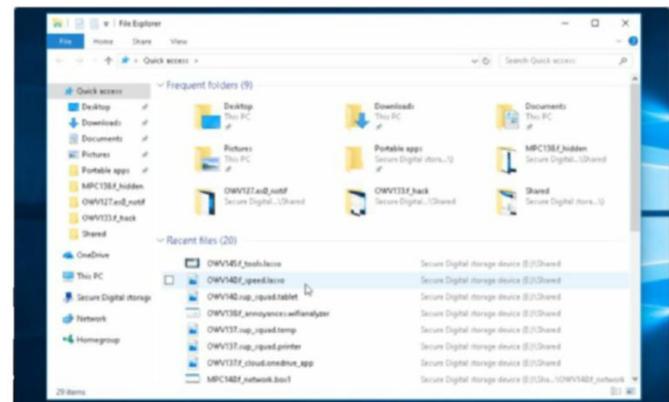
4 Take control

You can now access the other person's PC, using its own tools to troubleshoot. If the person you're helping isn't logged on as an administrator, you'll see a warning to that effect. It means that whenever you attempt to perform any administrative tasks, the screen will go black and the person you're helping will need to enter the password of an administrator account on that PC.



6 Reboot without reconnecting

If your fixes involve restarting your friend's PC, do so by clicking the Restart button at the top of the screen. Unlike a normal shutdown or restart, this will temporarily suspend the connection between your two PCs, then attempt to restore it once Windows has rebooted successfully on the target machine, saving you the bother of having to reconnect again manually.



8 Ending the session

You'll also see Pause and Stop buttons for suspending the connection (click Play to resume) or end it altogether. The person you're helping has access to these buttons too – if they pause the connection you're locked out until they resume it, or they can click the 'X' button to close it at any time. It means they can give you access to their PC without losing control of it. ■

HOW TO MINE BITCOIN

Turn your PC into a mining machine...By Alan Dexter & Nate Drake

Mining is the process of using a computer to perform complex calculations on blocks of data which maintain the Bitcoin network. Miners are rewarded for their efforts with a certain amount of Bitcoins.

Bitcoin (BTC) is fast becoming the province of people using specialised ASIC (application-specific integrated circuit) devices, although if you have one or more powerful graphics cards you may be able to make a small profit by building your own mining device. You'll learn more about this in the following steps.

Any profit you make will depend on a number of factors. The first is your 'hash

rate', or the actual processing power of your PC. Computers designed for mining, or 'rigs' as they're commonly known, require large amounts of electricity, which will increase running costs. The complexity of mining also rises over time.

The Bitcoin itself is a very volatile virtual currency and while it has recently made huge gains, it may also plummet in value. Bear this in mind if you plan to hold onto any BTC you mine rather than selling immediately. If you want a rough idea of how much you can make from mining, use one of the many online profitability calculators (for example, the one at <https://99bitcoins.com>).

While you can technically try to mine Bitcoin on your own, it's very unlikely that your rig will singlehandedly solve the complex sums necessary to receive a reward. Instead, you'll need to join a mining pool. As the name suggests, this is a pool of multiple machines connected together, engaged in a collaborative mining effort. Any Bitcoin rewards that are reaped are shared amongst everyone who contributed processing power to the mining effort.

However, note that the way in which profits are shared can vary from pool to pool. You can learn more about pooled mining at <https://en.bitcoin.it/wiki/>



01 Choose your miner

One easy – but not cheap – way to get started with Bitcoin mining is to buy an ASIC device, such as the AntMiner S9. These devices have been specifically designed for mining Bitcoins which means they'll generally give you the greatest return on your investment.

However, as mentioned, these ASIC devices are expensive. The S9 for instance currently retails for around €2,100 (about £1,860). You will usually need to buy a separate power supply unit which will set you back something like another €300 (£265). These devices are usually designed specifically to mine Bitcoin and will not function well if you try to use them to mine other cryptocurrencies (if, say, Bitcoin should happen to fall drastically in value).

Alternatively you can build your own Bitcoin mining rig. While these aren't as efficient in terms of power and hash rate, they require less upfront expense and can mine other currencies besides BTC. In the simplest terms these are computers with multiple powerful graphics cards installed. These GPUs might be primarily designed to render complex graphics when playing games, but they also lend themselves well to coping with the complex calculations involved in Bitcoin mining.

To get started, you'll need to purchase a case for the machine. Most of these are a simple metal frame to allow heat to dissipate easily. You'll then need to choose a motherboard and graphics cards for mining, such as the AMD Radeon RX 580.

If you need some more advice, see our guides on choosing the best graphics cards (<http://bit.ly/2DE4sOt>) and motherboards (<http://bit.ly/2D8eC94>) for mining. You'll need to assemble the machine and install the OS and mining software yourself, so you should only go down this route if you are tech-savvy and familiar with computers.

If neither of these options appeals to you, you can rent hash power from cloud mining companies. These firms have dedicated data centres devoted to mining Bitcoins. As they are centralised they can buy machines in bulk and use efficient methods to generate electricity.

Most companies will offer you a fixed amount of Gigahash Seconds (GH/s) of mining power for a fee. The advantage is that you don't need to buy any hardware. The fees for cloud mining will vary, however, and another point to be wary of is scammers posing as cloud mining outfits. See the Bitcoin Wiki for reputable vendors.

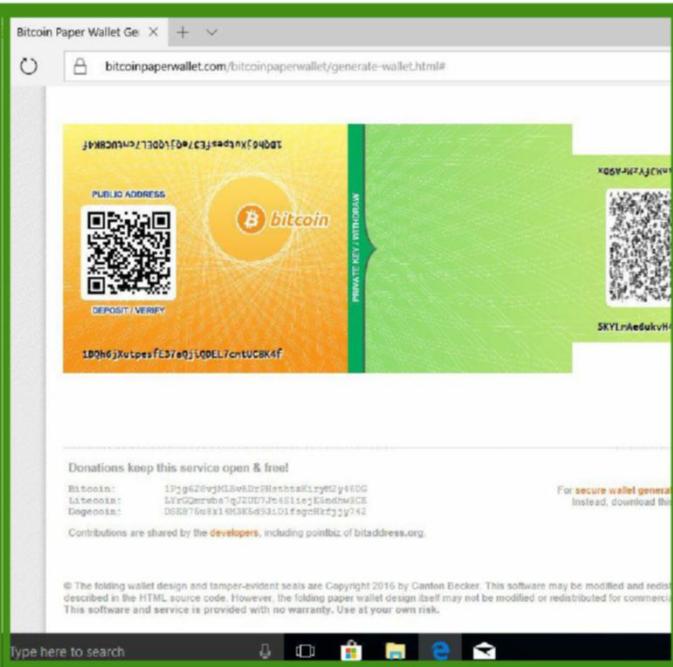
02 Set up your Bitcoin wallet

Once you've decided that mining's right for you, you'll also need to set up a Bitcoin wallet to store your profits. If you're mining as an investment and don't plan on spending any of your coins soon, consider using a website such as <https://bitcopaperwallet.com> to create a 'paper' wallet. Make a note of the 'public' address, which you can use to receive payments.

You can check the balance of your wallet at any time by visiting Blockchain.info and entering your payment address into the search bar at the top-right. Don't let anyone see your private keys as anyone with access to your paper wallet can control your Bitcoins.

If you plan to regularly cash out your BTC or make payments, consider using a software wallet. The Electrum wallet (<https://electrum.org/>) is available for all major desktop operating systems and Android. When you create your wallet, Electrum will generate a 'seed' of a dozen random words to use as a private key. This enables you to restore your wallet if anything happens to your PC.

If you use a software wallet, try to do it on a machine that isn't connected to the Internet so your BTC can't be hacked. This is known as 'cold storage'. The Electrum website has instructions for setting up a 'watching' wallet for day-to-day use which can show your balance but cannot make payments itself. For full instructions on setting up secure offline storage, see <http://bit.ly/2Dxa3WC>.



Comparison of mining pools

Reward types & explanation:

- **CPPSRB** - Capped Pay Per Share with Recent Backpay. [1] ↗
- **DGM** - Double Geometric Method. A hybrid between PPLNS and Geometric risk. Operator receives portion of payout on short rounds and returns it on long.
- **ESMPPS** - Equalized Shared Maximum Pay Per Share. Like SMPPS, but equalizes the variance of the reward.
- **POT** - Pay On Target. A high variance PPS variant that pays on the difficulty pool [4] ↗
- **PPLNS** - Pay Per Last N Shares. Similar to proportional, but instead of looking at shares, regardless of round boundaries
- **PPLNSG** - Pay Per Last N Groups (or shifts). Similar to PPLNS, but shares are grouped into shifts.
- **PPS** - Pay Per Share. Each submitted share is worth certain amount of BTC. A PPS method with 0% fee would be 12.5 BTC divided by <current difficulty>
- **Prop.** - Proportional. When block is found, the reward is distributed among all workers proportionally to how much shares each of them has found.
- **RSMPPS** - Recent Shared Maximum Pay Per Share. Like SMPPS, but system aims to prioritize the most recent miners first. [5] ↗
- **Score** - Score based system: a proportional reward, but weighed by time submitted. Each submitted share is worth more in the function of time t since start of current round. For each share score is updated by: $\text{score} = \exp(t/C)$. This makes later shares worth much more than earlier shares, thus the miner's score quickly diminishes when they stop mining on the pool. Rewards are calculated proportionally to scores (and not to shares) (at slush's pool $C=300$ seconds, and every hour scores are normalized)
- **SMPPS** - Shared Maximum Pay Per Share. Like Pay Per Share, but never pays more than the pool earns. [6] ↗
- **FPPS** - Full Pay Per Share. Similar to PPS, but not only divide regular block reward (12.5 BTC for now) but also some of the transaction fees.

03 Pick a Bitcoin mining pool

The next stage is to sign up to a pool; you can solo mine, but you need some serious hardware to make it worthwhile. You can find a list of pools on the Bitcoin wiki.

We'll walk you through the process of signing up for Slush Pool (<https://slushpool.com/>) because it's one we've used a lot, but the same procedure can be used for any of the major mining pools.

04 Jump in Head to the Slush Pool website and click 'Sign up here'. On the registration page choose a username, then enter your email address and password. You will be sent a confirmation email. Click the link to validate your email address. You'll see that a 'worker' has been created for you, so you can begin mining. You should ideally have one worker per device. You can visit the Slush Pool site at any time to view and create workers.



05 Funded mining

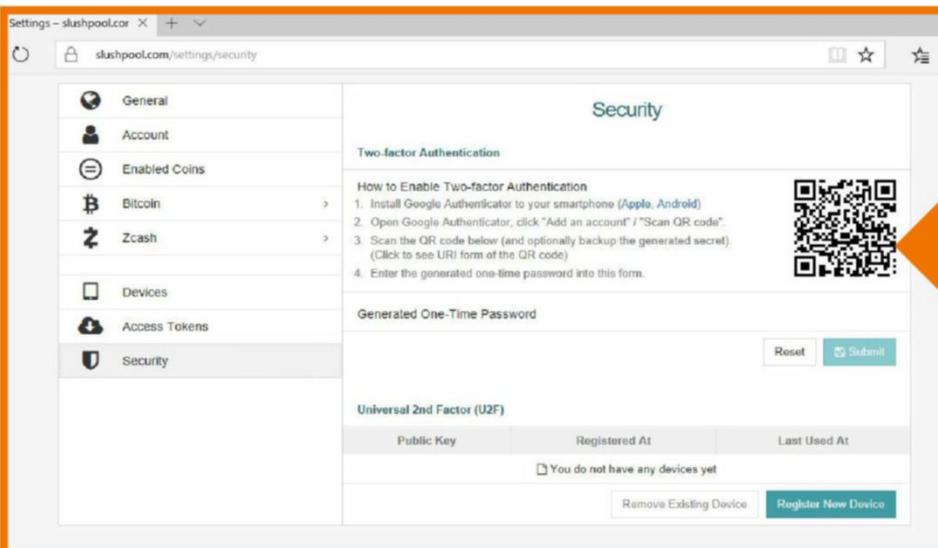
You need to tell your mining pool where and when to send the funds from your mining exploits. On the Slush Pool website you can do this by clicking Settings at the top-right, then clicking Bitcoin on the left. Choose 'Payouts' then click the New Wallet button. Paste in your public address for Bitcoin payouts here. If you're using a paper wallet this should be clearly marked. In Electrum you can view your current receiving address by clicking on the Receive tab. Click 'Submit' when you're done.

Some miners also enable you to choose the payout threshold – in other words how many BTC you need to have mined before the Pool sends funds to your wallet. This is important as while it's risky to leave large amounts of BTC in an online wallet, transaction fees for sending BTC across the network are currently very high, so you could end up paying a lot for multiple smaller payments. Choose freely and wisely.

General	Payouts
Account	Wallet Your address for receiving rewards
Enabled Coins	New Wallet Enter to change your BTC wallet.
Bitcoin	1t6CgF...
Mining	
Monitoring	
Payouts	
Zcash	
Devices	

Payout Threshold

- When your balance crosses the threshold value, the pool sends it to.
- It is possible to set this limit as low as 0.001 BTC.
- An additional fee of 0.0001 BTC applies to payouts lower than 0.01



The screenshot shows the 'Security' section of the Slushpool.com settings. It includes a QR code for two-factor authentication, a table for generated one-time passwords, and a section for Universal 2nd Factor (U2F) devices.

06 Pool safety

Mining pools are a popular target for hackers for obvious reasons. To make sure no one can potentially pilfer your Bitcoins, first check that your pool uses SSL. This means your connection is secure – in most web browsers you'll see a padlock icon (in the address bar) if this is the case.

Certain mining pools, such as Slush Pool, also enable you to secure access to your account by using two-factor authentication. This introduces a second step for a successful login, and is therefore another hurdle to prevent hackers from breaking into your account. To use this you'll need access to a mobile device and an app such as Google Authenticator or Free OTP.

07 Grab Bitcoin mining software

Now you need to download the mining software to your PC. You have a few options here, but to get started we'd recommend using GUIMiner (<https://guiminer.org>), if only because it has a straightforward interface.

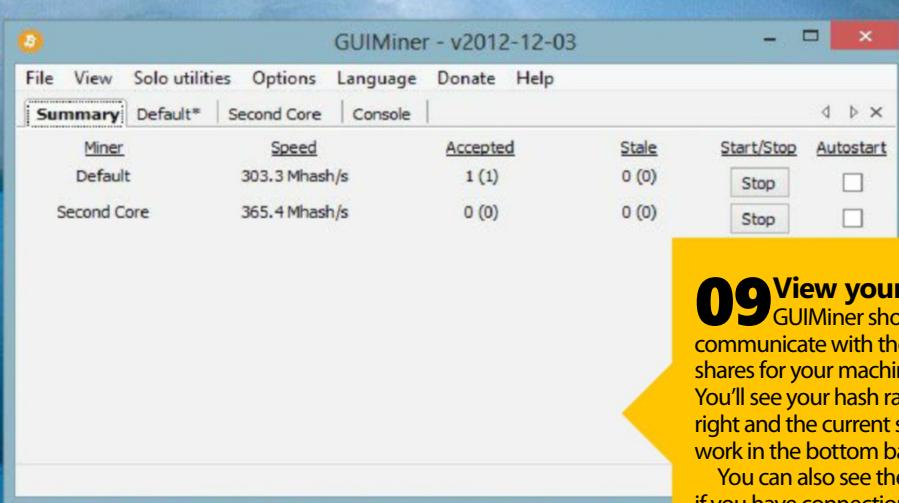
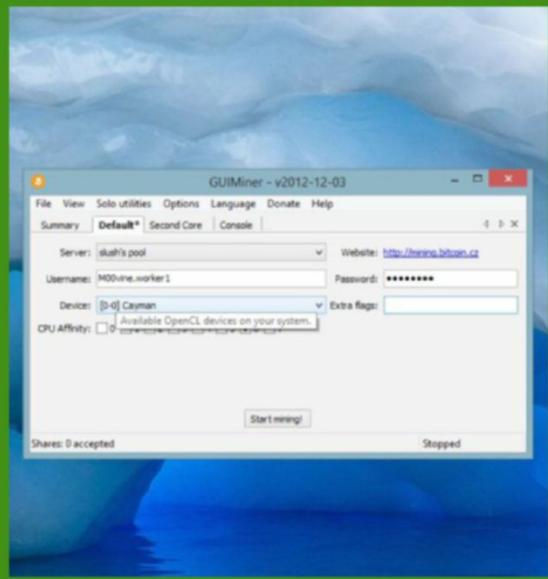
It comes as a self-extracting archive and runs straight from the folder to which it's extracted.



08 Configure mining

Launch GUIMiner and select 'Slush's pool' from the Server menu. Type in the name of the worker that was created when you registered your account – it'll be [username].worker1 – and enter the password for the worker.

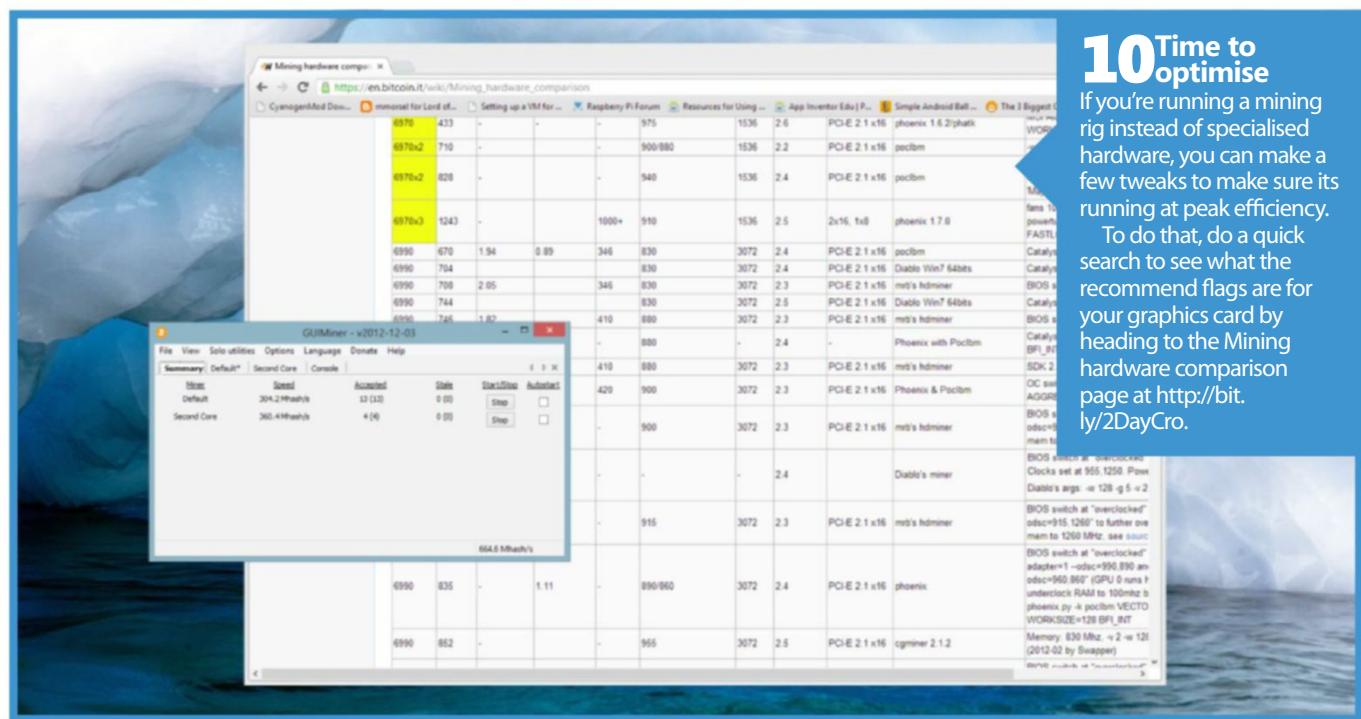
Select your graphics card from the Device menu and then click the 'Start mining' button to get going.



09 View your progress

GUIMiner should now communicate with the servers to get shares for your machine to work with. You'll see your hash rate at the bottom right and the current state of your work in the bottom bar.

You can also see the console (useful if you have connection problems) or a summary page (great if you have multiple cards) via the View menu.



10 Time to optimise

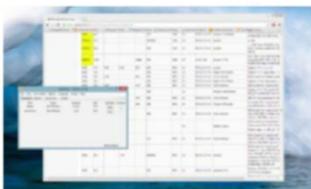
If you're running a mining rig instead of specialised hardware, you can make a few tweaks to make sure it's running at peak efficiency.

To do that, do a quick search to see what the recommend flags are for your graphics card by heading to the Mining hardware comparison page at <http://bit.ly/2DayCro>.

11 Data mining

The information you want from this table is under the Notes column. This is where you'll find the switches that push your graphics card that little bit harder, making them better at Bitcoin mining.

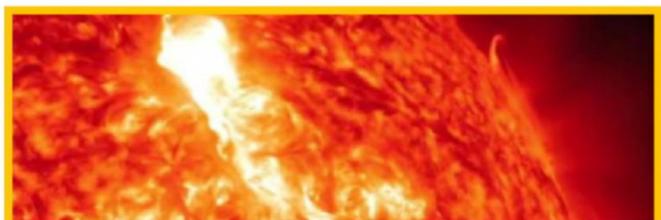
The important ones are those relating to the workload (-w) and whether to use vectors (-v). Enter these values into the Extra Flags block in GUIMiner, stop mining and then restart it.



12 Precision tuning

This should give your Bitcoin mining PC's performance a nice boost, but to really get the most from your card you need to turn your hand to a little overclocking.

We recommend grabbing EVGA's Precision X utility (www.evga.com/precisionx/), although you can get quite far using the overclocking tools that are part of AMD's Catalyst drivers.



13 Beat the heat

Whether you're using a specialised ASIC Miner or your own rig, the device is going to run very hot when trying to mine BTC for you. Therefore, be sure to place your mining hardware somewhere with good ventilation so the heat can dissipate easily. Generally speaking, the cooler your mining machine, the more efficiently it will perform. Be sure to factor in the cost of air conditioning and/or a heat pump into your mining calculations to be certain you're still running a profitable enterprise.

If you live somewhere cold, you could follow in the footsteps of smart Siberians and use the excess heat from mining as a 'data furnace' to heat your home.

14 Keep mining profitable

As research continues into specialist mining equipment and the difficulty of mining increases, the highest profits from mining are usually earned by data centres based in locations where energy is cheap, such as China. As a hobbyist miner, you can maximise your profits by following their example by using ASIC miners and keeping electricity costs down.

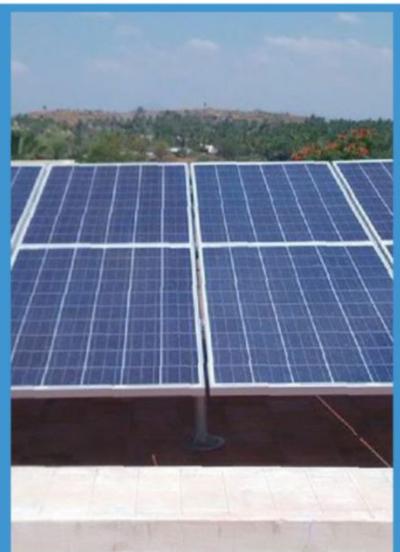
You can increase the efficiency of your rig by using an efficient PC power supply (PSU). You can get help with this in the Pools section of the BitcoinTalk forums (<https://bitcointalk.org>).

