Switch to the

ANONYMOUS WEB

How to browse PRIVATELY & SAFELY on the invisible internet p40

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☑ **Access blocked & censored sites**

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16>

The light shines in the darkness

As someone who sits at a computer for up to 12 hours a day, the restrictions imposed by the coronavirus lockdown haven't shaken up my routine as much as they have for many other people. But the world outside has changed for all of us, which means we're spending more time inside and more time online, where it's clear that the web hasn't changed in tandem. Hidden trackers aren't self-isolating, snoopers aren't social-distancing and content blocked in the UK hasn't been liberated. Unless, that is, you access an alternative, anonymous internet.

In this issue's cover feature, we explain why and how you should delve into the so-called dark web, a place that's far less scary and much more beneficial than its reputation suggests. We reveal the tools you should use, the sites you can visit and the steps you must take to stay private and safe.

PS: Our friends at *Computeractive* are kindly offering *Web User* readers a whopping 75% discount on Windows 10 Home. See page 18 for details.

Robert Irvine, Editor
editor@webuser.co.uk
#webuser

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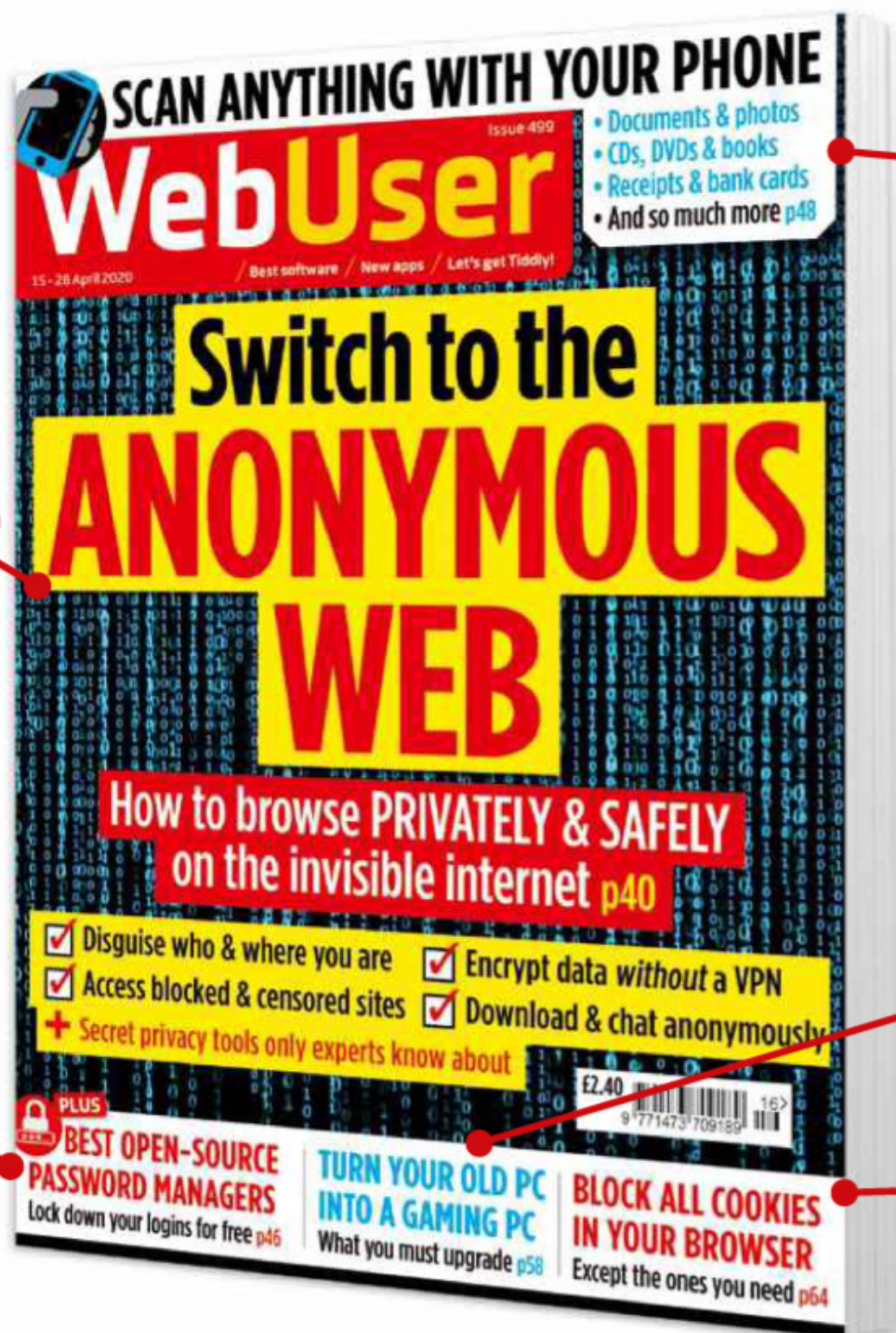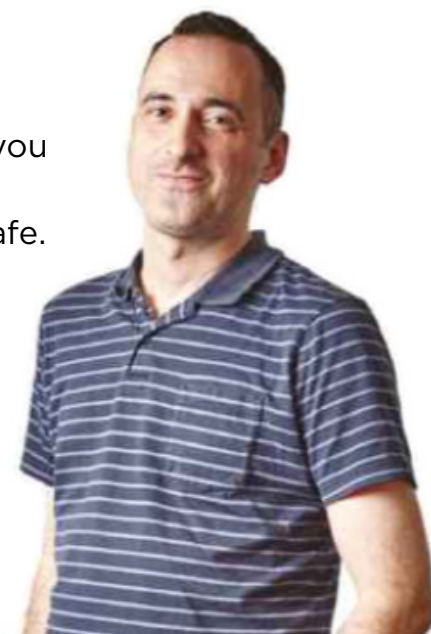
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4 How to use an app to identify birds you hear in your garden from their songs **page 36**
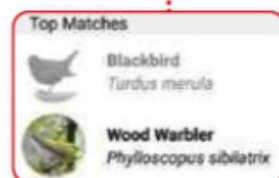
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How to use Bitly links

We use Bitly links to shorten web addresses that would otherwise be too long to print in the magazine. Type these into the address bar of your browser – not the search box – and you'll be redirected to the relevant web page.

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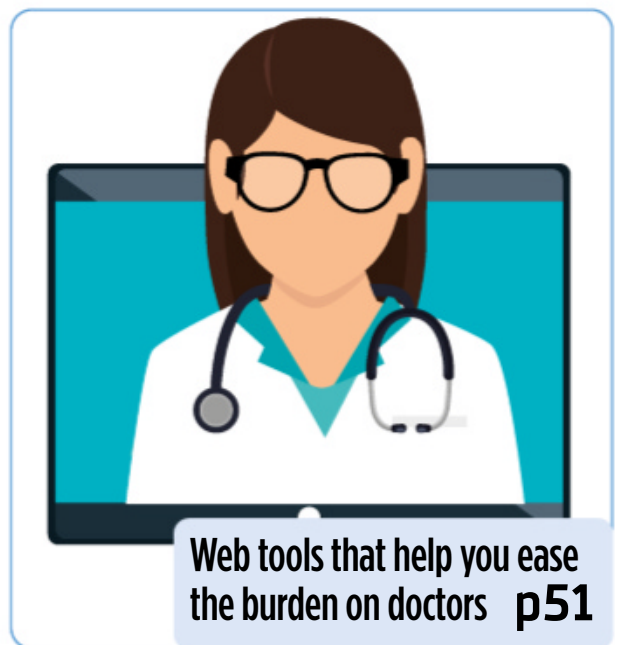
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What's New Online

Record your own podcast with friends

You may be social distancing at home, but that doesn't mean you can't get together with friends and start a fun podcast remotely. It's a great way to indulge in a shared hobby or tell the world about something you're doing. Using Anchor, you're now able to bring up to five people together to make a single recording, no matter how much physical distance there is between you.

All it needs is one of you to have the latest version of the Anchor app installed on iOS or Android – the rest can take part on a desktop or mobile device without an account. To get started, the host simply needs to send invitations to up to four others which, when clicked, open a browser window. Each participant is asked for their name and the microphone they'll be using. Your chat can then get going.

Creating these podcasts is entirely free and the tools are so straightforward that anyone can get to grips with them, with no experience needed. It's worth
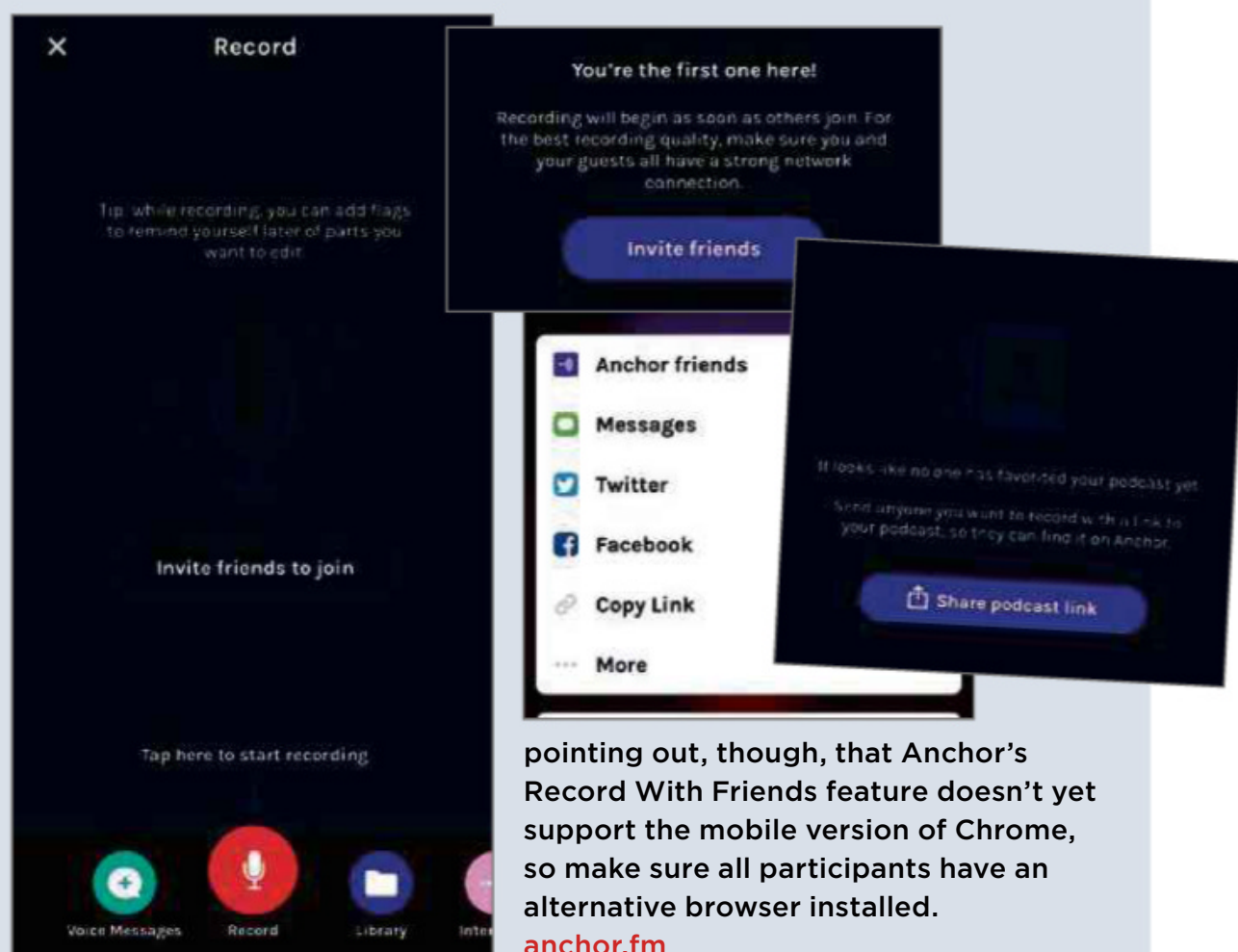
pointing out, though, that Anchor's Record With Friends feature doesn't yet support the mobile version of Chrome, so make sure all participants have an alternative browser installed.
anchor.fm

Play a *Doctor Who* game in virtual reality

bit.ly/doctor499

Time travel back to 2017 and you may recall that the BBC released a 360-degree endless-runner game that let players control the TARDIS in a time vortex. The developers have now given it a fresh spin with a rebooted version that uses virtual reality to put you right in the thick of the action.
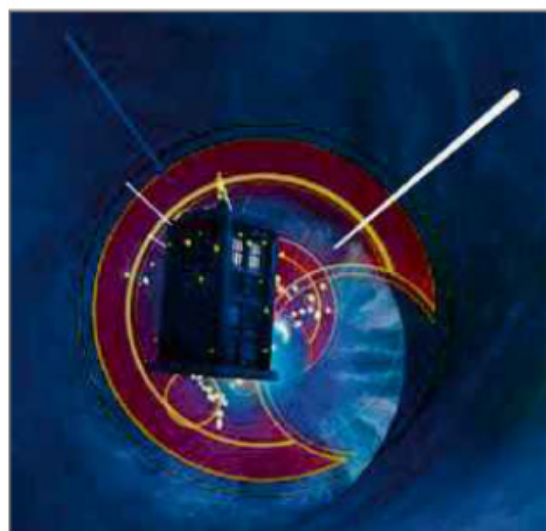
Don't blame us if you suffer a bout of motion sickness, but you can even launch the game on your phone and pop it into Google Cardboard. You can also enjoy the experience on a Google Daydream, HTC Vive or Gear VR device – or just play it in your browser, if you're not keen on VR.

When the game gets underway and the familiar *Doctor Who* theme tune plays, you can tilt to steer, collect zeiton energy orbs, avoid hazardous objects, pick up useful objects and fly through the gaps in barriers. Try to get as far as you can and share your distance on social media.

Get instant access to 1.4 million books

bit.ly/library499

Aware that learners are finding it difficult to access books due to library closures during the coronavirus pandemic, the Internet Archive has launched a National Emergency Library. It has suspended waiting lists based on the number of physical copies in public libraries, letting anyone immediately flick through the pages of more than 1.4 million digitised titles. These include assigned readings from universities and colleges that are generally only available in a paper format.

Although the move has been prompted by the epidemic in the United States, anyone in the world can read these copyrighted books without having to wait for someone to "return" them first. There are also more than 2.5 million extra public domain books available to download for free.

The National Emergency Library is set to run until 30 June, unless the pandemic goes on for longer.

We pick the 10 best things you must do on the web this fortnight

Send a heart to NHS heroes

www.thanksamillionnhs.co.uk
Want to express your gratitude for the amazing work being carried out by our NHS doctors, nurses and other healthcare staff? Then enter your postcode on this website and it will pop a heart in your location. The site also allows NHS workers to discover any discounts and offers that are available to them.

Check for fake COVID-19 sites

bit.ly/covid499
The coronavirus is being exploited to spread viruses of the computer-based kind. By entering a URL in this new tool, however, you can check a website against more than 60 databases to see if it's been flagged up as harmful. Tens of thousands of threats – including 'hmcr-cov19.payment.com' and 'coronavirus.care' – have been detected. One site that's perfectly safe is **coronavirusexplained.ukri.org** from UK Research and Innovation. Created by experts, it explains the virus, helps you understand outbreaks, check the progress being made and spells out why public health measures are important.

Try Facebook's new design

www.facebook.com
Facebook has given its desktop version a facelift and you can give it a go before it becomes the default later this year. Either accept the invitation when you see it or click the down arrow in the top-right corner and choose 'Switch to New Facebook'. You'll see options for the social network's long-awaited dark mode and new Undo button for shared posts, and tabs along the top of the screen for Groups, Marketplace, Notifications and Watch. Profile pages look cleaner with more white space, and the Messenger tab looks more like the mobile version, too.

Explore historical globes

bit.ly/globes499
The British Library has a collection of 150 fragile globes which it's digitising as 3D models, allowing you to click and hold them to rotate, then zoom in for more detail. Ten fascinating European globes from the 17th and 18th Centuries get the ball rolling and you can also get a close-up view using virtual reality.

NEW VOICE COMMANDS

Get help washing your hands
Rather than sing Happy Birthday when scrubbing your mitts clean of COVID-19, say: "Ok Google, help me wash my hands" to enjoy a jolly 40-second tune as the tap flows.

Jump to the home screen
Upgrade iOS to version 13.4 and you can say: "Siri, go to home screen" to exit an app and instantly jump to the homescreen.

Get coronavirus advice
Not sure what to do if you're feeling unwell? Say: "Alexa, what do I do if I think I have coronavirus" for advice. You can also say: "Tell me about coronavirus" for the latest info on the illness.

Video call up to 12 people
duo.google.com
Google Duo has upped the number of people who can take part in a video chat from eight to 12. Update the app (a new low-light mode has also been added) and you'll see the ability to invite 11 others.

Sing along with YouTube Music
music.youtube.com
Like Apple Music and Spotify, YouTube Music now shows lyrics to many songs when played through its iOS and Android apps. Play a song, tap the 'i' button and scroll through the words to follow them.

Create polls on Reddit
www.reddit.com
Rather than resort to third-party services, Reddit users can now poll each other by asking a question accompanied by up to six possible answers. Votes can be run for up to a week and they're available for all but the text-only communities.

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

Privacy concerns raised over video-chat app Zoom

What happened?

The coronavirus lockdown has prompted many housebound people to turn to videoconferencing apps to stay in touch with friends and family. Zoom (zoom.us) is leading the pack, and the business app has sat atop the iOS and Android download charts for several weeks.

However, the massive increase in Zoom's popularity has also led to concerns that the app doesn't do enough to protect its users' security. Last year, Zoom was hit by a series of security flaws, which could have allowed hackers to take over webcams and shared screens, and send spoof messages between users.

There are also concerns over the app's privacy measures. Zoom doesn't offer end-to-end encryption of video or audio meetings, which means the company can see what you say and who you say it to, though it denies doing so. Reports have suggested that Zoom shares data with Facebook, potentially leaks email addresses and is vulnerable to malicious links being shared.

These privacy issues are particularly worrying because Zoom, a Chinese-based company, has not only been used by people under lockdown to chat with family, but also by politicians for

The Prime Minister used Zoom to chair the first ever virtual Cabinet meeting

meetings. Indeed, the Prime Minister, Boris Johnson, shared an image of the Cabinet using Zoom.

Zoom has responded to such reports by saying that its service has been reviewed for security by a range of sensitive businesses, from finance to healthcare, and that the company was in close communication with the UK government's defence and security agencies.

Security concerns have also been raised around other popular communications apps, including Houseparty (houseparty.com), which lets people play virtual games together. The app was accused of letting hackers access Spotify accounts, and for having unsafe chat rooms. If a room isn't locked down in private mode, anyone can pop in, which isn't ideal when the app is being used by children. Epic Games, the company that owns and develops Houseparty, has denied such activity.

How will it affect you?

Whenever you download and install a new app, it's worth checking the privacy settings to ensure everything is locked down and as secure as possible. Most of us don't bother to read the privacy details in apps' terms and conditions – not surprising given such documents can be dozens of pages long – but it's

worth at least checking which settings you can change, especially for vulnerable users such as children.

None of this means you shouldn't use Zoom or Houseparty. Both apps are being carefully scrutinised because of the leap in user numbers, which leads to more problems being spotted. That's good news for everyone signing up, as long as the issues raised are addressed by the companies in question.

But it's a timely reminder that video chats aren't as private as you may think, so consider your conversations carefully – though businesses have more to be concerned about than family members having a catch-up.

It's also essential for parents to keep an eye on what their children do online. Apps that let kids communicate with their friends are great for socialising and entertainment during lockdown, but they could also be a security and privacy risk. It's worth taking the time to configure such apps so that chat rooms and games are private, and to talk with children about how they interact online.

What do we think?

We often blindly trust popular apps, even though they've not always done enough to earn that trust. Zoom is a great free tool for chatting with friends and family because it's so easy to use, while Houseparty is a fun way to socialise when you can't leave your house. Such apps will only become more popular as this lockdown drags on, which makes it important to monitor their privacy and security.

We're lucky to have these services, to keep in touch with each other, and even luckier that so many security researchers and privacy advocates are keeping a close watch to keep us safe.

What we think of this fortnight's top tech news stories and rumours, and how they affect you

Amazon changes delivery during lockdown

What happened?

Online deliveries have never been more vital as during the current COVID-19 lockdown, but protecting the people dropping off your orders isn't easy. In response, Amazon has said that its drivers have changed how they make deliveries, leaving a package on your doorstep and stepping back or departing before you open the door.

Reports suggest that instead of knocking on doors or ringing doorbells, they'll simply leave your package in a safe place. If an identity check is necessary, the driver will still ring or knock, but then step back to give each of you space to avoid infection.

Amazon has also warned that delivery times may be longer than previously expected, so keep a close eye on what's advised during the checkout process.

The retailer is prioritising the stocking and delivering of key items, such as food or healthcare products, so other items may be hit by longer wait times.

How will it affect you?

Exactly how your Amazon deliveries are changing depends on what you're ordering and where you live. If drivers need to buzz an intercom to gain access to your building or get past a security gate, they'll still need to do so.

You can tell Amazon where you'd like packages to be left when making your order by declaring a "safe place". However, for obvious reasons, you can no longer ask neighbours to accept your parcel.

What do we think?

Amazon and other online retailers are becoming increasingly important during the coronavirus lockdown – especially amid reports that COVID-19 test kits will be distributed in part by Amazon – but the safety of drivers and couriers is paramount. These are key frontline workers who deserve proper support in the form of safety equipment and time off to isolate if necessary. Hopefully they will get that, in addition to clear instructions to leave packages on doorsteps.

Credit: Sharkshock / Shutterstock.com

Coronavirus phishing scams still spreading

What happened?

Criminals are continuing to take advantage of the coronavirus pandemic. The latest tricks include registering related domains to house malicious websites, sending phishing emails pretending to offer out-of-stock goods or purporting to be from charities, and selling fake goods.

Action Fraud has reported more than a hundred scam cases related to the coronavirus in just a month (bit.ly/action499), mostly fake shopping sites that offer hand sanitisers or face masks, which never arrive.

The policing agency has also had hundreds of reports of phishing emails

themed around the coronavirus, while security firm Barracuda says there's been a 667% spike in the number of phishing emails exploiting fears about the pandemic (bit.ly/barra499).

How will it affect you?

Action Fraud reports that some of the tactics used in phishing emails pretend to be from the World Health

Organisation or other health agencies, offering information about infections in the local area, and asking for login details or a Bitcoin payment.

As ever, the security advice remains the same: think before you click a link and always run up-to-date antivirus software on your computer. The former is good practice at all times, because if an offer seems too good to be true, it is. The latter won't help in all cases, but offers a layer of defence in case you're fooled into clicking a malicious link.

What do we think?

All such criminal activity is appalling, but taking advantage of people's fears during these troubled times is particularly shameful.

It's worth warning your less web-savvy friends and family members to be on the lookout for these types of scams, so they don't get fooled.

If you want information about the COVID-19 outbreak, only go to official websites, such as the NHS Coronavirus site (bit.ly/nhsadvice499) and the government's advice hub (www.gov.uk/coronavirus), rather than clicking links in emails. That way you'll avoid scammers and fake news, too.

# Microsoft converts Office 365 to Microsoft 365

What happened?

Microsoft has announced a major shake-up to Office 365 – it's changing the name of the subscription suite to Microsoft 365 and adding new features and apps for a more personal, better integrated experience.

The package, which grants access to all standard Microsoft Office apps, has long been a staple of the company's line-up after it shifted from selling standalone Office programs (Word, Excel and so on) to a more lucrative online subscription suite. Featuring regular security updates and a generous 1TB of cloud storage, Office 365 also offers multiple payment plans depending on the number of users and devices.

The new Microsoft 365 introduces new security tools, software and systems but is, primarily, a consolidation and rebrand. Once your Office 365 package switches to Microsoft 365 on 21 April, you'll get an expanded provision that delivers "ongoing technical support for Windows 10 via chat or phone" and special partner offers.

The most useful addition is Microsoft Editor, an intelligent, Grammarly-stye writing assistant that helps you "write more clearly and accurately across the web, including on most social media sites". Expect further changes later down the line.
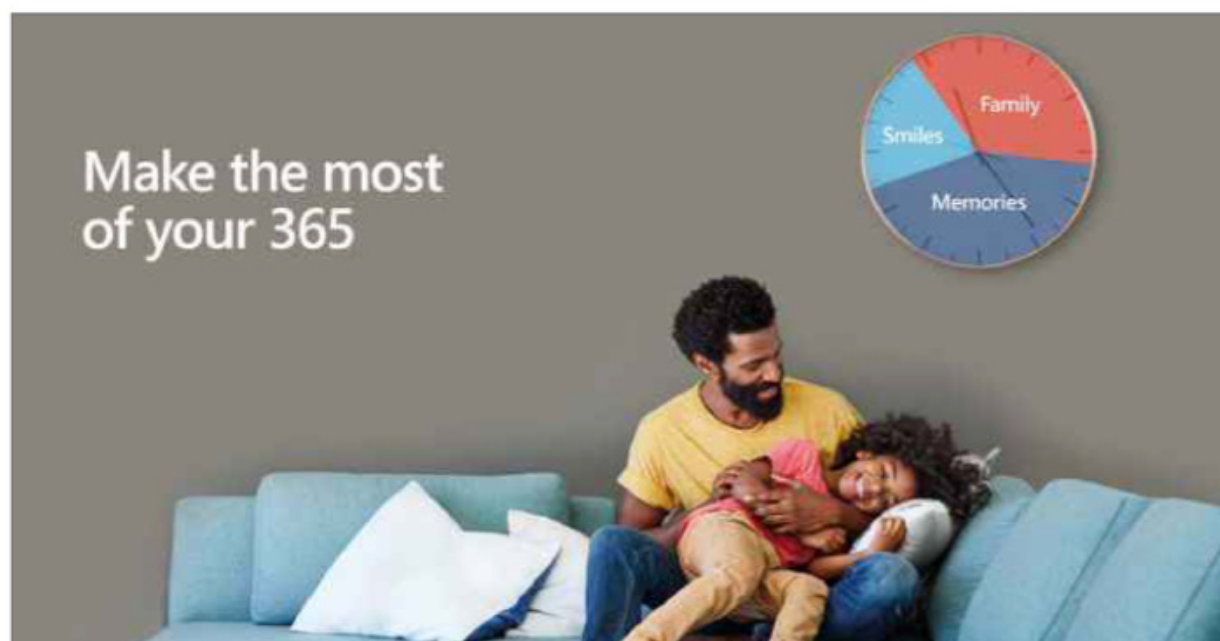
How will it affect you?

Office 365's name-change also brings with it a handful of extras that, frankly, aren't much to get excited about. However, since Microsoft has confirmed that you won't be paying any more for the privilege – at least for now – 'free' feels like good value.

There's a good chance, however, that subscribers will experience an increase in advertising. How else are we to we read the term 'special partner offers'?

The switchover will be automatic. If you're one of the approximately 38 million Office 365 subscribers, both Personal and Home, you won't be required to do anything to switch to Microsoft 365 on 21 April.

What do we think?

Without knowing what Microsoft has in store, we can't really complain about getting more bang for our buck. Office 365 remains fair value – yes, there are free, open-source office packages out there but they aren't as full-featured or easy to use – so this conversion can only strengthen Microsoft's hand.

It also helps the business bring the suite into line – we suspect the similarity in names (to the casual observer, they are, confusingly, the same product) is partly driving this decision. Editor could prove to be an interesting addition to the suite, and we're particularly intrigued by Microsoft's promise of "premium creative content in Office".

👁 **FIRST LOOK**

Huawei P40 Pro
bit.ly/p40pro499

A Google-free smartphone? For many, it sounds like a dream, but for others it's the first of several hurdles to jump when it comes to Huawei's 5G-supported P40 Pro.

Truth be told, the handset isn't strictly Google-free. Due to trade bans set by the US on the Chinese brand, the P40 Pro runs an open-source version of Android 10. Ultimately, this means you can't install Google's own apps, such as Maps or YouTube, unless you use unofficial and unrecommended methods. But if you're specifically after a Google-free phone, you're presumably prepared to live with less effective substitutes and workarounds for its apps.

The phone, co-engineered with German camera manufacturer Leica, is built with image capture at its core – or "Visionary photography," as the Huawei hype describes it. On the front, you'll find a 40-megapixel selfie camera, while around the back are four more, dubbed the Ultra Vision Leica Quad Cameras.

Your main picture-snapper is the 50-megapixel camera, designed for detailed pictures, even in lower-light settings. Beneath this is a 12-megapixel telephoto camera that packs optical, hybrid, and digital zooms ranging from 5x to 50x. For wide-angle and 4K videos, you have the super-smart cine camera and, rounding out the foursome, is the achingly 21st-century 3D camera. Apparently, you can also make calls with this thing.

The P40 Pro is a slab of beauty – its crystal-clear 6.5in screen slopes gently away at the edges without bezels cramping the view. Huawei likens the effect to flowing water – but while the effect is impressive, it's nothing we haven't seen before. Inside, the P40 Pro is powered by an octa-core 2.86GHz processor, running 8GB of RAM on 256GB of storage.

Available in four colours, the smartphone sells for just under a grand. There's no denying this is a classy smartphone but, in this highly competitive market, we're not sure it's worth the £999 price tag.

❓ WHAT'S THE RUMOUR

Is WhatsApp adding self-destructing messages?

WhatsApp could be getting a host of new features soon, if a leaked list of upgrades proves true. The Facebook-owned messaging service recently submitted an update to the Google Play Beta Program and, in the app's latest version, it appears the company is introducing expiring messages. Like a Mission: Impossible briefing, these messages can be set to self-destruct after a specified amount of time.

In previous tests, only the administrators of WhatsApp groups could control expiring messages, but the new option should be accessible to all. It's often been teased but, if the whispers are right, we can expect to see this feature appear in the near future.

Beta testers also suggest that WhatsApp is working on support for multiple devices. Currently, your WhatsApp account is tied to your mobile number and SIM card – which makes it next to useless for anyone running a phone and tablet setup. Users have long been requesting this feature, but it's probably taking so long due to security and encryption concerns. It's thought that when you log into your account on another device, you'll be notified on the original one.

Finally, and perhaps less usefully, is the support for 15-second videos in your status. While this may be welcomed by a few people, we suspect most still haven't changed their default status from 'I am using WhatsApp, let alone considered filming a video to go with it.

LIKELIHOOD RATING
✓✓✓✓✓

Fans have been looking forward to expiring messages and multiple-device support for a long time, and it seems that, finally, WhatsApp will deliver. Security remains our top concern, though – and should these features make it through to general release, we'd like reassurances that they won't be open to abuse or privacy problems. You can try signing up for beta testing of the app at bit.ly/beta499.

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

NevoQ
bit.ly/wallet499 | From £39

The NevoQ combines a wallet with a supercharged power bank to create a 'charge anywhere, anytime' device that keeps your phone juiced on the go, while stashing your cash and cards. Just pop your phone on top or connect one of three built-in cables to charge it using the wallet's 4000mAh power bank. This convenience, however, involves some bulk and the NevoQ cuts a fuller figure than a traditional wallet. It comes in two shades – one for men, and one for women. We just hope it won't clash with contactless cards while it's charging our phone.

WEBOMETER

WE LIKE...

⬆ **WHO launches COVID-19 advice app**
The World Health Organisation has launched an official coronavirus-advice app for Android and iOS. The WHO app provides WHO-approved information on protecting yourself, answers common questions and busts myths about the virus.

⬆ **Boss turns into a potato on video chat**
A company boss accidentally turned herself into a potato during a Microsoft Teams video conference and couldn't disable the filter for the rest of the meeting. A screenshot of the spud incident received almost 1m 'likes' on Twitter.

WE DON'T LIKE...

⬇ **Marriott suffers second data breach**
The Marriott hotel chain has informed 5.2 million of its guests that their personal details were exposed in a data breach. Last year, Marriott was fined £99m for an even bigger breach that involved 339 million guests.

⬇ **Apple scraps Android app Dark Sky**
Apple has bought the popular weather app Dark Sky and removed it from the Google Play store, forcing Android users to find an alternative. Those who already have Dark Sky installed can continue to use the app until 1 July.

Stay Safe Online

News about the latest threats and advice from security experts

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

iOS flaw stops VPNs encrypting data

A security vulnerability discovered in the latest version of Apple's iOS software prevents third-party virtual private networks (VPNs) from encrypting all web traffic on their devices.

When a VPN is activated on a device, the operating system typically shuts off all existing connections and re-establishes them through a VPN tunnel. Version 13.4 of Apple's iOS, however, doesn't close existing connections when connecting iPhones to a VPN.

This is an issue that affects some apps, but not all, because many connections are short-lived and are closed automatically, anyway. Some connections, however, remain open for minutes or even hours, and will remain established outside the VPN tunnel, according to researchers at ProtonVPN.

"The VPN bypass vulnerability could result in users' data being exposed if the affected connections are not encrypted themselves," said ProtonVPN. "No VPN service can provide a workaround for this issue because iOS does not permit a VPN app to kill existing network connections".
bit.ly/vpn499

Three customers targeted by phishing scam

Cybercriminals are posing as the UK mobile network Three as part of a sophisticated phishing campaign designed to steal cutomers' financial details. The attack relies on a convincingly spoofed HTML document that entices Three users to hand over everything from their passwords and personal details to credit-card and payment information.

