Don't Install 'FREE' VPNs

+ WORST VPNs Named & Shamed

Why they're not safe – and what you SHOULD use to hide what you do online p40

£2.30

PLUS

RESCUE YOUR PC FROM DISASTER
With a DIY recovery kit
p46

COMBINE YOUR CLOUD STORAGE
Everything in one place
p54

INSTALL VIVALDI ON YOUR ANDROID PHONE
The mobile browser you've been waiting for
p57

BETA

TANSTAAFVPN!

"**T**here ain't no such thing as a free lunch," goes the old adage, which (says Wikipedia) dates back to the 19th Century, when saloon owners in the US would offer complimentary grub to patrons buying alcohol. The saying even has its own acronym – TANSTAAFL – which is worth remembering if you find yourself back in the Old West, and is especially pertinent to free VPNs.

There are dozens, if not hundreds, of free VPNs available, which is great news if you want to save a fiver a month on a subscription but not so good if you value your privacy, security and peace of mind. In this issue's cover feature, we explain the risks of using a 'free' VPN, and why signing up for a service because it has a cute logo, offers one-click installation and doesn't ask for your card details can ultimately end up costing you dearly. We also recommend what you should use instead if you want to beat geographical restrictions and stay totally anonymous online.

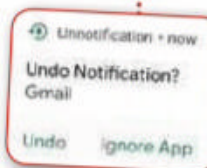**Robert Irvine, Editor**
editor@webuser.co.uk
#webuser
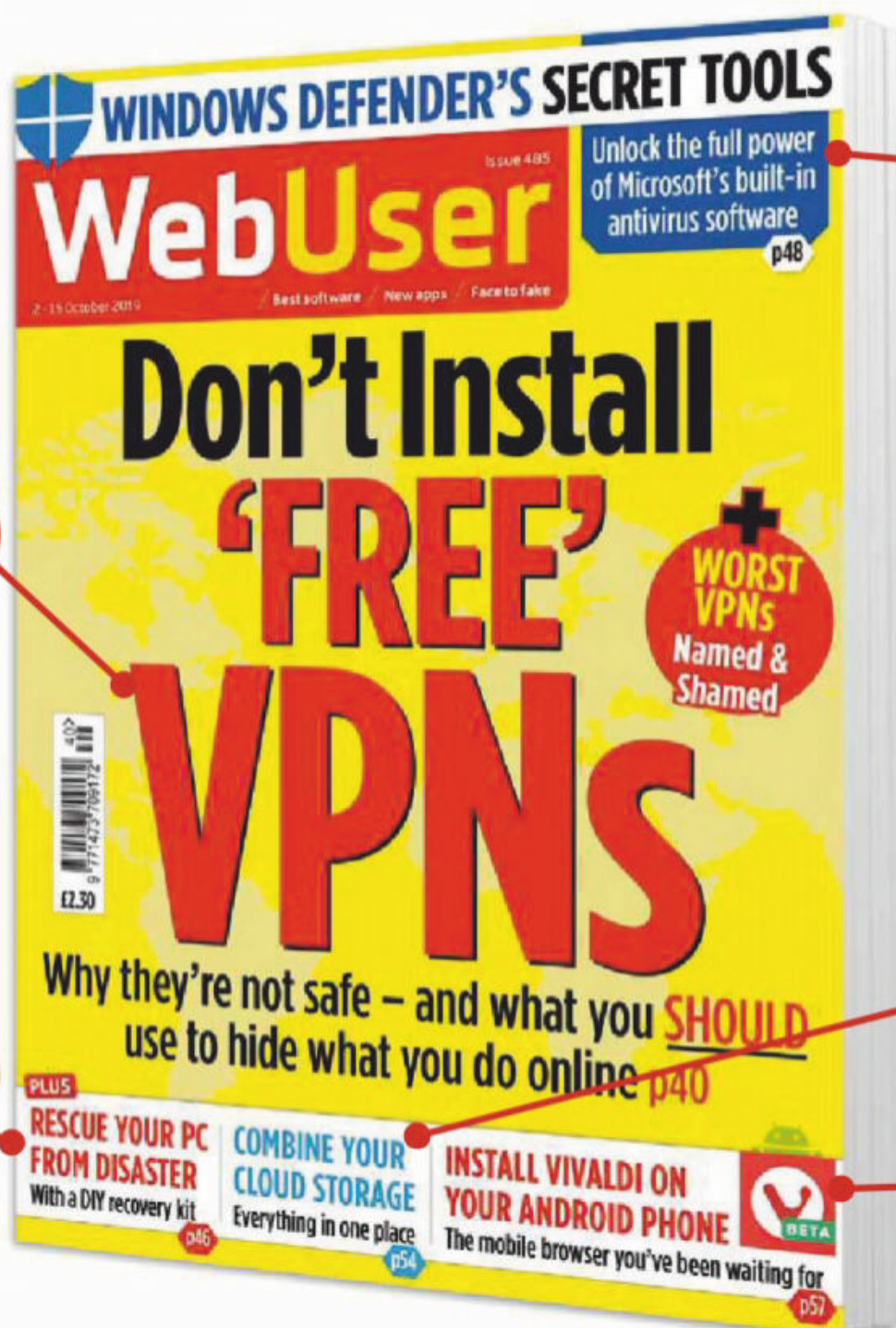
5 Things you'll learn this issue

1 How to view pictures from your past in Google Photos
page 6

2 How to translate any text you type or paste on your desktop into foreign languages
page 29

3 How to view notifications you've accidentally dismissed on your Android phone
page 34

4 How to stop Windows automatically logging you out and locking your screen
page 67

5 How to create a taskbar shortcut that lets you shut down your PC in a single click
page 70

p48
p40
p46
p54
p57

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Contents

COVER FEATURE

Don't Install
'FREE' VPNs
Why they're not safe – and what you SHOULD use to hide what you do online

p40

How Deepfakes make the camera lie   **p38**

Windows Defender's secret tools   **p48**

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FAVOURITES Must-read regulars

Has Firefox found Chrome's Kryptonite? **p74**
SAVE 50%

Practical WebUser
16 pages
Workshops, tips, projects and problem solving

Collate and control all your online storage **p54**

Create your own network-attached storage **p58**

What's New Online

Stream hi-res music with Amazon

Stealing a march on Apple Music and Spotify, Amazon's music-streaming service now offers listeners CD-quality audio. It uses the FLAC format for more than 50 million tracks, encoding them at 16-bit 44 kHz rather than compressing into AAC or MP3. It is also more than doubling the bitrate of standard services by streaming at up to 850 kilobytes per second (kbps).

Amazon Music HD is making a couple of million tracks available in 'ultra-HD', too, encoding them at up to 24-bit 192 kHz and streaming at 3,730kbps. You can listen to the higher quality tracks in the Amazon Music app for iOS or Android, as well as Echo devices, Fire TVs, Fire tablets and a desktop app, with the option to download songs for offline enjoyment. In all cases, you can see a track's quality by tapping the SD/HD/Ultra HD badge on the Now Playing screen.
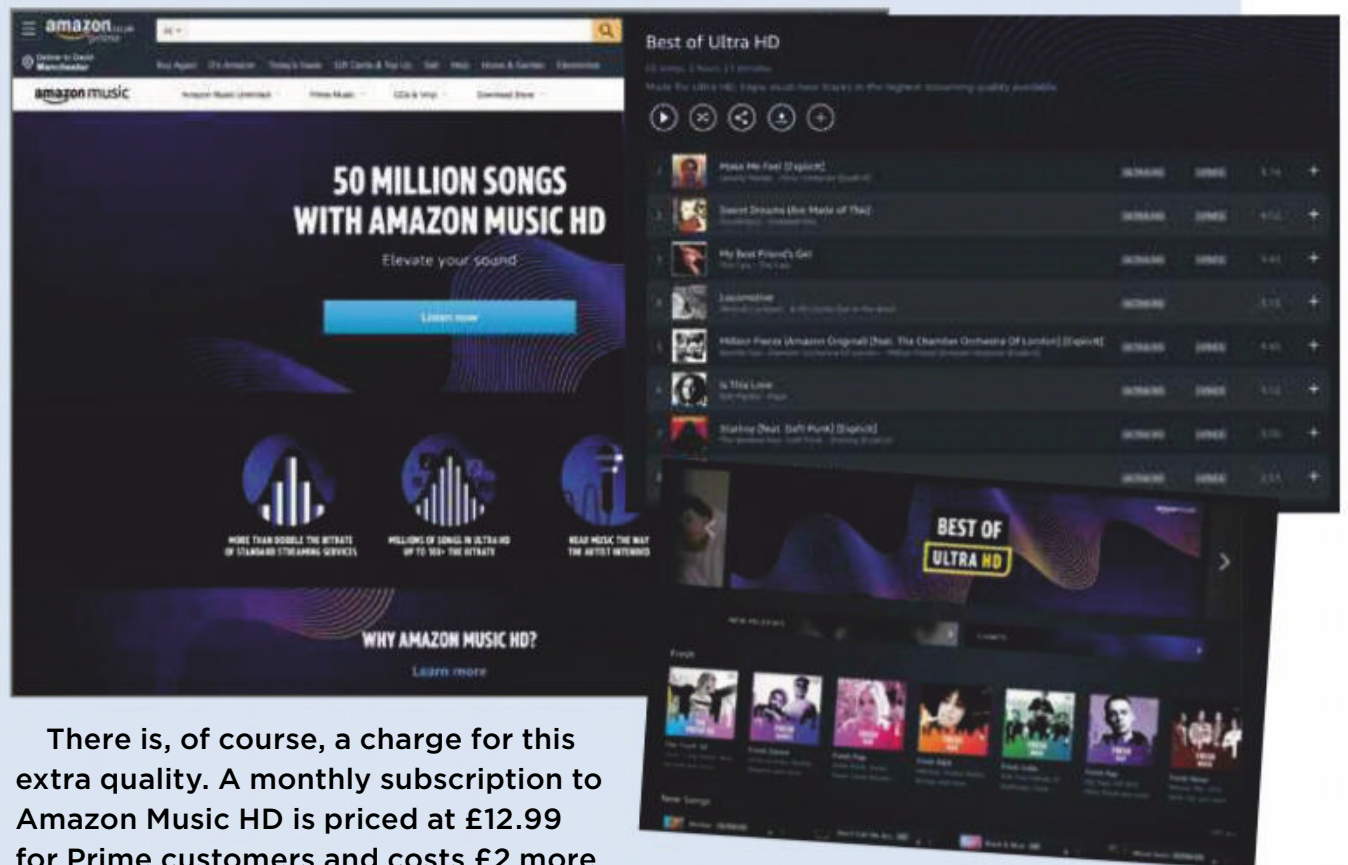
There is, of course, a charge for this extra quality. A monthly subscription to Amazon Music HD is priced at £12.99 for Prime customers and costs £2 more for non-customers. But both are cheaper than rivals such as Tidal and Deezer, and there's a 90-day free trial if you're not already using Amazon Music (or 30 days if you are).
bit.ly/amazonhd485

Instantly fix bad posture using your webcam

fix-posture.glitch.me

Slouching at your computer can cause neck and back pain so, to help improve your posture, developer Olesya Chernyavskaya has devised a tool that monitors how you're sitting in real-time and uses your webcam to prompt you to move into a better position.

Should you depart from the perfect posture – that is, with the screen at eye level, your back supported, your feet flat to the ground, elbows pulled in and shoulders relaxed – the screen will blur, indicating that there's a problem.

Fix Posture works by tracking the top section of your body, analysing the relationship between the tilt of your eyes, your shoulders and the horizon. The site explains the principles and admits it's not perfect because it doesn't look at your whole body but it's a good reminder that even sitting still affects your health.
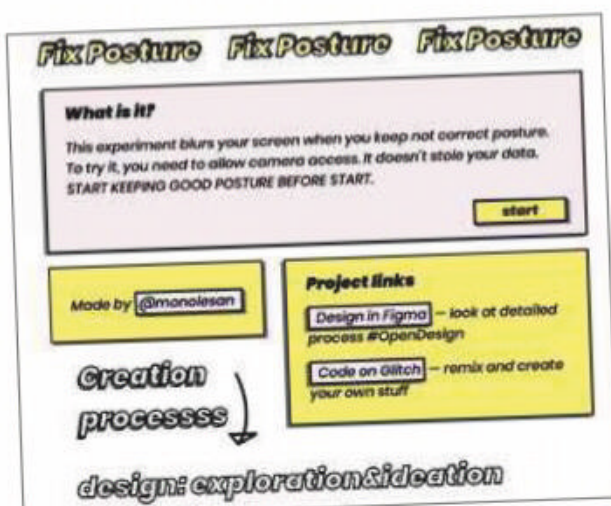
Relive your memories with Google Photos

www.google.com/photos

Similar to the stories you see at the top of Instagram, Google Photos' new Memories feature lets you relive key moments from your past. It displays a series of small circles dedicated to previous years, which you can tap to view a digitally curated series of shots without having to scroll through your entire library.

Using machine learning, Google Photos filters out duplicate images and picks the best quality photos. You can also hide people or time periods you don't want to see, with the resulting images presented to you privately rather than shared to all and sundry.

The feature has started to roll out, so keep an eye out for updates that are due to arrive soon. Google has also announced it will be making it easier to share photos with friends and family in the coming months, letting you add them to a private conversation and allow comments, effectively turning Photos into its own messaging app.
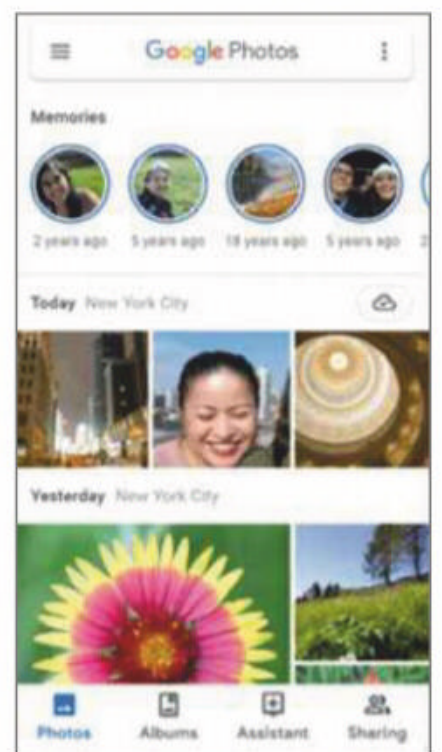
We pick the 10 best things you must do on the web this fortnight

Help Alexa answer questions

alexaanswers.amazon.com
Alexa doesn't know everything but, with human intervention, it may become more knowledgeable. Log into the site with your Alexa details and you can answer questions posed by other users. Each answer will then be relayed to the inquirer, gaining you points. Moderation and a system of up- and down-voting will help to weed out trolls.

Quickly find a train platform

departureboard.io
Departure Board is sure to become a handy companion for frequent rail travellers, particularly if you have to change trains during your journey. Simply enter your place of departure and your destination, and it will display the platform where the relevant train is standing. At the same time, it tells you when the train is due to leave, so you can decide whether to run, walk or pick up a coffee on the way. The tool draws its information from Network Rail, which makes it super-accurate. The developer also advises adding the site's widget to your iOS or Android device for even quicker results.
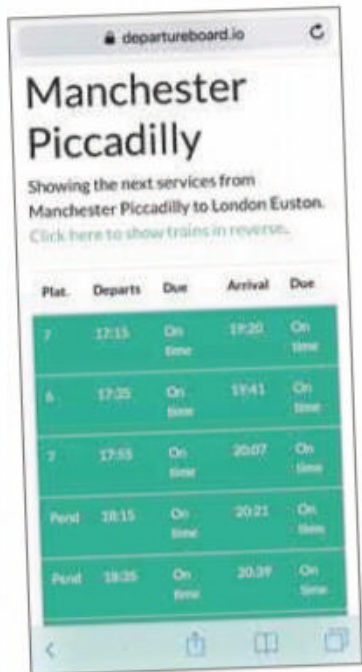
Enjoy a flavour of Japanese food

bit.ly/japan485
This tasty treat from Google Arts & Culture explores the people, places and traditions of Japanese cuisine. With more than 3,000 images and video spread across 100 online exhibitions, there's plenty to whet your appetite. As well as allowing you to embark on a tour of Tokyo's Golden Gai district, which is packed with 300 small bars, you can tuck into the past with a bite-size history presented in the form of a bento box. You can also examine iconic dishes such as sushi and ramen, and learn key phrases that are sure to impress any Japanese host.

Scour a map of rude place names

really-rude.glitch.me
From Middlefart to Six Mile Bottom, the world is awash with place names that sound risqué to English speakers. This map plots dozens of them and although it doesn't give the history behind each one (concentrating instead on explaining just three), it's nonetheless likely to elicit a titter or two.

NEW VOICE COMMANDS

Wind down with Headspace
Counter the stress with Headspace's daily meditations and sleep exercises. Start by saying, "OK Google, talk to Headspace".

Add multiple reminders
With iOS 13, Siri can add multiple items to a list in your reminders. Say "Hey Siri, add *Web User* and milk to my shopping list", for instance, and it will pop each item on a separate line.

Ask Alexa to speak at a different speed
Alexa can speak at different rates – two slower and four faster than its default. Say "Alexa, speak slower/faster". To reset, say "Alexa, speak at your default rate".

Agree on what to watch
bit.ly/telly485
The BBC's Tellybox 5-2-1 helps you agree on a show to watch. One person picks five programmes from a small selection, then a second person narrows the choice to two. The first person then clicks one to start watching it on BBC iPlayer.

Share Spotify songs on Snapchat
www.spotify.com/uk/
Last issue, we revealed how Spotify lets you share music and podcasts on Facebook Stories. You can now do the same via Snapchat – tap the Share menu, select Snapchat, edit the new Snap and send it.

Get groceries on demand
bit.ly/grocery485
You can now sidestep the £3.99 monthly subscription for Amazon Fresh by paying £2.99 for a one-off delivery. You need to spend £40 and live within one of 302 London and South East postcodes, though.

Tell us your favourite new things at **twitter.com/webusermagazine**

Apple unveils iOS 13, but it's riddled with bugs

What happened?

Apple unveiled and released the latest version of its mobile operating system, iOS 13. But alongside its new features – including faster app downloads, expanded Dark Mode and an improved Photos app – the new version of iOS has a few bugs.

First, the good news: the free update is expansive, with updates to many aspects of the operating system. It should run more efficiently and quickly, Apple said, with faster app launching and downloads. The Photos app has new editing tools, Maps has a Google-Street-View-like 'Look Around' feature and Siri has a more natural voice. Apple has also added intriguing privacy features, including a way to sign into online services with Apple so you can keep your data away from other providers, better permissions for Bluetooth use by apps, and single-use email addresses to sign up for stuff without giving away your real identity.

Unfortunately, alongside the wealth of new features, there's a downside: bugs. Hopefully, Apple will have already addressed the flaws by the time this issue is published but, currently, reports of problems abound, including losing data in iCloud, difficulties with the accessible version for people with reduced vision and problems sending email from the Mail app. Users also experienced apps crashing, batteries draining during the indexing process and more.

iOS 13 introduces a new look and lots of new features - but also a raft of new bugs

Bugs were also reported in the new iPhone 11 and 11 Pro handsets, which come with iOS 13 preinstalled. Reports suggested that the mobile signal suddenly drops, photos have incorrect metadata, such as dates, some apps crash on opening and the camera is slow, among other complaints.

There were so many issues that even the US Department of Defence warned staff to hold off upgrading to iOS 13 until iOS 13.1 arrived at the end of September. That may be due to a security vulnerability spotted by one researcher, which could let a hacker slip past the phone's lock screen and password to see contact information.

Apple plans to fix the many bugs with a quick follow-up release, iOS 13.1. This was initially expected by the end of September, but may be issued early, suggesting Apple is taking the various flaws seriously.

How will it affect you?

Thanks to the time required to print a magazine and the speed with which updates to phones can be pushed out, it's possible the bugs will be patched with iOS 13.1 before you even read this story. If not, it's worth waiting for iOS 13.1 to arrive before upgrading from an older phone. If you've already upgraded, or have picked up an iPhone 11, make sure you allow the update to run so you get the fixed version as soon as possible.

None of the bugs should cause any lasting harm to your device or present a major security risk. People working in the US government may worry about some of the security flaws but, for most of us, it's not a huge problem if someone snoops on our contacts list. The DoD didn't specify its concerns about iOS 13, so there could be further security risks the rest of us aren't aware of, but the organisation hasn't outright banned the update either, so the risks are likely to be minor.

Generally speaking, it's becoming clear that being the first to install an updated OS isn't necessarily the best move. Be it Apple or Microsoft, which has seen its own problems, operating system updates of late have been hit by bug after bug. Patience is indeed a virtue, so it's always worth waiting before upgrading.

What do we think?

Apple has a reputation for perfection, but it's experienced bugs before, including the infamous 'antenna-gate', when the iPhone dropped calls if you held it in a certain way. Still, it's surprising to see Apple trip up so many ways with this release. Critics have called it "messy" and much worse, and it's a shame to see such a lack of quality control. Apple runs long, detailed beta tests with advanced users and developers, so it's hard to see how these bugs could have been missed.

The next version, which has patches for some bugs, is being released a week early. That's a good sign and shows Apple is aware of its misstep. Hopefully, iOS 13.1 and the various versions that follow it will mark a return to perfection, rather than leaving bug testing in the hands of customers.
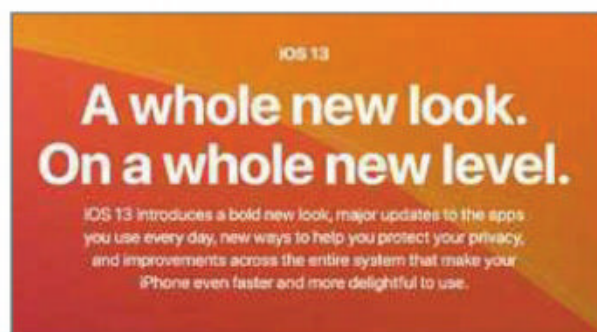
What we think of this fortnight's top tech news stories and rumours, and how they affect you

Three accused of overcharging customers

What happened?

Citizens Advice isn't pleased with Three, accusing the mobile operator of "penalising its loyal customers" by not automatically shifting them to a lower tariff when their contracts are up (bit.ly/citizens485).

When you sign up for a mobile contract, the cost of the phone is normally included in the monthly price. Once the device has been paid off at the end of your contract period – normally two years – if you don't sign up for a new SIM-only deal or upgrade to a new handset, you're effectively giving the operator money for nothing.

In July, the other major providers pledged to end the practice by February 2020, but Three argued that doing so will amount to an "arbitrary discount" when it already offers "some of the lowest prices and unmatched propositions on the market".

How will it affect you?

Citizens Advice believes that such overpayments are costing Brits more than £32m a year. If you're with a major mobile operator other than Three, you should see a lower bill once your contract is up, unless you opt for a handset upgrade, of course.

Vodafone, EE and Tesco Mobile have all said they'll reduce tariffs automatically once contracts are up, with the former two adjusting prices after three months. O2 and Virgin Mobile will shift customers to a SIM-only deal.

None of this means you should avoid Three – just make sure you note the end-date for your contract in your calendar.

What do we think?

It's disappointing that Three has taken this stance, but it's also less than impressive that action on this issue has taken so long. No-one wants to spend their spare time researching mobile deals, which are often complex and confusing, when they already have a tariff they're used to paying for. But it's worth taking the time to check the status of your contract and see if you can move to something a little cheaper. And if you're already out of contract, you don't have to wait until February to start saving.

VPN apps spamming Android users

What happened?

A security researcher spotted four VPN and security apps that shove full-page adverts at millions of Android users – even if the app isn't being used.

Andy Michael, an independent researcher based in New Zealand, noticed ads were being shown on his Android phone even though no third-party apps were open (bit.ly/vpnapps485). Eventually, he uncovered four apps with hidden code that served ads not only when the apps themselves were open, but when the user was looking at the home screen, their photos or another app, to serve more ads and earn more cash, despite breaking the rules of Google's Play Store.

How will it affect you?

The four apps with the dodgy code are HotSpotVPN, Free VPN Master, Secure VPN and CM Security Applock Antivirus, and they have more than 500 million downloads between them. If you have one of these apps on your phone, uninstall it now. Beyond the annoyance of being interrupted by full-screen pop-ups, these ads drain your battery and eat through your mobile data allowance.

If you don't have any of the four apps installed, but are still seeing unexpected ads, take a trawl through your app list and clear any that you're unsure of. Google has said it will remove any apps from the Play store that break its rules in this way.

What do we think?

Dodgy developers are always finding new ways to earn more money from apps, meaning Google has to fight on multiple fronts. In this case, the VPN apps aren't particularly damaging to users, though they may be intrusive and irritating – but that doesn't mean Google should let its guard down.

It's clear that more needs to be done to clean up the Play Store to ensure all apps are secure. After all, if Android users can't trust Google, who can they trust?

See our cover feature on page 40 for more about dodgy VPN apps.

➡

Live facial recognition 'must be stopped'

What happened?

Police have been urged to stop the use of live facial-recognition surveillance in public areas. These 'live' recognition services are able to capture images via CCTV and compare them to police watch lists in real-time. Police claim that these systems protect the public, and the Home Office agrees, saying the new technology "helps them identify and locate suspects and criminals".

However, civil liberties campaigners at Big Brother Watch (bigbrotherwatch .org.uk) claim that far from offering advanced protection, this type of facial recognition is often inaccurate and infringes on individual rights. The watchdog has submitted a letter to the government, co-signed by nearly 20 politicians – including Conservative David Davis, Labour's Diane Abbot, the Green's Caroline Lucas and Jo Swinson, leader of the Liberal Democrats. Nearly 30 other organisations, including Liberty and Amnesty International, have also added their names to the letter, which argues that the UK's rapid adoption of untested facial-recognition technology is being undertaken without proper tests and scrutiny.

Silkie Carlo, director of Big Brother Watch, told the BBC: "What we're doing is putting this to government to say: 'Please can we open this debate and have this conversation. But for goodness sake, while it is going on, there is now a surveillance crisis on our hands that needs to be stopped urgently'".

How will it affect you?

If the technology works, and you're a law-abiding citizen, then live facial recognition software won't affect you at all. But that's a lot of faith to place in the hands of technology.

What Big Brother Watch is requesting is that the House of Commons starts to seriously look at how the technology works, the laws surrounding it and its impact on society. As it stands, police are able to roll out live facial recognition at will, under the nebulous term of 'public safety'. What happens, though, when the system incorrectly identifies you as a criminal?

What do we think?

This is more than just another case of security versus freedom – this is about who has oversight over technology. It's an alarming thought that corrupt or incorrect information, compiled by the police themselves, could lead to false imprisonment, vigilante justice or riots.

Britain is already one of the most 'watched' nations, thanks to CCTV. Do we want to live in a country where 'computer says no' defines our justice system? Regardless of which side of the debate you're on, it's difficult to argue against proper regulation.

👁 **FIRST LOOK**

Apple Arcade
bit.ly/arcade485

As if there aren't enough subscription streaming services to sign up for, Apple has now launched Apple Arcade, which offers 'unlimited access to 100+ new games'. The main draw of Apple Arcade, besides the wealth of games available, is the removal of adverts and microtransactions – both of which have, in recent years, ruined gameplay on mobile devices.

Like Netflix, your subscription can be used by up to five other family members. That alone makes Apple Arcade a solid investment for an iOS-dominated household. Similarities with the premiere video-streaming service don't end there, either – you can play on multiple devices, starting a game on your tablet, for example, then seamlessly jumping across to your phone, and games can be downloaded for the morning commute, so they don't gobble up your data.
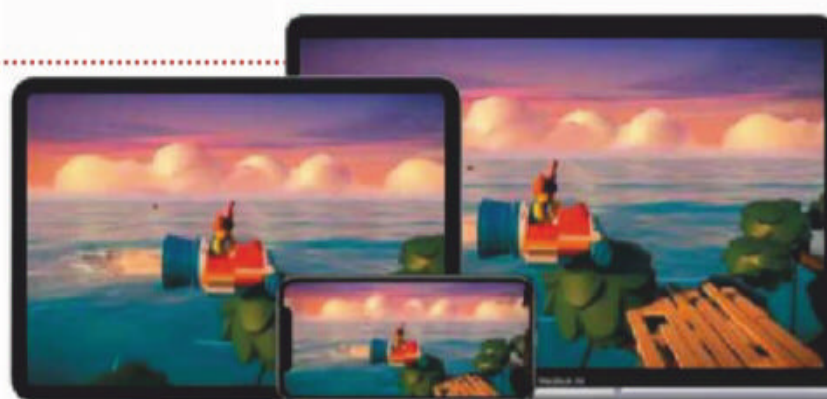
However, a service like this is wholly dependent on a well-stocked library and, unfortunately, Apple Arcade's launch line-up is less than stellar. While there's something for everyone, with games spanning every genre, it's just too lightweight, with not enough gems to balance out the standard mobile-gaming fare.

One highlight to watch out for, when it's released, is Beyond a Steel Sky – a sequel to the 1994 point-and-click classic from original developer Revolution.

Despite the so-so catalogue, there's enough to get you started. Expect new games to be added on a regular basis, with a broad enough range to appeal to everyone from casual gamers to the hardcore set.

If you're tempted to spend money on an iPhone game, Apple Arcade provides a much better deal. The company is also offering the first month free – 'free' being the best offer money can buy.

Apple Arcade is available now for £4.99 a month, and requires iOS 13.

WHAT'S THE RUMOUR

Is Google adding an incognito mode to Maps?

Google Maps is reportedly testing a full incognito mode that lets you privately browse its popular Maps app. The search giant mentioned the concept back at the Google I/O event in May. Since then, however, the company has remained tight-lipped.

Now, XDA Developers believes it's found evidence that the tool has quietly been released to select Google Map preview members. Apparently – not to mention unsurprisingly – these tests are only available to Android users.

In a tweet revealing the news (bit.ly/xda485), the website's editor-in-chief, Mishaal Rahman, showed a GIF detailing how the app could work. You'll launch Maps as standard, then press the Profile button. This should present an option to switch to incognito mode. After confirming your selection, the app reopens in incognito mode, complete with an distinctive black bar along the top of the screen. The GIF in question looks legitimate, adding credence to the report.

The mode is thought to work in the same way that incognito does in Chrome – switching off your location, ignoring the personal data used to make recommendations and not saving your history.

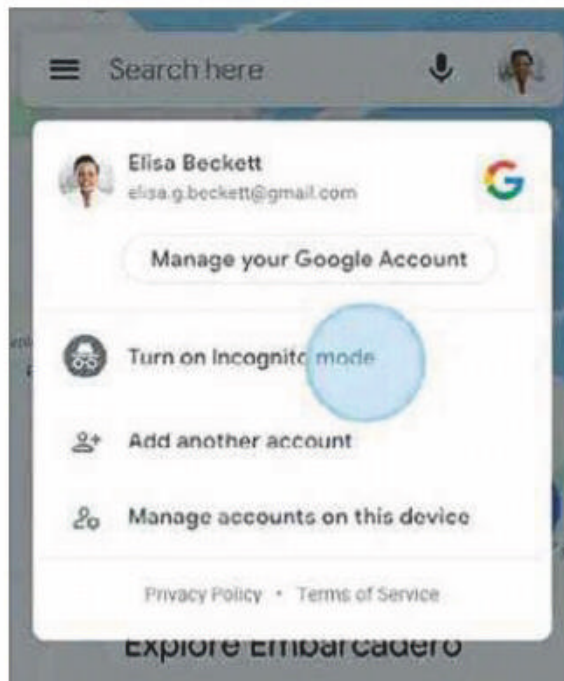Of course, it's already possible to open your desktop browser and visit Google Maps in incognito mode, but we're curious to see this feature come to phones – and how useful it will be.

LIKELIHOOD RATING
✓✓✓✓✓

We know that Google has had its eye on incognito Maps for several months, and the beta test is almost certainly happening. However, we can't be sure that the feature will receive a full rollout to everyday users. Nefarious reasons aside, we're also struggling to think why incognito will be useful, unless you share your phone with someone else. It can't be privacy related, as Google will still, after all, collect your usage data. It just won't store it on your device.

What's new on Kickstarter
Our favourite new project on the crowdfunding site

Hero
bit.ly/hero485 | **From £154**

The Hero is your best friend in an emergency. Featuring 100% global satellite coverage, this handheld beacon works in all extreme climates, so you're always able to raise the alarm. The 4in tube contains the same technology that powers SOS beacons around the world, including an aeroplane-style Blackbox recorder. Pressing the large SOS button triggers the beacon, and it's set off automatically under certain emergency conditions, such as a sudden impact or being in water for more than a minute. You can support the cause for £1, or pay £154 to get your own Hero.

WEBOMETER

WE LIKE...

↑ Google adds *Friends* Easter eggs
Google is celebrating the 25th anniversary of *Friends* with six special Easter eggs relating to the US sitcom. Search for a character such as Phoebe Buffay or Ross Geller, then click the icon under their name for fun with *Friends*.

↑ Channel 5 content coming to BritBox
ITV has agreed a deal with Viacom, which owns Channel 5 and Comedy Central, to make hundreds of hours of content available on the soon-to-launch BritBox streaming service, in addition to TV shows from the BBC and ITV archives.

WE DON'T LIKE...

↓ Booking.com still misleading customers
Booking.com is "continuing to mislead consumers" with false claims about the availability of hotel rooms, months after regulators ordered the hotel-booking site to cease the practice. *Which* said the site was "still flouting the rules".

↓ Windows Defender broken by update
Microsoft released an update to Windows Defender that caused both quick and full scans to stop working after inspecting only a handful of files. The company said it has now fixed the problem by issuing another update to Defender.

Stay Safe Online

News about the latest threats and advice from security experts

SECURITY ALERT! | What's been bothering us this fortnight

LastPass fixes password-leaking flaw

LastPass has patched a vulnerability that could have led to users exposing the login details they used on the last site they visited. A flaw in the popular password manager's browser extension rendered the service susceptible to cybercriminals launching 'clickjacking' attacks. To fall victim, a LastPass user would have had to enter their details on a website, then visit a compromised site by being tricked into clicking the page link several times.

This vulnerability affected the LastPass web extension for Chrome and Opera, the company confirmed. The bug was discovered by Google's Project Zero research team, which disclosed the vulnerability to LastPass a few weeks before the flaw was made public.
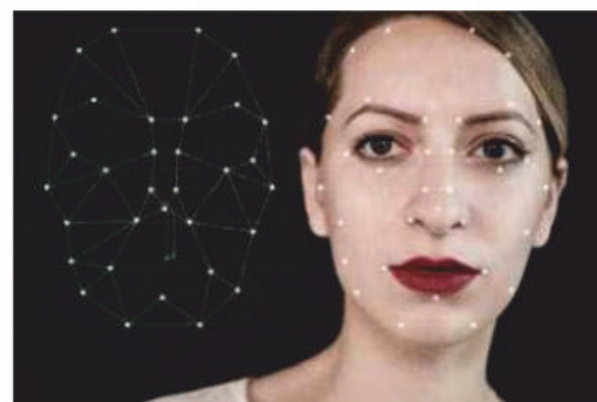
LastPass warned users to be aware of the scale of phishing attacks routinely launched against them, to use both anti-malware and antivirus software and to enable multi-factor authentication on all services where possible.
bit.ly/lastpass485

Security fears over deepfake ransomware

Deepfake ransomware is one of the most feared forms of cyberattack, according to Trend Micro's future threat researchers. The security company believes that this type of ransomware, which involves an attacker taking a selection of images that individuals post online and using them to create an embarassing or scandalous video such as pornography or violent behaviour, could start to spread in years to come.

The researchers believe the threat could be more damaging than current 'sextortion' scams because, with a deepfake, the act doesn't actually have to take place. Few people bother to fact-check, so once the deepfake is out there, the damage is done.

They also voiced their fears that deepfake scams could spur an increase in teenage suicide, so awareness of these types of scams is important so we can remain sceptical if and when they arise.

See our FAQ on page 38 to read more about the worrying rise of deepfake videos.
bit.ly/deepfake485

Security Helpdesk | Your questions answered by security specialists

THIS ISSUE'S EXPERT: David Emm, Principal Security Researcher at Kaspersky Lab (www.kaspersky.co.uk)

Q **How worrying is it that smart TVs share our data with Netflix (bit.ly/smarttv485)?**
Paul Giddings, Facebook

A Many household devices – from kitchen appliances to home-entertainment technology – are becoming inter-connected, so the lack of understanding about how they harvest and manage our personal data is concerning.

The news that smart TVs and digital assistants are leaking sensitive data to third parties such as Netflix and Facebook will come as a great surprise to many consumers and raises pressing questions: how far does this acqusition of private information undermine consumer trust in major technology companies and to what extent does it come at the expense of consumer privacy?

The government must set standards that limit the power of organisations to harvest personal information without the knowledge and consent of their customers, and establish security practices for Internet of Things devices.

It is crucial that we are made aware of the repercussions of having connected devices in our homes, and have a say in whether our data is shared.

> The government must limit the power of organisations to harvest personal data without knowledge and consent

Q **Are biometric login methods more secure than using passwords?**
Gary Jeffries, Facebook

A The combination of security breaches and poor password choice makes them a weak form of authentication. They're also an extra hurdle to jump to gain access to a service, whereas biometrics are more or less frictionless.

However, biometrics are best used to replace usernames, not passwords, and the established advice about using multi-factor authentication to secure your accounts still stands.
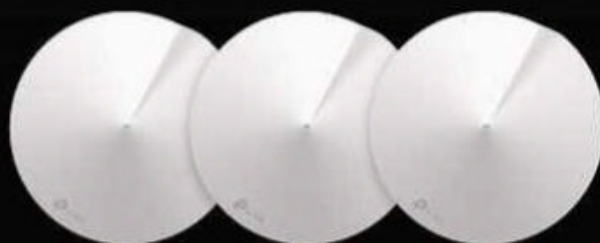
✚ Email us your security questions at **webuser@webuser.co.uk**

Best New Websites

HISTORY

NEW

BBC Archive
bbc.co.uk/archive

The BBC's archive contains more than 10 million hours of content, so it's great to see some of this footage find its way online. This new website from the Beeb, curated by the team behind the Archive's social-media accounts, unearths a host of gems from days gone by. The homepage contains an eclectic selection – just click one to showcase the video in question along with some related content. This generally means more video but there are also articles, quizzes and links to other archives, which makes the site feel like a genuinely comprehensive labour of love, rather than a random database of clips.

Our rating ★★★★★

COLLECTIONS
There are many splendid curated collections of programmes and clips based around a host of themes

ADDITIONAL FUN
Stills from the archives are used to create quizzes that test your knowledge of television history

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MUSIC

NEW
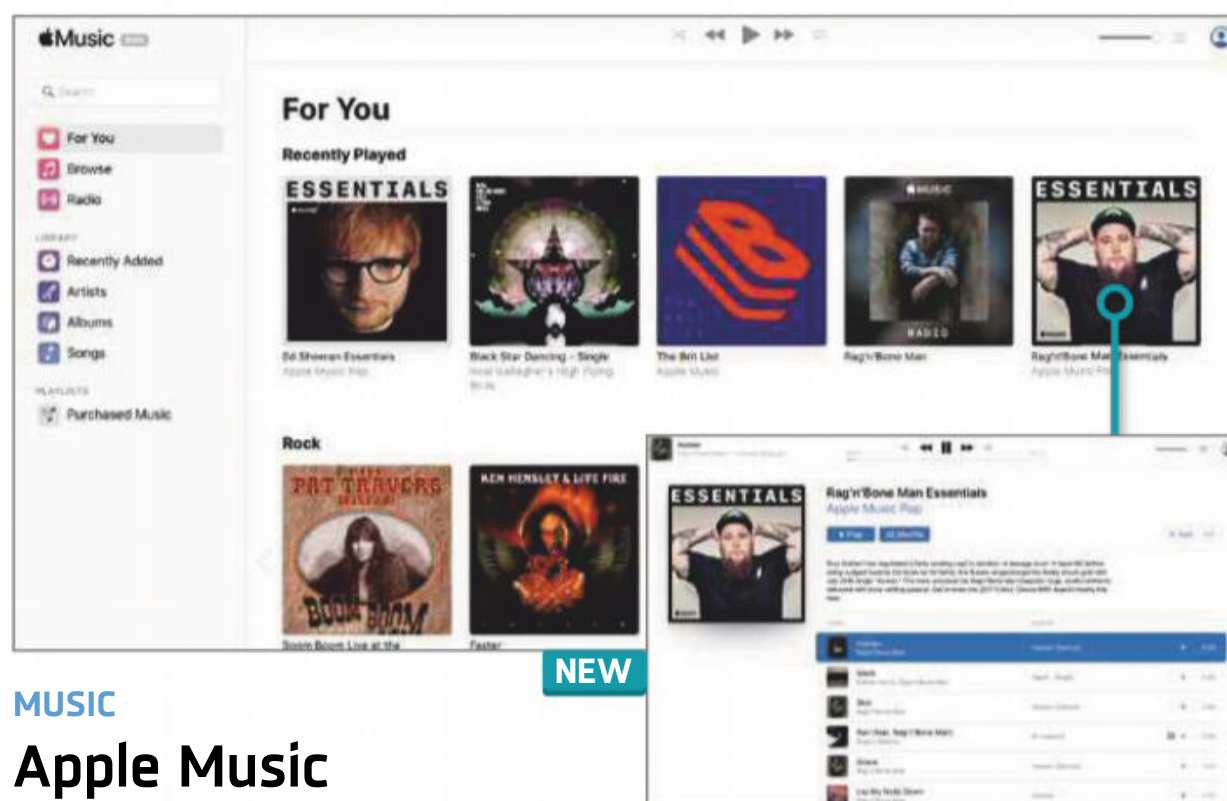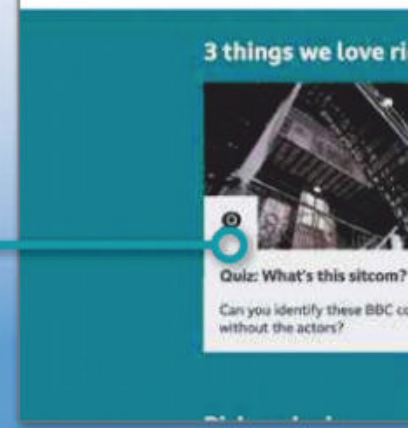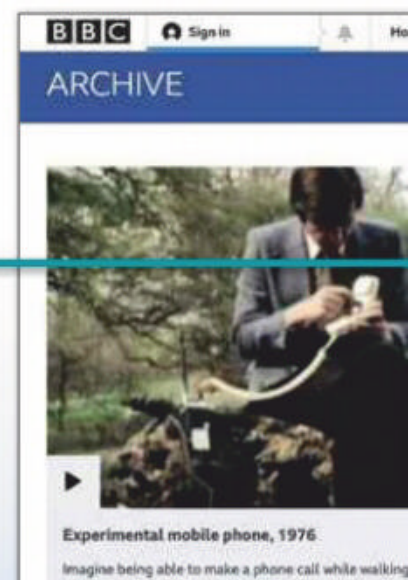
Apple Music
beta.music.apple.com

When Apple Music launched four years ago, listeners had to use iTunes or its own mobile app. Now, as with Spotify and other rivals, you can access the streaming service's entire catalogue via a web-based interface. It lets you listen to your own library of tunes, organised by artists, albums and songs, while making your purchased music available and providing personalised recommendations and streaming radio stations. The intuitive interface mimics the desktop app bundled with macOS Catalina, although Apple's Beats 1 live radio station, smart playlists and video are all currently absent. But it's still a great way to listen to your music on any platform.

Our rating ★★★★★

VIDEO

NEW
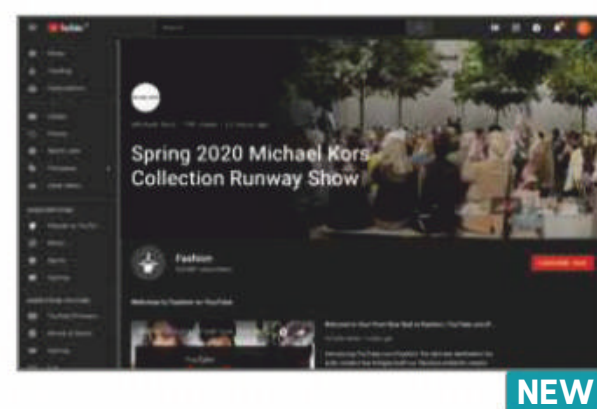
YouTube Fashion
youtube.com/fashion

Following on from the newly created Kids hub (reviewed in our last issue), YouTube continues its trend of grouping together related content by launching a new fashion section. Filled with videos from high-profile YouTube creators, publishers, industry pros and luxury brands, the curated hub is split into sections covering runway shows, tips and tutorials, insider looks at the industry, and profiles of models and celebrities. With its carousel of videos and channel suggestions, both from the community and fashion houses, it's a must for dedicated followers of fashion.