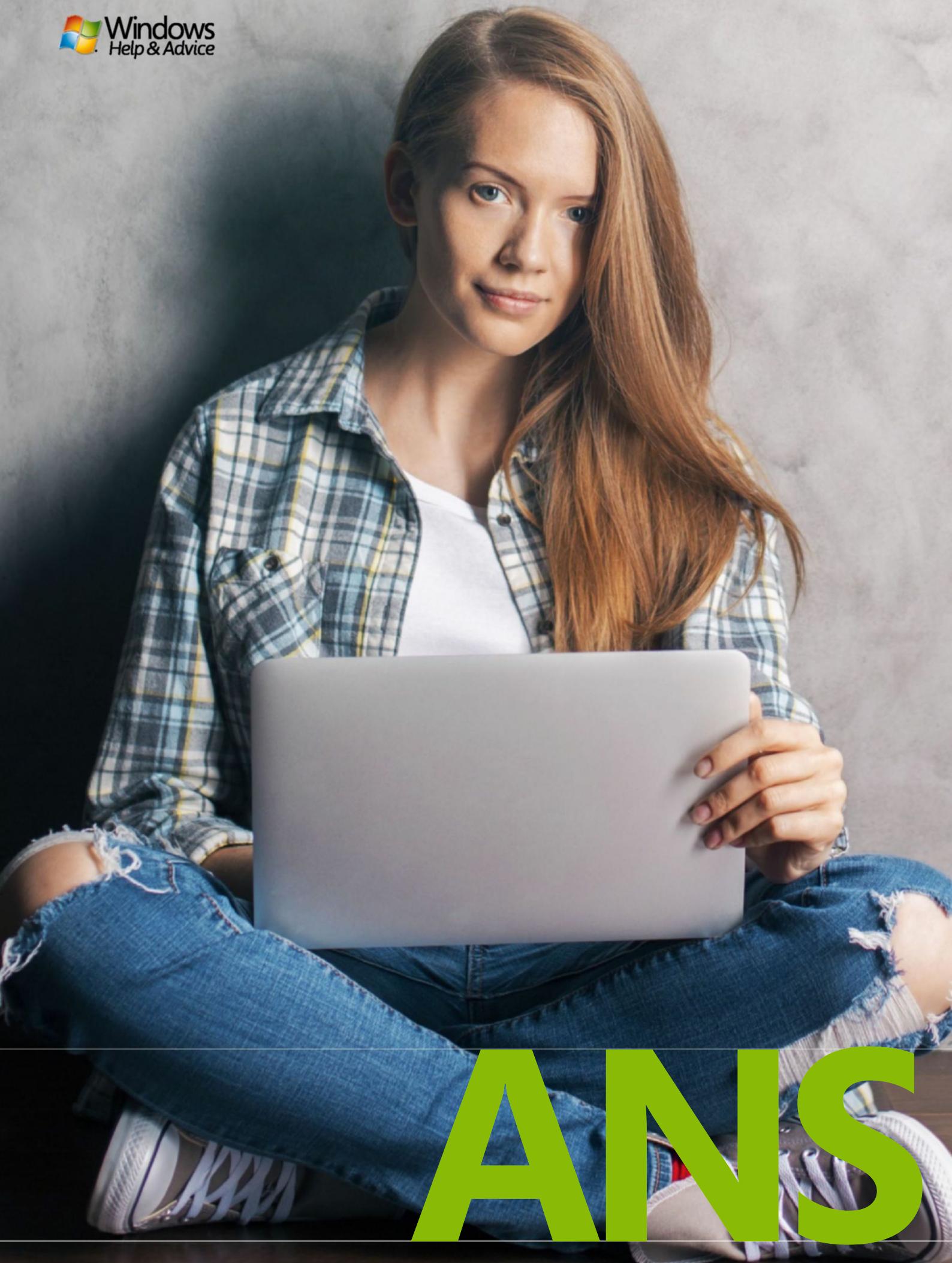
An alternative way to get one over on the 'big bully' miners is to use renewable energy to power your mining machine – for example by installing solar panels on your property.

If you do this, remember that the advertised wattage for devices is usually the optimal amount you'll receive under ideal conditions. Solar panels in particular are affected not just by the amount of sunlight they receive, but by surface area, the angle at which they're placed, and the direction in which they're facing. Speak to a qualified installer, fully explain your needs, and get things right.

To get started, consider using an electricity usage monitor to measure the energy consumption of your mining device in kWh (kilowatt hours). These are very inexpensive and are available from any hardware store.

Remember that the reward for mining Bitcoin halves every 210,000 blocks. You can find a more detailed explanation of this on the Bitcoin Wiki, but essentially, this means mining becomes less profitable over time, unless you can increase your hash rate – or the value of Bitcoin increases. ■





Uncover the mysterious secrets of Windows 10 with this bumper – and essential – collection of tips, techniques and handy info!

B

elieve it or not, but Windows 10 is now into its third year. Despite early teething troubles, something that always been a 'feature' of Windows (think XP before Service Pack 1 was released), the operating system has firmly established itself and largely found its feet.

We say largely because it's just had its third major update in the form of the Fall Creators Update, and that introduced a whole set of new problems to get past – although Microsoft is working hard to iron these out, so hopefully, by now, Windows 10 is functioning pretty much as it should.

That's all well and good for long-term users, but you may be a recent convert to Windows 10, taking advantage of the fact that Microsoft hasn't got around to charging people to upgrade yet. You may also find that certain changes made by recent updates have caught you unawares. And

then there's those age-old problems that plague all users too.

This is where we come in, providing you with answers to all those commonly asked questions about Windows 10 to help navigate you through the minefield.

All this and more

Over the next eight pages we'll show you how to tame Cortana, prevent Edge from running amok and reveal how to take control of which notifications you receive.

You'll find out why a Microsoft account is the best way to log onto your PC, discover how to get System Restore up and running again, and customise the Start menu. We'll also reveal how to transfer photos from your phone to your PC, deal with browser hijacks and gain access to the Control Panel (where the best system settings are still hidden).

Just sit back, get comfortable and find out how to take back control of Windows 10 and make it your best friend.

YOUR WINDOWS 10 QUESTIONS

WERE ANSWERED



"It's not immediately apparent, but you can also search for files from Cortana"

HOW DO I SEARCH WITH CORTANA?

Q How do I use Cortana to find files on my PC rather than the web? And can I disable the web-search portion of it?

A Cortana aims to be your one-stop shop for finding everything from files on your PC to getting information about upcoming events from the Internet. Just start typing your question into the 'Ask me anything' box next to the Start button and Cortana will return with a list of suggestions – just click one to access the relevant app, setting or to view the results of a web search. It's not immediately apparent, but you can

also search for files directly from Cortana. Type your search terms and either click the Documents icon at the top of the search window or click More to select from a wider choice – there's Music, Photos and Videos, plus a Folders option, which performs a general file search.

Cortana's web searches will open in Edge using the Bing search engine regardless of which default browser you set. If you'd like to turn it into a simple search tool for your files, apps and settings, you'll need to edit the Registry.

Click 'Start' > Run, type 'regedit' and press [Enter]. Now browse to the following key: HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\Windows\Windows Search. With Windows Search selected, choose Edit > New > DWORD (32-bit) Value. Name it 'AllowCortana' and verify its value is '0'. Restart your PC and you

GET STARTED
The first step is actually getting Windows 10.

should find the web search portion of Cortana has been disabled.

HOW DO I ADD EXTENSIONS TO EDGE?

Q I understand that Microsoft Edge now supports browser extensions. What's available and how do I install them?

A One of Edge's original shortcomings – lack of extension support – was finally addressed with the Anniversary Edition. Extensions are exclusively available through the Microsoft Store to allow them to be thoroughly vetted for security, and the simplest way to get them is through Edge itself: click the ellipsis (...) button and choose Extensions to view existing extensions

IMPORT PHOTOS FROM YOUR PHONE

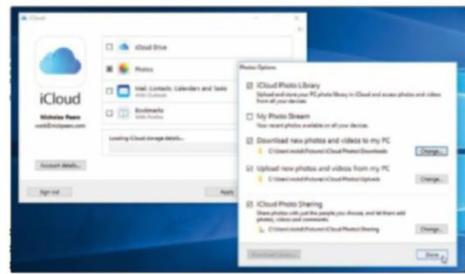
Q Can you tell me the various ways I can get photos from my phone over to my PC?

A In an ideal world you'd just plug your phone in, and your photos would be whisked off onto your PC. That works in some cases, but not others, so here's our guide to choosing the best free way of transferring photos to your PC.



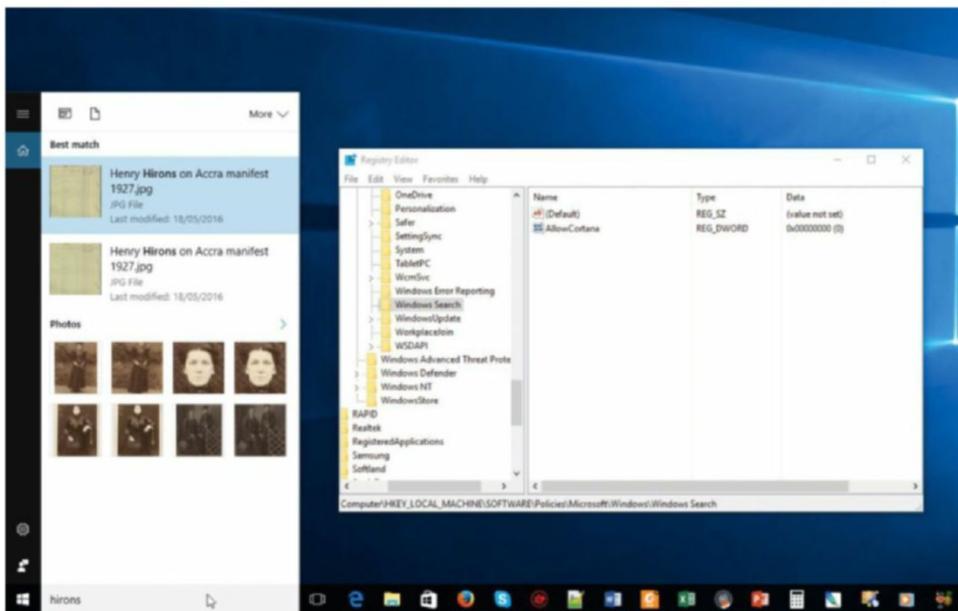
1 The wireless option

By far the simplest and most hassle-free version is to install the OneDrive app on your phone. Be sure to set up the camera upload option in Settings – photos will automatically upload to your OneDrive > Pictures > Camera Roll folder.



2 Use iCloud Drive

An alternative for iPad and iPhone users is iCloud for Windows (<https://support.apple.com/en-gb/HT204283>). Tick the Photos option and all the photos from your Apple devices will be transferred wirelessly to your PC over the Internet.



and access a convenient link to the Store where you'll find a complete list – install one from here and it'll appear in Edge.

There are currently over 70 extensions available, and more are bound to follow. Existing highlights include clipper tools for Evernote and OneNote, LastPass (password manager) and AdBlock Plus. Also look out for Office Online, a handy extension that allows you to edit Office documents on your PC or in the cloud through Edge itself.

HOW DO I STOP UNWANTED NOTIFICATIONS?

Q I keep getting notifications from apps I don't really care about. How do I stop them bothering me?

A If the new Action Centre is too intrusive, click Start > Settings > System > 'Notifications & actions'. Scroll down to the 'Get notifications from these senders' section where you can disable notifications from specific apps and services – alternatively, tap the app to reveal more options, allowing you to keep notifications while making them less intrusive, for example.

SHOULD I USE A MICROSOFT ACCOUNT TO LOG ONTO MY PC?

Q I was prompted to log into my Microsoft account during the Windows 10

RESTRICT CORTANA
Tweak the Registry to use Cortana exclusively to search your PC.

QUICK QUESTIONS

How do I change the default program for opening a particular file?

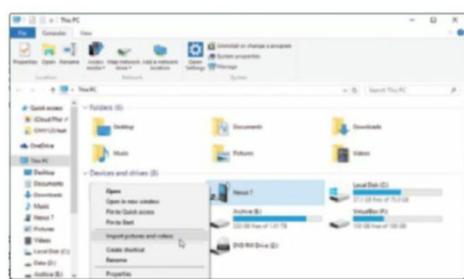
A The quickest and simplest way to do this is to right-click the file in question and choose 'Open With...'. If your chosen app isn't listed, click 'More apps' to browse through a list. If it's not there, scroll down and choose 'Look for another app on this PC' to manually find it. Make sure you tick 'Always use this app to open...' before clicking OK.

How do I open a Word file without installing Office on my PC?

A Windows 10 ships with an updated version of WordPad that can read .doc and .docx files, albeit with some limitations when it comes to advanced features. If you're looking for a full-blown – and free – alternative to Office try WPS Office 2016 Free (www.wps.com/office-free) or LibreOffice (www.libreoffice.org).

How do I access the Folder and Search Options dialogue box from File Explorer?

A Open a File Explorer window, switch to the View tab and click the Options button on the far right of the ribbon to access it.

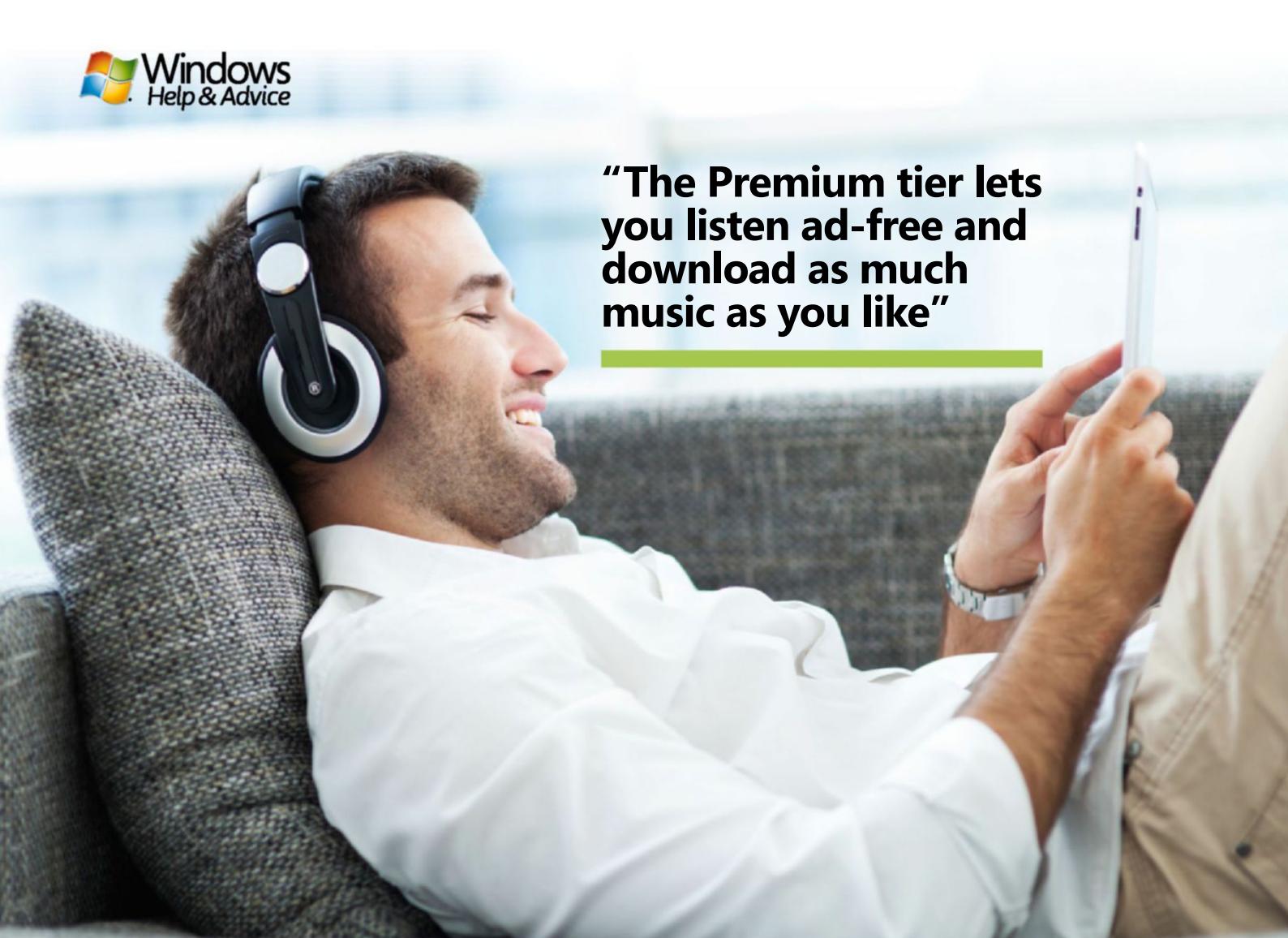


3 Via USB

Plug your Windows or Android phone into your PC's USB port. Make sure your phone's USB connection is set for file transfer as opposed to merely charging. Open File Explorer, right-click the device and choose 'Import photos and videos'.

4 Import via Photos

Photos will automatically search your phone and import any photos it finds across to your PC. You can also click the Import button and select your phone to manually choose exactly which photos to transfer across.



"The Premium tier lets you listen ad-free and download as much music as you like"

installation process.
I understand doing so will effectively replace my current account settings – why should I ditch my old account for a Microsoft one?

A Think of your Microsoft account as the glue that holds all your Windows settings, Store purchases and other Microsoft services together. It's basically a convenient way of using Windows 10 in this connected age – one login fits all. If you stick with your local account details, Windows should work fine, but you'll be frequently prompted to provide your Microsoft account details for other parts of Windows, from logging into OneDrive to downloading apps from the Microsoft Store.

If you use Windows on more than one device (say your phone, a hybrid tablet and your Windows desktop) then signing into each with your Microsoft account also allows you to sync certain settings between them (such as your desktop background), as part of

LISTEN UP
It's easy to get music and other media files on your devices.

keeping the experience consistent across all platforms.

WHAT'S THE BEST WAY TO EMAIL LARGE FILES TO OTHERS?

Q I want to email a 10MB file to a friend – should I simply attach this to the email, or is there a better way?

A Emailing large files can clog up people's Internet connections, while some services will actually reject email attachments over a certain size. A better option is to upload the file to your cloud account, such as OneDrive, then share a link to the file with your friend in the email. It means the email arrives speedily, and they can download the file on their own terms by clicking the link.

If you're a OneDrive user, copy the file into your OneDrive folder in File Explorer, then right-click it and choose 'Share a OneDrive

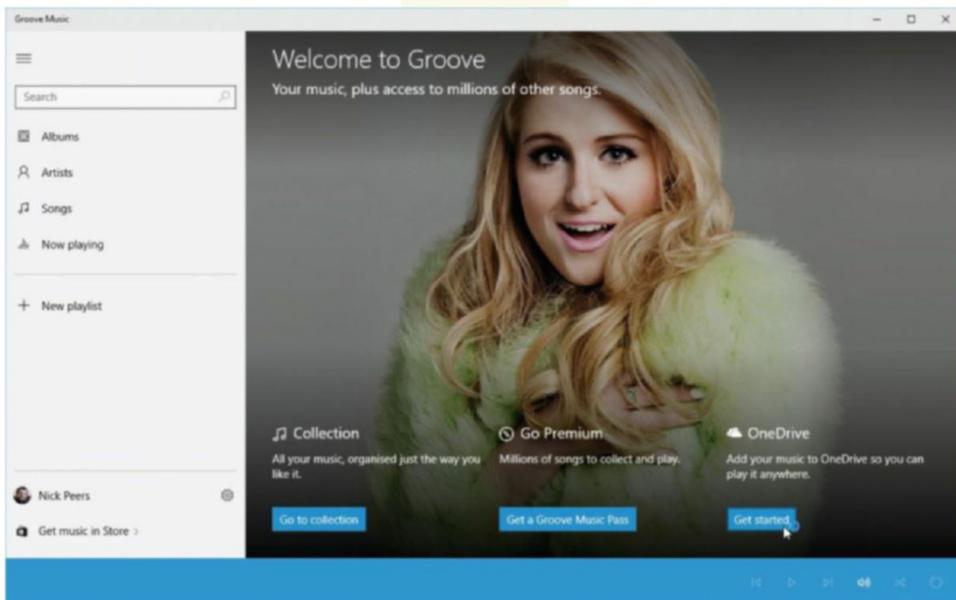
link'. A link to the file will be copied to your clipboard – just open the email and press [Ctrl] + [V] to paste the link into the body of your mail.

HOW CAN I EASILY BUY MUSIC ON MY COMPUTER?

Q Is there a recommended way of purchasing and downloading music to my Windows 10 PC?

A Since Microsoft closed down its Groove Music service last October, the most obvious way is to sign up for a streaming service such as Spotify (www.spotify.com), which is Microsoft's recommended partner.

You can either stream Spotify for free (with ads) or pay a monthly Premium subscription from £9.99 per month. The Premium tier lets you listen ad-free and download as much music as you like for offline listening. You can also sync it with



your smartphone or tablet using the free Spotify apps for iOS and Android. Similar services are offered by Apple Music, Amazon Prime and Deezer – you pay your money and you take your choice.

If you already have an existing music collection on your PC, you can continue to use the Groove Music app (which Microsoft says will carry on being updated), or try alternatives such as Apple's iTunes, or our current favourite, MusicBee, which is easy to use and free.

WHAT'S THE BEST WAY TO BACK UP MY COMPUTER?

Q Now I've upgraded to Windows 10, how do I protect myself from data loss? I have many documents I need to access for work, as well photos I have taken on my travels.

A Windows 10 has not one, but two built-in backup tools. There's the traditional Windows Backup tool from Windows 7, which can be used to create backups of your data, as well as take a full system image of your drive. Type 'backup' into the Cortana search bar and choose 'Backup and Restore (Windows 7)' under Settings to access it.

Those migrating from Windows 8 and 8.1 will be pleased to learn the File History backup tool is available too – simply choose

IN THE GROOVE
Microsoft says it will continue to update the Groove Music app, even though it has shut the music service that went with it.

Backup Settings from the same 'backup' search to open it and get set up. Follow the prompts to set up a drive to back up to, then choose 'More options' to fine-tune settings, including how often to back up and which of your folders get backed up.

Should you need to restore data from your File History backup, simply browse to the folder in question using File Explorer and click History under the Home tab on the ribbon. You can browse for files to restore, plus roll back to earlier versions of files too, in case you want to undo a recent change. If looking for a previous version, you can browse through the revisions, previewing each one before restoring the version you want to bring back.

One final option is to switch on OneDrive – this backs up your files to the cloud, giving you access to a securely hosted remote backup that you can also access on other devices and computers.

FILE RESTORE
Use File History to recover documents and other files – including older versions.

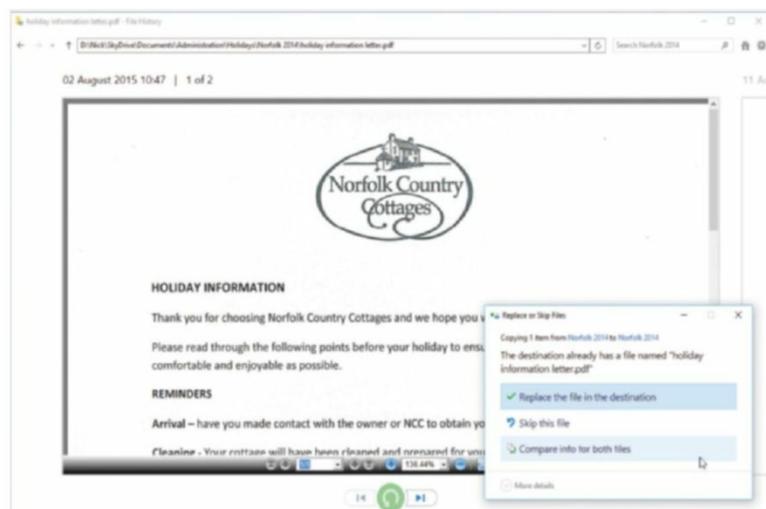
QUICK QUESTIONS

How do I unzip a file on my PC?

A Right-click it and choose 'Extract all', or double-click it to browse its contents – from here you can open individual files, or copy them to a folder on your PC.