The opportunistic phishing campaign, spotted by the Cofense Phishing Defence Centre, appears to be exploiting a rise in demand for data services amid the global coronavirus pandemic. Victims are first informed of a bill payment that couldn't be processed by their bank before being invited to download an HTML file to edit their billing information and avoid service disruption.

The attached file then requests login credentials, along with personal and payment information. Alarmingly, the file has cloned actual HTML code and style elements from the Three website to appear genuine. Cofense says the email address 'online@three.co.uk' is the apparent source, but on closer inspection this appears far from legitimate.
bit.ly/three499

Credits: Willy Barton / Primakov / Shutterstock.com

Security Helpdesk | Your questions answered by security specialists

THIS ISSUE'S EXPERT: Ray Walsh, Digital Privacy Expert at ProPrivacy (proprivacy.com)

ProPrivacy

Q Is it safe to use video-chat apps such as Houseparty (see page 8) during lockdown?
Dave Conway, Facebook

A Anybody who decides to use the Houseparty application to stay in contact during quarantine needs to be aware that the app collects a worrying amount of personal information. This includes geolocation data, which could, in theory, be used to map the location of each user.

A closer look at Houseparty's privacy policy reveals that the firm promises to anonymise and aggregate data before it is shared with the third-party affiliates and partners it works with. However, time and time again, researchers have proven that previously anonymised data can be reidentified.

If the coronavirus pandemic continues for an extended period of time, there is a real risk that apps like this may be used as a means of surveillance to observe how COVID-19 is spreading.

Q Can the government spy on us while it is collecting data about the coronavirus?
Paul Giddings, Facebook

A The news that the ICO has approved the use of UK phone data in the fight against the coronavirus is extremely concerning with regards to personal privacy. The newly approved rules give the government permission not only to use aggregated data to locate hotspots where people are congregating and potentially spreading COVID-19, but also to use personal device-level data that could reveal their exact location.

These surveillance measures are going to change the way we live forever unless specific time limits are set to ensure the government cannot keep spying on people once the pandemic is over. Individual users ought to be informed before and not after their personal data is collected.

✚ Email us your security questions at **webuser@webuser.co.uk**

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that can imagine the future

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Best New Websites

HEALTH   **RELAUNCH**

Google COVID-19

www.google.co.uk/covid19

There's an understandable hunger for information about the coronavirus pandemic right now and Google's new hub does an excellent job of keeping you up to date with many of the details. It aims to cut through the confusion by explaining what COVID-19 is and how you can help prevent it. You can also find resources about coping with the virus – whether you have it or not – and keep up to date with useful videos and stacks of data highlighting the areas affected. Curated content from media organisations is thrown into the mix and it should hopefully help to head off any potential fake news in the weeks ahead.

Our rating ★★★★★

TIPS
Check up-to-date official advice from the World Health Organisation and other public health bodies
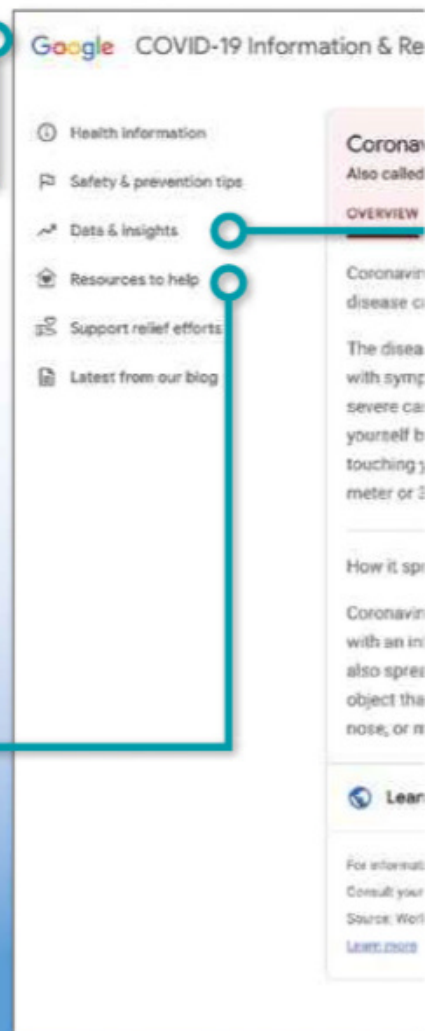
WATCH VIDEOS
There are lots of video resources about the pandemic, along with a link to YouTube content

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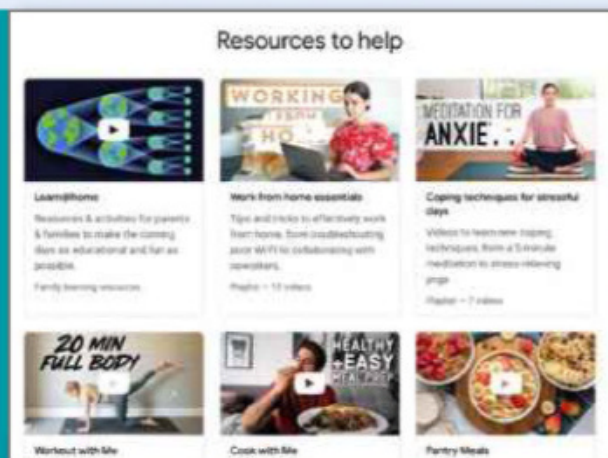
VIDEO GAMES   **NEW**

Sega 60th Anniversary

60th.sega.com/en

Founded in June 1960, Sega has created some of history's best loved consoles, including the Mega Drive and Dreamcast, and brought Sonic the Hedgehog and a host of other great characters and titles to the gaming world. These triumphs (and a lot more besides) are highlighted on this celebration site in a scrollable timeline packed with milestones and images. There's also a message from Sega chairman Haruki Satomi and a section that lets you leave your own thoughts. More content is promised soon, which we hope will include insights into past game development. There's also a greyed-out section called Events, which we'll be watching with interest.

Our rating ★★★★★

VIDEO GAMES   **NEW**

Xbox Series X
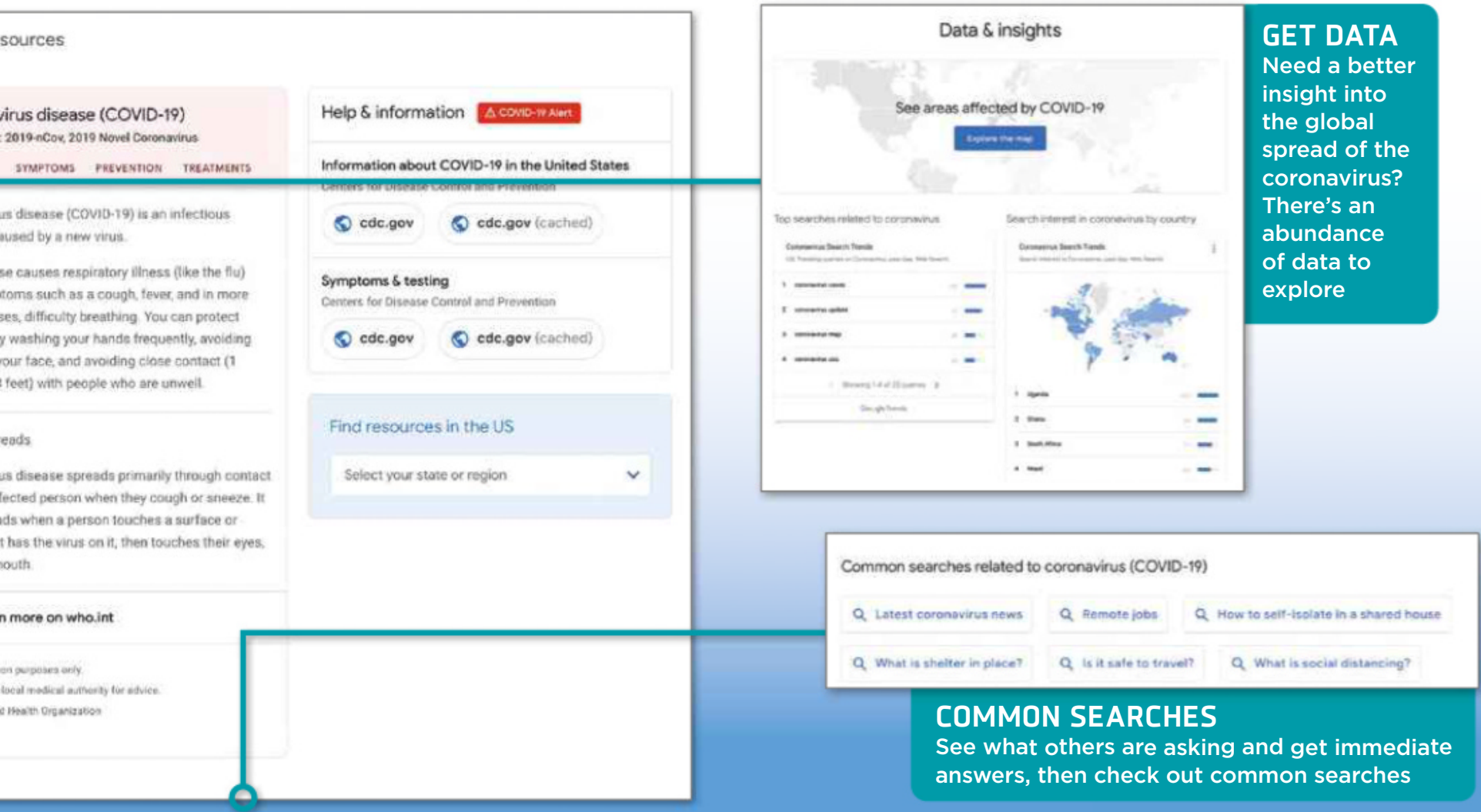
bit.ly/xbox499

Microsoft's latest and most advanced console is pencilled in for release this autumn and, to whet your appetite, the tech giant is inviting you to take a closer look. Not only is it showcasing what, in truth, looks like a nondescript black box, but it's also providing animated visuals of the machine's innards as well as explanations of many of the components. Once you've digested the comprehensive tech specs, you can feast your eyes on the new modernised controller. It's also worth peeking at the visual potential of the next-generation of games via a worthy but insightful promo video.

Our rating ★★★★☆

Reviews by David Crookes

We review this fortnight's best new and relaunched websites and rate them for content, design and features

GET DATA
Need a better insight into the global spread of the coronavirus? There's an abundance of data to explore

COMMON SEARCHES
See what others are asking and get immediate answers, then check out common searches

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HEALTH · NEW
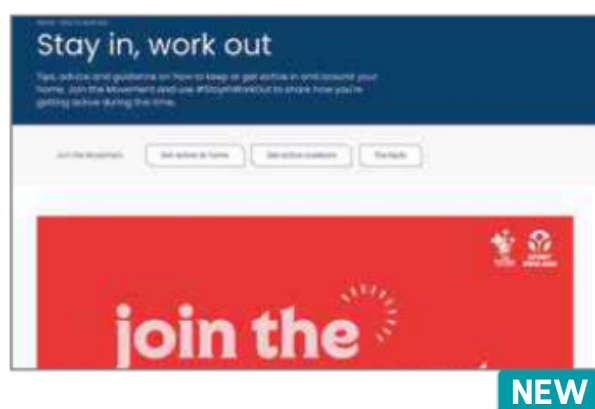
Stay In, Work Out
bit.ly/stayin499

Despite the current limitations on our movement, it's important to stay active. Sport England has added a new section to its website dedicated to tips for keeping fit around your home – whether that's indoors or in the immediate vicinity. The advice is split between interior and exterior activities, and there are plenty of free workout videos and suggested apps for you to check out, including promotions of established campaigns such as Couch to 5K. Just as importantly, you can read the latest government guidance about how to behave and protect yourself while exercising.

Our rating ★★★☆☆

COMMUNITY · RELAUNCH
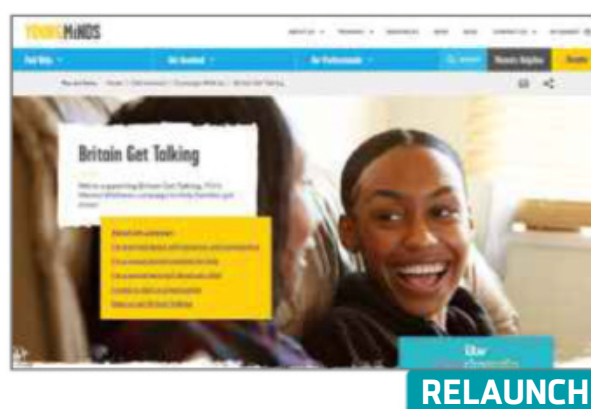
Britain Get Talking
bit.ly/bgt499

ITV's mental wellness campaign, Britain Get Talking, has been revived in response to the social issues surrounding the coronavirus pandemic. It's supported by the charity Young Minds, which has created a site section dedicated to explaining the campaign and addressing how young people can cope with self-isolation. There's an abundance of advice and tips for parents, with a link to further information via a series of guides. Navigating the site is also easy, thanks to a well organised menu towards the top of the page that lets you quickly find the links and the help you need.

Our rating ★★★★★

HOSPITALITY · NEW

Support Hospitality
www.supporthospitality.co.uk

Designed and launched in less than 48 hours, this website aims to keep pubs, restaurants, hotels, cafés and bars alive by letting them promote their takeaway services and gift vouchers. Choose a UK region from the drop-down list to see a selection of eateries with details of what they have to offer – gift-vouchers, menus and sometimes information on what they are doing during the coronavirus pandemic. If you own a food or drink business yourself, you can add it to the site via a button at the top of the screen. The project will rely on word of mouth so you're encouraged to share it.

Our rating ★★★★☆ ➡

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

⭐ Best New Websites

NEW

PHOTOGRAPHY

Explore York Images

images.exploreyork.org.uk

York dates back to the Roman Empire but this rich photographic archive of the city concentrates on the past 100 years or so, bringing together images from council records, local historians and residents. These are categorised by people, places and events, and include photos of slums, snapshots of war and York's changing landscape. A speedy search engine is accompanied by filters that help you quickly burrow down to images of interest. We like that the pictures are well-described and credited, but the high-resolution versions are watermarked and you have to pay to download them.

Our rating ★★★★☆

RELAUNCH

CLOTHES

Connolly England

www.connollyengland.com

Founded in London in 1878 as a saddler and shoesmith, Connolly relaunched four years ago as a luxury brand. Since then, it has built a quiet reputation for well-cut clothing, knitwear and leather goods, underpinned with a timeless British style. This is conveyed on its website via images of classic cars, craftsmanship and interiors, but it's the purchasable collection that's the focus of the site. Here, there are large photos that give different perspectives when you hover over them as well as lavish descriptions and easy size selection. The blog is also vividly image-led and there's a lovely potted history to enjoy, too.

Our rating ★★★★☆
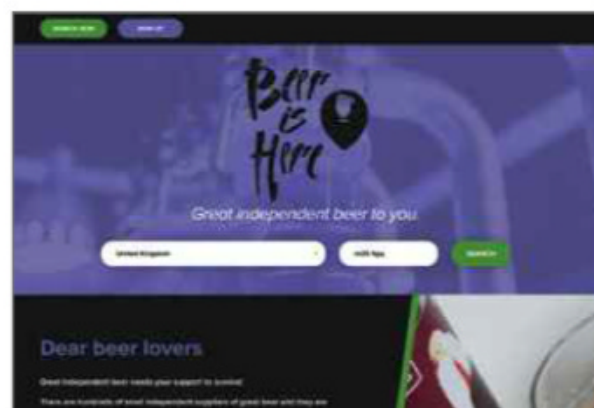
NEW

ALCOHOL

Beer Is Here

www.beerishere.org

Following the closure of pubs, bars and restaurants due to the coronavirus, independent breweries, bottle shops and taprooms could have been drowning their sorrows but, instead, they've looked for alternative ways to keep afloat and Beer Is Here is one of them. Enter your postcode to find small local businesses selling well-crafted beer in your area. By directing you to their websites, it lets you peruse their selections and place an order. Also of interest is the Five O'Clock Club initiative, which encourages people who are social-distancing or self-isolating to get together on a video chat. That's certainly something to raise a glass to.

Our rating ★★★★☆

RELAUNCH

EDUCATION

The Maths Factor

www.themathsfactor.com

Worried about your child falling behind while schools remain closed? Then who better to fill the gap than former *Countdown* star and numbers whizz Carol Vorderman? She's made her online educational resource free to use, allowing anyone signing up to save £2 per week, so four-to-11-year-olds can access videos that build up mathematical knowledge following the national curriculum. A cartoon Carol hosts a range of fun games including a times-table check and some counting-based titles – just the thing to keep young minds occupied (and stop parents being driven up the wall). Parents can monitor their child's progress, too, and get friendly advice.

Our rating ★★★★★

COULD DO BETTER
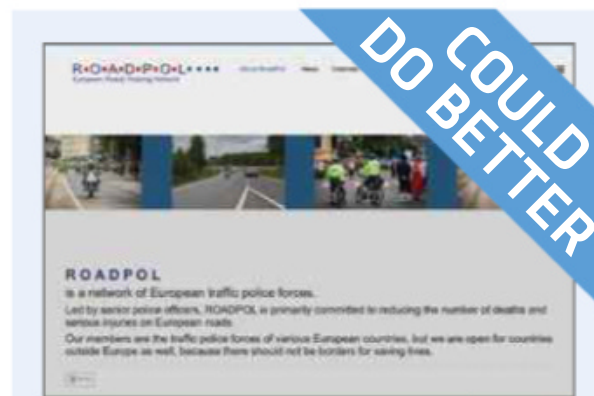
NEW

RECRUITMENT

RoadPol

www.roadpol.eu

What was formerly known as The European Traffic Police Network (TISPOL) is now more snappily named RoadPol, but its website seems to have taken a wrong turn. A basic homepage with a smattering of images – three of them identical – makes for a bad start, while clicking around feels you've stepped into a DeLorean and gone back in time to the late 1990s. Useful Links (or "userfull", as the site also spells it) is just that – a list of URLs. The calendar and news pages fare a little better but, on the whole, it's a car-crash of website design.

Our rating ★★☆☆☆

ESSENTIAL BOOKMARKS THIS ISSUE: Brain-teasing quiz sites

ActionQuiz
www.actionquiz.com

Flex your powers of trivia recall against online opponents in this addictive multiple-choice game. The site itself is relatively simple (none of the thousand-strong lists of puzzles you'll find on, say, JetPunk – see right) but don't be fooled by the brief selection of categories – they lead into a rabbit hole of subcategories and sub-sub-categories featuring everything from the Pre-Titan Gods to Jukebox Musicals of the 2000s, each with its own multiplayer knockout round. Ingeniously, your three 'opponents' are algorithmic virtual quizzers, based on the latest average scores from real-life users in those countries. This protects everyone's privacy while also giving you a realistic challenge. The difficulty level is pitched just right, too.

JetPunk
www.jetpunk.com

If you're a fan of *Pointless* or that pub-quiz round where you have to come up with umpteen correct category examples against the clock, then you'll like JetPunk. That's not to say that all JetPunk's thousands of quizzes are in that format, but you won't know until you click one. The highest-rated quiz list (bit.ly/rated499) is dominated by geography quizzes such as 'Countries of the World in 1914', but you'll also find rounds for *Doctor Who* episodes, periodic table elements and *Lord of the Rings* characters, with many quizzes devised by JetPunk users themselves. If you can't decide which quiz to try, click the Random link at the top of the page.

Sporcle
www.sporcle.com

We'd be happy to hail quizzing mega-site Sporcle as the only bookmark a trivia lover needs, but its US bias makes it occasionally tricky for those of us without an encyclopedic knowledge of baseball. That said, it contains such a treasure trove of high-quality games and well-crafted features (such as Trivia Bingo, which you can play against real users or SporcleBot) that we couldn't resist including it. It also has the best quiz-creation tool we've seen, for helping you take on the role of virtual quizmaster. This entails signing up to the site, but it's free and supports login via Google and Facebook. For extra fun and privacy, you get to disguise yourself with a custom handle and avatar.

7 Words
bit.ly/7words499

Here's a fiendish new challenge for wordsmiths. 7 Words, hosted by the free online puzzles site HTML5games.com, is an interactive brain teaser that tasks you with combining blocks of letters into longer words to match definitions. The grey squares by each clue indicate the number of blocks you need to complete the answer, and it's remarkable how alien even well-known words look when broken down into groups of two or three letters. While most of the words are in common use, the definitions can sometimes stretch logic, so you may need to use all three of your hints before you can progress to the higher difficulty levels. With nearly 800 rounds to play, there's plenty to keep you busy.

World Quizzing
quizzing.com

World Quizzing's online HQ, Quizzing.com, is normally little more than a directory of quiz circuit events, including the Quiz Olympiad, whose winners you'll recognise from shows such as *Eggheads*. But then the coronavirus forced World Quizzing to go virtual, live-streaming its events so we can all watch them for free via YouTube. You can subscribe to the channel at bit.ly/quiztv499, get Twitter updates via @WorldQuiz and even register to take part at quest.quizzing.com. Or settle for a newly online pub quiz, such as Big Drop's Living Room Pub Quiz (bit.ly/bigdrop499) or BrewDog Online (brewdog.com/onlinebar).

DON'T MISS!

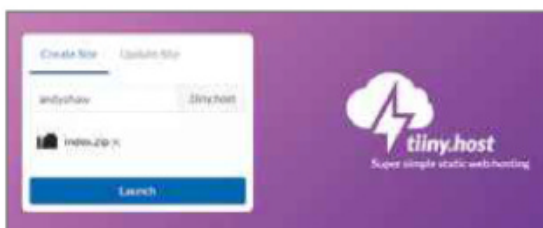➕ Tell us about your favourite quiz sites via webuser@webuser.co.uk

Build a Better Site

Specialist tips, top tools and practical help

Top Tips of the Fortnight

Host a temporary website for free

If you want to set up a free website for a short period of time, take a look at Tiiny Host (tiiny .host), which lets you upload an HTML website, up to 3MB in size, hosting it free of charge for seven days. Simply compress your website into a zip file and upload it to the site. Upgrading to the $39 (£31) per year option lets you have four sites up to 10MB each, or, for $9 (£7.22) per month, you can have 10 sites of 50MB each.

What's new in WordPress 5.4

The recently released WordPress 5.4 brings some new options to the popular web-building tool.

There are two new blocks: one to add social media icons and the other for adding buttons, both of which look more classy than the usual links. You can add gradients to buttons and also to the Cover block, which is basically a block of colour you can add to your design. The update has also streamlined the way media blocks work, so pictures, videos and other inserted items should look neater when laid out together.

Deal of the Fortnight

GoDaddy (uk.godaddy.com) has a great offer on '.com' domains, down from £16.10 to just 99p for the first year.

Web-building Helpdesk

Q I run a website for a small business but can't operate during lockdown. How do I effectively shut down my website to restart later, without losing all the hard work I've done with search engines?

Maria Turnham, via email

A We're clearly in a difficult time for small businesses, and website entrepreneurs may struggle as much as those having to close high-street shops and other physical premises. Hopefully your business will be able to spring back when this all blows over.

In the meantime, Google has published some useful advice that might be of help on its Webmaster Central Blog. Titled 'How to pause your business online in Google Search', it's available at bit.ly/pause499.

Andy Shaw, Technical & Reviews Editor

MINI WORKSHOP | Move your WordPress website to a new host
WordPress: **wordpress.org** | 🕑 10 mins | Two self-hosted WordPress websites

As with broadband, utilities, insurance and everything else that ties us into a contract, web-hosting prices can rise over time. If you want to hunt for a better deal, here's how to transfer your WordPress website.
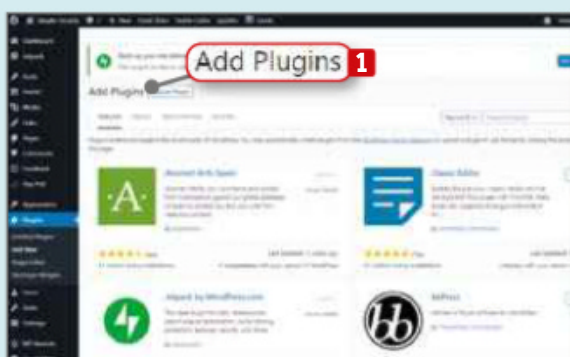
1 Before you start, make sure you have a WordPress installation set up on your new host. Download and install any themes, plugins **1** and other extras you've installed and activated on your existing website. As far as possible, make any adjustments to their settings to match the ones on your existing website.
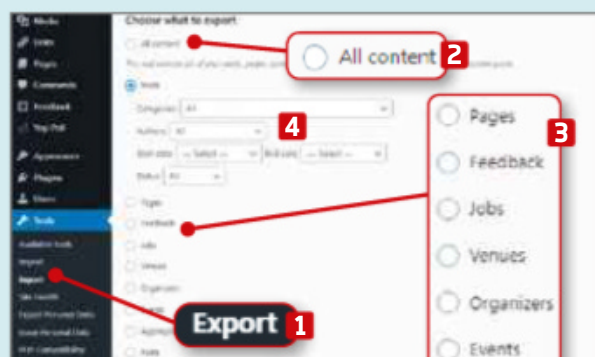
2 In the current site's dashboard, click Tools, then Export. **1** Select 'All content' **2** to export the entire site. If you'd like to tidy up your site while you move it, you can export specific elements. Click what you want, **3** then set up an appropriate filter. **4** Scroll down to the bottom and click the Download Export File button.
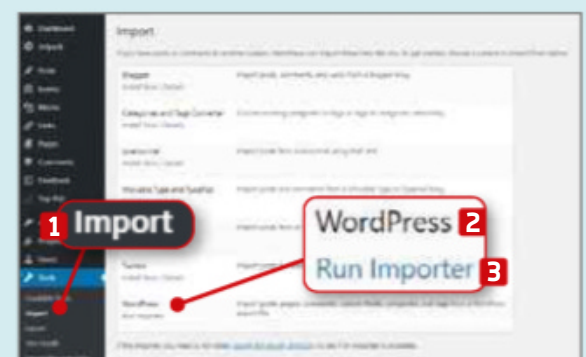
3 On the Dashboard of the new site, click Tools, then Import. **1** Scroll down to WordPress **2** and, if you need to, click Install Now. Once it's installed, click Run Importer. **3** Click the 'Choose file' button, select the exported file you downloaded in Step 2, then click 'Upload file and import'.

What To Watch Online

Watch Sky's new gangster drama *Gangs of London*

From 23 April

Sky has chosen St George's Day to release its ambitious new crime epic *Gangs of London*, which comes to Now TV as an 11-episode box set. What more patriotic way to spend lockdown than with hours of gangland ultraviolence in the present-day capital? Well, at least it'll keep us indoors.

Contrary to what you might be thinking, the Sky Original show isn't based on the 2006 PlayStation game of the same name (bit.ly/psgangs499), although it does come packed with visceral action scenes and immersive shots of the capital. Joe Cole (John Shelby in *Peaky Blinders*) stars as Sean Wallace, seeking to maintain his family's nefarious clutches on London following the murder of his dad, a notorious gangster named Finn Wallace (Colm Meaney). Michelle Fairley and David Bradley also star.

Watch Sky's official trailer at bit.ly/gangs499, and find out more about the show at bit.ly/london499. Stream all 11 episodes on-demand from 23 April with a Now TV Entertainment Pass (£8.99 per month after a free 7-day trial, bit.ly/nowent499).

Welcome back Ricky Gervais in *After Life*

From 24 April

Ricky Gervais writes, directs and stars in this disarmingly honest Netflix comedy-drama about a local newspaper writer struggling to come to terms with his wife's death. In Season 2, which arrives as a six-episode box set on 24 April, Tony (Gervais) must also deal with the looming threat of the paper he works for being closed.

There's no new trailer at the time of writing but Netflix offers up some Season 1 bloopers (bit.ly/bloopers499 – not for kids!) and Gervais keeps his Twitter feed (@rickygervais) brimming with updates. Season 2 joins Season 1 on Netflix at bit.ly/life499.

Watch Apple's justice thriller *Defending Jacob*

From 24 April

Captain America's Chris Evans swaps lycra for business suits in Apple's tense new miniseries, playing a lawyer whose beloved young son is charged with knifing a classmate to death. Legal eagle Andy suddenly starts lying to all and sundry – including his wife (Michelle Dockery) – in an attempt to protect his boy.

The eight-part drama is based on William Landay's award-winning 2012 novel (bit.ly/djbook499), and its trailer has an intense Scandi noir chill: bit.ly/jacob499. Stream the first three episodes on-demand from 24 April via Apple TV+ (£4.99 per month after seven days free, bit.ly/appleplus499), then watch five further episodes weekly.

Watch sci-fi mystery *Emergence*

From 20 April

Science fiction and conspiracy theories collide when police chief Jo Evans (Allison Tolman) finds a young amnesiac girl at the site of a mysterious accident. ABC's 13-part thriller earned great reviews in the US last autumn, with viewers raving about Tolman, who also played a likeable cop in 2014's first season of *Fargo* (soon to add a fourth season on Netflix at bit.ly/fargo499).

Emergence airs in the UK on Fox, so you can stream episodes

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

on-demand via Now TV with an Entertainment Pass. The trailer's already got us gripped: bit.ly/emerge499.
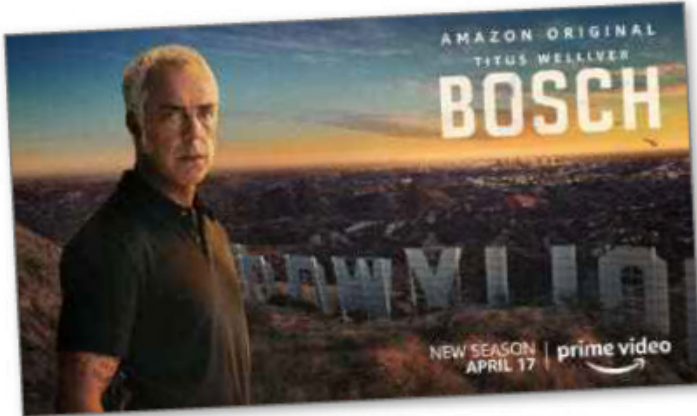
Defend LA in Season 6 of Amazon's *Bosch*

From 17 April

Titus Welliver returns as the titular 'tec in Season 6 of Amazon's intelligent cop show. This latest run may risk jumping the shark – its plot involves terrorists threatening to obliterate LA with radioactive material – but the official trailer (bit.ly/boschtrail499) is as intriguing as ever. Watch all five previous seasons via Amazon Prime Video at bit.ly/bosch499, then catch 10 new episodes from 17 April. Season 7 is due next year.

Watch new AI cop comedy *Code 404*

From 29 April

Stephen Graham and Daniel Mays star as the familiarly named detectives DI Roy Carver and DI John Major in Sky One's new six-part sitcom, a welcome slice of laughs in these intense times.

The action kicks off when Major (Mays) is killed in the, ahem, line of duty,

C4 shows finally come to BritBox

Channel 4 has added a batch of archive comedy and drama shows to BritBox, more than six months after confirming that it would join ITV, the BBC and Channel 5 on the subscription on-demand service.

Most of C4's content is comedy, with *Father Ted*, *Peep Show*, *Brass Eye*, *Spaced* and *The Inbetweeners* leading the charge. A few recent drama shows such as *Deadwater Fell* starring David Tennant and *The Accident* starring Sarah Lancashire are included, too.

A collection of classic British films curated by Film4 will arrive later this year on BritBox, which costs £5.99 per month after a free 30-day trial (www.britbox.co.uk).

and his body is reanimated via the magic of experimental AI. But all-new artificially-intelligent Major doesn't quite work properly, and hilarity ensues, courtesy of *Horrible Histories* writer Daniel Peak. There's no trailer yet, but keep an eye on Sky's *Code 404* page for updates: bit.ly/code499.

Watch acclaimed drama *Vida* for 99p

From 26 April

This tale of two Mexican-American sisters discovering the shocking truth about their mother's identity is one of

few TV shows to score a perfect 100 on reviews-aggregator site Rotten Tomatoes (rottentomatoes.com)

The show, which reaches its conclusion with the new Season 3, is only available in the UK via StarzPlay (bit.ly/vida499), normally £4.99 as an Amazon Prime add-on but currently 99p per month for three months (bit.ly/amstarz499). Could *Vida* make StarzPlay worth a punt? Watch the latest trailer at bit.ly/vidatrail499.

In case you missed it...

Smart-dressing, sharp-shooting, wise-cracking assassin Villanelle is back for a third season of *Killing Eve* on BBC iPlayer.

Unlike Season 2, which limped on to UK screens months after airing in the US, Season 3 arrives just a day after its US debut -

although we are having to wait a week between episodes this time, with Episode 2 arriving on Monday 20 April. Still, Villanelle looks to be on top form in the trailer (bit.ly/evetrail499), and Sandra Oh and Fiona Shaw are also back. Season 3 joins Seasons 1 and 2 on the iPlayer at bit.ly/killing499, and Season 4 is coming next year.

New comic book adaptation *Vagrant Queen* is arriving weekly on Now TV, courtesy of Syfy. Watch the trailer at bit.ly/queen499.

Amazon Prime has just added the third and final season of Seth Rogan's superhero satire *Future Man*, which joins Seasons 1 and 2 at bit.ly/future499. Watch the trailer at bit.ly/fmtrail499.

Fitness bands

Increase your step count and fitness, even if you're currently confined to your home, with one of our top five fitness bands

You don't have to spend a fortune on a full-on smartwatch if all you want is a connected device that straps on your wrist, alerts you when messages arrive and helps improve your fitness. Whether you want to make sure you're walking enough every day to stay healthy, or get alerted to changes in your heart rate, we've looked at five affordable fitness bands designed to help.