Our rating ★★★★★

Reviews by David Crookes

We review this fortnight's best new and relaunched websites and rate them for content, design and features
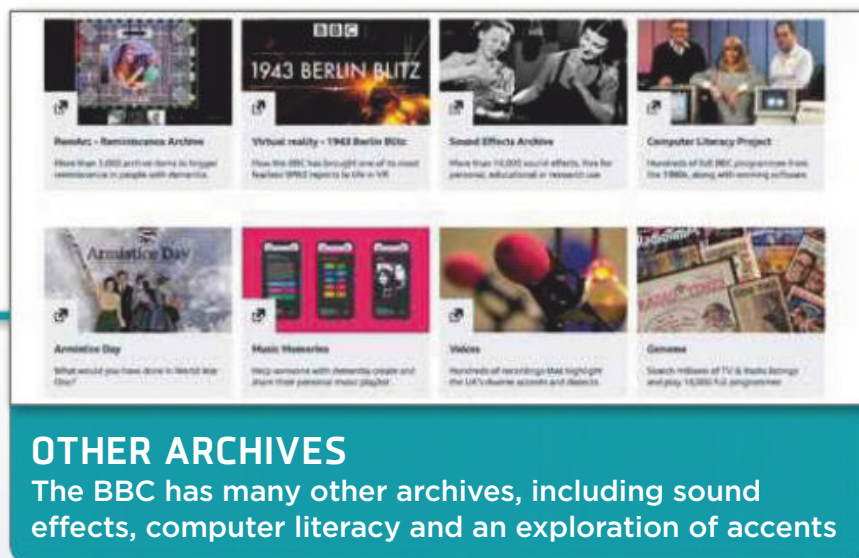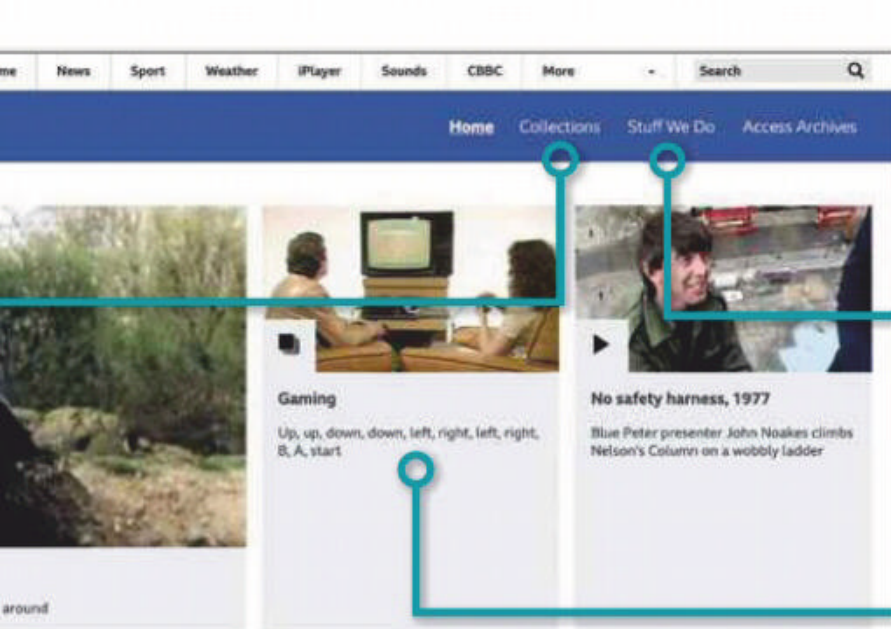
OTHER ARCHIVES
The BBC has many other archives, including sound effects, computer literacy and an exploration of accents
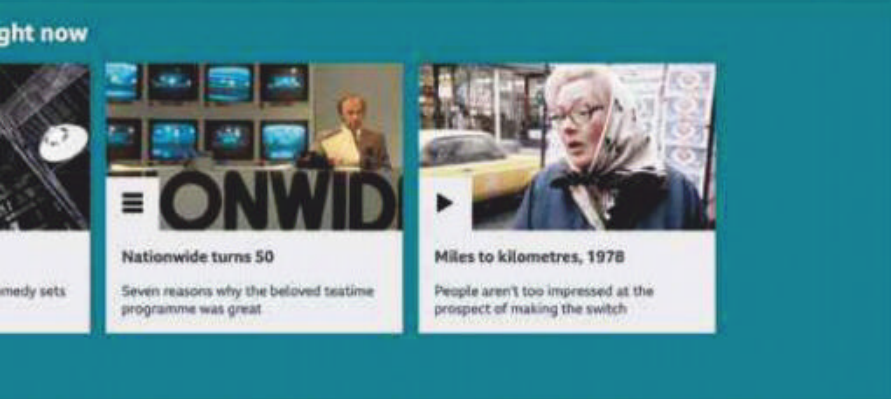
EXPLORE
Each video has a brief explanation, together with its original broadcast date, which you can click for a full programme synopsis

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TRAVEL

RELAUNCH

Classic Lodges
www.classiclodges.co.uk

Classic Lodges' old website was pleasing on the eye but difficult to navigate. Now, the homepage's scattered information has been organised into drop-down menus showing the hotels and locations on offer, with helpful signposting for weddings, meetings and Christmas bookings. Each property gets its own microsite, with large images and links to the services they offer. You can check out reviews and special offers, and short videos of the hotels are promised soon. The booking process could do with an overhaul – it's currently provided by RoomLynx and feels merely functional.

Our rating ★★★★☆
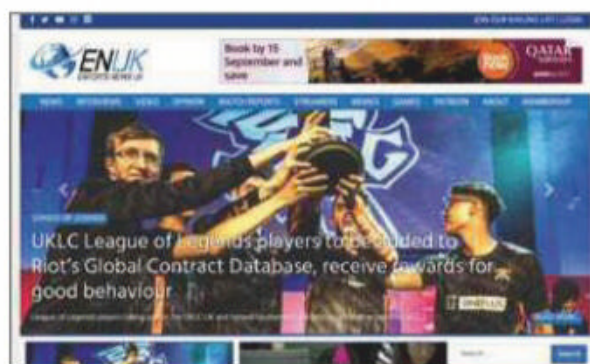
ESPORTS

RELAUNCH

Esports News UK
esports-news.co.uk

The world of esports offers exciting opportunities for videogame players and continues to gain attention. This site has plenty to read and watch across news, interviews, video, opinion, match reports and more, though the images and headlines are a bit drab and fail to convey much excitement – perhaps trying too hard to rank with search engines. Still, the content is well written and there's a strong community feel. The ads aren't intrusive, but members can pay £1 to remove them. Fork out extra and you gain access to other features, such as a personalised social graphic.

Our rating ★★★☆☆

MOTORING

NEW

Ford All-Electric
bit.ly/ford485

Ford's drive to promote all-electric vehicles continues via this new website, designed to build anticipation for a soon-to-be-launched Mustang-inspired SUV. There are as yet no images or info on the car, but you can entertain yourself with the Map Your Trips tool, which lets you plot routes by entering a start point and destination to show the distance, likely travel time, electric charging stations along the journey and whether or not you'll need to use any of them. It's a clean, business-like site that teaches you about charging and the benefits of going electric.

Our rating ★★★★☆

✚ Tell us about your website via webuser@webuser.co.uk
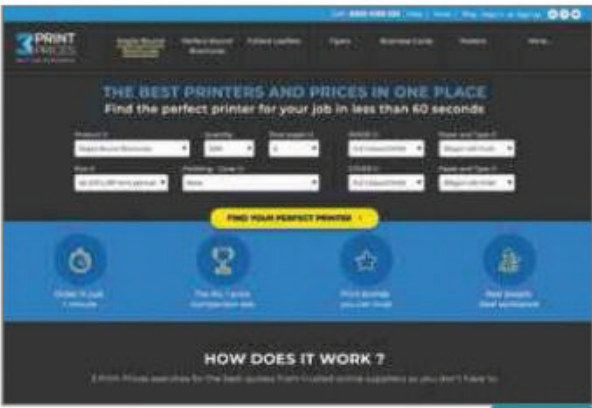
NEW

PRINTING

3 Print Prices

3printprices.com

If you're getting brochures, leaflets, cards and other stationery printed, you'll know how much of a bind it can be to get quotes. This price-comparison website draws on a number of online services – including Mixam, Saxoprint and Helloprint – chosen for their Trustpilot ratings and products offered. Drop-down menus make light work of defining your selections and results appear quickly, complete with delivery dates, comments and ratings. Prices drop if you sign up, which is a tad cynical, and the site asks for an email address before directing you to the relevant sites, but it certainly does its job well.

Our rating ★★★★☆
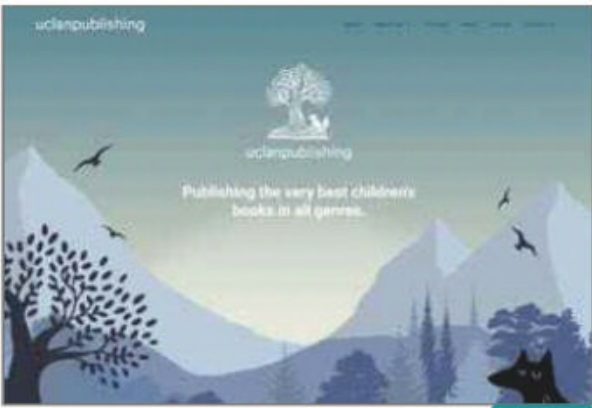
NEW

BOOKS

UCLan Publishing

uclanpublishing.com

This not-for-profit publishing company based at the University of Central Lancashire specialises in children's books. Once you scroll past the company's back story (or select the Books link at the top), you get to learn more about the books themselves, which can be purchased from Amazon or UCLan's online shop. You can also find out more about the university's academic courses in publishing, discover the latest news and check out forthcoming events. We like how the audiobooks are produced and narrated by students, and the beautifully illustrated design is charming and effective.

Our rating ★★★☆☆
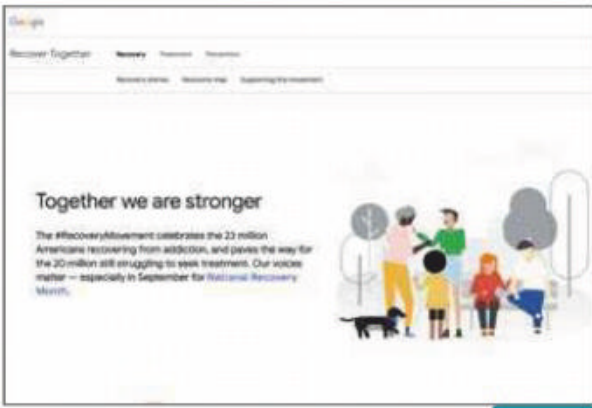
NEW

HEALTH

Recover Together

bit.ly/recover485

Google's latest website is a solid example of how serious issues can be tackled online. Focusing on the US, it supports people recovering from addiction, offering basic information about treatment and prevention as well as local community support. There are inspiring first-hand stories of recovery to watch, suggested terms that should be used to avoid labelling people and an interesting look at alternative treatments for pain. We hope Google will translate the site for UK use at some point because it's the kind of supportive resource that's invaluable to people all over the world.

Our rating ★★★☆☆
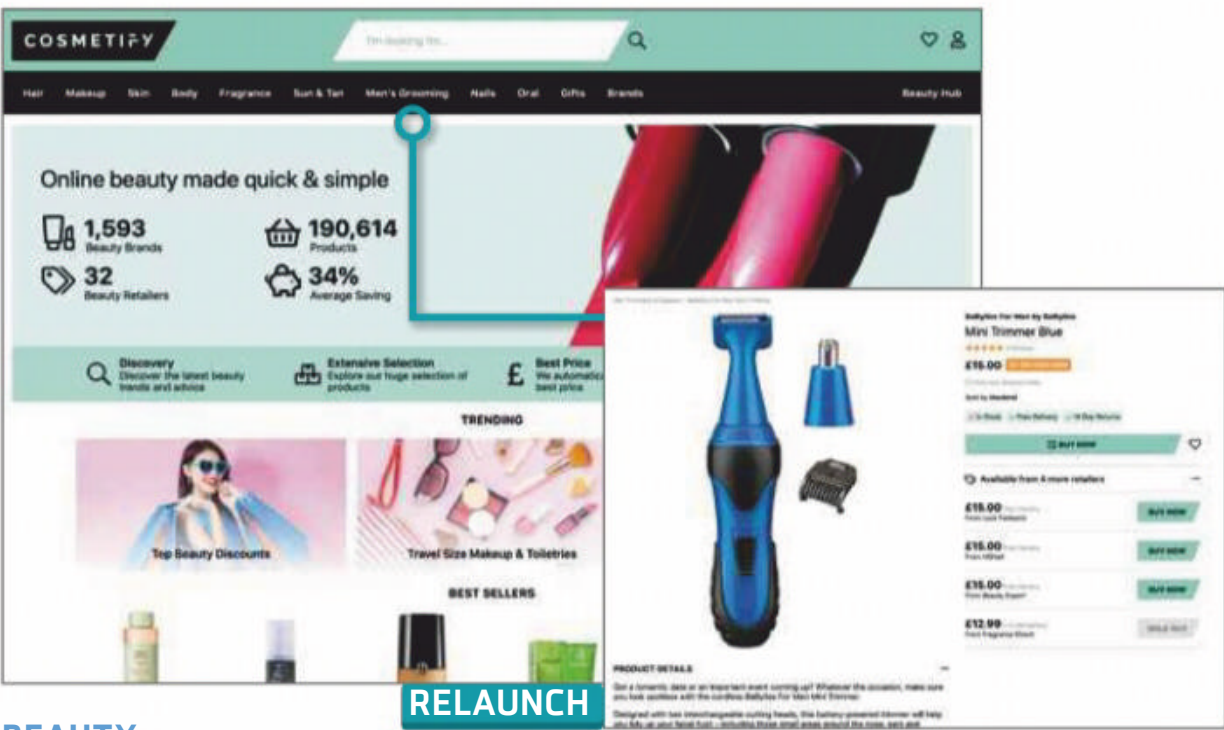
RELAUNCH

BEAUTY

Cosmetify

cosmetify.com

This price-comparison site for beauty products has substance as well as style, including savings that average 34% (or so it's claimed). Finding items is easy – either by searching manually or by browsing through the Trending, Popular and Top Pick categories. The main niggle is that clicking an item opens a product page highlighting the cheapest price from a specific seller. To see its availability from other retailers, you must click to expand a comparison section. That said, you can obtain price alerts, save items and see instant details of stock, delivery and returns, and the regularly updated blog is packed with tips, how-tos and product suggestions.

Our rating ★★★★☆

COULD DO BETTER
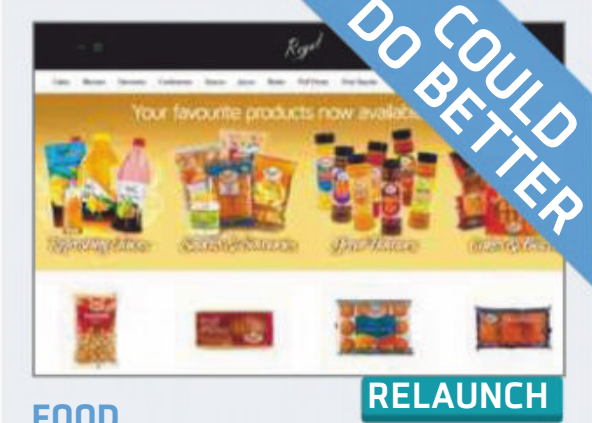
RELAUNCH

FOOD

Regal

shopatregal.com

The Regal bakery has whipped up a new website to sell its products online but, sadly, it's a little undercooked. The straightforward design provides a good look at its food, right down to their ingredients and nutritional information, but it's marred by some technical issues – adding items to the cart seems to take a fraction too long and there are broken links. We couldn't access the About Us, News, Contact Us or Inspiration pages, either, and the FAQ page directed to Terms & Conditions. The section pages work well, though – albeit with basic filtering.

Our rating ★★☆☆☆
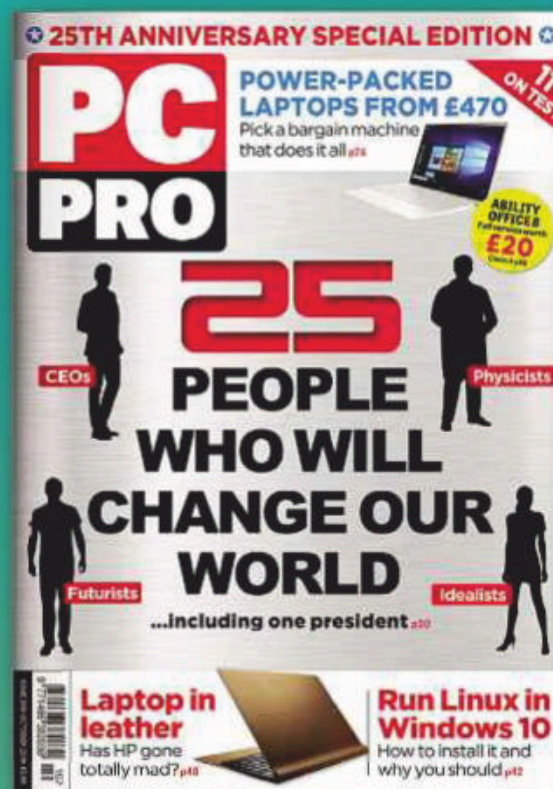
Build a Better Site

Specialist tips, top tools and practical help

Top Tips of the Fortnight

Look out for domain phishing

Easyspace (www.easyspace.com) has alerted us to a phishing email that's doing the rounds, trying to scare people into paying for a fake domain renewal. These messages aren't sophisticated and don't attempt to look like official emails from your web host. If you're in any doubt about a message you've received, contact your host by phone using the number on its website. For more information, check out the Easyspace blog at bit.ly/easy485.

Use new nofollow options

For 15 years or so, Google has encouraged webmasters to add rel="nofollow" to links they don't want to endorse, such as sponsored information where you've received a payment for adding a link. To help it further differentiate links in the future, Google now recognises rel="sponsored", which you can use specifically for links where cash has changed hands, and rel="ugc" (User Generated Content), for links that others might have added to your site, such as in a comment. You don't need to go back and change existing 'nofollow' tags, just start afresh with new links. For more information, visit bit.ly/nofol485.

Deal of the Fortnight

Hover (www.hover.com) has a lot of deals on domain extensions including more than 50% off '.blog', '.club', '.online' and '.site'. Find more at bit.ly/hov485.

Web-building Helpdesk

Q **Is it necessary to have a secure (https) website now that Google calls out regular sites as being potentially unsafe?**

Tim Todd, via email

A From a security point of view, you only need 'https' if you're collecting information from someone, such as asking them to fill out a form or complete a shopping transaction. An SSL certificate automatically encrypts information sent from your visitor's browser to your site, so anyone intercepting the data won't be able to unscramble it. If you don't have forms or shops, your site is perfectly safe without SSL. Annoyingly, however, Google still flags it up as 'Not secure', which may leave you wanting to upgrade anyway.

Andy Shaw, Technical & Reviews Editor
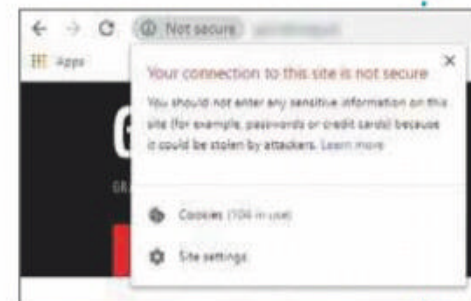
MINI WORKSHOP | Create eye-catching photo cut-outs in Wix
Wix: www.wix.com | ⏱ 10 mins | A Wix website

Wix has added a new automatic cut-out tool to its image-editing software that identifies the subject of an image and makes it quick and easy to remove the background

1 From your Wix page, click the Media button. **1** You can upload a file from your PC, **2** grab one from a social-media or online-storage account, **3** or use an image you've already uploaded. **4** Once the image is ready, click the 'Crop & Edit' link.
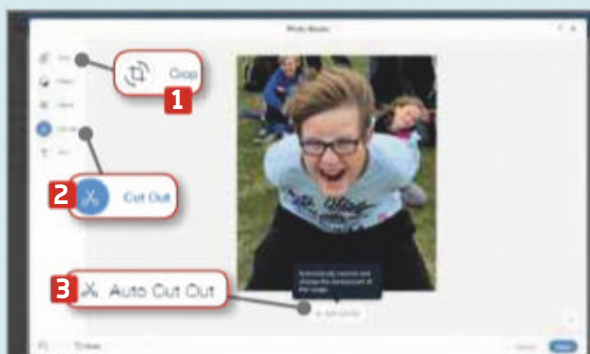
2 Make sure the element you want to cut out is taking up the majority of the image window, to make it easier for the software to recognise your subject. You can do this by dragging in the sides of the photo while in the Crop tab. **1** Click Cut Out, **2** then Auto Cut Out. **3** The software is good at cutting out the background but struggles if it's complex.
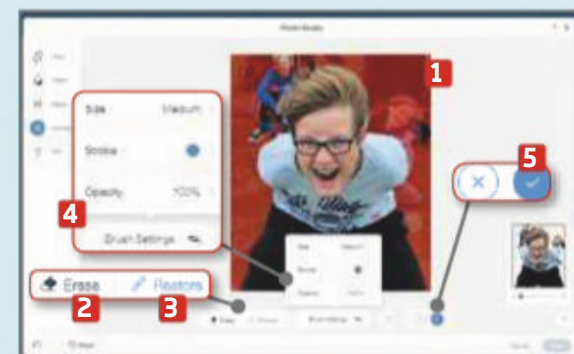
3 The removed sections of the image are masked in red. **1** You can trim any background elements it's missed with the Erase tool **2** and use Restore **3** if it's cut some of your subject. Brush Settings **4** lets you tweak the size and density of the drawing tool. When you're finished, click the tick. **5**

✚Email us your website building questions at webuser@webuser.co.uk

COOLER MASTER Make It Yours.

DEPENDABLE, DYNAMIC, DEVASTATING.

CM310

The CM310 is the mouse of choice for gamers of all levels, providing dependability and reliability without breaking the bank. An optical 10000 adjustable DPI sensor offers gaming-grade performance, while the rubber side grips and weighted body give just the right level of comfort.

RGB 16.7 Million Colors

Pick of the fortnight

Go on the run with *El Camino: A Breaking Bad Movie*

From 11 October

Netflix hasn't said much about *Breaking Bad*'s one-off return – but then it doesn't need to. The web is awash with *El Camino* fan art, theories, wiki pages and What Happens videos by people who haven't seen it yet, although we do have *some* official info – and even a trailer (bit.ly/elcamino485).

   El Camino picks up straight after the show's finale, with Aaron Paul back as crystal-meth chef Jesse Pinkman, now on the run. The one other confirmed cast member is Charles Baker, as Jesse's drug-running pal Skinny Pete. *Breaking Bad*'s true kingpin, writer and director Vince Gilligan, is still at the helm.

   Apart from that, it's all guesswork. Aaron Paul and Bryan Cranston (Walter White) have both hinted that Walt may return – "You never saw a body bag" teased Cranston, while Paul posted a photo of the pair on Instagram – but Netflix is currently keeping shtum. It's also remaining quiet on rumours that Bob Odenkirk will appear as criminal lawyer Saul Goodman.

   If you need a refresher, hurry up: there are five seasons of *Breaking Bad* to get through on Netflix (bit.ly/breakingbad485) before *El Camino* arrives on 11 October. And if you're wondering what El Camino means (as we were), it's Jesse's getaway car.

![N] Meet a superhero's mum in *Raising Dion*

From 4 October

Netflix's latest comic-book adaptation treads familiar ground (superhero origin story) but from a new perspective (his mum). "Imagine Superman, but from Martha Kent's point of view," says Dennis Liu, who wrote the 2015 comic and short film, which you can watch at bit.ly/diontube485. The new nine-part Netflix adaptation is co-produced by Michael B Jordan (*Black Panther*), who plays superboy Dion's late father. You can watch the nine-part series on Netflix at bit.ly/dion485.

![amazon] Hack the final season of Amazon's *Mr Robot*

From 7 October

Three years before his Oscar-winning turn in *Bohemian Rhapsody*, Rami Malek made a splash in cyber-thriller *Mr Robot*, whose final 13 episodes are about to land on Amazon Prime Video.

   Malek plays security techie Elliot Alderson, who's recruited into a hackers' group by digital anarchist Mr Robot, played by Christian Slater (*True Romance*). Season 4 of *Mr Robot* joins all previous seasons on Amazon at bit.ly/robot485.

![NOW TV] Watch Helen Mirren as *Catherine the Great*

From 3 October

Having played Elizabeth I, Elizabeth II, Queen Charlotte, The Snow Queen and Queenie in *Fast & Furious*, Helen Mirren is no stranger to portraying royals. Now, she is starring as the intelligent, politically determined 18th-century Russian Empress (basically, another

We reveal what's new on Netflix, BBC iPlayer, Amazon Prime Video and other streaming services

queen), Catherine the Great.

Sky and HBO's sumptuous four-parter is directed by Philip Martin (*The Crown*) and co-stars Jason Clarke as Catherine's lover Grigory Potemkin. Brit TV faves Gina McKee and Rory Kinnear turn up in supporting roles.

You can enjoy Sky's official trailer at bit.ly/cath485, then watch *Catherine the Great* on Now TV from 3 October with an Entertainment Pass (£7.99/month, bit.ly/nowent485).

## Watch Season 3 of animated comedy *Big Mouth*

From 4 October

Imagine the kids of *South Park* have reached puberty and instead of making fart jokes, they're hallucinating giant hairy hormone monsters that make everything *so embarrassing*. Roles are voiced by US comedy royalty including Nick Kroll, Maya Rudolph and Fred Armisen, plus a parade of guest stars including Jon Hamm and Zachary Quinto.

Netflix has confirmed there will be at least six seasons of *Big Mouth* but for now we're only on Season 3. Ten new episodes arrive on 4 October at bit.ly/bigmouth485, where you can watch all the trailers for free.
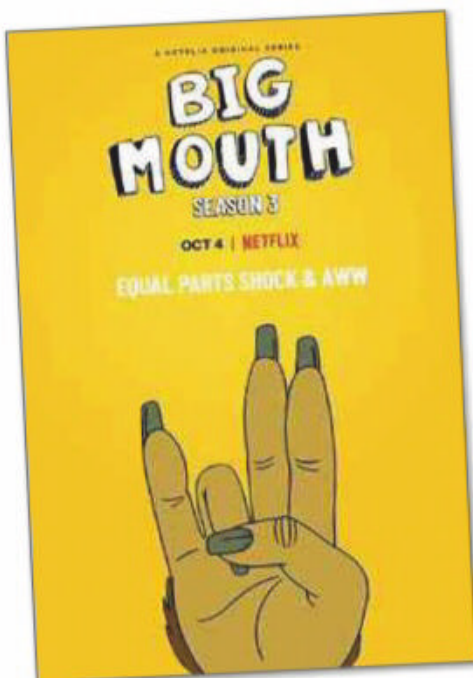
Apple launches Netflix rival

Apple has declared war on Netflix and Amazon by launching its own streaming service and filling it with original shows that feature stars including Jason Momoa, Steve Carell and Jennifer Aniston.

Apple TV+ launches in the UK on 1 November, and costs £4.99 per month to share between up to six family members. Sign up for a seven-day trial and updates at tv.apple.com.

You won't need an Apple device to use Apple TV+. At launch, it'll be accessible via browser, Apple TV app and some Samsung smart TVs, and Apple says it'll be on Roku and Amazon Fire TV "in the future".

The service will be ad-free and include download options as well as streaming, but it will only show original content, at least at first, including alt-history drama *For All Mankind*, TV satire *The Morning Show*, documentary *The Elephant Queen*, post-apocalyptic film *See* and a new Oprah Winfrey show. We'll reveal more next issue.

Strut your stuff for *RuPaul's Drag Race UK*

From 3 October

Queen of all drag queens RuPaul Andre Charles is here to zhuzh up the parts even *Strictly* can't reach, with a judging panel that'd pickle Len Goodman's walnuts. Graham Norton, Alan Carr, Maisie Williams, Andrew Garfield and more are on hand to whittle 10 UK drag queens down to one "Queen of Great Britain" via weekly challenges, such as lip syncing in preposterous heels.

RuPaul's Drag Race has already run for 11 seasons in the US (watch them all on Netflix at bit.ly/dragrace485) and has a huge UK following, so it's about time it paid a visit. Its iPlayer page (bit.ly/draguk485) has lots of content already, including video teasers and intros to the competing drag queens. There's also a Twitter feed (@dragraceukbbc) and a podcast hosted by *I'm a Celebrity* winner Scarlett Moffatt, which you can download via bbc.co.uk/sounds.

In case you missed it...

The fourth and final season of NBC's witty afterlife comedy *The Good Place* has begun streaming on Netflix at bit.ly/goodplace485, where new episodes arrive each Friday. It's a gem of a show, with Ted Danson and Kristen Bell on top form. Seasons 1-3 are still on Netflix, too.

South Park is back to remind Netflix's *Big Mouth* tweens who's boss. Season 23 has just arrived on Now TV at bit.ly/southpark485, where you can also watch Seasons 7-9 and 22. Amazon Prime Video has Seasons 1-21 at bit.ly/amazpark485.

Amazon's StarzPlay channel is now showing Season 3 of the well-reviewed Stephen King adaptation *Mr Mercedes*. Watch the official trailer on YouTube at bit.ly/mercedes485, and find out more about StarzPlay – which costs £4.99 per month plus Prime, after a 7-day trial (bit.ly/starzplay485).

➕ Tell us your favourite new TV at twitter.com/webusermagazine

Group Test

We test and compare the latest products

Mice and keyboards

Treat yourself to some new peripherals – we've reviewed 14 mice and keyboards and chosen our top three of each

Given the huge amount of time we spend on our computers – hours of clicking around web pages and typing information – you'd think that using the best possible mouse and keyboard would be a priority.

If you're still using the cheap, bundled peripherals that your PC's manufacturer chucked in the box before it left the factory, you're missing out. Modern mice are ergonomically designed and ultra-configurable, while the latest keyboards are resplendent with multicoloured lights and keys designed to make typing a pleasure.

HOW WE TESTED

There are no tools to measure the performance of a mouse or a keyboard, so we tested each one by using it for an extended period of time. To make our recommendations, we considered each device's range of features, and how easy and comfortable it is to use, then balanced this against the best price we could find online.

MICE / **KEYBOARDS**

	Cooler Master MM830	Rapoo MT550	Contour Unimouse	Asus ROG Strix Flare	Roccat Vulcan 120 Aimo	Razer BlackWidow Light	
WEBSITE	www.cooler master.com	www.rapoo.com	www.contour design.com	www.asus.com	en.roccat.org	www.razer.com	**WEBSITE**
PRICE	£54.89	£29.99	£89.99	£119.99	£109.99	£94.49	**PRICE**
BUY FROM	Amazon: bit.ly/cool485	Amazon: bit.ly/rapoo485	Amazon: bit.ly/cont485	Game: bit.ly/asus485	Amazon: bit.ly/roc485	Amazon: bit.ly/raze485	**BUY FROM**
SENSOR TYPE	Optical	Optical	Optical	Full-size	Full-size	Tenkeyless	**FORM FACTOR**
MAXIMUM DPI	24,000dpi	1,600dpi	2,800dpi	Mechanical	Mechanical	Mechanical	**SWITCH TYPE**
PROGRAMMABLE	✓	✗	✓	✓ (function keys)	✓	✓ (function keys)	**PROGRAMMABLE**
CONNECTION	USB 2	24GHz (requires USB), Bluetooth 4.0, Bluetooth 3.0	24GHz (requires USB), USB 2	1 x USB 2	✗	✗	**USB PORTS**
POWER SOURCE	Wired	2 x AA batteries	Rechargeable 470mAh battery	RGB	RGB	✓	**BACKLIGHTING**
DIMENSIONS	130 x 82 x 43mm	103 x 69 x 43mm	119 x 76 x 56mm	454 x 155 x 31mm	462 x 235 x 32mm	355 x 127 x 13mm	**DIMENSIONS**
WARRANTY	Two-years return-to-base	One-year return-to-base	Two-years repair-and-replace	One-year return-to-base	Two-years return-to-base	Two-years return-to-base	**WARRANTY**

Cooler Master MM830 | £54.89 | Buy from Amazon: bit.ly/cool485

FEATURES ★★★★★ PERFORMANCE ★★★★★ EASE OF USE ★★★★☆ VALUE FOR MONEY ★★★★★

VERDICT
★★★★★

The Cooler Master MM830 packs a lot of unusual hardware into what at first resembles a straightforward gaming mouse. Instead of conventional side buttons, it has a gamepad-style, vertically oriented D-pad you can operate with your thumb. This is a novel idea that provides a lot of extra options, but we found we had to stretch to reach the buttons because they were uncomfortably far apart. We also had to apply significant pressure from the opposite side to properly click the D-pad's buttons.

Built for right-handers, the mouse has a protruding thumb rest and a flared right edge to provide support, which makes it comfortable to use. Although the shell and main buttons are made from plastic, the mouse has a substantial, weighty feel.

You can switch between four sensor resolution settings, controlled via a button on the mouse itself, so you can adapt the responsiveness of the sensor as you're using the mouse without having to hunt down the setting in its software. Each setting makes the mouse's LED lights glow in a different colour to make them easier to tell apart.

Of all the models we tested, this mouse had the highest sensitivity setting: a dizzying 24,000dpi. In practice, this makes the cursor absurdly sensitive and prone to flying off the screen at the mildest of movements. Still, the option is there for anyone who wants it, as is the possibility of setting it as low as 200dpi or anywhere in between.

Cooler Master's Portal software is packed with customisation options. You can record macros, remap any button (except left-click) with shortcuts and media controls, change the double-click speed and much more.

WebUser GOLD AWARD

The Cooler Master MM830's shape and thumb-rest make it comfortable to use, and it's eqipped with a wealth of customisation options. Some of the features are a bit gimmicky, which may account for its higher than average price, but this device has set its ambitions beyond its rivals and largely succeeds, which we think makes it worth the extra money.

Rapoo MT550 | £29.99 | Buy from Amazon: bit.ly/rapoo485

FEATURES ★★★★☆ PERFORMANCE ★★★★☆
EASE OF USE ★★★★★ VALUE FOR MONEY ★★★★★

WebUser SILVER AWARD

Wireless mice are a mixed blessing. On the plus side, there are no cables to tangle and they're more portable. However, they are also prone to running out of battery power at inconvenient moments and aren't as responsive as wired mice.

The Rapoo MT550 is a wireless mouse with a soft-touch finish that's easy on the hand. It's small enough to carry around but still feels solid and substantial when moving it around the desk.

You can easily use it across multiple PCs, either by transferring its USB receiver or connecting up to three devices via Bluetooth. It can control all four devices at once, flipping between them with a switch on the bottom.

There's no software for this mouse so customisation is limited to Windows basics, though there's a switch at the top for adjusting the sensitivity. Unlike our Gold Award winner, however, it doesn't have a convenient indicator light.

VERDICT ★★★★★

If you're looking for a comfortable, reasonably priced wireless mouse, this is just the ticket. It doesn't have the extra features of the Cooler Master but unless you're using it for gaming, you're unlikely to miss them.

Contour Unimouse | £89.99 | Buy from Amazon: bit.ly/cont485

FEATURES ★★★★★ PERFORMANCE ★★★★★
EASE OF USE ★★★☆☆ VALUE FOR MONEY ★★★★☆

WebUser BRONZE AWARD

If you suffer from RSI (repetitive strain injury) or want to ensure against it, the Contour Unimouse is the kind of ergonomic device that can help. It's a vertical mouse, which means that, while it still has a sensor on the base, the buttons and scroll wheel are on the side, so your palm is kept in a more vertical position. This puts less strain on the bones and muscles in your wrist and forearm than a regular mouse.

The Contour Unimouse is no ordinary vertical mouse. This model has a hinge between the base and the top, so you can adjust it between angles of 35-70 degrees, allowing you to choose the most comfortable position and adapt with the mouse as you get used to it.

All the basics are present and correct, including six programmable buttons and a scroll wheel, and you can use it in both wired and wireless mode, though it still uses a USB port because it needs its own Bluetooth receiver.

VERDICT ★★★★☆

If you're concerned about RSI, this is a comfortable mouse that allows your hand to operate in a more natural position. Its hinged design lets you fine-tune the position of your wrist, and it can be used both wired and wirelessly.

ALSO REVIEWED Asus ROG Gladius (£30 | ★★★★☆), Asus TUF Gaming M5 (£32 | ★★★☆☆), Microsoft Classic Intellimouse (£27 | ★★★★☆), Sengu SG-MU1055-N (£14 | ★★★☆☆)
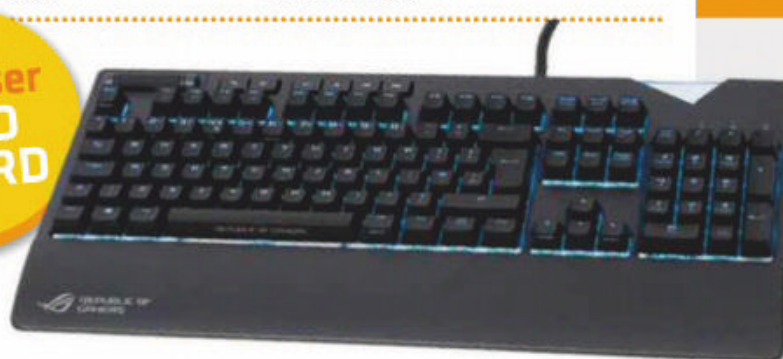

Asus ROG Strix Flare | £119.99 | Buy from Game: bit.ly/asus485

FEATURES ★★★★★ PERFORMANCE ★★★★★ EASE OF USE ★★★★☆ VALUE FOR MONEY ★★★★☆

Asus's ROG Strix Flare has plenty of visual pizzazz. It's a full-size keyboard with backlights under every key and emits a glow from its sides. But beneath the flashy exterior lies a practical, usable keyboard. Each key hides a Cherry MX Red switch, popular with gamers for the smooth, click-less feel, which gives each keypress a robust responsiveness. There's another version that uses Cherry's MX Brown switches, which are more suited to typists, but it's more expensive, costing around £160.

The main keys are laid out in a standard formation, with a set of media controls you can use to play, pause, skip and change the volume without reaching for your mouse. There's also a button for locking Windows and another that toggles through the various different lighting options. The keyboard lets you select from nine different effects, ranging from gentle pulses to a trippy 'rain drop' animation. Alternatively, you can just make everything glow in the colour of your choice.

For even more options, download and install the ROG Armoury tool. This provides greater control over the colours and lets you set up to five separate lighting profiles. It also offers powerful customisations for functions, so you can set individual key inputs to perform a Windows shortcut or launch an application, record and set macros, and disable keys. You can create preset profiles with different settings and call them up straight from the keyboard.

Though it's largely made of plastic, the Flare's bodywork has a nicely finished smooth texture, with a brushed aluminium effect on the right side of a wrist rest which, despite not being padded, is comfortable to use. The only downside is that it takes up two USB ports, although it has a USB pass-through at the rear.

WebUser GOLD AWARD

VERDICT ★★★★★

This may seem like a lot of money to pay for a keyboard, but the Asus ROG Strix Flare is sturdy, great to use, even better to look at and offers a ton of customisation options. If the fancy lighting system isn't enough to wow you, the level of control offered – whether via the keyboard itself or using its downloadable software – is sure to impress.

Roccat Vulcan 120 Aimo | £109.99 | Buy from Amazon: bit.ly/roc485

FEATURES ★★★★☆ PERFORMANCE ★★★★★
EASE OF USE ★★★★☆ VALUE FOR MONEY ★★★☆☆

WebUser SILVER AWARD

The Roccat Vulcan 120 Aimo takes a novel approach to keyboard design by making each individual key look like a hovering tile. It's dainty and light to type on, and the response feels crisp and lively, while the unconventional key design shows off more of the under-switch lighting and makes the entire keyboard easier than most to keep clean.

Plug in the keyboard using its single USB connection and you can immediately start typing while bathed in a red glow. To control the lights further, you have to install Roccat's Swarm software, which instantly switches to a wavy rainbow effect. You can then configure the lights to your preference and set up or switch between four profiles.

The Vulcan's switches are versatile and appear to combine the best of Cherry's various different options to create a comfortable environment, both for typing and gaming. However, the wrist rest is disappointing.

VERDICT ★★★★☆

Roccat's colourful lights and distinctive thin keys cut quite a dash but, as with the Asus model, good looks don't come cheap. However, it's better for typing because its more versatile switches are better suited to the task.

Razer BlackWidow Light | £94.49 | Buy from Amazon: bit.ly/raze485n

FEATURES ★★★☆☆ PERFORMANCE ★★★★☆
EASE OF USE ★★★★★ VALUE FOR MONEY ★★★★☆

WebUser BRONZE AWARD

The BlackWidow Light is gaming hardware company Razer's first attempt at something more suited to an office. The result is a slim, compact keyboard that ditches the number pad to save desk space, and provides subtle white backlighting (except for the Caps Lock key, which goes green when it's activated – a welcome distinction for some of us clumsier typists!). There are 19 levels of brightness to choose from, or you can switch the lights off completely.

The switches are Razer's own and are mostly quiet, as long as you're not bashing the keys too hard. A light bumping sensation lets you know that a key has been sufficiently pressed.

However, without all the frills and fancy looks of the other keyboards, this isn't such good value for money. Colourful lights may be frippery, but this keyboard costs as much as its rivals, and has no pass-through USB or extra media keys.

VERDICT ★★★★☆

The BlackWidow Light is a good-quality upgrade from a standard office keyboard, providing a compact, sturdy base, simple but effective backlighting and quiet mechanical switches that are a joy to type on. On the downside, it's expensive.

ALSO REVIEWED Asus TUF Gaming K7 (£97 | ★★★★☆), Cooler Master SK650 (£140 | ★★★☆☆), Raspberry Pi Keyboard (£16 | ★★★☆☆), Thermaltake X1 RGB (£108 | ★★★★☆)

JOIN THE PRO SQUAD!

RED EAGLE™

G-MASTER™
#MONITORS 4 GAMERS
by *iiyama*

GB2560HSU¹ | GB2760HSU¹ | GB2760QSU²

Panel	TN LED / 1920x1080¹, TN LED / 2560x1440²
Response time	1 ms, 144Hz, FreeSync™
Features	OverDrive, Black Tuner, Blue Light Reducer, Predefined and Custom Gaming Modes
Inputs	DVI-D², HDMI, DisplayPort, USB
Audio	speakers and headphone connector
Height adjustment	13 cm
Design	edge-to-edge, height adjustable stand with PIVOT

gmaster.iiyama.com

Web User's Best Buys

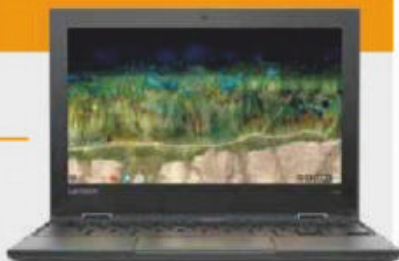## Web User and its sister titles test over 2,500 products every year

HARDWARE, SOFTWARE & SERVICES

CHROMEBOOK

Lenovo Chromebook 500e

£349.98 from **bit.ly/leno483**
Tested: Issue 483

This versatile and rugged convertible Chromebook has been designed for the classroom but would be just as useful at home and on the move. It's tough enough to survive a few knocks and you can use a stylus on its touchscreen.

KEY SPECS

Intel Celeron N3450 processor ▪ 32GB storage ▪ 4GB memory ▪ 11.6in touchscreen ▪ 1,366 x 768 pixels resolution ▪ Intel UHD Graphics 500 card ▪ 2 x USB-C, 2 x USB 3 ports ▪ 290 x 204 x 20.4mm ▪ 1.31kg ▪ 1-year collect-and-return

SECURITY CAMERA

Google Nest Cam IQ Outdoor

£279 from **bit.ly/nest481**
Tested: Issue 481

This is the best-quality external security camera we've tested, capable of capturing clear, sharp video footage. It takes a bit of setting up and is expensive, but it's worth paying for if you're serious about your home security.

KEY SPECS

Outdoor camera ▪ 1080p video resolution ▪ 130-degree lens ▪ Motion and audio detection ▪ Night vision ▪ 802.11ac Wi-Fi ▪ 128 x 93 x 93mm ▪ Three hours of free cloud storage ▪ One-year return-to-base warranty

INKJET PRINTER

Canon Pixma TS6250

£114.36 from **bit.ly/cango479**
Tested: Issue 479

This multifunction printer looks smart and is easy to use, whether you're printing from a PC, mobile device or its own touchscreen. With great results and acceptable running costs, it's easy to recommend.

KEY SPECS

4,800 x 1,200dpi print resolution ▪ 2,400 x 1,200dpi scan resolution ▪ 200-sheet A4 paper capacity ▪ Double-sided printing ▪ 7.5in colour touchscreen ▪ 802.11n Wi-Fi ▪ 372 x 315 x 139mm ▪ 6.2kg ▪ One-year return-to-base warranty

MINI PC

ASRock DeskMini 310

£668.70 from **bit.ly/asro477**
Tested: Issue 477

The performance of this diminutive PC comes remarkably close to a full-size system, once you've paid for and installed its components. It's compact, quiet and runs Windows well.