How do I play video DVDs on my PC?

A Download and install VLC Media Player from www.videolan.org/vlc – pop your DVD in the drive and you'll be prompted to play it in VLC Media Player (or open VLC and choose Media > Open Disc if it doesn't appear). VLC should work with all discs – including those from other regions too.



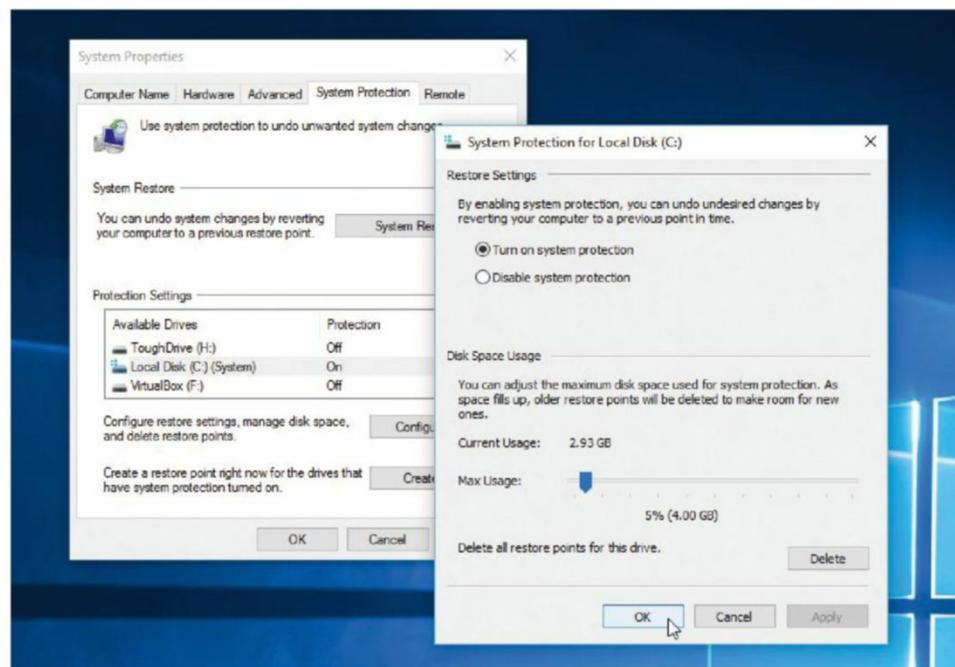
QUICK QUESTIONS

How do I verify a program's digital signature?

A Right-click the downloaded program file, then choose Properties. Switch to the Digital Signatures tab to view the signer. Use a tool like HashMyFiles (www.nirsoft.net/utils/hash_my_files.html) to compare its MD5 or SHA1 hash with that listed on the app's website to verify that it's genuine.

Where did that file I downloaded go?

A Most browsers – including Edge – will download files to your personal Downloads folder, which can be found under This PC. Check your browser settings to pick a different location.



SYSTEM PROTECTION
If System Restore isn't switched on, your PC isn't protected against certain changes.

HOW DO I GET MY BROWSER SETTINGS INTO EDGE?

Q I like Edge, Microsoft's replacement for Internet Explorer, but how do I get my bookmarks and other settings across from my current browser?

A If you're running the Fall Creators Update, you can import bookmarks, your browsing history and saved passwords from other browsers. To do that open the More (...) button in the Favourites menu. Scroll down in the pane that appears and click Settings. Once in Settings

click the 'Import from another browser' button under 'Import favourites and other info', then select the browser or browsers you wish to import from – Edge can directly import from Internet Explorer, Google Chrome and Firefox – and then click Import to bring everything across.

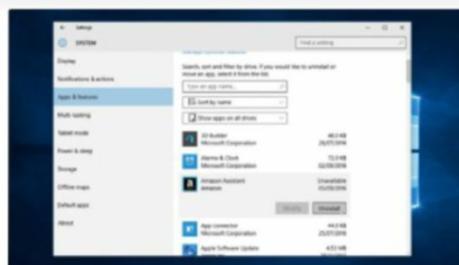
If you want to import bookmarks from another web browser – such as Opera (www.opera.com) or Vivaldi (<https://vivaldi.com>) – you'll need to import them as an HTML file. If you're running a recent version of Opera open the Opera menu and choose Bookmarks > 'Export bookmarks...' then save the resulting HTML file. In Vivaldi, click the 'V' icon then select File > 'Export Bookmarks...'. Again save the resulting HTML file – for more on Vivaldi, check out our step-by-step guide on page 29.

"We're not sure why System Restore isn't switched on by default, but it's crucial you do so"

GET RID OF BROWSER HIJACKERS

Q I've inadvertently installed a browser toolbar that's taken over my home page and search engine. How do I get rid?

A Despite what you might think, not all hijackers are malicious, and some can be very easily removed – although others can be trickier to get rid of. Work your way through these suggestions, to see what helps.



1 Remove offending items

Open 'Start' > Settings > System > Apps & Features and see if there's a program installer related to the unwanted toolbar – try removing this if so. If not – or it doesn't work – check your browser's add-ons or extensions, then try uninstalling from there.

2 Undo changes

If your home page and search provider aren't switched back automatically, look in your browser settings for the relevant sections where you can manually change back. If this doesn't work, try resetting your browser to its default settings.

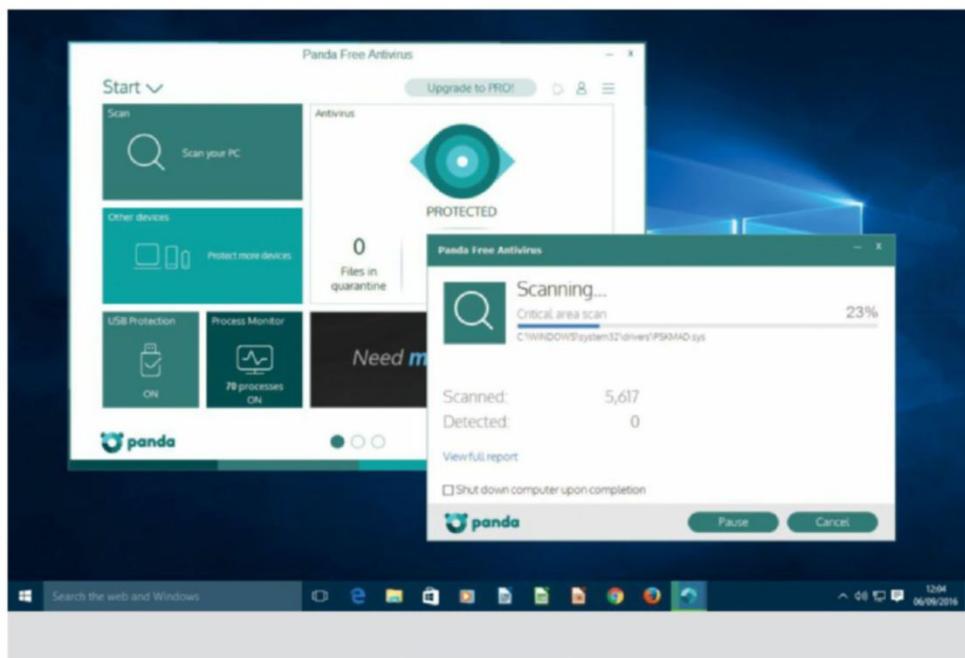
Back in Edge, head to Settings > 'Import from another browser' and in the next pane that appears select 'Import from file'. A File Explorer window will appear. Select the HTML file you created earlier and click Open. Then click the 'View imported favourites' link to see the bookmarks in Edge's Favourites menu.

DO I NEED ANTI-MALWARE SOFTWARE?

Q Does Windows 10 come with anti-virus software installed? If so, do I need anything else to protect my PC?

A Windows 10 comes with Windows Defender pre-installed, but it only offers basic protection against malware. We'd recommend replacing it with a third-party tool – if you're strapped for cash, then Panda Free Antivirus (www.pandasecurity.com) has a better detection rate than Windows Defender. Paid-for solutions such as Norton and Kaspersky also include more forms of protection, including proactive tools that automatically scan downloaded files and monitor for suspicious behaviour, which might indicate the presence of malware not yet known to the security software.

We also recommend that you add extra layers of security to your PC to minimise the risk of infection and block adware. Install and run regular scans with Malwarebytes Anti-Malware Free (www.malwarebytes.org),



get extra protection against potentially unwanted software using Unchecky (www.unchecky.com) and install the Web of Trust (www.mywot.com) plug-in to help steer you away from unsafe websites.

WHERE IS SYSTEM RESTORE?

Q I've read that Windows 10 disables System Restore, but that it's still present. How do I switch it back on?

A System Restore gets switched off both when you upgrade to Windows 10, and again when you install Windows 10 updates. To

STAY SAFE
Strengthen your PC's security by using a free anti-virus tool, such as Panda Free Antivirus.

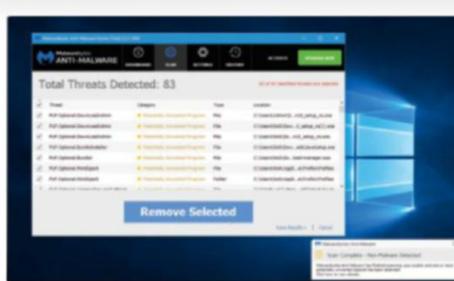
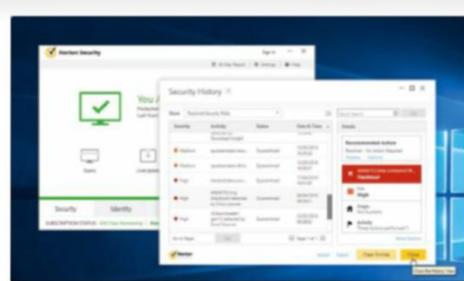
switch it back on, press [Win] + [X] to open the Quick Access menu and choose System, then click 'System protection'. Scroll through the list of available drives to find the System drive (typically C). Click 'Configure', then select 'Turn on system protection'. Use the slider to allocate space for System Restore – we suggest no more than ten percent or 5GB, whichever is larger. Click 'OK', then Apply and finish by clicking Create to set up your first Restore point.

WHERE'S MY MAIL GONE?

Q I access my live.com email through the Mail app, but messages vanish after a month. What's going on?

A This is one of those poorly documented features, whereby Mail only downloads mail from the past month from your Live.com email account. Don't worry, though; the messages are all still there if you need access – just go to <https://mail.live.com> in your browser if you only need occasional access to them.

If this is inconvenient, change the Mail sync setting to sync your entire mailbox: right-click your account name in the left-hand pane, choose Account Settings, then click 'Change mailbox sync settings' and use the 'Download email from' drop-down menu to choose 'any time' – then wait for your messages to be downloaded.

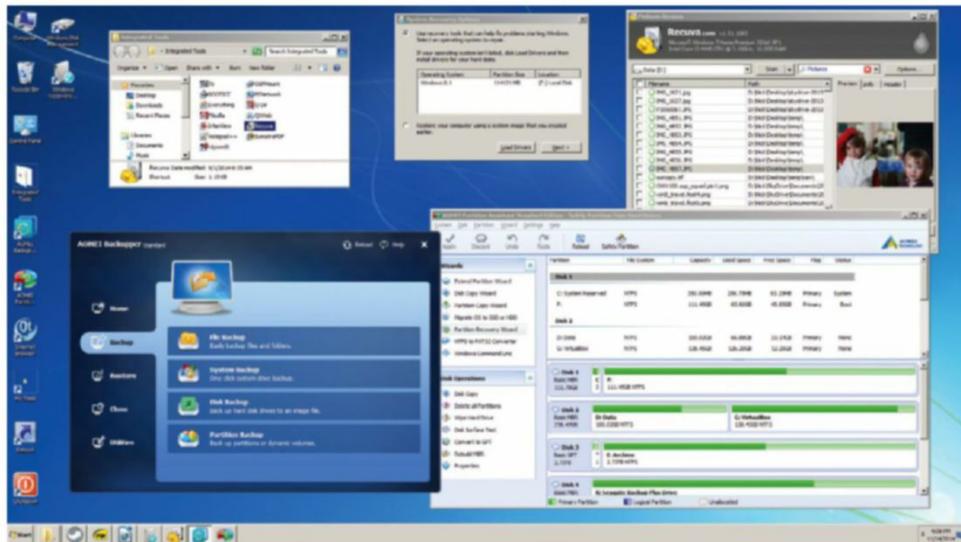


3 Scan with security software

If you can't get rid of the unwanted toolbar, run a full scan with your security software – many infections can be detected and removed in this manner. Be prepared to manually reset the home page and search settings when you're done.

4 Use a removal tool

If all else fails, try a dedicated removal tool such as Malwarebytes Anti-Malware (www.malwarebytes.org) or Norton Power Eraser (<https://security.symantec.com/nbrt-npe.aspx>), which can root out malware that evades your anti-virus software.



HOW CAN I ACCESS MY ONEDRIVE DATA ON MY MOBILE?

Q I've successfully installed OneDrive on my PC and enjoy being able to sync data between it and my laptop. What's the best way to access my OneDrive data through my mobile phone and tablet?

A While you can browse your OneDrive storage through your mobile's web browser, it's not the friendliest user interface. The good news is Microsoft provides free apps for Android, iOS and Windows. Search Google Play or the App Store for OneDrive, then sign into your Microsoft account to gain access to your OneDrive storage. From here you can do more than browse your files – you can upload photos, video and other files from your phone to your OneDrive account too.

HOW DO I ADD THINGS TO THE START MENU?

Q How can I customise the new Start menu to suit my tastes?

A The right-hand side of the Start menu is where you can 'pin' shortcuts

REPAIR WINDOWS

Create a USB recovery drive to troubleshoot problems when Windows won't start successfully.

permanently for easy access. It's designed specifically for apps you install through the Microsoft Store, but also works with regular desktop programs too. You can pin shortcuts from both the Start menu itself as well as from File Explorer – just right-click the program in question and choose 'Pin to Start'.

Shortcuts are organised in groups on the Start menu – you can drag and drop these shortcut tiles in whatever order you like, plus click the '=' button at the top of a group to rename it. Right-click a tile to resize it (make it small or wide), switch live tiles on or off with supported apps and to pin a shortcut to the Taskbar or remove it from the Start menu.

HOW DO I FIX BOOT PROBLEMS ON MY PC?

PIN ITEMS

Customise the Start menu to make your favourite apps and programs easy to access.

Q I can't get Windows to successfully start up – what can I do to either repair the problem or reinstall Windows?



"You may be able to fix Windows boot problems with a Windows recovery drive"

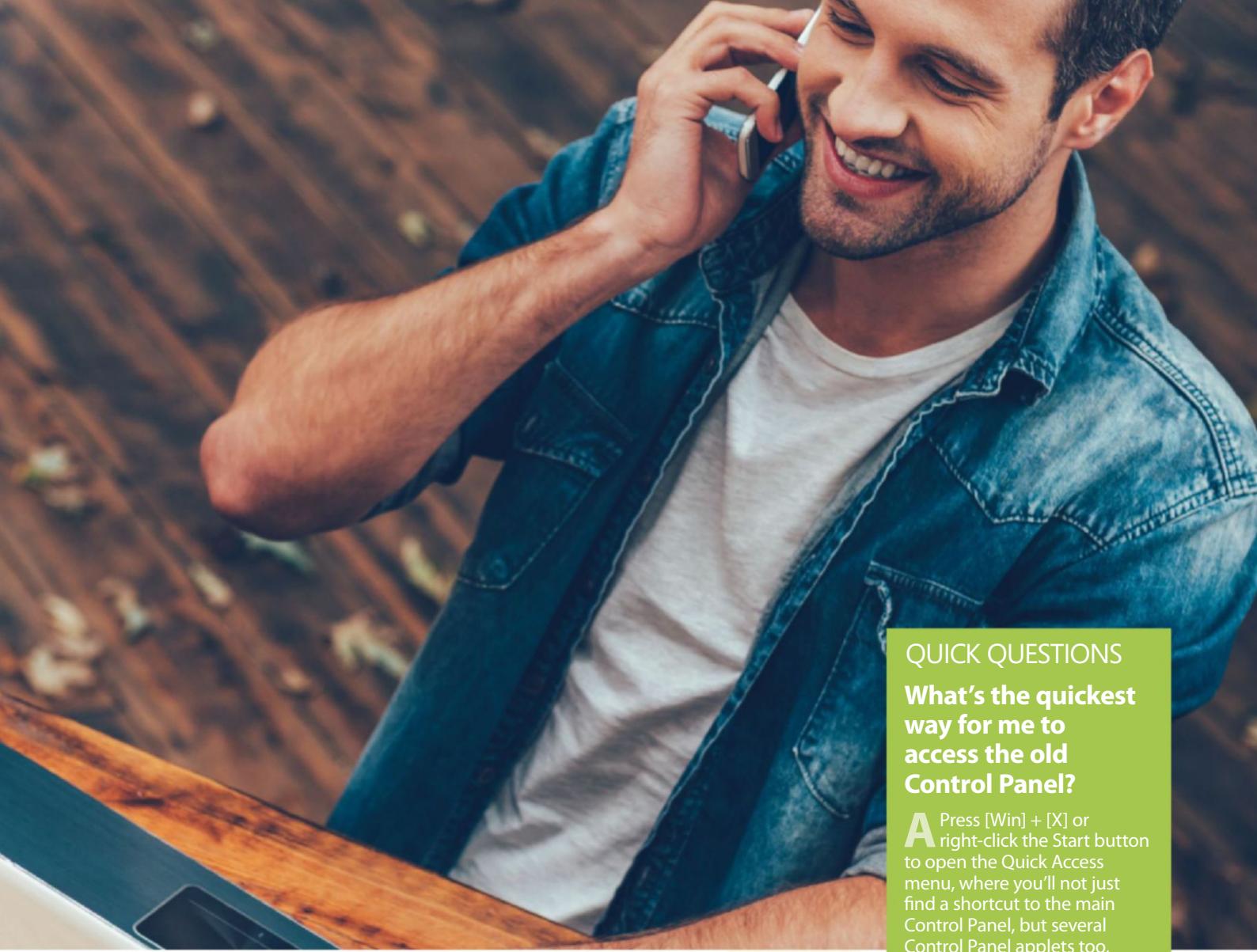


A We're assuming you get as far as the Windows loading screen and that Windows keeps freezing, throwing up an error message or rebooting. If so, you may be able to fix things using a Windows recovery drive, which you can create within Windows itself or on another PC.

Type 'recovery' into the Cortana search box and click 'Create a recovery drive'. If you leave 'Back up system files to the recovery drive' ticked, you may be able to reinstall Windows from the recovery drive, but it will need to be at least 8GB in size (as opposed to 512MB for just the recovery options).

Once complete, simply boot from this drive to repair or reinstall Windows. Look for options to repair boot problems, and if you're lucky the automatic tools will do the job. If they don't, and you have a recent drive-image backup, consider restoring that.

If you've backed up using Macrium Reflect Free (see page 18 or www.techradar.com/1319885), use its bootable recovery disc instead to restore Windows.



HOW DO I CHANGE MY PROFILE PICTURE ON MY ACCOUNT?

Q I'd like to change the picture that appears when viewing my Microsoft account profile. Is it possible to do this?

A This profile picture is linked to your Microsoft account, so any changes you make will appear across all your devices, as well as through your online Microsoft services. Click 'Settings' > Accounts, scroll down and under 'Create your picture' choose either 'Browse for one' to select a new photo or click the Camera icon to snap yourself using your webcam. Windows will do a good job of trying to align the photo so your face shows, but it helps if you choose a headshot. Previously used photos are shown to the right of the current picture, making it easy to switch.

WHERE'S MY HARDWARE?

Q I've got a new hardware device I want to add to Windows, but it doesn't appear to have detected it. What should I do?

A First verify that the hardware is compatible with Windows 10. In most cases, USB devices should be detected the moment you plug them in, so go to Start > Settings > Devices and check through the various sections to see if the device has been detected. Also scroll down to 'Related settings' for convenient shortcuts to the devices and printers control panel and Device Manager where you can check for further problems. In some rare cases, you need to install software and drivers before plugging in the device itself.

When setting up wireless devices, make sure that they're connected to your Wi-Fi network first – once done, they should become visible to your PC. ■

GADGET WOES

Installing hardware is usually plug and play, but occasionally things don't quite work as they should.

QUICK QUESTIONS

What's the quickest way for me to access the old Control Panel?

A Press [Win] + [X] or right-click the Start button to open the Quick Access menu, where you'll not just find a shortcut to the main Control Panel, but several Control Panel applets too, including System, Program and Features and Device Manager.

Where do I find my Wi-Fi settings?

A Open the Action Centre, then click the Network tile to browse and connect to available networks. Click the 'Network & Internet settings' link from here to jump to Settings > Network & Internet where you can access other options such as viewing data usage for the past 30 days.

How can I free up space for the Fall Creators Update?

A You may be able to clear enough space using Windows' own Disk Cleanup tool – open File Explorer, right-click your C drive and choose Properties, then click 'Disk clean up'. Be sure to click 'Clean up system files' to free more space. If this doesn't work, install CCleaner (www.piriform.com) for a deep clean.

IMPROVE WINDOWS

Alex Cox shows you how to cut out everything you don't need, and create a custom Windows install for next time

Bloat is the curse of operating systems, because they need to appeal to the masses, rather than cater for individuals. You can't have a Microsoft engineer sit there and craft you your own custom version of Windows (we know, we've asked), so you need to scrape off that additional chaff yourself. We're not just talking about shaving away the contents of a couple of megabytes of storage space, or cleaning up the Start menu. Windows comes with

stacks of software that can reduce your machine's performance or boot time. It comes with stuff that can see what you're doing. It includes features that are potentially monumentally annoying. So we'll do away with all of them, and explain what's safe to chop, and what isn't.

Doing all this work every time you get a new PC would be very frustrating, so we're also going to look at creating an already-mostly-trimmed Windows installer, which you can use to start from a much more advanced point than usual,

and even integrate apps that make up for some of Windows 10's shortfalls. A better Windows for your PC of tomorrow.

Windows doesn't seem to encourage trimming, but a little knowledge goes a long way. Our sacrificial OS for this guide is the latest official ISO of Windows 10 Home, updated for the Creators Update, because (presumably) that's the version most people are using; if you're taking a hammer to the Pro version, you might have to tease out a few more services, but the changes won't be too extreme.



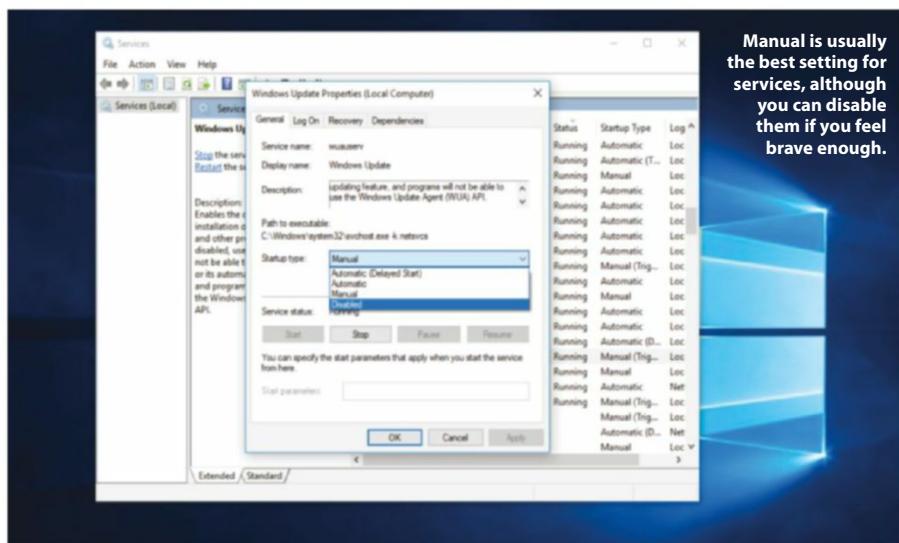
INTERFACE OVERHAUL

Although Windows 10's interface is already a highly streamlined affair compared to its predecessor, it could stand to be slicker. Let's begin, with our clean Windows install, by making it snappier, removing unnecessary elements, and making that experience all the better. What better place to start than, well, Start itself? While we personally love the Start menu tiles, you may not be such a big fan so how do you get rid?