Fitness bands are aimed at anyone with a desire to get a bit fitter, and you don't have to own a pair of running shoes. These devices will help you hit your steps target, whether it's 10,000 or more, and measure a selection of other key health metrics to help you stay well.

HOW WE TESTED

We wore each band for a few days while also wearing a fitness smartwatch – the Polar M430. This is a more expensive fitness device that we know measures distances and other metrics accurately, so we could compare it to each of the bands we reviewed.

We went on a 3km and a 5km run to see how the distance measured by each band compared to the Polar watch. We also explored the features of each device and evaluated their companion apps.

Xiaomi Mi Smart Band 4 | £25.98 | Buy from Amazon: bit.ly/xiaomi499

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

Xiaomi's latest Mi Smart Band fitness tracker is a small black lozenge that fits securely in a rubber wrist band when in use, and slots into a small charging dock when not. Its colourful screen is smaller than it looks, because the black background blends in with the plastic housing, but it's still large enough to be easily readable.

The combined device and strap is a bit bulky, protruding 10.8mm off your wrist, and there are no physical buttons, so navigation can be tricky if you're wet from swimming or even just sweaty. Still, it's amazing value for just £26.

The device relies on your phone's GPS (Global Positioning System) for location tracking. We tested it with a Huawei P20 Pro phone and the combo recorded 3.49km for a journey that the more expensive Polar M430 tracker measured as 3.59km. It's best not to zoom in on the details, though, as our run appeared to take us off our actual route several times.

*Web**User** GOLD AWARD*

Perhaps the best thing about the device is its battery, which Xiaomi suggests should last 20 days. This depends on how much tracking you're doing – our observation of the speed of battery drain indicated it could last as long as a month if your tracking demands aren't high.

On the downside, we weren't impressed with the Xiaomi Mi Fit mobile app, which has limited features and isn't very user-friendly. We liked the sleep-tracking tool, which compares your sleep patterns against other Mi Fit users, but it falls far short of other popular apps such as Garmin Connect and Polar Flow. Unfortunately, the Mi Smart Band can't connect to many other apps, either – only WeChat and Google Fit are on its compatibility list, while Strava, Runkeeper and MyFitnessPal are sorely missed.

VERDICT
★★★★★

The Mi Smart Band 4 is an excellent fitness band, given its ridiculously low price. Its impressive battery life means you won't need to charge it more than a couple of times per month. However, it's relatively bulky and isn't compatible with many apps, other than Xiaomi's own and Google Fit. Even so, it's extraordinarily good value for money.

Fitbit Inspire HR | £69.99 |
Buy from Amazon: bit.ly/fbihr499

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

WebUser SILVER AWARD

Fitbit no longer dominates the fitness band market as it once did, but the Inspire HR shows why its name became synonymous with the concept. It's a well-balanced device designed to help you get fitter without having to spend hours analysing your data.

The brain of the device is a small plastic lozenge that clips between two silicon straps – you get both regular and large sizes in the box. The touchscreen works well if your fingers aren't too wet or sweaty, and there's a button on the side that's mostly used to go back when browsing menus.

This is a great device for step tracking – enter your desired number and it'll buzz if you're sitting still for too long – and its sleep tracking wins praise from users. The app is brilliant, with a great design and plenty of users, so you're more likely to know a fellow Fitbit aficionado to help motivate you.

VERDICT ★★★★★
While it's more expensive than the other Award winners, the Fitbit Inspire HR is a better all-round fitness tracker, so it's worth the extra money. Its app is well-designed and fun, while the device itself is reliable and simple to use.

Honor Band 5 | £27.99 |
Buy from Amazon: bit.ly/honor499

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

WebUser BRONZE AWARD

The Honor Band 5 is aimed at people who want to be a bit more active but don't need to track the minute detail of their running activity. This means there's no built-in GPS but you get a heart-rate monitor, step counter and on-screen notifications.

We found the step counting feature a bit less accurate than some rival fitness bands, though it was closer to the Polar M430 comparison device than the Gold Award-winning Xiaomi Mi Smart Band, losing only 0.1km on a 5km run. Heart-rate tracking appeared accurate and has plenty of features, including the option to set your own alerts if your heart gets too fast for too long.

The battery life is quoted at 14 days with minimum features or 6 days with everything on, which is excellent but still put in the shade by the Xiaomi Mi Smart Band. It also only connects to its own app, MyFitnessPal and Google Fit.

VERDICT ★★★★☆
This device has limited features but it's affordable enough to forgive most of its shortcomings, and it's a great starting point for Android users. Our Gold award-winner's battery life is better but otherwise there's really not much in it.

Huawei Band 3 Pro | £49.99 |
Buy from Amazon: bit.ly/huawei499

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

Unlike the cheaper Xiaomi and Honor bands, the Huawei Band 3 Pro has an integrated GPS system, so you don't have to pair it with a phone to track your movements. The 0.9in AMOLED screen is sharp and readable, but the lack of automatic brightness adjustment means it could disturb your sleep if it's activated by movement during the night. There are no physical buttons on this device – just a single touch-sensitive button under the main screen.

The onboard software is limited to measuring steps, heart rate, sleep and workout, and delivering messages. It can't be used to control music on your phone and doesn't have extras such as the Fitbit's breathing exercises.

The biggest problem we had with the band concerned its distance accuracy, losing 0.44km from a 5km run as measured with a Polar M430. On a second, shorter run, it again lost around 10% of the distance.

VERDICT ★★★☆☆
We found the Band 3 Pro's distance tracking lacked accuracy – you get better results with a cheaper band that relies on your phone for GPS. And although the Fitbit Inspire HR costs a bit more, we think it's better value for money.

Fitbit Inspire | £49.99 |
Buy from Amazon: bit.ly/fitbit499

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

The Fitbit Inspire is a stripped-back version of the Inspire HR, though it's the same size and shape, has the same screen and even uses the same charger. What's missing is the heart-rate monitor, which in turn means there are no breathing exercises, cardio-fitness tools or sleep tracking. It's also had the built-in GPS removed, which is a double blow because this device can't piggyback on your phone's GPS like the other cheaper award-winners in this Group Test.

Fitbit has knocked £20 off the price of an Inspire HR to compensate for these cuts, but with fewer features than the identically priced Huawei Band 3 Pro, it still doesn't feel inexpensive enough. On the plus side (sort of), with no GPS or heart-rate monitor, there's less reason to interact with the Fitbit Inspire's fiddly screen, so the problem of sweaty fingers on the touchscreen is less of an issue.

VERDICT ★★★☆☆
The Fitbit Inspire is more affordable than our Silver Award-winner, but we think it's a false economy. If you want to spend less, you may as well go further and get our Gold Award winner, which is even cheaper but offers more.

	Xiaomi Mi Smart Band 4	Fitbit Inspire HR	Honor Band 5	Huawei Band 3 Pro	Fitbit Inspire
WEBSITE	www.mi.com	www.fitbit.com	www.hihonor.com	www.huawei.com	www.fitbit.com
PRICE	£25.98	£69.99	£27.99	£49.99	£49.99
BUY FROM AMAZON	bit.ly/xiaomi499	bit.ly/fbihr499	bit.ly/honor499	bit.ly/huawei499	bit.ly/fitbit499
PEDOMETER	✓	✓	✓	✓	✓
ALTIMETER	✗	✗	✗	✗	✗
HEART-RATE MONITOR	✓	✓	✓	✓	✗
SLEEP TRACKING	✓	✓	✓	✓	✓
GPS	From phone	From phone	From phone	✓	✗
WATERPROOF TO DEPTH OF	50m	50m	50m	50m	50m
DISPLAY SIZE	0.95in	0.7in	0.95in	0.95in	0.7in
RESOLUTION	240 x 120 pixels	128 x 72 pixels	240 x 120 pixels	240 x 120 pixels	128 x 72 pixels
DISPLAY TECHNOLOGY	AMOLED	OLED	AMOLED	AMOLED	OLED
MOBILE OS SUPPORT	Android, iOS	Android, iOS	Android, iOS	Android, iOS	Android, iOS
QUOTED BATTERY LIFE	20 days	5 days	14 days	21 days	5 days
WEIGHT	22.1g	20g	25g	25g	19g
WARRANTY	One-year return-to-base	One-year return-to-base	One-year return-to-base	One-year return-to-base	One-year return-to-base

OUR VERDICT

The Xiaomi Mi Smart Band 4 wins our Gold Award. Its extraordinary battery life means you'll rarely be worried about whether it has enough charge to get you through your next workout. Although it doesn't have its own GPS for tracking your exercise journeys, it's great value for money.

If you're after something more sophisticated, we'd recommend the Silver Award-winning Fitbit Inspire HR. It offers a full range of health and wellness tools, from monitoring your heart rate to making sure you sleep at night – and, despite being the most expensive device in this test, it's still very affordable.

Our Bronze Award goes to the Honor Band 5. It's a similar proposition to the Xiaomi device but, while it's more accurate, the battery life isn't as good. ■

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HARDWARE, SOFTWARE & SERVICES

FITNESS WATCH

Xiaomi Mi Smart Band 4

£25.98 from **bit.ly/xiaomi499**
Tested: Issue 499

NEW!

The Xiaomi Mi Smart Band 4's colourful screen and excellent battery life mean you won't need to charge it more than a couple of times a month. For the low price, it's extraordinarily good value for money.

KEY SPECS

Pedometer ▪ Heart-rate monitor ▪ Sleep tracking ▪ GPS from phone (Android or iOS) ▪ Waterproof to depth of 50m ▪ 240 x 120 pixels resolution ▪ 0.95in AMOLED display ▪ 20-days battery life ▪ 22.1g ▪ One-year return-to-base warranty

INTERNET SECURITY SUITE

Bitdefender Internet Security 2020

£14.99 (1 year, 3 devices) from **bit.ly/bitdef497**
Tested: Issue 497

This superb security suite's one-stop all-round package can't be beaten. It's lightweight, easy to use, loaded with features and scored 100% for malware protection in our tests.

KEY SPECS

Malicious-website detection ▪ Secure browser ▪ Browser extension ▪ Anti-ransomware ▪ Parental controls ▪ Firewall ▪ Password manager ▪ Home-network scanner ▪ Secure file deletion ▪ File encryption ▪ VPN – 200MB of data per day

MONITOR

BenQ BL2780T

£209.97 from **bit.ly/benq495**
Tested: Issue 495

This BenQ monitor offers impressive screen quality, with excellent contrast and colours, for a reasonable price. It has a good selection of ports and is height adjustable. You can even rotate it by 90 degrees to use in portrait mode.

KEY SPECS

27in screen ▪ 1,920 x 1,080 pixels resolution ▪ 5 milliseconds response time ▪ 1 x DisplayPort, 1 x HDMI, 1 x VGA ports ▪ 2 x audio outputs ▪ 2 x 2W speakers ▪ 547 x 512 x 231mm ▪ 7.2kg ▪ One-year return-to-base warranty

MINI PC

Raspberry Pi 4 Model B

£34 from **bit.ly/pi493**
Tested: Issue 493

This latest Raspberry Pi effectively provides a full desktop computer with the footprint of a book of stamps. Its fast processor and quick networking make it snappier than older models, and it can be set up to use with dual monitors.

KEY SPECS

Quad-core 1.5GHz Broadcom BCM2711 processor ▪ 1GB memory ▪ Broadcom VC6 graphics ▪ 2 x Micro HDMI ports ▪ 2 x USB 2, 2 x USB 3 ports ▪ Gigabit Ethernet, 802.11ac Wi-Fi ▪ 86 x 57 x 19mm ▪ One-year return-to-base warranty

SMARTPHONE

Google Pixel 3a

£399 from **store.google.com**
Tested: Issue 491

For a pure Android experience, the Google Pixel 3a can't be bettered for the price. It has a brilliant camera and an exceptional screen, plus the promise of access to future updates and security patches as soon as they're available.

KEY SPECS

8-core Qualcomm Snapdragon 670 processor ▪ 4GB RAM ▪ 64GB storage ▪ 5.6in, 2,220 x 1,080 pixels resolution screen ▪ 12.2-megapixel rear camera, 8-megapixel front camera ▪ Android 9 ▪ 151 x 70 x 8.2mm ▪ 167g ▪ 1-year return-to-base
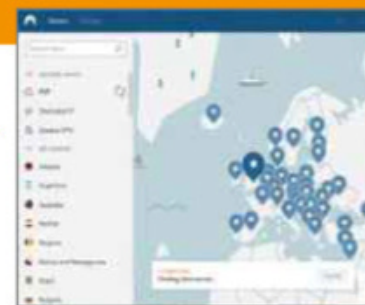
VPN

NordVPN

From £2.68 per month from
nordvpn.com
Tested: Issue 489

NordVPN strikes the perfect balance between usability, features and price. It's easy to set up a private connection and it has servers in dozens of countries across the globe.

KEY SPECS

Six simultaneous connections ▪ Choice of 60 countries ▪ 5,500+ servers ▪ IKEv2, OpenVPN protocols ▪ Double VPN security ▪ Router support ▪ 1,000+ BitTorrent servers ▪ Static IP option ▪ Windows, macOS, Linux, Android, iOS, Fire TV

All prices correct at time of review

Gold Award winners

The best from our software tests

Best Free Software

TinyWall 3

tinywall.pados.hu
Min requirements: Windows 7/8.1/10
File size: 1.4MB

TinyWall used to be a companion app for the built-in Windows firewall, which let you manage that tool's various settings to make it more effective against potential threats. With TinyWall 3, however, developer Károly Pados has completely rewritten the software, transforming it into a standalone firewall. As a result, it can now be run alongside – or without – Microsoft's security solution.

TinyWall's interface has undergone a little fine tuning, and benefits from better performance, new hotkeys, more useful defaults and unified batch operations. By becoming a firewall in its own right, TinyWall now offers enhanced security as a result of
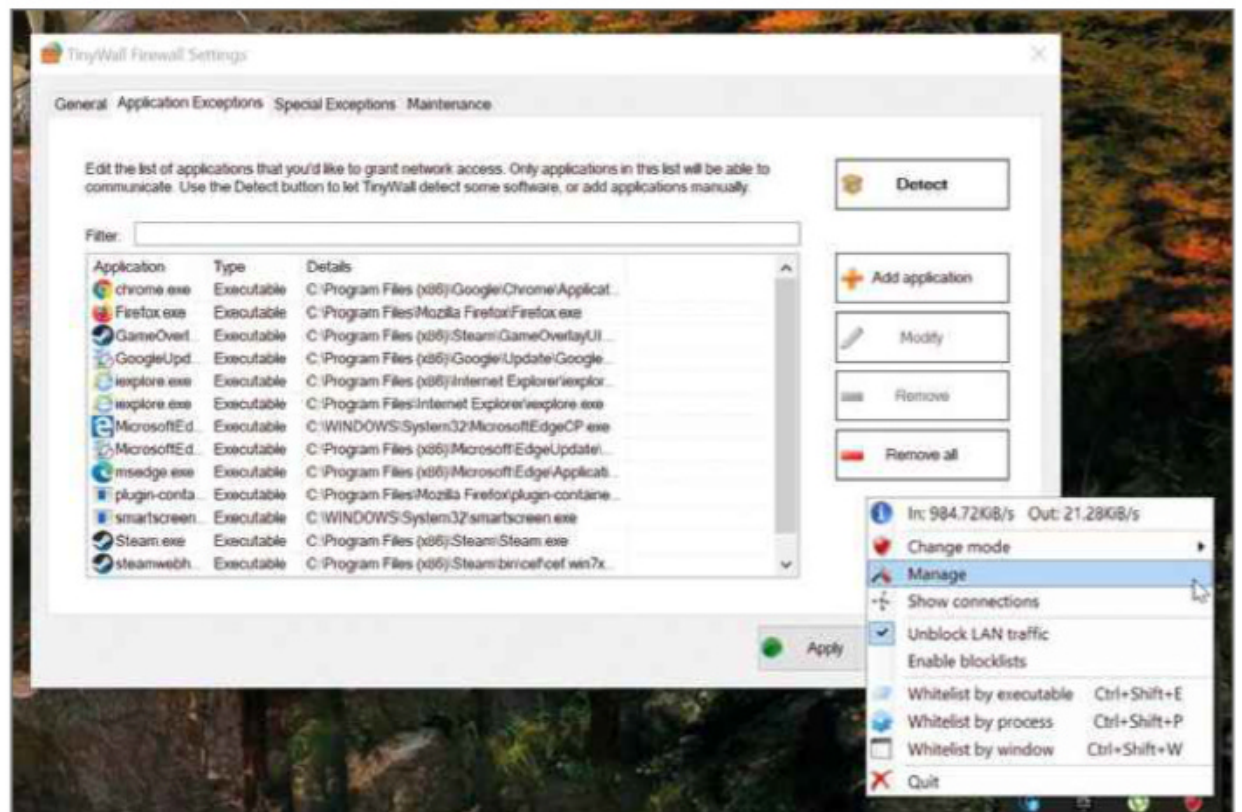
boot-time filtering, which allows the firewall rules to come into effect before the program even starts, protecting you much earlier. It also offers support for (and automatic handling of) UWP (Universal Windows Platform) applications from the Microsoft Store.

There's full support for Windows File Sharing, too – previously, you needed to employ a workaround to get this up and running – and the addition of raw and 'promiscuous' socket filtering provides extra security from apps that attempt to monitor or create network traffic.

The software now automatically allows child-processes of whitelisted executables (particularly useful in the case of online installers), and the firewall will no longer disconnect running apps when the protection feature is triggered. TinyWall's installer has also been rewritten, and now provides additional options.

On the downside, the changes to the firewall mean that the software no longer runs on 32-bit versions of Windows, and Vista support has been dropped as well.

MINI WORKSHOP | Configure TinyWall to protect your PC
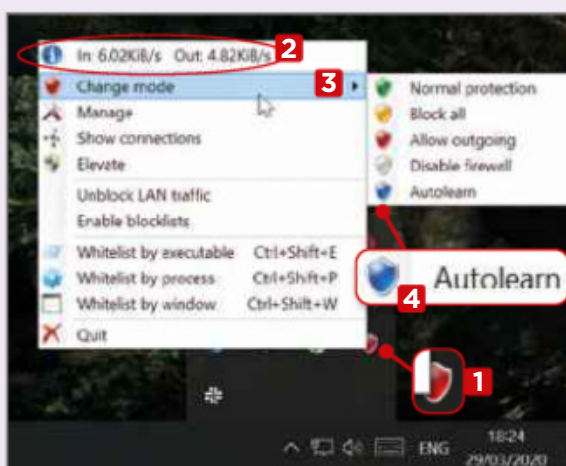
1 You can control TinyWall from the Windows system tray. Click the shield icon **1** and, from here, you can monitor inbound and outbound traffic **2** and change the protection mode. **3** Autolearn **4** teaches the software which applications you currently trust to access the internet.
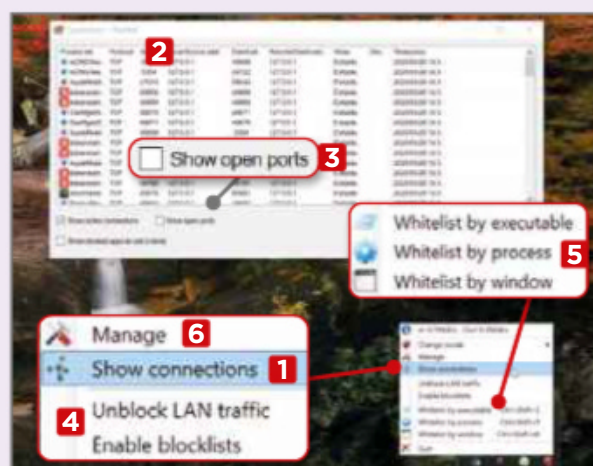
2 'Show connections' **1** lists all the active connections on your PC **2** and, optionally, any open ports. **3** You can unblock LAN traffic and enable blocklists. **4** If you know a program is safe, you can whitelist it by executable, process or window. **5** Click Manage **6** to open TinyWall's settings.
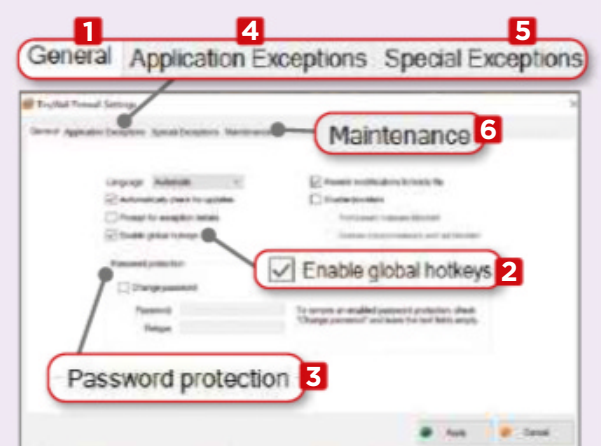
3 The General tab **1** lets you enable global hotkeys **2** and password-protect the firewall. **3** Application Exceptions **4** provides control over which apps can and can't access the internet. Special Exceptions **5** lets you control which Windows features have access, and you can import and export settings under Maintenance. **6**

This fortnight's top new software downloads to help you make the most of your PC, and they're all FREE

DESKTOP PET
Cyberpet Graveyard
bit.ly/cpet499
Min requirements: Windows 7/8.1/10 **File size:** 697MB

Boogy, Gordon, Louie, MeatSlug, Scrib and the rest of the gang are a collection of 'unlikeable and unwanted cyberpets' that reportedly originated at an 'undocumented point in the early 00s'. Each pet is different: some inhabit draggable windows floating on the screen; others that you just interact with by clicking. Explore the folders, view the information and launch any pets you want to see on your desktop. If you miss the days when cyberpets were popular, you'll enjoy this.

New Windows 10 App

Taskade
bit.ly/task499
File size: 68.51MB
Taskade is designed to help remote workers collaborate on projects, but it can also be used for personal purposes. You can manage tasks and chat with friends and family in one unified space, create task lists, notes and outlines, and share what you're doing with others. Taskade offers real-time syncing across devices, and has a tidy and intuitive interface. You can select a template or create your own.
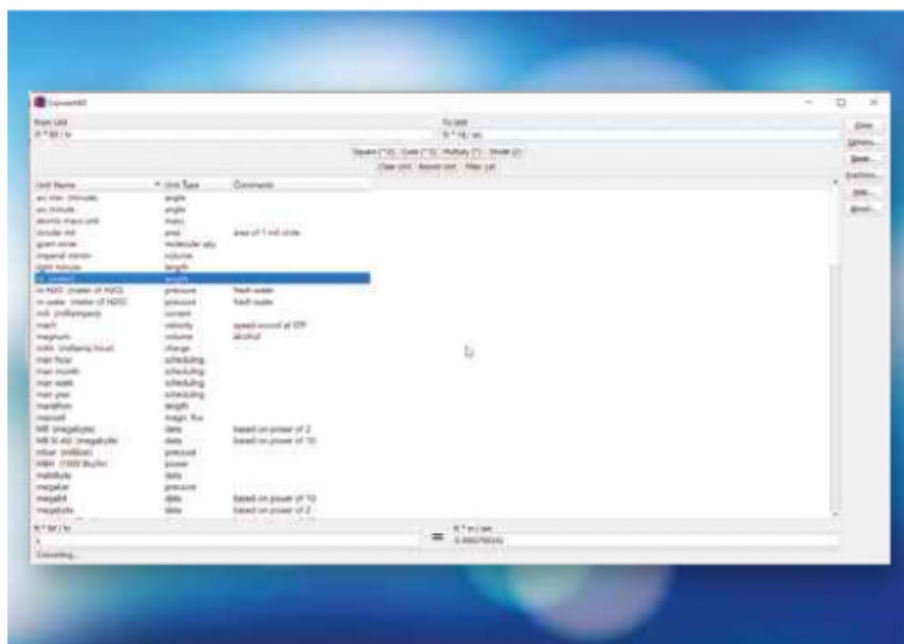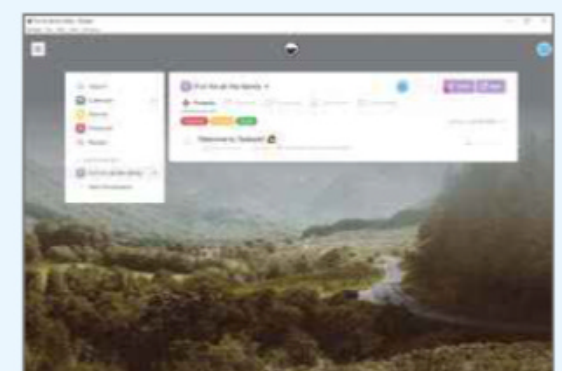
UNIT CONVERTER
ConvertAll
convertall.bellz.org
Min requirements: Windows 7/8.1/10 **File size:** 15.7MB

If you need to convert one unit into another – pounds into kilos or metres into feet, for example – you can use Google on the web or ask Alexa for the answer, if you own an Amazon Echo. However, for more complicated unit combinations – such as 'foot x pound force per hour' into 'Newton x metre per sec' – you're better off using ConvertAll. Type in the base units or select them from a list, then build up your combinations from there.

SYSTEM TOOL
Network Profile Name Changer
bit.ly/npnc499
Min requirements: Windows 7/8.1/10 **File size:** 376KB

When you connect to a new network for the first time, Windows will remember it, saving it as a network profile. Changing the name of this profile to make it easier to recognise is usually a complicated process, but this tiny tool from Sordum makes it much easier. Just change the network name in the box (by typing over it) and click Apply Now. There's also a Tools button that gives you direct access to various Windows networking settings.

➡

PRIVACY BROWSER
CCleaner Browser
bit.ly/ccbrowse499
Min requirements: Windows 7/8.1/10
File size: 4.8MB

Piriform, maker of the popular CCleaner system cleaner, has released a secure web browser, offering privacy-focused features including an ad blocker, anti-phishing and anti-tracking tools, and an extension guard to stop untrustworthy add-ons installing. The anti-phishing tool has been updated since the preview version of the browser launched and can now scan every web address loaded in a single page. The browser also offers anti-fingerprinting and a webcam guard, as well as a stealth mode that prevents your browsing history from being saved and automatically deletes any tracking cookies and cached files. You can launch CCleaner itself through the browser, too.
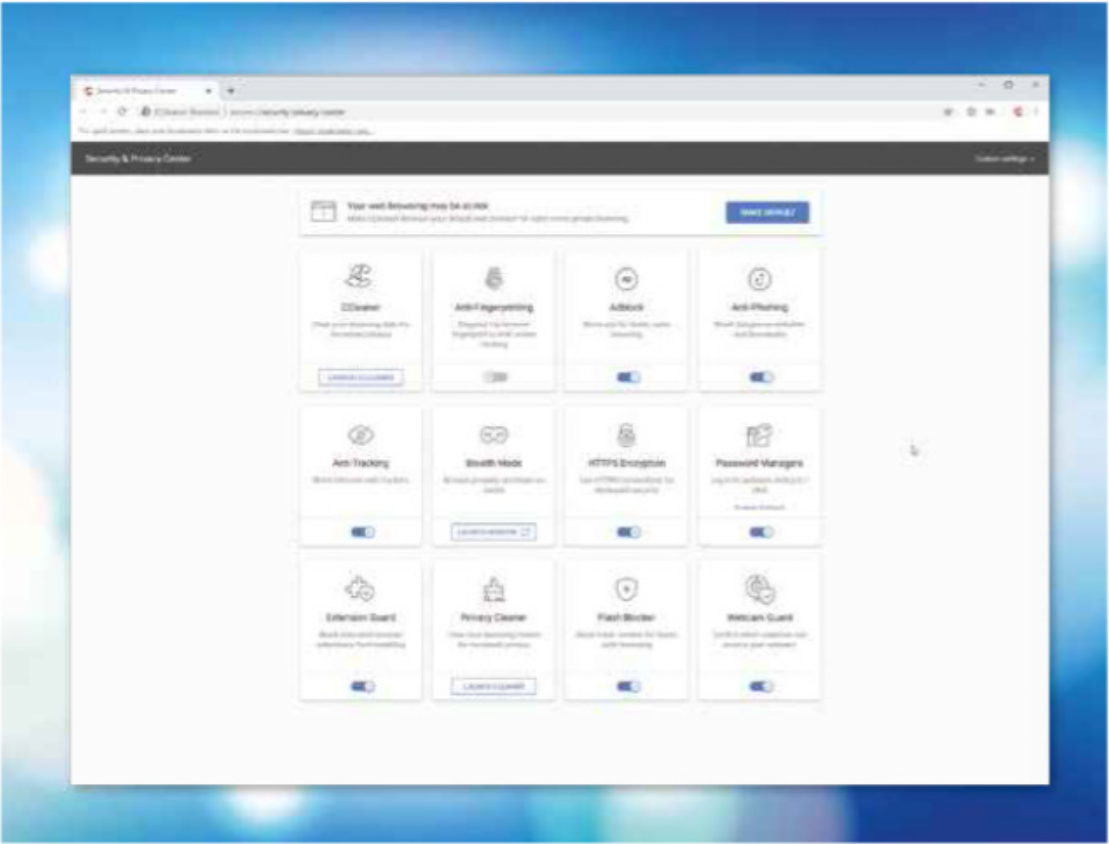
SYSTEM TOOL
WinDefThreatsView
www.nirsoft.ent
Min requirements: Windows 10
File size: 74.8KB

If you don't have a third-party antivirus program installed, you can rely on Microsoft's built-in Windows Defender to keep you safe from most threats in Windows 10. WinDefThreatsView, from prolific software developer NirSoft, displays all the threats detected by Windows Defender Antivirus and lets you quickly choose a default action for multiple items at once (Allow, Quarantine, Clean, Remove, Block or No Action). The software doesn't require installation – just run the program and it will get to work. If no threats have been detected, or you're using a different security program, then it will open blank.

SYSTEM TOOL
Alternate Archiver 4
bit.ly/aarch499
Min requirements: Windows 7/8.1/10
File size: 2.9MB

If your PC is a bit of a mess, with documents, photos, videos and music scattered across your hard drive, you can use Alternate Archiver to bring order to the chaos. It's a handy free file manager that can archive, rename, move or shred multiple items, analyse DLL files, change the date and time of your files, and more. You can drag and drop items to the main program interface, or go through the Send To option in the right-click context menu.

This latest version of Alternate Archiver improves the software's interface and updates some of the tools it includes.

✓ Install this program... ...Not this one ✗

Model Air Design
modelairdesign.com
Min requirements: Windows 7/8.1/10
File size: 2.1MB

Model Air Design lets you create 3D aeroplane models without having to master the complexity of Computer Aided Design (CAD). The free software lets you choose from a number of base models – such as a Bugatti 100p, RC Biplane, Military Jet, Canard Jet and Cessna 140 – and then replace, reposition and resize the fuselage, wing and horizontal stab.

Use the design grid to make tweaks, and rotate your creation in 3D. When you're happy with your model, choose its colours and then watch how it flies, either solo or in formation.

RcCad
www.rccad.com
Min requirements:
Windows XP/Vista/7/8.1/10
File size: 1.4MB

This aeroplane-design program may look basic – the outdated interface makes it clear that it hasn't been updated in years – but it's far from simple to use. Sure, it lets you tinker with its fiddly controls for free, but if you want to actually see your finished creation fly, you'll be charged the far from down-to-earth sum of $49.95 (£41.45).

GAME
MiniDoom 2
bit.ly/mdoom499
Min requirements: Windows 7/8.1/10 or macOS **File size:** 101MB

In the early 1990s, Doom was *the* game to play. In MiniDoom 2, the iconic first-person shooter has been reimagined as a platform game, and it's fantastic fun, offering loads of levels, weapons and enemies to defeat.
The visuals and sound are perfect, and you don't need to have played the original Doom to enjoy the game (although it helps).

OTHER OPERATING SYSTEMS What's new for Linux and macOS

LINUX DISTRO
Bodhi Linux 5.1
www.bodhilinux.com
Min requirements: 512MB RAM, 10GB drive space
File size: 782MB

Bodhi is a lightweight Linux distro built on the latest Ubuntu LTS release. It's currently the only OS that offers the Moksha desktop environment as the default choice, and this new version includes some noteworthy changes. The Leafpad text editor replaces the ePad tool, Epiphany swaps with the Midori browser and eepDater (a GUI system updater) has been ditched entirely. This is the first new release since project development changed hands last year.

CAMERA TOOL
Hand Mirror
handmirror.app
Min requirements: macOS High Sierra and later
File size: 6.1MB

This app aims to save you from embarrassment when joining a Zoom call. Fire it up to see a view from your Mac's camera, so you can check how you look and make sure there's nothing untoward in the background. Faster and easier than having to wait for Photo Booth to load to see what's visible through your camera, Hand Mirror isn't available in the Mac App Store as Apple rejected it for being too basic, but this simplicity is what makes it so useful. ■

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Best New Browser Tools

Tidy your Gmail inbox to find emails faster

Sort Gmail Inbox (bit.ly/sort499) from prolific extension developer CloudHQ helps bring order to a chaotic inbox, though you'll need to grant the tool access to your Gmail account for it to work.