KEY SPECS

Intel Core i5-8400 processor ▪ 250GB SSD ▪ 16GB memory ▪ Intel UHD Graphics 630 card ▪ 1 x USB Type-C, 2 x USB 3.1, 1 x USB 2 ports ▪ 802.11ac Wi-Fi, Gigabit Ethernet ▪ 158 x 155 x 80mm ▪ 1.87kg ▪ One-year return-to-base warranty

GRAPHICS CARD

Asus ROG Strix RX 570 OC

£189.99 from **bit.ly/asusbox475**
Tested: Issue 475

Asus's twin-fan graphics card gets the balance perfectly right. It comfortably plays games that are designed to push a graphics-processing unit to the limit, and for the price it kicks cards with similar specifications right out of the game.

KEY SPECS
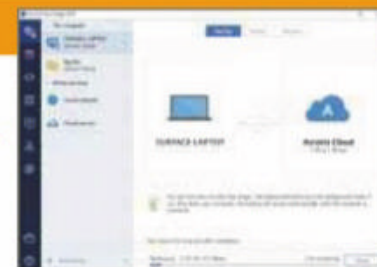
AMD Radeon RX 570 graphics processor ▪ 2,048 GPU cores ▪ 1,300MHz clock speed ▪ 4GB memory ▪ 1 x DisplayPort, 2 x DVI, 1 x HDMI outputs ▪ 200W power ▪ 240mm ▪ Two-year repair-and-replace warranty

BACKUP SOFTWARE

Acronis True Image 2019

£35 from **bit.ly/acro473**
Tested: Issue 473

Acronis True Image is a versatile backup tool that does everything from cloud storage to disaster recovery. It's not cheap compared with rival software, but it's flexible and simple to control, and should cover all your backup needs.

KEY FEATURES

Windows, macOS, Android, iOS ▪ Local backup ▪ Disc-image backup ▪ Restore from the web ▪ Create disaster recovery ▪ AES-256 encryption ▪ Continuous, daily, weekly or monthly backups ▪ Multiple backup sets

All prices correct at time of review

Gold Award winners

The best from our software tests

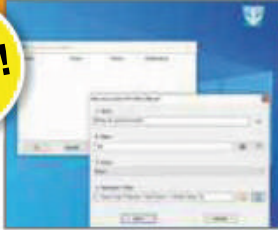### FILE ORGANISER

DropIt

NEW!

Free from **www.dropitproject.com**
Tested: Issue 484
DropIt's great innovation is to place a
floating arrow icon on your desktop. When you have a file
that needs sorting, just drag it over to the icon and drop it.

ANDROID DATA SHREDDER

Shredder

Free from **bit.ly/shredder483**
Tested: Issue 483
Shredder is an excellent, easy-to-use tool that
deletes sensitive and unwanted files
permanently, so they can never be recovered.
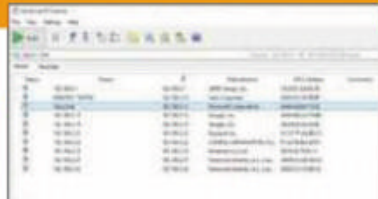
WI-FI MONITOR

Advanced IP Scanner

Free from
www.advanced-ip-scanner.com
Tested: Issue 482
This handy tool identifies all devices connected to your Wi-Fi
network. There's a portable version available, too.

BACKUP SOFTWARE

EaseUS Todo Backup Free

Free from **bit.ly/ease481**
Tested: Issue 481
The free version of EaseUS Todo Backup is more than
enough to keep your PC backed up for years to come. It's
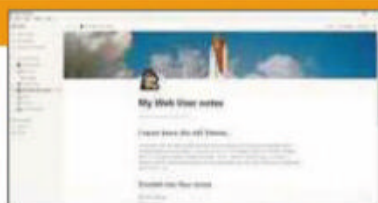missing a few tools but nothing that hampers its usefulness.

NOTE-TAKING TOOL

Notion

Free from **www.notion.so**
Tested: Issue 480
Notion lets you keep and organise all your inspired thoughts,
no matter what device you're using. It has every feature
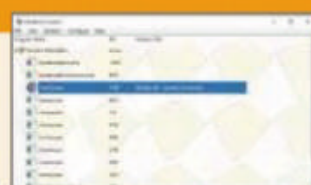you'll ever need and it's free for personal use.

SANDBOX SOFTWARE

Sandboxie

Free from **www.sandboxie.com**
Tested: Issue 479
If you can get past the somewhat dated interface, Sandboxie
is the most thorough sandboxing tool we've seen for running
programs in a fenced-off environment.

WebUser
BACK ISSUES DISC 2018

WebUser Issues 440 - 465
All 26 issues of 2018

2018 Back Issues Disc

Our **2018 Back Issues Disc** containing all 26 issues from last year is now on sale from Amazon

For more information, visit
bit.ly/wudisc18
or search for 'webuser disc'

You can still buy our 2014-2017 Back Issues Discs, search for 'webuser disc' on Amazon

WebUser Issues 414 - 439
All 26 issues of 2017

2014 Bac 2015 Bac 2016 Bac 2017 Back Issues Disc

Best Free Software

Sandboxie

www.sandboxie.com
Min requirements: Windows 7/8.x/10
File size: 3.2MB

A previous *Web User* Gold Award winner, Sandboxie has always offered a feature-limited free version but, as of its latest release (5.31.4), the full program is now entirely free.

This extremely handy tool prevents software from making any changes to – or taking control of – your operating system by containing programs in a secure, disposable section (a sandbox) of your computer's hard drive. Software running in this sandbox is allowed to read data from the drive, but it can't write data outside of the sandbox or make any changes to Windows. This makes it ideal for testing programs you're not sure about, or have no
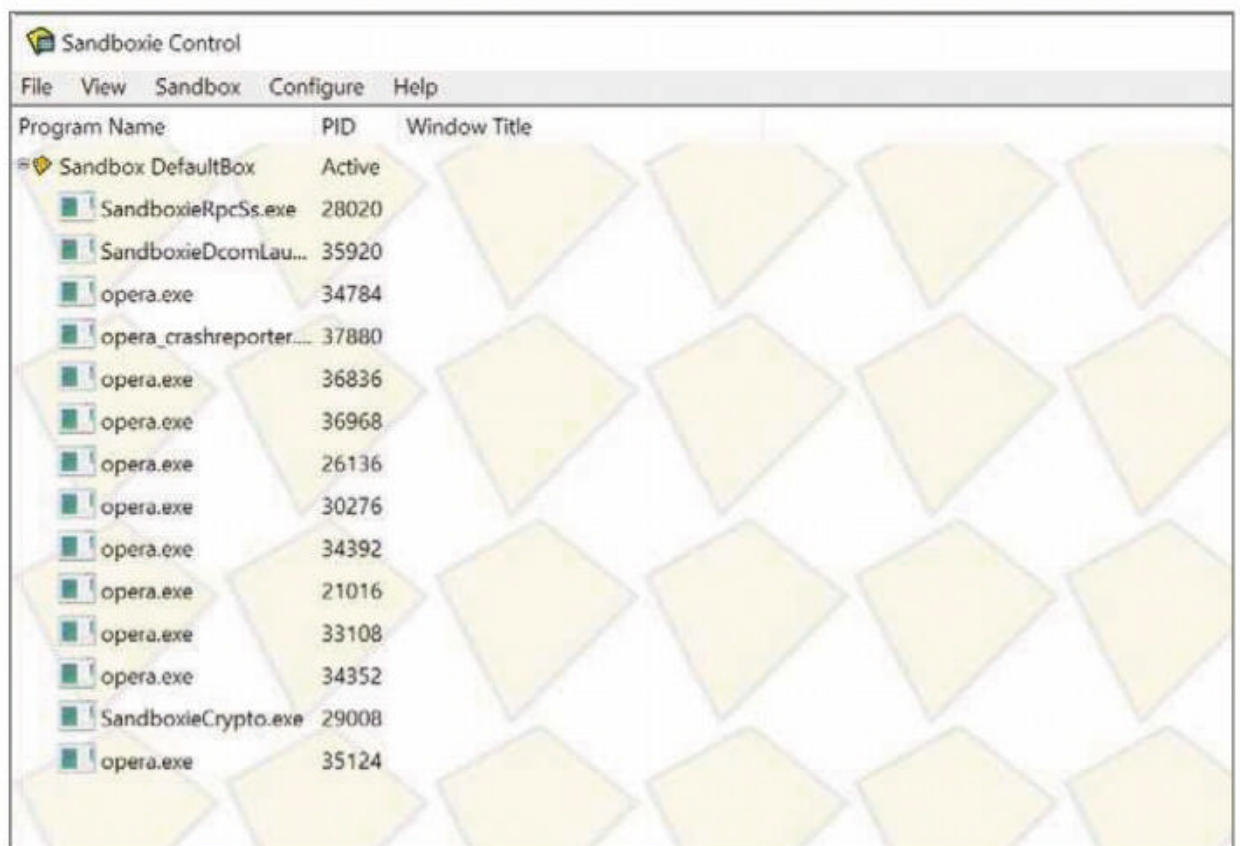
long-term need for. When you're done trying out your software, just empty the sandbox to remove all trace of it.

If a download contains malware, you don't need to worry because it won't be able to spread beyond the sandbox and can't harm your computer in any way. Emptying the sandbox will dispose of it for good.

The new free version contains all the previously paid-for features, such as support for multiple sandboxes and

the ability to force specific programs to run sandboxed. Since there's no longer a paid version, the free edition won't nag you to upgrade.

Sandboxie is a great alternative to Windows Sandbox, which Microsoft introduced with the Windows 10 May 2019 Update (version 1903). Although they work in similar ways, the Windows Sandbox only runs on Windows 10 Pro and isn't available in the Home edition or earlier versions of Windows.


MINI WORKSHOP | Get started with Sandboxie
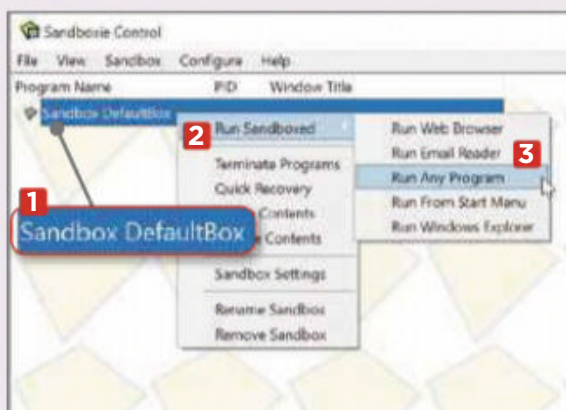
1 Run Sandboxie to open the Control window. If it doesn't appear, right-click the system-tray icon and select Show Window. Right-click Sandbox DefaultBox **1** and open the Run Sandboxed menu. **2** From here, you can launch a sandboxed version of your default web browser, email reader, any program, any item from the Start menu or Windows Explorer. **3**
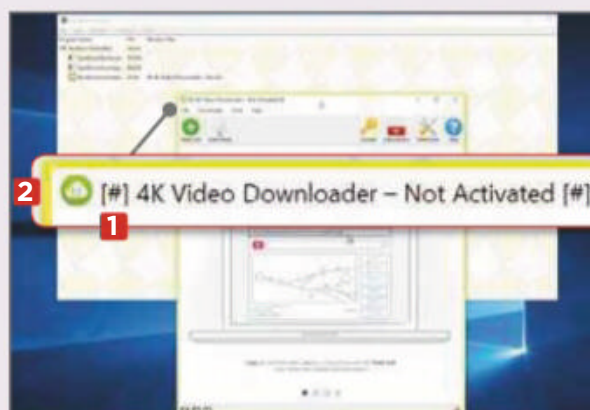
2 Alternatively, just drag a program shortcut to the window to launch it in a sandbox. You'll be asked to select a sandbox to run it in. To indicate that a program is being contained, its title bar will show a hash (#) sign **1** and a yellow border will appear **2** when you move your mouse to the top of its window.
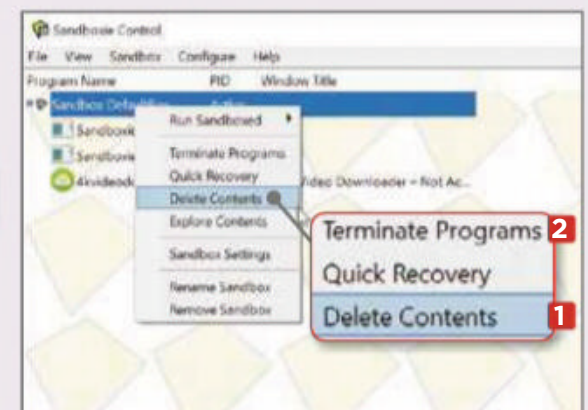
3 Use the sandboxed software just as you would normally. When you've finished with the program, close it and it will vanish from the sandbox. Alternatively, right-click the sandbox name and select Delete Contents. **1** This will clear out everything, including any accrued junk. You can also Terminate Programs directly from the menu. **2**

This fortnight's top new software downloads to help you make the most of your PC, and they're all FREE
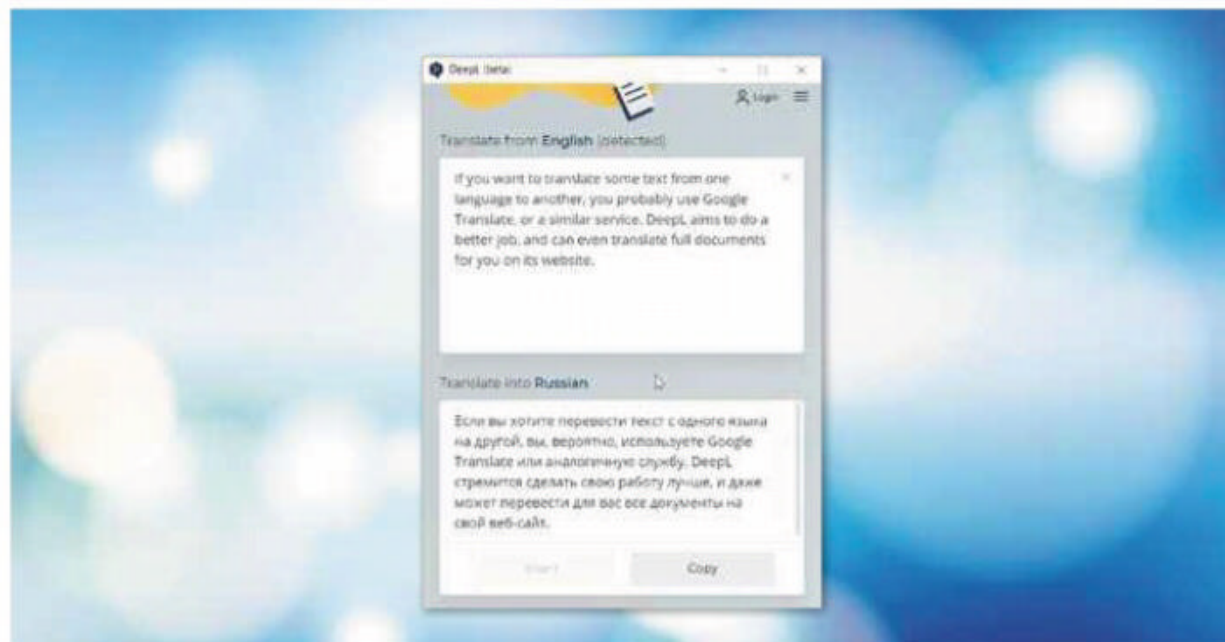
TRANSLATOR
DeepL
www.deepl.com/en/app/
Min requirements: Windows 7/8.x/10 or macOS **File size:** 134MB

If you want to translate some text from one language to another, you're likely to use Google Translate or a similar service. DeepL aims to do a better job and can even translate full documents for you on its website. Its new apps – in beta, for now – are more basic than the website but they can quickly translate anything you type or paste into them. You can choose from eight foreign languages – French, German, Spanish, Italian, Potuguese, Polish, Danish and Russian.

Sharp Keys
bit.ly/skeys485
File size: 388KB
Sharp Keys is a popular open-source program that lets you remap certain keys to change their functionality. This app version lets you map new keys and manage existing ones, although it can't map multiple key presses to a single key. You need to run it with Administrative Privileges for it to work. To do this, right-click the program's entry under Start, then select More and choose 'Run as Administrator'.
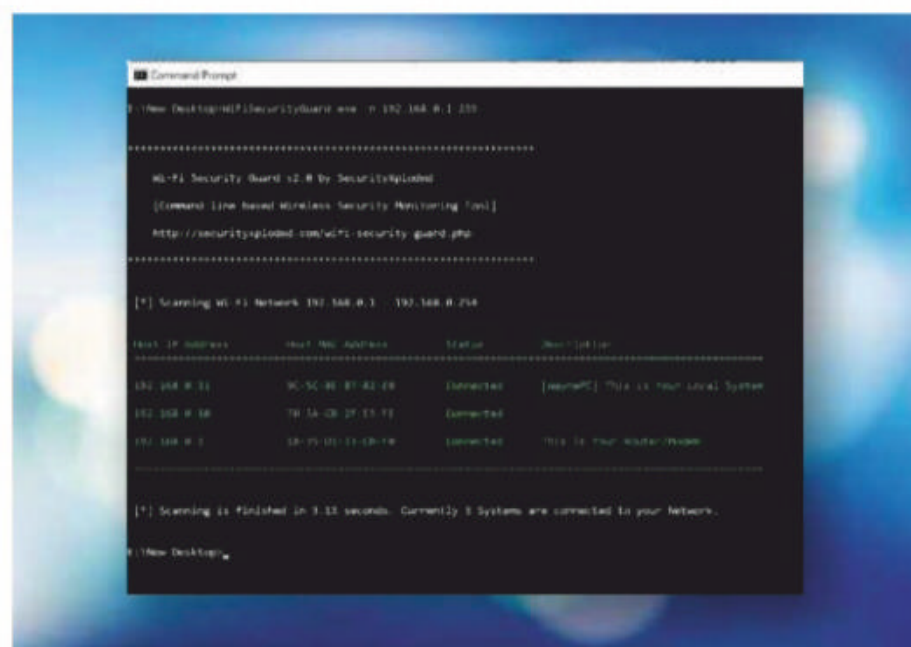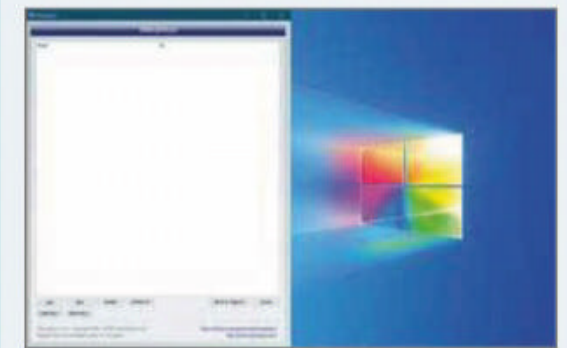

NETWORK TOOL
Wi-Fi Security Guard 3
bit.ly/wifisg485
Min requirements: Windows 7/8.x/10 **File size:** 264KB

Wi-Fi Security Guard is a free command-line tool that monitors and protects your wireless network from unauthorised access. It's very easy to use – open the Windows Command Prompt (CMD) and run it from there (you need to navigate to the folder containing the WiFiSecurityGuard.exe). Run the program directly in Windows to see examples of the sort of commands that you can use. This update has improved features for monitoring devices connected to your router.
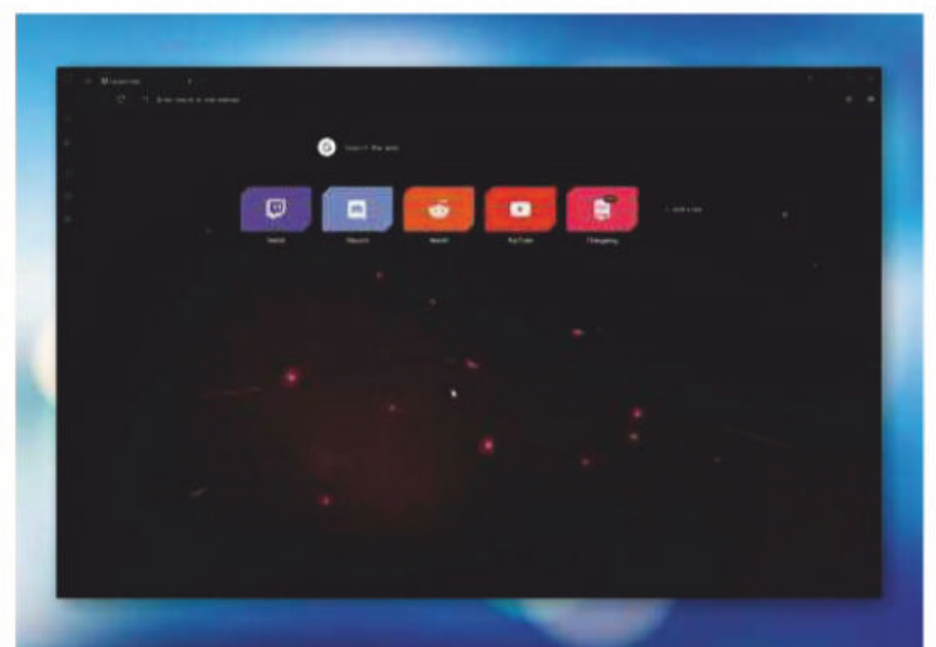
BROWSER
Opera GX
bit.ly/opgx485
Min requirements: Windows 7/8.x/10 **File size:** 62.5MB

Opera GX is a special version of the Opera browser, built specifically for gamers. First launched in June, the browser has since been downloaded over a million times and includes gamer-specific features such as memory and processor management, as well as Twitch integration. The latest version adds a network limiter, so downloads won't interfere with online games, while a new release calendar in the Gaming Corner will tell you when upcoming games are due out.

➡

SYSTEM TOOLS
# PowerToys for Windows 10
bit.ly/ptoys485
Min requirements: Windows 10
File size: 2.9MB

Anyone who has used Microsoft's operating system since the days of Windows 95 and XP will no doubt recall PowerToys, a selection of essential tweaking tools. Earlier this year, Microsoft announced plans to launch a series of PowerToys for Windows 10, and the first of these are now available to download.

There are currently two PowerToys on offer (with more on the way): FancyZones is a highly configurable tool that improves windows snapping, and Shortcut Guide is an overlay which displays all of the keyboard shortcuts that are available to use.

You can find out more about PowerToys for Windows 10 in our Workshop on page 56.
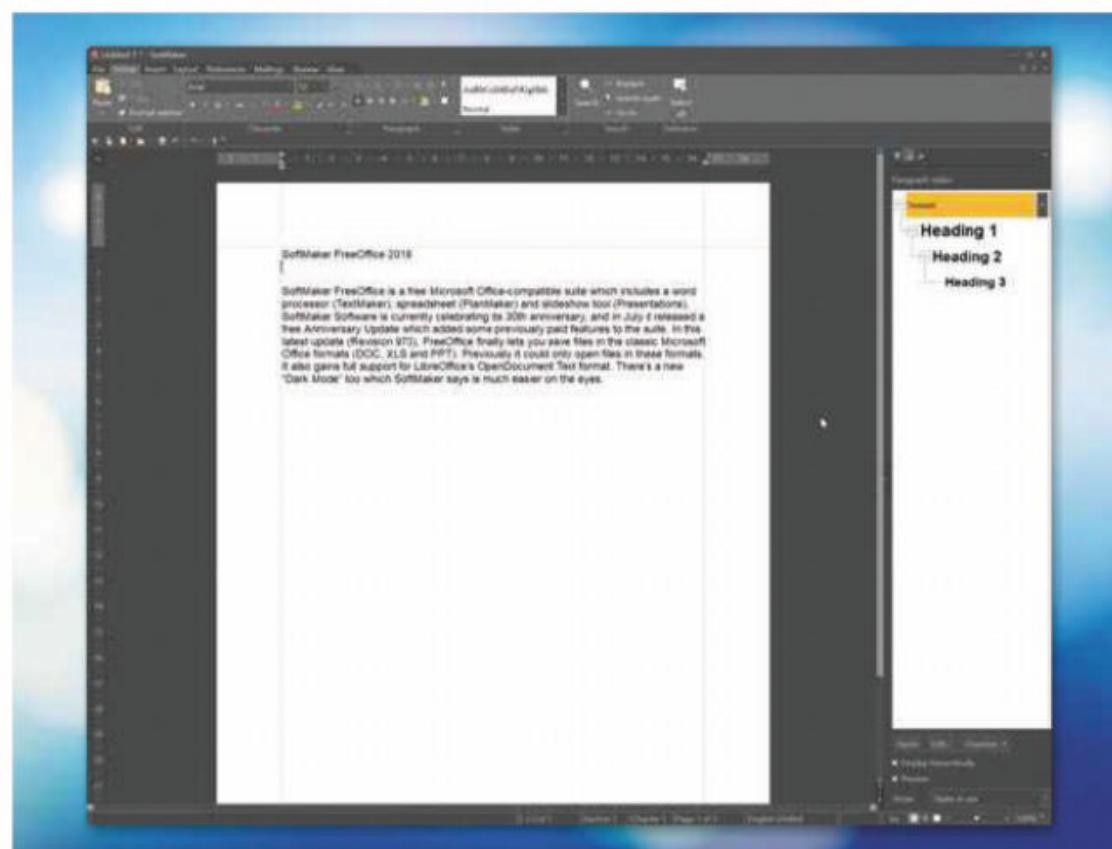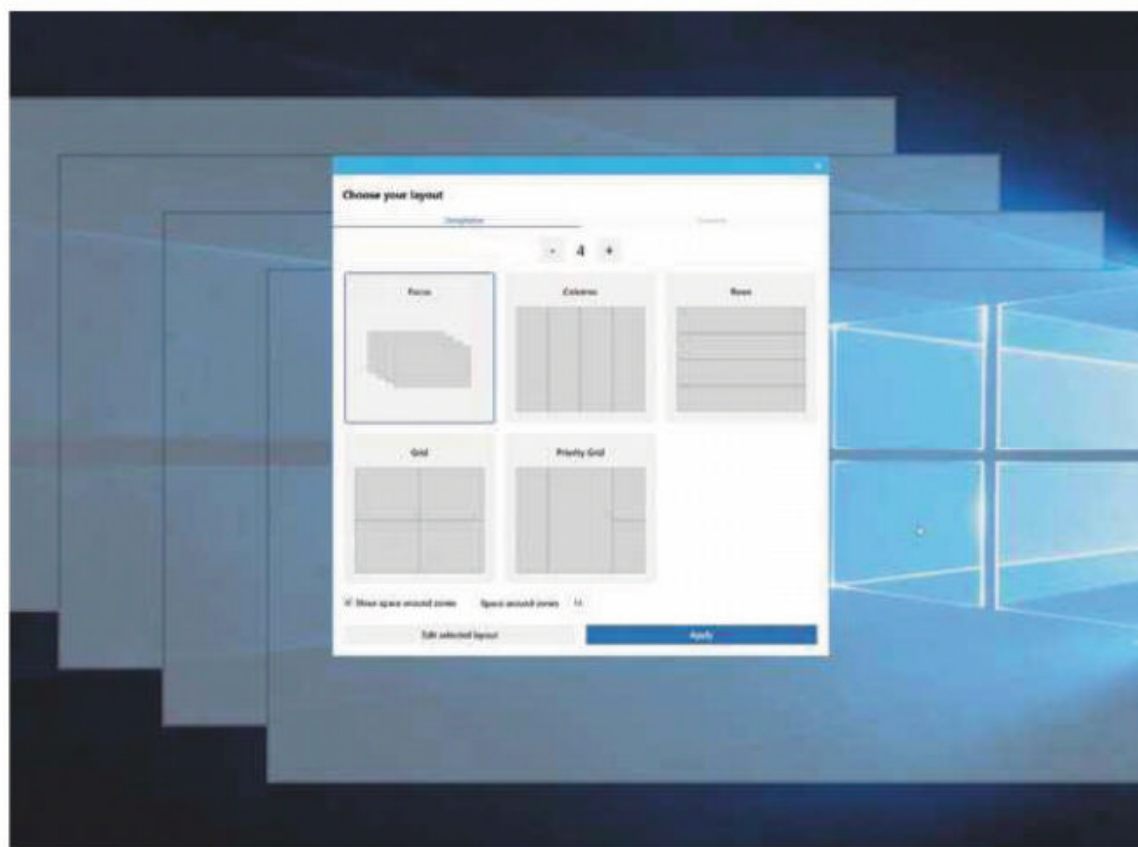
OFFICE SUITE
SoftMaker FreeOffice 2018
www.freeoffice.com/en
Min requirements: Windows 7/8.x/10, macOS, or Linux **File size:** 114MB

SoftMaker FreeOffice is a free Microsoft Office-compatible suite that includes a word processor (TextMaker), spreadsheet program (PlanMaker) and slideshow tool (Presentations). SoftMaker is currently celebrating its 30th anniversary and released a free Anniversary Update in July, which added some previously paid-for features to the suite.

In this latest update (Revision 970), FreeOffice lets you save files in classic Microsoft Office formats DOC, XLS and PPT (previously, it could only open them) and gains full support for LibreOffice's OpenDocument Text (ODT) format. There's a new dark mode, too, which SoftMaker says is much easier on the eyes.
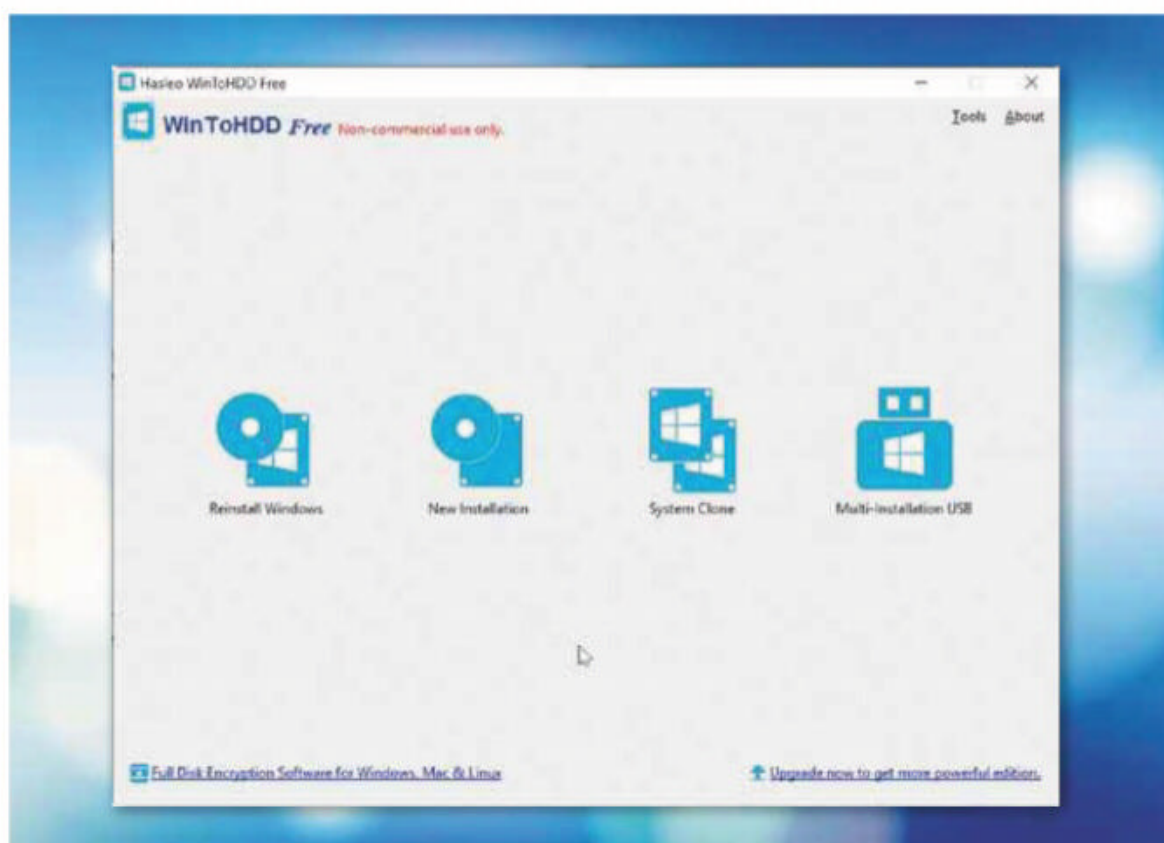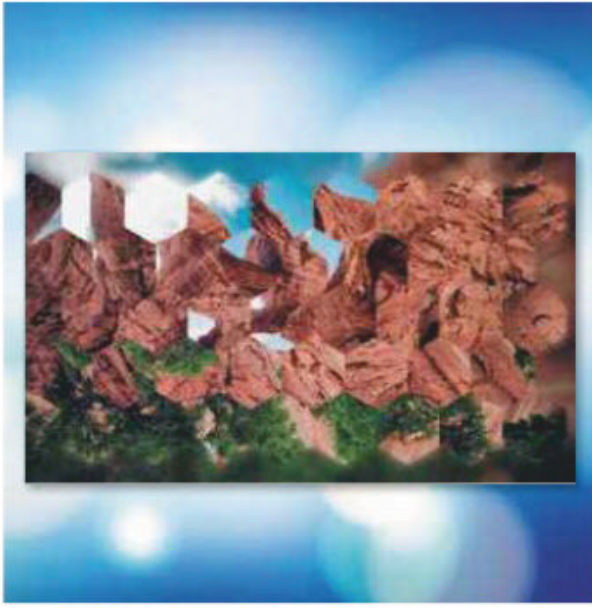

WINDOWS INSTALLER
WinToHDD 4
bit.ly/hdd485
Min requirements: Windows 7/8.x/10
File size: 9MB

If you need to install or reinstall Windows but don't have the disc it came on (or a CD or DVD drive, for that matter) then WinToHDD can help. This tool can install the operating system from an ISO, WIM or ESD image file (which you need to supply yourself) or clone Windows to a new drive. It also lets you create a multi-installation USB flash drive that you can use to install different editions of Microsoft's operating system.

This new version adds support for cloning Windows between disks with different sector sizes and improves the Windows installation process.
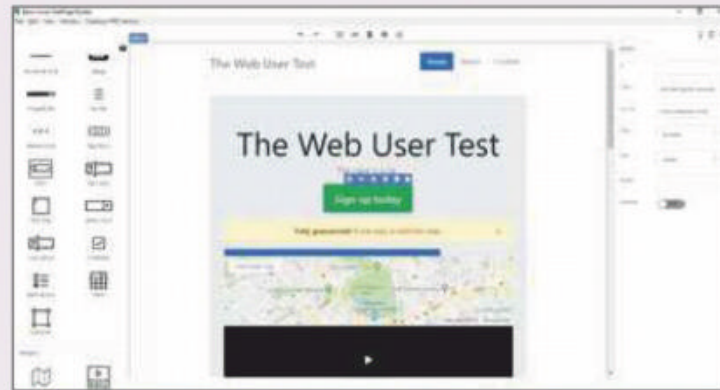
Basic WebPage Builder
bit.ly/basic485
Min requirements: Windows 7/8/10
File size: 30.5MB

Basic WebPage Builder is a What You See Is What You Get (WYSIWYG) editor that makes building websites very simple. No toying with complex HTML code – just drag and drop key elements to the page and add your own text. It's packed with features that give your site a professional feel, without the need for professional skills, and offers options to preview how your site looks on mobile devices, as well as desktops, so you can make sure everything looks perfect. Your block-based template is converted into HTML code that you can copy to a content-management system such as WordPress.

Brackets
brackets.io
Min requirements: Windows 7/8/10
File size: 76.6MB

Brackets bills itself as a "modern, open-source text editor that understands web design", but you'll need a good working knowledge of HTML, JavaScript and CSS coding to make any real use of this advanced tool. There are much friendlier free options available for web-design novices.

GAME
Hexeptional Picture Puzzle
bit.ly/hex485
Min requirements: Windows 7/8.x/10
File size: 101MB

This game divides a photo into hexagonal pieces which have to be reassambled to produce an image. Solve each puzzle by rotating the hexagons or by sliding them into position. You can select a pre-built level or make puzzles from your own images. Each puzzle is accompanied by music and effects, and you can adjust the difficulty (number of pieces) as required.

OTHER OPERATING SYSTEMS What's new for Linux and macOS

MENU-BAR APP
Red Eye
www.hexedbits.com/redeye
Min requirements: macOS 10.12 or later
File size: 3.8MB

Red Eye is a menu-bar app that has one very simple but useful purpose – it prevents your Mac from going to sleep. The author suggests that this can come in handy when making presentations or downloading large files. It can be enabled and disabled with a single click. Apple has banned the app from the Mac App Store for "duplicate functionality that already exists" so, for now, you need to download it directly from the author's page.
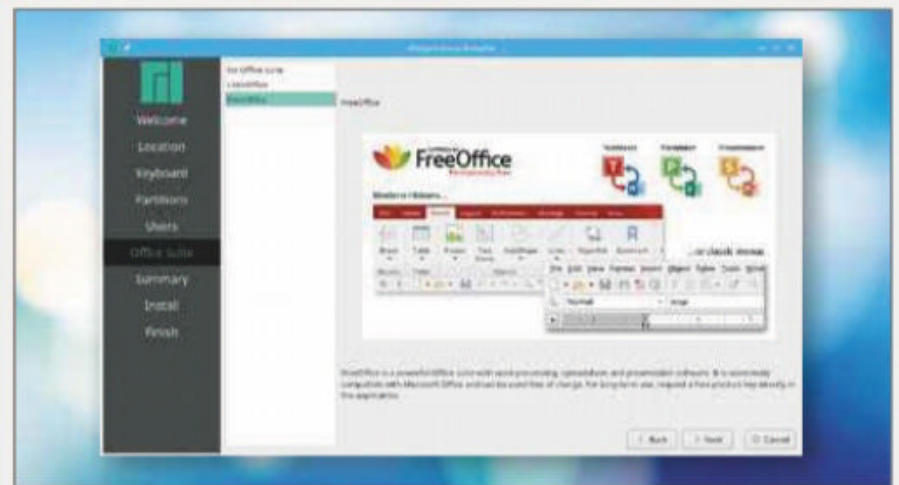
LINUX OS
Manjaro Linux 18.1 'Juhraya'
manjaro.org/download
Min requirements: 2GB RAM, 20GB hard-drive space
File size: 2.2GB

After six months of development, the latest version of Manjaro Linux is available to download. It includes integrated support for FlatPak and Snap packages, and all three Manjaro desktop editions – Xfce, KDE and Gnome – have been updated with new features. The Xfce edition sports a new 'Matcha' theme. Previously, you could only add LibreOffice during installation, but SoftMaker FreeOffice 2018 is now offered as an alternative.

Best New Browser Tools

Fade deceptive adverts on websites

Adverts are a necessary evil of the web – but the worst are those that adopt a sneaky disguise, such as Google ads masquerading as search results and Reddit promotions pretending to be posts. It's all too easy, when you're not really concentrating, to click these sponsored ads instead of genuine results.

NoDisguisedAdsAnymore (bit.ly/noads485) tackles this problem head on. Rather than removing adverts entirely, it adds a fade effect so they are faintly visible but no longer 'in your face'. You're free to click them if you like – it doesn't strip out the link – but it also makes these types of ads a lot easier to ignore.

At present, the NoDisguisedAdsAnymore extension works on adverts on Google, Reddit and Amazon. It's a work in progress, though, so it's possible that sites such as Twitter and YouTube will be added in time.
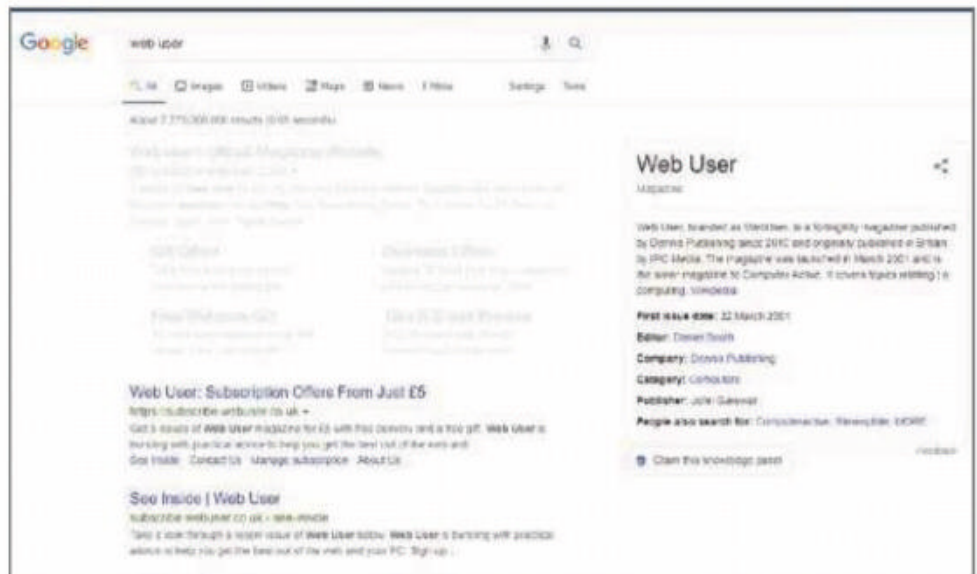
Redirect Google searches to DuckDuckGo

Designed so that "quitting Google search doesn't have to be cold turkey", DuckDuckSometimes (bit.ly/duck485) is a handy browser tool if you're trying to wean yourself off Google. Head to Google to run a search and every now and then – in our tests, it was approximately one in seven searches – your search will automatically be redirected to DuckDuckGo.

This lets you break the Google habit without even thinking about it. DuckDuckGo, of course, is famously the anti-Google when it comes to your data: a privacy-focused search engine that's as good as its rival, but doesn't capture and flog all your information.
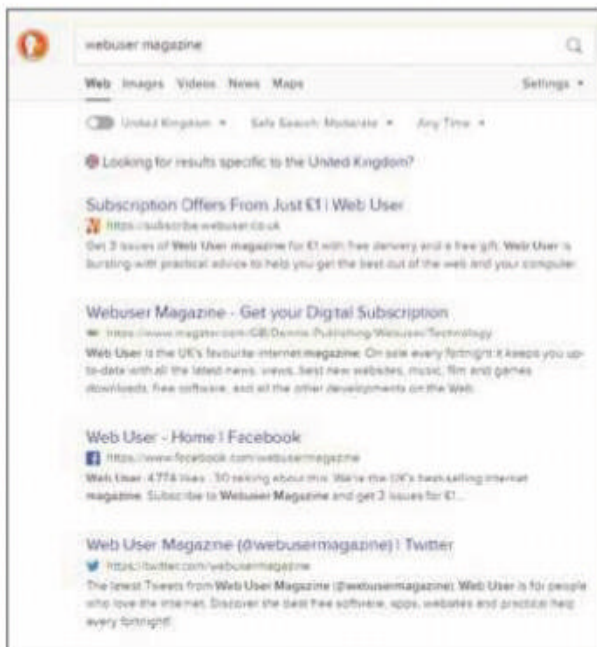
Learn a language while reading the news

Learning a new language broadens your horizons and, with today's technology, there's no excuse not to try. The Duolingo app makes this easy on your phone, and now TenWords (bit.ly/tenwords485) takes it to the next level.

Click the extension's toolbar button, set the language you want to learn and you'll get a selection of foreign-language articles and news websites. Visit these, then click any or all the words. A text field lets you manually translate a word and choose whether the word is Known or Unknown to you. These words are then added to cards on the TenWords dashboard for future revision. The final option is to have the word translated for you. It's a clever way to gradually build your language skills.
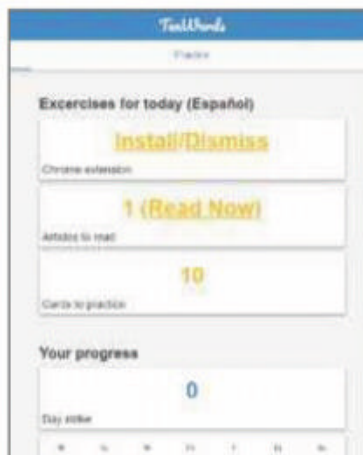
Hack and improve Amazon Prime Video

When it comes to browser tools for streaming services, Amazon Prime Video often feels forgotten compared to the likes of YouTube and Netflix. Refined Prime Video (bit.ly/prime485) seeks to change this by bringing a few welcome tweaks to the platform, while adding some handy new features.

When you first set it up, click the toolbar button and set your region – the tool won't work otherwise. You can then choose how and when 'spoilers' are displayed. This boils down to blurring thumbnails and hiding descriptions for episodes you haven't watched yet, so you can binge without fear.