Windows 10 Pro includes tools such as the Group Policy Editor, which can help you do away with them quickly, but in Windows 10 Home you're stuck with the tedious process of right-clicking each tile, and selecting 'Unpin from start'. Do this enough times, click off the Start menu, and relaunch it, and that right side panel disappears altogether. Clearing out the main bulk of the menu itself, apart from a certain selection of Windows' default apps, is again a case of wading in with right-clicks, and uninstalling. Those apps that simply won't uninstall – the monsters – can usually be excised using Powershell. See the 'Ultimate Removal' box (page 63) to find out how to remove and, if you're desperate, reinstate them.

There is a host of surface personalisation tweaks that you can

apply to the Start menu and Taskbar through the Settings > Personalisation menu. You can change the colour by first selecting an accent colour in Colours, then checking the box to apply it to the Start menu, Action Centre, and Taskbar. While you're on the same screen, switch off



Take a fail-safe backup image before you begin.

transparency effects for a microscopic performance boost, then head to the Start tab. Because we're old school, we favour switching off everything here to make the Start menu a straight alphabetised list of apps, but we're not going to say you're wrong if you like having recently used or installed apps pushed to the top. Suggested apps, though? That can definitely go. At the bottom of the page, click 'Choose which folders appear on Start' to get quick links to a bunch of useful features on there. Quite why File Explorer and



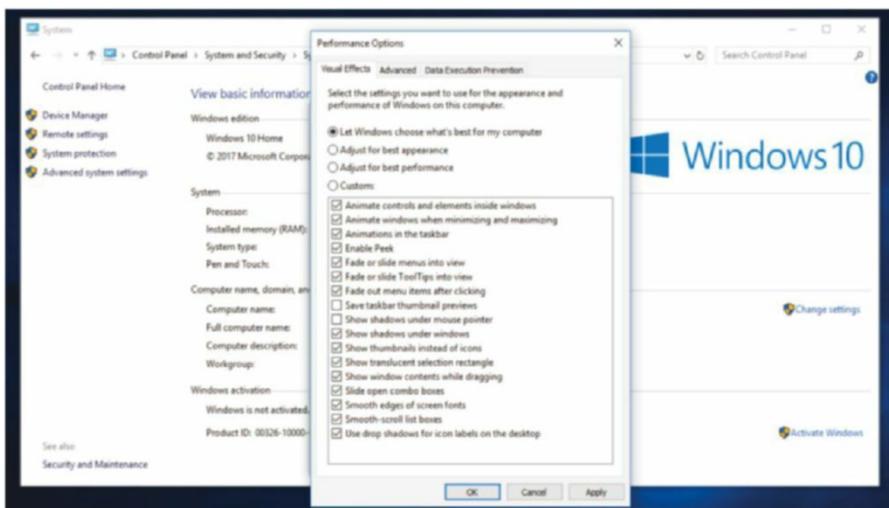
Tweaking colours is only aesthetic, but can help Windows feel more streamlined.

everything you can't stand to lose. Since we're currently here for efficiency, not looks, we recommend disabling animations, fades, shadows – basically, everything bar font smoothing. Save your changes, then open up the Registry editor for a quick deeper hack. Navigate to the 'HKEY_CURRENT_USER\Control Panel\Desktop' key, open up the 'MenuShowDelay' entry, and change its value. A flat zero tends to make things a little overcrisp – read: impossible to use – but halving the number can really make Windows feel a lot more responsive.

"If there are components you use very little, it's a good idea to stop them"

its ilk aren't included by default, though, is baffling.

Basic stuff done, let's do some more intricate tweaking. Open up Control Panel > 'System and Security' > System > 'Advanced system settings', then click the Advanced tab. Jump into the performance settings, and switch off



Who needs fancy visual effects, really? Disable everything you can live without.

Manual is usually the best setting for services, although you can disable them if you feel brave enough.

BACK TO BASICS

Now head back to the control panel, because it's time to do a little old-school scrubbing. Head to Programs > 'Programs and Features', and select 'Turn Windows features on or off'. The list isn't over-extensive, and there's not much you can remove that will leave you with a faster PC, but it can prevent some annoyances. Drop, for example, Internet Explorer 11, because you don't use it, and there's no sense keeping it around. You can also kill off Windows Media Player, if that's not your jam.

Next, let's improve your boot speed by preventing a few things from running at startup. Launch the Task

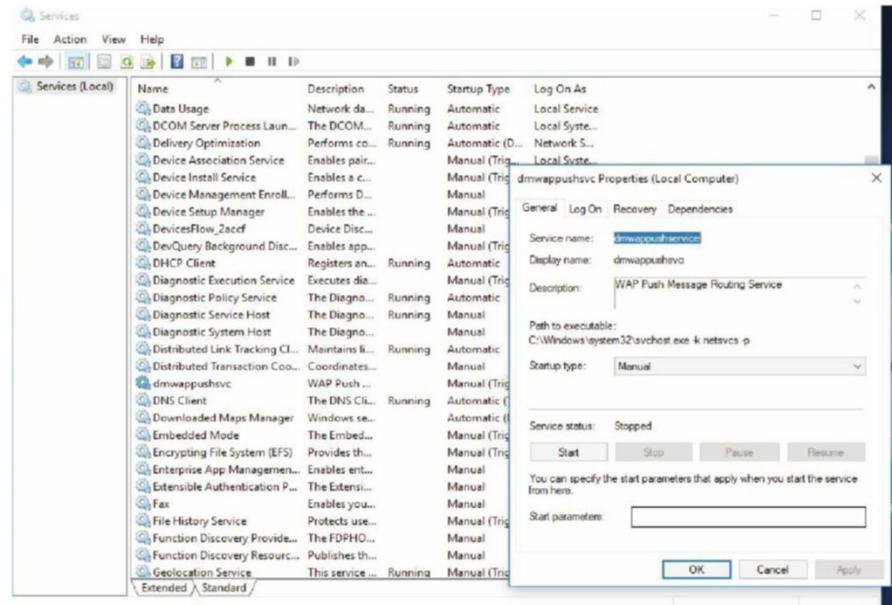


Removing the Live tiles from the Start menu is as simple as a right-click.

Manager with [Ctrl] + [Shift] + [Esc], and head to the Startup tab. Each program that's launched automatically is listed with a broad rating of its start time impact. If there are components you use very little, it's a good idea to stop them; to squash OneDrive's system-grinding initial launch time, for example, right-click it, and set its status to Disabled. For more intricate control, Microsoft's Sysinternals team has long published Autoruns (<http://bit.ly/2CKVQ05>), a free – and portable – add-on that offers access to the same management tools as Task Manager, plus a whole lot more.

More classic cleaning can be done within Windows 10's Settings screen. Microsoft's love for its Universal apps means it presumes you'll want to use them, and are going to want them ready at a moment's notice, running in the background at all times. Which may be true, but disabling those background apps is preferable if you want a smoother-running PC. In Privacy > Background Apps, you can switch off anything you're happy to just fire off manually, which will likely include, well, just about everything.

One more quick optimisation, whether you're running a small drive or not, would be to clean up temporary files, and wash away old versions of Windows. This will gain a fraction more speed in certain apps if they're forced to grind through cache directories before running, but you're not doing this just for speed; you're doing it for cleanliness. Find the drive you want to optimise in File Explorer, right-click it and select Properties, then seek out Disk Cleanup in the General tab. Select the categories that you want to kill off, and then use 'Clean up system files' to expunge the lot.



Safe services

There's a laundry list of services that can safely be switched from automatic to manual for a boost at boot time; disabling them altogether is a question of your preferences, or Windows' ability to hold up. Cut **Connected User Services and Telemetry**, **dmwappushsvc**, and **Diagnostic Tracking Service** to remove Windows' spying – er, telemetry – tendencies, then **Diagnostic Policy Service**, **Windows Error Reporting Service**, and **Program Compatibility Assistance Service** to do away with a few services that you won't want bothering you once you've started using Windows in earnest. You can also disable **Remote Registry** just to be a little

secure, and **Windows Defender Service** – and possibly **Security Centre** – if you're confident in your own malware-fighting methods.

A lot of the other possibilities will depend on the specific makeup of your machine. Shut down **IP Helper** if you're not using IPv6, **TCP/IP NetBIOS Helper** if you're not part of a workgroup, or **Distributed Link Tracking Client** if your PC is not on a network at all. Kill **Print Spooler** if you don't have a printer, **Windows Image Acquisition (WIA)** if you don't have a scanner, **Touch Keyboard and Handwriting Panel Service** if you don't have a touchscreen, **Bluetooth Support** if you haven't

already got the idea here, and **Downloaded Maps Manager** if you never use Windows 10's built-in maps app.

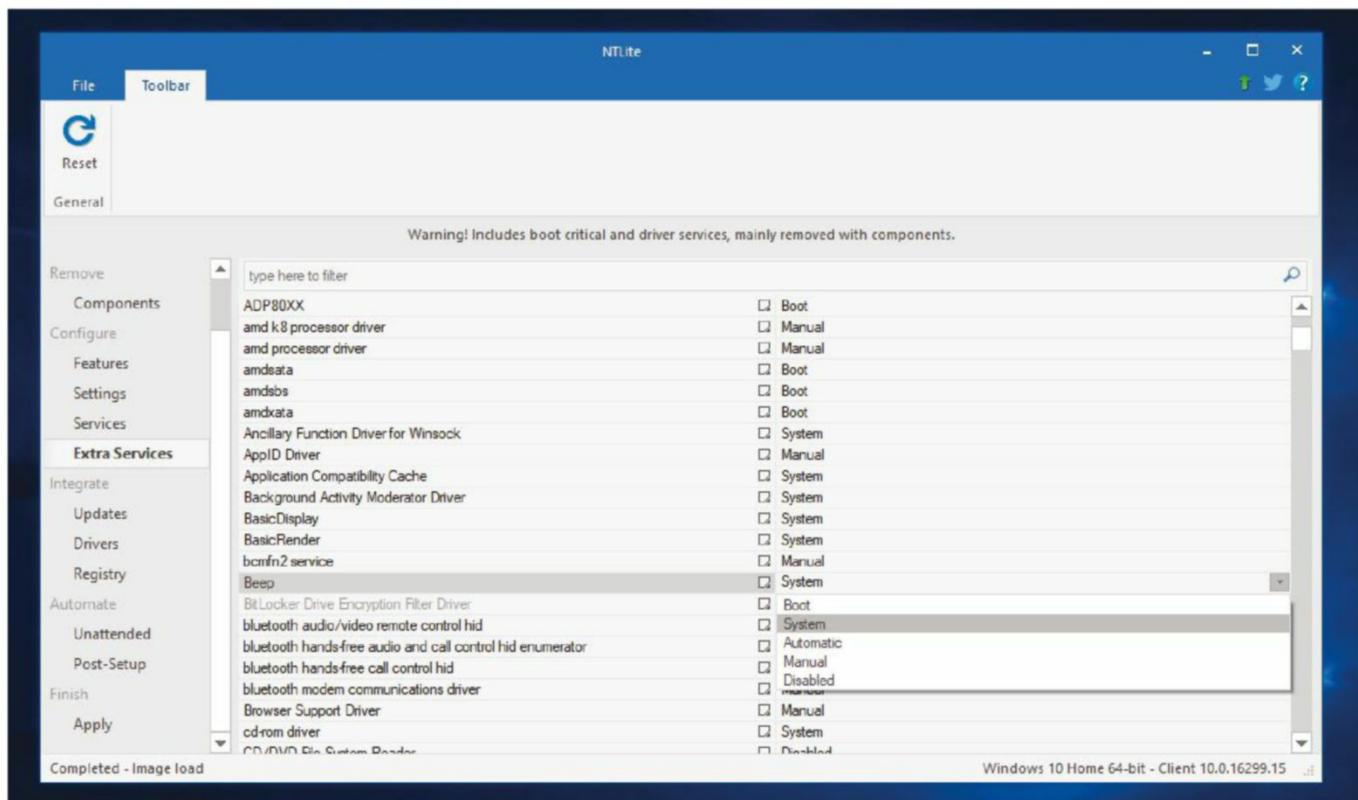
You may also wish to make a few other services manual, without disabling them. The three remote desktop services are optional, and your graphics card – or possibly sound driver – has likely slipped a few in. Dropping these to manual will improve boot time, but probably slow the launch of your graphics-intensive apps. That's a common theme with services: Unless you completely disable them, you simply delay the, er, delay, and disabling is rarely the best idea. But do experiment, and see what works for you.

SLASHING SERVICES

We are, of course, working on a clean Windows install, but you probably aren't. Disabling the core Windows services – those programs that run quietly in the background, supplying your PC with essential (and inessential) functions that don't require an interface – isn't necessarily recommended; Microsoft's own suite has been honed over the years to be as efficient as possible, its contents sitting in the pagefile, barely ever touching system RAM. You could

chop out most Windows services and never feel a difference on a modern machine, apart from the whole operating system crumbling around your ears. Third-party services, though, are a different story, and cutting them out means you're likely to see a real change, which (usually) will only impact that app's time to initial launch.

First up, finding out what's running. The Task Manager is a good place to start. Switch to the Advanced view, and scroll down to see the entries prefixed with the words 'service host'. These are all fired off via svchost.exe, so they're categorised together. Some might



NTLite enables you to drop integrated services before Windows is even installed.

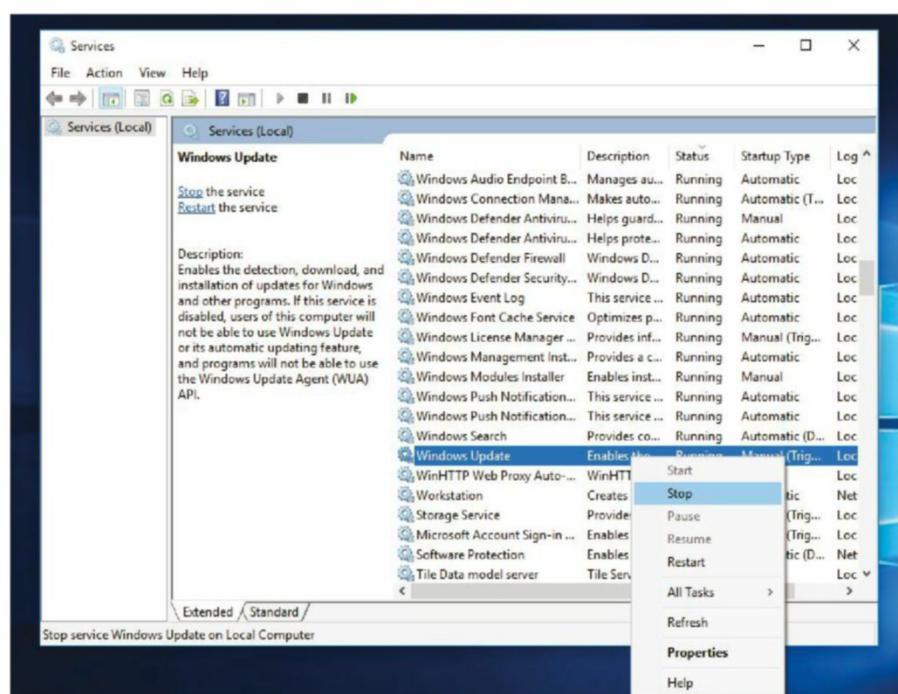
contain more than one service, which you can discover by clicking the expand arrow on the left; and most, while not essential, are there to improve your Windows experience. A quick glance through the list in our clean install reveals Superfetch as the main culprit for RAM hogging – as it should be, given that it's the service that puts commonly accessed data into RAM, rather than spending ages reading it from the hard drive. Our biggest CPU sapper is the usefully named Local System, which deals with Windows updates. That's the perfect target for now: We know there are no updates pending, so we can stop it.

Cumbersome ending the task in Task Manager won't do. Instead, type 'services' into the search bar to open the services section of Windows' Management Console. You won't find Local System in the list, but you should find the two components we're looking for: Windows Update, and the Update Orchestrator service. Right-click them, select Stop, and they'll go away until your next boot. Those sanctions not harsh enough? Right-click, select Properties, and poke around the General tab. Change the 'Startup type' to Disabled, and they won't come back until you dig through the list and switch them back on again. Be warned, though: Unless Windows is happy to do without, this is a stupid thing to do. Even more stupid – but similarly possible – would be to remove a Windows service altogether,

although cutting out a third-party service – maybe even a piece of malware – is unlikely to sting too much. Run the Registry editor by typing 'regedit' into the search bar, then dig down to 'HKEY_LOCAL_MACHINE/SYSTEM/CurrentControlSet/Services'. Finding the particular service you want to kill can be tricky, but click around until you find it, then rename (or, ulp, delete) its key to get rid of it.

BACK IN TIME

If you're installing on a new machine, there's no reason you have to use Microsoft's stock ISO. Installation customisation tool NTLite actually makes generating a stripped-down Windows easier, and it means you can arguably do a lot more in a lot less time. It's also a chance to



You can use Stop to temporarily kill a service and see what effect it has.



Disabling Windows features is a good idea if you're never going to use them.

save a bunch of time post-install, as you can integrate all the drivers, updates, and software you need into your custom installer, so it's there straight away. What's more, it's a fantastic way of cutting down an existing Windows installation, as long as you pay for a license – although you'll only be able to create your own install image if you're chipping away at an ISO, rather than a running system.

Let's concentrate on trimming a new ISO – the live process is no different, just a little more narrow. Download the software from www.ntlite.com via the three-line 'hamburger' menu, and run through its installer – you can also create a portable version of NTLite at this point by checking the appropriate box, so you can drop it on a USB flash drive, and take it from PC to PC if necessary. Before you run it, mount your Windows ISO (you can download one from the Microsoft website, if you don't have one handy) by right-clicking the file, and selecting Mount, then copy over the files to a writable folder to prepare them before unmounting again. Open NTLite, click the Add button on the ribbon, and point it at the folder where you dropped your installer files. Pick the version of Windows you're looking to hack, wait for it to mount (it may take a couple of minutes), then select Components below Remove in the left column, and accept the dire warning of potential doom that appears.

The full list of features available for removal is going to be pretty daunting, and unless you're generating a kiosk Windows that's designed to be impervious to interference by certain means, there's probably little reason to go too crazy here – you can cut out some of the same services that you might have disabled previously, and really trim the size of your ISO by excluding support for every piece of hardware you know you don't have. You'll see a bunch of stuff in blue – these are components you can't remove unless you pay €40 for a full license.

Check out the Settings, Services, and Extra Services panels, too. The former

```

IsFramework : False
PackageFamilyName : microsoft.windowscommunicationsapps_8wekyb3d8bbwe
PublisherId : 8wekyb3d8bbwe
IsResourcePackage : False
IsBundle : False
IsDevelopmentMode : False
Dependencies : {Microsoft.VCLibs.140.00_14.0.25426.0_x64__8wekyb3d8bbwe}
IsPartiallyStaged : False
SignatureKind : Store
Status : Ok

Name : Microsoft.Advertising.Xaml
Publisher : CN=Microsoft Corporation, O=Microsoft Corporation, L=Redmond, S=Washington, C=US
Architecture : X64
ResourceId :
Version : 10.1712.2.0
PackageFullName : Microsoft.Advertising.Xaml_10.1712.2.0_x64__8wekyb3d8bbwe
InstallLocation : C:\Program Files\WindowsApps\Microsoft.Advertising.Xaml_10.1712.2.0_x64__8wekyb3d8bbwe
IsFramework : True
PackageFamilyName : Microsoft.Advertising.Xaml_8wekyb3d8bbwe
PublisherId : 8wekyb3d8bbwe
IsResourcePackage : False
IsBundle : False
IsDevelopmentMode : False
IsPartiallyStaged : False
SignatureKind : Store
Status : Ok

Name : Microsoft.Advertising.Xaml
Publisher : CN=Microsoft Corporation, O=Microsoft Corporation, L=Redmond, S=Washington, C=US
Architecture : X86
ResourceId :
Version : 10.1712.2.0
PackageFullName : Microsoft.Advertising.Xaml_10.1712.2.0_x86__8wekyb3d8bbwe
InstallLocation : C:\Program Files\WindowsApps\Microsoft.Advertising.Xaml_10.1712.2.0_x86__8wekyb3d8bbwe
IsFramework : True
PackageFamilyName : Microsoft.Advertising.Xaml_Awkuw3dRhhwe

```

Ultimate removal

Doing Windows your way means only including the applications you absolutely want, using Windows as a base for your operations, and often completely ignoring those apps that Microsoft doggedly protects unwitting users from deleting. We're not suggesting they're useless, and sometimes a core Windows app might be the best choice, but that's for you to decide.

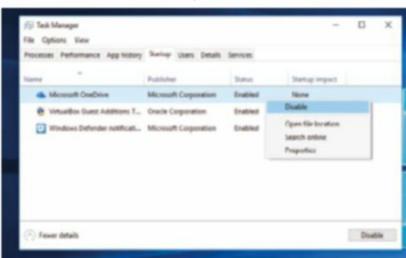
While the surface parts of Windows deny their removal, the deeper toolbox doesn't. Fire up Powershell by right-clicking the Start button, and selecting Windows Powershell (Admin). Now run the command

Get-AppxPackage

(capitalisation is important in Powershell) to list every core app that Windows has installed. Scroll through – it's probably quite a long list – until you find the application you're looking for, and seek out its full name, which is a longer string, including version numbers. Then just type 'Remove-AppxPackage <full name>' to strike it from your drive. One bit of caution here: Don't, whatever you do, remove the Microsoft Store app. While most of these apps can be reinstalled relatively simply if you realise you've made a mistake, removing the Microsoft Store removes it

permanently, and also does away with your ability to reinstall other core apps. Whatever you may think of the Windows app pool, the Store itself is getting at least a bit better these days, and you don't have to use it. Just work around the fact that it's still there. This may not be an entirely permanent exercise, either. Future updates are likely to reinstall packages that you've previously removed, and add a few stubborn newcomers to the mix along with them. But now you know how to remove them, you can just go through the process afresh when major new versions of Windows appear.

enables you to preconfigure your ISO to look and act just as you'd expect, again saving you time poking around the Settings screen and Control Panel later on, while the latter pair gives you full control over services, as discussed previously. Extra Services, in particular, enables you to manipulate a bunch of services that would usually be pretty inaccessible through Windows itself;



Dropping little-used startup apps can lead to much faster boot times.

switching some of these from Boot to Manual can boost your PC's boot time, although you won't know until you install your image, so this may be a false economy. The Integrate and Automate categories are where you include the software and drivers that you want to integrate into your new ISO – any third-party programs and apps you also want to install on your refreshed PC need to go in the 'Post-setup' section.

When you're done, use the Apply section at the bottom of the list to finish everything off. We recommend opting for the 'Save and trim' option, which cuts out everything but the specific version of Windows 10 you've been working on. Since most ISOs contain multiple editions, and few people have any use for Windows 10 S, N, and the like, this is a good way to cut down the size of the install image. ■

Meet the... Support Squad



Support!