Once you do, you'll see three new options in the sidebar: Sorted Received Mail, Sorted Sent Mail and Sorted All Mail. Click each of these for further sorting options, such as finding emails from specific people, specific companies (and domain names), dates and by attachment – and that includes size or file type.
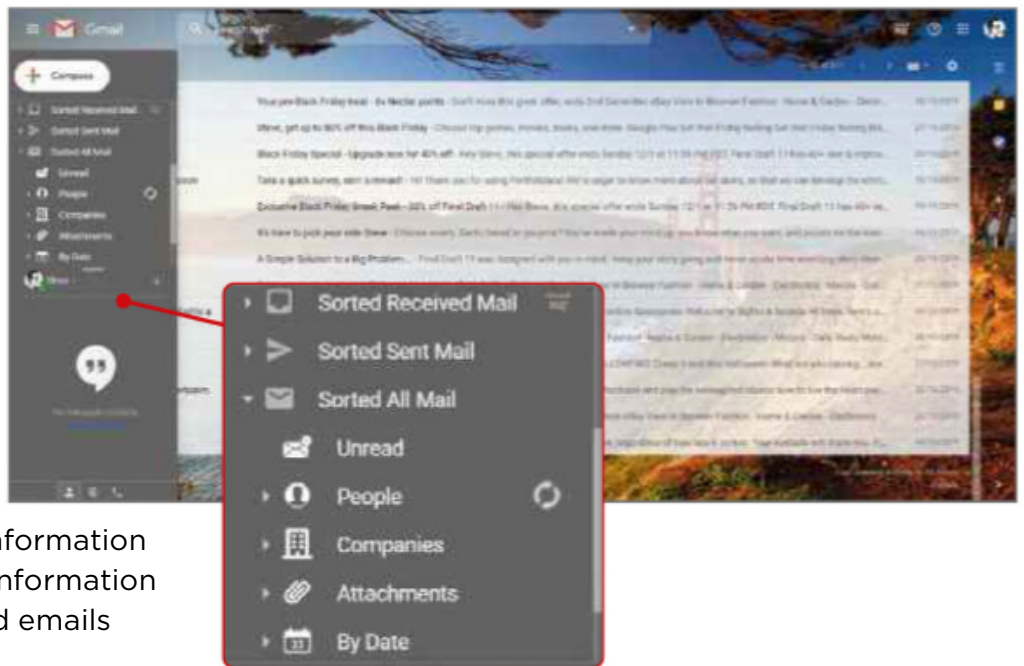
It's worth noting that you may have to wait a couple of seconds for the extension to show options for People and Companies (since it has to 'read' this information from your undoubtedly gargantuan inbox). Once the information is loaded, however, it becomes a breeze to quickly find emails without the usual laborious searching and scrolling.

Save and restore your tabs

Saving tabs can be a bit of a minefield. Often, we just use the option to remember which tabs are open, so they reappear when we reopen our browser. But that can prove slow and clunky when dealing with dozens of web pages for different purposes, which is where Save Tabs (bit.ly/savetabs499) comes in handy.

With all the tabs you need open, click the extension's toolbar button to see three simple options: Save, Restore and Delete Session. Select Save Session and you're prompted to give it a name – we found it's best to be descriptive rather than leave the default date as a save name. Once you click Submit, you can easily reopen all these tabs by choosing Restore Session.

View search results without clicking

One of our all-time top browser tools is Google Search Previewer (bit.ly/previewer499) – but, in the interests of competition, we're recommending a new kid on the block: Search Results Previewer (bit.ly/searchpreview499).
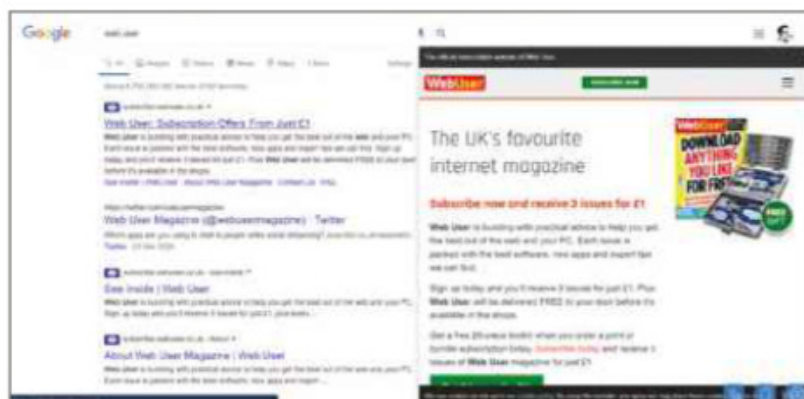
This extension acts in much the same way as the previously covered Previewer. Run a Google search but don't open a new page or tab. Instead, hover over the link you're interested in and Search Results Previewer will kick into action. You'll first see a small pop-up of the link appear to the right-side of the screen. By moving your cursor into this box, it'll enlarge, letting you scroll and navigate a page as if it was properly open.

It's a vastly superior way of browsing the web, because you can decide whether a website is worth visiting before you actually do so.

Block distractions while browsing

At a time when half the country is seemingly working from home, Shush (bit.ly/shush499) and Hide Images with Nope

(bit.ly/nope499) couldn't have appeared at a better time. Aimed at preventing online distractions, both browser tools block elements of web pages so you aren't driven to distraction.

Shush lets you mute specific words, phrases, hashtags or 'expressions' across Facebook, Twitter and LinkedIn. Click its toolbar button to begin building your block list, or remove existing expressions. Hide Images with Nope, meanwhile, replaces images with a black box containing the word 'Nope'. It won't work automatically so, when you're on a distracting web page, click the toolbar button and choose Hide, then bring images back by selecting Show.

This fortnight's most useful tips and add-ons to help you get the most from Chrome, Firefox, Opera, Edge and more

FIREFOX

Raise money for charities as you search

Not so long ago, Microsoft hit upon the notion of persuading people to use Bing by offering points for searching. A loyalty system, in effect, that lets you redeem Store points and enter sweepstakes.

For the more charitable among us, Give with Bing (bit.ly/bing499) lets you earn and give points – and, by extension, donations from Microsoft – to charities. Your charity is shown alongside current and total points. By default, ours was set to the CDC Foundation, which helps support America's Centre for Disease Control. Click Manage to turn Give mode on or off, and switch to a different non-profit organisation.
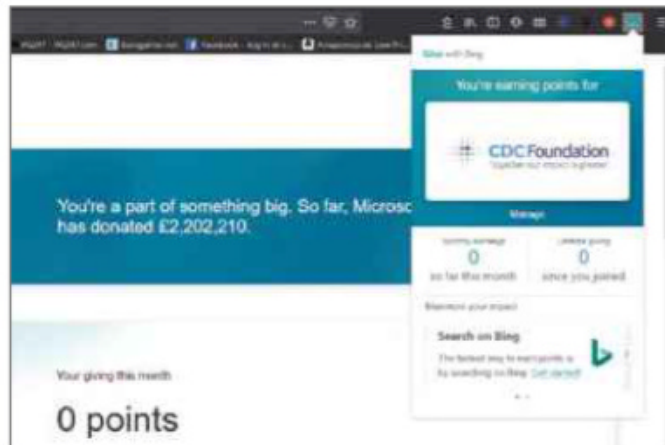
The cynic in us wonders if this is really an attempt to entice kind-hearted users to use Microsoft's second-rate search engine. On the other hand, with every search we're helping those who need it most.

Clear your cache with a single click

Your browser cache is an important factor for ensuring a smooth browsing experience – by saving elements of web pages, it helps sites load a little quicker. However, it's also the reason why, on occasion, a page can look broken, and it can provide 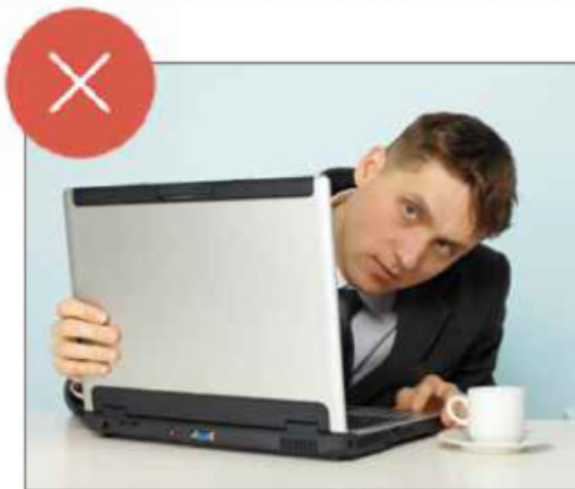a hiding place for malware. As such, it's a good idea to empty your browser cache every now and again, as a good internet housekeeping measure.

Rather than venturing into Firefox's settings, try Cache Cleaner (bit.ly/cache499), which makes deleting your cache instant and hassle-free. Install the extension, click its toolbar button and it's job done – it's so fast, you'll barely register it worked. There's no confirmation dialogue box, so make sure you're happy to go ahead before clicking.

Hide what you're doing from snoopers

Quick! Look busy! One click of the Panic Button (bit.ly/panic499) and every tab on your screen will instantly close. It's ideal when surreptitiously purchasing presents for your partner or indulging in downtime at your desk.

As with most Firefox extensions, you can also head into the Add-ons Manager and run it in Private Mode. Be aware, though, that once you've 'panicked', there's no going back, because the extension opens a new instance of Firefox, with a new tab. You won't get an 'Are you sure?' – there's no time for that – and even switching on 'Restore previous session' under Firefox's General Settings has no effect.

To be honest, we found the add-on most useful as a quick way to start afresh. After accumulating too many tabs to close, one click of the panic button meant we could open a new, clean browser window.

OTHER BROWSERS

Never miss a text box

It happens to the best of us: we're merrily typing away, eyes barely looking at the screen, when we realise the cursor's just outside the text box and we've been typing into thin air. Save yourself from this frustration with Were You Typing (bit.ly/typing499). Start typing on a website and the extension detects if you haven't entered the text field and flashes an unmissable red bar at the bottom of the screen to alert you before you type too much 'nothing'. This function can be temporarily disabled by pressing the Esc key.

Apply dark mode everywhere

Dark Reader has long been a part of Edge's limited extensions catalogue and has now been updated for the Chromium-based version of the browser. Dark Theme for Edge (bit.ly/dark499) gives you an incredible amount of control over how websites look, going beyond a simple on/off switch for dark mode. Open the extension to tweak contrasts, change fonts and lock settings for individual websites. If you'd rather limit the darkness, combine Dark Theme for Google (bit.ly/googledark499) with its sister extension, YouTube Dark Theme (bit.ly/youtubedark499).

Best Free Apps

App of the Fortnight

PODCASTS

NEW

Google Podcasts

bit.ly/poddroid499
bit.ly/podios499

(varies) 12

If you've yet to explore the wonderful world of podcasts, then now could be the perfect time. There are hundreds of thousands of hours' worth of audio content out there – so much that you need never be bored again, however long the UK lockdown goes on for. Best of all, most podcasts are free – you just need the right app to find and listen to the ones you want.

We think that Google Podcasts is a good place to start – the trouble is that, until now, the app was only available for Google's own Android OS. Happily, that's just changed and now iOS users can download it, too. Not only that, but the app has been updated with some useful tweaks that make it better than ever.

The main Home screen displays podcasts you already subscribe to, shown as an updating feed. The app uses a three-tab interface with icons along the bottom for easy one-handed control. To discover new shows, simply tap the Explore tab to view recommendations and browse what's available. Tapping the Activity tab lets you manage your podcast consumption by cueing up shows, viewing your listening history and more.

Once you subscribe to a show, new episodes can be set to download automatically, and you can opt to receive notifications when they arrive. Usefully, you can listen across multiple devices – phones, tablets, smart speakers and PCs (via the Google Podcasts website at podcasts.google.com) – and pick up the podcast you were listening to from where you left off.

Our rating ★★★★★

MINI WORKSHOP

Find and download podcasts using Google Podcasts

1 Launch Google Podcasts, then tap Sign In and enter your Google account details. You'll be taken to the app's main interface. At the bottom of the screen are three icons, representing the app's three main tabs. The Home tab **1** is where you'll eventually find all the shows you subscribe to, but this will be empty if you haven't used the app before, so tap the Explore tab **2** to find some podcasts.
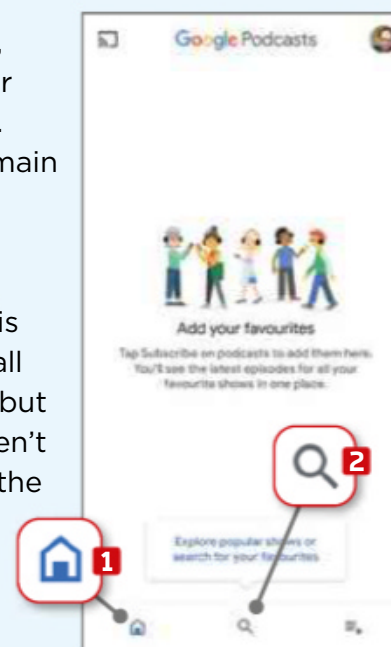
2 If you know what you're looking for, press the Search box, **1** type a keyword and tap Search to find it. Otherwise, you can use the categories along the top of the page **2** to browse by genre, or scroll down the main area of the page **3** to browse popular and trending podcasts. Eventually, Google Podcasts will display recommended shows here, based on your previous listening habits.
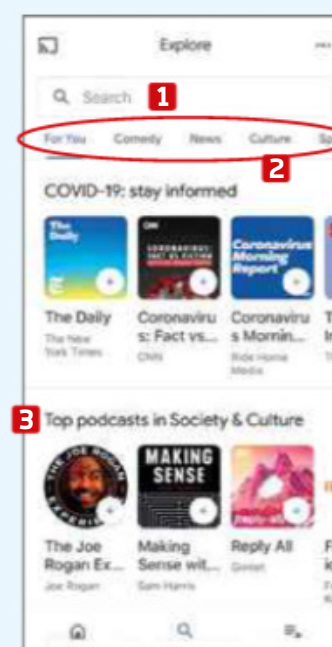
3 When you find a podcast you like, you can either press Play **1** to start playing a specific episode straight away, or tap the Download button **2** to save the episode offline for later. Tapping the show's Subscribe button **3** allows you to choose whether you'd like to download future episodes of the podcast automatically and whether you'd like to be notified whenever a new episode arrives. **4**
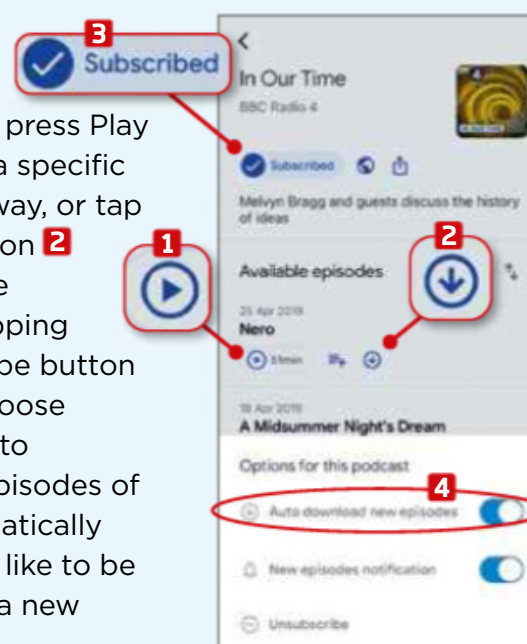
This fortnight's top free and paid-for apps for Android and iOS phones and tablets

TOOLS

NEW

APKMirror Installer

bit.ly/apkdroid499

(varies)

Sideloading apps used to be a relatively straightforward process but, recently, some apps have become a pain to install if you have to do so from outside of the Google Play store. This is because many such apps are now distributed as split APKs or app 'bundles', which you can't download and install in the same way as regular APKs. That's where APKMirror Installer (which is still in beta) comes in. Download the app files (from a trusted source, naturally), then point APKMirror Installer to where you saved them and the app will do the rest.

Our rating ★★★★☆

BROWSER

UPDATED

Opera

bit.ly/operadroid499

(varies)

Opera has launched a major update for its Android web browser, and Opera 57 introduces a number of changes and new features. Now, it's easier to check whether you've enabled the data-saving feature because you'll see an icon displayed in the address bar – tap this for quick access to the browser's data-saving controls. Previously, offline pages could only be stored in your device's internal memory but now it's possible to use external storage instead. And, if you visit YouTube, you'll now see a prompt to open the app instead.

Our rating ★★★★☆

KIDS

NEW

Duolingo ABC

bit.ly/duoabc499

11

You probably already know Duolingo from its brilliant app for learning a second language. The company has now launched a new app that's designed to help younger children have fun as they practise reading and writing in their own language. Designed by education experts, the app includes fun, interactive stories and activities such as letter tracing. Duolingo ABC is free to use, doesn't include any adverts or in-app purchases and it works offline, too. Currently, the app is only available for iOS, but there are plans to release an Android version in the near future.

Our rating ★★★★★

MEDIA PLAYER

UPDATED

MX Player

bit.ly/mxdroid499
bit.ly/mxios499

(varies) 11

MX Player has always been one of the best free media-player apps around, but it just got a whole lot better. Initially, MX Player was effectively just a replacement for the stock video player that came with your device, but the app was picked up by an Indian media company in 2018 and has now been effectively relaunched in the UK as a video-streaming platform. Currently, there's an impressive selection of free content to stream or download, including Hollywood classic movies such as Hitchcock's *Psycho*, martial arts films, sports documentaries and even some original series.

Our rating ★★★★★

GAME

NEW
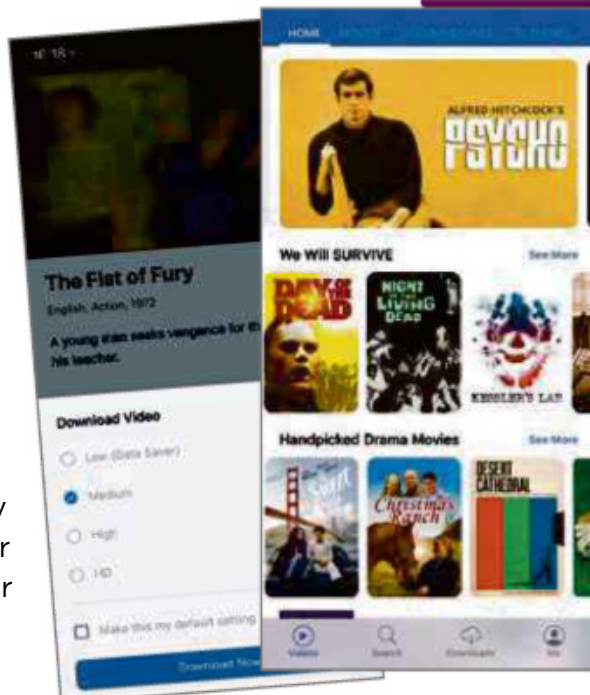
Gwent: The Witcher Card Game

bit.ly/gwentdroid499
bit.ly/gwentios499

7 12

If you're a fan of Netflix's *The Witcher* series, you'll be pleased to hear the fantasy franchise's famous card game has finally made it to Android devices. Gwent is a fictional card game that has its roots in Polish author Andrzej Sapkowski's Witcher novels and was featured heavily as a playable side-quest in 2015's *Witcher 3 Wild Hunt* game, before being released as a standalone game for PC and console back in 2018, and for iOS last October. Now available for Android, Gwent is a fun, free-to-play game that sees you collecting cards, building your deck and battling it out with other players.

Our rating ★★★★☆

③ NEW APPS WORTH PAYING FOR

STREAMING
Disney Plus
bit.ly/disneydroid499
bit.ly/disneyios499
Price: £5.99 per month
🤖 5 🍎 11

After months of hype, Disney's Netflix-style streaming service is finally here – just in time for self-isolating Brits to binge on all that Disney goodness. The app itself is as slick as you'd expect, and the service can be used on up to 10 devices (but only four simultaneously). Whether or not the service is worth its £5.99 per month subscription fee will largely depend on the average age of your household members, since much of its content is understandably skewed toward younger viewers. Remember, though, that Disney also owns *Star Wars*, Marvel, Pixar and *The Simpsons*, as well as 20th Century Fox's back catalogue, so there's plenty here to keep you entertained.

PHOTOS
Pro Camera by Moment
bit.ly/procam499
Price: £5.99
🍎 11

Moment's brilliant camera app has been updated to v4.0, which introduces a whole host of new features, including expert time-lapse controls that let you add light trails and motion blurs, and output videos at up to 4K.

EDUCATION
Squeebles Number Bonds
bit.ly/squeedroid499
bit.ly/squeeios499
Price: 59p (Android), Free (iOS)
🤖 4.0.3 🍎 8

Looking for a fun way to help primary-age kids learn during the lockdown? This colourful app could be just the ticket – it helps young ones build their mental arithmetic skills across a series of game-ified number-bond exercises.
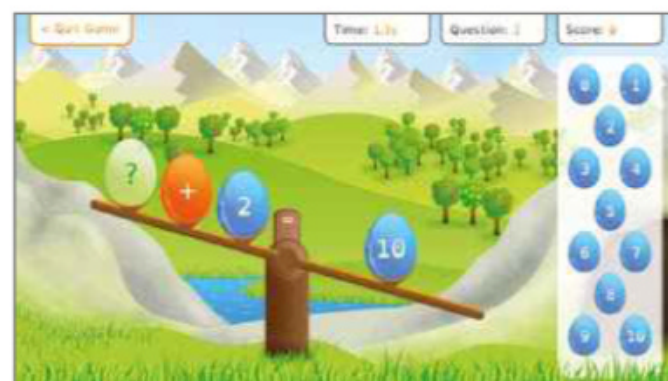
✓ Install this app...

ChirpOMatic
bit.ly/chirpdroid499
bit.ly/chirpios499
🤖 4.4 🍎 10

Us humans may be in lockdown but, for the birdlife in our gardens and hedgerows, it's springtime as normal. ChirpOMatic (which costs £3.99 but is worth every penny) is basically Shazam for bird song. It can help you identify all the different bird songs around you by recording a snippet, then matching it with similar reference samples in its online database. If you don't have a reliable data connection, the app can be used offline – recordings are stored on your device, so you can upload them when you get home. There's even a 'bird safe' mode that lets you use the app without disturbing other birds.
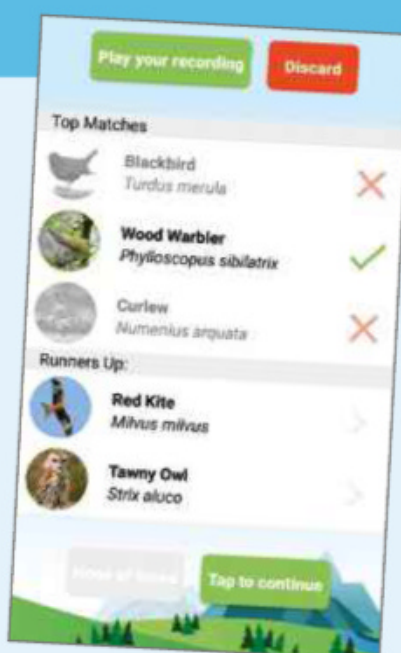
...Not this one ✗

Bird Sound
birdsound499

This app's unintelligible boast that it's "for children can easily bird calls identification & enjoy now" is a blatant indication of its level of quality. A far cry from the clever automatic identifying wizardry of ChirpOMatic, this app basically just plays nine different bird sounds with an accompanying picture of the bird in question. Or at least it would, if it didn't instantly crash every time you attempt to launch it.
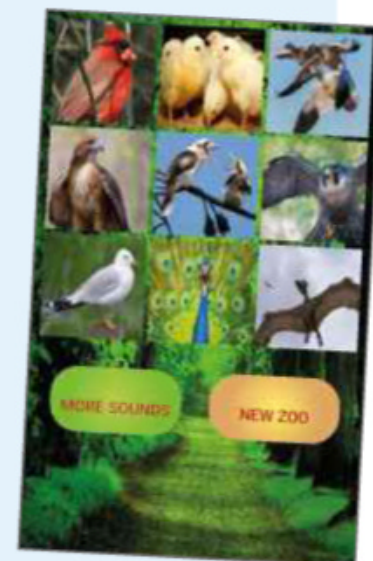
☕ Take a Screen Break

Take a rest from your browser with our fiendish fortnightly challenges. Can you solve our 1950s-songs emoji and guess our Wikipedia article?

CAN YOU GUESS THE 1950s SONGS 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 is the largest and most popular general reference work on the worldwide web, and is one of the 20 most popular websites. It features exclusively free content and no commercial ads."

2 "It has been criticised for exhibiting systemic bias, for presenting a mix of 'truth, half truth, and some falsehoods', and for being subject to manipulation and spin in controversial topics."

3 "Its users often have disputes regarding content, which may result in repeatedly making opposite changes to an article, known as 'edit warring', where no useful knowledge is added."

4

5 "It has spawned several sister sites including a dictionary project, a collection of quotations, a collection of collaboratively written free textbooks and a site devoted to free-knowledge multimedia."

COMPETITIONS

Our guide to Quibi

Do we really need yet another streaming service? **David Crookes** looks at a new contender, which takes a bite-size approach

What is it?

Quibi (quibi.com) is the latest streaming service promising to deliver top-quality television shows. It is set to rival the likes of Netflix, Amazon Prime Video and Disney Plus, with releases rolled out over multiple episodes and a subscription model allowing access to the lot. The big difference is in how Quibi presents that content. Each episode will be limited to a maximum of 10 minutes and they will only be available on mobile devices.

Does this mean lots of throwaway shows?

Not according to Quibi. The company, whose name stands for Quick Bites, insists its short-form content will be as compelling as anything put out by other streaming services. It also says that the episodes, when put together, can equate to the length of a feature film – just chopped into smaller pieces. In fact, the service claims each series will be of a "movie-calibre". That certainly seems true when viewing the trailers (quibi.com/shows), which appear to have high production values.
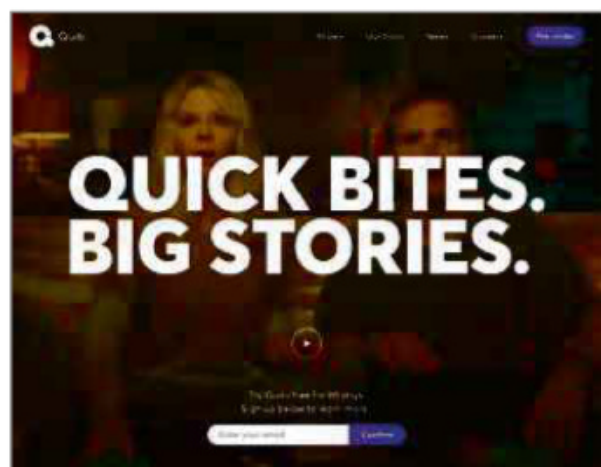
Quibi offers bite-sized TV shows with each episode lasting less than 10 minutes

But what's the point?

As you can imagine, this service is not aimed at anyone who wants to crash out on the sofa and binge-watch a boxset on TV. Rather, it's catering for people who are seeking to kill a bit of time on the go, perhaps while on a morning commute or during those times when you're early for

an appointment. Since the episodes can be as short as four minutes, its shows are sure to offer plenty of opportunity for a cheeky catch-up.

Who came up with this idea?

That would be founder and chairman Jeffrey Katzenberg (pictured, below). The reason people are sitting up and taking notice of Quibi is because Katzenberg is a stalwart US film producer and media proprietor who was chairman of Walt Disney Studios between 1984 and 1994, as well as the subsequent co-founder and CEO of DreamWorks Animation.

Katzenberg is credited with reviving Disney's fortunes by creating Touchstone Pictures to distribute adult-focused movies and by turning its ailing animation arm around, leading to top-grossing and popular movies such as *Aladdin* and *The Lion King*.

Are any big names involved?

Yes. Quibi is looking to roll out 175 original shows spread over 8,500 episodes in its first year and, so far, we can see the involvement of prominent stars including former *Game of Thrones* actress Sophie Turner, who appears in *Survive*, Reese Witherspoon, Jennifer Lopez, Liam Hemsworth and Idris Elba. Steven Spielberg has penned a horror series called *After Dark*, while BBC Studios' Natural History Unit has made a nature series called *Fierce Queens* exploring phenomenal female animals. Other directors include the Farrelly brothers and Guillermo del Toro.

Sophie Turner stars in Quibi's Survive, *a thriller about the aftermath of a plane crash*
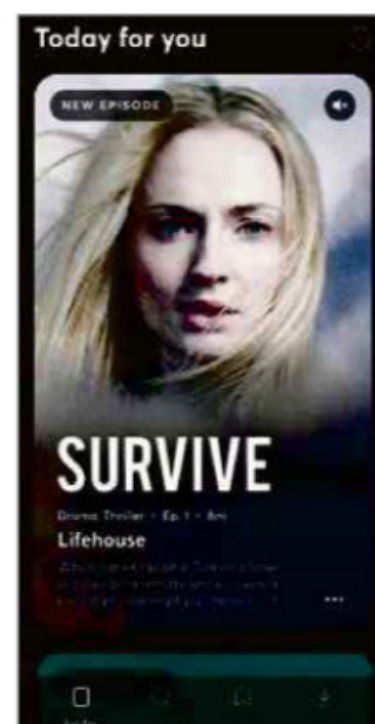
So it's not all about drama?

Apparently not. Although there will be many drama series to hook you in, there's a quirky show about building luxury dog houses called *Barkitecture*; a scripted comedy called *Agua Donkeys* about employees at a pool-cleaning company; and a cooking show called *Dishmantled*, in which chefs are blindfolded and blasted with food from a cannon. Interestingly, Spielberg's *After Dark* will only be watchable after sunset, once a phone tells the app that it's dark outside. The hope is that content won't be entirely passive but will offer interactive elements, too.

Films are broken down across episodes lasting between seven to 10 minutes, while entertainment and lifestyle shows will top out at six minutes. News programmes will be thrown into the mix and episodes are going to be released every day, ensuring there's always something new to watch. In fact, news and sport will be covered in regular shows such as *Daily Essentials*.

Quibi offers a mix of drama series, reality shows, comedies and other bite-size content

Can't I watch it on a TV?

Nope – Quibi is for mobile devices only, with apps available for both iOS and Android. This means it can go beyond just showing straightforward television content and use clever techniques to tell stories in a different way.

What sort of technology is being used?

For starters, Quibi works in both landscape and portrait modes, rejigging the screen as you turn your device. In either orientation, it makes proper use of
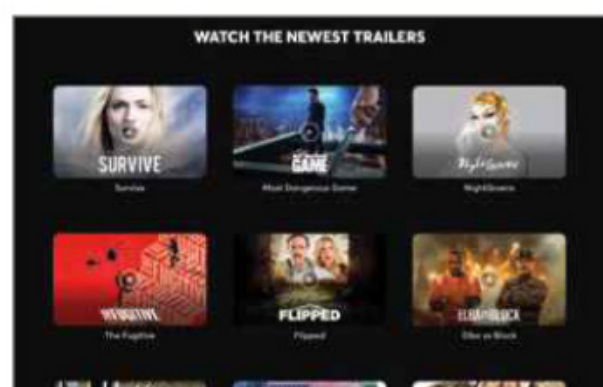
You can watch trailers for Quibi shows to avoid wasting valuable minutes of your life

CAN I SHARE MY QUIBI ACCOUNT?

Quibi has already stated that it will only allow one stream per subscriber. In that sense, it is not going down the path of other streaming services, which allow multiple users to share the same account. Quibi is likely to have learned a lesson from Netflix, which is understood to be losing $135m (over £113.5m) a month because people on premium plans share their passwords to allow friends and family to log in and watch shows. Some 10% of Netflix users do not pay for their accounts and the company is looking at a crackdown, something Quibi will be looking to avoid from the start.

the display: you won't see the screen squeezed in the middle of a portrait mode with huge black areas top and bottom, for instance. That's because each content maker is asked to edit their show twice to optimise the viewing experience from different perspectives, perhaps with close-ups and less attention on action in portrait mode, so it's all about how you feel most comfortable watching. It's even possible to see entirely different versions of a show depending on the orientation, although this is all dependent on the director's vision.

Can you give me an example?

Sure. Quibi has a technique called 'turnstyle' which it shows off to good effect in a short film called *Nest*, created by Zach Wechter. This thriller is about a woman being harassed by an intruder in her home and, when viewing in landscape mode, it feels like a traditional cinematic story. In portrait mode, though, you see what is on the woman's phone – perhaps a view through her Nest cameras or whatever app she's currently using in the narrative. There's a lot of creative scope and, technically, what you're seeing is a patented flipping between concurrent streams.

Won't all this content eat up my mobile data?

If you're out and about then, indeed, any content you watch will eat into your mobile data plan unless you're using Wi-Fi. But each show can also be downloaded and stored in a Downloads folder in the app for later viewing. So you

Avoid wasting mobile data by downloading Quibi shows to watch offline

can load up with the content you want to watch, then view the programmes at any time via the app without worrying about the costs or how much 3G, 4G or 5G data it's consuming.
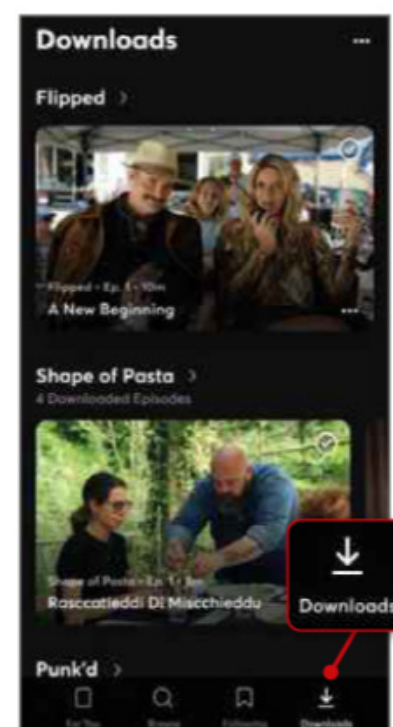
How much is this going to cost?