The add-on also lets you jump to Prime Video from whatever website you're on, and pick up shows and films where you left off. Best of all, if you're sick of ads (and who isn't?), you can click 'S' during a pre-video trailer to instantly skip it.
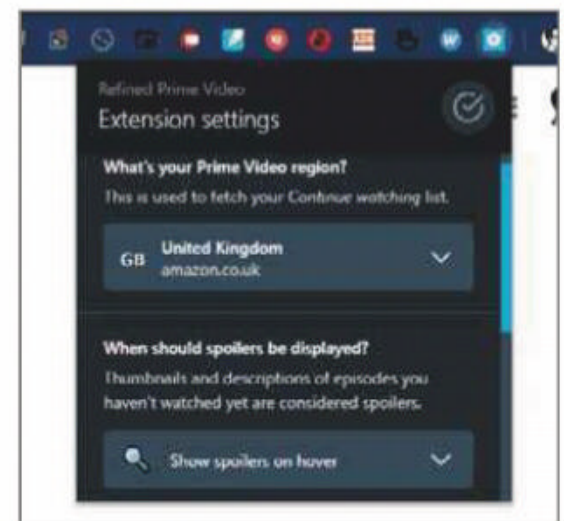
This fortnight's most useful tips and add-ons to help you get the most from Chrome, Firefox, Opera and more

FIREFOX

Navigate Firefox faster using key commands

Vivaldi has an excellent feature called Quick Commands, which lets you skip around the browser, opening and closing tabs, creating notes, searching your history and more – all using keyboard shortcuts. Taking more than a pinch of inspiration from this slick idea, Quick Commands for Firefox (bit.ly/quick485) lets you perform all the same functions in Mozilla's browser.

Start by pressing Alt+Shift+R – it's a bit clunky, but you get used to it – to see the Quick Commands box float on-screen. At the top of the box is a text field, for inputting commands; below is a list of open tabs and previously visited pages. Getting around Firefox was always a breeze, but this tool makes it even breezier.
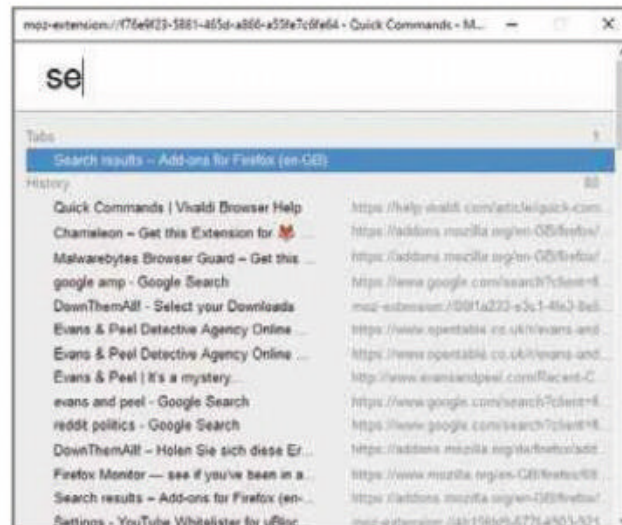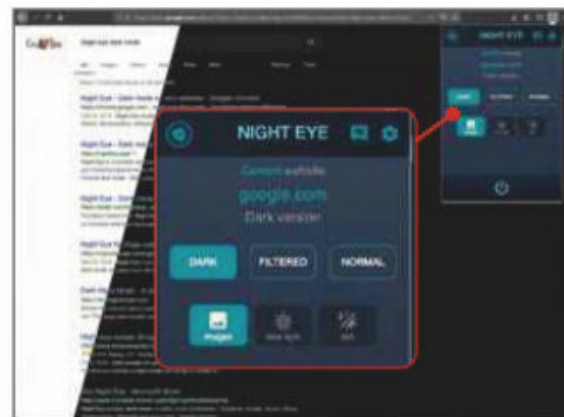
Plant trees while you shop

Saving the planet is a challenge, so we're happy to take all the help we can get from TreeClicks (bit.ly/tree485). The developers behind this browser tool have partnered with hundreds of shops and online purchasing platforms including Amazon, Adidas, Booking.com and Airbnb. Every time you buy from these online stores, the devs get a fee for bringing you to the store. They then "use the majority of [their] advertising fee" to plant trees in India. And yes, your shopping bill stays the same price.

Just head to a partnered site, click the toolbar button, then select 'Click & Start Planting Trees'. You'll be redirected to the site, and you only need to do this once for the tree-planting to take effect.
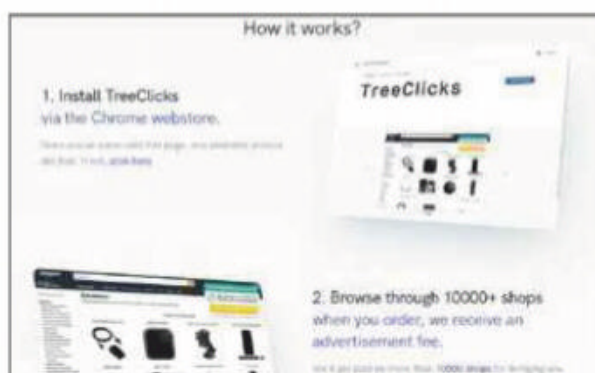
Bring dark mode to every website

It might seem like dark mode has taken over the world, but that just makes it even more inrolerable when you're browsing at night and come across a glaring, sleep-busting white screen. So shield your eyes and install Night Eye (bit.ly/nighteye485) instead. This extension turns day to night on pretty much every website going. According to the developers, "instead of simply inverting, the extension analyses the pages' colors and images and converts them to improve your browsing experience".

The 'lite' version of the add-on is free forever and lets you add dark mode to five websites – the unnaturally bright Google and Facebook would be a good start. If you want to add the theme to more sites, you'll need to upgrade to the paid-for plan, but there is a free three-month trial that doesn't require your credit card details, if you want to try it out.

OTHER BROWSERS

See Facebook notifications on the toolbar

If you're forever flitting to Facebook to check your notifications, F-Notifier (bit.ly/facenote485) puts an end to all the faff by adding your unread notification count to Opera's toolbar.

Once you've installed the add-on, you can dictate what happens when you click the icon: if you have notifications, you can be taken straight there, while clicking the bell when there are no notifications will whisk you to the Facebook homepage. You can even set it to play a sound.
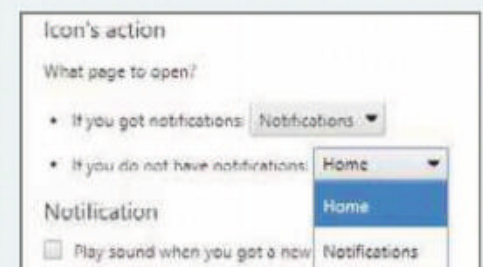
Convert any video in Opera

Converting videos once required specialist software but today, you can do it in your browser while you pop online. Video Converter (bit.ly/convert485) offers the ability to convert videos into any video format. Start by clicking the toolbar button to open a new window, then drag and drop your video to it. Next, choose a format – the default options are MP4, H.264, VP9 and JPEG, and you can even make a GIF of your video. Press Run Command, leave the conversion to take place, then download the outputted video at the bottom of the screen.

Best Free Apps

App of the Fortnight

TOOLS

UPDATED

Unnotification

bit.ly/unnotify485

🤖 6

Notifications are either extremely handy or intensely annoying, depending on your point of view. Android has a number of basic built-in tools for managing notifications – you can view them, turn them off for specific apps and change the noise they make when they arrive – but that's about it.

If only there was an easy way to view previous notification history or undo accidentally dismissed notifications. Well, with Unnotification there is – plus a whole lot more.

While it's true that Android does, in fact, keep a notification log, this is usually hidden and most devices don't allow you to view it by default. In some cases, you may be able to work around this by using a somewhat convoluted hack that involves creating a widget on your home screen. But Unnotification makes this much easier.

With the app installed, you can not only view your notification history, but also search it for specific text (app names or text within a notification heading, for example). You can also set up a schedule that automatically clears your log daily, weekly or monthly, and even export your notification log – to Google Drive or an email, for instance – if you want to keep a backup.

When it originally launched, Unnotification was only available for devices running Android 8 and above. The latest update, however, opens up the app to users of Android 6 and up, too, although some of its features – namely the ability to undo swiped notifications and the option to view snoozed ones – remain limited to Android 8+ devices. But the app is still well worth installing.
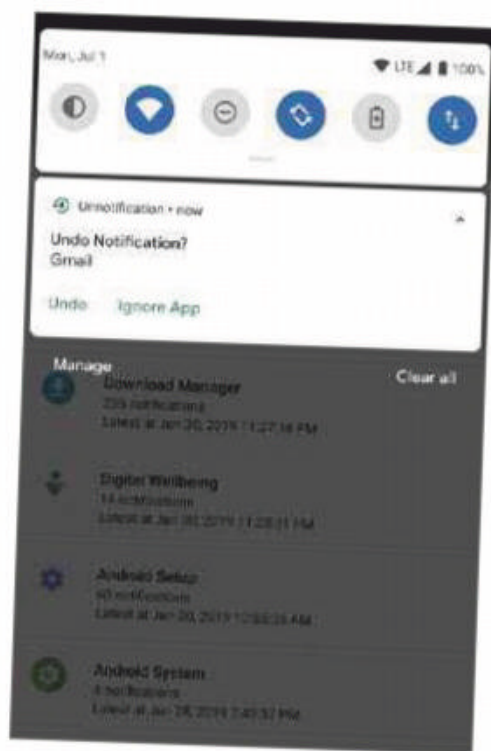
MINI WORKSHOP

Manage your notifications using Unnotification

1 Launch Unnotification and swipe your way through all the introductory screens. At the end, you'll see a screen prompting you to allow the app permission to access your notifications. Tap Enable Access, then press the slider to switch on 'Notification access' for Unnotification **1** and tap Allow **2** in the box that pops up. Tap the Back button **3** to return to Unnotification, then tap OK.
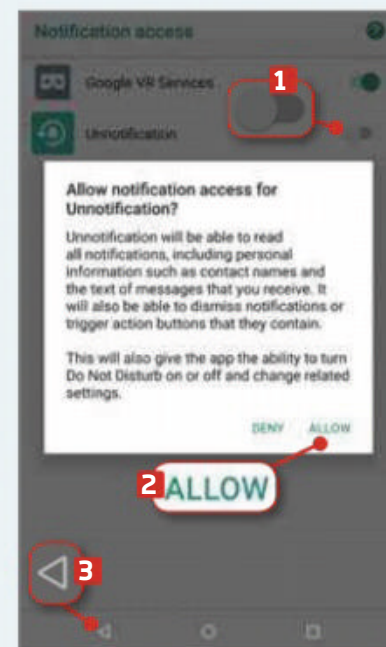
2 Tap the magnifying-glass icon in the top-right corner to bring up a comprehensive list of your device's notification history. **1** You can type a keyword where it says 'Search notifications' at the top **2** to search for something specific, or just browse your notification history by scrolling. By default, the most recent notifications appear at the top, but you can tap the triangle menu **3** for more sorting options.
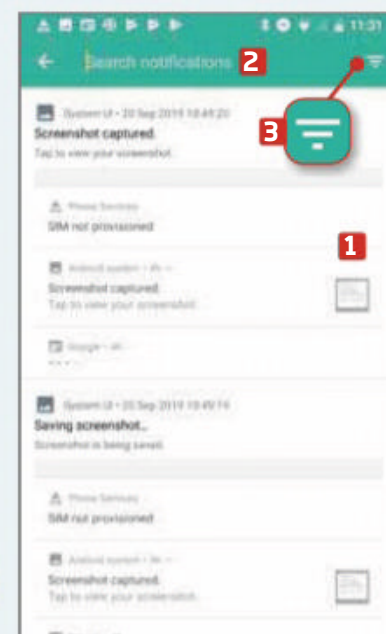
3 Users of Android 8 and above get a few extras, including the ability to bring back notifications you've accidentally deleted. Swipe down from the top of the screen to view the Android notification drawer, **1** then swipe away one of the notifications. You'll see a new mini-notification appear at the top saying 'Undo Notification?'. **2** Press Undo **3** to return the notification to where it was before you deleted it.
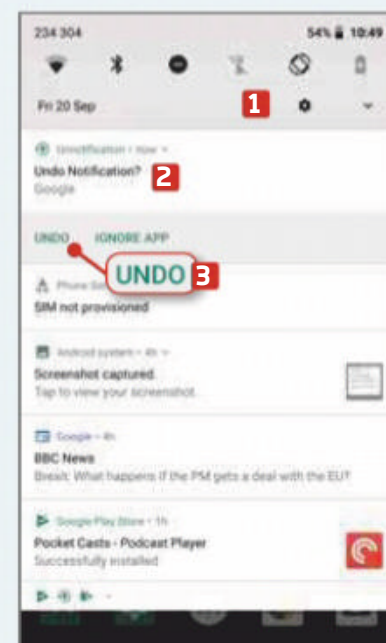
Our rating

★★★★★

This fortnight's top free and paid-for apps
for Android and iOS phones and tablets

MUSIC

Shazam

bit.ly/
shazdroid485
bit.ly/shazios485

🤖 (varies) 🍎 8

Now owned by Apple, Shazam – the brilliant 'name that tune' app – has been updated. Predictably, most of the new features are skewed in favour of Apple devices, such as the ability to sync automatically with iOS 13's new native Dark Mode and the option to long-press any Shazammed track to add it to your favourite streaming app – including, of course, Apple Music. Android users aren't left out, though – they get new ways to navigate, browse and manage their Shazam history.

UPDATED

Our rating ★★★★★
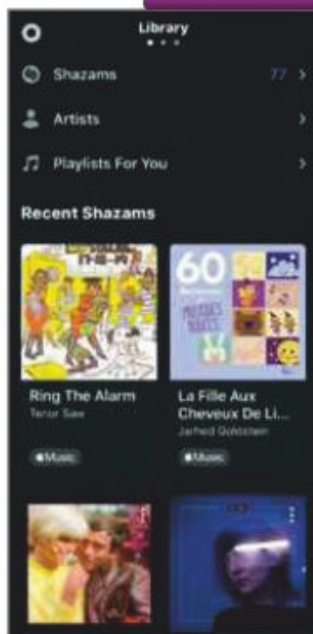
HEALTH

### Music Zen - Relaxing Sounds

bit.ly/zen485

🤖 6

NEW

When you need to de-stress, this app aims to be a one-stop shop for all your relaxation and meditation needs. It offers a broad selection of guided meditation exercises to choose from, alongside a range of soothing sounds – including white noise, rainfall and relaxing music – to help you chill out. For visual soothing, there are mesmerising animations, images of nature and even calming games. Free users get a limited selection of content along with some shorter clips, while full access costs £40 per year.

Our rating ★★★☆☆
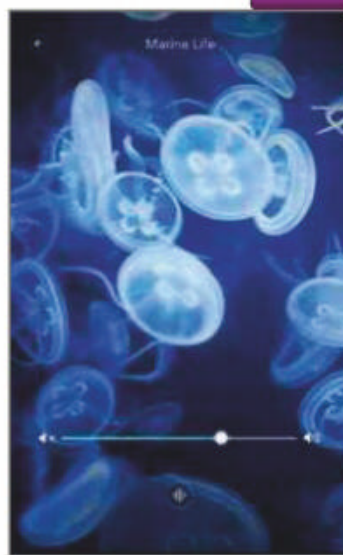
PRODUCTIVITY

Microsoft To Do

bit.ly/
tododroid485
bit.ly/todoios485

🤖 (varies) 🍎 11

UPDATED

Microsoft has released a new desktop version of its Wunderlist replacement, To Do (to-do .microsoft.com), and the Android and iOS versions have also been freshly updated with a new look and additional features. These include the freedom to set and customise your own full-colour backgrounds, while iOS users also get the ability to drag and drop items between tasks and lists. It's even possible to drag and drop multiple items at once, by long-tapping the first item, then tapping another.

Our rating ★★★★☆

WELLBEING

BBC Own It

bit.ly/owndroid485
bit.ly/ownios485

🤖 6 🍎 11

NEW

This fortnight, the BBC has been busy launching its online archive (see page 14) and killing off its much-loved iPlayer Radio app. But it has also released a very welcome app that uses AI to monitor the wellbeing of young people through their online interactions with friends and family, providing help and support where it's needed. Own It takes the shape of an on-screen keyboard, which works like any other keyboard (complete with all the requisite emojis and GIFs), except that it offers helpful tips and friendly advice as you type messages and social-media posts. Everything typed is kept private.

Our rating ★★★★★
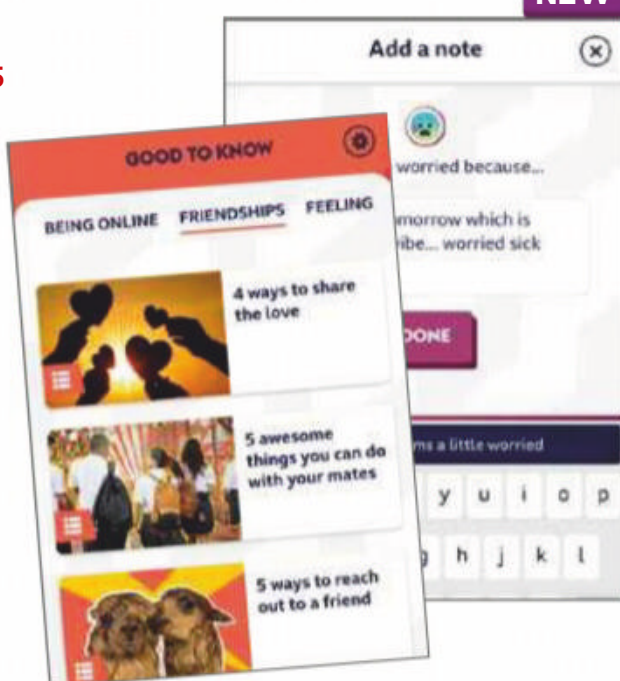
PODCASTS

Pocket Casts

bit.ly/pocketdroid485
bit.ly/pocketios485

🤖 5 🍎 11

UPDATED

One of the better paid-for podcasts apps, Pocket Casts has been updated and is now completely free to use. Everything originally offered in the paid-for version is now available to free users, though a now-optional premium tier (Pocket Casts Plus, £1 per month) offering cloud storage, themes and desktop apps is also available. Free users get some powerful playback tools, such as a brilliant silence trimmer that automatically edits out silences from your podcasts to speed up listening times. The latest version adds several improvements, including the ability to import your own content and listen to it alongside podcasts downloaded within the app.

Our rating ★★★★☆

5 NEW APPS WORTH PAYING FOR

EDUCATION
Mensa IQ Check
bit.ly/iqdroid485
bit.ly/iqios485
Price: 99p (Android), £1.99 (iOS)

🤖 **4.1** 🍎 **9**

Ever wondered how you'd score in an IQ test? This app tests you on genuine Mensa questions used in official Mensa test papers, so you can find out once and for all if you're a genius.

PRODUCTIVITY
Notes Pro
bit.ly/notespro485
Price: £1.29

🤖 **4.1**

Manage your life with this comprehensive note-taking app. Notes Pro lets you jot down thoughts, lists and ideas, scan text from any image and sort, search or share your notes.

GAME
NBA 2K20
bit.ly/nbadroid485
bit.ly/nbaios485
Price: £5.99

🤖 **4.3** 🍎 **9**

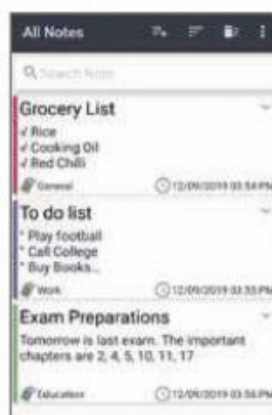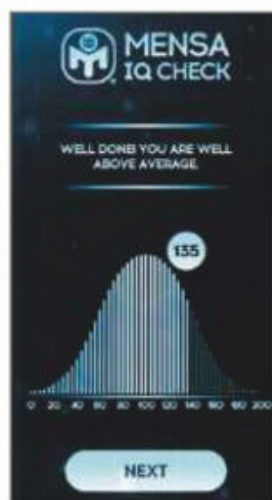The latest official NBA basketball mobile game offers new modes, improved graphics and multiplayer options. It's not quite a slam dunk, though, because it includes microtransactions.
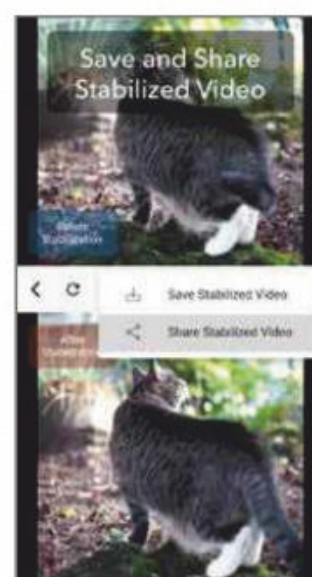
VIDEO
Deshake Video
bit.ly/shake485
Price: £1.59

🤖 **7**

If you've recorded a video that's spoiled by shaky camerawork, consider giving this app a go. It promises to stabilise wobbly video, allowing you to compare before and after shots.

PUZZLE
Inbento
bit.ly/inbentodroid485
bit.ly/inbentoios485
Price: £2.69 (Android), £2.99 (iOS)

🤖 **5** 🍎 **9**

What do you get if you combine cats, Japanese bento boxes and puzzles? The answer is Inbento, a beautifully designed brain teaser that blends a cat-based story with pattern-matching gameplay.

Mensa IQ Check	Notes Pro	NBA 2K20	Deshake Video	Inbento
[QR code]	[QR code]	[QR code]	[QR code]	[QR code]

✓ Install this app...

Flightradar24
bit.ly/flightdroid485
bit.ly/flightios485
🤖 **(varies)** 🍎 **10**

Whether you're a frequent flyer or an aeronautical enthusiast, Flightradar24 is a must-have. It lets you track flights anywhere in the world in real time, either by locating the plane on a map or by searching for its flight number, and provides information about the aircraft itself, along with data such as speed, altitude, estimated arrival times and more. The 3D pilot's view and an augmented-reality feature that lets you point your device at the heavens to view information about planes currently flying overhead are an impressive flourish on an already excellent app.

...Not this one ✗

Airline Flight Status Tracker
bit.ly/airline485

The whole point of a flight tracker is to provide accurate, up-to-the-minute information about the status of air traffic. So, it's somewhat counter-intuitive to use an app that can't seem to accurately or reliably deliver this data. Users of this relatively expensive (£4.39) Airline Flight Status Tracker app report that it has problems displaying the correct route, frequently hangs and often doesn't work at all.
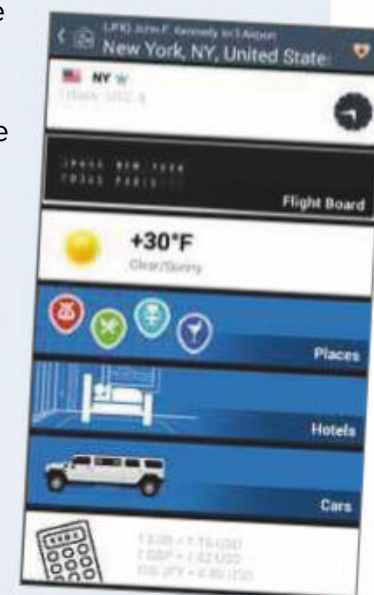
Take a Screen Break

Give your eyes a rest from your browser and try our fiendish fortnightly challenges. Can you solve our classic-film emoji and guess the Wikipedia page?

CAN YOU GUESS THE CLASSIC FILMS FROM THE EMOJI?

1. 🧙➡️🇦🇺

2. 🏙️🧘‍♀️🦯
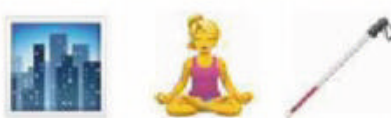
3. 👊➡️💵

4. 😎👋👀

5. 🦆🍲

6. 😠😠😠😠😠😠 😠😠😠😠😠😠

GUESS THE WIKIPEDIA ARTICLE

Can you work out which technology-related Wikipedia entry the following clues refer to?

1 "It was among the first mainstream-audience home computers in the UK. Its introduction led to a boom in companies producing software and hardware for the machine, the effects of which are still seen."

2 "The original model had 16KB of ROM and either 16KB or 48KB of RAM. Video output is through an RF modulator and was designed for use with contemporary television sets."

3 "It was intended to work with a normal domestic cassette recorder. The software-loading process was quite reliable and faster
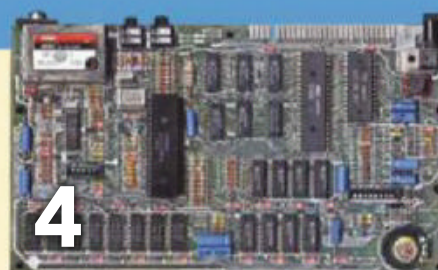
4

than on competing systems of the time."

5 "It enjoyed a very strong community early on. Several dedicated magazines were released, which were initially very technically oriented with type-in programs and machine code tutorials."

COMPETITIONS

WIN A...
Lumie Bodyclock Luxe 700FM radio

Lumie's new Bodyclock Luxe 700FM radio/Bluetooth speaker helps to minimise the sleep disruption caused by blue light from laptops and phones. Its light fades at sunset, then turns on gently in the morning to wake you naturally. To enter, email your address to webusercomp@dennis.co.uk with 'Bodyclock' in the subject line. For more information, visit www.lumie.com and follow @Lumie_lights on Twitter.

WIN 1 OF 4
Nero Platinum 365 software

Nero Platinum 365 offers seven exceptional programs in one suite. You get all the features of professional video editing to create, burn and publish your video projects with stunning effects and animations in outstanding 4K quality. There are several excellent new tools, including filters to create moods in your photos. To enter, email your address to webusercomp@dennis.co.uk with 'Nero' in the subject line. For more info, visit www.nero.com.

Our guide to Deepfakes

The face looks familiar but that doesn't mean the camera isn't lying. **David Crookes** takes a look at the worrying rise of deepfake videos

What are they?

Deepfakes are videos that use artificial intelligence to digitally alter the faces of people in a film by swapping them with those of other people who were nowhere near the camera. Most often, the aim is to create footage so realistic that the viewer is convinced the 'faked' person actually appeared in the film. Left unchecked, it's possible that in the near future we will no longer be able to determine for certain what is real and what is not when viewing filmed footage.

Why are they called deepfakes?

Deepfake videos and images draw on a branch of artificial intelligence called deep learning, which is based on neural networks. Since they produce false results, they're dubbed fakes – deepfakes. The underlying process is based on theories about how the brain recognises patterns – the more data processed by a deep-learning algorithm, the more realistic and accurate the output.

So, how are they made?

Deepfakes do not require any great skill on behalf of the person looking to swap one face for another in a video because all the hard graft is carried out by software. In technical terms, there are
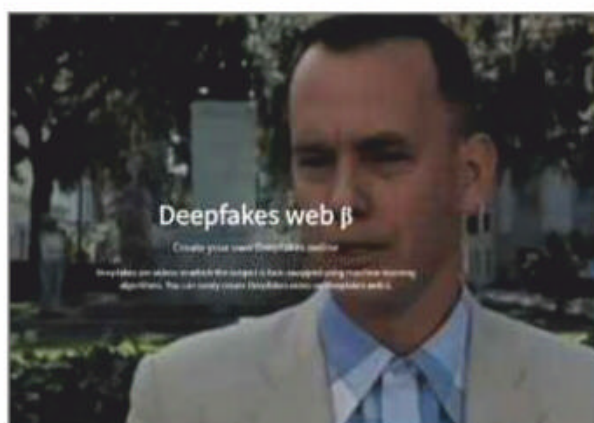
Deepfake generators swap one face for another – such as Trump for Forrest Gump

generator and discriminator systems of artificial intelligence that form what is called a generative adversarial network (Gan). The generator produces the fake clip and the discriminator tests it. If the latter can tell the results are not real (in much the same way that a spam filter can recognise junk email), then the former will use the experience of its failure to learn and improve. When the neural network's nodes arrange themselves well, the videos look more convincing, right down to subtle expressions such as eyebrow raises.

What range of images is needed?

Ideally, you need images of a person's face at multiple angles and in different poses. So you want photos of someone looking in different directions, opening and closing their mouth, blinking and so on. The AI will then figure out what's happening in the destination video and work out which images need to be used for the best effect. You could then add a voice – the 'vocal avatar' software Lyrebird (lyrebird.ai) claims to create the largest number of artificial voices in the world. With decent lip syncing, you should be able to fool most people.

What software is being used?

Open-source machine-learning tools such as Keras (keras.io) and Google's TensorFlow (www.tensorflow.org) are among the most popular – in fact, the Reddit member 'deepfakes', who
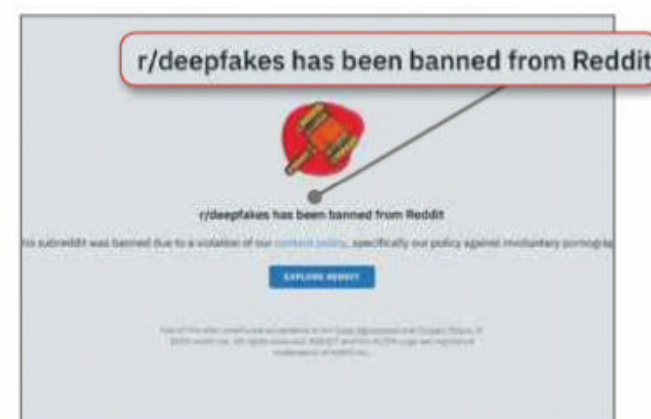
Reddit banned the 'r/deepfakes' subreddit for violating the site's content policy

DO DEEPFAKES HAVE A POSITIVE USE?

The film, television and gaming industries are certainly cottoning on to the potential of deepfake technology. You could, for example, play as yourself in a game (Facebook's AI Research team has created Vid2Play, which extracts playable characters from real-world videos) or revive dead actors to star in current movies – a controversial topic in itself. There are also suggestions that deepfake AI could be used for better dubbing, so what you see and what you hear are better aligned when a different language is being spoken. But the important element is consent, and the technology will always court controversy when placed in the hands of people hell-bent on causing trouble.

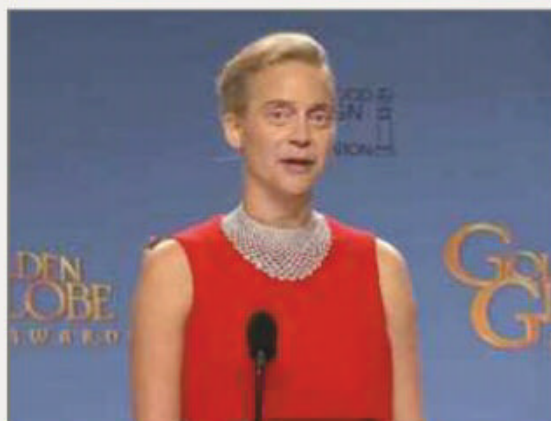brought the craze to light in 2017 (on a now-banned subreddit), used these tools within his self-created AI software. Another Reddit user called 'deepfakeapp' went on to develop an age- and gender-changing tool called FakeApp, which proved very popular. Again, this was underpinned by TensorFlow, and made the deep-faking process quick and easy.

Doesn't this open a can of worms?

Absolutely. The technology was initially seen as a bit of fun, when actor Nicolas Cage's face was used in a variety of different movies he didn't originally appear in. But a more sinister side was quick to follow. Videos began to appear featuring the faces of female celebrities – including that of *Wonder Woman* star Gal Gadot – swapped on to the bodies of porn actresses. What made it even worse was that thousands flocked to view.

Since then, there have been instances of revenge porn, political tinkering and more skullduggery using the faces of celebrities such as Taylor Swift, Maisie Williams and Scarlett Johansson. Even if a deepfake can be identified as such, anyone taking a cursory glance may be unaware that they're being tricked and the damage is done.

Are deepfakes easy to spot?

In many cases, yes. There may be some flickering or slight blurring around a face. There can also be instances of the 'uncanny valley' – that eerie feeling you get when you're looking at a human face but you just know something isn't quite right, usually because the eyes are not behaving as expected. Low-resolution rendering is also a problem and yet some videos are pretty advanced. The sheer number of genuine recordings of celebrities and politicians provides enough data to create convincing deepfakes of such people.

But I'll be safe, won't I?

Maybe. But consider how many selfies many of us take and upload to social media, putting vast image sources within the reach of deepfakers. The Reddit user 'deepfakes' said he had grabbed videos and pictures from YouTube, stock-photography sites and Google Images.

It's also interesting to note the controversy over a face-swapping app called Zao, which allows users to insinuate their faces in place of characters from television and film. But while members of the public were innocently enjoying starring in their favourite movie clips, Zao's terms and conditions handed the developers the permanent global rights to use any image created on the app, and allowed those rights to be transferred to a third party without permission. Far from having our identities stealthily stolen, we're building these databases ourselves.

So, what is being done?

In the case of Zao – which is only available in China – the developers did an about-turn and said that biometric information and detailed user information would not be stored. Meanwhile, the Chinese authorities said it was looking to tighten the regulations around face-stitching technology. One of the big concerns was that the resulting videos – based on still images – could be used to bypass facial-recognition systems. Alipay had to assure users that its Smile To Pay method of authorisation, which asks users to look into a camera to verify a purchase, could not be cheated using Zao.

Can technology combat deepfakes?

It seems so. A group involving Facebook, Microsoft, the Partnership on AI coalition and academics from seven universities has launched the Deepfake Detection Challenge (deepfakedetectionchallenge .ai), which is set to run until spring of next year. It is looking for participants to create a solution, using a collection of deepfake videos released by Facebook for the purpose of research. The hope is to come up with approaches that have so far not been considered.

Does any detection software currently exist?

Well, a team at Imperial College in London is developing software that will check if film footage has been altered. It is currently teaching machine-learning software called CheckFake to pick up on doctored footage by analysing 1,000 examples of fakes. According to Maja Pantić, professor of Affective and Behavioural Computing, the software could be made available as a download for all, allowing footage to be input and checked. The fight, it seems, is on.

Nicolas Cage was the subject of many of the earliest examples of deepfake videos

Zao proved controversial for claiming the rights to any image created using the app
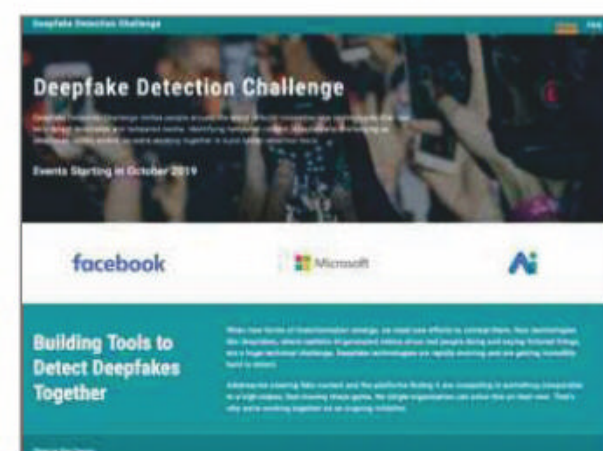
The Deepfake Detection Challenge aims to find a solution to the problem of deepfakes

Don't Install 'FREE' VPNs

COVER FEATURE

Just how private is your virtual private network? **Wayne Williams** reveals the hidden risks of using 'free' VPNs and explains what you should be using instead

F ree VPNs (virtual private networks) may seem like a great way to protect your privacy online at no cost, but the truth is that you're likely to pay in other ways. You may already be aware that free versions of VPNs have limitations – most offer a restricted choice of servers, slower speeds and reduced data usage compared to paid-for options. But a great number of free VPNs have more serious flaws, too. Rather than protecting your privacy and ensuring your security online, many free VPNs track and sell your data, and put your PC or phone at risk of malware and hackers.

In this feature, we expose the dangers of using a free VPN and explain which software and services you should be using if you want to stay anonymous and beat online restrictions – without getting more than you bargained for. We also reveal the best ways to test your VPN security, so you can find out for yourself just how protected – or otherwise – you actually are.

WHY STOP USING FREE VPNs?

There's no question that if you do your research, you can often find free software that rivals (or even surpasses) most types of paid-for programs. However, one big exception to this rule is VPNs. It's certainly tempting to go down the free route, especially if you don't need to use a VPN on a daily basis. But the fact is that they usually aren't worth the risk. Here are the main reasons why.

They cost the developers money to run

Unlike a lot of free software and online services, running a VPN incurs significant ongoing costs that the developers need to pay for. The servers that traffic gets routed through aren't cheap to run, so if you're not giving the company money, then how is it paying for its overheads? Sadly, the answer is that they are probably selling your data. The high cost of servers also means that VPN owners dedicate far fewer resources to the free version of their services, with the overall outcome being a slower, more congested and less private service for you.

They have unacceptable privacy policies

Few of us take the time to read the terms and conditions and privacy polices when installing free software. But the whole point of a VPN is to keep your browsing private, so you need to be able to rely on it to keep your data safe. Unfortunately, a lot of free VPNs are governed by privacy policies that either don't reveal what they can do – and are likely to be doing – with your user data, or which freely admit to sharing your information with third parties.

> **"** If you're not giving the company money, then how is it paying for its overheads? Sadly, the answer is that they are probably selling your data **"**

Many of them are Chinese owned

In an investigation at the end of last year, Top10VPN (bit.ly/ chinesevpn485) found that over half of the most popular free VPN apps in the Apple App Store and Google Play Store (both in the UK and US) either "had Chinese ownership or were actually based in China". China is well known for its snooping activities, and the country's government also recently started clamping down on citizens who use VPNs to try to circumvent the blocks it places on the internet – the so-called Great Firewall of China. Several free VPNs were found to have privacy policies that explicitly state they "share data with China".

They could contain malware

Big-name VPNs should be free from malware, but lesser known apps, which still have huge numbers of downloads, may not be. Some Android VPNs have been found to contain malware in the past and, according to Top10VPN's Free VPN Risk Index: Android Apps (bit.ly/vpnrisk485), 18% of all recently tested Android VPNs – that's 27 out of 150 apps – returned positive matches when scanned for potential viruses or malware on VirusTotal.

They could contain ads

Free apps need some way to pay for themselves and including ads is fairly standard practice. The trouble is that some VPNs sell your browsing data to third-party ad networks, allowing them to serve you up targeted advertising. In 2017, this accusation was levelled at HotSpot Shield Free VPN and, although HotSpot Shield's parent company AnchorFree denied the claim, the evidence was damning (see the 'Bad VPNs Named and Shamed' boxout on page 44 for more details).

There may be slow speed issues

As we mentioned previously, free VPNs are usually limited by various restrictions. For example, there may be a cap on the amount of traffic you get or the number of countries your traffic can be routed through. Most annoyingly, though, the speed of free VPN connections often gets throttled, making downloads painfully slow and causing streaming services, such as Netflix and Hulu (which often don't work through free VPNs at the best of times) to suffer from stuttering and buffering.

These limits are imposed to make you want to upgrade to the paid-for version.

They may not protect all traffic types

Some free browser-based VPNs, such as those available as browser extensions and add-ons, only secure your web traffic, so they don't provide any protection for tasks such as peer-to-peer (P2P) file sharing or VoIP calling.

In some instances, using a VPN for these purposes may not even be allowed under the terms and conditions. Even if they are, the VPN provider may choose to throttle this type of traffic, making it inoperable.

4 FREE VPNs YOU CAN TRUST

Although we'd recommend paid-for VPNs over free versions every day of the week, we appreciate that not everyone wants to spend money on a tool they may only use occasionally. Fortunately, there are some good free VPNs we can recommend. They all have some limitations you should be aware of but they won't compromise your privacy or security.
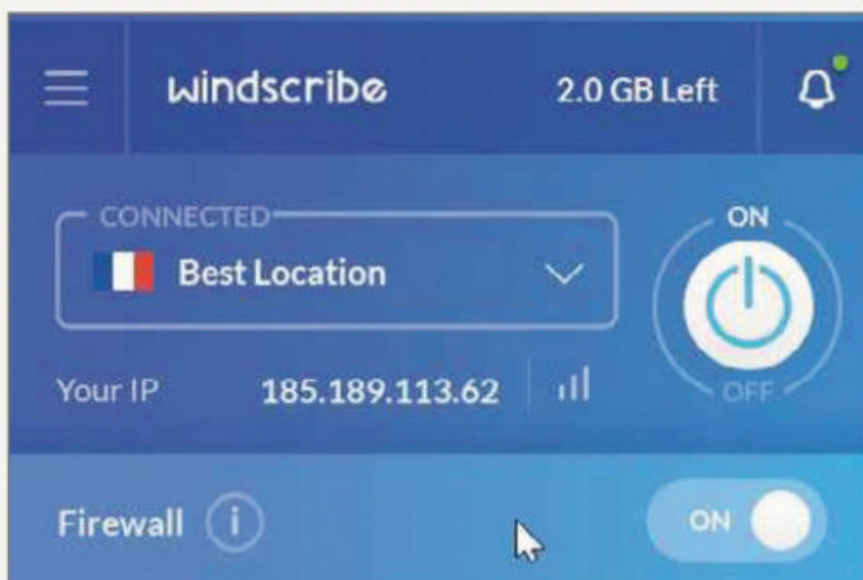
Windscribe
windscribe.com

Windscribe has been our favourite free VPN for quite some time. It's available for all the major platforms (you can even install it on your router) and it provides you with 10GB a month of data, unlimited connections and access to more than 10 countries (paying customers get servers in 100 cities across 55 countries). You can get a free one-day trial of the paid-for Pro version by clicking the Team Garry button (the floating green circle) on the website and asking for a Pro trial.
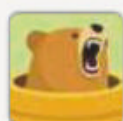
TunnelBear
www.tunnelbear.com

TunnelBear is available for Windows, macOS, Android and iOS. You get a tiny 500MB of traffic for free per month, which you can increase by an extra 1GB by tweeting about the service. Its browser extensions for Chrome and Opera (but not Firefox) can disguise your location, but they don't offer the same level of protection as the full software.

TunnelBear doesn't sell your personal information, but instead makes its money from paid subscriptions.

ProtonVPN
protonvpn.com

ProtonVPN, from the company behind the privacy-centric ProtonMail, is free and designed with security as its main focus. It doesn't include ads or sell your data to third parties but, like most free VPN tools, there are restrictions. It limits the number of countries you can pretend to be browsing from to just three, throttles speeds and only lets you run it on one device. You get a seven-day trial of the paid-for version with the free download.

Warp

Cloudflare's 1.1.1.1 app for Android and iOS (https://1.1.1.1) aims to speed up and protect your mobile browsing. It works by routing your DNS queries through its privacy-focused resolver, which should mean that websites load a little bit quicker.

1.1.1.1 isn't actually a VPN in itself, but Cloudflare does offer one – called Warp – through the app. This promises to secure and optimise all your traffic. However, there is one major drawback with Warp at the moment: it's not available to everyone. You have to sign up to a waiting list – and it's a very long list. We're currently number 1932244!

Nevertheless, when it does finally start rolling out to everyone, its pedigree – coming from Cloudflare – means it should be a trustworthy service that's worth using.
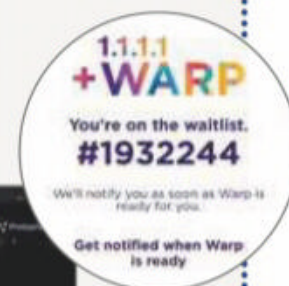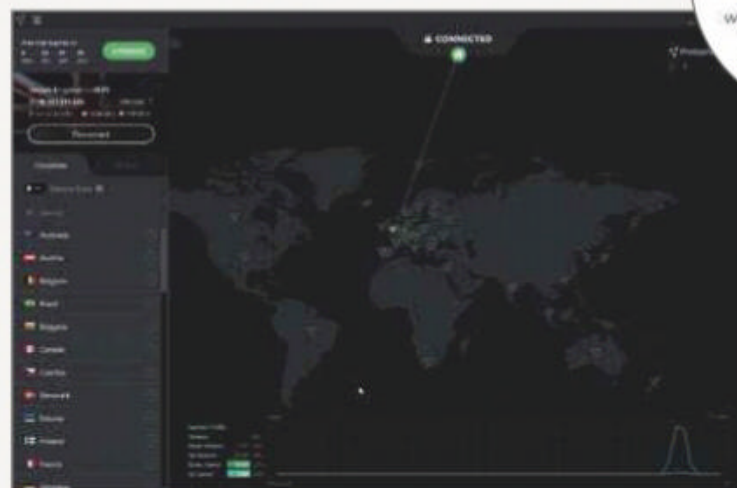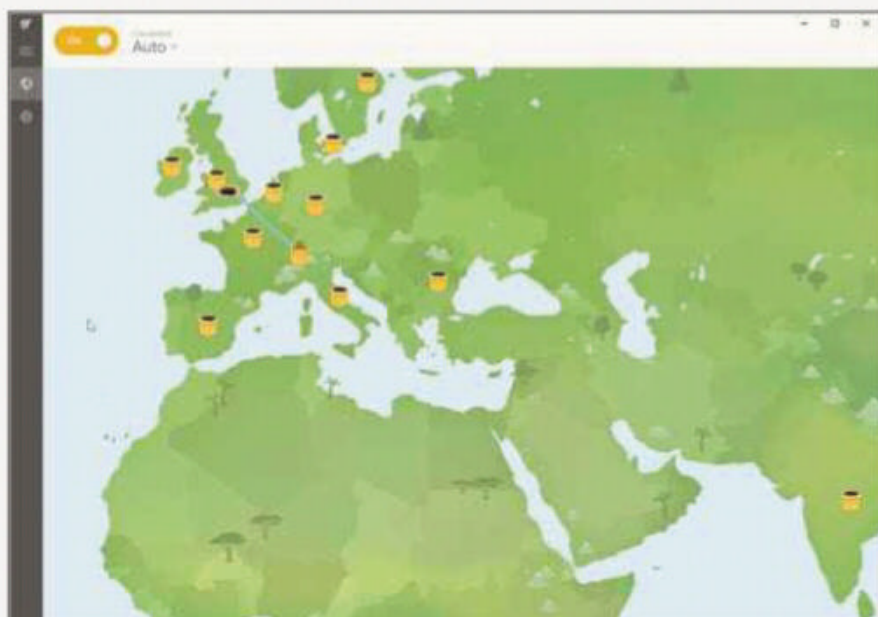
WHAT YOU SHOULD USE INSTEAD

A paid-for VPN

The truth of the matter is that if you want a secure and speedy VPN service, you'll need to pay for it. Of course, not all paid-for VPNs are created equal. Check to see how many devices you can use the VPN on (five is fairly standard), as well as the number of servers and countries on offer – the more there are, the faster the service should be.