► WINDOWS HELP ► HARDWARE FIXES ► SOFTWARE SOLUTIONS ► INTERNET TIPS



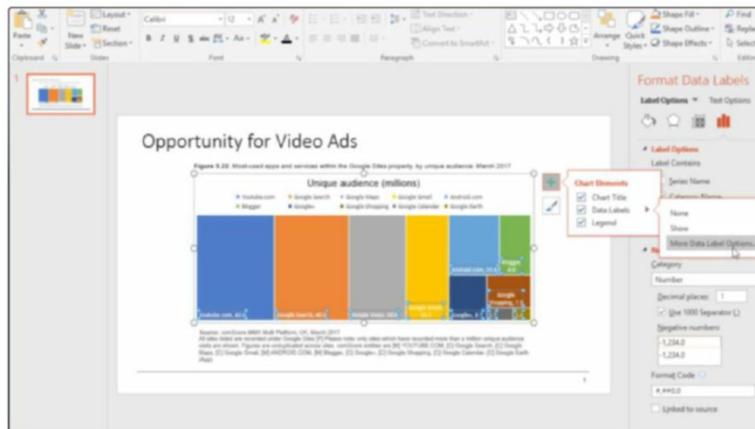
Do you have a
PC problem?
Get in touch...

Email full details of
your problem to the
support team and we'll
do our best to help
windowshelp@futurenet.com

Microsoft Office UNCOVER MORE CHART LABELLING OPTIONS

Q I've created a 'Treemap' chart using Microsoft PowerPoint's Insert Chart tool, but annoyingly it doesn't appear to give me an option to display the values assigned to each part of the Treemap. Is there a way to do this without having to manually add text boxes to the document?

Hannah Stuart



BETTER LABELS
PowerPoint hides
several of its chart
labelling options
from view.



Cat's solution

PowerPoint has a habit of burying settings such as these behind a bewildering maze of options. Select your chart and click the '...' button. It'll appear like you only have a choice of three display options – title, data labels and legend – but if you roll the mouse over the Data Labels option, click the '...' button that appears and choose 'More Data Label Options...' you'll reveal

the Format Data Labels pane where you'll see a Value option you can tick. Expand the Number section to change how the value appears – set it to Number, for example, and you can display a decimal point or two as required.

Windows ONEDRIVE ACCESS ISSUE

Q I'm no longer able to copy files to my OneDrive folder – instead I get the following error whenever I try to do so: 'Error 0x800770780: The file cannot be accessed by the system'. I would appreciate any assistance that you can give me!

Peter Swain



Rob's solution

The error message enabled us to narrow it down to three possibilities: corrupt or missing system files, a problem with the OneDrive directory itself or an unknown malware infection. Peter eliminated the first problem by following our 'Give Windows a



health check' guide to checking and resolving problems using the Windows Repair tool (page 13, issue 144) long story short, running 'sfc /scannow' brought up no errors.

We then advised Peter to try moving his OneDrive directory to another storage drive, at which point he was able to report that the error message had gone, suggesting that the problem was with the OneDrive directory itself. Moving the folder in this way is a bit of a convoluted process, but ultimately worth it: first, right-click the OneDrive icon in the Taskbar Notification area – click '^' if it's not visible – and choose Settings. Click the 'Unlink this PC' link under the Account tab, then follow the set-up guide to point to a new folder.

You'll have to wait for the folder to resync from your cloud storage, but once done OneDrive should work correctly again.

Hardware

SSD UPGRADE QUESTION

Q I'm thinking of upgrading to a laptop with two drives, one of which will be a solid-state drive (SSD). What's the best way to split Windows, applications and data between these two drives?
Chris Balinski



Matt's solution

A lot will depend on the size of the SSD drive, Chris. If it's 32GB you'll have space for Windows 10 and a handful of apps only – but if you get a model with 64GB or even 128GB you should have ample room to run all your apps alongside

Windows, ensuring both load swiftly and run responsively. You would then use the secondary hard drive both to store your data on and as a backup for your SSD drive.

One trick is to set up user folders – Documents, Pictures, Desktop and so on – on your data drive and then point Windows to them. Create the folders – we suggest inside a parent folder named after yourself (so D:\Chris\Documents and so on), then open File Explorer. Under 'Folders', right-click each folder in turn and choose Properties. Switch to the Location tab, click Move and point it to your newly created folder on your data drive. When prompted, move any existing files across and you're

STORAGE ENVY
HP's Envy 360 laptop contains two hard drives.

Quickfire questions

I keep getting an Application Error linked to explorer.exe each time I shut down Windows 8.1.
Eddie Parker

There's no proper fix for this issue, which is annoying rather than damaging. The only workaround is to shut down or restart Windows using the Settings charm.

Can you suggest a tool that easily extracts audio from video files please?
Leonard Redfern

Try Pazera Free Audio Extractor (<http://bit.ly/2CvFOOD>), which supports over 70 video and audio formats and can be run as a standalone portable tool.

"Moving the folder in this way is a bit of a convoluted process"

Jargon buster!

► SSD

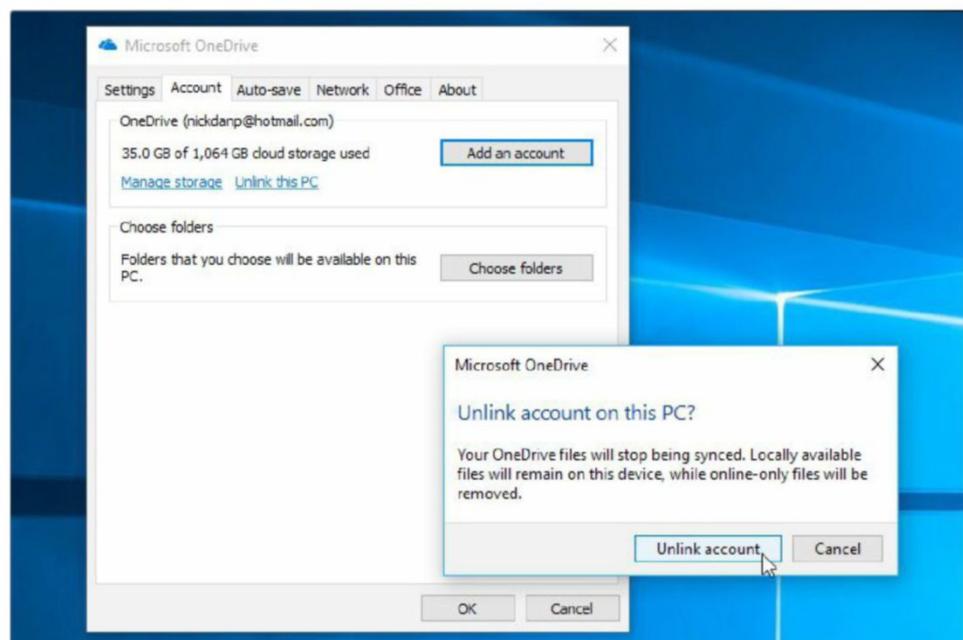
Stands for 'solid-state drive' and refers to a storage device where data is stored on integrated circuits – typically flash memory.

UNLINK ONEDRIVE

It's a drastic solution, but fixes problems with a corrupt folder.

► Treemap

A way to display hierarchical data that helps visualise how data is broken down.



Quickfire questions

I'm using the Ghostery privacy extension and it says there are a number of Facebook and Google trackers on my local music server's web interface. What should I do?

Lincoln Edwards

These are third-party cookies tracking all web pages, including locally hosted ones. If you don't trust them, switch to Detailed View and click Block All.

Every time Windows restarts, more and more blank Word documents keep appearing. Please help!

Francine Dervlish

Create a new temporary user profile via Settings > Accounts > 'Email & app accounts', then log out of your account and log into that one. Once done, immediately log out and back into your own profile. This should clear the problem.

What's the quickest way to navigate the Office ribbon without the mouse?

Janet Johnstone

Press [Alt] to see a list of letters – or key combos such as [Y] + [3] – appear next to tabs on the ribbon: press the key or key combo and you'll jump to that tab, complete with shortcut keys next to each option.

done. Don't forget to point applications such as OneDrive to your D drive too.

Security

KEYLOGGER ALERT

Q I've read online about a keylogger affecting HP laptops. I have a HP EliteBook laptop – am I affected, and what can I do to remove it?

James Francis



Nick P's solution

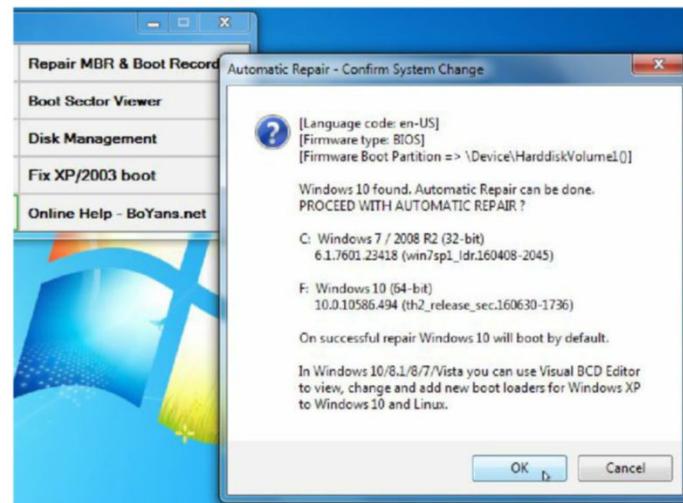
Keyloggers are potentially malicious pieces of code that record mouse movements or key strokes. In HP's case, some code was discovered in its Synaptics TouchPad driver that – if exploited by hackers – would enable it to be used as a keylogger. Head over to <https://support.hp.com/us-en/document/c05827409>, which describes the issue in detail, then scroll down to the table below, which lists the affected HP models. If your particular laptop is listed you'll be able to download an updated driver via a link beside the relevant model name. Once it's been installed the updated driver will close the vulnerability.

Windows

PROBLEM WITH WINDOWS DUAL-BOOT

Q I have a dual-boot system whereby Windows 10 Pro is installed on an m2 SSD drive and Windows 10 Home is installed on a SATA SSD. Whenever I update Windows 10 Home, I then find Windows 10 Pro won't boot and the usual start-up repair fails to work too, forcing me to restore from a system image. Can you suggest a fix please?

Brian Harding



FIX STARTUP

Boyan's Dual-boot Repair tool can resolve many PC boot problems.



Nick P's solution

Ordinarily, dual-booting Windows shouldn't be an issue because the existing version of Windows should be smart enough to detect the other version and create a proper dual-boot setup. Brian, however, appeared to have installed the second OS while the first hard drive was disconnected, then used EasyBCD to marry the two together.

After updating Windows 10 Home, Windows 10 Pro would start to load, but then fall over, with start-up repair unable to fix things. The boot files were stored on the Windows 10 Pro drive, and Brian had been experimenting with various settings – 'hiding' the Windows 10 Pro OS by removing its drive letter prior to updating Windows 10 Home, for example.

We pointed Brian to a couple of boot repair tools: the Dual-boot Repair tool (<http://bit.ly/2CUgUZR>) revealed that thanks to the way EasyBCD had set up each partition, each partition thought it was the C drive after each boot, so only one copy of Windows was visible. Brian

UPDATE WINDOWS 7 INSTALLATION DISC

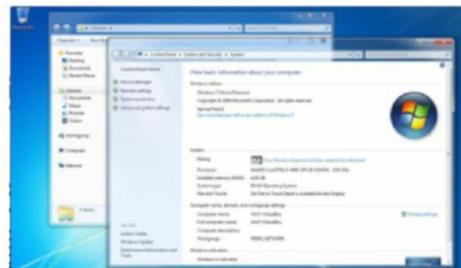
Q I'm unable to perform a repair install of Windows 7 because it says my installed version is newer than the version that's on the disc. How do I go about getting an updated version?

Deborah Yardley



Rob's solution

You need install media that has both Windows 7 and Service Pack 1 slipstreamed into it. Here's how you can get your copy courtesy of Microsoft.



1 Determine system type

Open File Explorer, right-click Computer in the left-hand pane and choose Properties to open the System Control Panel. Make a note of your Windows system type (32-bit or 64-bit) in the System section.

2 Download correct image

Open your web browser and go to www.microsoft.com/software-download/windows7 and enter your product key to obtain the correct edition. When prompted, select 32-bit or 64-bit depending on your system type to download the file.



Do you have
a PC problem?
Get in touch...

Email full details of your problem to the support team and we'll do our best to help:
windowshelpine@futurenet.com
Or write to:
Support Squad,
Windows Help & Advice magazine,
Future Publishing Ltd,
Quay House,
The Ambury,
Bath, BA1 1UA

also uses Macrium Reflect (www.macrium.com/reflectfree), so we pointed him towards its rescue disc, which includes a tool for fixing boot problems via Restore.

Ironically, Brian reported he had no problems with a subsequent update, so for now it's a watching brief. There's a possibility the problems may come back, in which case we'll reveal what we did in a future Support Squad.

Security

STUBBORN PUP JUST WON'T GO AWAY

When I run a scan with AdwCleaner it always comes up with the following: 'Chromium Extension Advance SystemCare Surfing Protection'. I don't know where it is, and it keeps coming back. Should I just ignore it?

Jim Duncan



Rob's solution

You could safely ignore this – it's linked to IObit software, which is safe enough – but Jim had no memory of having installed Advanced SystemCare, while Firefox was the only web browser installed on his PC. We kept digging and confirmed it was linked to the Chrome web browser, which Jim eventually remembered having briefly installed, suggesting there are some leftovers on his PC's hard drive somewhere.

After a bit more research, we discovered where the leftovers are likely to be: press [Win] + [R] to open the Run dialogue box, type %LocalAppData% and press [Enter] to access the hidden AppData\Local folder inside your personal user folder. From here open a Google folder and see if there's a Chrome folder inside – deleting this should finally clear the leftover files,

and AdwCleaner should no longer detect the add-on.

Applications

BROWSE PLUG-INS FOR PAINT.NET

I'm loving your Paint.NET tutorials, and I've recently discovered that Paint.NET supports plug-ins too. I've installed loads, but have lost track of what I've installed. Is there any way that I can keep track of them?

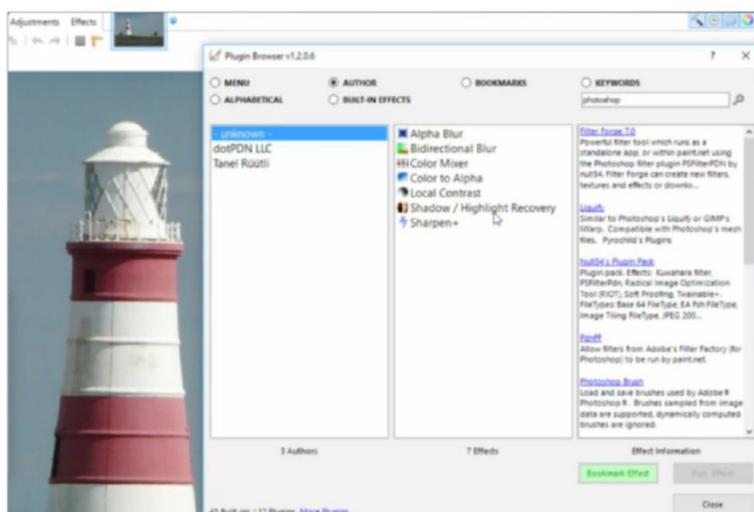
Frank Farrell

Nate's solution

The best tool for the job is the Plugin Browser, which lists all plug-ins – including the 43 bundled with the program itself – that have been installed. It's simple to install: visit <https://forums.getpaint.net> and

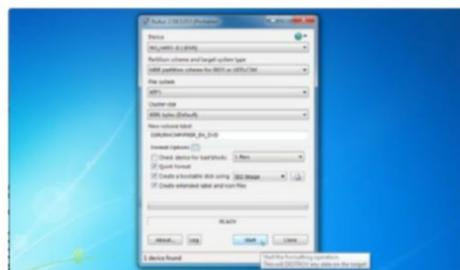
navigate to 'Plugins – Publishing ONLY' and you'll find it pinned to the top of the list. Save the ZIP file to your Downloads folder, then extract and run the .exe file inside – ignore the SmartScreen warning, it's safe to install.

Once you've installed the Plugin Browser, click Close, open Paint.NET and access it via Effects > Plugin Browser where you can browse by various criteria. You'll also see a keyword search tool: this can be used to search the plug-in index online to track down more plug-ins – just click a hyperlink to be taken to the relevant web page. Plug-ins are downloaded as ZIP files, then if no installer is provided, you copy the .dll file inside the ZIP archive to the relevant subfolder – typically Effects – inside C:\Program Files\Paint.NET. ■



VIEW PLUG-INS
See which plug-ins you've installed in Paint.NET with Plugin Browser.

"If your particular laptop is listed you'll be able to download an updated driver via a link beside the relevant model name"



3 Burn an install DVD

Once downloaded, insert a blank DVD into your disc rewriter, then locate the ISO file and double-click it. Your burner should be detected, so tick 'Verify disc after burning' and click Burn, then sit back and wait for the install disc to be created.

4 Create an install USB drive

Download and run Rufus Portable from <https://rufus.akeo.ie>. Click the FreeDOS drop-down menu and choose ISO Image, then click the disc icon to select your ISO file. Select your USB drive from the Device drop-down menu and click Start.

Jargon buster!

► EasyBCD

A tool for managing the Windows bootloader, which enables you to install multiple operating systems on one PC and then switch between them at start-up time.

► Slipstream

A method for integrating updates into Windows installation files, so when you reinstall Windows the updates are automatically applied at the same time.



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Welcome to... Windows 10

► WINDOWS 10 TIPS ► FEATURES EXPLAINED ► NEW TIPS AND TRICKS

Welcome



Just starting your Windows journey? Confused by the changes Microsoft has made to the

Fall Creators Update? Maybe you want to learn something new about Windows 10. Well, this is the section for you!

There's not enough space to tell you absolutely everything you need to know here, but *Windows Help & Advice* always has your back. On page 70 we'll show you how to master the desktop, customise application icons and take control of notifications; and on page 72 we'll explain how you can customise the Start menu from changing the default colours to managing your Live tiles.

Matt Hanson

Associate Editor

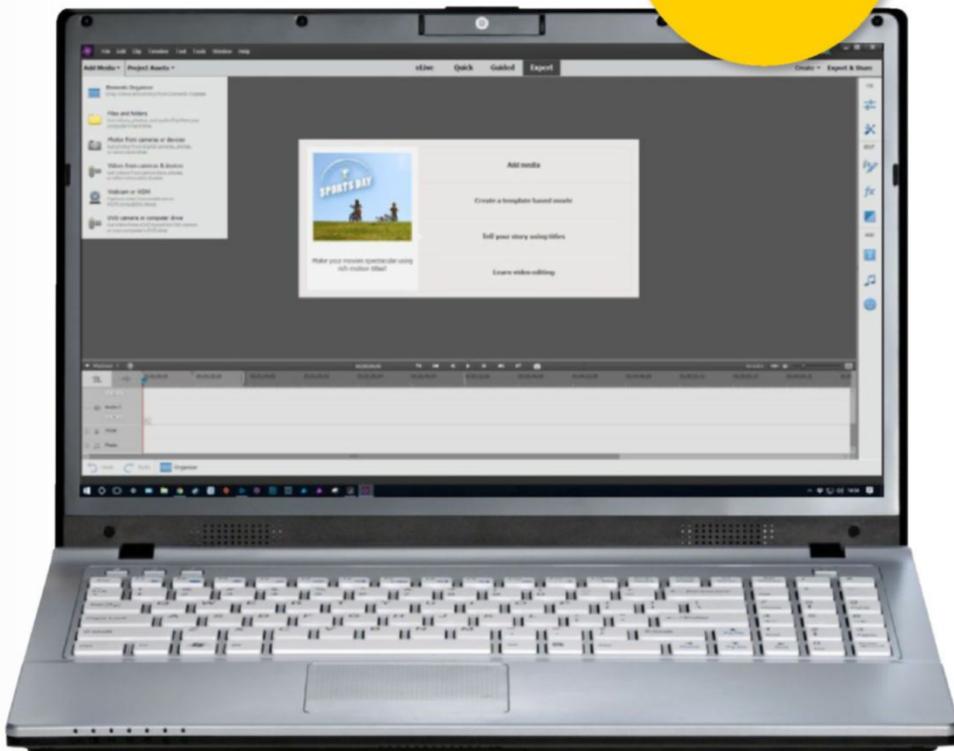
www.facebook.com/windowsmag

Featuring...

70 How to master the Windows 10 desktop

72 Change the way the Start menu works

SPEED UP YOUR PC FOR FREE! SEE PAGE 11



Windows 10 tip of the month

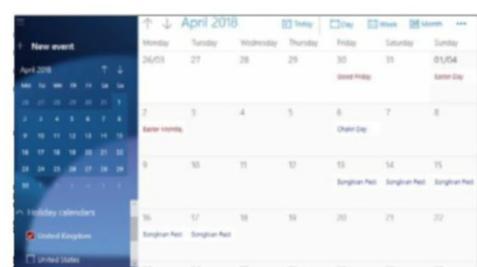
Add holidays to Windows' Calendar

Add public holidays and events to Calendar

Everyone loves a holiday – especially when it's freebie like a bank or public holiday. The trick is knowing when they are, especially when some events, such as Easter, move around from year to year. Luckily Microsoft has the answer. Open up the Calendar app in Windows 10 and then follow the steps on the right to easily add public holidays and other notable events for the UK, the USA and a whole host of other countries.



MAKE A DATE Select 'Add calendars' from the sidebar, then choose the holiday calendars that you wish to add.



HOLIDAY TIME Your selected calendars will now appear as entries in the main window, and in the sidebar.

Master the desktop

You'll spend a lot of time there, so here are some great ways to make it work for you...

When not actually using applications, the Windows desktop is where you'll spend much of your time, moving files about, hunting for that obscure application you installed six months ago and suddenly need, or lining up your windows so that they fill the space perfectly (a time-wasting

pastime that's all but dead now thanks to window snapping).

In Windows 10, the desktop and the Taskbar get a few new tricks that make working with files and folders even easier, and the new search bar means pulling up an application you don't use often is a breeze. Follow these tips to a happy start...



1 Show desktop/peek

The Show Desktop button isn't marked, and some people don't even know it exists. Press this anonymous section at the extreme right of the Taskbar, and all your open windows will minimise. Hover the mouse pointer over it, and you'll get a preview 'peek' at the desktop that reverts when you move your mouse pointer away. It's very useful when you've got a chaotic number of windows open on your desktop.

Get started with Windows 10

File Edit View Insert Format Tools Table Add-ons Help All apps

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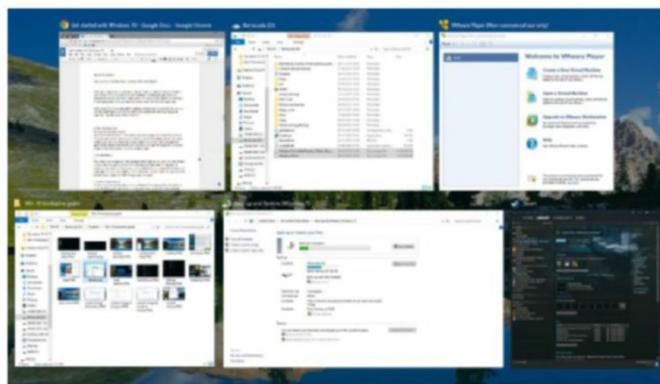
2 Virtual desktops

Task switch png [desktops at bottom]

If you find your desktop frequently getting overcrowded as you work, why not offload some of the mess onto another one? Click the Task View button to the right of Cortana's search box on the Taskbar, and you'll be taken to a screen that shows your open apps, and also your desktops. Add a new one, or even more, and you'll be able to flick between them with different apps open on each. It's a great way to stay organised on your PC.