UK prices have yet to be announced but Quibi has been priced at $4.99 per month in the US which equates to about £4. That, however, is for the ad-supported version. If you want to to stream without ads, then you're looking at $7.99 per month (or about £6).

We don't yet know when Quibi is due to launch in the UK, but US viewers have been enjoying the streams since 6 April. There's also a very generous 90-day free trial, which we hope to see when Quibi becomes available here.
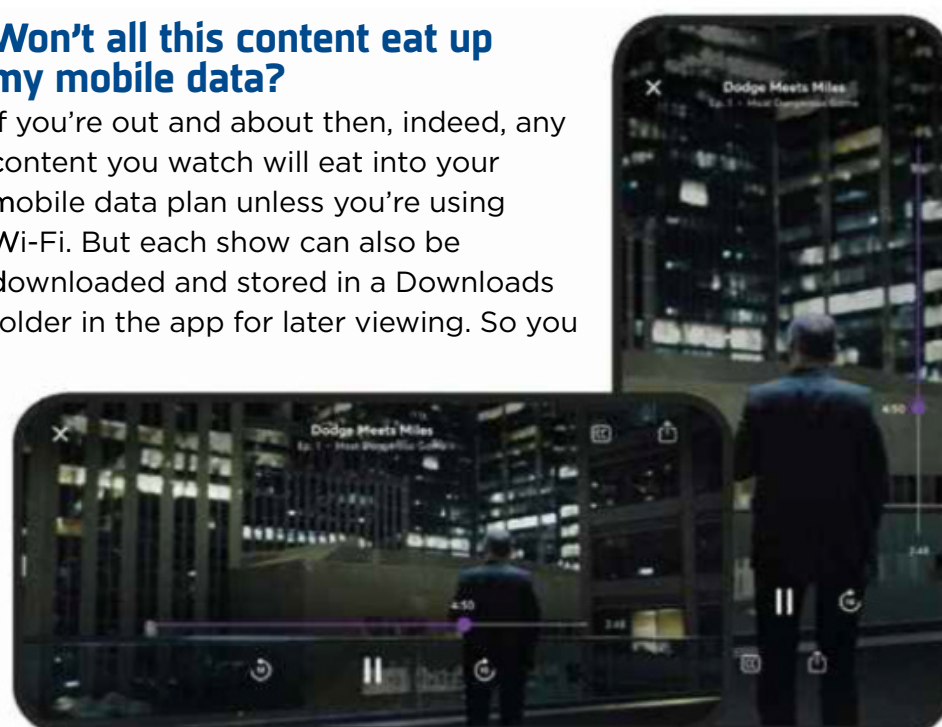
Quibi's turnstyle technology adjusts what you see based on your phone's orientation

Switch to the ANONYMOUS WEB

Worried about your online privacy while confined to your home during the coronavirus crisis? **Wayne Williams** reveals the best tools for accessing an alternative, invisible internet

With most of us currently self-isolating and social-distancing to avoid spreading and catching the coronavirus, we're likely to be spending more time online than usual. This makes it more important than ever to keep our web activities private and secure.

One option is to disguise what you're doing by using a VPN, but another, more intriguing proposition is to connect to an alternative internet that better protects your identity and lets you access sites that are otherwise unavailable or censored. Often misleadingly called the 'dark web', the decentralised internet may sound legally dubious, but it's actually a very effective way to browse and communicate anonymously online. However, you can't just jump onto hidden networks through your standard browser.

In this feature, we lift the lid on the invisible web, reveal the tools you need to access it, suggest the best hidden sites to visit and explain how to stay completely safe and private.

ANONYMOUS WEB FAQ

There are lots of misconceptions about the so-called dark web, which detract from its many benefits. Here we address the most frequently asked questions

Why would you want to access the dark web?

It's exciting to explore web content that the vast majority of people never get to see, and you'll find things there that may not be available on the normal web. You can also have completely anonymous and unmoderated interactions with other people, without worrying that Google will index and display everything in its search results. People can be themselves – for good or bad.

What content can you find there?

The dark web has a reputation for being a 'hive of scum and villainy', and there is certainly some truth in that – some of its online marketplaces sell illegal products such as weapons, drugs, fake passports, counterfeit currency and so on. But you can buy perfectly legal things, too, usually paying with Bitcoin or another cryptocurrency, with the benefit that you don't need to worry about a 'middle man', such as Amazon, taking a cut, trying to sell you additional products or tracking your movements and building up an advertising profile.

Reputable companies including the BBC, New York Times, DuckDuckGo, ProtonMail and Facebook offer access to their websites on the dark web through '.onion' addresses (so called because onion services have multiple layers, like onions). These onion versions aren't really any different to the standard sites, but they provide a channel for people who might not otherwise be able to access them – for example, if the country they are based in blocks or censors their content.

Research shows that most people use the dark web for privacy and censorship reasons

Reasons for using Tor and the Dark Web, globally

I like being anonymous online

To protect my privacy from Internet companies

To access restricted content in my location

Credit: PreciseSecurity.com

Is the dark web legal?

Yes. Think of accessing the dark web as akin to using BitTorrent. You can fire up the tool you need to access and explore content without breaking the law, but downloading a copyrighted film, TV show or some music is illegal – and that's also true if you purchase something illicit from one of the dark web's marketplaces.

Just visiting the hidden web won't get you into trouble. It's also important to point out that you'll only see bad stuff on the dark web if you go looking for it, so you're not going to stumble across anything illegal unless you choose to.

The team behind Tor, the most popular way to access the dark web, states categorically that "it is not a tool designed or intended to be used to break the law", but to "enable anonymous communication and combat network surveillance that threatens personal freedom and privacy".

> **You'll only see bad stuff on the dark web if you go looking for it**

Is it safe?

It's mostly as safe as the standard web. Just take the same precautions as you usually would online, and don't click any unknown links or download anything unless you're sure it's harmless.

Purchases can be more risky – if you buy from one of the marketplaces, you may end up receiving fake goods – or nothing at all. And if that happens, you won't be able to complain to customer services, and

you'll lose your money.

Don't be tempted to engage in illegal activity, either, because you could end up being arrested. Law-enforcement agencies have officers monitoring hidden sites and forums.

Who uses it?

Mostly people who live in oppressive regimes where the regular internet is restricted and access is monitored, but also anyone who just wants to browse the web away from the prying eyes of their ISP and other snoopers.

Recent research by cybersecurity website PreciseSecurity.com found that more than 30% of North Americans used the dark web regularly in 2019 (bit.ly/precise499). Globally, users have cited their main reasons for accessing the dark web to be anonymity, privacy from internet companies and the ability to access content not available in their own country.

How do you access it?

The most common way is to use the Tor Browser, but you'll need to know the exact web address of the sites you want to visit. These usually consist of a jumble of 16 (sometimes 32) characters and the domain '.onion'. You can also use Google or another, more private search engine to track down sites – search for 'BBC .onion Tor', for example, to find the address of the BBC's dark-web site (bbcnewsv2vjtpsuy.onion). There are also a few dedicated search engines for finding hidden sites on the dark web, of which Ahmia (msydqstlz2kzerdg.onion) is the best-known – and least dubious!

Aside from Tor, there are other tools you can use to access the hidden web, which we'll look at in the next section.

Some online marketplaces on the dark web sell illegal goods but most trade in perfectly legal items

HOW TO ACCESS THE ANONYMOUS WEB

You can't just hop on the dark web using Chrome, Firefox or another standard browser – it requires special tools for access. Here, we look at the main options

Tor Browser
www.torproject.org

How it works: Available for Windows, Mac, Linux and Android, Tor Browser is based on the same engine as Mozilla Firefox, but with a privacy-focused twist, using the Tor network to protect your browsing and disguise your location. Your traffic gets transmitted and encrypted across Tor relays around the world, and you can request a new "circuit" for any site at any time. This means you can browse the regular web anonymously, but the software is also adept at handling 'onion' addresses with ease, just as if they were HTTPS addresses, which makes it the best – and certainly the simplest – gateway to the dark web. Follow our Mini Workshop below to get started.

How anonymous will you be? Unlike a VPN, there's no single entity behind Tor that you need to trust – the network is run by thousands of volunteers, so there's no chance of your data being harvested and sold to third parties.

Tor also does a good job of hiding where you're browsing from and preventing you from being tracked,
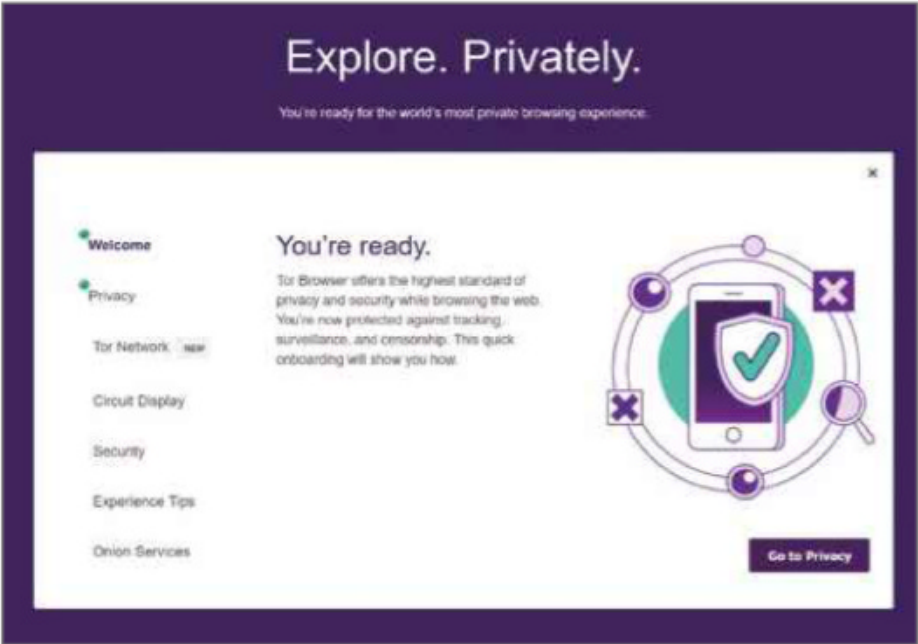
Tor is the simplest and best way to access the anonymous web

although visiting an unsecured website (HTTP instead of HTTPS) could allow an exit node to spy on you. You can use Tor with a VPN for additional anonymity.

Why you should use it: Tor is very easy to use – not much different from browsing the web normally – and, in addition to its built-in Tor functionality, the browser comes with a number of privacy-focused features and add-ons. It uses DuckDuckGo (duckduckgo .com) as its default search engine, disables risky plugins, such as Flash, and lets you adjust the security level of the

browser – you can choose from Standard, Safer and Safest. The higher levels disable additional elements, such as JavaScript, and stop audio and video autoplaying.

See our expert tips for using Tor, opposite.

Why you shouldn't: The biggest downside of using the Tor Browser is a drop in speed. Your traffic gets routed through a number of relays, which can slow down your browsing noticeably. It's not a tool you should use for protecting your torrenting, either. In fact, the developers strongly advise against using it for that purpose, because it slows down the network even more.

Tor Browser is free to download for most platforms, except iOS devices

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MINI WORKSHOP | Access the hidden web with Tor Browser
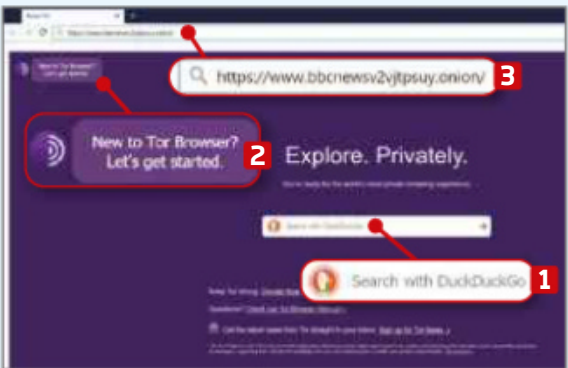
1 Run the Tor Browser to load the homepage. It lets you search the web using DuckDuckGo. **1** If you're new to Tor, you can open the onboarding experience **2** to find out more about it. To visit a site on the dark web, enter its onion address in the address bar. **3**

2 It takes a little while for an onion site to load, so be patient. When it appears, you can explore it as you would normally. Click the site-information strip to the left of the address bar **1** to check your privacy by viewing the connection details **2** and Tor circuit, **3** and to request a new circuit. **4**
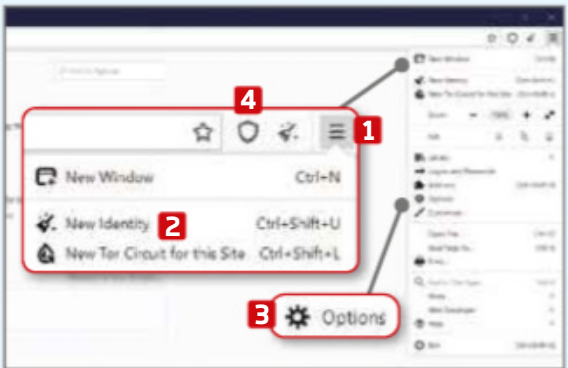
3 The Settings menu **1** lets you get a new browsing identity (the browser will close and reopen) or a new circuit. **2** Go to Options **3** to configure the browser and customise Tor's settings. Click the shield icon to the right of the address bar **4** to change your current security level.

EXPERT TIPS FOR USING TOR

Secret ways to make Tor even more private and secure, and beat restrictions

Check the safety of your circuit

Tor relays use volunteers, which means its circuit system could potentially be abused by unscrupulous users to snoop on web traffic and even spread malware. To check the safety of your current circuit, click the 'i' icon in your address bar. The list of relays displays a 'Guard node', which is the first point of entry in the circuit and has been verified as trustworthy. Other nodes may include details of host countries and IP addresses, but the most important is the exit node – the gateway where encrypted Tor traffic hits the 'normal' internet. To check the IP address of your exit node, which websites will see as *your* IP address, visit check.torproject.org.

If you think your privacy or security has been compromised, click 'New Circuit for this Site' to reroute your connection; or click the menu button, choose New Identity and restart Tor with a fresh IP address and circuit.

Beat Tor blocks using bridges

Tor is particularly useful for anyone trying to access the internet in countries where it's restricted or heavily monitored. Those nations often block Tor but you may be able to get around this by using a bridge. Open the main Tor menu, click Options, then scroll down to the Bridges section and select 'Use a bridge'. You can either choose a built-in bridge, request one from torproject.org, or provide your own.

*Using a bridge lets you access Tor in countries that have blocked it*

Remove letterboxing from Tor

You may notice some Tor sites display with a white margin around them. This isn't a rendering error, it's actually an anti-fingerprinting technique called letterboxing that's designed to mask the true dimensions of the browser window from snoopers compiling details on you. If you don't like this, you can disable it by typing `about:config` in the address bar and hitting Enter. Click 'I accept the risk!' and search for `privacy`

`.resistFingerprinting .letterboxing`'. Double-click the entry to change the setting to False.

Change your security level

It's wise to maximise Tor's security to ensure your privacy and safety aren't compromised. Click the shield icon by the address bar and choose Advanced Security Settings. By default, the level is set to Standard with all Tor Browser features enabled. Safer disables potentially dangerous and non-essential website features, such as JavaScript on non-HTTPS sites and autoplaying content; while Safest only allows features required for static sites and basic services. Increasing the security level can cause some sites to break, so be warned. If download links don't work, reduce the security level to Safer.
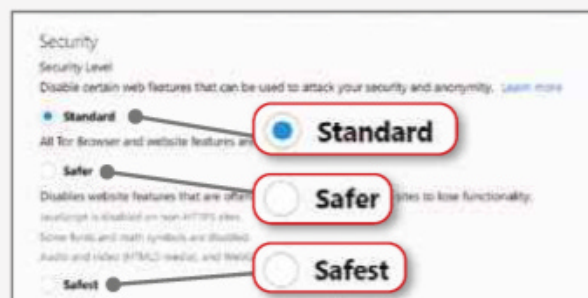

You can increase Tor's security but it may cause some sites to break

Configure HTTPS Everywhere

Tor Browser comes with HTTPS Everywhere from the Electronic Frontier Foundation (EFF), which redirects you away from unsafe HTTP sites to the HTTPS version where available. To

configure this, type `about:addons` in the address bar and click the HTTPS Everywhere entry. The feature can be disabled on certain sites (under general settings) but Tor recommends you don't do this for privacy reasons.

Tor also includes NoScript, which blocks harmful scripts, but you shouldn't install other security add-ons or you risk breaking your anonymity.
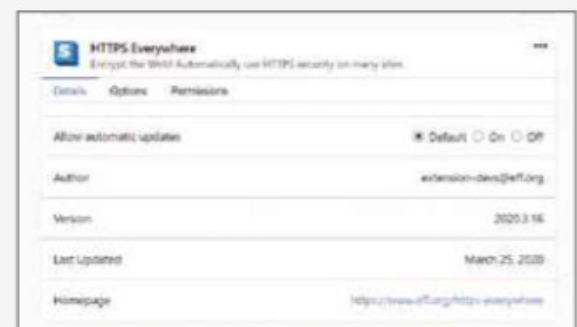
HTTPS Everywhere is built into Tor to redirect you away from unsafe sites

Use an anonymous OS

If you're serious about protecting your privacy, then you can boot the privacy-focused operating system Tails (tails.boum.org) from a DVD, USB memory stick or SD card. The Amnesiac Incognito Live System (to give it its full name) is based on Debian Linux and can hide who and where you are; encrypt your files, emails and instant messaging chats; and protect you from malware threats. It comes with the latest version of the Tor Browser included, so you'll always be anonymous online.

SHOULD I USE A VPN INSTEAD?

A VPN (virtual private network) is similar to Tor in that your traffic gets routed through its own servers, hiding sites you visit from your ISP and disguising your location. The main benefit of using a free VPN over Tor is simplicity – you can visit sites as you would normally, in your usual browser; and access geo-blocked content by choosing where to appear to be browsing from, whereas Tor assigns your location randomly.

On the downside, free VPNs come with data limitations – even the more generous, such as Windscribe (windscribe.com), only give you 10GB of data a month – or there's an ongoing cost of at least £3 a month if you use a paid-for service providing unlimited data and choice of servers. There are also privacy concerns, with reports of free services selling user data to third parties (see our cover feature in Issue 485).

Both Tor and VPNs have their pros and cons, but combining the two gives you the strongest possible anonymity. However, you will definitely experience a noticeable hit to your browsing speeds if you do so.
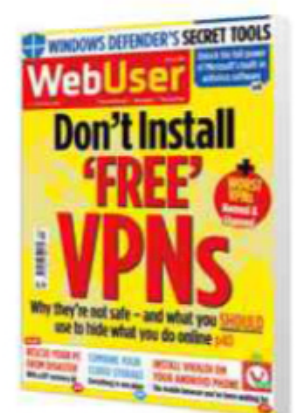
I2P
geti2p.net

How it works: The Invisible Internet Project is an anonymous, peer-to-peer decentralised network layer (written in Java). It is essentially an internet within the internet, and lets you send messages, browse and host websites, chat and perform other web activities in complete privacy.

I2P employs 'garlic' routing (as opposed to Tor's 'onion' routing), which adds an extra level of privacy by encrypting multiple messages together, to make them harder to snoop on.

How anonymous will you be? Incoming and outgoing messages in I2P use separate tunnels, which improves privacy. It's also designed to anonymise traffic within the network, protecting communication and preventing your ISP from seeing what you're up to.

Why you should use it: I2P is faster and more secure for accessing hidden services than Tor, and you can use it to access normal websites anonymously.

I2P is faster and even more secure than Tor but harder to get to grips with

Why you shouldn't: I2P is more complicated to set up and use than other anonymous services, and the website doesn't do a great job of explaining how to get started. However, there's a browser configuration page at bit.ly/i2psetup499 that you can follow.

Additionally, I2P relies on Java, which could be seen as a security risk.
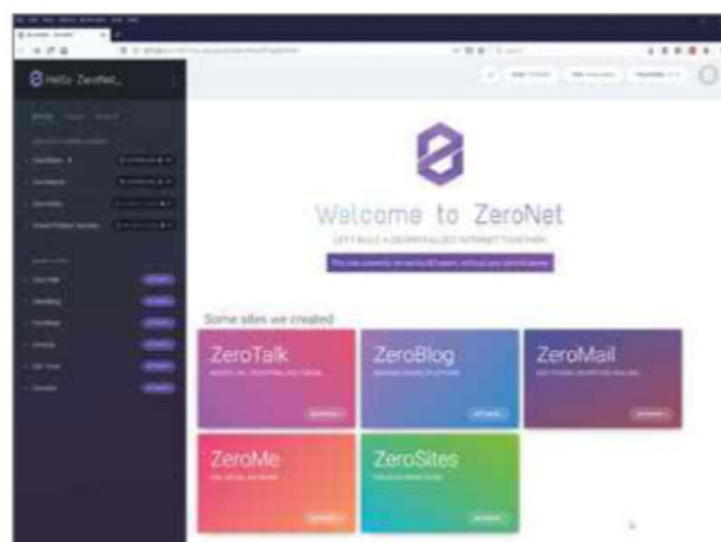
ZeroNet
zeronet.io

How it works: ZeroNet is a peer-to-peer decentralised service that uses the BitTorrent network and Bitcoin cryptography to deliver "open, free and uncensorable" websites. Where Tor uses '.onion' addresses, ZeroNet has '.bit' domains. You can create your own websites and, just as with torrent files, the content remains online as long as there is at least one peer connected.

You need to install ZeroNet's software to access it (available for Windows, macOS and Linux), and can then browse the available sites and services from the interface in your browser.

How anonymous will you be? ZeroNet uses the BitTorrent network, which isn't very anonymous at all. However, you can hide your IP address by using it in conjunction with the Tor Browser. There are instructions for how to do this in its FAQ (bit.ly/zeronet499).

ZeroNet uses the BitTorrent network to deliver open and uncensorable websites

10 HIDDEN SITES WORTH VISITING

DuckDuckGo
3g2upl4pq6kufc4m.onion
The privacy-focused Google alternative provides fully anonymous searches on the dark web.

BBC
bbcnewsv2vjtpsuy.onion
Auntie Beeb now has an onion site, too, so people in censored countries can access BBC content.

Facebook
facebookcorewwwi.onion
The social network with a very patchy reputation for privacy can be accessed through the hidden web.

SecureDrop
secrdrop5wyphb5x.onion
Created by the Freedom of the Press Foundation, this open-source submission system lets whistleblowers share stories and files anonymously. The Guardian's SecureDrop is at 33y6fjyhs3phzfjj .onion.

Privacy International
privacyintyqcroe.onion
This is a London-based charity and champion of human rights and digital protections.

New York Times
nytimes3xbfgragh.onion
The popular US newspaper has been available as an onion site since 2017.

ProPublica
propub3r6espa33w.onion
ProPublica is a non-profit web-based newsroom. In 2010, it became the first online news source to win a Pulitzer Prize.

CIA
bit.ly/cia499
Yes, America's Central Intelligence Agency can be found on the dark web. We've shortened its 32-character onion link!

ExpressVPN
expressobutiolem.onion
ExpressVPN is one of the best VPN services around, and you can access its site through the dark web.

ProtonMail
protonirockerxow.onion
This open source privacy-focused email service encrypts your messages to prevent interception.

Why you should use it: There are a number of benefits to ZeroNet, primarily that it is very fast and it lets you access hidden sites even if you have no internet connection. Sites are updated in real time, so you don't need to refresh your browser to get the latest content, and there are some excellent sites to browse.

Why you shouldn't: ZeroNet isn't anonymous by default, and it can be overwhelming when you first start using it because the list of available sites constantly refreshes (sort it by English to make it more manageable). Because ZeroNet relies on BitTorrent, you work as a peer to serve the sites you visit, which uses some of your bandwidth. You continue serving them, too, until you pause or remove them.

Freenet
freenetproject.org

How it works: Freenet has been around for 20 years, so it pre-dates other, similar services. It's a peer-to-peer decentralised platform that lets you share files anonymously, chat on unmoderated forums and browse and publish so-called "free sites" that can only be accessed through Freenet.

How anonymous will you be? Very. As the site explains: "communications by Freenet nodes are encrypted and are routed through other nodes to make it extremely difficult to determine who is requesting the information and what its content is". There's also a 'darknet' mode, which is where you only connect to your friends, making your activities even harder to detect.

Freenet's peer-to-peer service lets you chat, browse and share content anonymously

Why you should use it: Freenet's purpose has always been to provide a private, anonymous service, and that remains the case today. You can chat on forums without fear of censorship, and publish and share files anonymously.

Why you shouldn't: It's a peer-to-peer service. When you use Freenet, you contribute to the network by providing both bandwidth and a chunk of space on your hard drive. Popular content from Freenet is kept in this "data store" (in an encrypted format) and updated regularly. You can choose how much space to devote to it during setup.

Tribler
www.tribler.org

How it works: The first BitTorrent client was released in 2001 and, although piracy clampdowns and affordable streaming services have dented its popularity, BitTorrent says its protocols still account for up to 40% of all internet traffic. Tribler is a BitTorrent program that offers anonymous downloading and includes built-in torrent search and video streaming.

How anonymous will you be? Although Tribler promises anonymous downloading and seeding using a Tor-like onion-routing network exclusively for torrent downloading (it doesn't use Tor itself), it won't keep your activity hidden from determined snoopers. As its website states: "Tribler does not protect you against spooks and government agencies. We are a torrent client and aim to protect you against lawyer-based attacks and censorship".

It also points out that "Our anonymity is not yet mature".

Why you should use it: Unlike most other torrenting clients, Tribler does at least offer a degree of anonymity, and needn't just be used for obtaining content illegally. You can also download public-domain audiobooks and ebooks, non-copyrighted videos and music, open-source software and Linux distros.

Why you shouldn't: It's not entirely anonymous. If a dogged copyright holder wants to know who is downloading their content using Tribler, they could find out. Also, by attempting to safeguard your privacy, download speeds can be slower than in other BitTorrent clients. ∎
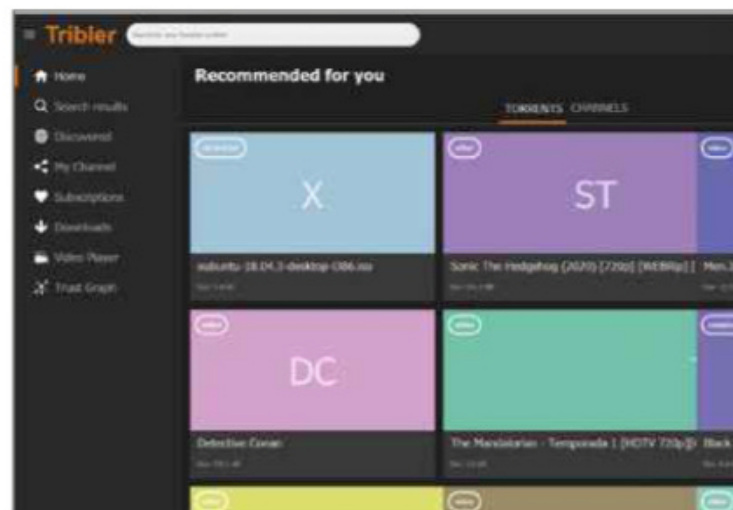
Tribler protects your identity while torrenting but doesn't offer complete anonymity

Best open-source password managers

Open-source password managers can be as secure and feature-packed as their premium rivals – and, best of all, they're completely free. **Steve Clark** tests the top six options

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KeePass | keepass.info | ★★★★★
FEATURES ★★★★★ **PERFORMANCE** ★★★★★ **EASE OF USE** ★★★★☆

WebUser GOLD AWARD

What we liked:

With its high-level encryption, two-factor authentication and plenty of tools, KeePass ensures all your passwords are safe and makes it simple to organise and manage them. You can install it on your PC or, if you prefer, use the portable version.

Start by creating and saving a database to store your logins and passwords. During this setup, you need to choose a master password, but make sure you don't forget this because it's the only way to access your account.

There's support for multiple databases, so you can manage separate accounts for individual users. KeePass saves these databases on your computer, bucking the trend for cloud-only storage and giving you greater control and more security.

KeePass eschews fancy design, sticking instead to a simple and familiar interface. The Explorer-style layout places groups in the sidebar, so it's easy to add and manage your users' multiple logins. Adding an entry (via the 'key and green arrow' button) is straightforward, displaying the password strength and offering further options for advanced users, such as the Expiration option for setting time-limited passwords.

The Tools menu includes an option to generate near-unhackable (and certainly unguessable) passwords, made of a random stream of letters and symbols, and a handy option called Triggers that's especially useful if you intend to save a lot of passwords. This effectively lets you automate the software, performing specific actions in response to events and conditions, a bit like IFTTT (ifttt.com).

Once you've completed a database, you can add an extra layer of security by locking it down, so no one can tamper with it. There's also a healthy – if poorly organised – plugins library to add more functions, if you need them.

How it can be improved:

Newcomers to password management will find it easy to get started with KeePass, but they may struggle to dig deeper. It's not always clear what less-obvious options do or why they're necessary. When downloading the portable or desktop version, we were met with a page fail every time – which isn't ideal. If this happens, scroll down the broken web page and click Problems Downloading to nab it from a mirror.
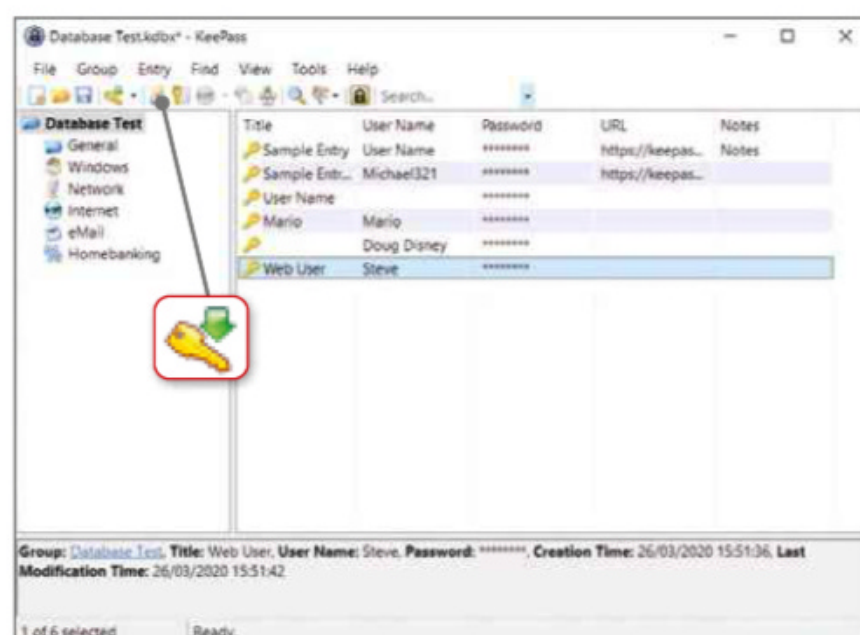
OUR VERDICT

KeePass is a no-nonsense open-source password manager that's built for both casual and heavy users. It's available as a desktop tool or a portable file, and includes several outstanding features.

Bitwarden | bitwarden.com | ★★★★★
FEATURES ★★★★☆ PERFORMANCE ★★★★★ EASE OF USE ★★★★★

WebUser SILVER AWARD

What we liked:
Bitwarden makes managing passwords as simple as possible. Each uncluttered screen consists of a basic, familiar form and, while the options may change – such as adding an authenticator key, for example – its interface won't leave you scratching your head.

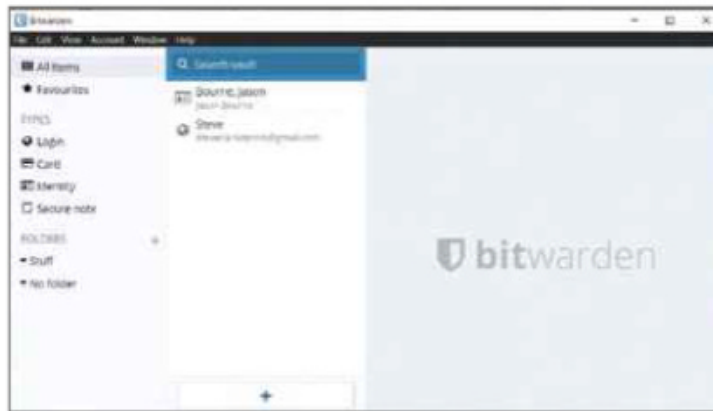The simple tagging system is implemented via a drop-down menu, making it easy to file email accounts, credit cards, identity details and secure notes. Jump to any of these using the sidebar and, for populous login lists, group them in folders. Every password, whether it's your own creation or a super-secure login generated by the software, is checked against a list of data-breached passwords. If it's safe, Bitwarden nods you through.

We like that you can use Bitwarden almost anywhere: desktop, browser, app and command line. The Organisation option is an interesting extra: designed for businesses, with a low-cost family plan tacked on, it lets free users share specific information with other users.

How it can be improved:
Bitwarden has fewer features than KeePass but it's ideal if simplicity is your priority. Our only niggle is that you're limited to the preset list of categories.

OUR VERDICT
Bitwarden's streamlined software provides flawless synchronisation along with excellent security credentials. It's short on advanced features but very accessible.