The VPN should also use OpenVPN, IKEv2, IPSec, L2TP or OpenSSH encryption, and give you unlimited traffic. It should also include a kill switch, which detects when your VPN connection drops and immediately ends all online activity so that your real IP address doesn't get exposed accidentally. Other features to look out for are a no-logging policy, P2P support (for torrenting and the like) and a decent money-back guarantee. Paid-for VPNs should also provide good customer service support – something you're unlikely to get with the free ones.

Many paid-for VPNs offer a free trial (not just a free version), so you can take it for a spin and test it properly before committing to a subscription. The length of the trial can vary massively, from one day to 30 days.

Our favourite paid-for VPNs are NordVPN (nordvpn.com), ExpressVPN (www.expressvpn.com) and CyberGhost (www.cyberghostvpn.com), but bear in mind that each paid-for VPN has its own pros and cons, depending on your personal needs, so you should carry out your own research before signing up.

Tor

The Tor network safeguards your browsing by disguising your location. It works by routing your traffic through a number of Tor servers around the world. The main difference between Tor and a VPN is that there's no single entity you need to trust. Tor is a non-profit organisation, rather than a company that might prioritise its profits over your privacy, and the network is run by thousands of volunteers.

The best way to use the Tor network is via the Tor Browser (www.torproject.org), which is available for Windows, macOS, Linux and Android, and is based on the same engine as Mozilla Firefox. It protects your browsing by relaying and encrypting your traffic across three Tor relays around the world. You can

request a new 'circuit' for any site at any time, should you wish to.

The browser also comes with a number of privacy-focused add-ons and disables risky plugins, such as Flash. You can even tweak the browser's security level by choosing from three options: Standard, Safer and Safest.

Tor isn't designed to protect downloading via BitTorrent, however, and the organisation does request that you don't use the network for this purpose.

If you want even more security, you can use Tor in conjunction with a VPN. However, be warned that although this will boost your anonymity significantly, it will also dramatically slow your browsing speed.

Tails

If your main concern is privacy, then Tails (tails.boum.org) offers peace of mind. The Amnesiac Incognito Live System (to give it its full name) is a privacy-focused live Linux operating system that you can boot into from a DVD, USB memory stick or SD card. It runs ou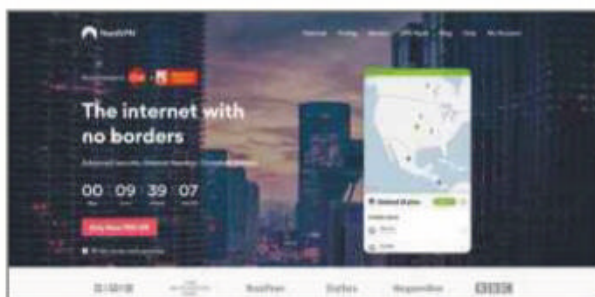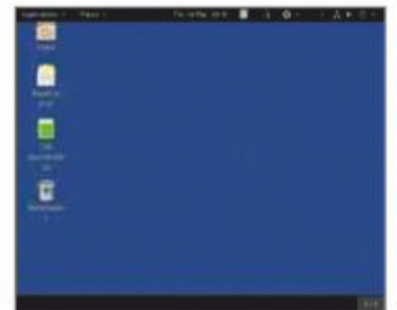tside your main operating system, and all connections to the internet are forced to go thr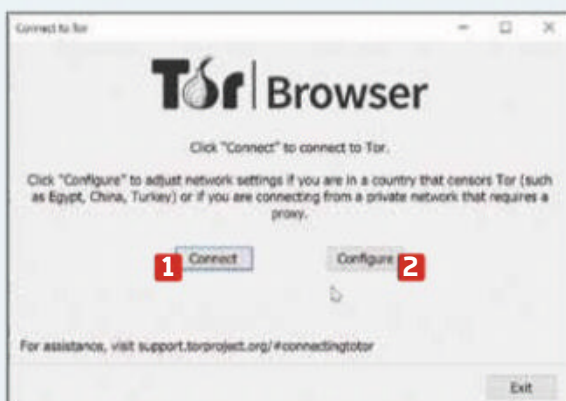ough the Tor network – it even comes with the Tor Browser included. Tails doesn't leave any trace of your activity behind once you shut it down (unless you ask it
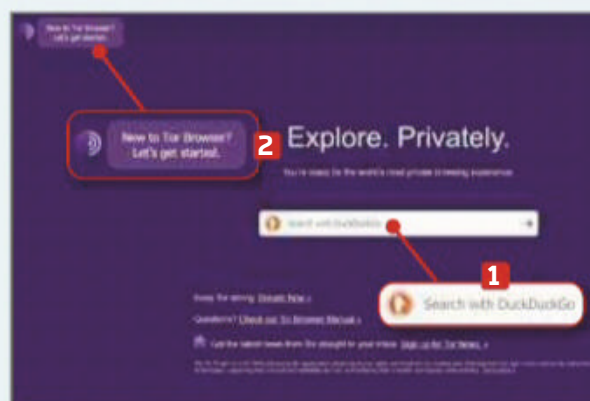

⚙️ MINI WORKSHOP | Browse securely with Tor Browser

1 The first time you run Tor Browser, you're offered two options – you can either connect straight to the Tor network using the default settings, **1** or click Configure **2** if you use a proxy to connect to the internet or if you're browsing in a country where Tor is censored.

2 Once the connection is made to Tor, the browser opens. You can enter the address of a site to visit or search for something using the privacy-focused DuckDuckGo search engine. **1** If you're new to Tor Browser, you can click the button **2** in the top-left corner to see how it all works.
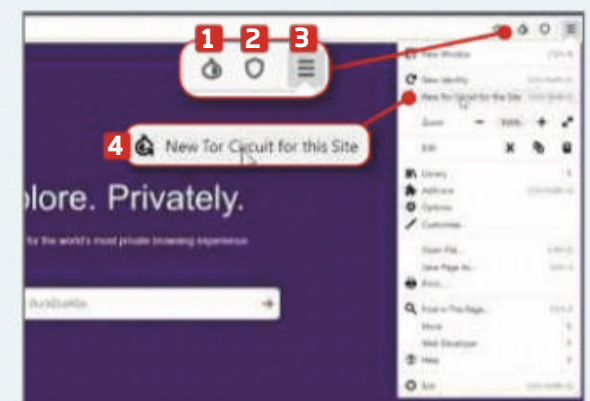
3 Click the Onion button **1** in the top-right corner to get a new browsing identity (the browser will close and reopen). Clicking the Shield button **2** lets you change your current security level, while the three-line menu button **3** provides the option of a new Tor circuit for the current site. **4**

to), and it comes with a number of tools that can encrypt your files, emails and instant messaging.

Proxy servers

A web proxy works similarly to a VPN – to the extent that the terms are often used interchangeably – but there are some important differences.

A proxy acts like a middle man. When you browse the web by typing the URL of the site you want to visit – 'webuser .co.uk', for example – your ISP makes the request and connects you, whereupon the website sees your real IP address – such as '192.0.2.1'. With a proxy, however, your request goes to the proxy server, with its own IP address. The proxy makes the request on your behalf, gets the response from the target site and sends the data back to you, so any sites you visit see the proxy's IP address and not yours. Hiding your IP address, making it appear like you're based somewhere else – sounds just like a VPN, right? Yes, except that proxies lack the encryption that VPNs offer – HTTP and SOCKS proxies offer no encryption at all, while HTTPS proxies are only as secure as any SSL website. This means it's still possible for websites, ISPs and governments to see your real IP address.

In a most cases, only your browser traffic is routed through the proxy. Skype calls and BitTorrent downloads – essentially any traffic that occurs outside of the browser – will still use your actual IP address. Although proxies aren't as good as a strong VPN, they can still serve a useful purpose and get around annoying geographic blocks.

SSH tunnelling

SSH – Secure Shell – is typically used to secure remote logins and file transfers over untrusted networks, but you can use it to direct data traffic and benefit from its strong encryption. SSH is a UNIX system, so Linux and macOS users are likely to be more familiar with it (both operating systems are derived from UNIX), but it can be used on Windows, too.

SSH tunnelling is harder to set up and use than a VPN, but there are some reasonably simple instructions you can follow at bit.ly/winssh485. Here, you'll find an explanation of how to use the Bitvise SSH (bit.ly/bitvise485) and PuTTY (bit.ly/putty485) clients.

Windows 10 users now have access to OpenSSH – the open-source version of Secure Shell – which was added to the OS last autumn. You can read about this at bit.ly/ossh485.

BAD VPNs NAMED AND SHAMED

Top10VPN (www.top10vpn.com) has investigated hundreds of VPNs over the years. While its list of the worst apps and services include some names you may never heard of, such as SkyVPN, Snap VPN and YogaVPN, these offenders have millions of installations worldwide. However, choosing a VPN that you have heard of is no guarantee of quality because many big-name VPNs have behaved badly in the past.
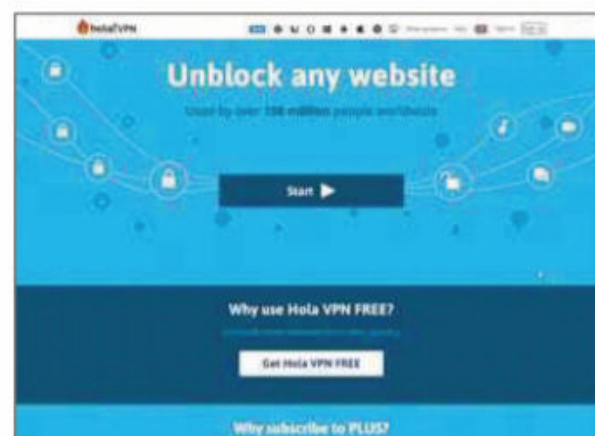
Hola
hola.org

The Hola VPN claims to be able to "unblock any website". However, it's a community powered (peer-to-peer) tool, which means it routes your traffic through other peers (nodes) in the Hola VPN network. In other words, it turns your connection into a server – unless, of course, you pay.

In 2015, Hola was found to be turning users' connections into exit nodes and selling their bandwidth to third parties. In addition to all that, the company logs your information and shares it, while the VPN itself provides hardly any security at all. It goes without saying that you should avoid Hola at all costs.

Onavo VPN
www.onavo.com

Facebook and privacy are not words that sit comfortably together. A couple of years ago, before the Cambridge Analytica scandal hit, Facebook offered a VPN tool called Onavo Protect, which aimed to help "keep you and your data safe when you browse and share information on the web". However, digging deeper into the app revealed that information from the VPN would be used to "improve Facebook products and services, gain insights into the products and services people value, and build better experiences." In other words, it would spy on you and report back to Facebook. Onavo VPN was also found to gather data, even when disabled.

Apple kicked the app out of the App Store when this came to light, and Facebook killed Onavo VPN six months
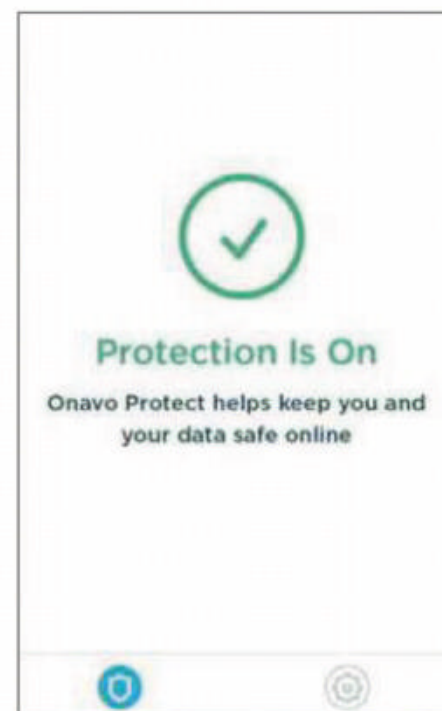
TEST YOUR VPN SECURITY

If you're worried about your VPN, you can test it to find out just how effectively it's keeping you safe and anonymous online. VPNs can leak various types of data, including DNS (Domain Name Server) requests, IP addresses, and WebRTC bugs. The best way to check for these problems is by disabling your VPN and then going to ipleak .net. Make a note of the details it displays, then open an incognito window, enable your VPN and go to the site again. The details should be completely different. If they aren't, then you have a problem. Try removing and reinstalling your VPN to see if that fixes the leak. If not, then it's time to switch to another VPN!
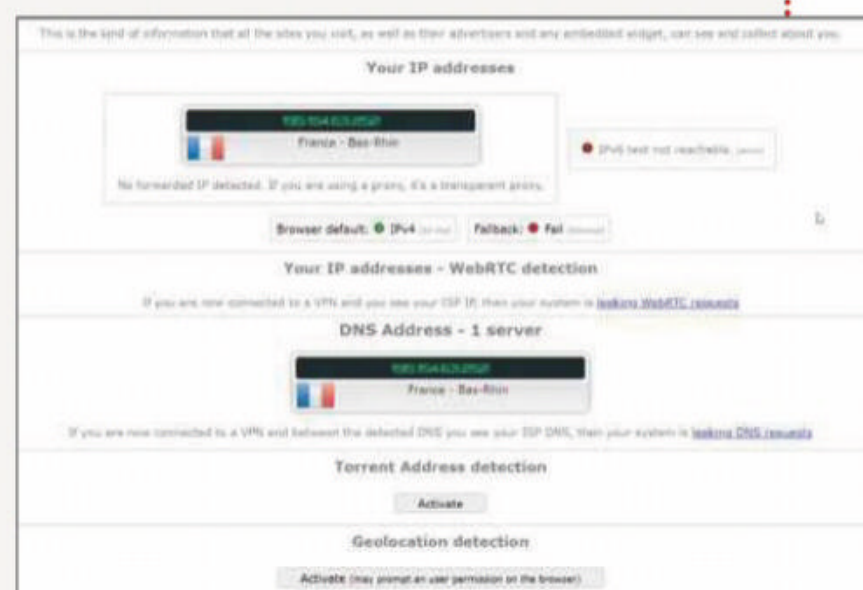
later – although it did, for a while, offer a very similar Research app that paid users for allowing it to spy on them.

Hotspot Shield
www.hotspotshield.com
In 2017, the CDT (Center for Democracy & Technology) filed a complaint with America's FTC (Federal Trade Commission), asking it to investigate Hotspot Shield's shady security and data-sharing practices. The complaint (bit.ly/cdths485) makes for worrying reading.

In its Privacy terms (www.anchorfree.com/privacy), AnchorFree (which owns Hotspot Shield) happily admits that it collects information about how you interact with its services, how much bandwidth you use, device identifiers, browser types, operating system versions and mobile, wireless, and other network information (such as internet service provider name, carrier name and signal strength). It also shares some information with third parties, including advertisers.
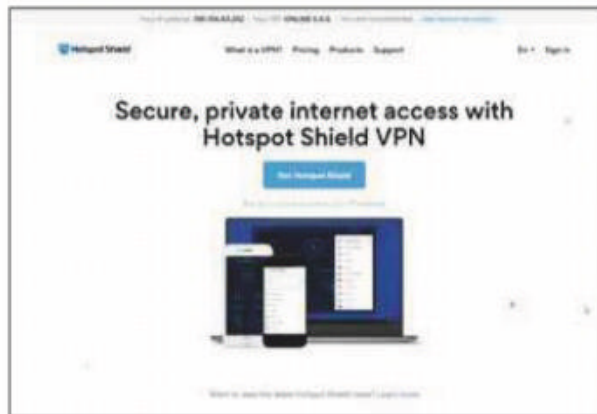
Betternet
www.betternet.co
Although Betternet's free VPN (called VPN Free on Google Play and Best VPN Proxy Betternet on the Apple App Store) is a solid offering, the company has a history of security
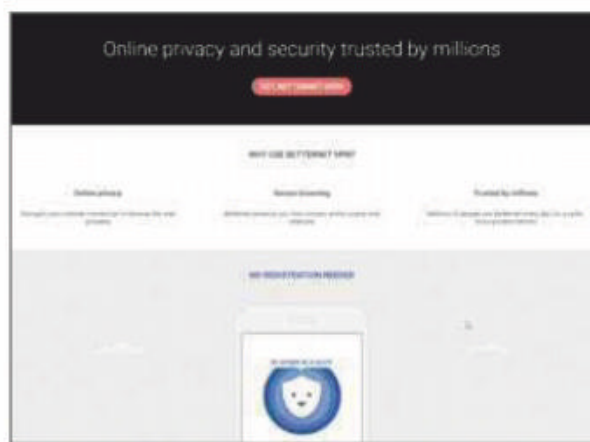
problems. In 2017, its Chrome VPN extension was hacked and used to spread malware (bit.ly/bnchrome485), and researchers have also identified the Android app as having a high malware presence, along with one of the largest numbers of tracking libraries (bit.ly/bnet485).

Not only that, but the ad-supported VPN keeps connection logs, and it's owned by AnchorFree – so the same privacy policy we outlined for Hotspot Shield applies here, too.
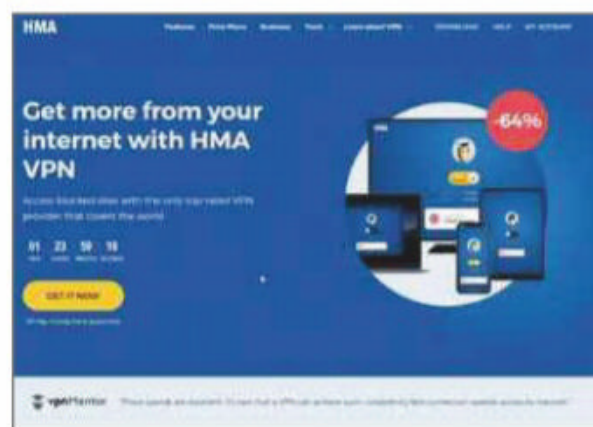
HideMyAss
www.hidemyass.com
One thing that most VPNs claim is that they don't log your traffic, so you're granted complete anonymity on the web. However, this isn't always true.

In 2011, the FBI used activity logs from HideMyAss to identify and prosecute a hacker who was involved with breaking

into the Sony Pictures website. When news of HideMyAss's involvement broke, the company admitted that it "logs the time you connect and disconnect" from its service but not the actual internet traffic "in any shape or form". However, it added that "as stated in our terms of service and privacy policy, our service is not to be used for illegal activity, and as a legitimate company we will cooperate with law enforcement if we receive a court order."

Opera's built-in VPN
www.opera.com
The Opera browser now comes with a built-in VPN and, while it's arguably better than no VPN at all, Opera's offering is really just a web proxy, which means it offers no encryption (beyond the same level of security used by most websites).

Opera's VPN also logs your information in order to improve its product and it offers very limited server options with just a broad choice of geographical locations to pick from – Americas, Europe or Asia – which is disappointing. ■
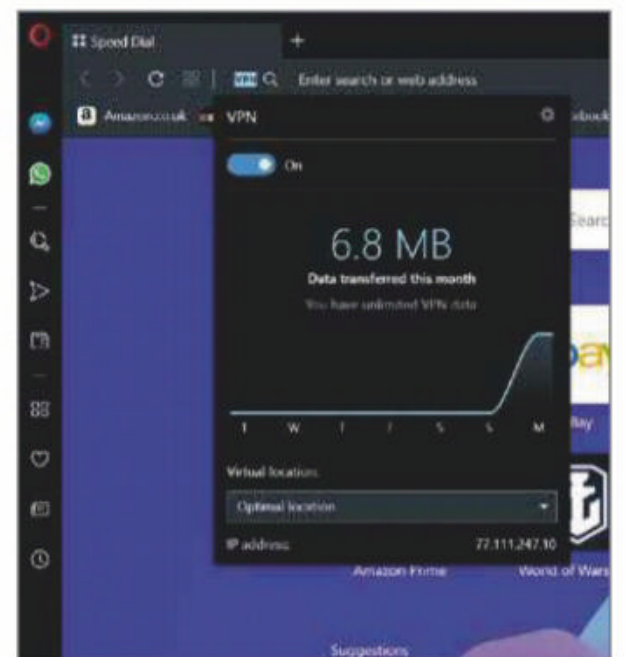
Best free bootable recovery drives

If your computer gets struck down by a virus or serious malfunction, you need bootable recovery tools on hand. **Steve Clark** tests six free programs to get your PC working again

Hiren's Boot CD | www.hirensbootcd.org | ★★★★★
FEATURES ★★★★★   PERFORMANCE ★★★★★   EASE OF USE ★★★★★

WebUser
GOLD
AWARD

What we liked:
Hiren's Boot CD was once considered the king of the bootable recovery drive – an all-in-one must-have for any IT pro or computer buff looking to sort out their computer.

For a long time, the project was discontinued but it was so sorely missed that fans took up the challenge of bringing it to a new audience. And now, using Windows PE (a lightweight version of Windows 10), we have a modern update that's just as good. There's even the option to download older versions of Hiren's to use on older computers.

When we say 'all-in-one', we mean it. Hiren's comes complete with just about every tool you need to repair and recover your device, including driver-management tools for getting your computer back online and a reset-password feature for times when you're locked out. Should you be facing a more catastrophic situation, there's also an option to run a mini Windows XP environment, so you can run basic tests.

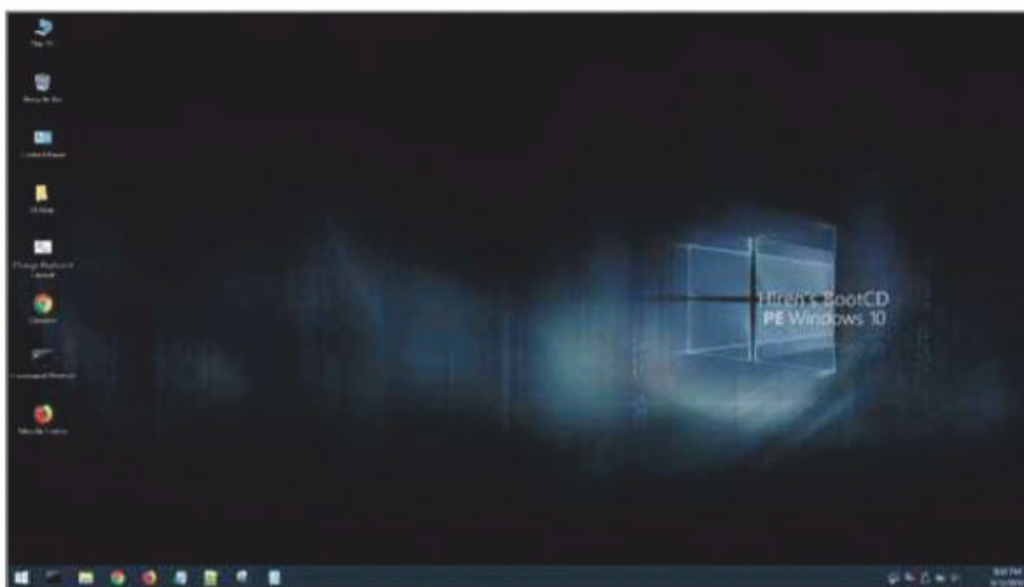Beyond that, you'll find useful staples, including Rufus and Malwarebytes, as well as programs such as FastStone Image Viewer, Chrome, Firefox and Notepad. It's so loaded, in fact, that you could almost stick with Hiren's and never go back to Windows 10.

One of the best features on offer is the ability to retrieve files from your hard drive – ideal when you know you'll need to factory reset your computer to get it working again. The process for accessing files and folders is as simple as you would hope, and lets you move everything you need to a USB stick before performing a reinstall.

How it can be improved:
There's no real con and plenty of pros to using Hiren's Boot CD. However, depending on your computer, you may not be able to make full use of it because the most up-to-date version of the tool is currently only available as a 64-bit version. If you're running a 32-bit computer, you'll need to download an older version, which won't have the latest updates.

Given the brilliance of the original Hiren's tool, we'd love to see the original developer return to the project.

OUR VERDICT
Hiren's Boot CD isn't just the best bootable recovery disk out there, it's arguably the only one you'll ever need. With its wealth of tools, it addresses just about every problem you're likely to run into. There's no reason not to own a copy.

Ultimate Boot CD | www.ultimatebootcd.com | ★★★★☆
FEATURES ★★★★☆ PERFORMANCE ★★★★★ EASE OF USE ★★★★☆

WebUser SILVER AWARD

What we liked:
Where Hiren's offers the complete package, Ultimate Boot CD brings just the basics – and that's part of its strength. Operating like the BIOS of your computer with a basic, text-based interface, you navigate using the arrow and Enter keys. It feels a bit clunky at first, but keeps you focused on getting your PC up and running. Helpfully, every tool is accompanied by a brief explanation, so you don't waste time performing the wrong tasks.

With just a few clicks, you can recover data, diagnose issues and stress-test various components, such as your main processor, and its built-in tools include ways to clone and wipe your hard drive.

Where Ultimate really shines, though, is in its wealth of password features. There are tools to decrypt, unlock, remove and recover passwords at every level – more than you'll know what to do with. There's also a Registry Editor that's accessible before Windows boots, which lets you fix any Registry errors or hacks-gone-wrong that are stopping Windows from starting.

How it can be improved:
Ultimate's interface is effective in its simplicity but it would have looked dated 20 years ago. Without a modern graphical interface, this powerful tool risks being overlooked. It also makes for a slightly long-winded diagnostic process since you'll be jumping back and forth between settings without the aid of a mouse.

OUR VERDICT
Much of Ultimate Boot CD's strength comes from sticking with the essentials. The password-recovery tools are particularly impressive, while the diagnostic and stress-test tools are welcome additions.

Kaspersky Rescue Disk 18 | bit.ly/ka485 | ★★★★☆
FEATURES ★★★☆☆ PERFORMANCE ★★★★☆ EASE OF USE ★★★★☆

WebUser BRONZE AWARD

What we liked:
As you'd expect from a company that built its reputation on antivirus tools, Kaspersky Rescue Disk 18's main event is its antivirus scanner, which detects and eliminates threats from your computer. There are several extra tools, including a handy archive manager and Registry editor, but they are basic and minimal compared to our Gold Award-winner.

On the whole, the software is easy to use, though the layout takes a bit of getting used to. It features settings options galore, which let you tweak various parts of your computer and help restore it to its original form. Also, keep your eyes peeled for Firefox and a limited image viewer, but don't expect much more in the way of accessories.

How it can be improved:
The blocky interface looks like someone tried to recreate Windows XP from memory – it's not pretty, and it's certainly not the easiest to navigate, with folders given obtuse names that make it difficult to find what you need. We'd also appreciate a tool for accessing files on the hard drive, which Hiren's Boot CD manages to provide.

OUR VERDICT
Kaspersky Rescue Disk 18 is an excellent go-to tool when viruses and malware take over your PC. Its antivirus scanner, which hunts down and quarantines bugs, is first-class, but its other features can't match our Gold Award-winner.

BEST OF THE REST

All in One — System Rescue Toolkit
bit.ly/aiosrt485

All in One – System Rescue Toolkit runs on a version of Lubuntu that apes the Windows interface, which makes navigation simple and familiar. It

packs in most of the necessary recovery and management tools, including the excellent Clonezilla, and a basic browser and office programs are also included. Best of all, once you're done fixing your PC, you can play the game Breakout (it's just as good as you remember).

Kyhi's Rescue Disk
bit.ly/kyhi485

Back in 2015, TenForums (www.tenforums.com) user Kyhi posted links to what he named Custom Windows 10 Recovery Tools and Bootable Rescue Disk. Like Hiren's Boot CD, it runs on a version of Windows 10 PE that's fully stocked with familiar

troubleshooting tools, including CCleaner, GetDataBack and Malwarebytes. At the bottom of Kyhi's original forum post, you can download both the 32-bit and 64-bit versions of the ISO. But that's your lot – there's no official site for further support.

Trinity Rescue Kit
bit.ly/trinity485

The Linux-based Trinity Rescue Kit is a solid bootable recovery drive made for repairing Windows PCs. The text-based interface can feel a bit unmanageable to navigate, but it includes plenty of useful tools, including antivirus software, data-recovery tools and drive cloning.

As with Ultimate Boot CD, the password-reset features are some of the best we've seen but although it's a solid backup option, our Silver Award-winner is better.

WINDOWS DEFENDER
—The Missing Manual—

Windows Defender has matured into a surprisingly powerful and comprehensive security suite. **Nik Rawlinson** explores its essential features and best hidden options

Over the course of Windows 10's recent updates, Microsoft has paid a lot of attention to improving and expanding the operating system's built-in security tools. However, it can't seem to make up its mind what to call them. Originally referred to as Windows Defender, the name for the Windows 10's security tools changed to Windows Defender Security Suite following the Creators Update, and they now appear to go under the generic banner of Windows Security. You'll still find the name Defender used in various official quarters, however, so that's what we're sticking with here.

Despite stiff competition from big-name free and paid-for rivals, Defender frequently ranks highly in antivirus labs tests and is used by more than half of all Windows users – and it's easy to see why. It's free, simple to use and – because it's a native Windows component – the software is unobtrusive and lightweight compared to other security tools.

Access the tools

Launch Defender, either by opening the Start menu, typing `defender` and clicking 'Windows Security' or by expanding the taskbar's hidden icons (click the upward-pointing arrow to the right) and clicking the shield icon. Windows overlays this icon with a yellow warning triangle if Defender detects anything that needs your attention.

Opening Defender will display a dashboard for controlling applications' rights and restrictions, Windows' built-in firewall, antivirus protection and more. To make it easier to navigate, maximise the window so the sidebar menu is permanently extended (with names beside the icons) or click the three-line button in the top-left corner to reveal the menu's contents.

Scan for viruses

Click 'Virus & threat protection' and look under 'Virus and threat protection settings' for a button labelled 'Turn on'. If it's there, click it, so you're protected. Now click either the 'Quick scan' button or the 'Scan options' link below 'Current threats'. The former speaks for itself, but 'Scan options' lets you choose from full, custom and offline scans. 'Full scan' checks all the files and folders on your hard drive, which could take more than an hour, while 'Custom scan' lets you limit the folders it examines. 'Windows Defender Offline scan' is designed to deal with malware that's so deeply embedded in Windows it can't be removed while the operating system is running. Selecting this reboots your PC in a stripped-down security environment. Because Windows isn't active, your system files will be unlocked and visible to the scanner.

Make an exception

Antivirus software sometimes alerts you to a 'false positive' – something that it thinks could be a threat, but which is actually benign. In such instances, simply mark the 'threat' as safe and Defender will ignore it in future. If you accidentally clicked this and meant to quarantine the threat instead, you can undo your action by clicking the 'Allowed threats' link near the top of the 'Virus & threat protection' page. Now select the threat you mistakenly permitted and click 'Don't allow'.
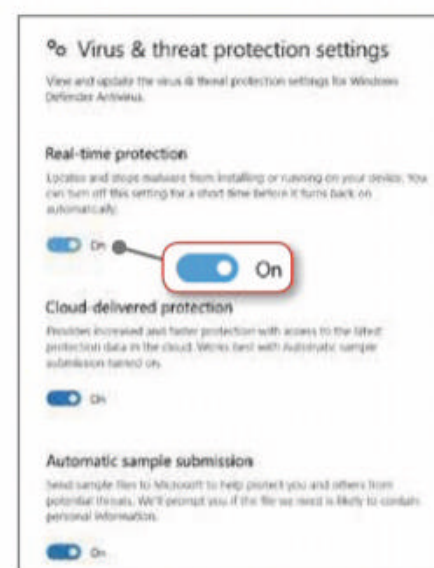
Disabling real-time protection can leave you exposed to malware
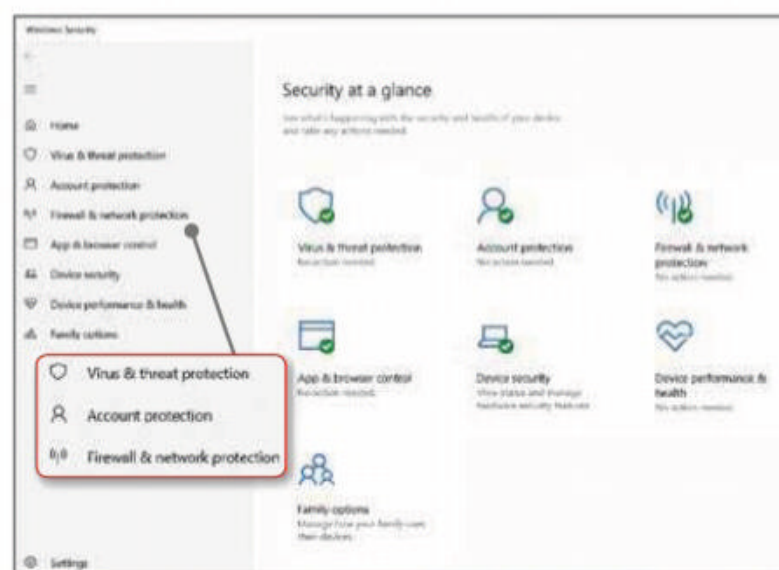
Windows Defender's security dashboard includes antivirus, malware protection and more
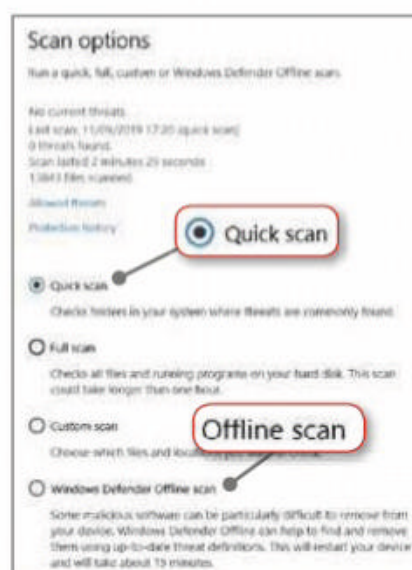
Use Defender's offline scan for stubborn infections

By default, Windows protects your Pictures, Documents, Videos, Music and Desktop folders, but you can supplement these by clicking 'Protected folders' and, on the following screen, clicking '+ Add a protected folder'.
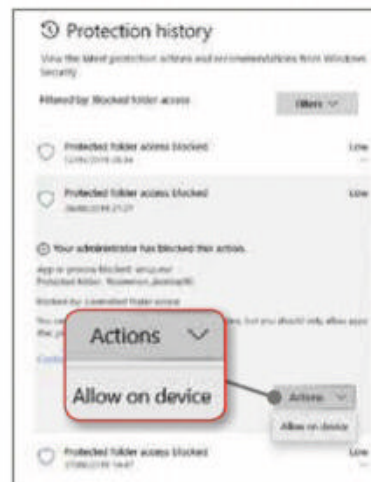
To remove a folder you added, click its name, followed by the Remove button. You can't remove protection from the folders included by default.

Allow a program access

Windows warns you when a program tries to access a protected folder. Click the warning to see what triggered it and, if you want to authorise the action, click its name in the list of warnings followed by 'Allow access'.

You can authorise programs without waiting for an alert by clicking 'Allow an app through controlled folder access'. Click '+ Add an allowed app' followed by 'Browse all apps', then navigate to the program you want to authorise and click Open.

If Defender blocks access to a protected folder, you can authorise programs on a case-by-case basis

Protect your network connection

Inbound security threats may arrive via remote computers but outbound threats can come from your own PC, too. Windows Firewall blocks both, as long as it's properly configured. Click 'Firewall & network protection' and you'll see the firewall protects you at the 'domain', 'private' and 'public' network levels. Domain is primarily relevant to business, but private and public are your local network and internet respectively. If the line below any of the three networks says 'Firewall is off', click the accompanying 'Turn on' button.

If the firewall is blocking an application from accessing the internet, permit it by clicking 'Allow an app through firewall', which opens a Control Panel window. Here, click 'Change settings' followed by 'Allow another app...'. Click Browse and navigate to

Protection for our private network isn't active. Click 'Turn on' to fix this

the program you want to unlock, then select it and click Add. Only do this for programs you trust and not just because a pop-up asked you to grant access to software you don't recognise, because this could be malware trying to phone home.

Adding firewall rules

The firewall works by checking every bit and byte of data against a set of rules that authorise or block each item from coming into or leaving your PC. To define your own rules, click 'Advanced settings' to open a sidebar of the advanced interface and click either 'Inbound Rules' to control data coming into your computer or 'Outbound Rules' to manage data heading out to the network and Internet.

You can tweak the settings for programs or the 'ports' through which specific traffic, such as web pages, email and internet telephony pass. In this instance, we're going to block port

You can temporarily disable Windows Defender's antivirus engine if it's stopping you installing or running an application. To do so, click 'Manage settings' beneath 'Virus & threat protection settings', then click the 'Real-time protection' switch so it slides to the left. Don't forget to re-enable antivirus once you've performed the operation it was blocking.

Add ransomware protection

Ransomware encrypts part or all of your hard drive, then holds your files hostage by popping up an on-screen demand for payment, often in a digital currency, such as Bitcoin. In return for the payment, ransomware makers claim they'll provide you with the keys to unlock your file, but there's no guarantee that giving in to these demands will get your data back, and you could end up both out of pocket and out of luck.

Windows Defender can stop malicious programs meddling with folders commonly targeted by ransomware. Open 'Virus & threat protection' and click the link beneath 'Ransomware protection', followed by the switch below 'Controlled folder access'.
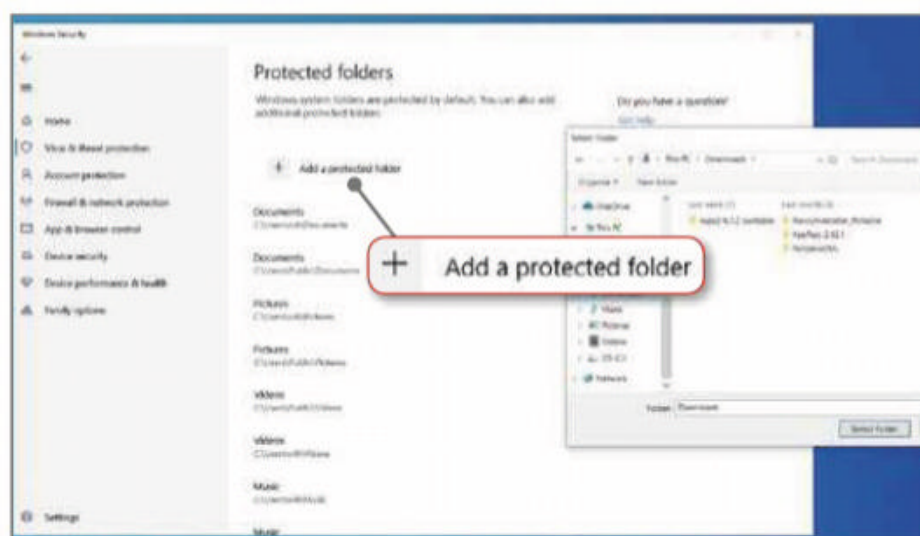
Add and remove as many folders as you like to the ransomware protection tool. The default folders can't be removed
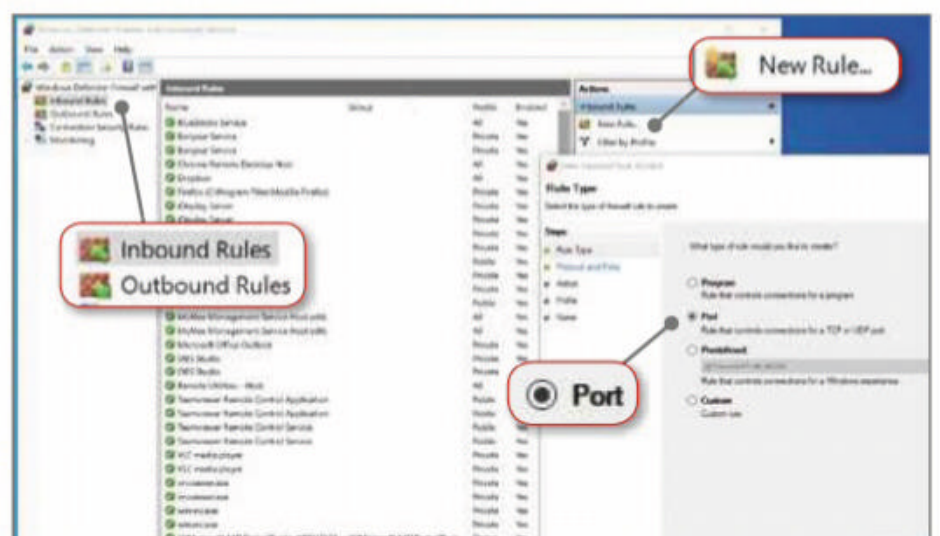
Behind the scenes, the Windows Firewall provides lots of control over the flow of data into and out of your computer

Windows Defender tips

21, which manages file transfers (FTP). Make sure 'Inbound rule' is selected and, in the right-hand sidebar, click 'New rule…'. Select Port and click Next, then type 21 in the 'Specific local ports' box. On the following page, click 'Block the connection', then click Next twice and give the rule a memorable name, such as 'Block incoming FTP connection attempts'. Click Finish to implement the rule.

Check software and code

Even without internet access, malicious code can still cause serious harm, so make sure Windows is watching out for anything suspicious. Click 'App & browser control' and make sure that all three settings on the page are set to warn. Windows will then pop up alerts if you try to install software sourced from outside the Microsoft Store or visit questionable sites using Edge, or if Microsoft Store software downloads dangerous data from the web. Unfortunately, SmartScreen web protection is ineffective if you're using any browser other than Edge, but Chrome and Firefox both have their own built-in alternatives.

You can also stop any software Microsoft doesn't recognise by clicking Block beneath 'Check apps and files'. This doesn't limit you to shopping in the Microsoft Store – rather, it spares you having to make a judgement call because trusted developers' products will still install without any problems.

Defender protects from potential threats, even if they are already on your hard drive

Run a health check

Defender is a native Windows component, so it's familiar with how your system should – and shouldn't – be running, which makes it best-placed to spot glitches before they become a problem. Click 'Device performance & health', and check that each of the four categories under 'Health report' has a green tick. If any show a yellow warning triangle, click them for a description of the problem and a link to resources that will fix it.

Note the 'Fresh start' section at the bottom of this page. If you're battling a stubborn problem you simply can't fix, this could be your last line of defence. Fresh start installs a copy of the latest version of Windows in its factory-fresh condition. While Microsoft promises to retain your data and some of your settings, we'd still recommend making a backup first – and to put aside time for it to complete. Fresh start installs the latest version of Windows, not the
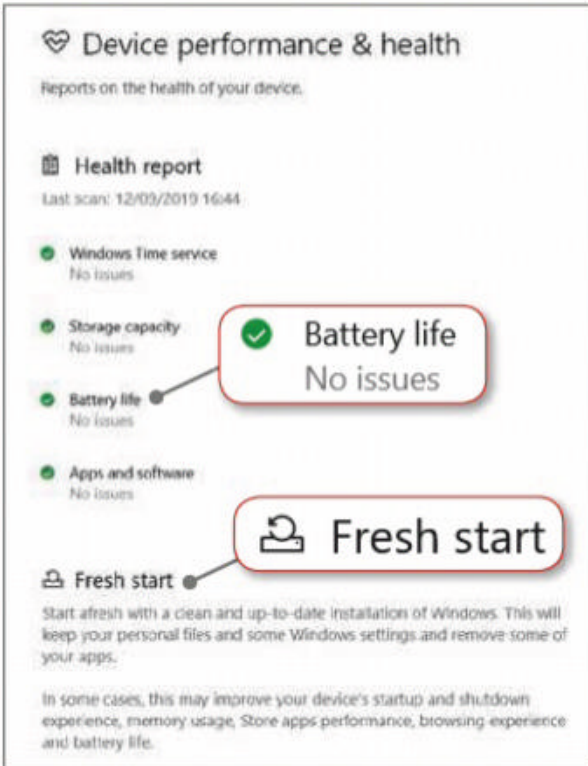
Defender is perfectly placed to know exactly what constitutes a problem

version stored on your PC's recovery partition, so it needs to download several gigabytes of data.