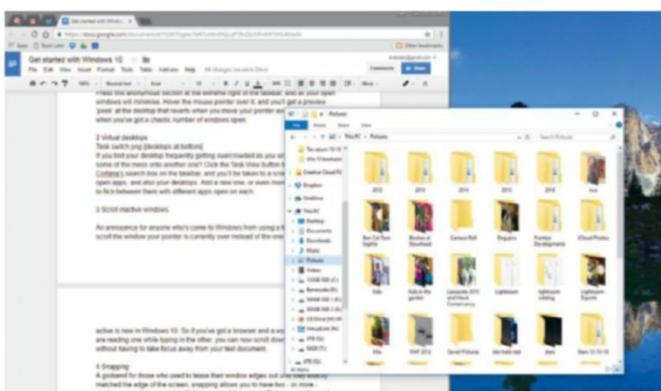
3 Scroll inactive windows

An annoyance for anyone who's come to Windows from using the Mac, the ability to scroll the window your pointer is currently over – instead of the one that's currently active – is new in Windows 10. So, if you have a browser and a word processor open, and are reading one while typing in the other, you can now scroll down in the browser without having to take your focus away from your text document.



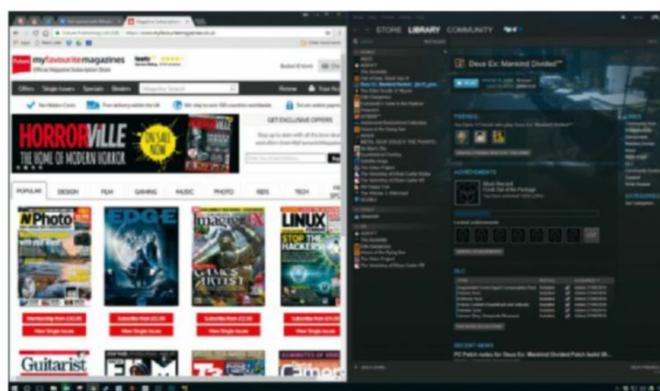
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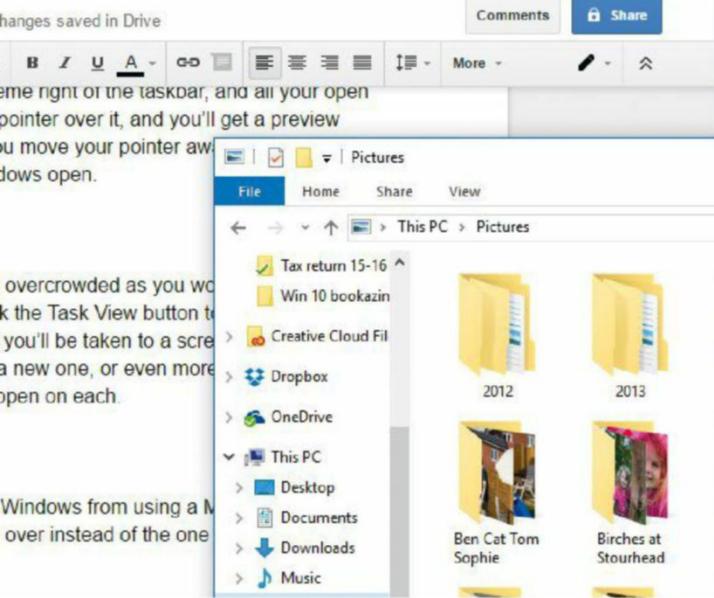
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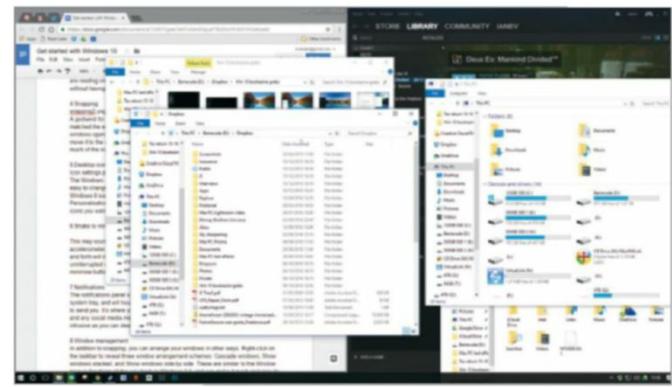
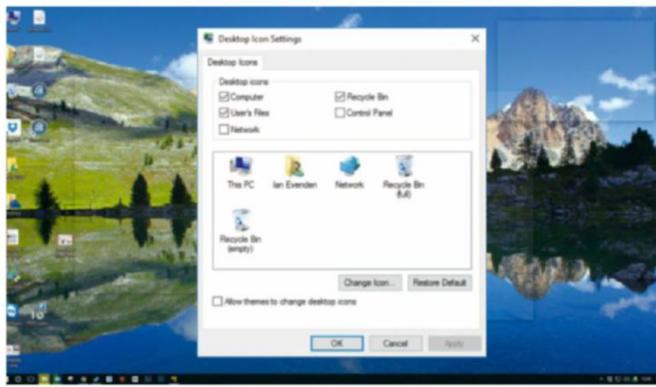
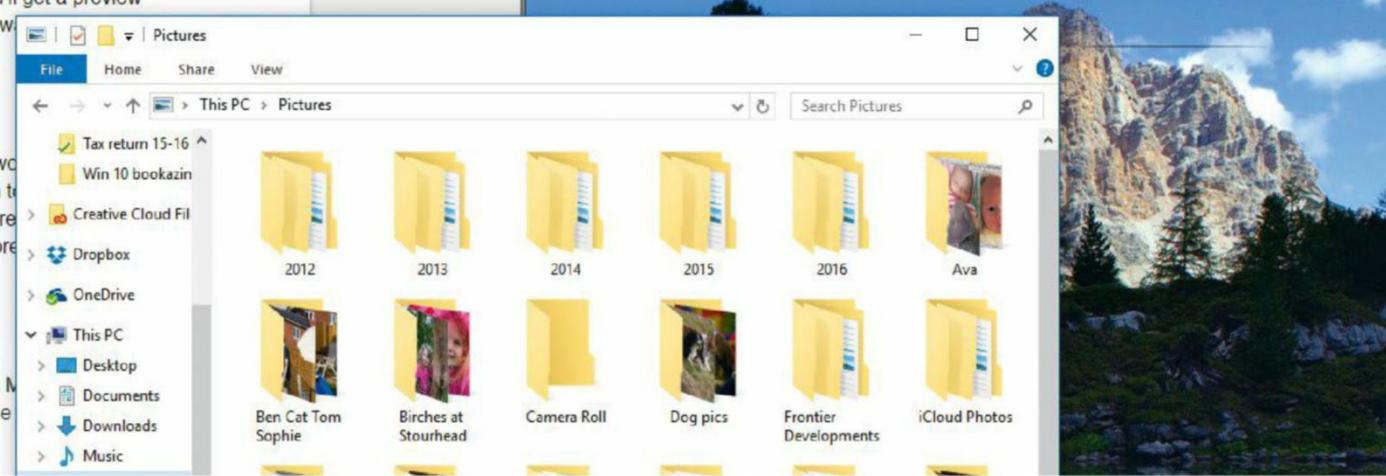
4 Window snapping

A real godsend for those who used to tease their window edges out until they exactly matched the edge of the screen, snapping in Windows 10 enables you to have two or more windows open that completely fill their areas of the screen. Pick up a window and move it to the extreme left or right edge of the desktop to try it (you'll see it 'snap' to the new half screen format). You can adjust how much of the screen they take up too.



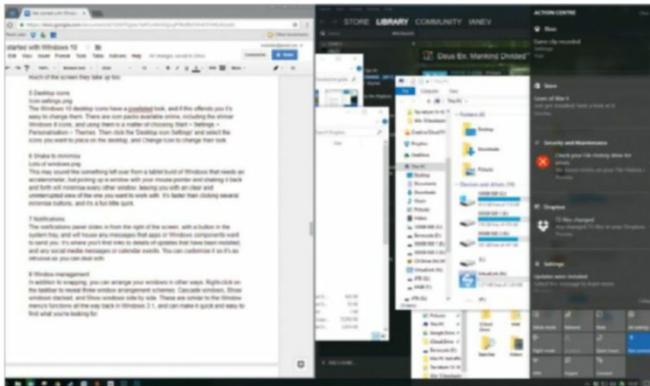
overcrowded as you work? Click the Task View button to see what's open – you'll be taken to a screen where you can switch to a new one, or even more windows open on each.

Windows from using a mouse instead of the one



5 Desktop icons

The Windows 10 desktop icons have a pixelated look, and if this offends you it's easy to change them. Luckily, there are icon packs available online – including the shinier Windows 8 icons. Download the icon pack you want to use, then go to Start > Settings > Personalisation > Themes. Click the 'Desktop icon Settings' and select the icons you want to place on the desktop, then use the Change Icon option to change their look.

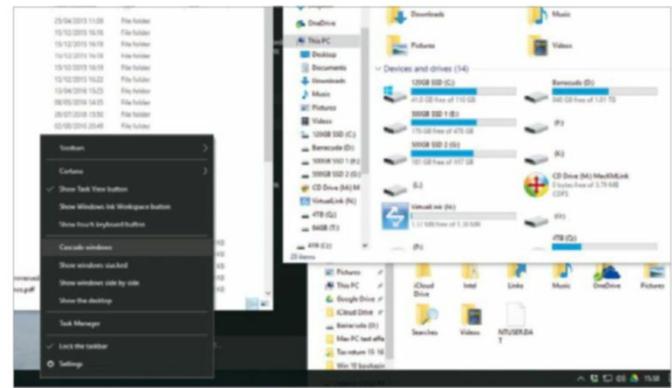


7 Notifications

The notifications panel – or Action Centre – slides in from the right of the screen, with a button in the system tray, and will house any messages that apps or Windows components want to send you. It's where you'll find links to details of Windows updates that have been installed on your machine, and any social media messages or upcoming calendar events. You can customise it so it's as intrusive as you can deal with.

6 Shake to minimise

This may sound like something left over from a tablet build of Windows that needs a built-in accelerometer, but picking up a window with your mouse pointer and shaking it back and forth will minimise every other window, leaving you with a clear and uninterrupted view of the one you want to work with. It's much faster than clicking several minimise buttons, and it's a fun little quirk that's a good one to remember.



8 Window management

In addition to window snapping, you can arrange your windows in some other ways too. Right-click on the Taskbar to reveal three window arrangement schemes: 'Cascade windows'; 'Show windows stacked'; and 'Show windows side by side'. These are similar to the Windows menu's functions that have been available all the way back to Windows 3.1, and can make it quick and easy to find what you're looking for.

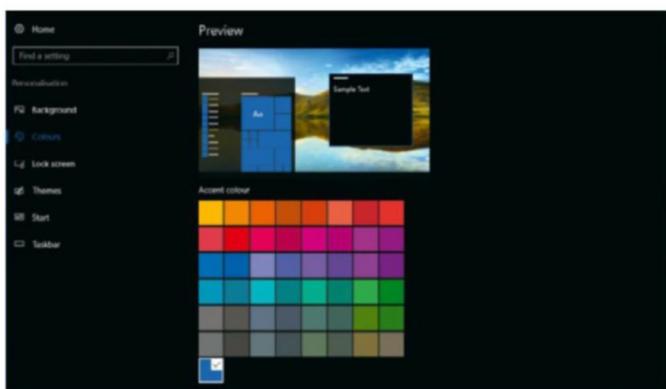
Customise the Start menu

The Start menu in Windows 10 is more powerful than ever – here are some easy tips to make it work for you

The Start menu's return was big news when Windows 10 launched, and it has evolved as the operating system has been updated. It's become a fast, and efficient way to access apps and settings – Windows 8's full-screen monstrosity is now a distant memory, thankfully!

However, if you don't like how the Start menu looks when you first pop it up on your fresh

install of Windows 10, it doesn't have to stay that way. It's fully customisable in ways that were never possible in earlier versions of the operating system, and can be made to work in just about any way you want, standing out from its background for ease of reading, or automatically blending in with the colour scheme of whatever theme you have currently set on your desktop.



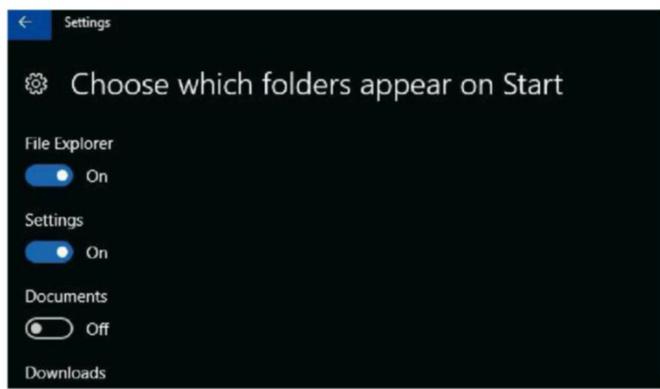
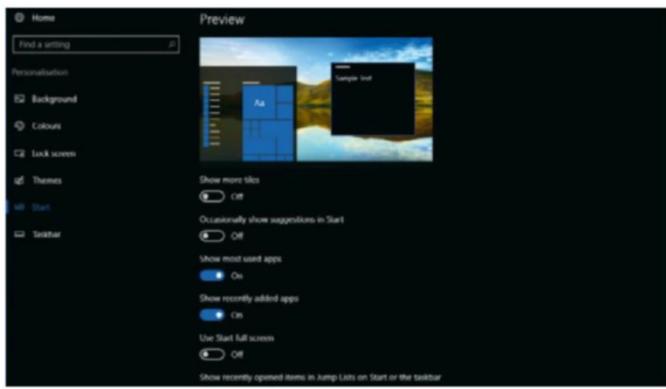
1 Colour

Your Start menu's background can be any colour you like – all you have to do is untick a box. Open up Settings, then Personalisation and finally Colours. Untick the 'Automatically pick an accent colour from my background' option and you'll be able to pick a colour from the palette. So your Start menu can be a contrasting red or yellow rather than a dull blue or grey. Play around to find a combination that works for you.



2 Size

To make space for all the customising you can do to the Start menu, you can easily resize it to your liking. Just move your mouse pointer to the top-border or right-border of the Start Menu, the pointer will change into arrows, and you'll be able to increase or decrease height and width, dragging it out to completely fill the screen if you want to. This is particularly useful if you have a PC filled with programs that you access regularly.

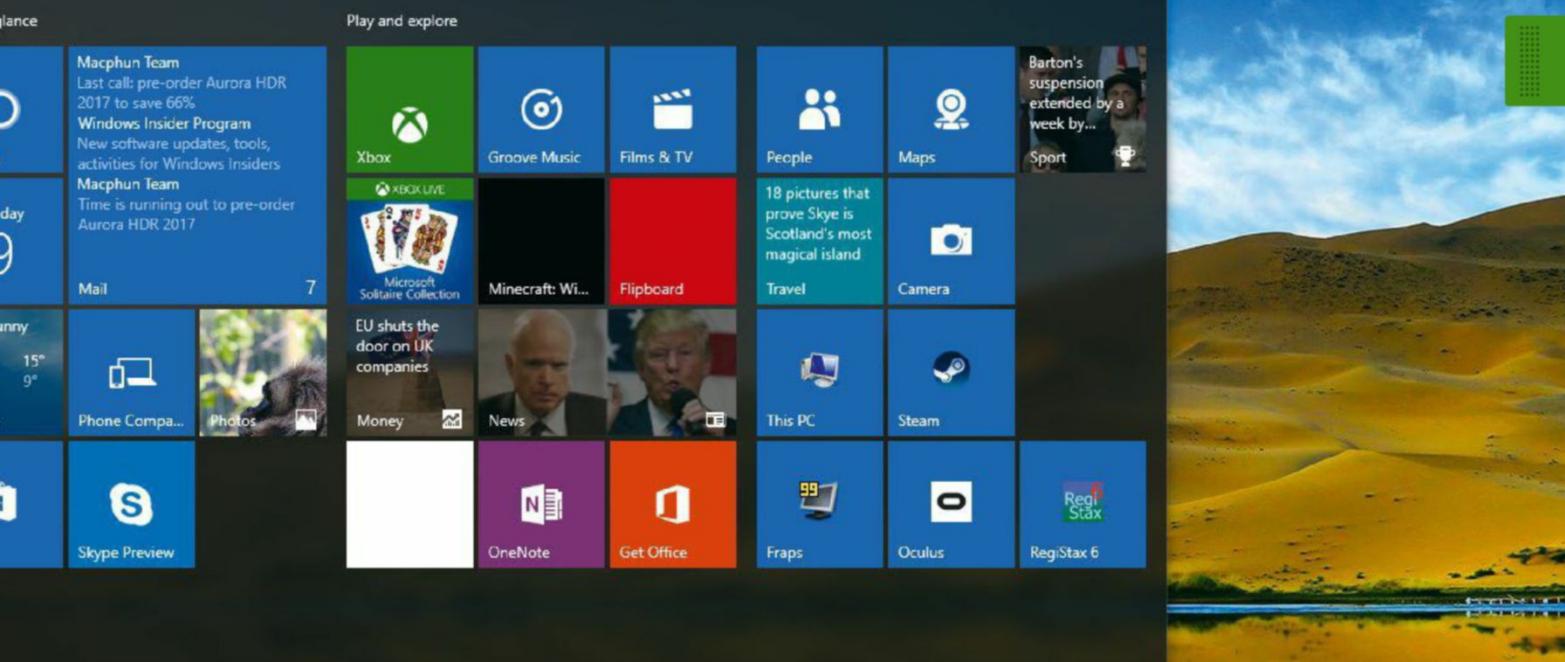


3 Folders and tiles

Your Start menu is made up of lists and tiles, and some of these can be shortcuts to folders such as Documents. Settings > Personalisation > Start enables you to tinker with this, so if you never shoot videos you can stop the empty Videos folder from taking up space on the menu. You can turn the links to the Settings window – and the one that opens an empty File Explorer window – on and off too.

4 Hide program lists

By default, the Start menu will show you lists of both your most used programs and the most recently opened ones. This can end up repeating itself, so if you want to get rid of one or the other of the lists, or both, open up Settings > Personalisation > Start, from where you'll be able to toggle the lists on or off. You can also prevent apps from appearing on the lists so you only get a view of the things you really need from day to day.



5 Use it to search with

Hitting the [Win] key on your keyboard to pop up the Start menu's Search box is one of the fastest ways to look for anything in Windows 10. Just type a few characters and you will get suggestions for applications and documents stored on your computer that match your initial query. You can also use the arrow keys on your keyboard to navigate the Start menu, if you'd rather not use the mouse.



6 Live tiles

Live tiles are tiles that are constantly updated with data, usually gleaned over the Internet to make them up-to-date. There's one for the Mail app that shows your most recent messages, one for the Weather app that uses your PC's location to tell you what's going on outside the window, and so on. If you find them distracting, you can turn them off by right-clicking them and choosing the appropriate option.



7 Pin tiles and shortcuts

If there's something you need to be able to find quickly, but which gets lost in the lists of the Start menu, you can pin and reposition it so it's always prominently placed. To do that right-click an item and choose 'Pin to Start'. It will now appear in tiles. Now click and drag the tile to where you want to move it to. To resize the tile, right-click, choose Resize then the tile size you want. You can pin shortcuts to the Taskbar for easy access too.

8 Bring back the Start screen!

It may have been almost universally mocked and reviled in Windows 8, but the full-screen Start menu is still there in Windows 10, ready to block out all your work at a single press of the [Win] key! But, if you liked it, go to Settings > Personalisation > Start and tick the box marked 'Use full-screen Start when in the desktop'. Note that wording: the Start menu now won't actually cover up your apps like it used to do in Windows 8.

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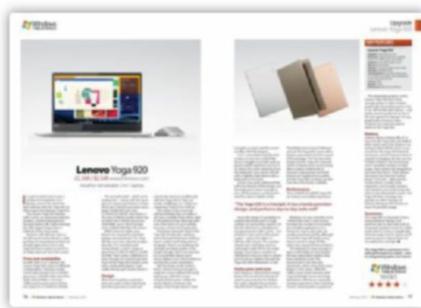
When it comes to editing photos, Photoshop sets the standard – it's packed with powerful features that enable you to create stunning image effects.

There are, however, plenty of very capable alternatives, which don't require you to pay a monthly subscription like Adobe's Creative Cloud does. You'll find four of our favourites on page 88.

Also on test are two new laptops from Lenovo and Razer (pages 76 and 78); two unique ways to make your home network more secure (pages 80 and 84); plus the latest in wireless earbuds (page 86).

Nick Odantzis Deputy Editor
windowsmagazine@futurenet.com

This issue's highlights



76 Lenovo Yoga 920

In a world of exceptional 2-in-1 laptops, can this one stand out from the crowd?



78 Razer Blade Stealth

No longer just aimed at gamers, this slick and powerful laptop is worth a look



80 Bitdefender Box 2

Beef up your connected home security with this supercharged firewall router



88 Best Photoshop alternatives

Don't want to pay for an Adobe Creative Cloud subscription? Then try these...

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RATING EXPLAINED ★★★★☆ Superb ★★★★☆ Very good ★★★☆☆ Good ★★★☆☆ Disappointing ★★★☆☆ Poor



Lenovo Yoga 920

£1,349 | \$1,549 www3.lenovo.com

Another remarkable 2-in-1 laptop

In a year in which we've seen a number of remarkable 2-in-1 laptops, Lenovo has saved the best until last with the Yoga 920, its follow-up to the fantastic Yoga 910.

The Lenovo Yoga 920 features USB-C ports, an improved webcam location, a better keyboard and boosted battery life, while retaining the 360-degree hinge that's a hallmark of the Yoga range.

However with devices, such as the Microsoft Surface Book 2, really pushing the boundaries of what we should expect from 2-in-1s, the Yoga 920 has its work cut out if it's to really stand out from the crowd.

Price and availability

As with other 2-in-1 devices, the Lenovo Yoga 920 comes in different configurations. The base model comes with an Intel Core i5-8250U processor, a 256GB solid-state drive (SSD), 8GB of RAM, a 13.9-inch 1080p touchscreen and an Active Pen stylus for £1,199.99 (\$1,199.99).

The second model – which we're testing here – comes with the same specs as above, but features a faster Intel Core i7-8550U processor and a larger 512GB SSD and costs £1,349.99 (\$1,549.99). And there's a US-only \$1,999.99 model, which has an Intel Core i7-8550U processor, 16GB RAM, up to 1TB of storage and a 3,840x2,160 Ultra HD screen.

While these are hefty sums, they're not unusual for premium laptops and ultrabooks. The Yoga 920 line-up is also a fair bit cheaper than the 13.5-inch Microsoft Surface Book 2, which ranges in price from £1,499 (\$1,499) to £2,999 (\$2,999). That's quite a difference in price, though you should note that none of the Yoga 920 models come with a dedicated graphics card, unlike the top-spec Surface Book 2.

Design

When you're paying a premium price you want a device that looks and feels premium as well, and

Lenovo has done an excellent job with the Yoga 920. It's thin, yet sturdy, weighing in at 1.37kg and measuring 323x223.5x13.95mm.

This means it has a nice heft, without feeling heavy or bulky. It also has a metallic finish which adds to the premium feel, although after only a few hours of use it quickly becomes a haven for fingerprints.

The hinges along the back of the Yoga 920 are also eye-catching – we've fluctuated between thinking they're stylish and finding them a bit gaudy. There's no doubting the strength and build quality of the hinges though, which are essential for a convertible laptop since they're likely to see a lot of action as you flip the screen orientation.

Like the hinge on the Surface Book 2, they're strong enough to angle the screen without the body tipping up, while the screen remains held in place. Unlike the Surface Book 2, however, the design of the hinges doesn't stick



KEY FEATURES

Lenovo Yoga 920

Supplier www3.lenovo.com

Processor 1.8GHz Intel Core i7-8550U (dual-core, 4MB cache, up to 4GHz)

Graphics Intel UHD Graphics 620

Memory 16GB DDR4

Display 13.9-inch Full HD (1,920x1,080)

Storage 512GB PCIe SSD

Connectivity 802.11ac Wi-Fi; Bluetooth 4.1; 1x USB 3.0, 2x USB-C (Thunderbolt 3); 3.5mm mic/headset jack

Camera 720p

Weight 1.37kg

Dimensions 323x223.5x13.95mm

The integrated graphics of the Lenovo Yoga 920 don't have enough power to drive modern graphically-demanding games, but it can still handle older games – and pretty much any title on our list of the best games for laptops. For any graphically-strenuous tasks, however, you may not want to settle for the Yoga 920.