KeeWeb | keeweb.info | ★★★★☆
FEATURES ★★★☆☆ PERFORMANCE ★★★★☆ EASE OF USE ★★★★★

WebUser BRONZE AWARD

What we liked:
KeeWeb combines the functionality of KeePass with the simplicity of Bitwarden. Once it's installed, you can upload or create locally saved databases, then lock them down. There's also the option of using a key file, for added protection.

What KeeWeb lacks in features, it makes up for in ease of use. The big, bold buttons and tabbed layout (unconventionally placed at the bottom, rather than the top) are handy for updating multiple databases. Integrating cloud services such as Google Drive is a smart move, and linking these accounts is a cinch – click More to get started. You can also generate secure passwords by clicking one of the many Lightning Bolt buttons dotted around the software.

Extra tools are provided via plugins, but the available selection – mostly consisting of language packs and themes – is a bit of a disappointment.

How it can be improved:
KeeWeb feels a bit basic and its management tools can be clunky. You can only use it on your PC – there's no browser tool or mobile app – which, for such a lightweight password manager, seems like an oversight.

OUR VERDICT
KeeWeb does its job quietly and efficiently, but the lack of a mobile app or browser tool is a major drawback. On the plus side, it works on a range of PC-based operating systems.

BEST OF THE REST

Clipperz
clipperz.is
From its retro font and zingy orange accents, Clipperz sets out to add a fun element to password management, while remaining serious about your privacy – all your information is locally encrypted before Clipperz' servers get a chance to see it. Management is sound, using the same Type categorisation as Bitwarden, which in this guise includes Bitcoin wallets. Unfortunately, Clipperz is totally browser-based – they call it an "online vault" – which limits its appeal.
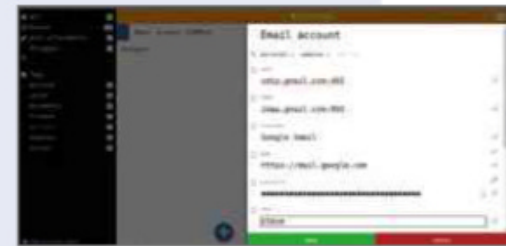
LessPass
lesspass.com
LessPass proves less is more, as it merrily strips away all but the essentials. Store an account and it randomly generates a password on the fly – but that's about it. You can use the tool in your browser, but the developers recommend using the Chrome or Firefox browser add-ons for better security, and we imagine that advice extends to the Android app, too. This breezy handling of passwords doesn't fill us with confidence, and it feels more like a password saver than a manager.

Password Safe
pwsafe.org
Password Safe is dull to use and not much to look at but, if you can forgive its cluttered ribbon and uninspiring tree-view, you'll find a commendable enough tool with a rough, old-school charm. Head to the main site for official links to 'Popular clones' that let you download faithful ports of the tool to your Android device or iPhone.
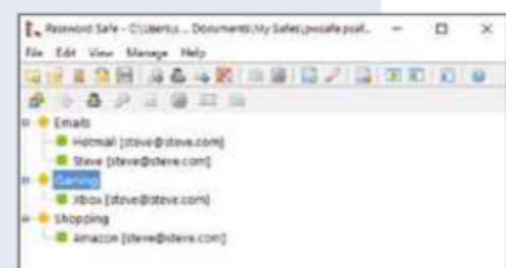
SCAN ANYTHING WITH YOUR PHONE

Your phone's built-in camera can do much more than capture photos and videos. **Nik Rawlinson** rounds up the best free Android and iOS apps that turn your snapper into a scanner

Scan documents into editable text

Scanbot for iOS and Android (scanproapp.com) takes the pain out of scanning text with your mobile device by automatically detecting the document's dimensions when capturing a photo.

The resulting image may look like Scanbot has only captured the area shown in the preview screen, but it's actually grabbed slightly more – so, if it's made a mistake, tap Crop. This zooms out so you can drag the edges of the boundary box – or the handles in each corner – to more accurately frame the area you want to scan.

Tap Save at the top of the screen and, unless you want to share the document as a PDF, press the 'X' in the top-left corner of the floating dialogue box to return to the file manager. Tap your new document to preview it, then tap the Text button at the top of the screen, followed by Run OCR.

OCR stands for Optical Character Recognition and is the process by which

Scanbot detects the text in your photo and extracts it. When it's finished processing, either tap Send Text to attach the file to an email, open the dcument in another app to edit it or choose Actions to share the scan online.

Digitise your old photos

Scanbot can just as easily be used to scan, save and share physical photos, offering automatic cropping and the option to tweak the results. What we really like is its ability to enhance your captured pictures within the app, so you don't have to use a separate tool or open the scans on your PC.

Once you've scanned your photo, tap the Filter button. Although filters usually mean fancy layer effects that can degrade rather than enhance a photo, Scanbot is much more sensitive, with a narrow range of presets to choose from, alongside individual sliders for brightness, colour and contrast.
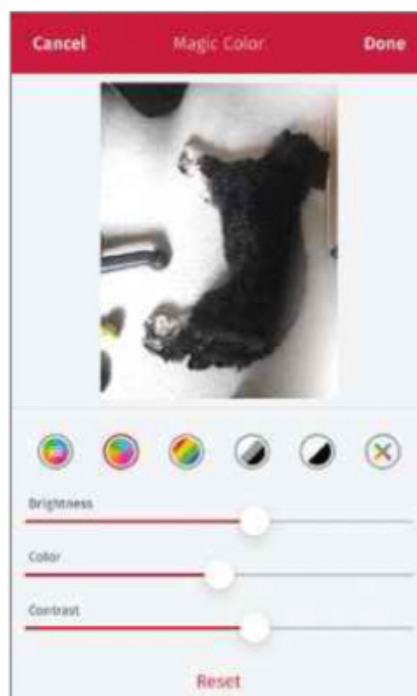
Scan barcodes to compare prices online

The iPhone has a built-in QR-code scanner. Open the camera app and point the lens at a square barcode and, if it contains a web link, it will offer to open it. Most Android phones have the same function.

You can also use barcodes – both square and linear – to compare prices. The Amazon app for iOS (bit.ly/amazonios499) and Android (bit.ly/idealo499) has a built-in scanner that links to matching products in its own store. However, if you prefer not to shop at Amazon or want to check that a product isn't on sale cheaper elsewhere, there are alternatives.

Idealo for iOS and Android (bit.ly/idealo499) compares more than 200 million products across 52,800 shops, and includes not only cost but product information, reviews and price trends, so you can see how prices have fluctuated over time. Tap the barcode icon at the end of the search bar and point your camera at the barcode you want to capture.

happy with the image, enter the relevant details, such as the receipt's value and where it came from, and the record will be added to the app.

All these features are available for free, but you can add automatic recognition of the receipt's contents for 99p per 10 scans, and online backup plus other features for £9.99 a year (see bit.ly/receiptscompare499).

Catalogue your books

LibraryThing for iOS (bit.ly/librarythingios499) and Android (bit.ly/librarythingandroid499) lets you scan and catalogue all the books on your shelves by pulling in data from Amazon and 65 million library records. Tap Add Books 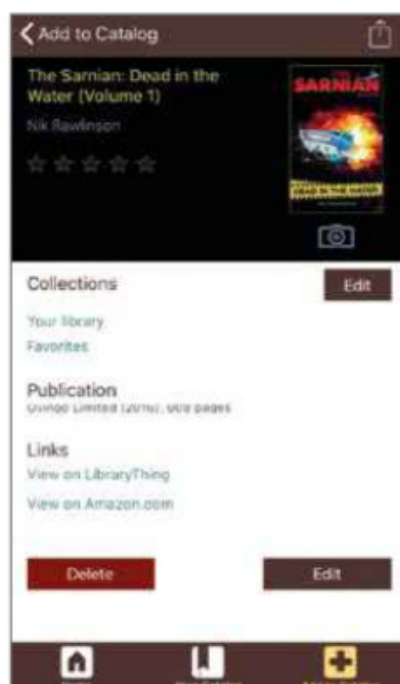on the home screen, followed by the barcode icon, then scan the barcode on the back or flyleaf of your book. You can organise your books into collections, add tags and attach high-resolution cover pictures.
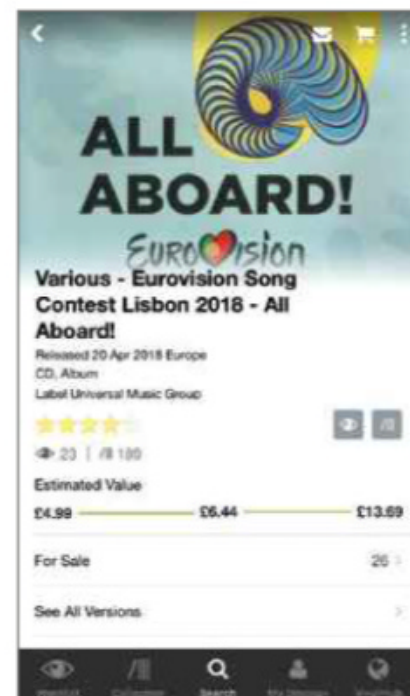
Catalogue your CD or DVD collection

Discogs (www.discogs.com) claims to be the world's largest database of physical music – that is, CDs and vinyl – with listings of more than 12,250,000 recordings by 6.7 million artists. So far, more than half a million users have added their own data or tidbits. It's free to sign up for an account, and free to download the iOS and Android apps (www.discogs.com/app). When you've done so, log in and tap the barcode icon on the search box, then scan the barcode on your CD or record.

As well as giving you an estimated value and links to people selling the album or single second-hand through the service (so you can scan a friend's CD and buy a copy for yourself if you're enjoying it), Discogs provides cover notes, credits and full track listings.

My Movies for iOS (bit.ly/mymoviesios499) and Android (bit.ly/mymoviesandroid499) is a database of more than 950,000 films and TV series, which can catalogue not only physical DVDs and Blu-ray discs, but digital downloads, too. You can add up to 50 items to your library for free, after which you can upgrade for £4.99 to remove the restriction. As with Discogs, you can add discs to your collection by scanning their barcodes, and the app recognises what you're pointing at very quickly.

These types of apps are useful when browsing high-street shops (when they eventually reopen) to check whether you're being charged a fair price or that a discount is genuine.

Scan and manage receipts

There are lots of receipt-scanning apps for business but relatively few for home users, and Smart Receipts for iOS and Android (www.smartreceipts.co) is our favourite.

Start by tapping '+' to create a new expense report, then give it a name and set a start and end date. You can choose to create reports for different categories, such as food, fuel and household expenses, set them up by month or just create an overall report for the whole year. You can also set up multiple reports to run concurrently and switch between them.

Start scanning your receipts, open the report you want to add them to, then tap '+' and take a photo of the receipt. Once you've confirmed that you're

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CONTROL ACCESS TO YOUR PHONE'S CAMERA

While all the apps in this feature require access to your phone's camera for scanning purposes, many other apps don't, but you may have granted them this permission when you installed them. To check which tools can use your Android camera, go to Settings, 'Apps & notifications' (or similar). Here, you can either review apps' permissions individually or open the Advanced menu at the bottom of the screen and select 'App permissions'. Tap Camera and disable access for any apps you don't want to use your camera.

In iOS, go to Settings, Privacy and choose Camera to review which apps have access to your camera, then disable any that shouldn't.
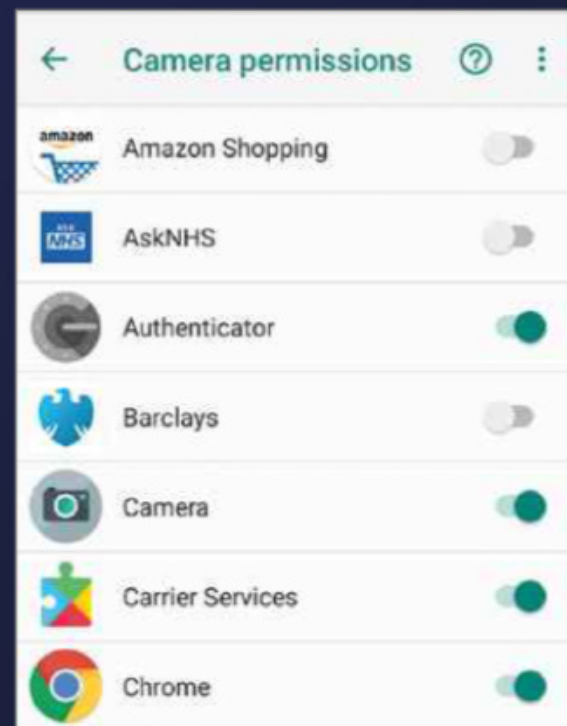
Scan anything with your phone

Browsing the results reveals a wealth of information, including lists of episodes in a series, broadcast dates, descriptions, lists of actors and pictures taken from the film or series. There's also a link to IMDB, for even more in-depth information without the faff of a manual search.

Translate foreign languages

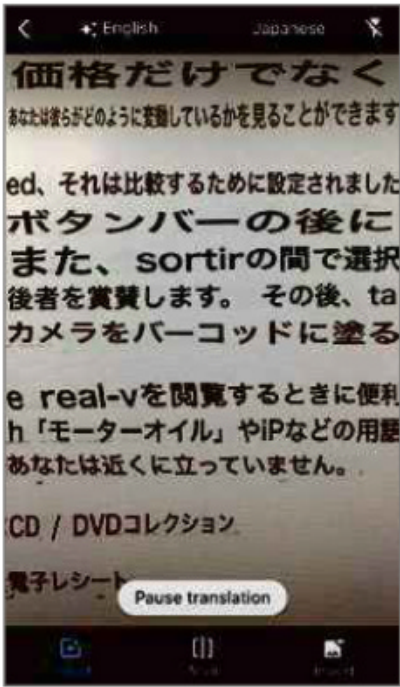Google Translate, for iOS (bit.ly/ translateios499) and Android (bit.ly/ translateandroid499) swaps foreign words for English – or one of 109 other languages – in real-time. Lea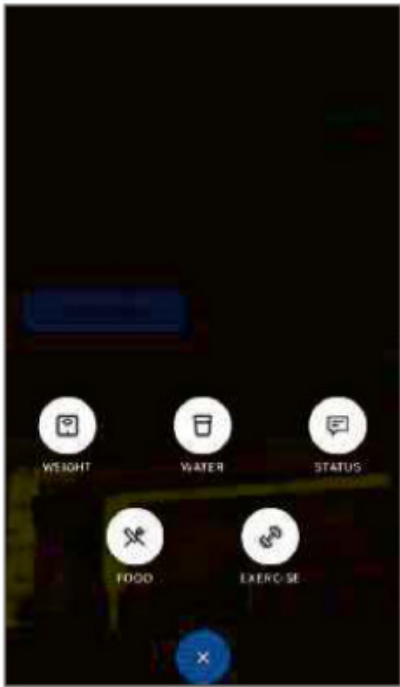ve the 'from' language at the top left of the app set to 'Detect language' and choose the destination language using the drop-down menu to the right. Now, tap Camera and point your phone at the text you want to translate. Google Translate will even try to retain the original formatting so you can see the result in context.

Count your calories

MyFitnessPal for Android and iOS (myfitnesspal.com) does more than just log your workouts, it also simplifies the task of logging your calorie intake, helping you decide whether that afternoon snack can really be justified. You'll need to create a free account within the app or through the website (you're encouraged to sign up for an annual or monthly premium membership at £39.99 and £7.99 respectively, but this isn't required).

Next time you're heading for the kitchen, tap '+' on the toolbar, followed by Food, then select breakfast, lunch, dinner or snacks, depending on what you're about to eat, and tap the barcode icon beside the search box. Scan the back of the packet (or wherever the barcode is), and MyFitnessPal uses that as a start point for adding your food to the database.

As its name might suggest, MyFitnessPal lets you track your food as part of a broader fitness scheme. Specify your height, weight and goal (which can be as simple as maintaining your current weight) and it will suggest how many calories you should be eating each day, as well as keeping an eye on your ongoing consumption.

Check your lottery numbers

If you play the lottery, you'll love the free National Lottery Results apps for iOS and Android (lottery.co.uk/apps), which let you scroll through recent results and generate random numbers, as well as scan the QR code printed on every ticket. Doing so reveals whether you're a winner far more quickly than manually comparing your picks to the chosen numbers.

The app also lets you search through an archive of results that stretches all the way back to the very first draw in 1994, store your numbers (even if you're part of a syndicate), and exclude certain tickets from specific draws if you don't play in every event.

Digitise your debit, credit and loyalty cards

Both iOS and Android have built-in digital wallets. By adding your credit, debit and loyalty cards to them, you can tap your phone on in-store readers to pay for goods, or scan an on-screen barcode to collect loyalty points.

On an Android device, you may need to get Google Pay from the Play Store (bit.ly/googlepay499) because although it runs on non-rooted phones with Android 6 or later, it isn't always preinstalled (it wasn't on our phone).

Launch it and tap 'Set it up' in the 'Pay contactless with your phone' panel. Google Pay will retrieve any cards you've already stored in your Google account. To add a new one, tap 'Add a new card'. As with Wallet on iOS, line up your card with the outline and the app will detect the card number and expiry date, then ask you for the three-digit security code on the back.

To pay using your Android phone, hold the device over the in-store contactless terminal. The phone detects the terminal's presence and pays automatically using your default card.

If you're using an iPhone, launch Wallet, then tap the '+' at the top of the screen to add a new payment card. Hold your card beneath the camera, framing it exactly within the on-screen outline, and your phone will detect the card number, expiry date and your name. It checks these against a list of authorised issuers and, if your card is compatible with the service, asks you to provide the security code – the three digits printed on the back.

When you want to pay with your stored card, if you have an iPhone 8 or earlier, hold your finger or thumb on the fingerprint reader, then tap the top of your phone against the contactless reader. On an iPhone X or later with FaceID, double-click the side button on your phone, look at the phone until it recognises you, then tap the phone on the reader.

Solve maths problems

Point Photomath at a problem and it finds you the solution. Whether it's basic addition, subtraction, calculating roots or working through geometry, trigonometry and statistics, this clever, free app for iOS and Android (photomath .net) works like magic, even recognising handwritten equations. It's a must-have if you're trying to help your kids with homework, and great for anyone whose numeracy skills have grown a bit rusty. ◼

STAY AWAY
from the doctor

Don't visit your GP during the coronavirus outbreak unless it's essential – use these web tools to keep yourself and others safe

Order repeat prescriptions

You don't need to visit your doctor's surgery to request a repeat prescription or pop into a pharmacist to collect it, because you can do everything using the web or a mobile app. Most GP practices now offer online services that let you order repeat prescriptions, although to sign up you need to obtain registration details from your surgery, usually in person, which may not currently be possible (you may be able to get the info over the phone).

Another option is to use an approved repeat-prescription service such as Echo (www.echo.co.uk) or Pharmacy2U (www.pharmacy2u.co.uk), which let you request your prescription via their sites or apps. They then contact your GP to approve it, dispense the medication from their own pharmacies and deliver it to you for free, although waiting times are understandably longer at the moment and some services only cater for NHS England patients.

Your NHS prescriptions, delivered for *free*
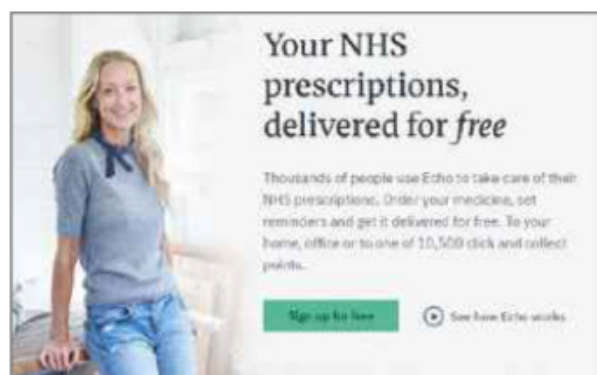
Alternatively, you can use the NHS App (bit.ly/nhsapp499) to order repeat prescriptions. Confirm who you are by taking a photo of your ID (passport, driving licence or national identity card) and recording a short video of your face while you say four numbers.

Get medical advice from an app

If you're unable to visit your doctor to diagnose your ailment, it's worth trying the Ask NHS app for Android and iOS (bit.ly/asknhs499). Launched last year, this lets you describe your symptoms to a virtual health assistant called Olivia,

Do you have a high temperature or fever (above 37.8 C or 100 F)?
Yes   No

who will ask questions to deduce what might be wrong with you and provide relevant advice. In some areas of the UK, Olivia can also arrange a callback from a 111 nurse and schedule an appointment with your doctor. The latest update to the app includes a brief coronavirus screening and lets you book a video consultation with your GP, if their practice supports the feature.

Other good medical-advice apps include WebMD's comprehensive (if US-biased) tool (www.webmd.com/webmdapp) and Ada – Your Health Companion (ada.com), both of which were recently updated to include information about COVID-19 and assess your symptoms.

Book a video appointment with a GP

During the current crisis, many doctors are conducting appointments by phone. While this allows you to discuss your condition, it's no substitute for a face-to-face examination. A video consultation is a better option, which is where apps such as Livi (www.livi.co.uk) can prove useful. Sign up and select your GP practice to book a free video appointment or, if the surgery doesn't yet offer this service, you can speak to

one of Livi's GMC-certified doctors, who can offer medical advice, issue prescriptions and refer you to a specialist, if necessary. This costs £39 per appointment but, on the plus side, Livi says waiting times don't usually exceed an hour.

See a GP by video
Get medical advice, prescriptions and referrals from registered GPs, from home, work or on the go.

Similar video-consultation services include Babylon (www.babylonhealth.com), which costs £49 for a one-off appointment, or is free if you switch from your current GP; and Push Doctor (www.pushdoctor.co.uk), which costs from £30 for a 10-minute appointment, or is free with partnered practices.

Check the NHS 111 website

The NHS 111 service has been overwhelmed by calls about the coronavirus, so anyone worried about their health is advised to use the website instead

NHS 111 online
Do you have a new continuous cough?

New: means a cough that you've not had before, or if you usually have a cough, it's got worse.
Continuous: means coughing a lot for more than an hour, or 3 or more coughing episodes in 24 hours.

Yes   No

(111.nhs.uk/covid-19) and not to go to a GP, pharmacy or hospital. Enter your location, then answer a few questions about yourself and your symptoms for instant advice – usually, "you and your family need to stay at home"! ∎

HELP BEAT THE CORONAVIRUS

Lots of dodgy apps have sprung up in the wake of the coronavirus, but a new tool developed by doctors and scientists at King's College London is taking commendable steps to slow the outbreak. Covid Symptom Tracker (covid.joinzoe.com) asks users to complete and share a one-minute health report every day, even if

they're feeling well, so experts can identify how fast the virus is spreading in different areas and better understand who is most at risk, by linking symptoms with underlying health conditions. It's free to install for Android and iOS.
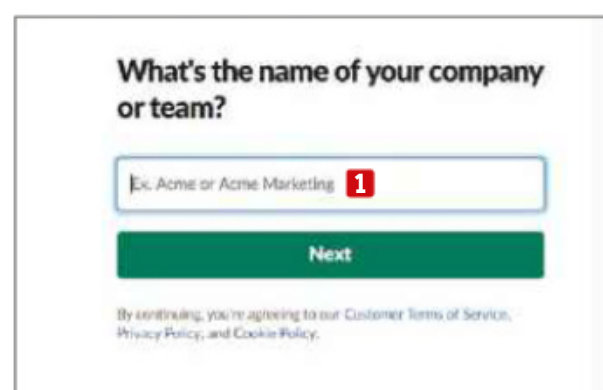
Keep in touch using Slack

Slack is primarily a tool for businesses but its free service is ideal for keeping in touch with friends and family. Here's what you need to know

**Slack: slack.com** | 🕐 **20 mins** | 🪟 🤖 🍎 **(macOS & iOS)**

With the coronavirus currently limiting our movements, we can't visit friends and relatives, but it's important to keep in touch with people as months of social isolation could lead to loneliness, even for those people who in normal circumstances are happy to live on their own. Thankfully, tools such as Slack are designed to let

you set up group communication to keep everyone in touch on a daily basis.

Slack, if you're not already familiar with it, is a collaboration hub where you can chat together, share links and images, and have conversations as a group or one-to-one. It's aimed at businesses, but it's just as useful for home users, and you can download it and use it for free.

FILTER
Use the sidebar to filter what you see by Threads, 'Mentions & reactions', Saved, Channels, Files and more

CHANNELS
You can switch between different channels and add new ones. Right-click a channel to access more options, including leaving it

APPS
Connect any apps you use to Slack, including Google Drive, Google Calendar, OneDrive, Dropbox and Slack for Gmail

1 Click the Get Started button on the website, then click 'My team isn't using Slack yet'. Enter your email address and click the Confirm button. You'll be sent an email message containing a six-digit code. Enter this into the box to verify your address. Fill in the name for your family or team, **1** then click Next.
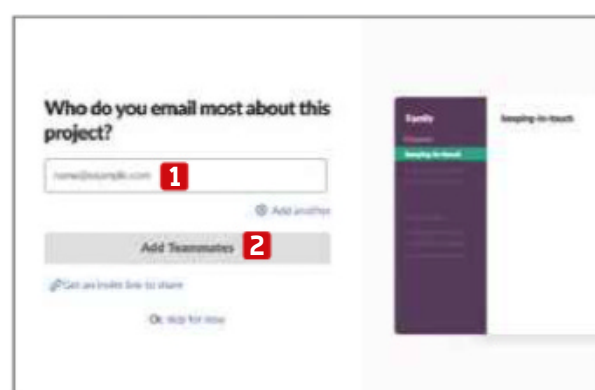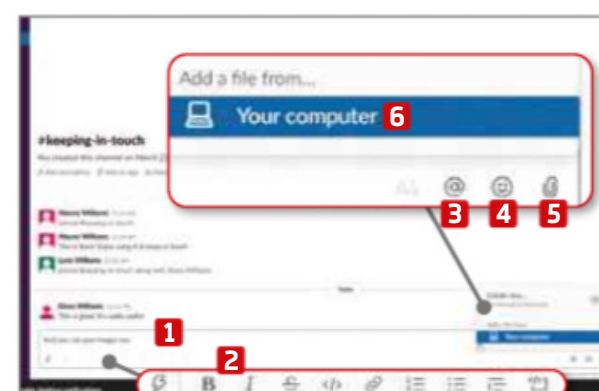
2 You'll be asked to enter a project your team is working on. This could be 'staying in touch', for example. Click Next, then enter the email of the first person you want to join your 'team'. **1** Add the other people's emails and click Add Teammates. **2** When done, click 'See Your Channel in Slack'.
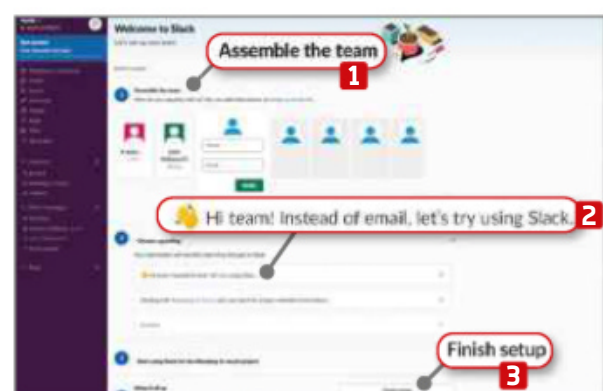
3 The Slack interface opens. Before you can start using it, you need to finish configuring everything. You can add more people **1** and set a greeting that new arrivals will see when they log in. Create the first channel post, **2** then click 'Finish setup'. **3**
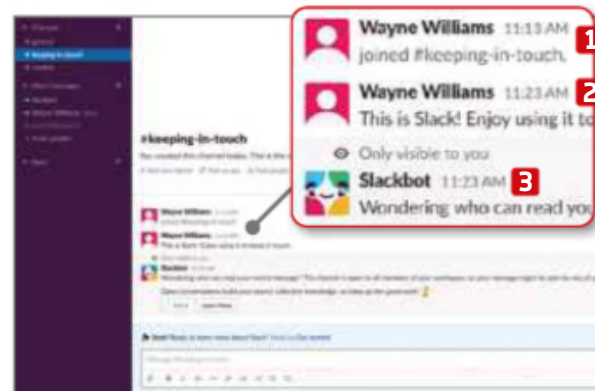
4 Enter a username and password for yourself, a workspace name for Slack, and note or change the URL to sign in. Click Finish, then click Explore Slack. Your channel opens along with a message that you've joined **1** and your first post. **2** Slackbot **3** provides useful help and advice for using the tool.

5 Post messages whenever you like by typing text in the box below. **1** You can add formatting, **2** mention people **3** so they receive a notification that you've messaged and add emoji. **4** To include attachments, **5** such as photos, browse for the items you want to upload from your computer. **6**

IMAGES
If someone shares a photo in Slack, you can click it to view it full screen, download it or share it. Click the menu button to see more options, such as copying the link to a file to share it elsewhere

6 People can reply by typing a response in the message box. Alternatively, they can hover over another comment to bring up options. From here, they can add an emoji reaction, **1** start a threaded response (messages can also be set to appear in the channel), **2** and share **3** or star it. **4**

7 Click your name **1** in the top-left corner to change your visibility (you can set yourself as 'away') **2** and view your profile, **3** which appears on the right. **4** Click Edit Profile **5** to change your display name and upload a photo to use as your profile picture.

8 If you want a one-to-one chat with someone in Slack, click their name **1** in the left-hand panel, then type your message. This is a personal conversation, so no one else can be invited to join. Right-clicking their name on the left lets you star, mute or close the conversation. **2**

Launch your VPN automatically for specific programs

PowerShell: bit.ly/pshell499 | 🕐 **20 mins** | 🪟 **Windows 10**

V PNs tend to slow your browsing speed and often impose download limits, so you'll want to reserve use for your most private activities, rather than have it running all the time. However, you may have applications that you always use via your VPN, such as a secure browser for specific online jobs or a piece of software you only ever use while avoiding unfair geographical blocks.

You can set Windows 10 to launch your VPN automatically when a program opens, using Windows 10's PowerShell. The only limitation is that your VPN needs to be set up to run under Windows' own VPN controls. We show you how to do this in Steps 1 to 3, so skip these if you're already set up. You'll find the settings you need in the support pages of your VPN's website.
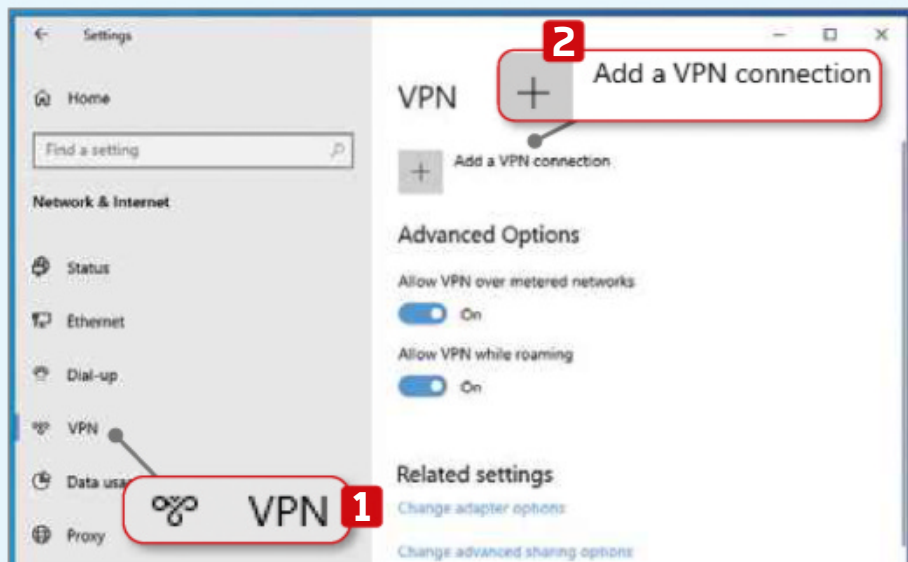
1 Set up your VPN so it works natively in Windows. Open the Settings app, select 'Network & Internet', choose VPN **1** and click 'Add a VPN connection'. **2** Under 'VPN provider', choose 'Windows (built-in)'.