Protect your family

Clicking 'Family options' lets you monitor what children in your household see and do online, and how long they spend on their devices. There are no controls on this pane – just two links that send you to the web. The second of these – 'View devices' – lets you remotely check that every device enrolled on your Microsoft account,
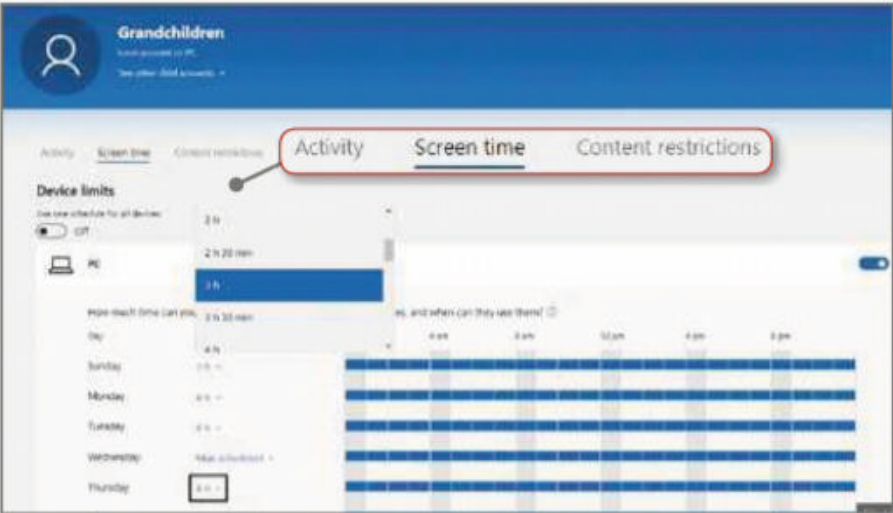
Restrict the kind of content younger users can access and limit their daily computer use

whether it's yours or a child's, is fully patched. The one above it – 'View family settings' – is of more interest because it gives you greater control over how a child's account can be used.

You'll first need to define which accounts are for younger users. On the machine you want to control (which may be different from the machine you're using yourself), open Settings and click Accounts followed by 'Family & other people'. Click 'Add a family member' followed by 'Add a child' and provide an email address to which they have access.

This account will now be tied to your own Microsoft account. Click 'View family settings' in Windows Defender's dashboard on your PC, then use the Activity, 'Screen time' and 'Content restrictions' tabs in the browser interface to see what your child account holders have been up to, dictate when they can log into their PC and specify what kind of age-rated content will be restricted. ∎
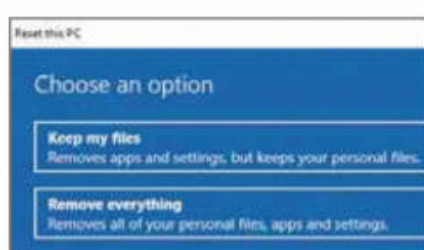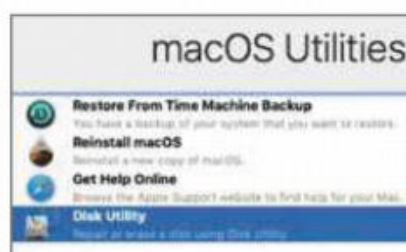
FACTORY-RESET
ANY DEVICE

Restoring a device to factory settings can fix performance problems, and wipes data before you sell or recycle. **Robert Irvine** explains how

WINDOWS

In Windows 10, open the Settings app, select 'Update & Security', Recovery and click the 'Get started' button under 'Reset this PC'. Choose whether to 'Keep my files' (but remove apps and settings') or 'Remove everything' – for a proper reset, select the latter. Next, select whether to fully clean the drive to securely overwrite all the data (this can take several hours), then click Reset.

ANDROID

Exact instructions vary between manufacturers, but on most Android devices, open the Settings app and tap System, Advanced, 'Reset options'. Select 'Erase all data (factory reset)' and you'll be told exactly what (non-synced) data you'll lose by resetting. Press Reset Phone to continue.

iOS

On an iPhone or iPad, open Settings and tap General, Reset, 'Erase All Content and Settings'. Confirm that you really want to reset your device, and enter your Apple ID or device passcode. You can also reset via iTunes by connecting your iPhone or iPad to your computer and choosing Restore [device].

macOS

Restart your Mac and hold down the Command+R keys as it boots. When the macOS Utilities window appears, select Disk Utility, Continue, then choose the drive you want to wipe and click Erase. Next, click Reinstall macOS and follow the instructions to get a fresh version of the OS.

CHROMEBOOK

Open your Chromebook's Settings by clicking the clock, then the cog, in the bottom-right corner. Choose Advanced and scroll to the bottom of the page, then click the Powerwash button and restart your Chromebook when prompted. Choose to continue with Powerwash to reset your device and erase all your data. You'll need to sign into your Google account to start afresh.

KINDLE

On the home screen, open the menu in the top-right corner and choose Settings. Open the menu again and select Reset Device or 'Reset to Factory Defaults', depending on your Kindle model, then choose Yes to confirm. Ebooks you've bought from Amazon are stored in the cloud, so you can download them again.
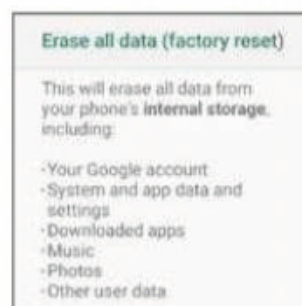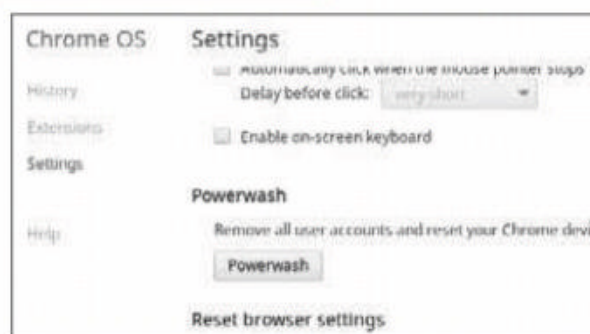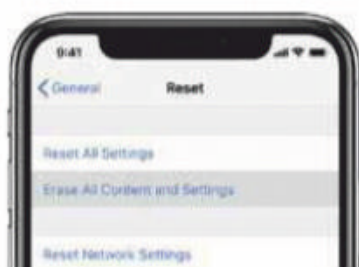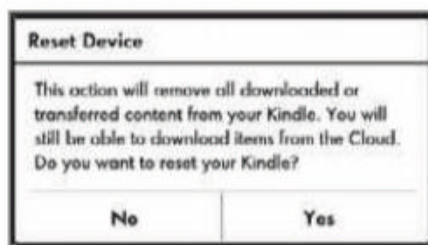
GOOGLE HOME

To reset a standard Google Home, press and hold the mute-microphone button on the back for about 15 seconds. Google Assistant will confirm that it's resetting. On a Home Mini, hold down the factory-reset button on the bottom of the device for 15 seconds; and on a Home Hub, press both volume buttons on the back for about 10 seconds. You can't use your voice or the Home app to reset Google's smart speakers.

AMAZON ECHO

To wipe all data and settings from Amazon's Echo, Echo Plus and Echo Dot smart speakers, press and hold the mute-microphone and volume-down buttons for 20 seconds until the ring glows orange. On an Echo show, swipe down from the top of the screen, tap Settings, Device Options and select 'Reset to Factory Defaults'. ■
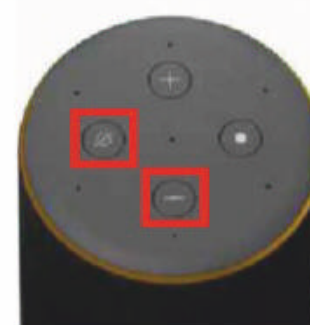
BACK UP FIRST!

You can't undo a factory reset, so before you follow the steps we've provided, make sure you've backed up any data you want to keep, including documents, photos, videos, contacts and passwords, either to the cloud or a storage device such as a USB stick or SD card. Apps you've installed from an app store should re-download automatically following a reset, but it's worth making a note of them – just in case.

Try new features in Thunderbird 68

Thunderbird, Mozilla's free email software, has been updated with a wealth of improvements. Here's what's new and how to get started

**Thunderbird: www.thunderbird.net** | ⏱ **10 mins** | 🪟 **7+** 🍎 **10.9+** 🐧

Webmail services such as Gmail offer the convenience of accessing your email from anywhere, but there are some key advantages to using PC-based email software such as Thunderbird. You can read messages and open attachments on your PC when you're offline, and the number of emails you keep is limited only by the size of your hard drive. Thunderbird also lets you collate multiple email accounts in one place.

Thunderbird 68 introduces several features and improvements, including new menus, an improved dark mode and better attachment handling. You can now 'detach' attachments, and save them for quick future access.

1 To add a new email account to Thunderbird, enter your name, email address and password. **1** Thunderbird attempts to configure everything automatically. Check that all the details are correct and click Done. **2** If they're not, click the 'Manual config' button **3** and fill in the server settings yourself.
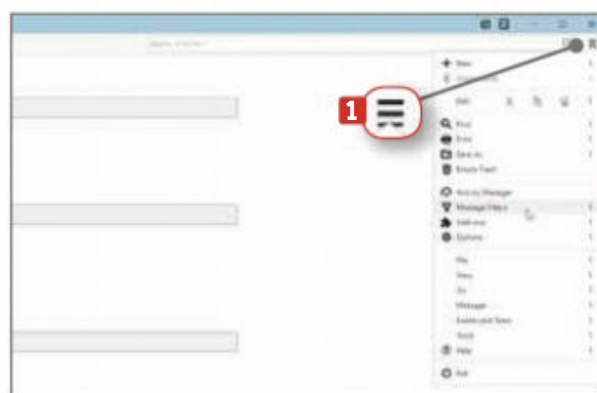
2 The App Menu has been given a major makeover in this build. Click the menu button **1** to display all the options in a single pane. Click any of the items, such as Message Filters, Options or Tools to open the sub-menu, which slides into view.
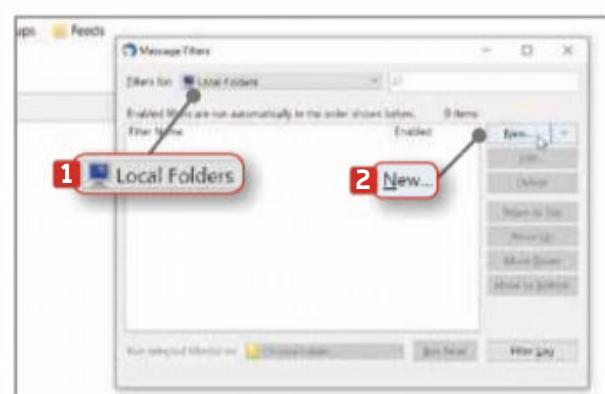
3 The new version introduces the ability to run filters periodically, and has improved filter logging. Click the menu button and select Message Filters. Choose the email address to search in the drop-down box or just select Folders. **1** Click the New button. **2**
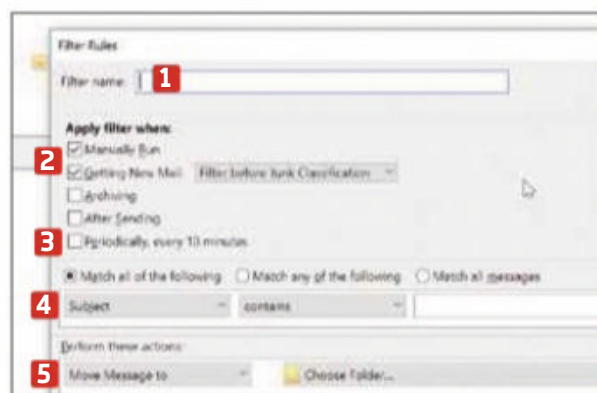
4 In the new window that opens, give the filter a name. **1** You can choose when the filter should be applied – Manually and Getting New Mail are selected by default. **2** You can now also choose 'Periodically, every 10 minutes'. **3** Choose what to search for **4** and the actions to perform. **5**
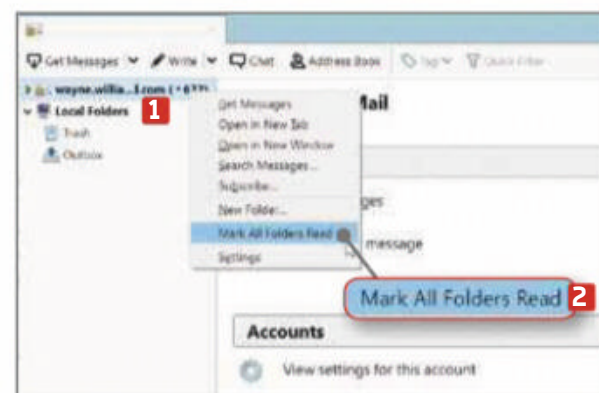
5 You can now mark all the folders of an account as read in one go, instead of having to tackle each one in turn. To do this, right-click your email account in the left-hand panel **1** and select Mark All Folders Read. **2** A dialogue appears asking you to confirm the action.

CALENDAR TAB
Click this button to open Thunderbird's built-in calendar in a new tab. This update includes past and future time-zone changes

DARK THEME
Thunderbird 68 has an improved dark theme. Enable this by clicking the menu button and going to Add-ons, Add-ons and clicking Themes on the left

ATTACHMENTS
View all your detached attachments here. Thunderbird lets you add them to new messages with ease

FULL COLOUR SUPPORT
Thunderbird now lets you change the colour of text (or tags) in your emails to any hue you like

6 Click the menu button, select Options, then click Options again. Thunderbird's preferences open in a new tab **1** (an improvement from previous versions, where it opened in a separate window), providing easy access to your program settings. You can switch back to your email tab **2** when you're done.
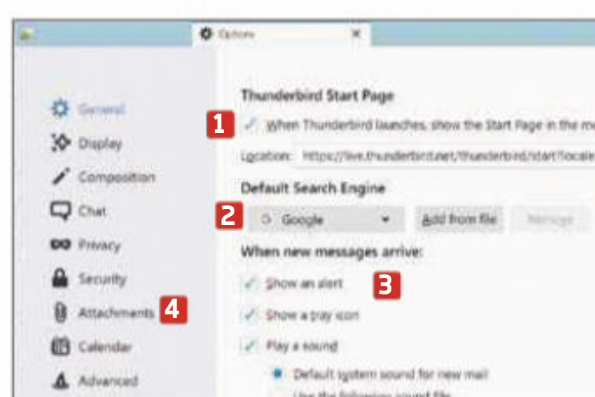
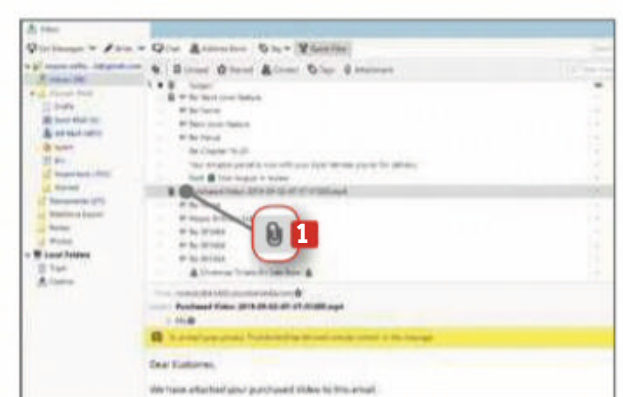**7** The General options let you disable the Thunderbird Start Page, **1** change the default search engine **2** and choose what should happen when new messages arrive. **3** The Attachments section **4** lets you add WeTransfer, for sending larger files to contacts. This no longer requires a WeTransfer account.

8 You can now detach attachments from emails. Right-click an attachment **1** and select Detach. You can save the attachment in any folder on your PC. A link to the detached file appears in place of the actual attachment in the message, so you can still open it as you would normally.

Control all your cloud-storage services in one place

MultCloud: www.multcloud.com | 🕐 **20 mins** | **Any browser**

Most of us have unused reserves of free cloud-storage spread over different services and accounts, as new services and tools have tempted us away from old favourites. While you may have one service that you use more than the others, such as Google Drive or OneDrive, you've probably got plenty more space sitting around in these dormant accounts.
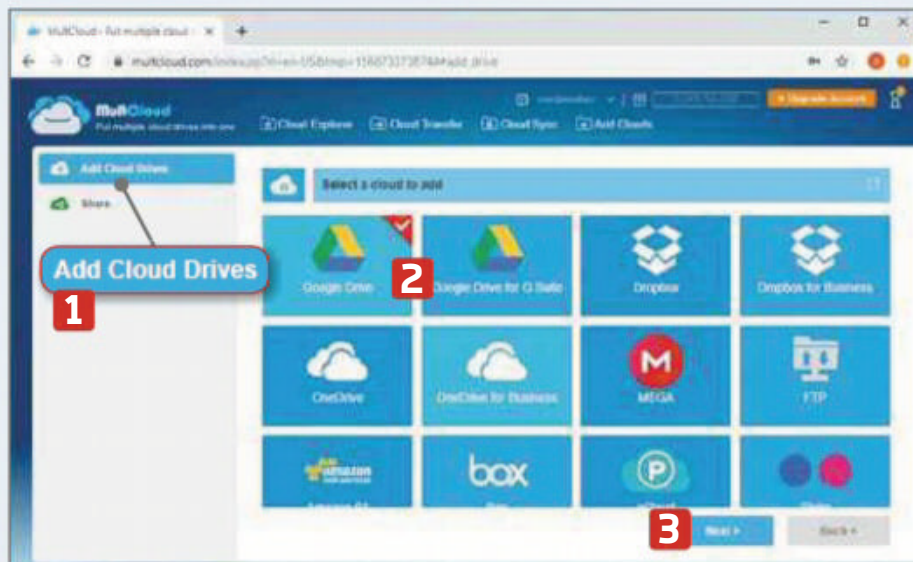
MultCloud is a convenient way of bringing your unused cloud storage together in one interface. With a single login, you can move files from one cloud service to another, without first having to download them to your PC. MultCloud can also encrypt your files to keep them private and share them between your accounts, whichever service they're stored on.
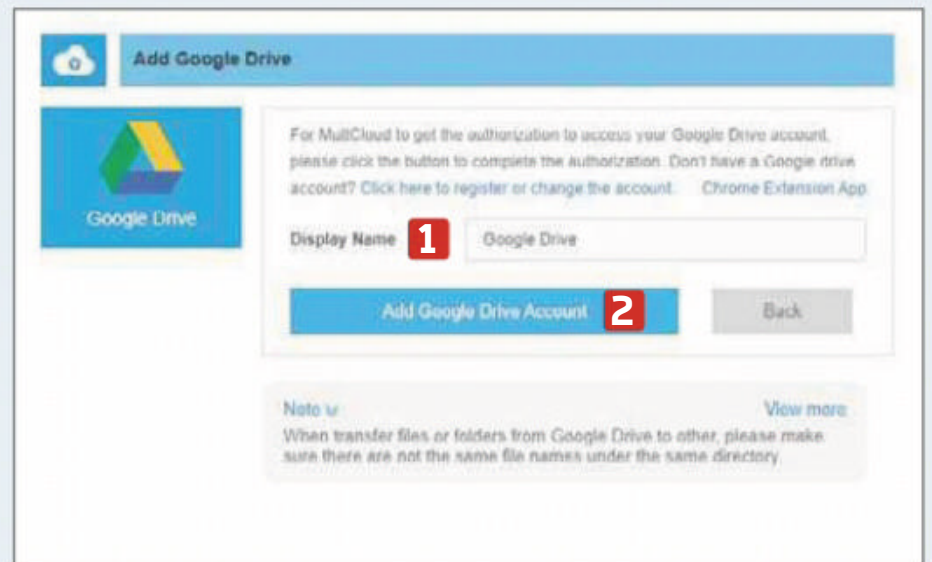
1 Create an account with MultCloud and sign in. To connect your cloud services, click Add Cloud Drives. **1** Browse the tiles displaying the various cloud services **2** and click the one you want to add first, then click Next. **3**

2 Choose the Display Name **1** (the default should be fine) and click the button to add the account. **2** You'll need to enter your username and password for the service, and grant MultCloud permission to access and make changes to your files.
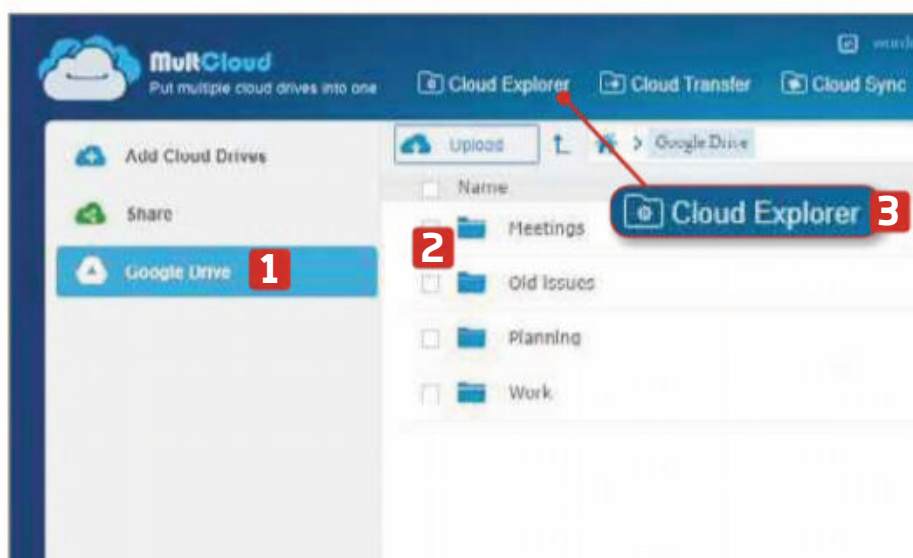
3 Your newly added cloud service appears in the left-hand panel. **1** Click it to display any files and folders it contains in the main window. **2** This is the Cloud Explorer section. **3** You can single-click a file or folder to highlight it or double-click a folder to open it. Double-clicking a file displays information about it.
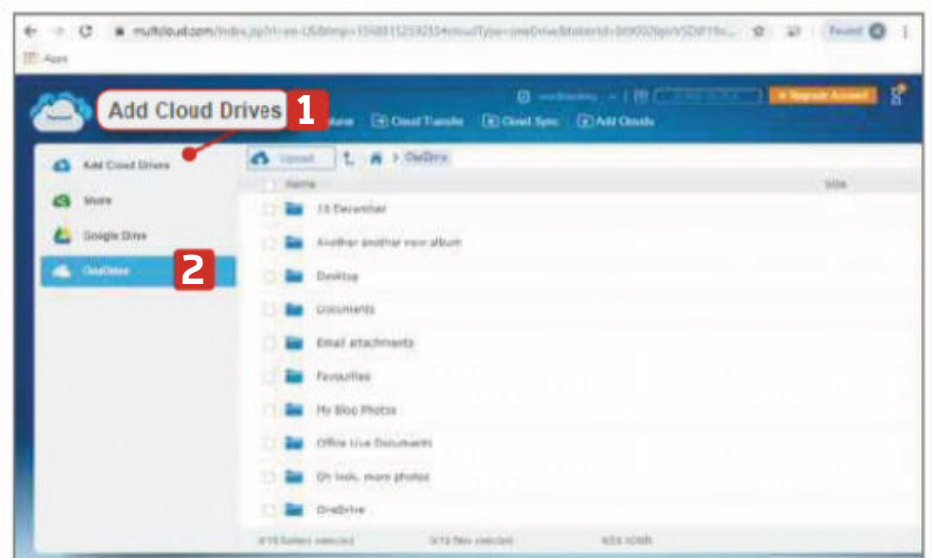
4 Add a second cloud account so you can start experimenting by connecting the two services. Click Add Cloud Drives **1** and select another account, as you did in Step 1. Each one you add will be listed on the left. **2** Click their names to switch between them.
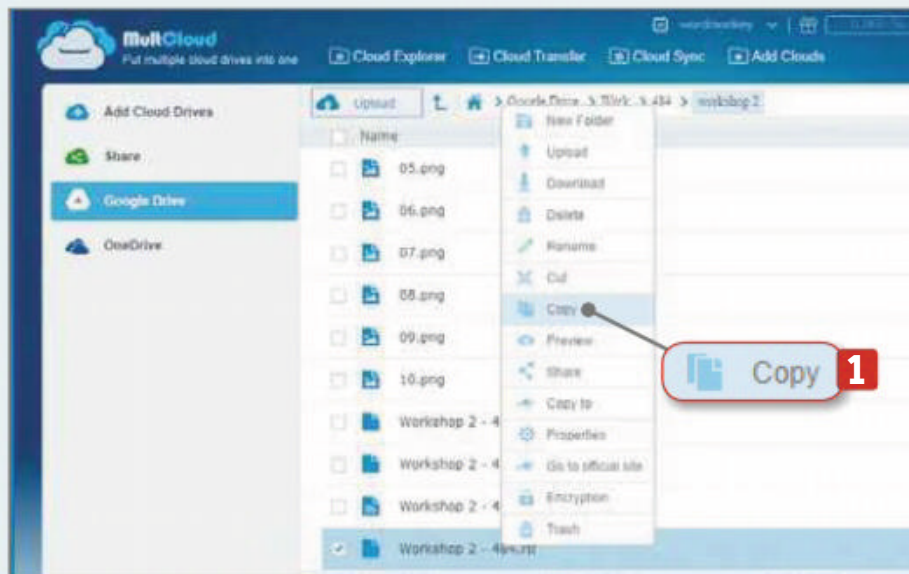
5 The easiest way to transfer a file from one service to another is to use the internal clipboard. Find the file you want to transfer, right-click it and choose Copy. **1** Now, go to the folder you want to place it in, right-click an empty space and choose Paste. The file is transferred to the new location as if you were copying and pasting in Windows.
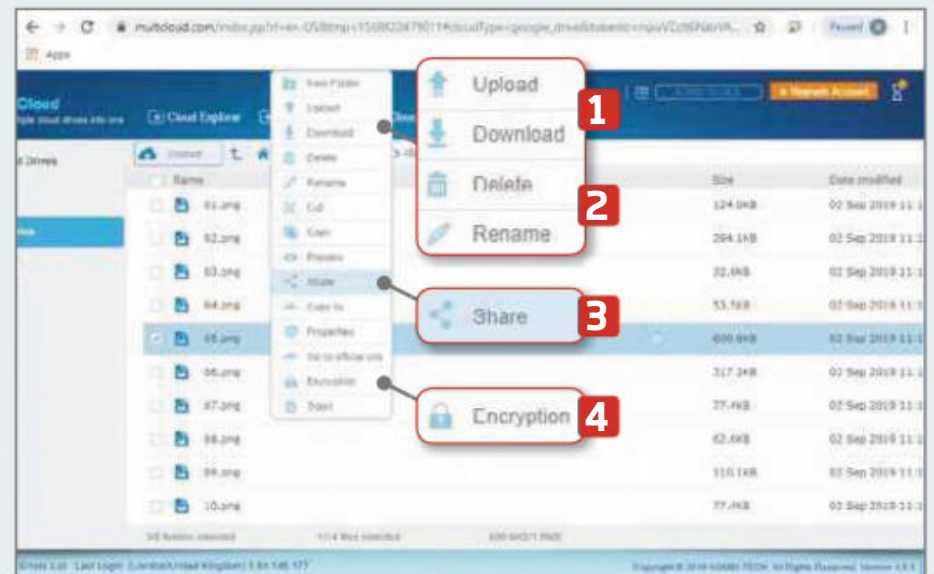
6 There's a range of other actions you can perform from this menu, including uploading files to the current folder, downloading a file to your PC, **1** renaming a file and deleting it. **2** You can also share files with others by clicking Share, **3** then picking one of the options. For an extra layer of security, you could encrypt your files. **4**
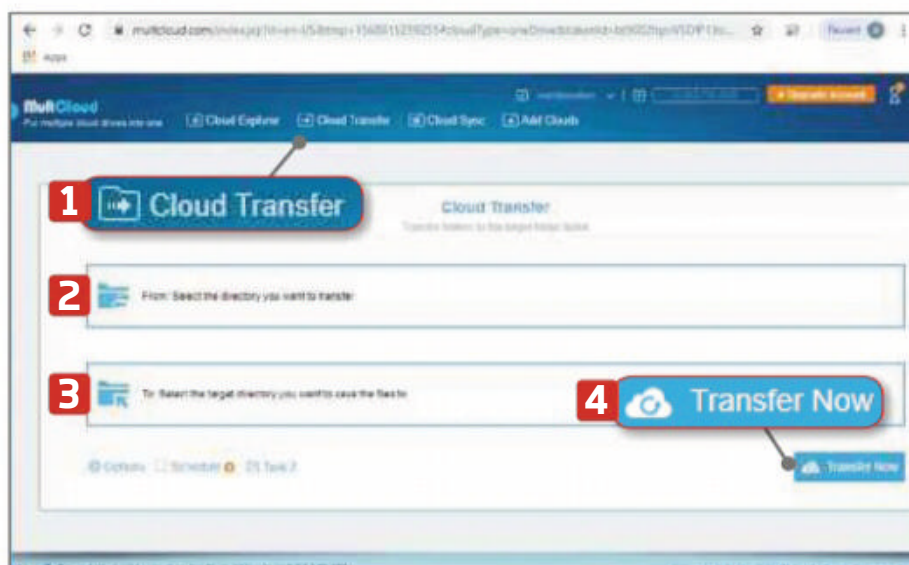
7 To transfer an entire folder, use the Cloud Transfer option. **1** Click the From box **2** to choose the source folder. If there's more than one, tick the Multi-selection box. Click the To box **3** to choose the folder to send it to. If you want to create a new folder for this, click the white folder on the right of the selected destination. Click Transfer Now. **4**
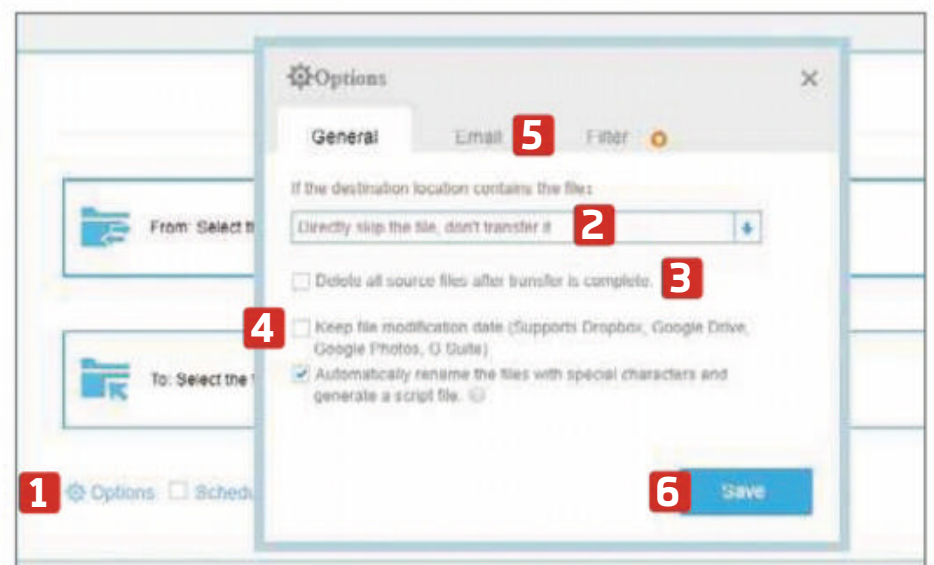
8 For more control over your transfers, click the Options link. **1** Here, you can choose what happens if a file of the same name already exists in the destination, **2** whether you want to remove all the original files after you've transferred them **3** and manage how the file is dated. **4** The Email tab **5** sends a message when a job has been completed. Click Save. **6**
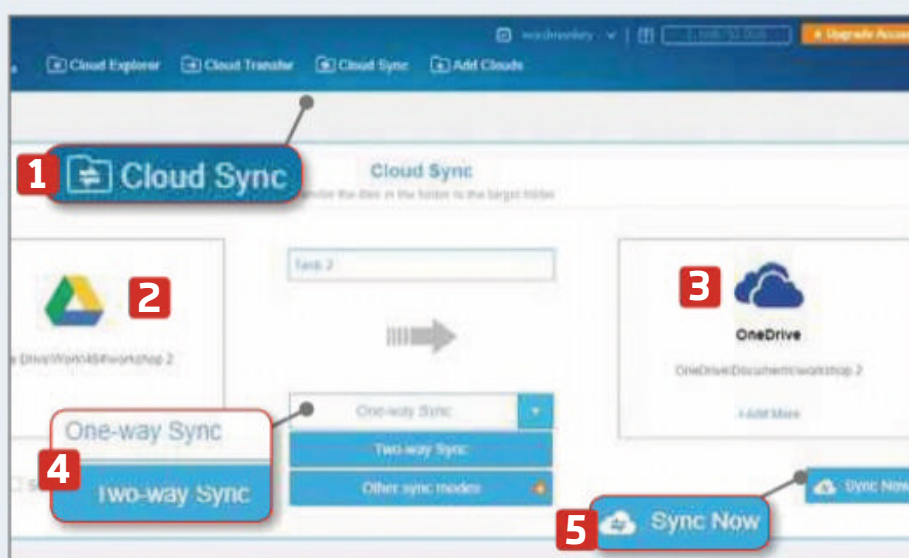
9 There's also a sync option, so you can keep one cloud folder updated with changes that happen in another. Click Cloud Sync **1** and choose the source **2** and destination **3** folders. You can choose between a one-way or two-way sync. **4** Use the Options to fine-tune the sync, then click Sync Now. **5**
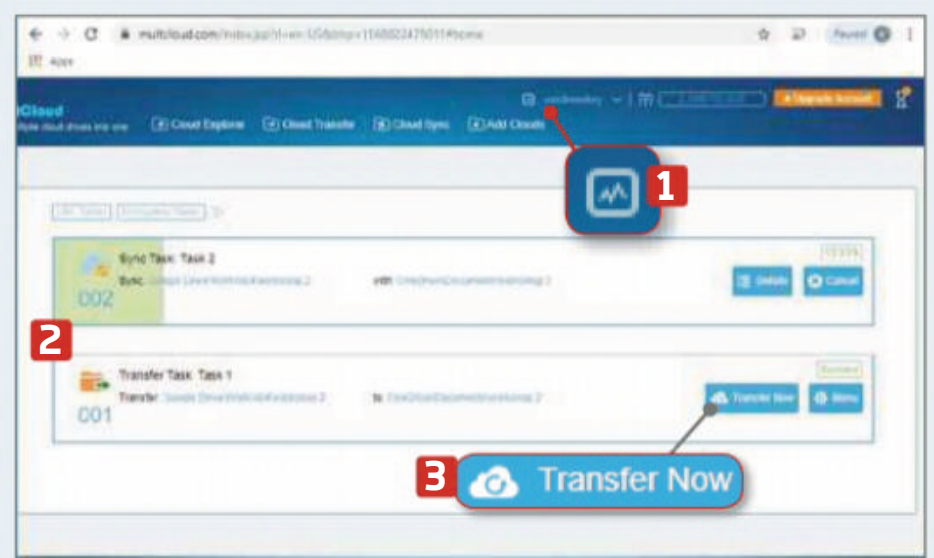
10 If you need to carry out the same job twice, click the Task Manager icon. **1** This opens a list of your previously completed tasks. **2** To repeat a job, click its Transfer Now button. **3**

Explore Microsoft's new PowerToys

Remember Windows PowerToys? These brilliant freeware tools, which first appeared with Windows 95, were developed by Microsoft so that advanced users could tweak and customise the operating system. Well, now they've made a welcome and long-overdue return. We've only got two so far, available as a preview on GitHub (bit.ly/dlpt485), but there are more on the way.

PowerToys preview: bit.ly/power485 | 🕙 **10 mins** | ⊞ **Windows 10**
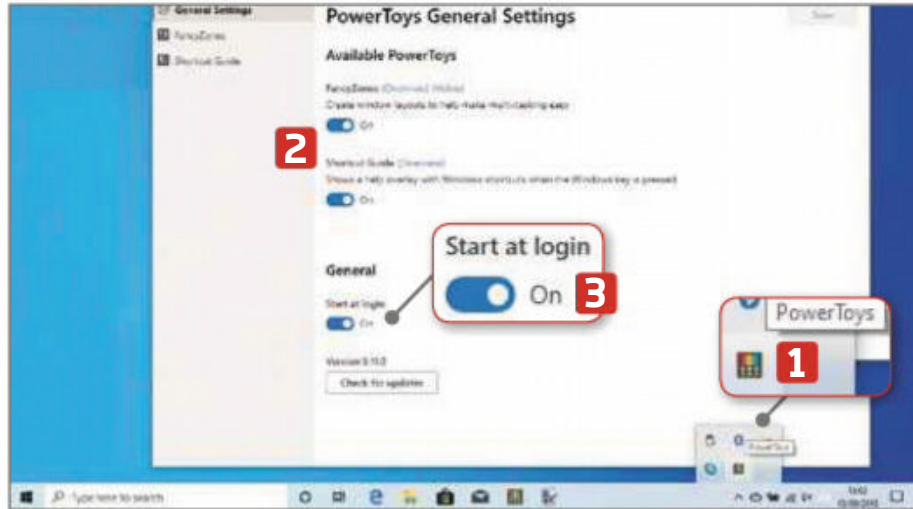
1 The PowerToys app can be run on startup or you can launch it from the Start menu. Click the icon in the notification area **1** to open the PowerToys window. You can choose to have either or both of the PowerToys running, **2** and decide whether you want it to launch with Windows. **3**
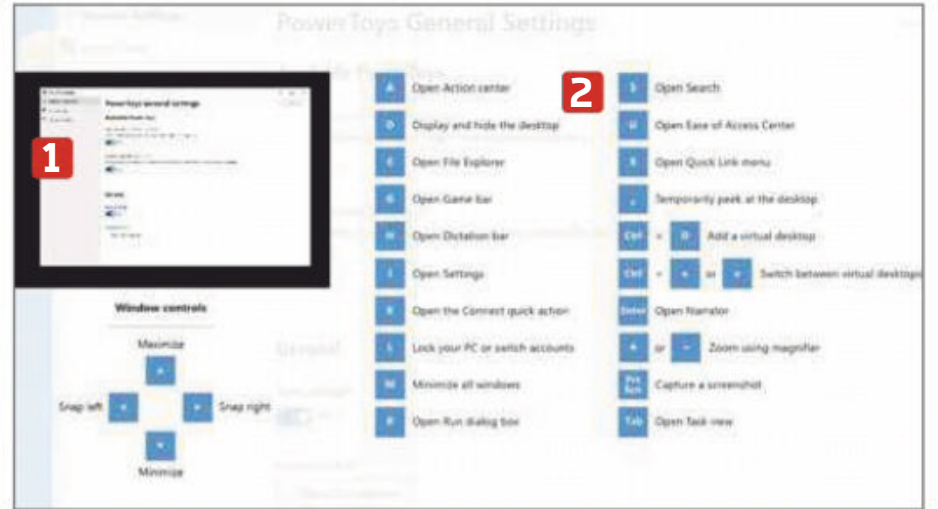
2 Of the two new PowerToys, Shortcut Guide is the simplest. All it does is open an on-screen guide to Windows shortcuts. Just press and hold the Windows key to shrink your current desktop to a thumbnail **1** and display the available keyboard shortcuts. **2**

3 To launch FancyZones, click the FancyZones settings, then the 'Edit zones' button. It displays a selection of layouts for organising the windows on your desktop. **1** Choose the number of panels you require **2** and pick a layout. **3** A template appears in the background. **4** Click Apply. **5**
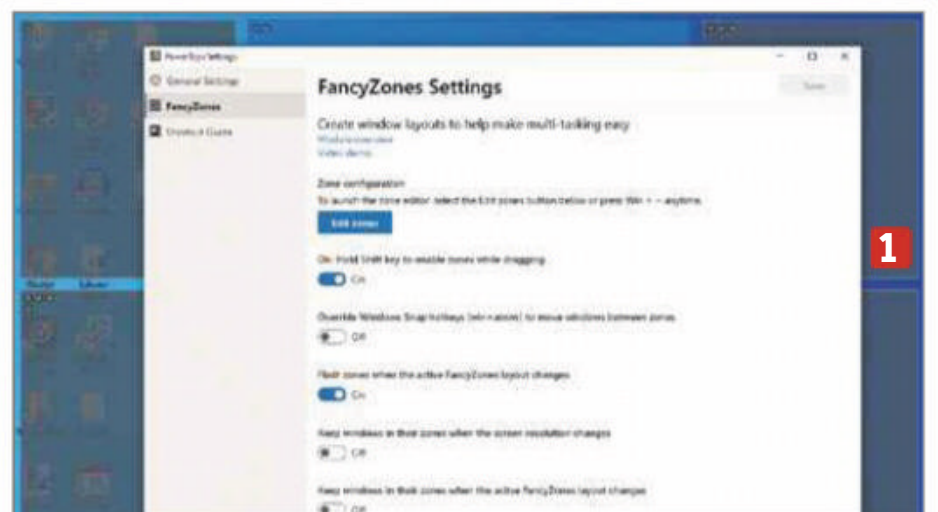
4 Use your mouse to pick up a program by its title bar, then hold down the Shift key and move it around the screen. The panels that you set up appear in the background. **1** Drop the window into one of the panels and and it will be resized automatically to fit the space.
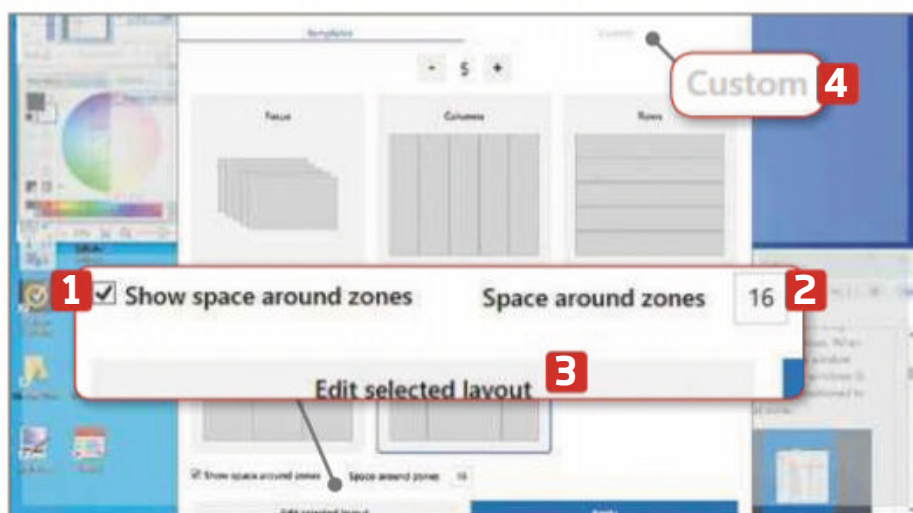
5 Back in 'Choose your layout', you can decide whether to have a border between your windows **1** and how many pixels the gap should be. **2** To configure your own layout, click 'Edit selected layout'. **3** When you've finished, the new layout will appear under the Custom tab. **4**
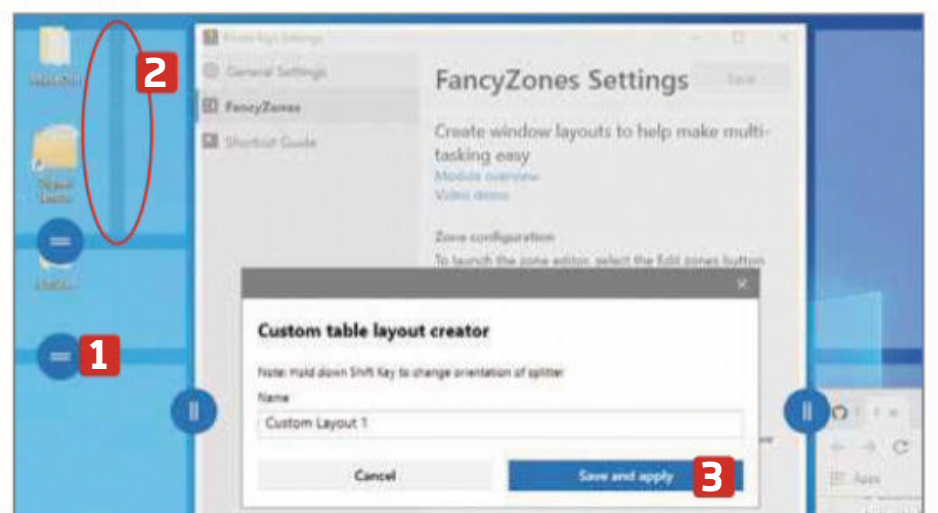
6 Drag the circles **1** around the screen to resize the sections. Hovering over an existing area brings up a new dividing line. **2** Position it where you like, then click to split the section along the line. When you've finished, give your new layout a name and click 'Save and apply'. **3**

Browse the web with Vivaldi for Android

It's finally here! After years on your desktop, Vivaldi has arrived on Android. We've found the app provides an impressive and speedy browser experience that brings many of Vivaldi's best features to your phone, alongside welcome Android-specific tricks. The browser is currently in beta, so although we didn't run into any problems, you should watch out for bugs and expect new features.