Battery

Lenovo claims a battery life of 12 hours for the Yoga 920, and while it didn't quite reach that target in our testing it didn't fall far short. In our movie test the Yoga 920 lasted for nine hours and 23 minutes before it needed recharging. We also ran the PCMark 8 Battery Life benchmark, which simulates medium to high usage. Here, battery life dropped to just over four hours. That's almost two hours less than the Surface Book 2 13.5-inch – although the Surface Book 2 is both more expensive, and actually contains two batteries (one in the body, the other in the detachable screen). The Yoga 920 does recharge very quickly via USB-C though, its battery taking just 90 minutes to reach 92 percent charge.

Summary

The Yoga 920 is a triumph. It has a lovely premium design, and performs day-to-day tasks well. Its integrated graphics mean it's a little weak when it comes to graphically-intensive tasks, but it's a price you'll want to pay for a device that's so incredibly thin and light. ■

The Yoga 920 is a premium 2-in-1 with performance to match – only its integrated graphics let it down.


Windows Help & Advice
Verdict



out quite as much, and the screen can flip a full 180-degrees.

2-in-1 convertibles that flip their screens to turn into a tablet-like device struggle to provide quite as good a tablet experience as 2-in-1s on which the screen detaches from the keyboard, since you're still left with a slightly bulky device with a keyboard on the back.

Lenovo has partly addressed this with the thinness of the design, and the keyboard is clever enough to turn off the buttons, so they don't interfere when in tablet mode.

"The Yoga 920 is a triumph. It has a lovely premium design, and performs day-to-day tasks well"

Given the design it's probably no surprise that there aren't a huge number of connectivity options. On the left side there's a headphone/mic jack and two USB-C ports – one of which is also used as the power supply – and on the right is a full-size USB 3.0 port. The number of ports isn't restrictive, and is a reasonable trade-off for the svelte design. If you have a number of USB devices that you want to attach you'll need an adaptor, though the Yoga 920 offers Bluetooth as well.

Stylus pros and cons

One thing we criticised the Surface Book 2 for was the fact that you'll need to pay extra for the Surface Pen stylus, despite the premium that Microsoft charges for its 2-in-1.

Thankfully Lenovo hasn't followed suit and the Yoga 920 comes with a battery-powered Active Pen as part of the package. The Pen has a nice design and the Yoga 920 responds well to it, thanks to its screen being able to detect 4,096 levels of pressure. Light presses and hard presses are registered accurately, and the Yoga 920 can keep up with even the most frantic scribbles.

Performance

The £1,349.99 (\$1,549.99) Yoga 920 we tested is incredibly impressive.

Windows 10 runs smoothly on its 1.8GHz Intel Core i7, and Lenovo has kept the number of unwanted pre-installed applications to a minimum. Day-to-day tasks are usually processed quickly, although it took the Yoga 920 quite a long time to extract a large ZIP file, which also caused its fans to kick in.

The keyboard is large enough to type comfortably on, and despite the keys being fairly shallow they have satisfying travel. The touchscreen is also fast and responsive, when using either your fingers or the stylus, while the 1080p screen looks fantastic with crisp and bright visuals and deep, dark blacks, offering an enjoyable viewing experience when watching movies. Sound quality is good too.



Razer Blade Stealth

£1,609 | \$1,599 www.razer.com

A higher class of ultrabook

The Razer Blade Stealth is one of our favourite ultrabooks, and it's only getting better with age. In the middle of 2017, the formerly 12.5-inch laptop moved up to a larger, 13.3-inch display, putting it on an equal footing with other notebooks in its category, and this latest version sports Intel's latest, 8th-generation Kaby Lake Refresh processors, helping it deliver its best ever performance.

Price and availability

Starting at around £1,455 (\$1,449), the Razer Blade Stealth is more expensive than it has ever been, but that's partially thanks to its elevated specs. Each of the models in the range rocks a quad-core Intel Core i7 processor with integrated Intel UHD graphics, a QHD+ (3,200x1,800) resolution display, 16GB of RAM and a 256GB SSD.

Compare that to the £1,749 (\$1,749) asking price of an equally well-equipped Dell XPS 13, and the

Stealth looks like a bargain. Outside the US, the Dell XPS 13 also only comes with 8GB of memory when teamed with the Intel Core i7/256GB SKU priced at £1,349.

If you elect to double your storage capacity (an option our review unit offers) the Blade Stealth further hones its more affordable edge over its competitors. The configuration here rings up for £1,609 (\$1,599), whereas Dell charges £1,449 (\$1,899).

Design

Despite the increase in screen size, the 13.3-inch Razer Blade Stealth is no larger than its 12.5-inch predecessor, maintaining most of its original dimensions at 321x206x13.8mm. The Kaby Lake Refresh update also bumps up the weight from 1.33kg to 1.35kg – this is likely due to the additional cooling needed for the new CPUs.

Aside from the screen bezels, the biggest aesthetic change Razer has

introduced is the new gunmetal finish. Synonymous with its name, the Stealth has always been the Razer's most understated laptop. The new colour adds to that quality.

Gone too are the RGB keyboard and light-up lid logo. Instead, the gunmetal version features a simpler white backlight on the keys. Meanwhile, the 'tone-on-tone' printed triskelion symbol is actually hard to miss unless you're turning the laptop from side to side, like one of those old holographic prints.

The result is a professional-looking Razer ultrabook design. However, its off-grey paint job still sets itself apart from the pack of black rectangles in the room. If you'd rather have RGB lighting and a jet-black look, the regular version of the Stealth is also available.

As with previous generations, the Blade Stealth comes with potently powerful speakers and a large, tactile keyboard. What has changed this year is that Razer has upgraded



KEY FEATURES

Razer Blade Stealth

Supplier www.razer.com
Processor 1.8GHz Intel Core i7-8550U (quad-core, 8MB cache, up to 4GHz)
Graphics Intel UHD Graphics 620
Memory 16GB DDR3 (2,133MHz)
Display 13.3-inch, QHD+ (3,200 x 1,800) IGZO display
Storage 512GB SSD (M.2 PCIe)
Connectivity Killer Wireless-AC; Bluetooth 4.1; 2x USB 3.0 Type-A; 1x Thunderbolt 3 (USB Type-C); HDMI 2.0; 1x headset jack
Camera 720p
Weight 1.35kg
Dimensions 321x206x13.8mm

Battery

While we're seeing performance improve year-over-year, the Blade Stealth's battery life has also taken a hit with every iteration. The latest version ran our movie playback battery test for five hours and nine minutes, which was shorter than the five hours and 25 minutes of the previous model – and that was already down from the five hours and 44 minutes result we saw from the 12.5-inch 2016 version.

The blame for these battery life decreases are the larger, sharper screen and the new quad-core processor. The Blade Stealth also lags behind its peers for longevity: the Dell XPS 13 lasted for a remarkable 10 hours and 29 minutes. Of course, it features a lower-resolution screen.

Summary

With its 13.3-inch screen and 8th-generation Intel processors, the Razer Blade Stealth has matured into the ultrabook we always wanted. The larger display and the half-sized bezels make this laptop more attractive, while the brighter screen and Windows Precision Touchpad addressed our other, smaller, qualms from last year.

Aside from its battery life, the Razer Blade Stealth is on a par with other similarly-specced ultrabooks. For a reasonable price, it's as well-equipped, and performs as well as, most premium offerings from Dell, Lenovo or HP. ■

With its vibrant display and excellent performance, this is an ultrabook for everyone.

 Windows Help & Advice
Verdict



its ultrabook with a Windows Precision Touchpad.

We didn't have many complaints with the trackpads on previous models, but the direct-from-Microsoft drivers offer even better tracking and multi-touch gesture recognition. So, we'll take the improvement on the laptop's pointing device even if we felt it wasn't absolutely necessary.

Performance

It's remarkable that Razer has squeezed in a bigger display

and up to 400 nits of brightness. We can confirm that the screen is much brighter now, outshining even rays of sunlight streaking through our office windows. Razer's IGZO displays have never lacked in colour rendition, and the added colour depth helps the screen resolve more distinct shades.

Quad-core Kaby Lake Refresh processors have helped the Razer Blade Stealth make a huge leap in performance. While it's a given that more cores usually lead to better performance, its benchmark

"What's most surprising are the graphical enhancements that Intel UHD Graphics brings"

without making the laptop any larger. It's done this by reducing the size of the bezels on all sides by 50 percent, making them barely more than a centimetre wide.

On top of the added screen real estate, the Razer Blade Stealth features a sharper 3,200x1,800-resolution panel that's sits above the previous default 2,560x1,440 display. Unfortunately, there's no option of getting a 4K display on this ultrabook other than going with the older, 12.5-inch model.

To our eye, the QHD+ screen on the latest Razer Blade Stealth resolves plenty of detail as is, and we don't really miss having an Ultra HD resolution on a screen this small. The new display also boasts 100 percent sRGB colour coverage

numbers are impressive. For starters, the 8th-generation Intel processors deliver a more than 75 percent increase in multi-core performance compared to 7th-gen Kaby Lake. This in turn leads to correspondingly higher scores in Cinebench and PCMark 8.

What's most surprising are the graphical enhancements that Intel UHD Graphics brings, going by the four percent to nine percent improvement in its 3DMark scores.

You can fire up *Overwatch* on the Razer Blade Stealth for a smoother gaming experience with higher frames per second, but you'll still be relegated to playing the game at awfully low settings. And that pretty much goes for most games you try to play on this ultrabook.



Bitdefender Box 2

£200 | \$249.99 <http://bitdefender.com>

A smart firewall for the connected home

Bitdefender Box 2 is a smart home security appliance that shields PCs, mobiles, tablets and other connected devices from hackers, malware and more.

The Box is essentially a supercharged router that can replace or run alongside your existing networking kit. Connect your devices to the Box and it acts as a sort of firewall, watching inbound connections to keep hackers at bay. Your network is constantly monitored for unknown devices or suspect behaviour, and the Bitdefender Box also blocks outgoing requests to known malicious websites.

The Box is powered by a dual-core ARM Cortex A9 CPU, with 1GB of DDR3 RAM and 4GB of internal storage. Wi-Fi duties are handled by an 802.11ac AC1900 setup. You get just two ports – one LAN, one WAN – both supporting Gigabit Ethernet. It's not quite up to the standard of Norton Core's 4x4

MU-MIMO system, but there will be enough power for most users.

The Box is only available in the US at the time of writing (other countries are 'coming soon'), and that's probably why our review unit came with a two-pin power plug. This accepts 100-240V input, however, so can be used in the UK and elsewhere with an adaptor.

The Bitdefender Box costs \$249.99 (£200) for year one, which gets you the router and a free one-year subscription to Bitdefender Total Security 2018, or the equivalent software for your device. Buying the software alone would normally cost from £35 for up to five devices, but the Box subscription covers as many as you need. Renewing your subscription costs \$99 (£80) a year.

While Box isn't exactly cheap, it's competitive with similar products. Norton's Core has the same upfront cost at \$249.99 (£200), and also includes software for unlimited

devices and renews at \$10 (£8) a month, or \$120 (£96) a year.

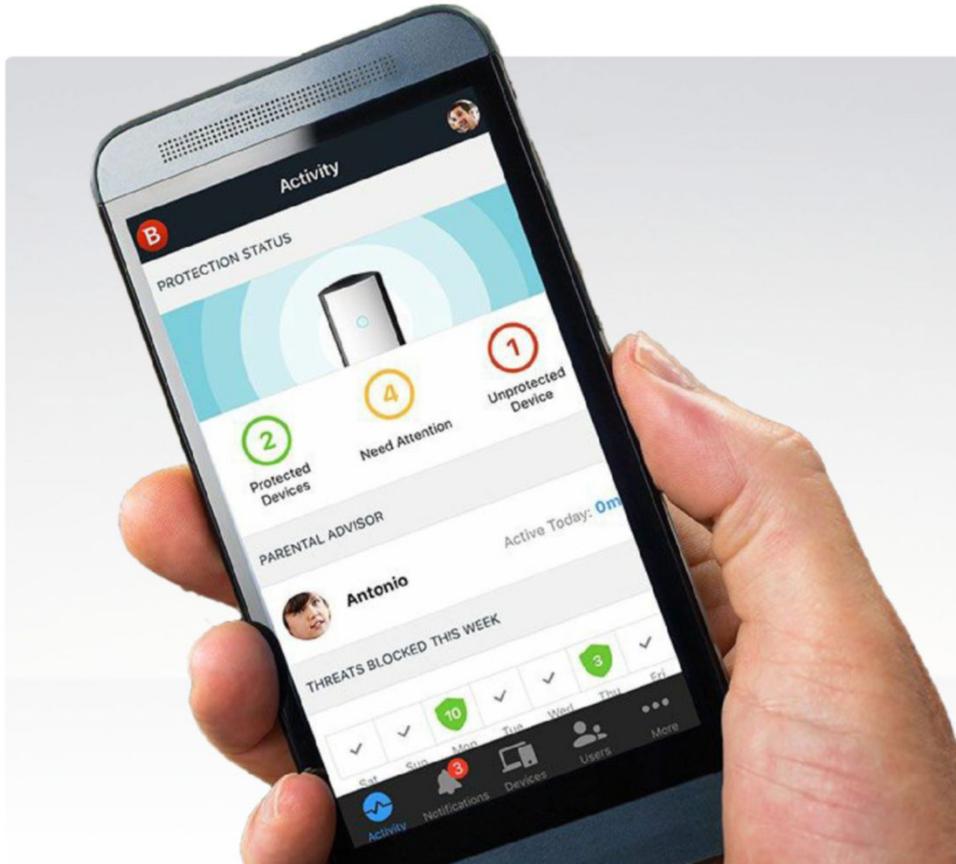
Setup

The Bitdefender Box is a simple cream and black triangular block with a power connection and a couple of Ethernet ports. No one's going to marvel at the design, but it's good enough, and won't look out of place in most homes.

Networking newbies will probably be intimidated by the lengthy instructions on the setup card, but it can be easier to get going than you think.

The process starts with you downloading the free Bitdefender Central app for iOS or Android, which is used to manage any existing Bitdefender installations you might have, and includes a Box activation wizard.

Setup starts by asking you to log in to the Box network on your phone, then connect your Box to the Internet, typically by plugging it



into your standard router with the 1m Ethernet cable provided.

The app offers a choice of networking modes. The Box can replace an ISP router, work with an existing router by enabling bridge/AP mode, or can be used as a standalone router. The last step requires disabling your original wireless network to ensure any devices reconnect to the Box. The app includes instructions to work with four common US router types – AT&T, Comcast, Time Warner, Verizon – but UK ISPs aren't listed.

"Setup can be a hassle, but once it's done you can use the Box without doing anything else at all"

This isn't Bitdefender's fault, since our review unit was a US rather than a UK model – and if you're used to setting up network gear, you should still be able to disable the original wireless network on your own. But even if you're not, it shouldn't stop you from getting started; you can connect devices to the Box network right away and sort out your old router later.

If you do experience problems, Bitdefender will do its best to help, with free installation assistance via telephone or email. We tested the email route and got friendly and helpful replies within two to three hours. This should help you solve most issues, but if all else fails, return the unit within 30 days and you'll get your money back.

Performance

Setup can be a hassle, but once it's done you can use the Box without doing anything else at all. Restart each of your devices, and they should connect to the Box and the Internet exactly as they did before.

Even at this level, there's plenty happening in the background. The Box is monitoring outgoing connections, blocking attempts to access malicious websites, and also preventing the sending of sensitive information like credit card details over unencrypted connections.

The Box also watches for dubious incoming connections. New devices won't be able to access the network until you give permission, and Box prevents any brute-force attempts to log in to your devices.

More general network monitoring layers detect and alert you to network vulnerabilities, as well as picking up behaviours that might indicate a hacked device.

There's no clear way to test most of these, but we have measured Bitdefender's anti-phishing systems in previous reviews, and they perform very well. That protection alone is well worth having.

Your Box is managed from the Bitdefender Central app. Its Devices screen shows you recognised and unknown devices, which have

KEY FEATURES

Bitdefender Box 2

Supplier <http://bitdefender.com>
Processor 1.2GHz dual-core Cortex A9
RAM 1GB DDR3
Storage 4GB
Connectivity 802.11ac Wi-Fi; 1x 10/100/1000BASE-T Ethernet port; 1x 10/100/1000BASE-T WAN port

connected to your network recently, gives you more information about them and provides some handy extra tools.

This status display doesn't always work as expected. It regularly told us devices were 'disconnected' and hadn't been seen for some time, even when we were using them to access the web. This happened on both a Windows 10 laptop and an Android phone, suggesting it wasn't a device setup issue.

These status issues don't seem to affect what the Bitdefender Box can do, fortunately. We were able to click a device, find out more about it, and pause/resume its Internet access with a simple click.

The Box comes with simple parental controls that can block websites by content or restrict Internet access by time of day. The ability to block a specific device's Internet access on demand could also be handy for those ad hoc 'stop what you're doing and come here right now' situations. There's nothing surprising or revolutionary here, but the features are still a worthwhile addition.

We completed our checks by running simple performance tests, including streaming HD video content from three devices simultaneously. As we'd expect from the level of hardware used by Bitdefender Box, there were no issues and our systems worked much as they did with the original ISP router.

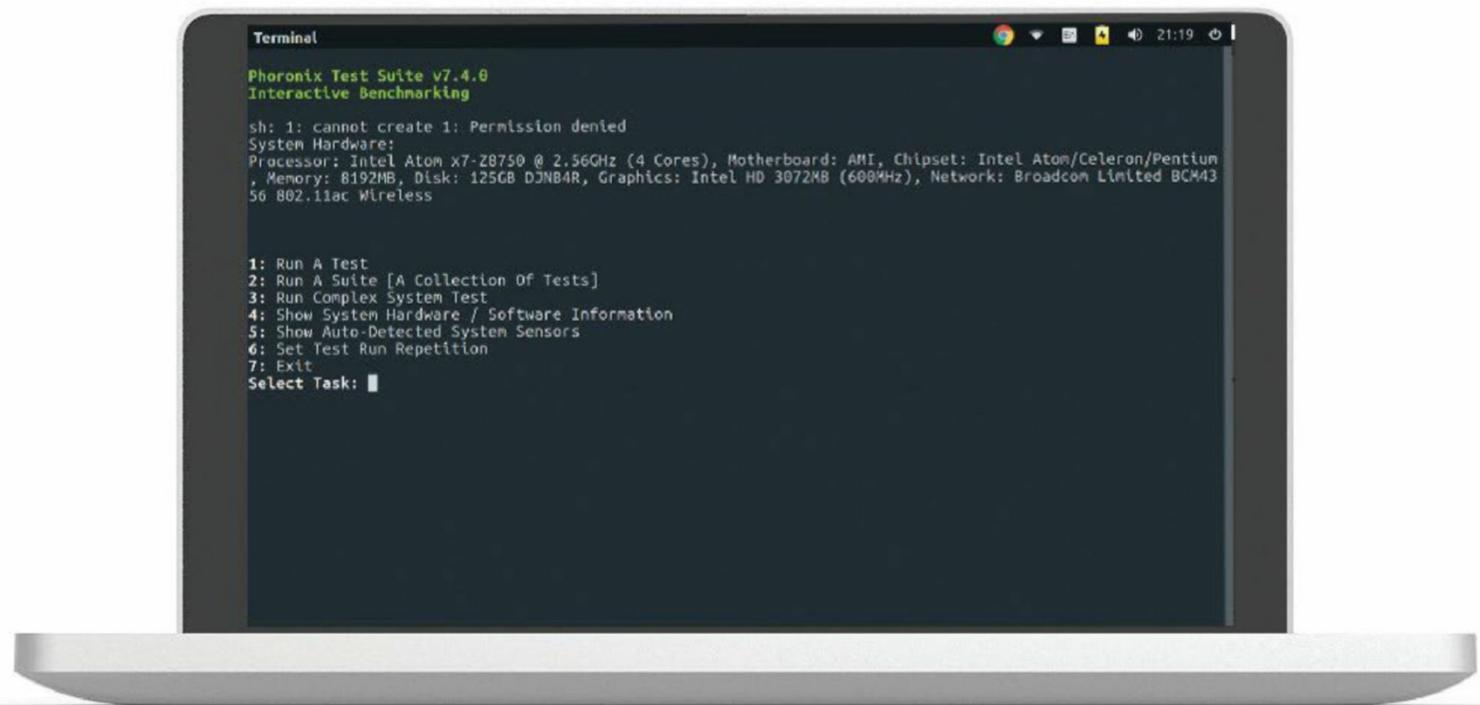
Summary

The Bitdefender Box can take some time, thought and experience to set up, but once it's working it does an excellent job of protecting you from a host of security threats. ■

Setup can be complex, but once it's configured the Box will help keep your connected devices safe.

 **Windows Help & Advice Verdict**





GPD Pocket

£383.88 | \$509.99 www.gpd.hk/

A relatively powerful yet highly compact little notebook

Round ten years ago, the computing world was obsessed with the idea of ultra-mobile PCs (UMPCs). Although there were some impressive devices for the time (the Sony Vaio and Toshiba Libretto, for example), the reality was that the technology wasn't available to make the machines viable for most users.

The small screens were low resolution and low quality, processors were power hungry and ran hot and, most importantly, battery technology meant an hour or two of runtime at best. Now technology has moved on and it's much more feasible to create tiny PCs, but we don't tend to see them – smartphones and tablet PCs more commonly fulfil that need.

A relatively unknown Chinese company is looking to change that, with the GPD Pocket mini PC. The GPD Pocket was initially launched on crowdfunding site Indiegogo. The campaign not only hit 1,516

percent of its funding target with \$3.5 million (around £2.6 million) raised, but the firm in question – GPD – was also able to build upon previous experience manufacturing these types of devices to bring the Pocket to fruition. Its previous product, the GPD Win, was a popular 5.5-inch Windows-based gaming machine.

Before we dive into the details, it's important to understand that devices of this type are about compromises. It's not possible to cram a top-end desktop PC into a tiny chassis, but the key to making a successful product is compromising in the right places so as to provide a good overall experience. So has GPD made the right calls here?