2 Give the connection a name **1** and fill in the rest of the details from your VPN's support pages. We've used the 'VPN type' of IKEv2, **2** and signed in with a username **3** and password **4** supplied by the VPN.
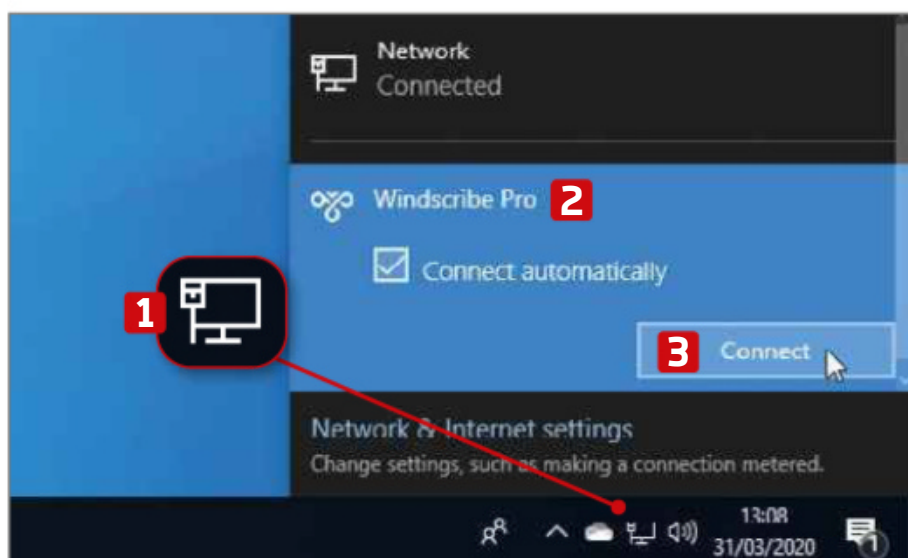
3 Click the 'Network Internet access' icon in the notification area. **1** Your VPN will be listed here. **2** Click the Connect button **3** to launch it. Once you've verified that this works, switch it off again for the purposes of this workshop.
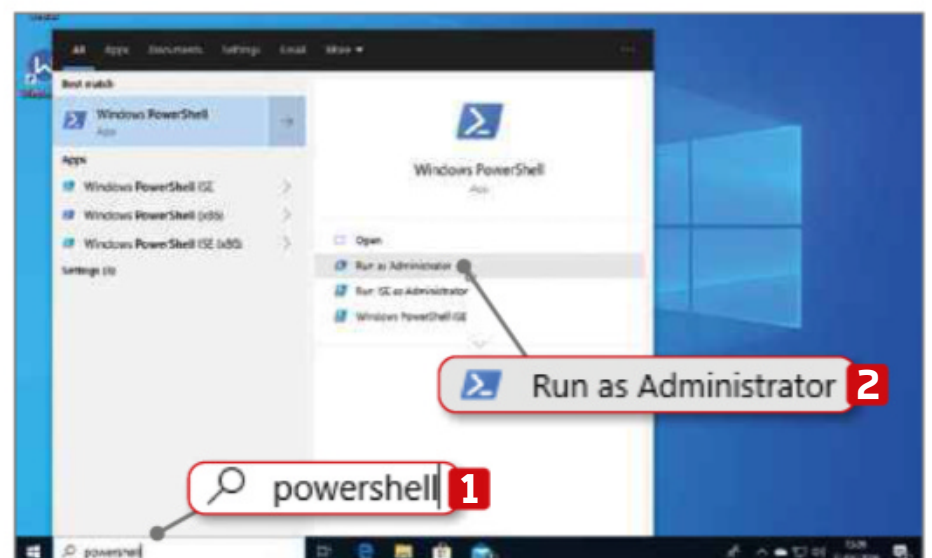
4 Find PowerShell in the Start menu by typing its name in the search box **1** and choose 'Run as Administrator'. **2** When the User Access Control window pops up, click Yes – this gives it permission to make changes to your PC.
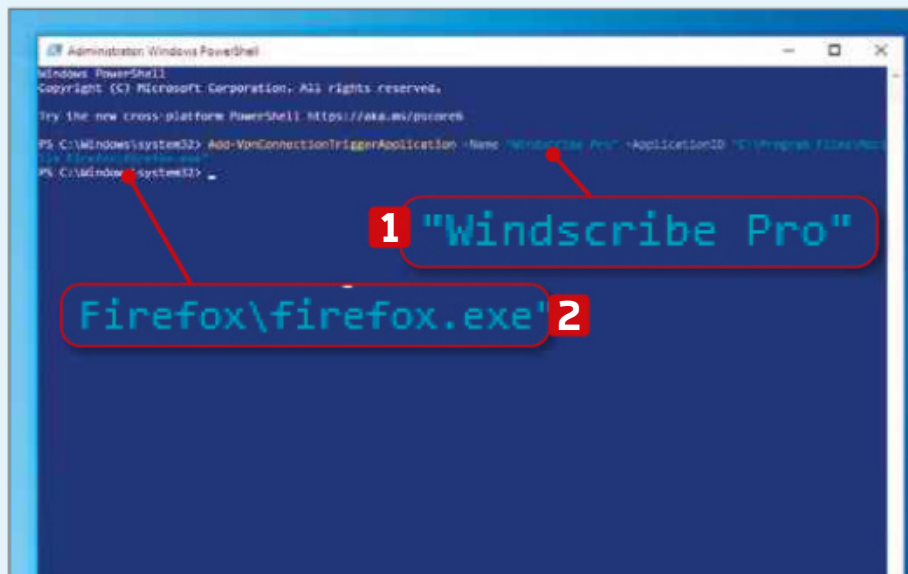
5 Type: `Add-VpnConnectionTriggerApplication -Name "Windscribe Pro" -ApplicationID "C:\Program Files…firefox.exe"` but replace the name **1** with that of your own VPN – the one you set up in Step 2; and replace the last bit with the full path and filename of the software you want to load **2** (in our case, Firefox).
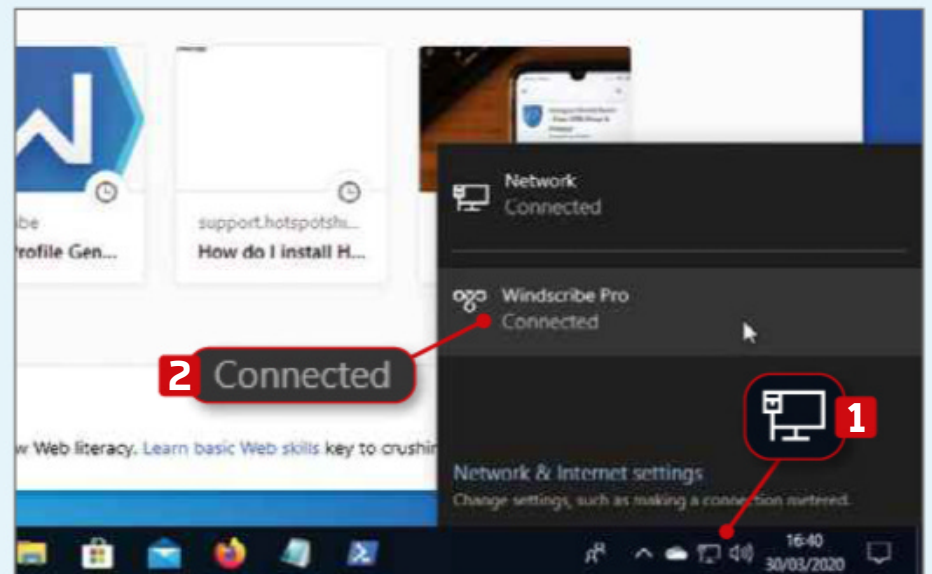
6 The next time you launch the program (the one you entered at the end of Step 5), the VPN will trigger automatically. Check it's working by opening the software and clicking the 'Network Internet access' icon **1** to see if the VPN is connected. **2** Switch the VPN off manually when you've finished.

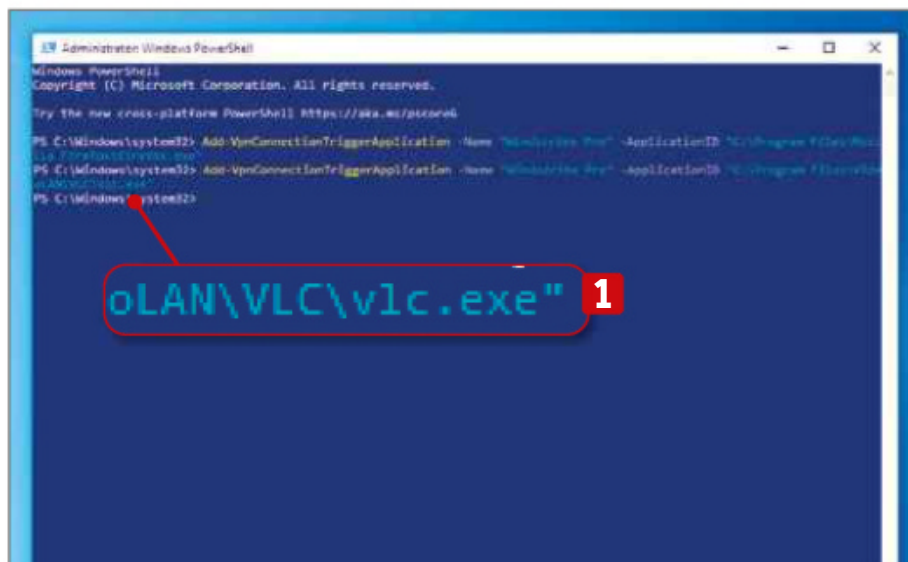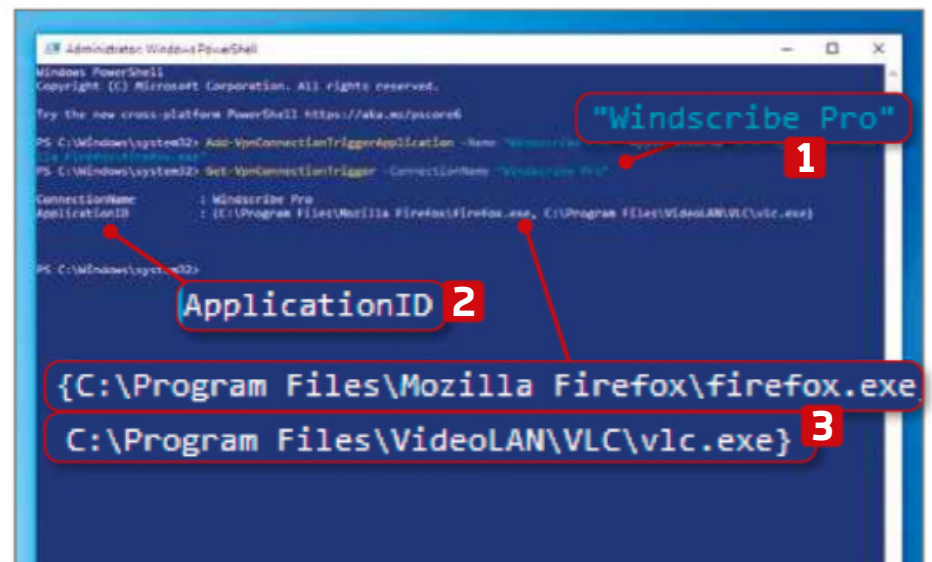**7** You can set up more programs to trigger the launch of your VPN, if you wish. Retype the command from Step 5, replacing the path with the path of this new program **1** (we've entered details for our VLC media player).

8 To remind yourself which triggers you have in place, type the command: `Get-VpnConnectionTrigger -ConnectionName "Windscribe Pro"` but replace Windscribe Pro with the name of your own VPN. **1** Next to ApplicationID, **2** you'll see the programs you've set up to trigger your VPN. **3**
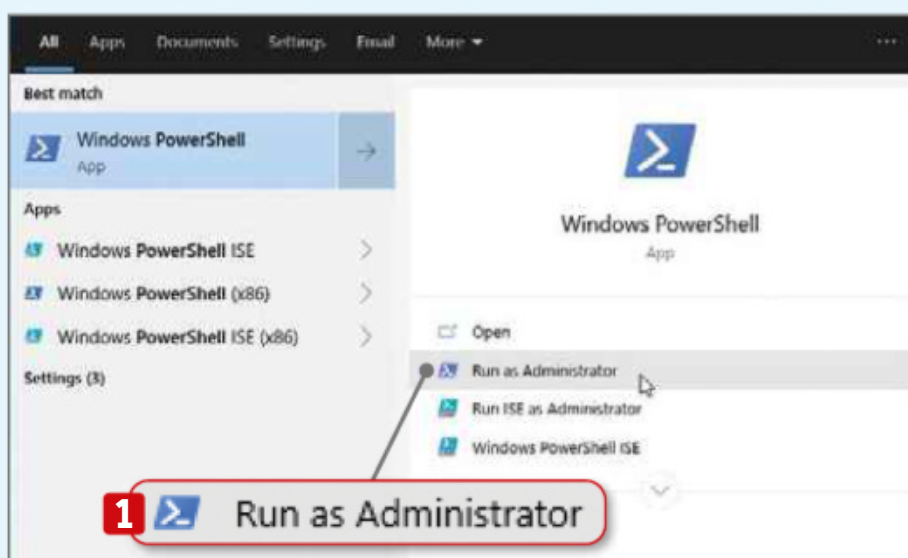
9 If you decide you don't need to protect these programs any more or you added the wrong one by mistake, you can remove applications from the list. If you're coming back to this at a later date, don't forget to open PowerShell as an administrator again. **1**
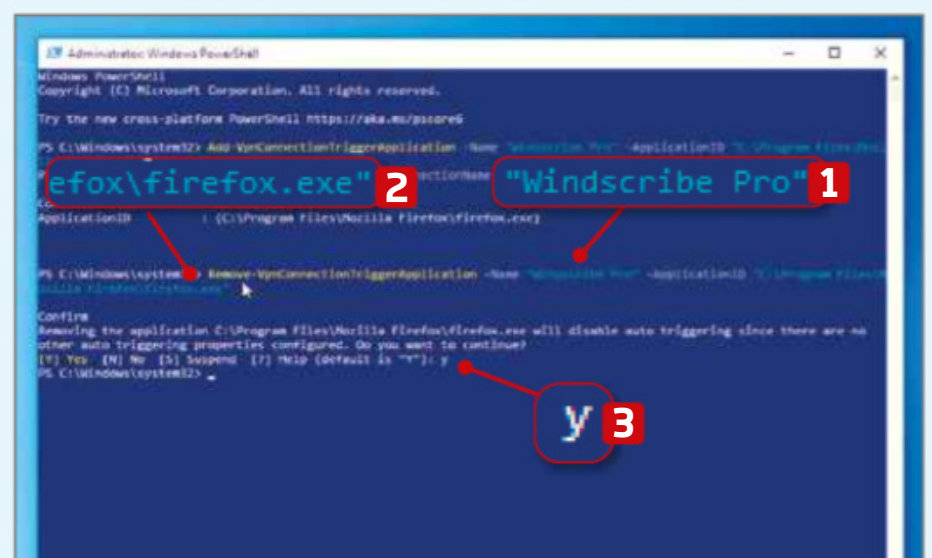
10 Type: `Remove-VpnConnectionTrigger Application -Name "Windscribe Pro" -ApplicationID "C:\Program Files…firefox.exe"`, replacing Windscribe Pro **1** with the name of your VPN and the file path with that of the application you're using. **2** When asked to confirm, type `y` **3** and press Enter.

Manage several email addresses from one

Most of us will have accumulated several email addresses over the years, linked to jobs we've moved on from and services we've abandoned. You may not use these old email addresses very often, but it's worth keeping tabs on them in case an important message appears. Luckily, you can monitor and even use your old email addresses from webmail accounts such as Gmail and Outlook.

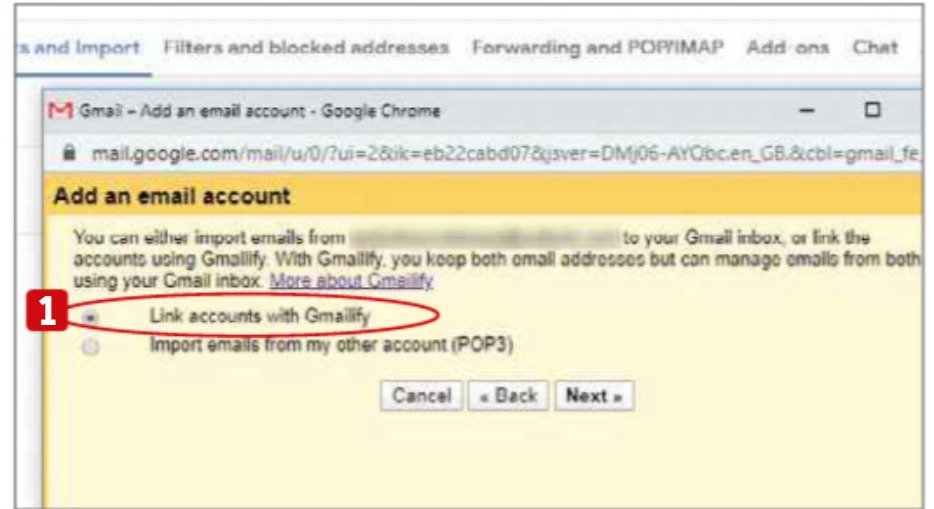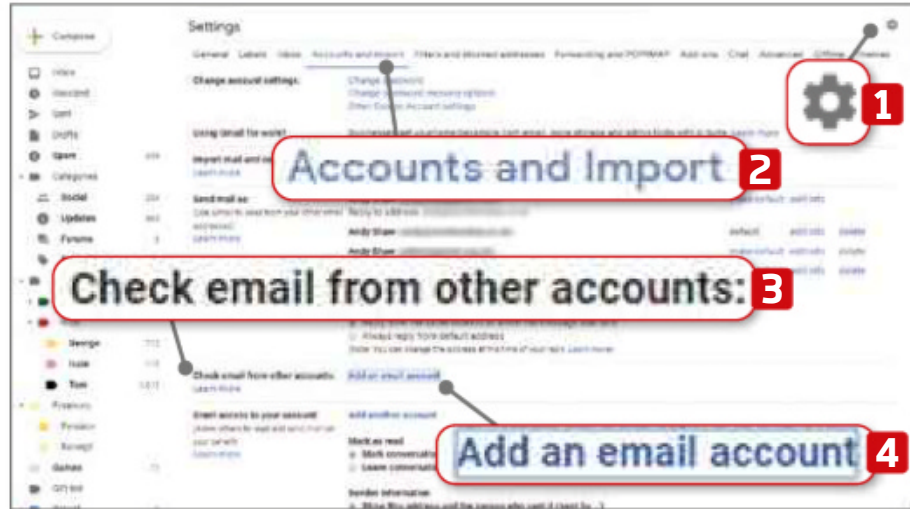**Gmail and Outlook.com: www.gmail.com www.outlook.com** | 🕐 **10 mins** | **Any browser**

1 To use Gmail to collect email from other accounts, click the cog button **1** and choose Settings. Click the 'Accounts and Import' tab. **2** Next to 'Check email from other accounts', **3** click the 'Add an email account' link. **4**

2 Enter the email address you want to add and click Next. Many accounts offer the option to 'Gmailify', which is the best way to use Google's email filters with other webmail addresses, though it's only available for a single account. Select the option **1** and sign into the account to give Google access.
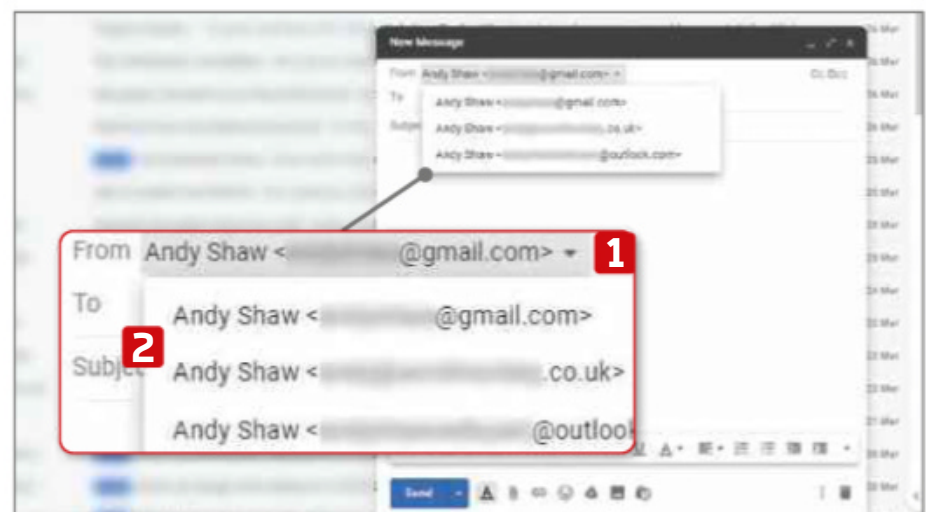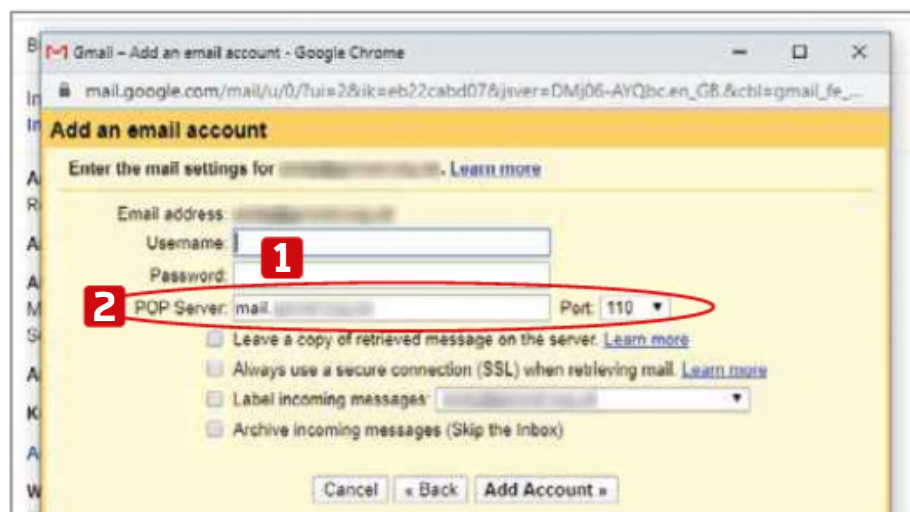
3 If you can't connect through Gmailify, either because of the one-account limit or because it's incompatible with the address, choose 'Import emails from my other account (POP3)' and enter your details. **1** You should find the POP3 server information **2** on your email provider's support site.

4 Now, when you reply to an email that has come via the external address, your message will appear as though it was sent from that same external address. To write a new email from the external address, click the drop-down arrow in the From box **1** and choose the address from the list. **2**
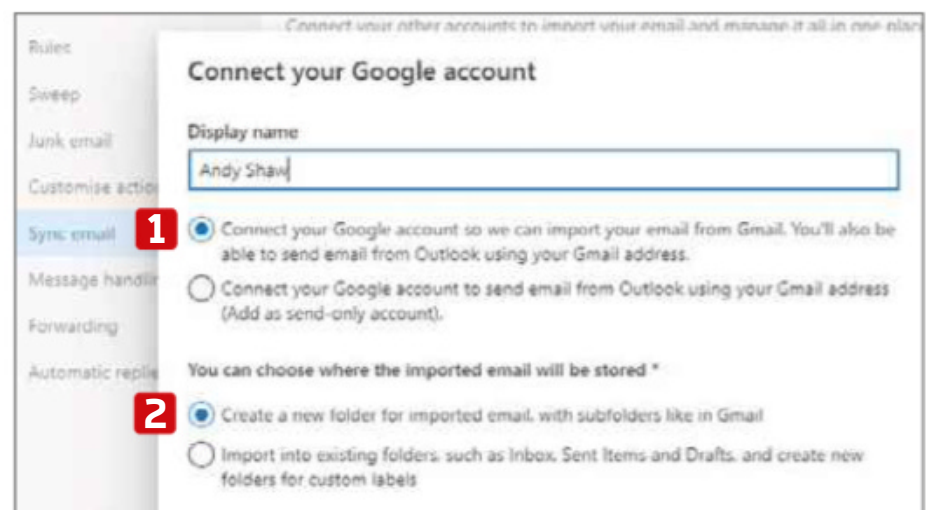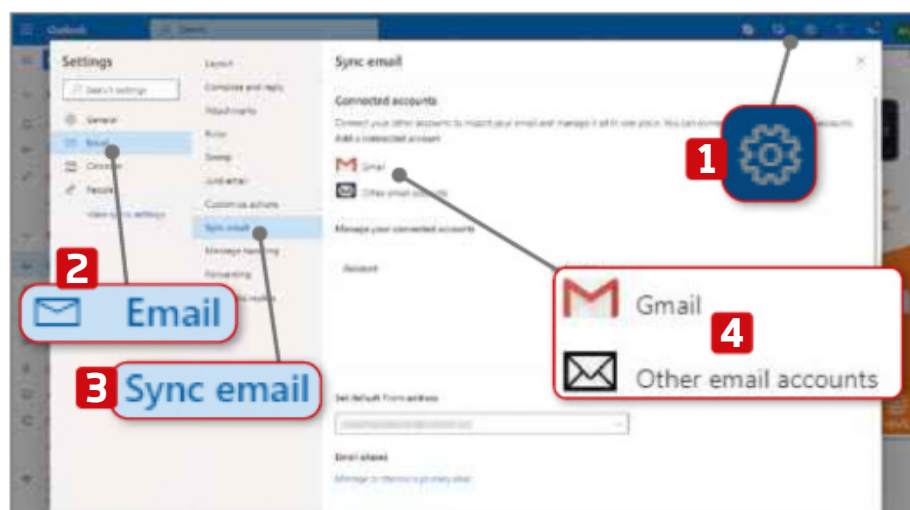
5 Outlook.com offers a similar tool, though its automatic setup only works with Gmail. Click the cog icon **1** and choose 'View all Outlook settings'. Select Email, **2** then 'Sync email' **3** and choose from either Gmail or 'Other email accounts'. **4**

6 The Gmail option lets you choose how the account is integrated, including whether to download email **1** and, if so, where to keep it. **2** Alternatively, you can use the address as 'send only'. There's also the option of connecting the email using either POP3 or IMAP, if the address supports it.

Create your own simple wiki website

Wikis are a great way to organise your personal notes. Rather than keeping each page as an individual document, you link pages together, like links in websites, to easily find your way from one page to another. In this Workshop, we're looking at the Windows version of the free wiki-creation tool TiddlyWiki, but it can be run on any device that can access your wiki's HTML file.

TiddlyWiki: tiddlywiki.com | 🕐 **10 mins** | **Any device**
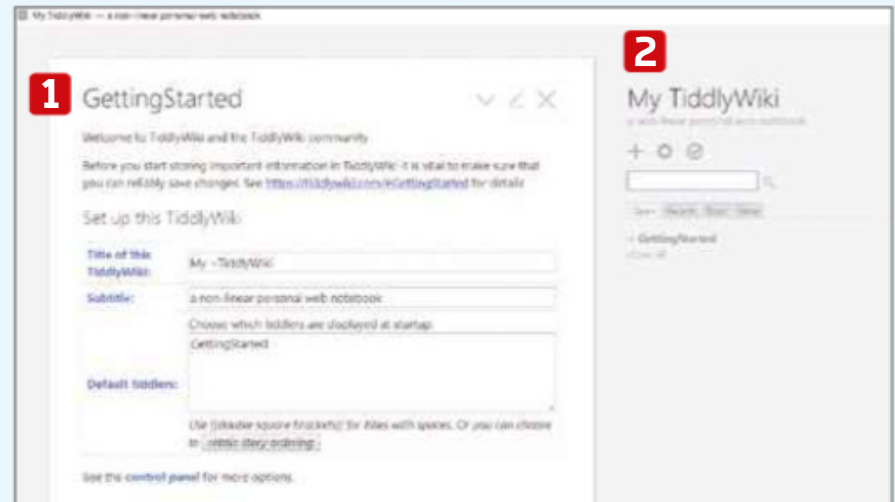

1 At tiddlywiki.com, click Getting Started, TiddlyDesktop **1** and then Download Empty. **2** Save the file, go to bit.ly/tiddlydt499 and download the right version for your PC. Run 'nw.exe' and click 'More info' to accept the warning. Click 'Add a TiddlyWiki file' **3** and select the emtpy HTML file.

2 Your TiddlyWiki opens with GettingStarted. **1** To the right are the navigation and management tools. **2** From here, you can change the name and subtitle of your wiki. 'Default tiddlers' are the pages shown every time you launch the wiki. Other pages you add are under Recent.
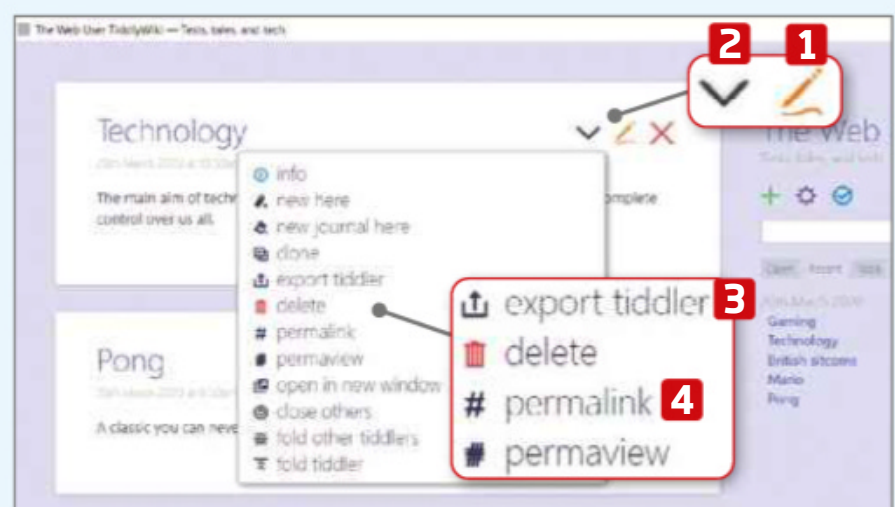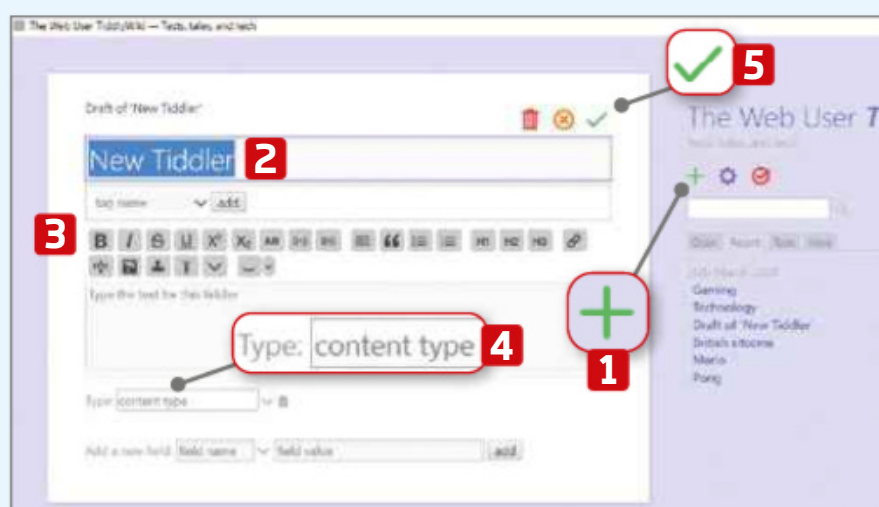
3 Click the plus sign **1** to create a new page. Name it and add any tags. **2** Pages are created with the text editor, which has all the tools you'd expect. **3** Click Type **4** to switch between text and image formats. When you're satisfied, click the tick to save. **5**

4 With your wiki created, you can edit pages by clicking the pencil icon. **1** Clicking the down arrow **2** reveals a list of functions for sharing: 'export tiddler' **3** lets you download it, while 'permalink' **4** copies a direct link to the page, which you can use to link to it from other pages.
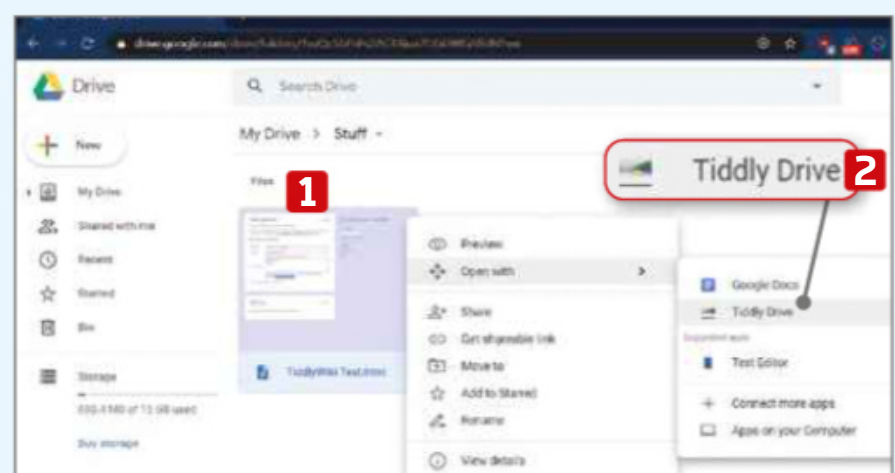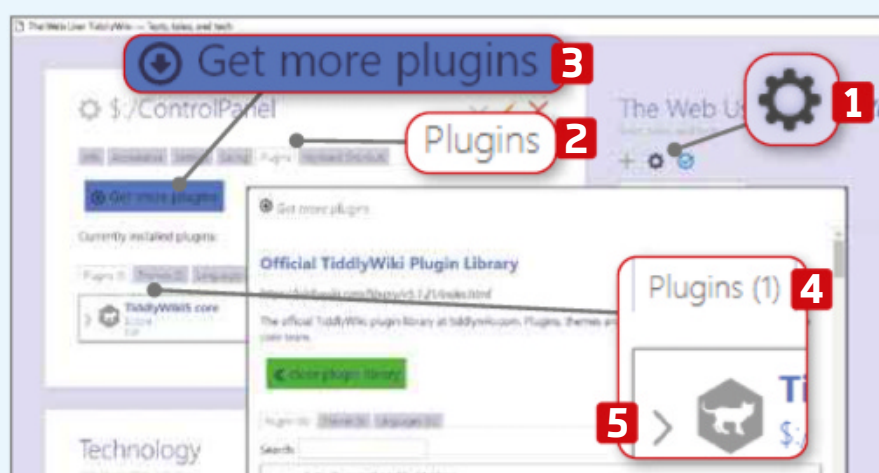
5 TiddlyWiki is supported by a small selection of plugins. Click the cog icon **1** to open the Control Panel. Under the Plugins tab, **2** click 'Get more plugins' **3** to launch the plugin library (and a few themes and languages). **4** You can click the arrow **5** to get a description of the plugin.