Vivaldi Browser Beta: bit.ly/vivaldi485 | 🕐 **10 mins** | 🤖 **Android 5.0 +**
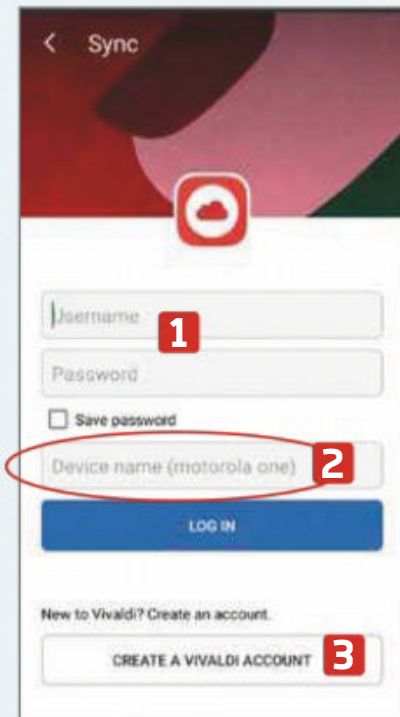
1 After opening the browser for the first time, sign in or create an account by tapping the V and selecting Settings. Tap Sync and enter your details, **1** including your device name, **2** or choose Create A Vivaldi Account. **3** Doing so lets you sync data between desktop and phone.
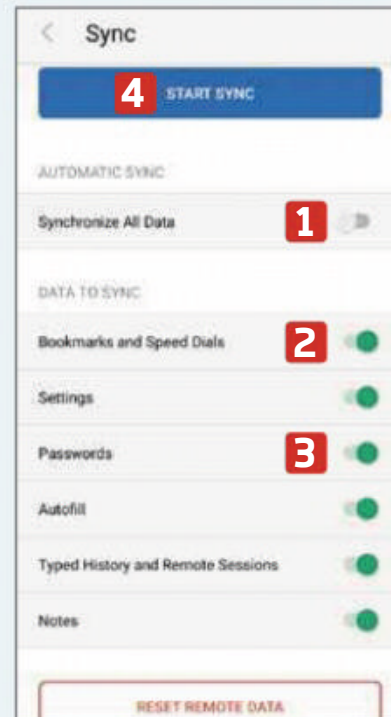
2 After signing in, you're prompted to create an Encryption Password, which lets you decrypt your existing Vivaldi data. Tap Continue to begin synchronisation. Vivaldi syncs all your data by default, **1** but you can toggle this option off to choose specific data, such as bookmarks **2** and passwords. **3** Tap Start Sync **4** to begin the process.
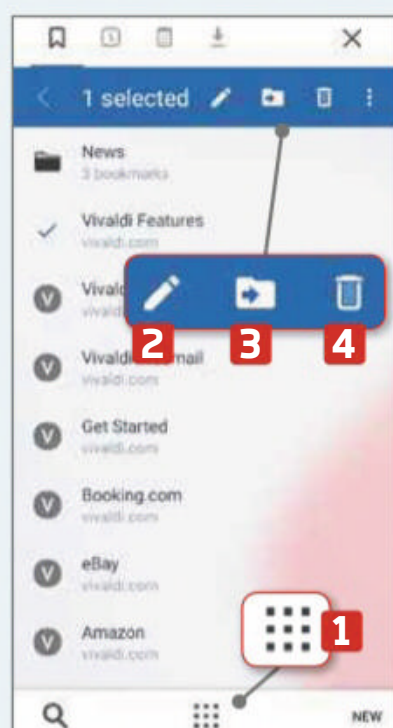
3 Like the desktop version, Android's Vivaldi supports Speed Dials. Add a site by tapping the plus sign, then enter the name and URL. Tap the tick to save it. To remove a site, tap the home screen's panel button, **1** open the Speed Dial folder, then press and hold a site to edit, **2** move **3** or delete it. **4**
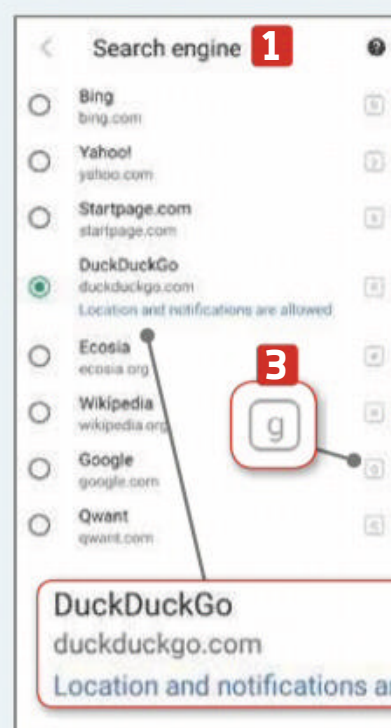
4 Vivaldi's search-engine nicknames have also come to Android. Popular search engines are assigned letters that can be viewed by pressing V, 'Search engine'. **1** Tapping a site lets you change its permissions. **2** The default is Bing, but you can switch by typing the corresponding letter in the address bar – such as g **3** for Google or d **4** for DuckDuckGo – followed by a space.
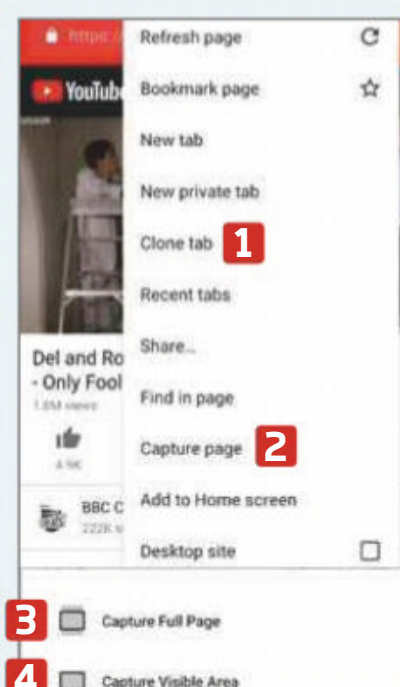
5 Visit a website and a couple of nifty options reveal themselves. Press the V and, alongside the usual browser options, you'll see the very useful 'Clone tab'. **1** Even more spectacular is 'Capture page'. **2** Select this, then choose Capture Full Page **3** or Capture Visible Area **4** to save a screenshot of the site.

6 Notes is another cool trick. Start writing notes by tapping the panel button. Swipe left twice or tap the Note icon, **1** then tap the Pencil. **2** After making a note, tap the tick **3** to save it or the trash can **4** to delete it. You can also highlight text on a webpage, then select 'Copy to note'.

Weekend Project

Get to grips with some serious tech tinkering to boost your computer and other devices

Build your own network-attached storage

There's no need to spend a fortune on a fancy new NAS drive. **Wayne Williams** explains how to build your own for free

NAS (network-attached storage) is a system made up of one or more hard drives that sits on your network and acts as a central repository for all your photos, videos, music and even backups. You can buy ready-made NAS devices that attach to your network, so you can access all your personal content from anywhere, but in this Weekend Project we show you how to make your own without spending a penny, using free software and items that you may already have lying around at home.

What you'll need

There are a number of programs you can use to create a NAS, or NAS-like system, such as Windows Storage Spaces, which comes as part of Windows 10, and FreeNAS (www.freenas.org). For this project, however, we'll be using Openmediavault (www.openmediavault .org), a NAS operating system based on Debian Linux, which comes with lots of great features. If you have a spare PC, you can install the Openmediavault software on it and use it as your server, but it can also be installed and run on a Raspberry Pi – you just need a sizeable USB memory stick connected to it for storage.

To install Openmediavault on an old PC, you need a USB memory stick, a copy of balenaEtcher (www.balena.io/

Boot Openmediavault from a USB stick to install it on an old PC
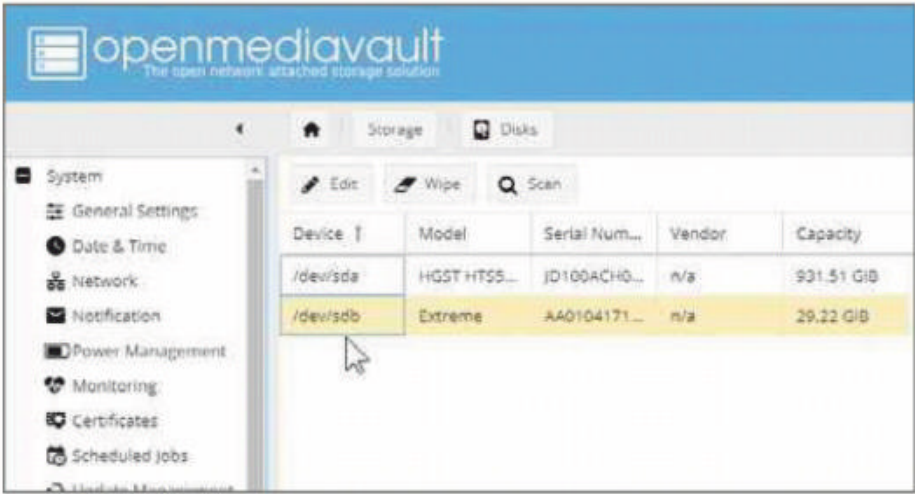
Hard drives you can set up on your device show up under Disks
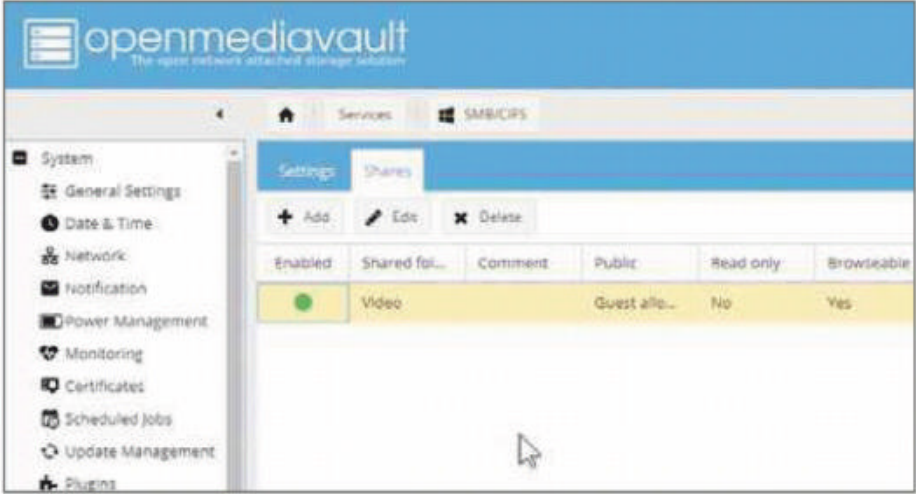
Add the folders that contain your data through the Shares section

etcher) and the ISO image of Openmediavault, which you can get from bit.ly/omvdl485. The latest stable version of the software, at the time of writing, is 4.1.22, but we're using version 5.0.5, which is still in development but solid enough for everyday use.

We show you how to install Openmediavault on an old PC in our Mini Workshop, below.
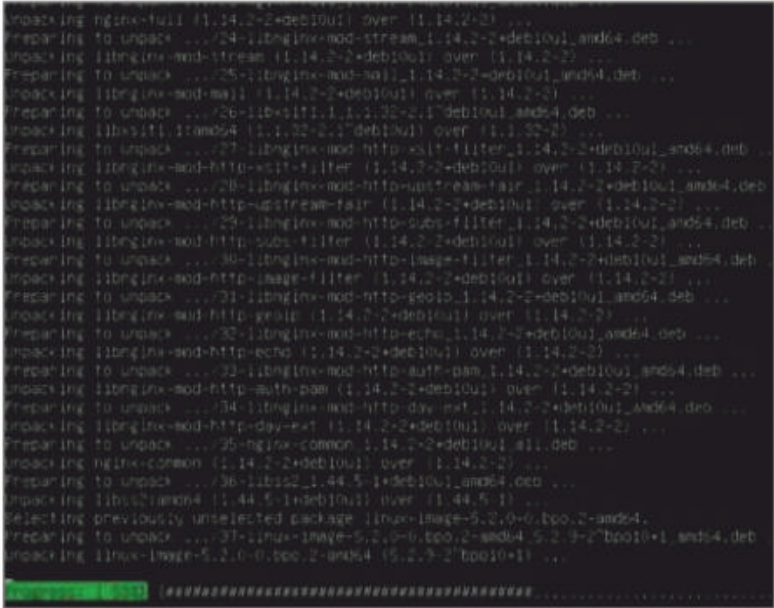
During installation you'll see a lot of text. Don't worry, you don't need to read it!

First steps with Openmediavault

Once you've installed Openmediavault, boot into the operating system and, when prompted, log in as `root`. Type in the password you created earlier (see Step 3 of our Mini Workshop, below) and, once you're logged in, type `apt update` and press Enter. This updates the software lists for your server. Next, type `apt upgrade` and press Enter to install any found updates. Type `Y` (for Yes) when asked if you want to continue, and the updates will be installed.

To finalise everything, click OK, then enter the following command:

`omv-confdbadm populate`

Enter the `ip addr` command to get the IP address. You will need this to log into the web interface.

We show you how to configure the software in our Mini Workshop on page 61.

Manage your storage and share folders

Click Disks to see the available hard drives. We have two – '/dev/sda' (which contains the system) and '/dev/sdb' (which we'll use for our data). Select the data drive and click Wipe. You can choose between Quick and Secure wipes but the latter takes significantly longer to complete. Next, click File System, then Create. Select the drive you just wiped under Device, give it a name and choose a file system. The default – EXT4 – should be fine. Click OK and Yes, then wait while it prepares the drive. Click Close, select the drive and click Mount.

Under Access Rights Management, click User, then Add, and create a user. Under Groups, you can choose which options you want. These include Audio, Games, SSH and Video. Click Save and apply the changes by clicking the button in the yellow bar at the top.

Next, click Shared Folders, then Add. Create some folders for your content (for audio and video files, for example), then click SMB/CIFS on the left, making sure the Workgroup is correct for your

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MINI WORKSHOP | Install Openmediavault on an old PC
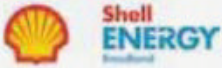
1 Go to Openmediavault's download page (bit.ly/omvdl485) and click the 5.0.5 folder. Click the link openmediavault_5.0.5-amd64.iso and save the file (it's a 551MB download). Open balenaEtcher, click 'Select image' **1** and navigate to the saved ISO. Click 'Select target', **2** choose your USB memory stick and click Flash. **3**

2 When that's done, disconnect your flash drive, plug it into the PC you're using as a server and boot from it. The Openmediavault boot menu loads. Select Install to launch the setup process. Select your language, location and keyboard language. Choose the network adapter to use if prompted. Name your server. **1**

3 Enter a password twice, then select the drive where the OS will be installed. The storage is formatted and the installation continues. When it's finished, select a mirror of the Debian package archive. **1** It installs the boot loader as the final step. Unplug your USB memory stick and reboot.

Broadband Deals

	Provider	Package name	Monthly price	Contract length	Broadband speed	Allowance	First-year cost*
							CHEAPEST
1	**TalkTalk** For Everyone	**TalkTalk: Fast Broadband**	**£19.95** (£30 after 18 months)	**18** months	**11Mbps** avg. speed	∞ unlimited	**£239.40**
2	**Shell ENERGY** Broadband	**Shell Energy: Fast Broadband**	**£19.99**	**18** months	**11Mbps** avg. speed	∞ unlimited	**£239.88**
3	**sky**	**Sky: Broadband Essential**	**£20.00** (£25 after 18 months)	**18** months	**11Mbps** avg. speed	∞ unlimited *	**£240.00**
4	**Virgin media**	**Virgin Media: Big Bundle + Fibre Broadband + Weekend Calls**	**£30.00** (£54 after 12 months)	**12** months	**54Mbps** avg. speed	∞ unlimited	**£360.00**

Terms & Conditions apply - see ISP sites for details
* Fair-usage or restriction policy applies.

Data supplied by www.broadbandgenie.co.uk. Correct as of 16 September 2019.
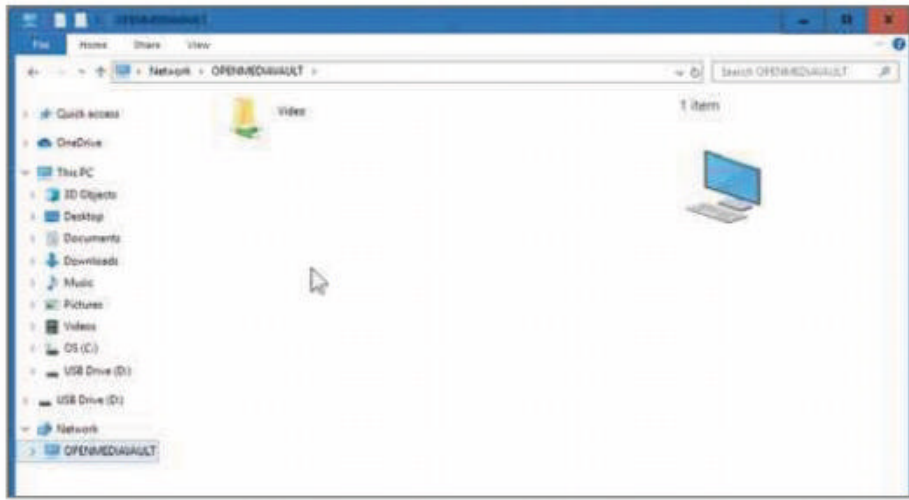
You can access your shared folders directly in File Explorer on any computer on the network
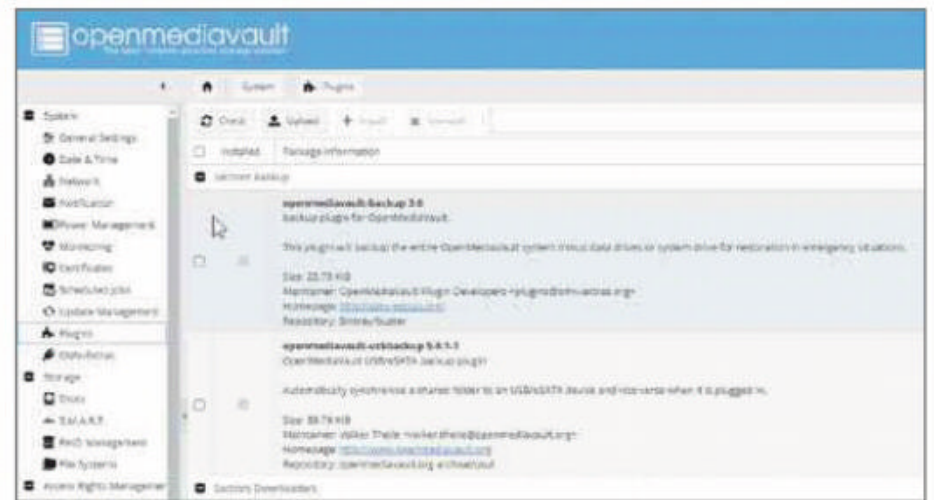
Expand Openmediavault's capabilities by downloading and installing plugins

network. Click Enable, then save and apply it. Now click Shares at the top, and Add. Enter the shared folder name and enable any required settings. Make sure 'Enable permission inheritance' is toggled on, then save and apply the changes. You will now be able to access the folders you created through the Network section in Windows File Explorer.

Add plugins to Openmediavault

Openmediavault supports plugins, so you can add extra tools to the software. Click Plugins in the left-hand sidebar and install any that take your fancy. There are (at the time of writing) only nine plugins available, but you can add more.

Open a new browser tab and go to omv-extras.org. Click Guides to see the steps required to install the omv-extras plugin. There's no link for OMV 5x but you can get the file from GitHub (bit.ly/omvpl485). The downloaded file can be

installed via the Plugins section in the web interface. Click the Upload button, then click Browse and locate the saved '.deb' file. Click OK. Once uploaded, the new plugin is listed, though you may need to refresh the page. Select it and click Install. You're prompted to reload the Dashboard afterwards.

A new OMV-Extras section appears in the sidebar. Select this and, under General Settings, enable the Testing and Extras repos (you can also install and enable Docker and Portainer if you wish). Check for new plugins and you're presented with a much longer list. The backup and downloader plugins are well worth enabling.

Install Openmediavault on a Raspberry Pi

The Raspberry Pi is a very affordable, highly flexible, barebones computer. If you have one, you can install

Openmediavault on it because the software is based on Debian Linux, which is the same operating system that Raspbian – the Pi's main OS – is also built on. You can then connect a USB drive to the Pi for your storage.

There are dedicated Pi images (for Openmediavault 4, at the time of writing) available to download from SourceForge (bit.ly/ompi485). Save the '.img.xz' image file to your hard drive, then write it to an SD Card using balenaEtcher. Slot the SD Card into your Pi and boot into it. It takes a while to finalise the process, so be patient. When you've gone through the setup, attach your storage and connect to your network.

The website says that the image file is compatible with Raspberry Pi 2B, 3B and 3B+, but we've tried it with the Raspberry Pi 4 and it worked just fine. Make sure you use the OMV_4_Raspberry_Pi_2_3_3Plus_4.img.xz (or newer) file. ■

MINI WORKSHOP | Configure Openmediavault's essential settings
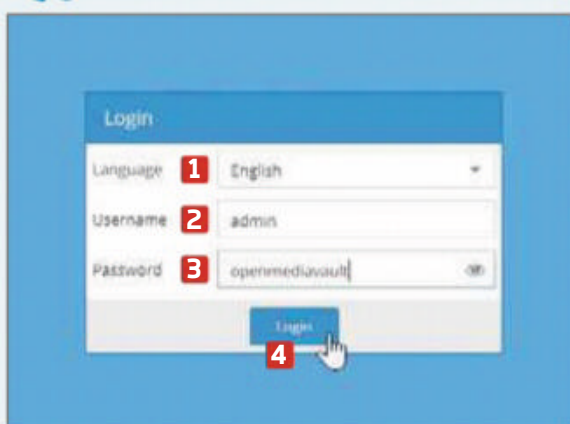
1 On another PC in your network, open the web browser and enter the IP address for your server. The login screen appears. You can change the language here. **1** Enter `admin` as the username **2** and `openmediavault` as the password. **3** Click Login **4** and the dashboard loads.
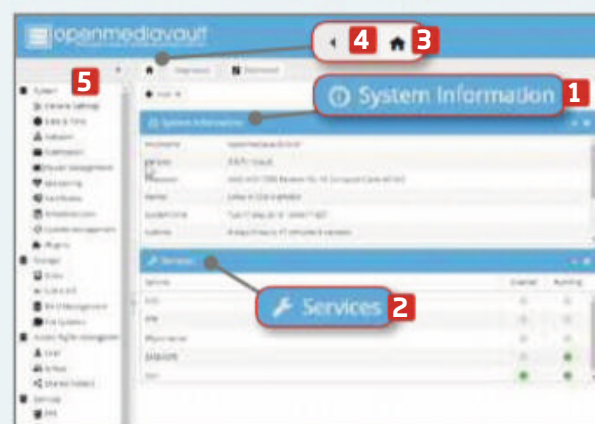
2 This screen tells you about the server **1** and the services that are enabled and running. **2** Clicking the Home button **3** gives you access to the system, storage, access rights management, services, diagnostics and information options. Clicking the arrow at the top **4** displays the same options in a sidebar. **5**

3 General Settings **1** lets you adjust the auto-logout time **2** and enable a secure web connection (HTTPS). **3** You can add Plugins **4** and change your hostname and domain under Network. **5** Go to Storage to manage any hard drives, **6** and add and manage shared folders under Access Rights Management. **7**

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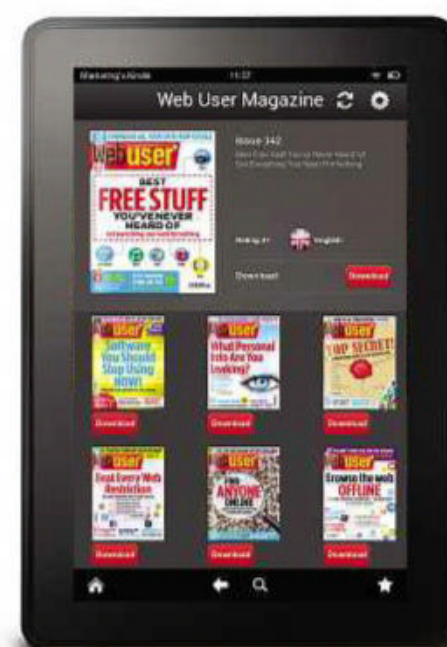
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STEP 3 Choose whether to create an optional Zinio account

STEP 4 Enter your Apple ID password to confirm

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Perform several tasks at once on your iPad

The iPad is well suited to multitasking because it has ample screen space to run two or even three apps at once.

Open the apps you want to multitask, so they are in the Dock at the bottom of the screen, then tap the main app you want to use so it opens full screen. Now swipe up from the bottom of the screen to show the Dock, then press and drag a second app to the screen and move it to the left or right edge to snap it into place. Drag the vertical bar to resize the two apps and allocate screen space. Both apps can be used at the same time, which is useful for note-taking and other tasks.

The iPadOS was due to launch with extra multitasking features on 30 September, and we'll be looking at these in more detail in a future issue.

Open a second app in a window on the iPad and snap it to the edge of the screen
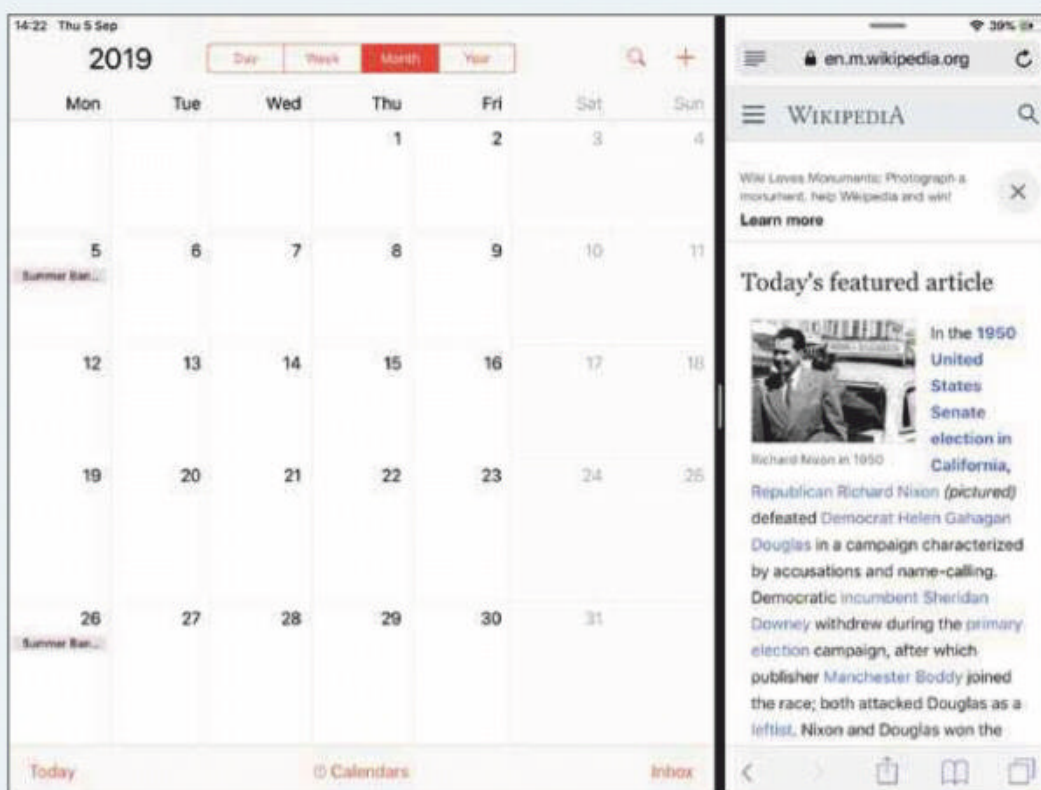
Browse two websites on the iPad

If you open Safari in Split View, you can browse two websites simultaneously. Go to a web page, long-press a link and select 'Open in Split View' from the menu that appears. Alternatively, long-press the New Tab button at the top and select 'Open in Split View'.
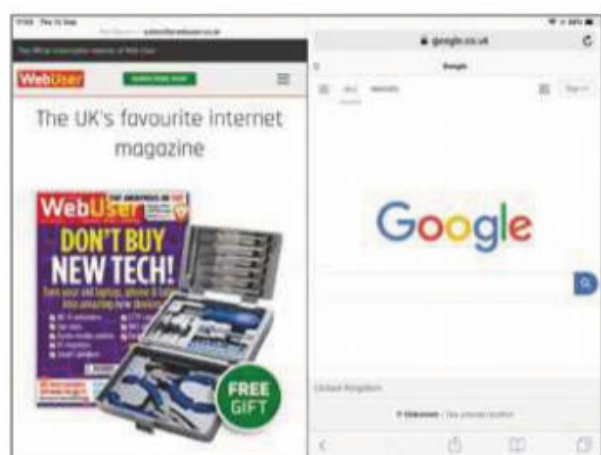
Safari on an iPad lets you browse two websites at once

Switch Android apps

Tapping the square icon on an Android (versions 7-8) phone lets you see recently used apps and allows you to switch to another app. Some phones require you to swipe up to see the square icon. You can then tap an app's tile to switch to it.

Okay, so that was an easy one, but did you know that one tap on the square icon displays recent apps and another tap switches to the last one used? This means you can double-tap the square button to quickly switch between the current and previously used app, which is handy if you need to go back and forth between two apps.

iPad multitasking and Picture in Picture

On the iPad, open Settings, General, Multitasking & Dock. Turn on all the switches to enable multiple apps to be opened on the screen and allow 'Picture in Picture'.

Videos playing in Picture in Picture mode continue to play if you press the Home button. So, if you go to the home screen while you're watching a Netflix movie, the film will keep playing in a small floating window while you use the iPad for something else, such as browsing the web.

If you start a YouTube video playing and pull down over the video, it shrinks to a small floating window that lets you browse YouTube at the same time. Other video apps provide similar functionality.

If you see words that `look like they've been typed in a typewriter`**, follow the instructions and type them exactly as they appear, paying close attention to spaces and punctuation.**
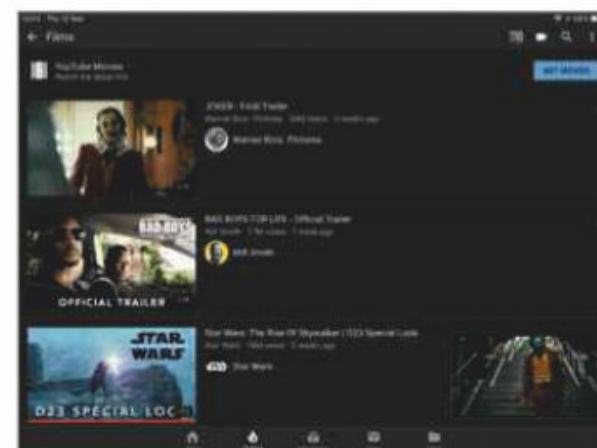
Some iOS apps let you play video in a thumbnail while you browse the app

Android Picture in Picture

If your Android phone is running version 8 or 9, you can access Picture in Picture mode, which lets you use two apps at the same time. Open an app with video, such as YouTube (subscribers only) and start playing a clip. If the app is designed for it, tapping the Recent or Home buttons shrinks the video to a small window that continues playing while you open and use another app.

You can watch a YouTube video while reading Google News

This functionality is available in a number of other apps, including Google Maps directions, Chrome, VLC and WhatsApp video chats. On some phones, you need to go to Settings, Apps & Notifications, Advanced, Special App Access, 'Picture in Picture' and tap an app to enable it.

Android 9 task switching

The latest versions of Android have changed the process for accessing recent apps and provide a different way to switch from one task to another. Most new phones run Android 9 and some older models may have received an OS upgrade, so let's take a look at how it works.

At the bottom of the screen is a 'pill' button, which has replaced the old Home button. Tap this pill icon to return to the home screen, so you can open another app.

To view the apps you've used recently, swipe up over the pill button. Your apps are displayed on tiles. Swipe left and right to browse the recent apps, and tap one to switch to it. Swipe an app tile up to remove it from the list of recently used apps.

It's not obvious, but there is a quick way to switch between the current app and the last one you used. Quickly swipe right over the pill button whenever it's visible to switch back and forth between two apps.

If you swipe right over the pill button and then hold it on the right side, the recent apps display quickly scrolls through the apps. Let go to stop and tap an app to switch to it.

TAKE IT TO THE NEXT LEVEL
More advanced tips for when you're feeling brave

Switch tasks on iOS

Double-tap the Home button on old iOS devices (including iPhones) to show the app switcher. On newer models, swipe up from the bottom of the screen and pause in the middle, then lift your finger when the recent apps appear.

When multitasking and switching between two apps, swipe left or right with four fingers to go to the previously used app.

Advanced iPad multitasking

Our previous tips have demonstrated how you can access two apps at the same time on an iPad, but using Split Screen and Slide Over lets you open three. Open one app, then slide up from the bottom to show the Dock. Press and drag a second app to the screen and snap it to the left or right edge in Split Screen view.
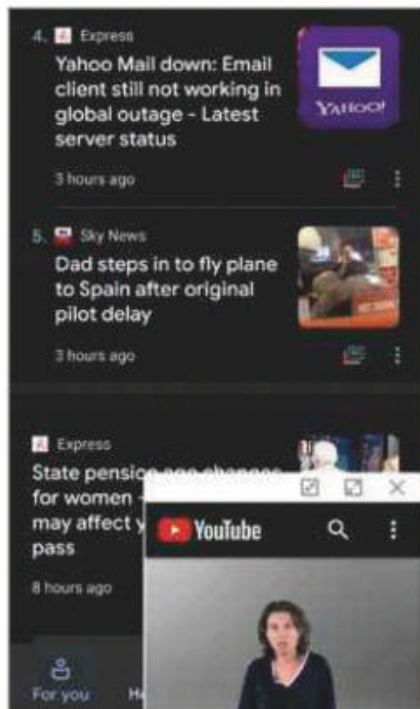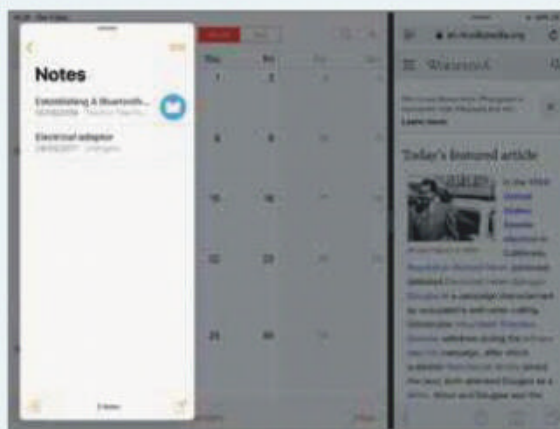

Combine Split Screen and Slide Over for three-app multitasking on an iPad

Now, swipe up from the bottom of the screen to show the Dock again, then press and drag a third app to the screen. When it displays as a vertical window, drop it. This third app is now in Slide Over mode. Drag the top bar left or right to position it, then drag it off the screen edge to hide it so you can use the two main apps. Swipe in from the screen edge to bring it back to your screen.

Not all iOS apps are suitable for multitasking. Just use trial and error to find the ones that work.

Drag and drop on iPad

If you have two apps open in Split Screen view on the iPad, you can drag items from one app and drop them on the other. For example, if you have Safari open on one side of the screen and Notes on the other side, you can press and hold a photo or image in Safari until it's picked up, then drag it to a note. Bear in mind, though, that the drag-and-drop feature requires compatible apps, so it won't work with everything.

Android 9 multitasking

To access multitasking and show two apps on the screen simultaneously, swipe up over the pill button to show the recent apps and tap an app's icon. Tap Split Screen and the selected app will be displayed in the top part of the screen with the list of recent apps at the bottom. You can now select a second app to display on the bottom half of the screen.

If you want to use just one of the apps and dismiss the other, drag the horizontal split between the two apps up or down, so the app you want fills the screen.

Split-screen apps in Android 7/8

You may not have the latest Android OS, but you can still carry out multitasking in older versions – it depends on the phone. Open several apps and press the square icon to view the app switcher.

Apps that work in split-screen mode have a double horizontal-bar icon. Tap a split-screen-compatible app to open it in the top half of the screen. The app switcher remains in the bottom half – just tap another app to open it.

Tap the horizontal bar dividing the two apps, then tap the square icon to open one app full screen and have the other in a floating window, which can be positioned anywhere on the screen.
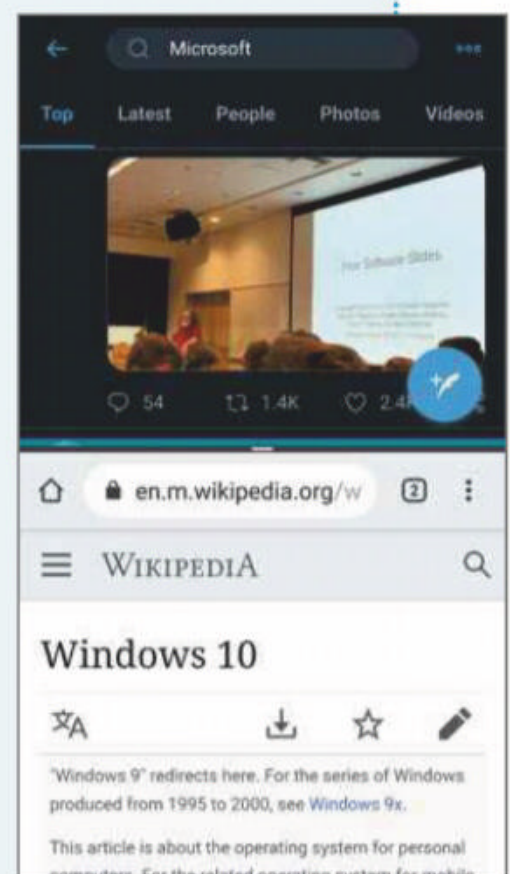
Many apps, including Twitter and Wikipedia support Split Screen

Roland Waddilove, computer programmer and PC journalist since 1981, answers all your technical questions. Email us for help at webuser@webuser.co.uk

---

EMAIL

Write longer emails

Q My emails are limited to about 40 words, in both Gmail and Hotmail. Can you help?

Ken Ramsey, via email

A This puzzled us for a while, until we realised that the text of your email was actually written in the subject field and not the body. The subject box – positioned below the 'To' field, where you put the address of the person you're emailing, but above the main message area where you write the body of your email – accepts only a limited number of characters.

Go to your inbox and, depending on which email software or webmail you're using, you'll see the list of emails only displays around 10 words of the subject field. The rest is hidden until you open the email, at which point the full subject line will be displayed. Most people rarely use more than 10 words, anyway. Conversely, the body of an email can contain as many words as you want. Technically, there may be a limit, but we've never reached it.

When writing an email, enter a short subject consisting of up to 10 words, then click in the main message area below and type as many words as you need.
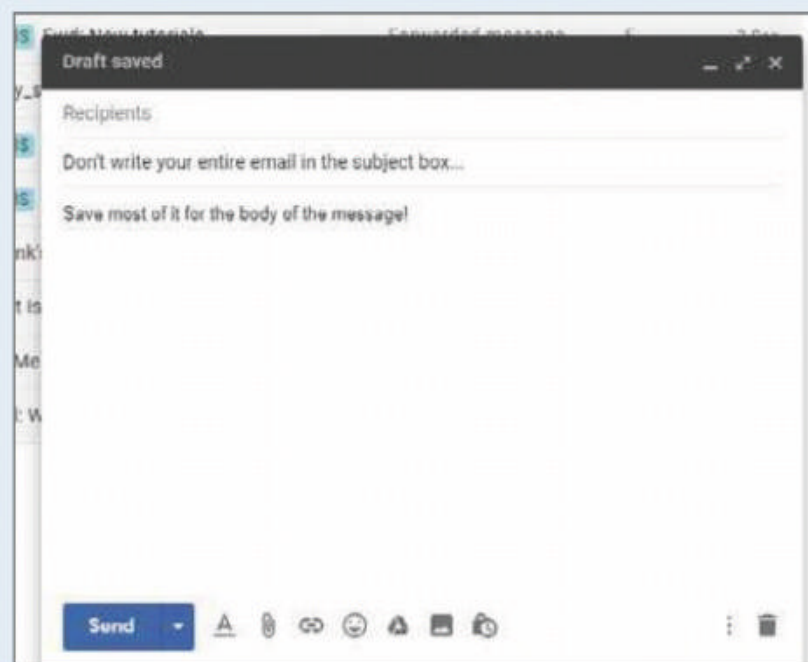
There are two text areas in an email message but the subject area is only designed to hold a short heading

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EMAIL

Create cut-and-paste contact groups

Q I belong to a local club made up of just over 20 members. Emailing them individually is a pain, as is manually adding 20 people to the 'To' box when trying to combine them into one email. I wondered whether there is a way to create a group so I can add them collectively to the recipients box? I am using the Mail app in Windows 10.

T Bloom, via email

A Windows 10's Mail app isn't designed for emailing large groups of people. Microsoft reasons that it's normally businesses that do that sort of thing, so it only built the option into Microsoft Office. You can use the Mail Merge tool in Word and link it to a contacts list, then Microsoft Outlook would extract each contact and send the email to them.

The Mail app doesn't do this, but there is a way around the problem for small groups of people. Open the Mail app and create a new email, then click
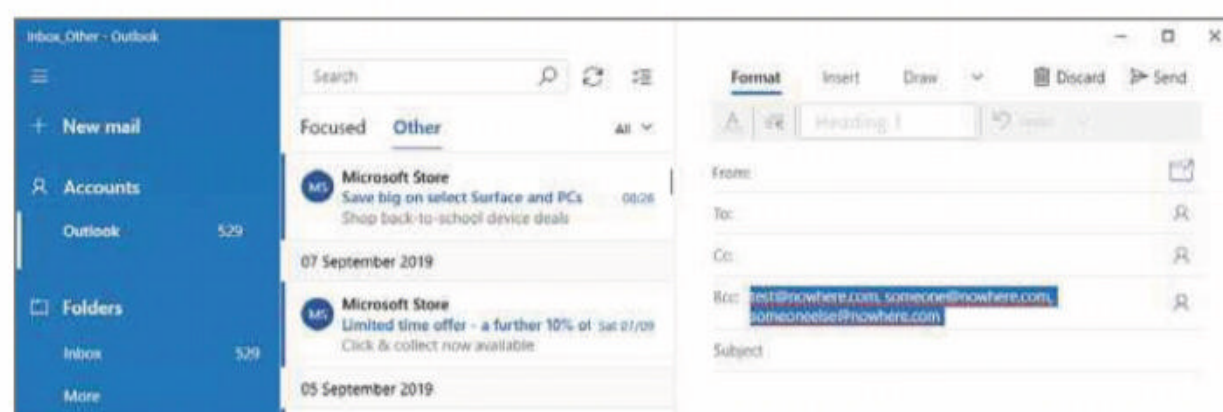
Copy a list of email addresses from the Bcc field and paste them to a text file to use later

inside the 'To' box and either type the email address of each person you want to send the email to or select them from your contacts.

When everyone has been added, click inside the 'To' box and press Ctrl+A followed by Ctrl+C to copy everyone to the clipboard. Open OneNote, Notepad or some other text app and press Ctrl+V to paste all the recipients and save the OneNote note or Notepad file.

Now, the next time you want to email the same group of people, open the note or file, copy all the text, click in the 'To' box and press Ctrl+V to paste in all the recipients. It is quick and easy.

Bear in mind that entering all the recipients' addresses in the 'To' box means that everyone can see all the other recipients' email addresses. To respect everyone's privacy, it's best to address the email to yourself, then click 'Cc & Bcc' and paste all the names into the 'Bcc' box. This means that everyone will receive the email but they won't be able to see anyone else's email address.