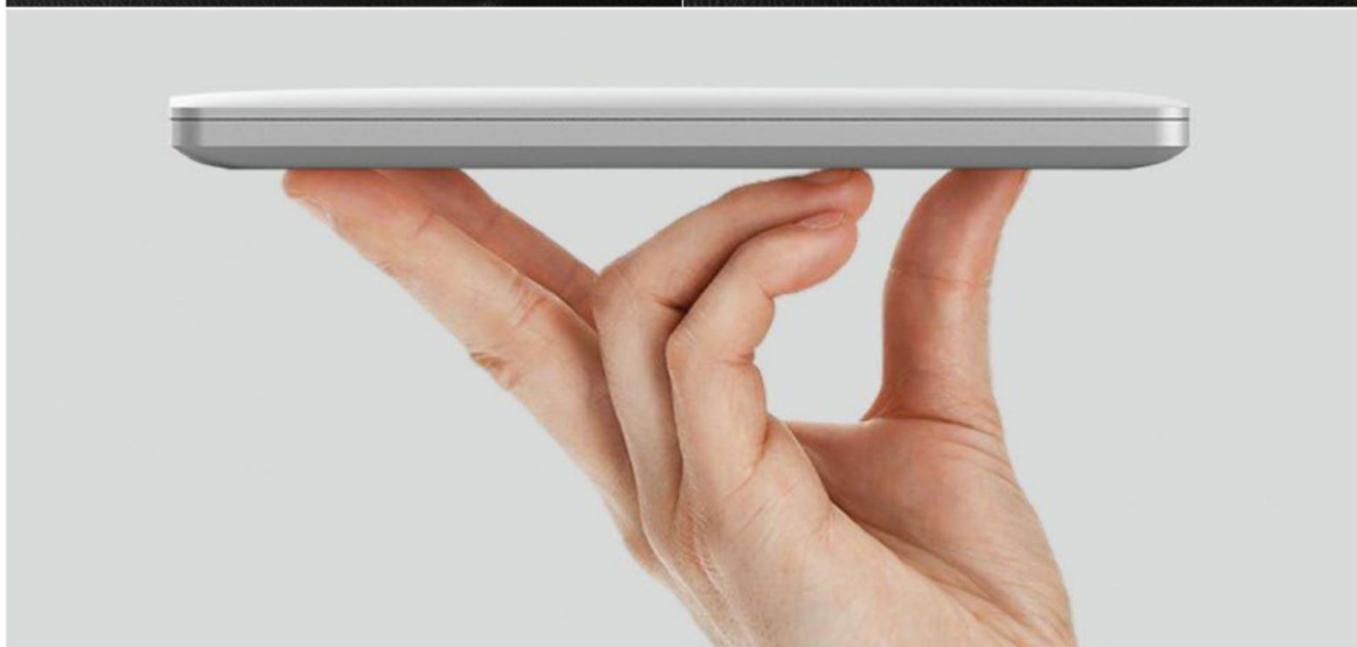
Performance

At the heart of the Pocket sits the Intel Atom x7-Z8750 processor with integrated HD 405 graphics. While your immediate reaction may be to balk at the mention of an Atom

processor, it's worth noting that the Z8750 is a quad-core, 64-bit CPU from the Cherry Trail family, built on the 14nm process with a base 1.6GHz clock speed and burstable 2.56GHz max. Backed by 2MB of on-board cache, the processor proves impressively capable, particularly for a 2W part.

Performance is also helped by 8GB of LPDDR3-1600 memory and 128GB of storage (albeit eMMC rather than SSD). The balance between capability and efficiency is spot on – although claimed battery life is 12 hours, this is more like seven hours in reality, which is still extremely impressive.

The GPD Pocket's display is also a particular highlight. The 7-inch 1,920x1,200 (16:10 aspect ratio) screen packs 323 pixels per inch (ppi) and is impressively sharp with responsive multi-touch. The top and bottom bezels are tiny, while the side bezels are larger to facilitate space for the keyboard.



Unusually, the Pocket doesn't include any sort of camera at all, so video calls are out of the question.

via the USB Type-C port and USB Type A is still present. A 3.5mm headphone jack is included, as is a

"As a full PC experience you can fit in your jacket pocket, nothing else really comes close"

Selecting the right hardware might be the simple part of the equation when compared to getting the keyboard right. There's no avoiding the fact that there's not a lot of space for a full keyboard, so input on the Pocket will take time to get used to. The layout is somewhat shifted to the left, some of the key sizes are a little unusual and, of course, things are more cramped than on a conventional QWERTY.

Luckily, the keys have plenty of travel and are responsive – after a few hours, you'll be surprised by how good the Pocket is to use.

A healthy array of ports provide excellent connectivity – charging is

micro-HDMI port so you can use the Pocket to power a larger screen.

Summary

The GPD Pocket is a compromise – ultra-mobile PCs like this always will be – but it's done well. As a full PC experience you can fit in your jacket pocket, nothing else really comes close. Windows on ARM will drive new devices in this form factor, though, so the market is set to explode in the near future. ■

The GPD Pocket isn't perfect, but it compromises in the right places to make it a praiseworthy UMPC.

KEY FEATURES

GPD Pocket

Supplier www.gearbest.com

Operating System Windows 10 Home

Processor 1.6GHz quad-core Intel Atom x7-Z8750

Graphics Intel HD 405

Memory 8GB of LPDDR3-1600

Display 7-inch (1,920 x 1,200) IPS

Storage 128GB eMMC

Connectivity 802.11ac Wi-Fi; Bluetooth 4.0; 1x USB Type-C; 1x USB 3.0; 1x Micro-HDMI; 1x 3.5mm headphone jack

Weight 480g

Dimensions 106x18.5x80mm

 **Windows Help & Advice**
Verdict





Liberty Shield VPN Router

From £29.99 | \$37.50 www.libertyshield.com/

An easy-to-use VPN router with top-quality UK-based support

Liberty Shield is a UK-based proxy and VPN provider, which offers the usual range of software clients, along with a preconfigured router, both of which give you access to the same small network of eight locations: the UK, US, Ireland, Germany, Canada, Spain, France and Switzerland.

Liberty Shield claims to offer 'superfast Tier 2 network speed with sophisticated routing to help ensure zero buffering with video streaming', and can also unblock Netflix among many other services that might be geo-blocked due to their location.

Its VPN Router is a customised version of the popular MikroTik hAP Lite box, which comes with five 10/100Mbps Ethernet ports, dual-chain 802.11b/g/n 2.4GHz Wi-Fi, single-chain 802.11ac 5GHz Wi-Fi, and a USB port for 3G/4G modems. There's more detail on the MicroTik website (<http://bit.ly/2AyfqTo>) if you need it.

The starting price is attractive at £29.99 (\$37.50) which includes your choice of power supply (UK, EU, US), free UK shipping for the router and one month of VPN access.

Subscription prices are relatively high, though, ranging from £6.99 (\$8.75) per month to an equivalent £5.83 (\$7.30) for the annual plan. Liberty Shield's VPN Router still seems reasonably cheap for the first year, but after that it begins to look relatively costly.

There's some compensation in Liberty Shield's UK-based customer support, which is open from 9am to 9pm, seven days a week, and includes live chat, email, support tickets, and even an option to schedule a call-back.

We tested the chat service and got a helpful and friendly response in less than a minute. It's wise to be skeptical of web reviews, but reports on Trustpilot consistently praise Liberty Shield for its customer support.

Support matters, too, especially with a VPN router where you might add new devices. If you're not the technical type, then spending £20 (\$27) more a year to help solve these problems is a good deal.

Privacy

Liberty Shield makes apparently definitive statements about privacy, including: "We never share your data with anyone and don't log your website usage through our servers in any form". There is some scope for session logging, as its privacy policy goes on to explain:

"...We may collect the following information: times when connected to our service, choice of server location, and the total amount of data transferred per day..."

This is vague, and not ideal, but it's also not unusual; many VPN providers do something similar.

We browsed the small print, too, but didn't find anything unusual. It's the usual stuff: don't do



KEY FEATURES

Liberty Shield VPN Router

Supplier www.libertyshield.com
Architecture MIPSBE
Operating system RouterOS
Processor 650MHz Qualcomm QCA9531 SoC (system on chip)
Memory 64MB
Storage 16MB flash storage
Connectivity 802.11ac/b/g/n; 5x 10/100 Ethernet ports (1x with PoE output); 1x USB Type A port
Dimensions 113x89x28mm

Server Location :



anything illegal, don't breach copyright, don't be a spammer – you know the deal.

Performance

The Liberty Shield VPN Router arrives in a surprisingly small box, yet still contains everything you need: router, power supply, a 0.25m Ethernet cable, a Quick Start guide

libertyshield.com/activate and enter the SSID and Code from the front page of your booklet".

We headed off to the activation page, where a form asked us to enter the login credentials provided with the router. We also had to provide our name and email address to create a Liberty Shield account, and enter the details of

"This delivered solid results, with download speeds ranging from 52-58 Mbps on a 75Mbps connection"

and a card with an allocated login name and password.

The Quick Start guide started off well: Plug one end of the router cable into the VPN box, the other into your regular router, plug in the power cable and wait for it to connect to the Internet. Easy.

Unfortunately, the guide didn't tell us what to do next. Should we look for an SSID and try to connect? Access the router from a browser? Do something else? After spending a few minutes exploring our options, we checked the web version of the guide and spotted the problem. We weren't missing anything; the printed setup guide, left out the most crucial line of all:

"To begin the activation process please visit <https://www.libertyshield.com/activate>

the card that would be used for payment. (The first month is free, and if you cancel your subscription before the month is up, you won't be charged anything at all).

Moments after submitting the form, an email arrived reporting that our router was now activated and ready for use. Sure enough, the SSID name of the Liberty Shield box was now visible, and we were able to connect to it from a laptop, tablet, phone and TV by entering our allocated wireless password.

By default, our router connected us to a UK VPN server. You can change this, but it takes a little work. There's no local router console, so instead you must go to the Liberty Shield website, log in, choose your preferred location and

connection method (VPN or Proxy), save the results, turn your router off, wait a couple of minutes, turn it on and wait for it to reconnect.

The web console offers a few other connection settings – protocol, Wi-Fi SSID and password – but nothing like the power or configurability you'd get with a standalone router.

We started our tests using a wired connection. Our router was initially set to use our nearest UK server, and this delivered solid results, with download speeds ranging from 52-58Mbps on a 75Mbps connection. Switching to a wired connection showed no real difference on our laptop, which managed to max out its wireless adaptor at around 44Mbps.

Our mobile saw a dramatic drop in performance from around 50Mbps when connecting to our regular router, to more like 25Mbps when using Liberty Shield. That was unexpected, but as this isn't an issue that affected other devices, we didn't count it as a significant black mark against the product.

Switching our location to Germany saw speeds fall to around 20-30Mbps on a wired connection, around what we would expect from a regular VPN. UK-US connections were inconsistent and relatively disappointing, ranging anywhere from 6-20Mbps.

We visited a few geo-blocked sites, and found Liberty Shield accessed them without difficulty. There's no guarantee that this situation will last, but at the time of writing, the service works well. ■

Liberty Shield's router package is easy to use, but has limited power and configurability options.



WIRELESS IN-EARS

The age of earphone wires is over. Welcome to the wireless Bluetooth revolution and a new era of audio flexibility



1 Bragi Dash Pro 35X

£349, bragi.com

There's little the Dash Pro buds don't do. They're fitness trackers, with heart-rate sensing built in. The gyroscopes give you head-gesture control and the potential for interaction just by tapping your face. Each touch-sensitive bud responds to swipes and presses; you can store up to 4GB of music and the mic gives rise to a clear transparency mode, smart assistant integration and even (wonky) live translation. Feature-packed, then: shame the fairly flat sound quality, with a rough bottom end and an unexciting treble, lets them down a little.



2 Apple EarPods

£159, apple.com/uk

At once the most compact design and the most conspicuous on test, Apple's flagship wireless buds almost exactly ape the design of its wired staples. They're plenty clever – with extra customisable functions open to owners of an Apple device – and five-hours charge. They're far from the best, though; given the lack of any silicone or foam, sound is clear but only passable; they don't block a lot of outside sound; and the stalk-mounted mic is a magnet for wind noise. The AirPods may have led the charge, but they're struggling to keep up.



3 Avanca Minim

£89, avancaproducts.com

Minim is a good name – these things are tiny. Their minuscule size and highly reasonable price belies the quality of their sound, too. It's a little muddy in the bottom end but tremendously listenable, and while they lack the extra features of pricier buds, as a basic pair – either of which can operate as the lead ear – they're perfectly decent. Battery life isn't the best, and their Bluetooth connection isn't the strongest, so you may need to rethink your phone's pocket position to get the best out of them, but at this price you can get two pairs!



Truly wireless earphones are in their infancy, and that's exciting. Every company that's birthed a set of buds has added their own genetics: connection methods, features, buttons, charging cases –

all differ. There's no standard yet. But there are plenty of ideas and, depending on which way your money goes, the potential for a huge range of functionality.

The best entries in this first generation will define the look and

sound of the next. Perhaps we've been critical in this six-way smackdown, but that's only because we see what wireless earphones could become – and that every current entry, for all their individual merits, has a kink or two to iron out.



Windows
Help & Advice
Winner!

4 B&O Beoplay E8

£259, beoplay.com

No question about it: these small, well-designed (and expensive) earbuds sound the absolute best of all the devices in this line-up. They're astonishing, offering a rich soundstage which reaches all the way to sub-bass levels without any frequency clouding the others. A triumph of hardware engineering in a comfortable, clever package, with tweakable audio and customisable levels of transparency if that's your thing. The app needs a little work on stability, and the transparency mode can sound robotic, but these are small gripes.



5 Optoma NuForce BE Free8

£199, optoma.co.uk

If you have larger ear canals, you'll need to supply your own tips for these buds – the selection in the box are all on the small side – but once you do, the Free8's quality of sound shines through. Massive (but not overwhelming) bass, a relatively sound middle, crispy top end, with a solid battery life and a decent left-ear mic. However, the glossy black plastic design isn't the most attractive, there are no media controls, and there's a constant background hiss when playing audio.



6 Jabra Elite Sport

£229, jabra.co.uk

Although they're not the most comfortable buds, the snug ear-hooking design of the Elite Sports is necessary to accommodate their heart-rate sensing and fitness-tracking capabilities. This is much more than just a pair of wireless earphones, then, and the app can guide you through workouts too, though it takes a good amount of training before it knows exactly what you need. What's more, they sound absolutely excellent, although the foam tips absorb sweat, so you'll want to use the rubberised ear hooks when you're working hard.



THE BEST FREE PHOTOSHOP ALTERNATIVES

Give your pictures a professional finish for free without Photoshop

1 GIMP

www.gimp.org

Powerful and adaptable, GIMP is the best free Photoshop alternative. With layers, masks, advanced filters, colour adjustment and transformations – all of which are customisable – its feature set is unbeatable.

One of GIMP's best features is its wealth of user-created plug-ins and scripts, many of which come pre-installed. Some of these replicate Photoshop tools and there's a package of animation tools for bringing your photos to



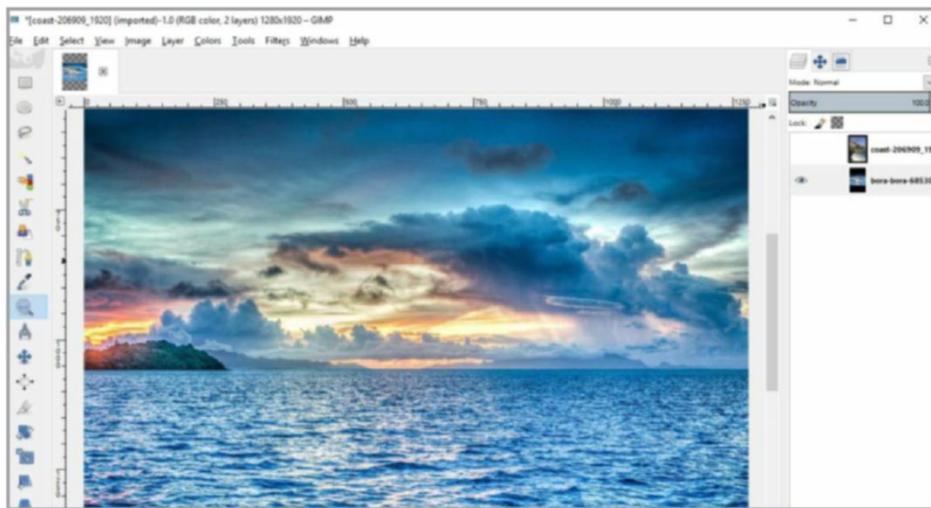
Windows
Help & Advice
Winner!

GIMP is a flexible, feature-packed photo editor that's the closest you can get to Photoshop.

life. You can also add Photoshop plug-ins to GIMP.

If this all sounds intimidating, don't worry – GIMP's excellent user manual includes step-by-step tutorials and troubleshooting guides to get you started.

The latest version of GIMP has a new interface that puts all of its toolboxes, palettes and menus together in one window, though its extensive patchwork of user-created tools means you'll have to spend a little time experimenting and perusing the documentation to learn how to get the best results from each one.




Windows
Help & Advice

RATING



2 Photo Pos Pro

www.photopos.com

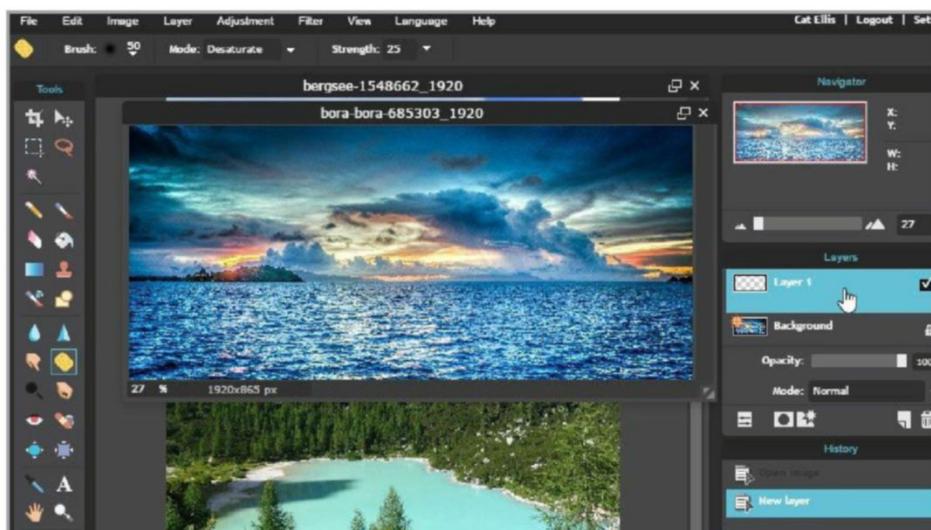
If you haven't heard of Photo Pos Pro, you're in for a treat. This free Photoshop alternative aims to give the best of both worlds, offering interfaces for both novice and advanced users. The novice option

places one-click filters and automatic adjustments to the fore, while the latter closely resembles Photoshop. Both are well designed, and more intuitive than GIMP's endless lists and menus.

Photo Pos Pro is a powerful images editor that gives you a choice of user interfaces.

Photo Pos Pro offers both layers and layer masks, as well as clone and healing brushes. All of the expected colour-refining tools are present. There's support for batch-editing and scripts to save time on routine tasks, you can also import images from a scanner or camera. Plug-ins are available in the form of frames and templates, and you can create your own filters.

The main drawback of the free version is a limitation on the size of the images you can save – a restriction that's removed from the affordable, and even more capable, Premium version.




Windows
Help & Advice

RATING



3 Paint.NET

www.getpaint.net/

Photoshop alternative Paint.NET started life as a substitute for Microsoft Paint, but over the years it's grown into a powerful photo editor in its own right.

Paint.NET offers an excellent selection of automatic filters, plus manual editing tools for fine adjustments. It also supports layers, though you'll need to

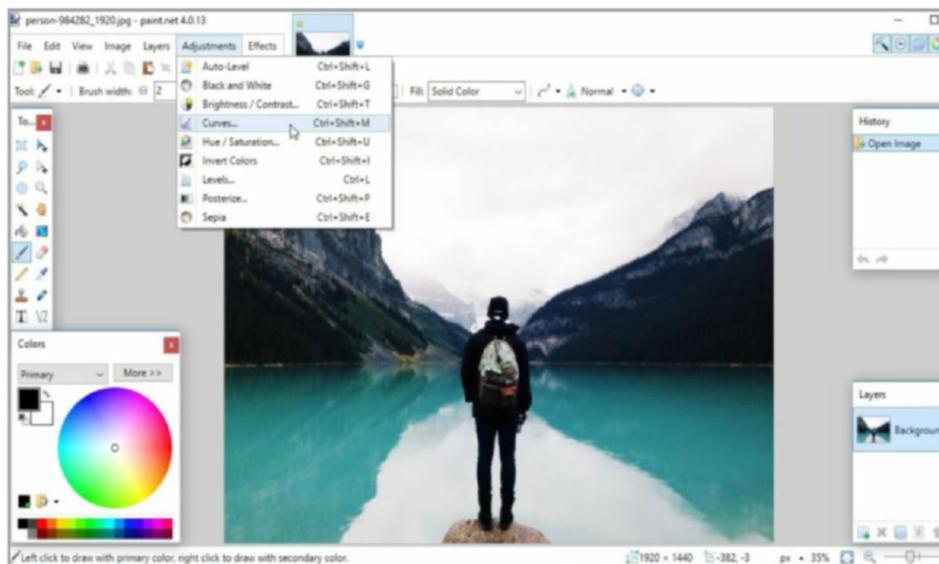
Plug-in support gives Paint.NET almost unlimited potential, and it works very well.

install a plug-in for masks. Batch editing is included by default, and its clone stamp makes it easy to erase blemishes and distractions.

Paint.NET isn't as feature-rich as GIMP, but its smaller community of volunteer coders means its interface is more consistent and easier to use overall (though not as slick as Photo Pos Pro).

Paint.NET is a particularly good Photoshop alternative for working with multiple photos thanks to quick-access tabs that use thumbnails to represent each open image at a glance.

It's also very fast, and runs well even on low-powered PCs.



RATING



4 Pixlr Editor

<https://pixlr.com/editor/>

Pixlr is the work of AutoDesk, one of the biggest names in computer-aided design and 3D modelling software, and is as impressive as its pedigree implies.

The web version of the app, featured here, gives you all of the expected Photoshop-style tools, as well as artistic filters and automatic optimisation options.

Pixlr Editor is such a brilliant tool, it's hard to believe it's a web app running in your browser.

Pixlr Editor also gives you a toolbox very much like GIMP's, with brushes, fills, selection, healing and clone stamp tools. There's support for both layers and masks, and although Pixlr Editor can't edit pictures in batches, it will handle multiple images at once in different tabs.

Sound too good to be true? In 2015, Autodesk announced it was working on an HTML5 version of its photo editor Pixlr Express – and since Pixlr Editor is built in Flash it may not be long for this world.

For now, though, it's a truly excellent Photoshop alternative.



RATING



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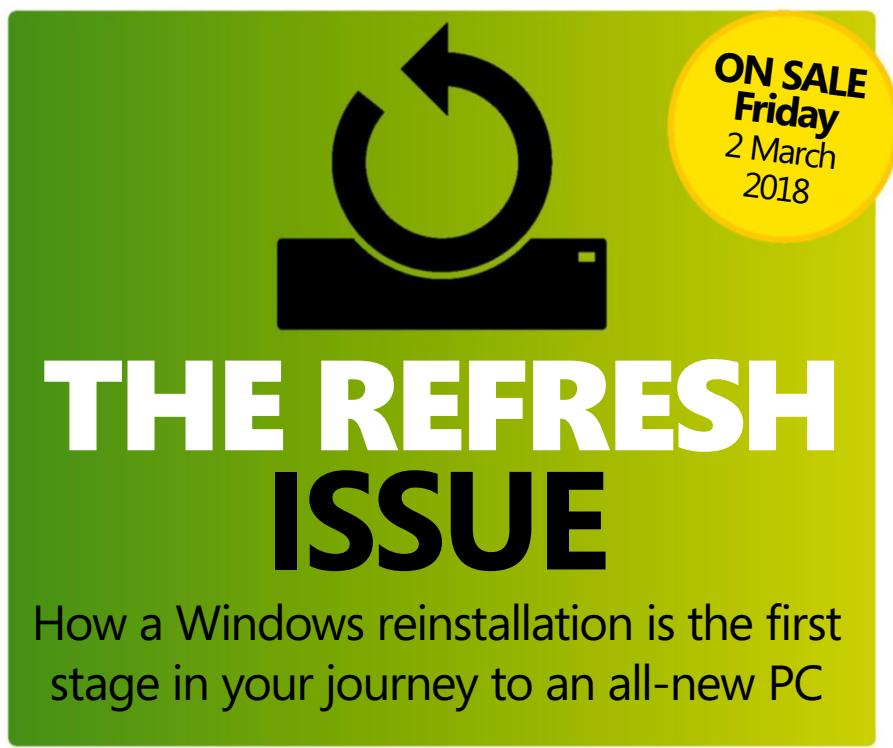
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