EMAIL

Stop worrying about spam

Q I get about 100 spam emails a day from 'return@xxxx.com' and 'contact@xxxx.com', where the 'xxxx' is different in each email. I use Outlook and I have tried to set up the filter
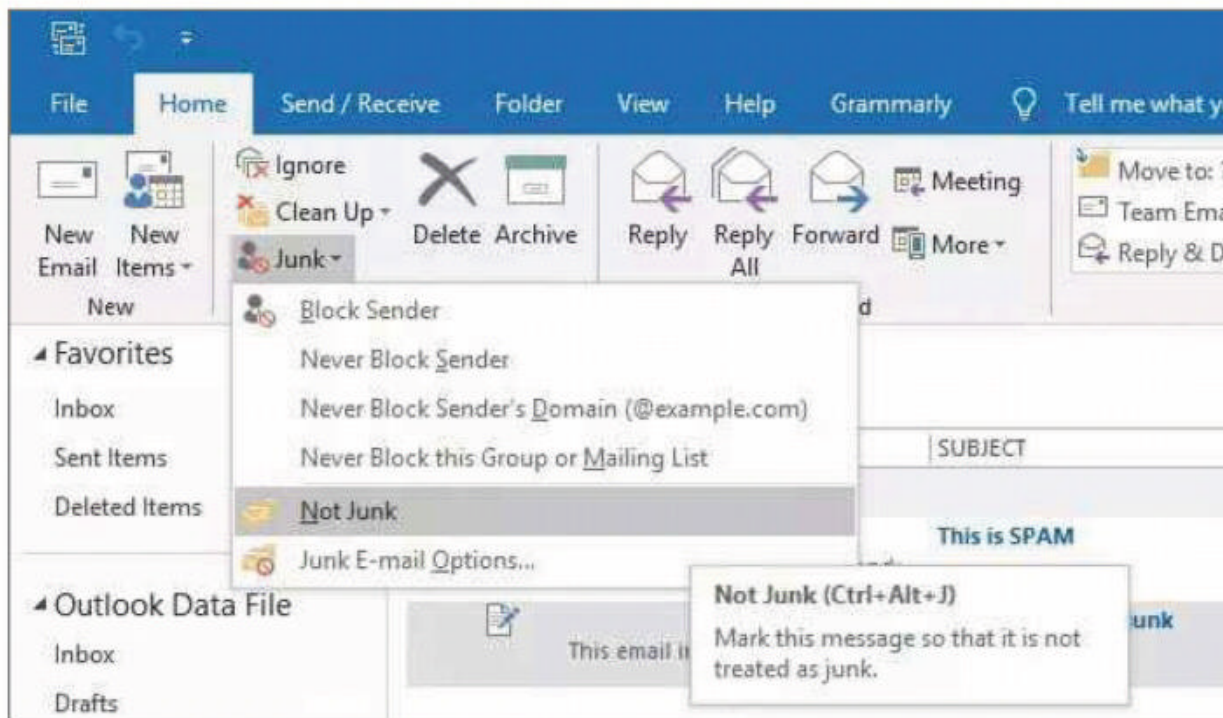
It's worth checking Outlook's spam folder occasionally to retrieve any important messages that have been overzealously marked as spam

A flickering screen may be due to a driver problem – try downloading a newer one

system, but it's either not working or I'm not doing it correctly. All the spam emails arrive in my Junk folder. I don't block them because the 'xxxx' changes in every email.

Jerry Frost, via email

A Unfortunately, spam is a constant irritation. Outlook is able to detect many junk messages and places them in the Junk Email folder instead of the Inbox, so it sounds like it is working normally and keeping your inbox clean. Don't worry about the number of messages in Junk Email, it can hold thousands. You don't even need to delete them because Outlook automatically deletes any junk that's older than 30 days.

You may occasionally need to check the Junk Email folder in case Outlook mistakes a legitimate email for junk. This sometimes happens when you sign up for email newsletters or need to confirm online registrations. If you find a message in the Junk Email folder that shouldn't be there, select it and click 'Not spam' in the menu bar at the top. This helps to train the system so that it does not mistake real emails for spam.

HARDWARE
Stop the screen from flickering

Q I've had a problem for some time concerning a rapidly flickering screen. It only affects part of the screen, when I've been watching a full-screen video and then switch back to normal. At this point, the Explorer window flickers like crazy until I click, minimise or do something else with it. This sometimes happens on startup, too, in the bottom-left corner of the screen. Clicking Start and then clicking away solves it. Is there a permanent solution?

Mark Nolan, via email

A This is almost certainly caused by a bug in the display driver and a replacement should fix the flickering.

Click Start and type `device manager`, then click it in the search results. Expand 'Display adaptors', then right-click each item and select 'Update driver'. Choose the option to 'Search automatically for updated driver software'. If it says the best drivers are
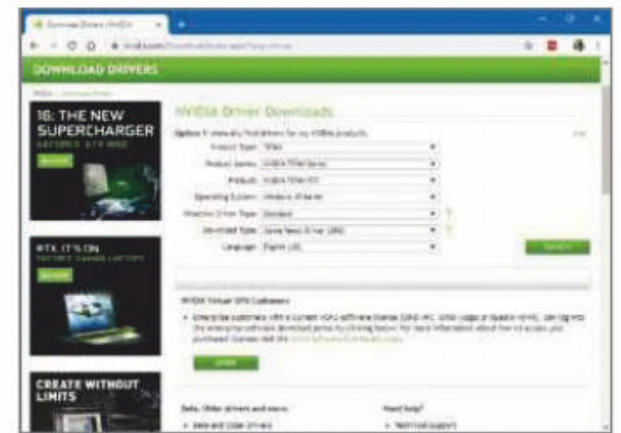
already installed, click 'Search for updated drivers on Windows Update'.

If no Windows drivers are found, then you should get the drivers from the display adapter's manufacturer. Go to Device Manager and look up the manufacturer and model, then search for the driver downloads online. Nvidia GeForce drivers, for example, can be found at nvidia.com.

GENERAL PC
Stop your PC logging out

Q My new Windows 10 laptop has an annoying feature (or bug) – after two minutes of inactivity, the screen goes blank and turns off. Tapping a key

GENERAL PC
Find an alternative to Windows Backup

Q The Backup and Restore tool in the Control Panel has stopped working. It was fine until the last Windows 10 update in spring earlier this year. Is there any way to get it working again? I don't like to be without backups.

Kevin Stevenson, via email
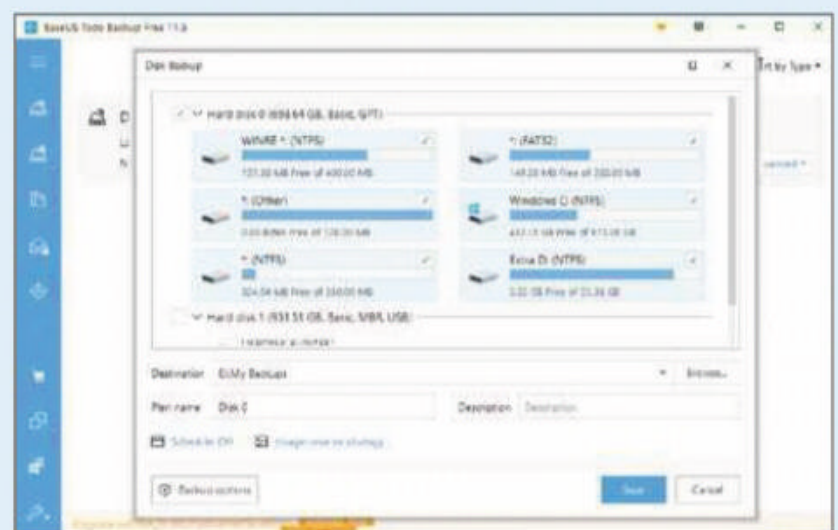
EaseUS Todo Backup Free is an excellent alternative to Windows' built-in backup software

A This is an old Windows 7 tool that was only provided in Windows 10 for the sake of compatibility. If it isn't working, there's not much that can be done to fix it and it may not be supported for much longer. Windows 10 has major updates twice a year and there's a new one due soon, which may get it working again.

There are a couple of alternative tools you can try, such as Windows File History, which is useful for backing up files. Open the Settings app and click Update & Security. Select Backup on the left and turn on

the switch under 'Back up using File History'. You'll need a USB drive for storing the backups. Click 'More options' if you want to set the backup frequency – the default is every hour.

Instead of using Windows to back up a PC, many people rely on software from other sources. Macrium Reflect (www.macrium.com), EaseUS Todo Backup Free (www.easeus.com) and AOMEI Backupper (www.backup-utility.com) are all free and any one of them can be used to create a whole-disk system backup and recovery media to boot your PC.

GENERAL PC

Photo viewer mode

Q Years ago, I remember Explorer having a sort of filmstrip view when browsing the Pictures folder on the hard drive. The thumbnails were arranged in the filmstrip across the bottom and clicking one showed a large image above. I don't see anything like that built into Windows now. Is there an alternative?

Ben Lightfoot, via email

Configure Explorer to make browsing your photo collection easier

A Explorer no longer displays that particular view but there's an almost identical alternative that is useful for browsing photos. Click View in the Explorer menu bar to open the tab and select 'Large icons' or 'Extra large icons'. Click Navigation Pane and deselect it to hide the sidebar.

Press Alt+P to open the preview pane. Position the mouse between the icons view and the preview pane, and click and drag it left to increase the size of the preview pane. The icons can be sized to look like thumbnails, making Explorer look like the old filmstrip view on its side.

drag the slider all the way to the right for maximum power.

The problem may be due to your screensaver. Open the Settings app, type `screen saver` in the search box and click 'Change screen saver' in the search suggestions. The Blank screen saver with a Wait time of two minutes and 'On resume, display log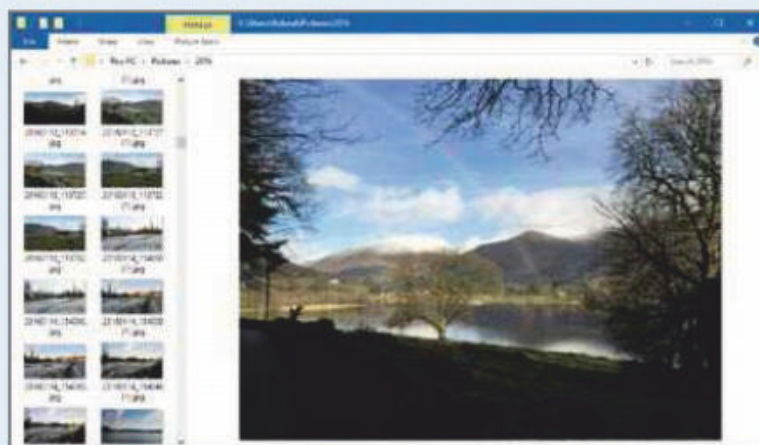-on screen' ticked (see screen grab, below left) will have the effect you describe. To fix this, set the screensaver to '(None)' and clear the tickbox below.

GENERAL PC

Alternatives to snipping

Q I use the Snipping Tool in Windows a lot, but if I run it now, a message tells me it is moving and I should try Snip & Sketch instead. I don't like it as much. Is there an alternative for capturing parts of the screen or web pages, marking them up and saving them?

Sandra Wilson, via email

A There are many screenshot tools to choose from and a popular choice (1.2 million users, according to the Chrome Web Store) is the Chrome extension Nimbus Screenshot & Screen Video Recorder (bit.ly/nimbus485).

LightScreen (lightscreen.com.ar) is a great free app with lots of options for capturing screenshots. It's very customisable and can be installed as a portable app that runs from anywhere.

Greenshot (getgreenshot.org) hasn't been updated for a few years, but it still works and is free. Right-click the taskbar icon to configure it after installing.

Alternatively, keep a Windows Paint window open. Press Print Screen to grab a screenshot, Alt+Tab to Paint and press Ctrl+V to paste it. You can then crop it, annotate it and so on.

turns the screen back on, but it returns to the Lock Screen and I have to type my password to log in. It's annoying to have to log in so often. I have tried changing the settings, but it still happens. Am I missing something?

Trevor Cartwright, via email

A There are several possible causes. Open Settings, click System and select 'Power & sleep'. Enter your preferred length of time for the screen timeout when on battery and mains power – for example, 10 minutes and 20 minutes. Set the Sleep timeout to your preferred settings, too.

Click the 'Additional power settings' link to open Power Options in the Control Panel. Next to the currently selected plan, click 'Change plan settings'. The display and computer sleep settings should be the same as the Settings app, but if they're not, change them yourself.

Click 'Change advanced power settings' to open the detailed settings. Expand the Sleep option, then open 'Sleep after' and check or change the settings. Expand Display, 'Turn off display after' and check the settings. Click the power or battery icon in the taskbar and
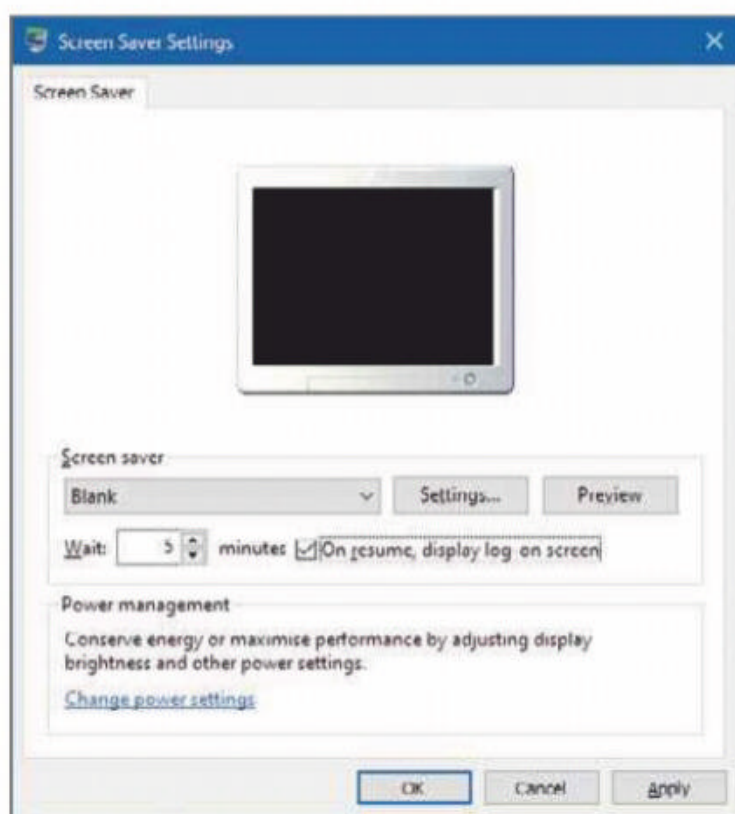
If your computer keeps reverting to the Lock Screen, the screensaver may be the culprit
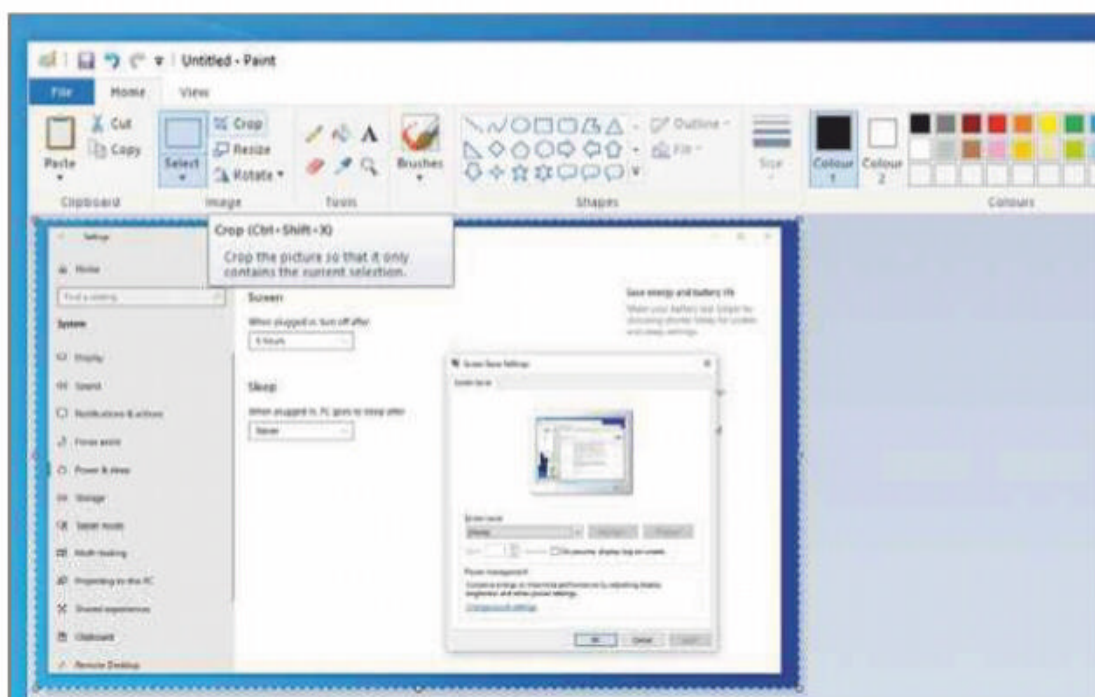
Taking screenshots is simple and you can paste them into Paint to tidy them up

 This fortnight, Roland has been looking for second-hand iPhone bargains from people upgrading to the iPhone 11

Readers' Helpdesk

Can you help your fellow readers with their computer problems? Send your questions and answers to webuser@webuser.co.uk

SECURITY
Share a driving licence safely

Q My son wanted to hire me a Mazda sports car for a day as a birthday present but, because he is under 35, they needed my details, so I passed on my driving licence number, start date and end date, and my National Insurance number. They then wanted me to email a photo of me holding the licence, plus a copy of both sides of the licence.

At this point, I refused – I feel it should be enough for me to show my licence when I collect the car. I read *Web User*'s 'Don't let anyone steal your identity' and wonder if this is legitimate or a means of using my details to fake another licence.
Ian Machen, via email

A We've never heard of this before, so you're right to be cautious. Most car rental companies require this info, but there are safer ways than photographing your driving licence. In fact, the DVLA advises you not to "share photos of your driving licence or your vehicle documents on social media or selling sites. Scammers can use this for identity theft". Instead, the DVLA offers a secure service that lets you share your driving record, including penalty points, with companies that need the info – visit bit.ly/drive485 and enter your licence number, National Insurance number and your postcode to view and share the record.

When it comes to vehicle rentals, it's best to stick to trusted 'experience day' and car hire companies. As always, if you feel something is amiss, the priority is to

The DVLA provides a secure way to share your driving licence details

READERS RESPOND

HARDWARE
Fix the PC Load Letter error

A In *Web User* Issue 481 (bit.ly/webuser481), Clive Potts asked about the PC Load Letter error on his printer. It's possible that the default paper size in the application he is trying to print from is set to Letter rather than A4. For example, in Microsoft Word go to Page Layout, then Size and, if Letter is ticked, change it to A4.

Alternatively, the document may have been created in the US, where the default paper size is Letter. This

Clive's Load Letter error sounds like a paper-related problem

attribute, buried in the document's properties, may be overriding his UK printer's default setting and asking that he load it with Letter-size paper – hence the message 'PC Load Letter'. You can usually override this by selecting the option 'Print A4 instead?'.
David Andrew, via email

CAN YOU HELP?
webuser@webuser.co.uk

You can seek help or suggest solutions to other readers' problems by emailing webuser@webuser.co.uk or via www.facebook.com/webusermagazine or twitter.com/webusermagazine.

APPS
Q I often use Google Maps as a sat nav, and check the route using Google Street View, but is there a way to create a frame-by-frame Street View video of the route I tap into Maps?
Stella Hart, via email

APPS
Q My company is looking into getting either Slack or Microsoft Teams. Do any readers know which is objectively better, or if there are any decent (and cheaper) alternatives.
J Simmons, via email

keep your personal information safe.
Steve Clark, Features Writer, Web User

GENERAL PC
Get a mobile hotspot working

Q I recently had trouble with my internet and thought, "I'll just connect via my mobile phone". But everything in the 'Mobile hotspot' settings in Windows 10 was greyed out with a message: 'We can't turn on mobile hotspot. Turn on Wi-Fi'. How can I get back online?
Ray Montgomery, via email

A First, check your data plan and contract to see if it allows you to use your mobile as a hotspot. This particular problem is usually associated with a faulty network adapter, or one that

needs an update. In the Settings app, choose 'Update & Security', click the Troubleshoot option, then find and run the Network Adapter troubleshooter. It's also worth opening up Device Manager, right-clicking your network adapter, and selecting 'Update driver'.
Steve Clark, Features Writer, Web User
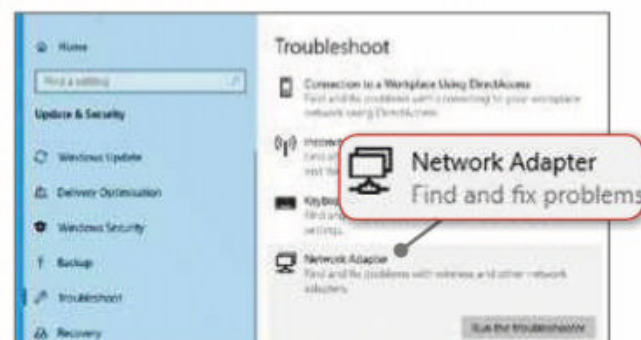
Having trouble getting online? Try some mobile hotspot troubleshooting

Your Top Tips

Our pick of the best advice from our readers. Please send questions and answers to webuser@webuser.co.uk

TOP TIP

GENERAL PC

Create your own one-click shutdown

I read with interest the Slide to Shut Down tip from Roger Stott in Issue 482 (bit.ly/webuser482). To make your own one-click shutdown, create a shortcut to 'C:\Windows\System32\shutdown .exe -s -t 00', then right-click the shortcut and select Properties. Click Change Icon and select the red button with a power off icon. Click Apply, OK.

If you right-click this shutdown shortcut and pin it to the taskbar, you can delete the one on your desktop. I've used this one-click shutdown since Windows 10 came out. It works with all
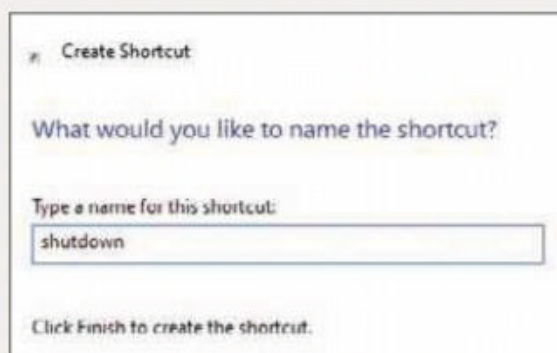
A quick, one-click way to close down your computer

versions of Windows, right back to XP.

Paul King, via email

NETWORKING

Curb your data usage

Most people have unlimited broadband these days but for those that don't – or if you are curious about how much data you use – open the Settings app in Windows 10 and click Network & Internet. Go to the 'Data usage' section and, under Overview, you'll see the amount of data used by your PC in the last 30 days. You may be shocked by the results!

Below this is an option to reduce background data usage if you need to cut down. I find that limiting background data speeds up my computer's startup a little because it's not working as hard updating and syncing programs.
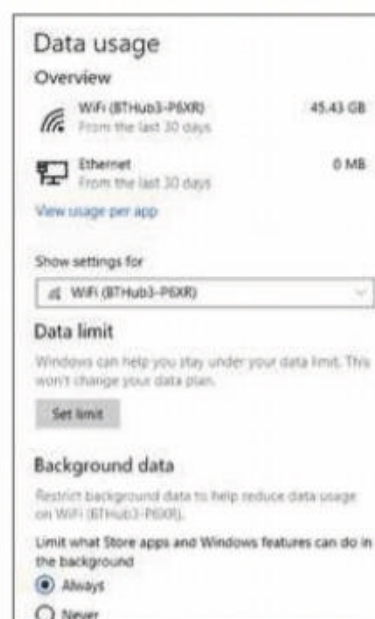
Chris Hayes, via email

How much internet data are you using?

GENERAL PC

Show startup programs

Most people know that reducing the number of programs that automatically

start with Windows makes your PC faster and more reliable. You can use Task Manager to identify some of these programs, but it only shows a fraction of what actually loads. Autoruns (bit.ly/auto485) is often recommended by *Web User*, but that goes to the other extreme and displays so much information that it's hard to understand.

I've found a tool that sits happily between the two – it provides more than the basics but won't overload you with unnecessary information. EF Startup Manager (bit.ly/efsu485) shows what starts with Windows and where in the Registry it loads from, but without overwhelming you with data. I use the portable 64-bit version.

It triggers an 'unknown app' warning from Windows SmartScreen when run, but this can be ignored as I haven't found any problem with it.

Charles Roberts, via email

See what's loading automatically with Windows using EF Startup Manager

EMAIL

Bulk delete quickly in Outlook for Android

I always used to long-press to start the procedure for deleting multiple emails in the Outlook for Android app (bit .ly/outlook485), but it turns out there's a slightly quicker way. Just tap the circle displaying the sender's initials and it will turn into a tick, indicating that it's been selected. You can then continue your bulk deletion in the normal way.
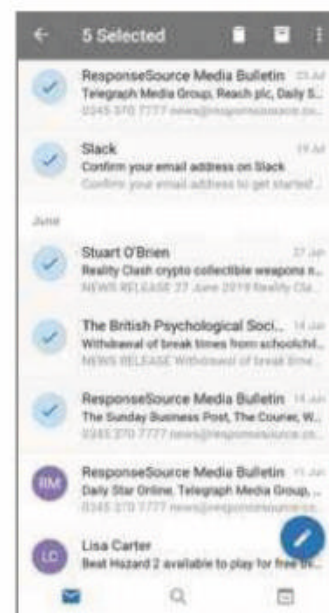
A tap is quicker than a long-press

John Bogart, via email

BROWSERS

Block malicious websites as you browse

Malwarebytes' new Chrome extension Browser Guard (bit.ly/malwarebytes485). has just come out of beta and is designed to block malicious websites before they can harm your PC. It also works to remove pop-ups, online scams and other net nasties. Malwarebytes also claims that using the tool speeds up your browsing by blocking all those clickbait ads and trackers. I absolutely love it. There's also a Firefox version available (bit.ly/bytesfox485).

George Bates, via email
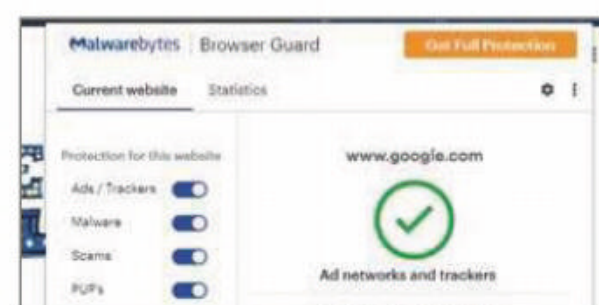
Safety first with the new Malwarebytes browser tool

GENERAL PC
Disable unwanted gaming tools

I read online that stopping the Game Bar from running can speed up your PC but I can't say I've noticed much difference. Still, if you don't play games on your PC, why have the gaming services enabled?

Open the Settings app, go to the Gaming section and turn off the switches for 'Record game clips' in the 'Game bar' section, 'Record in the background' in Captures and 'Record audio' in Broadcasting.

Jo Marks, via email

It's a good idea to disable Windows features you never use

ANDROID
Get all the phone wallpapers you need

I'm sick of the default wallpapers that came installed on my phone. In desperation, I tried all sorts of other ways to liven it up – from NASA images on daily rotation to my own personal photos – but nothing beats the 4K Wallpapers app (bit.ly/wallpaper485). As its name suggests, most of the images are in 4K, so they look super-crisp on my Samsung device.

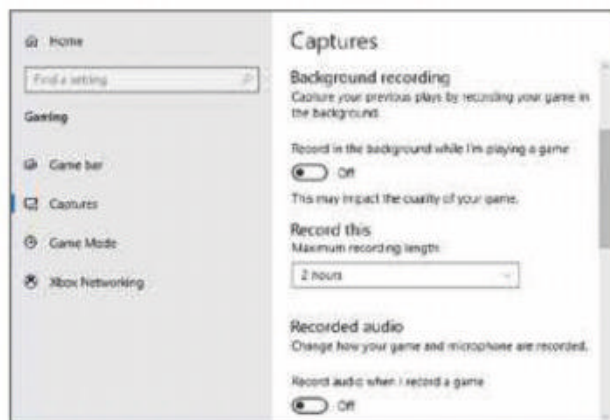You can choose your favourite wallpaper or force it to update at set times, and with new wallpapers added every day, you'll likely never see the same ones twice. You can even tweak them by adding blur and changing the contrast, to make them more personal.
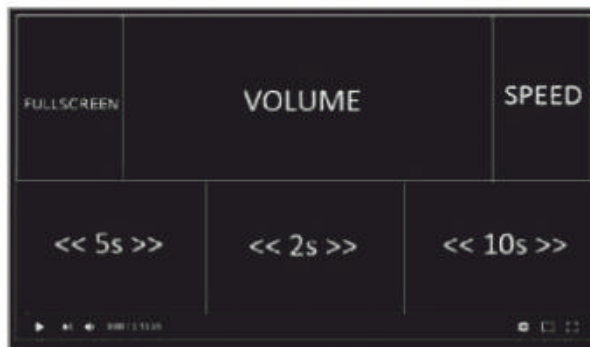
Kiera Bridges, via email

Refresh the look of your phone with new wallpaper

BROWSERS
Control YouTube videos with your mouse

If you want a seamless way to control YouTube videos, I recommend Mouse &

Control YouTube videos using Mouse & Video for Firefox

Video – a browser tool for Firefox (bit.ly/mousevideo485). It overlays your video with invisible dividers that perform different functions depending on where you hover and scroll. For example, to switch to full screen, move the cursor to the top-left corner and scroll the wheel; to jump backwards or forwards by ten seconds, move the cursor to the bottom-right and scroll the wheel up or down.

Henry Piper, via email

MOBILE
Reveal hidden Android games

To access hidden games in Android, open your phone's Settings and go to About Device, Software Info. The menus will vary depending on your device, but when you find the Android Version, keep tapping it (maybe a dozen times?) until something happens.

On Android 7, a big N appears on the screen. Pull down from the top to show all the icons and tap Edit. Drag the cat to the row of icons at the top, then exit Edit and tap the cat. On Android 8 you get a large O. Tap it repeatedly, then long-press to show an octopus. Weird!

Andrew Taylor, via email

WEBSITES
Let a robot finish your sentence

We often hear about how advanced artificial intelligence and machine learning is. Now, you can try it out yourself. Go to 'Talk to Transformer' (talktotransformer.com) and start typing anything – a sentence, a story, or even just your name. Press Complete Text and the website's OpenAI language model automatically completes the rest of your sentence, creating "coherent paragraphs of text one word at a time". It can be a bit hit and miss, but it's always interesting.

Joshua Chung, via email
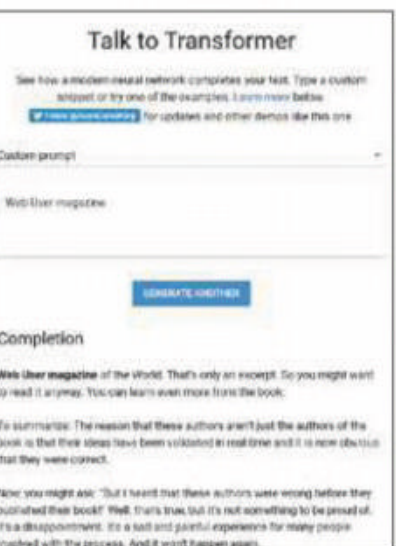
Use AI to complete your writing

BLUNDER OF THE FORTNIGHT

GENERAL PC
Turn off the Windows lock screen

I've never liked the Windows 10 lock screen, which seems designed to slow me down. I know it's a security measure but, frankly, there's nothing worth stealing on my computer. I discovered a Registry hack to disable it permanently by opening the Registry Editor and going to:

HKEY_LOCAL_MACHINE\ SOFTWARE\Policies\ Microsoft\Windows\ Personalisation

Next, I created a DWORD (32-bit) Value and named it `NoLockScreen`. After setting the value to 1, I restarted my now lock-free computer.

Unfortunately – and regular readers may know where this is going – my grandson got onto the computer and
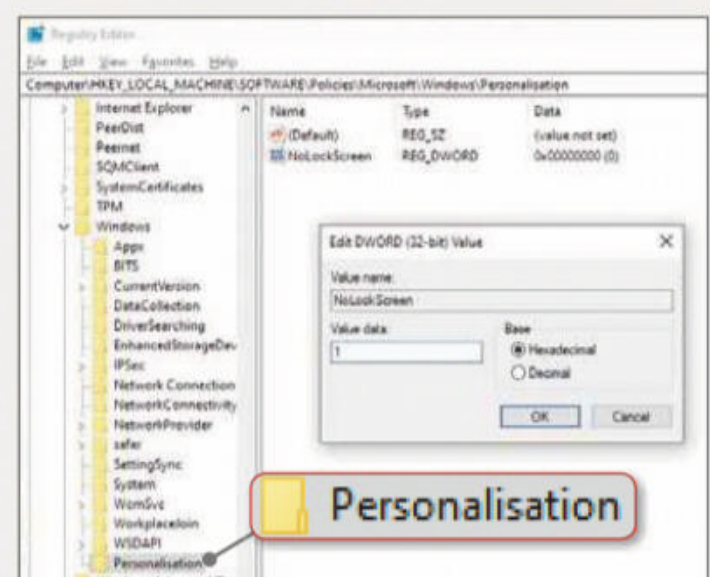
You can switch off your lock screen with a Registry tweak – but should you?

'accidentally' bought some Fortnite coins on Amazon. Lesson learnt. The lock screen is now back in place.

David Hawking, via email

Have you managed to fix a PC-related disaster? If so, please send your story to webuser@webuser.co.uk

Inbox

You can let us know your views via: editor@webuser.co.uk, www.facebook.com/webusermagazine and www.twitter.com/webusermagazine

Star Email

Back Issues disc winner

Hopeless administrators ruin Wikipedia

Your comments on Wikipedia, especially concerning its "officious moderators", were most interesting (Everipedia review, Issue 482, page 17). I used to be a great fan of Wikipedia until I thought to contribute a couple of articles of my own.

I couldn't believe the wall of ill-mannered, ill-informed, ignorant, rude bile that I encountered from a load of ignoramuses – the so-called 'administrators' with the power to alter anything. I wrote two articles, both on subjects about which I was well informed and knowledgeable. Having contributed over the years many articles to journals in my own field, I believe that the articles were factually correct, clear and well written.

What I got back was just offensive rubbish. One administrator's comments were so absurd that I looked up their 'user' page to find out about their areas of expertise. I had contributed an article on an arts subject. This person listed about seven interests, mostly computer-related topics and not one arts-oriented subject – and kung fu!

To get around this problem of ignorance, Wikipedia has developed endless 'Help' pages – or, in other parlance, a 'rule book'. But these pages are hopeless – you read the first page on screen and think you've got the hang of it, then discover that there's another five pages of garbage!

The most notorious rule, of course, is the 'Notability' requirement. We all no doubt agree that Albert Einstein was 'notable', but there are a million other topics of legitimate interest to many people.

Personally, I think that Wikipedia should no longer brand itself as an encyclopedia but as a broad information source for the computer age – that way, everything is relevant. It should also employ a professional staff and get rid of the amateur 'administrators'. Otherwise, Wikipedia will soon totally lose its way.

Ross Dallas, Edinburgh

Beware of Chromebook expiry dates

Thanks for highlighting that support for Chromebooks runs out after a set, secret time (Need to Know, Issue 483). I fell foul of this when I purchased a used Lenovo ThinkPad Chromebook in March 2018, only to receive a warning in January 2019 that support updates would cease.

I was happy with the Chromebook itself but nowhere in the advert did it mention the year of manufacture or, more importantly, that within five years of that date, support for it would cease.

I contacted the seller, explaining the situation, and received a blunt one-line reply stating that "the model numbers are available on adverts so you can do your due diligence before buying". The wise words in your article should be followed for all Chromebook purchases, and I would also advise to avoid buying from uncaring sellers. Buyer beware the trap that is made of Chrome.

Maurice Elliott, Malvern

How to avoid unwanted software extras

In Issue 483's Star Email, Brian Turnbull made comments about CCleaner wanting to install antivirus software on his system. Avast, which owns CCleaner, is not the only company that does this.

Many years ago, you had to tick boxes if you wanted the extras on offer but in recent years, you have had to do the opposite. Lots of boxes are now pre-ticked and if you can't be bothered to scroll to the bottom of the terms and conditions, you will miss some of them.
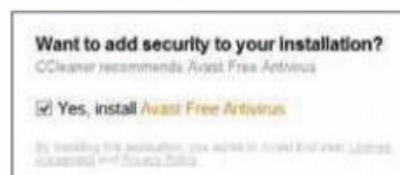
To avoid these extras, you should always download the program from the software maker's own site and, where possible, choose Custom install to deselect any items hidden in a package.

I have a collection of downloaded apps and software that are ready to be installed again when required. I don't update them because I know the versions I have are free of

Quiz Answers: Issue 484

1. **To Kill a Mockingbird**
2. **The Catcher in the Rye**
3. **The Grapes of Wrath**
4. **Fear of Flying**
5. **Flowers in the Attic**
6. **Wild Swans**

WINNER!
Well done to **Simon Barclay** who wins a Web User Back Issues Disc

WIKIPEDIA ARTICLE

Google Street View

PUPs (potentially unwanted programs). I also check forums to see whether the latest versions are not as good as the previous ones.

Keith Norton, Staveley

Windows 10 update fixes don't work

I read with interest the email from Alfred Donovan in Ask the Expert, Issue 483, regarding the error he was getting when trying to update Windows 10.

I, too, am having issues applying updates (Windows 10 Pro, build 1803) with the error "0x80070015". Originally, this occurred with KB4023057 but now further updates are impacted (please see screenshot).

I tried your suggested fixes, as well downloading an MSU pack from the Windows Catalogue and deactivating Kaspersky, but all to no avail. Searching the web and Microsoft's forums, it seems I'm not alone and the suggested fixes don't work.

The tinfoil-hat brigade would have me believe this a conspiracy by Microsoft for us all to be on the same, latest version. In any case, I've resigned myself to waiting for Microsoft to distribute a fix or just ignore the updates. At present, everything is working fine so if it ain't broke, don't fix it. Frankly, the amount of stuff I've tried has made me give up.

Rob Forsdyke, via email

Fed up with Windows

I know you are predominantly a Windows magazine but it would be nice to have rough guides to other operating systems and distros – comparing them to Windows, perhaps, or just a basic guide to each one.

Personally, I am getting fed up with Windows and am looking for alternatives. Windows updates are too frequent and they sometimes change my settings and remove software Microsoft doesn't like.

I am not a fan of endless logins but Windows doesn't seem to understand this. All I want is to surf the web and write my letters but I have stopped using Office, Edge and Chrome in favour of other open-source or free software.

Tim Avery, via email

What you say...

HAVE YOU HAD ANY PROBLEMS USING A SMART METER TO MANAGE YOUR ENERGY USAGE (bit.ly/ smart485)?

Yes. Pointless. It worked for about three months, then we changed supplier and it's not worked since.

Carl Briggs

Anyone considering getting one should ask themselves "will this benefit me or the electricity suppliers?" – and we all know the answer to that! You will watch the meter to start with and turn stuff off to try to keep the bill down but after a few weeks, you'll forget about it and use the same power as before. The only way to save money would be if the companies offered lower rates, which of course they won't do.

John Hewett

I've dodged having one after reading about all the issues, including house fires. They are a good idea if your energy bills are out of control but if, like me, you have a small family and you're vigilant about turning off lights and so on, they aren't needed.

Simon Mellor @4KBacon

We had one for a couple of years but it stopped working when we changed suppliers. It often showed high energy use when no one was up, and similar days had vastly different readings.

Philip Edwards @tattyjacket

Ours, from SSE, has faded so much that it's unreadable. Reported it but not heard anything. Useless!

Jason 'Boz' Bowyer

I'm with Eon and have had no problems at all. I'm visually impaired so, for me, it's brilliant.

Brian Brown

The Other Half looks after that side of things. I've learnt not to interfere. So no, she doesn't want one.

Pete A Cox

I'm with Co-Op Energy and they held off on smart meters until the second-generation ones were available. At this point, I've only had the electricity meter replaced because the gas meter is in an awkward location, which means emptying half the garage. I've not even plugged in the display yet, so I don't know if there's any benefit or not. Still, if it means not ferreting around to read meters and getting more accurate bills, that's enough of a reason for me.

Lee Dodgson

Until they make them so they can be used with all energy suppliers, they're completely pointless.

Phil Graham

VIVALDI HAS LAUNCHED A MOBILE BROWSER (see page 57). WHICH BROWSER DO YOU USE ON YOUR PHONE?

I'm currently using Dolphin (dolphin.com). I've tried all the big name browsers and I'm happy with it. However, unlike my desktop browser, I am always willing to try other mobile browsers because not one of them has ever truly impressed me.

Rich Grove

I use Ecosia (info.ecosia.org/mobile) – saving the planet one search at a time.

Sam Higgins

I just downloaded Vivaldi for Android yesterday. It will be my go-to browser on my phone, as it is on both my desktop computers.

Dean Stockton

I use Chrome, Firefox and Dolphin.

Martin Phillp

Firefox Focus usually. It seems to mean fewer adverts follow me around the interweb!

Caroline Chapman @cantstopthesgnl

If you needed a compelling reason to ditch Google Chrome, here it is, says **Barry Collins**

Has Firefox found Chrome's Kryptonite?

Firefox was arguably the biggest victim of Google Chrome's surge to browser dominance. At the start of this decade, Firefox had about a third of the browser market and Chrome was practically nowhere. Today, Chrome has a market share of around 70% and Firefox's share has slumped to just below double figures. But battered and bruised, it may be about to land a sucker punch.

Quietly and determinedly, Firefox has been ramping up its privacy tools. To be clear, Firefox-maker Mozilla has always been one of the good guys – an organisation with a keen sense of right and wrong. But with the public growing increasingly concerned at the amount of data that online firms are secretly stashing, Firefox is making it easier than ever to throw the advertisers off the scent and it may have found the Kryptonite to weaken Chrome's stranglehold on the browser market.

In Firefox 63, released last October, the company introduced a feature that allowed users to block the tracking cookies that advertisers drop on your system as you move from site to site. These cookies are used to keep tabs on whether you're looking up holidays in the Maldives or browsing for a new VW Golf, so they can target their ads at you accordingly. This is why, when you're reading an article on the Guardian website, you see an advert pop up for the printer you looked at last week on Amazon.

In Firefox 63, this feature was optional – switched on only if you knew where to look. In the latest release, 69, it's enabled by default. Every time you visit a site with tracking cookies on it, you'll see a little shield glow purple in the address bar. Click that shield and you'll see the inevitably long list of tracking cookies that have been scuppered. Firefox 1, Ads United 0.

> ❝ Firefox wants to protect your privacy, Google wants to sell it to the highest bidder ❞

It's not the only way in which Firefox has started siding with the user. Another recent update silenced those obnoxious autoplaying video ads, meaning your speakers don't get blasted by a barrage of jingles that are running in the background.

Firefox is also beginning to implement a highly controversial, but long overdue, privacy feature called DNS-over-HTTPS. DNS is the web's 'phone book' that turns web addresses (such as 'bbc.co.uk') into the IP addresses (such as '151.101.128.81') where the websites are found. By default, your browser will normally use your broadband provider's DNS servers, which are unencrypted and vulnerable to attack, potentially allowing hackers to redirect you to rogue websites even when you've typed in the correct address.

DNS-over-HTTPS – already an option you can turn on in Firefox – encrypts that data, which means even your own broadband provider doesn't know which sites you're visiting. That's bad news for their content filters, which rely entirely on DNS. But once again, it's good news for those of us who value our privacy.

Will Google introduce these anti-tracking features in Chrome? It's highly unlikely because it's Google and its advertisers who are responsible for placing many of these tracking cookies in the first place. Much of the company's enormous ad revenue depends on them.

Firefox wants to protect your privacy, Google wants to sell it to the highest bidder. If that's not a reason to switch browsers, I don't know what is.

✚ Do you agree? Let us know at **webuser@webuser.co.uk**

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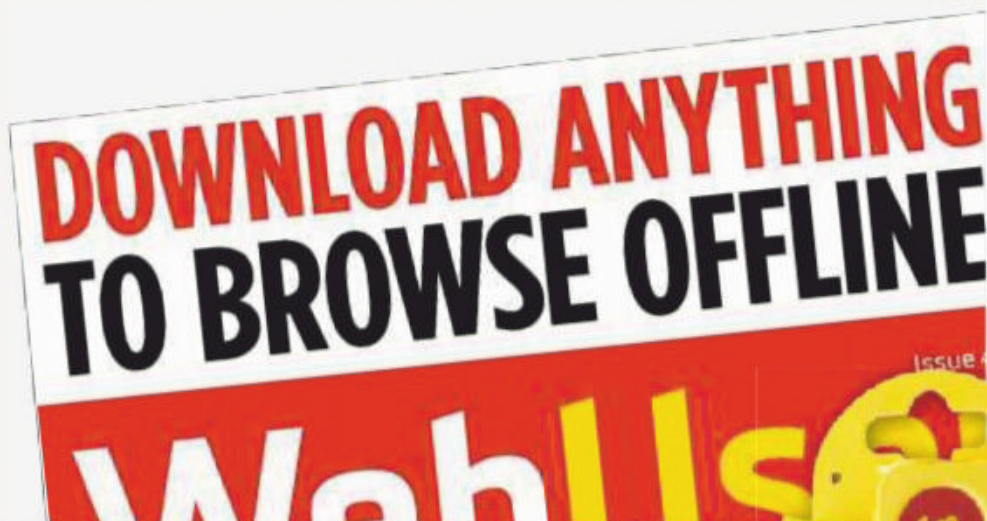
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