6 To use TiddlyWiki on other devices, install the Google Drive add-on (bit.ly/tiddledrive499). Upload your HTML file to the cloud **1** and right-click to add Tiddly Drive to the menu's 'Open with' option. **2** You can now work on the wiki in your browser and save it back to Google Drive.

How to...

Turn an old PC into a gaming PC

Wayne Williams shows you the cheapest way to give an older PC the hardware boost it needs to run modern games

A state-of-the-art gaming rig that can handle the latest 3D shooters and other graphically taxing games comes with a hefty price tag because powerful desktop and laptop PCs with top-of-the-range graphics are far from cheap. That said, unless you're competing in e-sports competitions or going to LAN parties (yes, they are still a thing), you can get away with something less pricey. As we show you in this Weekend Project, it's possible to transform an old PC into a pretty decent gaming system without having to spend too much money.

What you'll need

We'd love to tell you that your old PC from a decade or so ago can be transformed into a gaming beast but, in truth, that's unlikely to be the case – unless it was a cutting-edge machine when you bought it and you're prepared to spend some money upgrading it. Even then, this would probably entail adding a new motherboard, processor, memory and graphics, and for the total cost and effort, you might as well buy a brand new games machine.

However, you might be able to pick up a more suitable PC from eBay. Search for 'office computers', then filter the list to show refurbished models. These tend to be good quality and reasonably priced. For example, we found a Dell Optiplex

eBay has lots of refurbished ex-office PCs available to buy at very reasonable prices
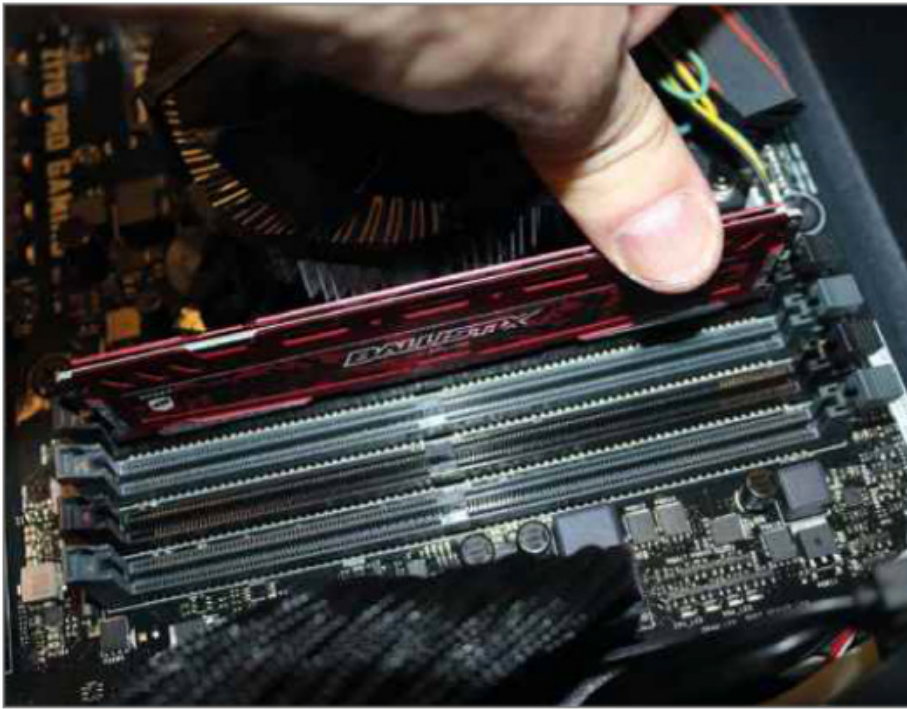
Upgrading your PC's memory can give it a big performance boost

Nvidia's Geforce GTX 1050 Ti is a good, affordable graphics card

790 PC with an Intel Core i7 processor, 16GB of memory, 2TB hard drive and Windows 10 for £285. If you have your own hard drive and compatible memory, you could pay half that.

The PC we found was offered with free shipping, but didn't include a mouse, keyboard or monitor, so these would have to be added separately. And because it's an office PC, it uses graphics hardware built into the processor and motherboard, so we'd have to bolster that with a separate graphics card. Make sure you know what slots and ports your PC has before buying any cards or peripherals for it.

Although one of the best ways to boost a PC's performance is by replacing its processor, we'd recommend starting with a machine that already has a reasonably powerful CPU. Replacing the processor might involve adding a new

motherboard, at which point the job becomes much more fiddly.

You can get better performance by making three simple upgrades – by adding more memory, a faster hard drive and a new graphics card.

Add more memory

Find out what sort of memory your PC takes, check the computer's available slots to establish its maximum capacity and identify the operating system you're planning to run on it. The 32-bit version of Windows 10 only recognises a maximum of 4GB and is only capable of using a total of around 3.5GB. The 64-bit Windows 10 Pro supports up to 2TB of memory, but the 64-bit Windows 10 Home is limited to 128GB.

The more memory you add, the better your PC will run. The included memory might be fine, but you could potentially

replace it with faster modules. Avoid mixing different makes and models of memory because this can cause problems down the line. The speeds of the different memory modules need to match, too. If they don't, all the installed memory will run at the slowest rate.

Get a faster hard drive

If your PC comes with a hard drive, you can continue to use this for storage, but you'll definitely want to add an SSD (solid-state drive) as your system drive. The price of these has come down a lot in recent years, and the available capacity has also increased.

There are two types of drive to choose from - SATA and PCI Express-based NVMe SSDs. The latter is the best choice because it's much faster, but a SATA drive will likely suffice, and it will still be much faster than a mechanical hard drive.

MINI WORKSHOP | Install an SSD in your PC

1 To replace a laptop hard drive, turn off the device, earth yourself, take out the battery and unscrew the case. Remove the existing hard drive. Some manufacturers glue in components, so you might not be able to do this. Insert the SSD in the hard-drive enclosure, attach the power and SATA connectors and reassemble everything.

2 Installing a 2.5in SSD in a desktop PC is slightly trickier because they have 3.5in drive bays. To solve the size discrepancy, you'll need a 2.5in-3.5in adapter. Your SSD may come with this but, if it doesn't, you can pick one up for around £6 from Amazon. Insert the SSD into the adapter and screw it into place. **1**
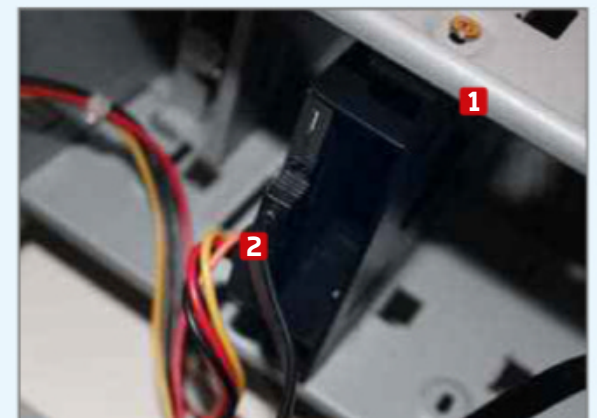
3 Turn off your PC at the wall, earth yourself, then open up the case. Locate a spare bay, insert the drive, and secure it. The process varies depending on the design of your computer chassis but it usually just slides in and you can then secure it with screws. **1** Once done, attach the power and SATA cables. **2**

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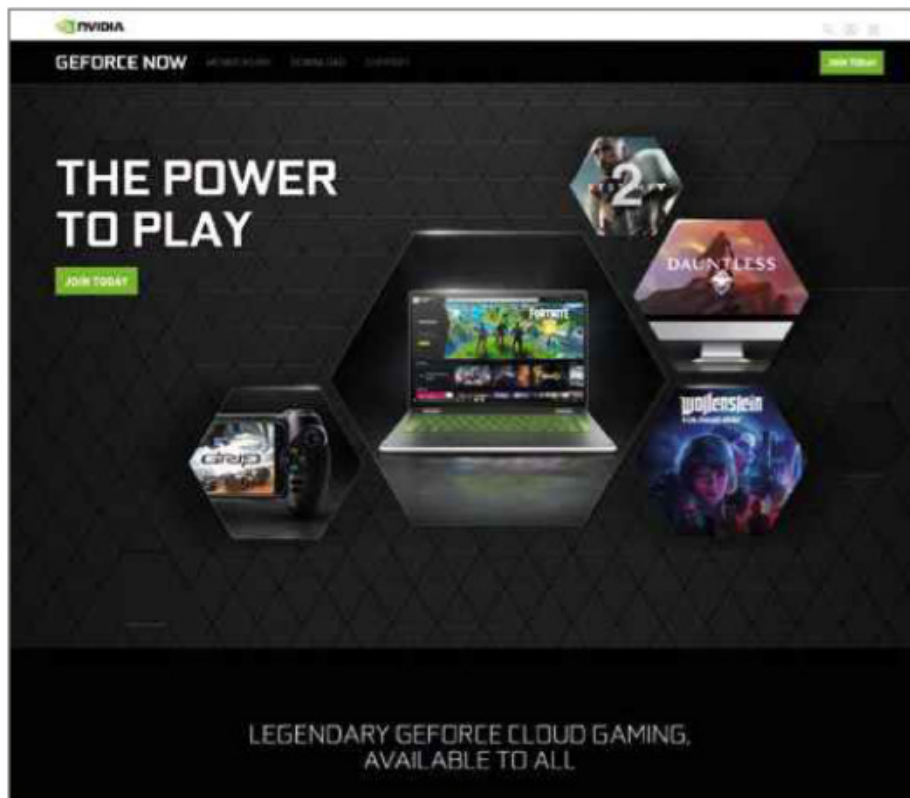
GeForce Now is free to try and uses games you buy through online stores such as Steam

Google Stadia lets you stream high quality modern games to any device

Shop around to find an SSD that suits your budget. It's better to go for a named brand, where possible, and you should always buy new. You'll need to install an operating system on your new SSD or clone an existing drive.

We show you how to install an SSD in our Mini Workshop on page 59.

Fit a new graphics card

The good news, for those on a tight budget, is you don't need the latest and greatest GPU (graphics processing unit). It might not fit in the case, anyway, and could draw more electricity than your power supply can handle (upgrading the power-supply unit is another tricky upgrade).

Work out what you need, then shop around. A model such as the Nvidia GeForce GTX 1050 Ti should suffice. Graphics cards, which the chips are built into, are available from a variety of brands and manufacturers. Expect to pay around £150.

Optimise perfomance

Once you've added your components, use a benchmarking tool such as 3D Mark (bit.ly/3dmark499) to check your PC's performance. You can eke a little extra speed from your system by overclocking the main processor and the GPU. For the former, this can probably be done through the BIOS/UEFI (Unified Extensible Firmware Interface), which you can get into when your PC first boots. Look for the key to press to load this as your PC starts – it's typically Del or F2. You can overclock the GPU through the software provided with it, or download it from the GPU manufacturer.

As an aside, always make sure you're running the latest graphics drivers for your hardware. You could also consider upgrading your BIOS as well, but only if you know exactly what you're doing.

Stream PC games to your PC, TV and other devices

Another way to turn an old PC into a games box is to use a service that can stream games over the internet. The advantage of this is the remote hardware does all the heavy lifting, so your PC doesn't need to be that powerful.

GeForce Now (bit.ly/gfnow499) is a good choice – you can read our full review of the service in Issue 498 (bit.ly/webuser498). You buy the games you want to play and the service's cloud-based processors let you run them on any device. It's free to try, with some limitations (sessions are cut off after an hour) but the paid-for version recently sold out. More capacity is expected to be added "soon".

Google Stadia (bit.ly/stadia499) is another good choice, which can stream games to PCs, tablets, Android phones and even televisions via Chromecast Ultra. It costs £119. ■

TURN YOUR PC INTO A CLASSIC GAMING MACHINE

If you're not bothered about the very latest games, you could turn an old PC into a retro gaming station. This involves much more modest hardware requirements – indeed, the Internet Archive (archive.org) has a vast collection of games that run directly in your browser and can be played on virtually any PC that can connect to the internet.

If you prefer to run emulators on your PC, you can install individual ones for different systems – MAME (www.mamedev.org) for arcade

The latest version of Kodi lets you play old games using emulators

machines, for example – or you could use the latest version of Kodi (kodi.tv), which also supports emulators. We covered the process for getting this up and running in our Weekend Project in Issue 493 (bit.ly/webuser493).

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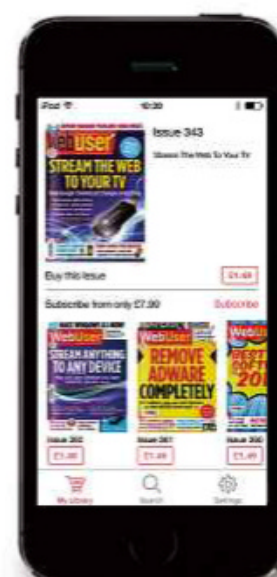
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Open the menu in Chrome or Edge and click Settings. Select 'Privacy and security' on the left, then click 'Site settings' or 'Site permissions'. Click 'Cookies and site data', then turn off the switch at the top labelled 'Allow sites to save and read cookie data'. Restart Chrome. If you have problems with a site, enable cookies again.

In Firefox, open the menu, click Options, then Privacy & Security. In the Enhanced Tracking Protection section, select Strict.

Block cookies for increased privacy but be aware that some sites won't work

Quickly delete cookies

The quickest way to delete all your cookies in Chrome is to go to Settings, 'Privacy and security' and 'Clear browsing data'. In Edge, go to Settings, 'Privacy and services' and click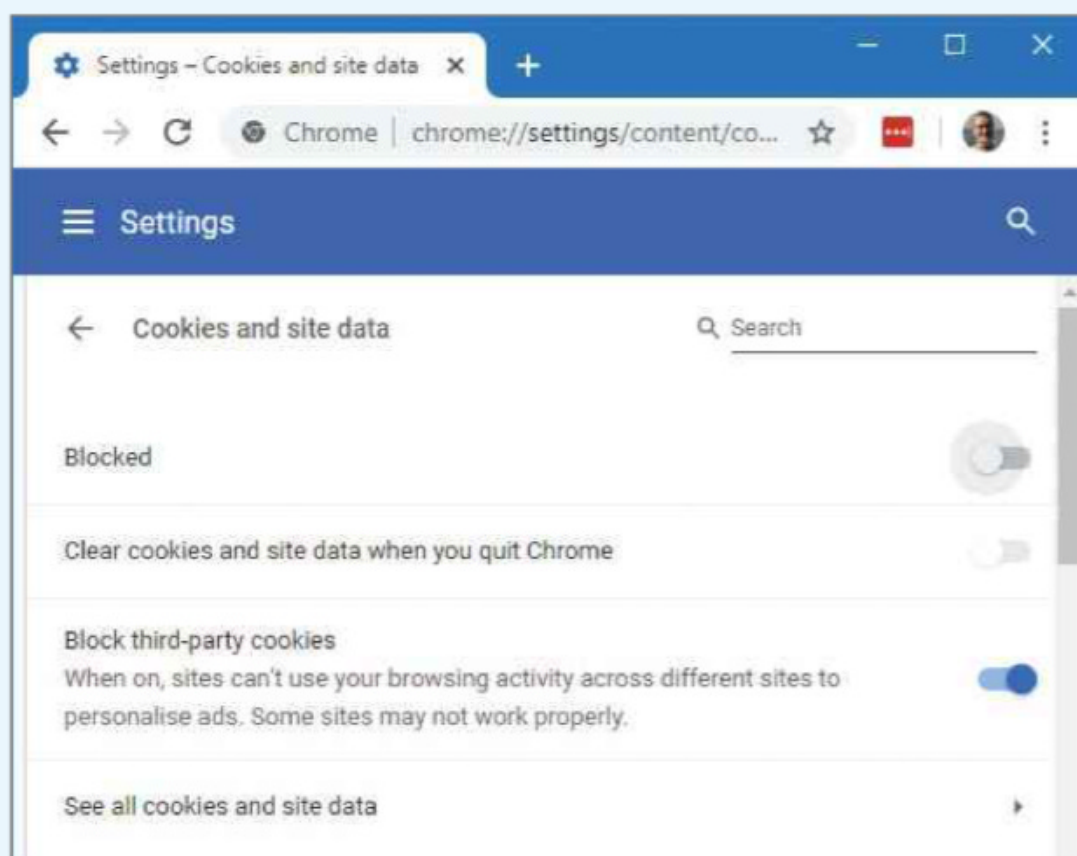 'Choose what to clear'. Both browsers show a list of items that can be cleared, including 'Cookies and other site data'. You can clear everything if you want or just select cookies and keep passwords, browsing history and other items.

In Firefox, open the menu and go to Options, 'Privacy & Security', find 'Cookies and Site Data' and click the 'Clear data' button.
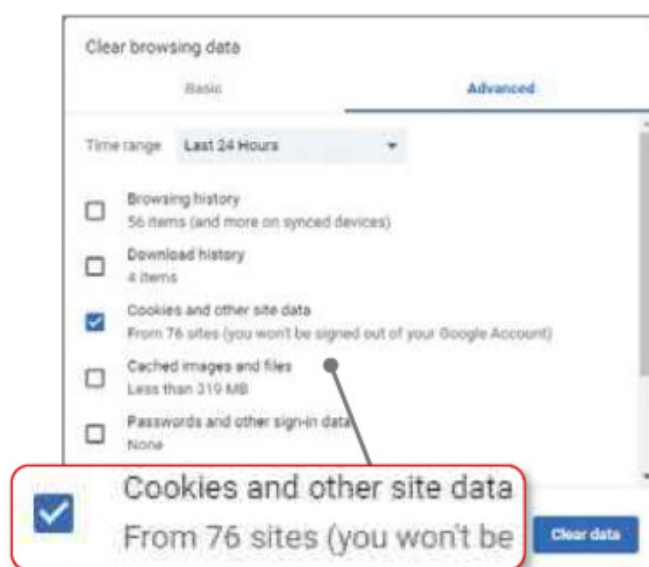
Choose to only delete cookies or include other items when clearing browser data

Clear cookies on browser exit

When you browse the web via an incognito (Chrome) or private (Edge and Firefox) window, any cookies you pick up will only be saved during that session. This means you can visit and revisit a website during a single browsing session and be remembered – as will anything in your trolley if you are shopping – but the cookies you picked up will all be deleted as soon as you close the browser. This means that websites can't track you between browsing sessions.

However, it also means that every private/incognito session begins with a blank slate, so when you visit sites that require a login – such as Facebook, Amazon, Outlook and Gmail – you and your details and settings won't be recognised because there's no cookie saying you've been there before.

It's possible to set this cookie behaviour as the default, even when you're not using incognito or private-browsing mode. Open Chrome's menu and click Settings, then 'Privacy and security', 'Site settings' and 'Cookies and site data'. Turn on the switch next to 'Clear cookies and site data when you quit Chrome'.

In Edge, open the menu and choose Settings, then 'Privacy and services'. Click the link 'Choose what to clear every time you close the browser' and

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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.**

turn on the switch for 'Cookies and other site data'. In Firefox, go to Options, Privacy & Security and select 'Delete cookies and site data when Firefox is closed'.

Bear in mind that sites requiring a login – such as shops and social media – won't remember you after Edge or Chrome is closed, so make sure you know your login details.

Manage iPhone cookies

Cookies aren't just stored on computers, they're also used on mobile phones. Open Settings on your iPhone and tap Safari, then scroll down to Privacy & Security and turn on Prevent Cross-Site Tracking. This blocks third-party cookies. There is also a switch to Block All Cookies but, as we pointed out earlier, this may prevent some websites from working.

Tap 'Clear History and Website Data' to clear everything, including cookies. There is no option to remove just cookies – everything has to go.

Alternatively, open Safari, tap the book icon at the bottom, then tap the clock at the top and Clear at the bottom. You can choose whether to clear the last hour, day, today and yesterday or all time. All stored data will be deleted, including cookies.

Control Android cookies

Chrome on Android phones and tablets handles cookies in the same way as the desktop version. Open Chrome on your phone, choose Settings from the three-dot menu and tap Privacy, then 'Clear browsing data'. You can choose what to clear from the list. 'Cookies and site data' can be selected on its own or everything can be cleared. The Advanced tab has finer controls for choosing what to delete.

Go back to the Settings menu and tap 'Site settings', then Cookies. There is a master switch to block all cookies, but this could stop some sites working. Tick 'Block third-party cookies' to stop cross-site tracking by advertisers.
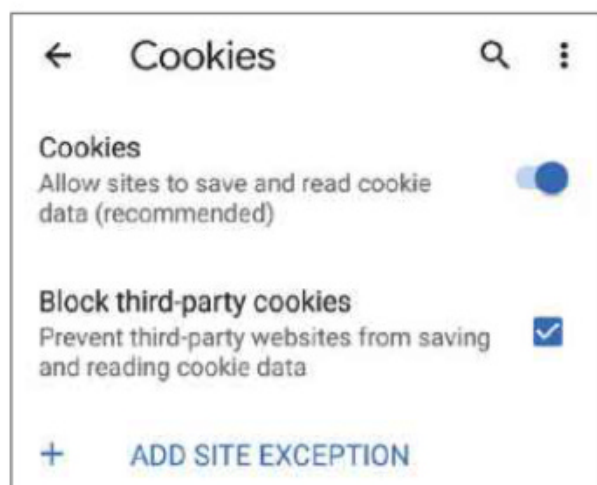
Browsers on phones handle cookies the same way as on PCs

Block or allow specific cookies

As mentioned previously, a blanket ban on all cookies means that some of your favourite sites may stop working, and you'll be pestered to enter your details every time you visit a site that requires a login.

Chrome and Edge have a solution that lets you block specific websites instead of blocking them all. Go to Chrome Settings, choose 'Privacy and security', 'Site settings', then 'Cookies and site data'. In Edge, go to Settings, 'Site permissions', then 'Cookies and site data'. In both browsers, you'll find sections for Block and Allow, with an Add button to enter the URL of a website. This means you can target a handful of sites where you specifically want to allow or block cookies, although you may visit too many sites to manually manage these lists.

In Firefox, go to the menu and choose Options, then 'Privacy & Security'. In the Cookie section, click Manage Permissions. As well as Block and Allow, Firefox lets you select 'Allow for Session', which lets cookies through until you quit browsing.

*Add websites to Allow and Block lists to control whether they can create cookies*

Block third-party cookies

If you try browsing the web with all cookies blocked, you'll probably find it more of an irritation than a help. Sure, it's private, but some websites just don't work.

There is a middle path between allowing all cookies and banning them outright, which is to block third-party cookies. This allows the website you are browsing to create and read their own cookies, while blocking other lurkers, such as advertisers. So it won't make any noticeable difference while you are browsing a website, but it means you won't be tracked as you browse the web.

In Chrome and Edge, go to Settings,
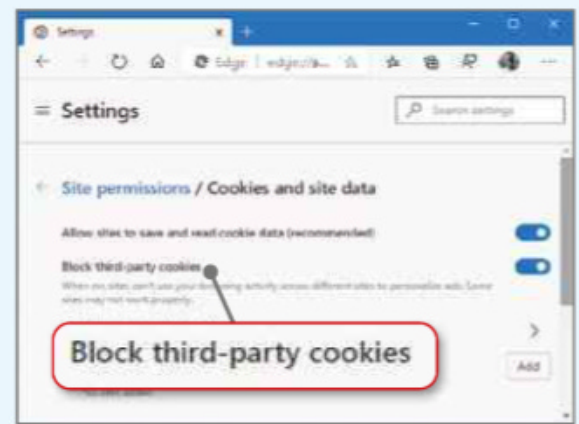
Block third party cookies if you don't want advertisers to track you

'Privacy and security' (Chrome) or 'Site permissions' (Edge), 'Cookies and site data' and turn on the switch to 'Block third-party cookies'.

Firefox now blocks third-party cookies by default.

What's in a cookie?

Websites use cookies to store information, and anything private or security-related should be encrypted. However, if you're curious to discover what cookies are made of, there are ways of finding this out.

In Chrome or Edge, open the menu and choose Settings, 'Privacy and security', 'Site settings (or permissions)', 'Cookies and site data', then 'See all cookies and site data'. In Firefox, go to Options, Privacy & Security, 'Cookies and Site Data' and click Manage Data.

This brings up a list of website addresses you've visited that have created cookies. To delete a cookie, click the trash icon next to it, but leave any sites you use often, such as social media, banking, shops and so on, which might contain useful login details and account preferences.

If you see an advertiser or a website you don't intend to visit again, then it is safe to delete the cookie. It's actually safe to delete all cookies, because it is no different to installing a new web browser, but doing this could make browsing less convenient.

Click the arrow to the right of a website to see a list of the cookie data sections. Expand each section and look under Content to see what is stored. If all you see is random letters and numbers, it's encrypted. You might occasionally spot plain text, though.

Ask the Expert

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

Find hidden Photos controls

Q If I double-click a photo in File Explorer, it opens in Windows 10's Photos app. This is fine for viewing a single image but if I want to look at several in the same folder, I have to go through the hassle of quitting Photos, then double-clicking the next image in the folder to launch Photos again, then quitting again and double-clicking the next image, and so on. Is there a way to show all the images or browse through them without repeatedly quitting and restarting?

Matt Scott, via email

A It's a modern design trend to hide controls that aren't actively being used, and the Photos app in Windows 10 is a prime example. Double-click a photo to open it. If the mouse pointer is outside the Photos window or in the middle of the photo, you won't see any browsing controls.

However, if you move the mouse to the left or right edge of the Photos window, arrows appear that you can click to move to the next or previous photo in the folder. They disappear when the mouse is moved again. You can also use the left and right arrow keys on your keyboard to move back or forward through the images.
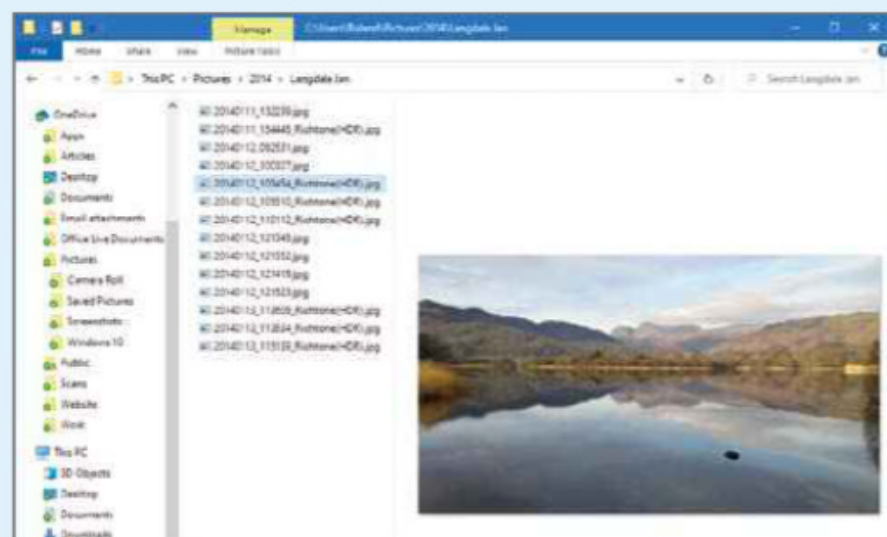
Open the Preview pane in File Explorer from the View menu

Another way to browse photos is to open File Explorer and navigate to a folder containing images. Make the Explorer window fairly big, then click View, 'Preview pane' (or press Alt+P). Select a photo to see a large version displayed in Explorer's preview pane.

EMAIL

Create Outlook storage space

Q I've had a Microsoft email address since before it was called Outlook, back when it was Hotmail. I recently received an email telling me that my Outlook email storage is close to it's storage limit. Once it's full, I won't be able to receive any more emails. What is the limit? Is the only solution to delete emails to free up space?

Jamie Dowson, via email

A The free storage allocation for Outlook and OneDrive depends on several factors, and long-time users have more space than new members. Microsoft Office subscriptions also provide more space.

Open Outlook in a browser, click the cog icon in the top-right corner and select 'View all Outlook settings'. Select General in the first column and Storage in the second to display your usage on the right. A bar indicates your free and used space, with numbers showing used and maximum space. Our screen shot, right, shows that we have a 15GB space allocation for Outlook emails.

One way to get more space is to subscribe to Office 365 Personal at www.office.com. It costs £5.99 a month and provides 50GB of space for Outlook. You also get 1TB of OneDrive space.

The other option is to delete emails to free up space. Short messages that
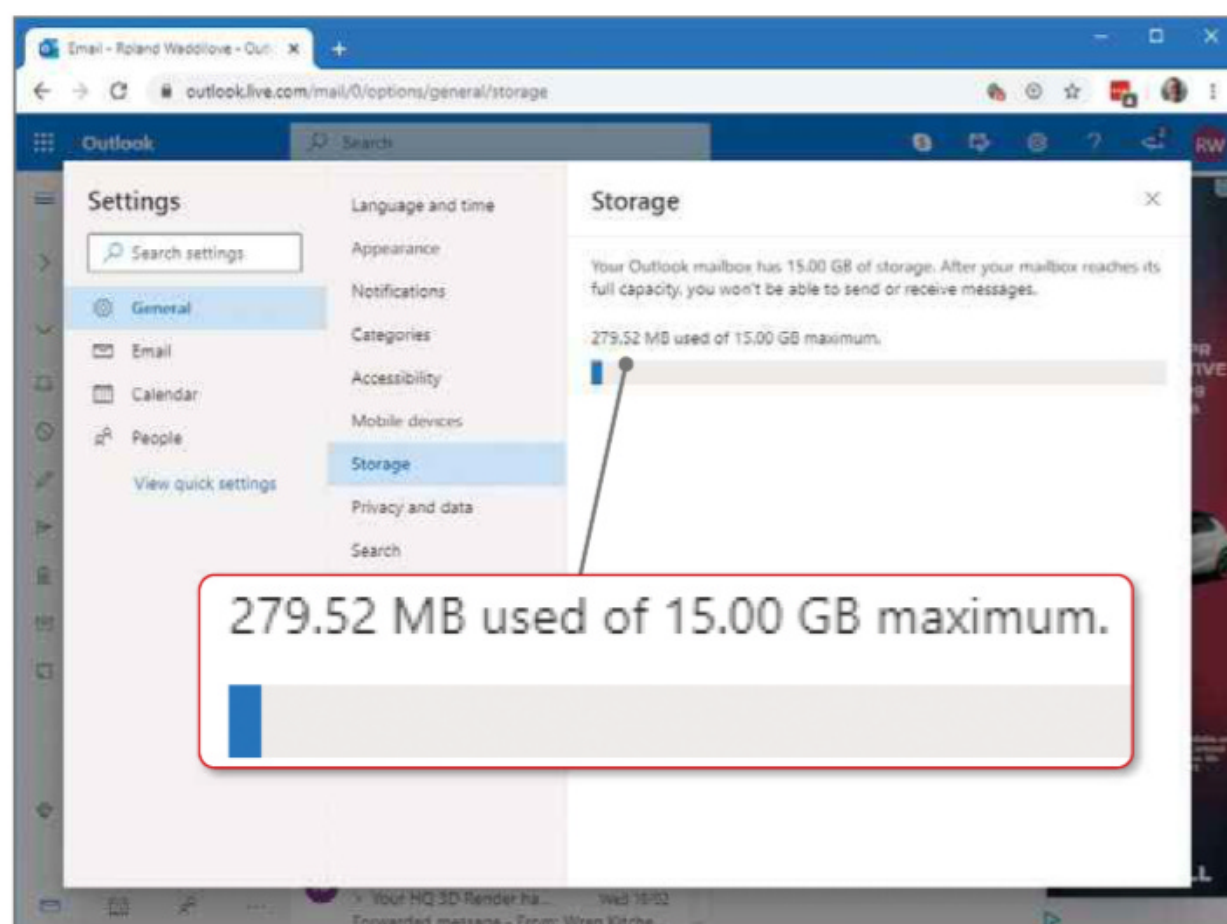
Check how much space is used by your Outlook email in the service's settings

Join the Windows Insider Programme to get preview versions of the next big Windows update

contain only text take up barely any room, but messages with attachments can be very big, so clear these to make the most impact.

At the top of your inbox, you'll see options for Focused, Other and Filter. Click Focused, then click Filter and select Attachments. Scroll down to the oldest messages at the bottom and delete any you don't need. Repeat this for the Other inbox, Sent Items and any folders you have created.

Deleted messages are moved to the Deleted Items folder but the space won't be recovered until this is emptied, so open it and select 'Empty folder'.

WINDOWS
Increase diagnostic data for Insiders

Q I want to join the preview programme for Windows 10 so I can get early access to new features. I went into the Settings app, chose Update & Security and selected Windows Insider Programme. When I tried to enable it, I was told that I had to set the diagnostic data to Full to get the preview builds.

I have found 'Diagnostics & feedback' in the Privacy section, but the Full setting under 'Diagnostic data' is greyed out, so I can't select it. Only Basic is allowed.

I am the only user of the computer and am therefore an administrator. Why can't I select Full? Is it because I only have the Home edition of Windows 10?

J Corbett, via email

A You can join the Insider Programme as a Home user, so the version of Windows is not the problem. It's more likely to be your settings.

As a beta user, Microsoft needs feedback to check that Windows is working properly and fix any problems

you encounter. You can't hold back usage data or maximise privacy by limiting data sent to Microsoft if you're an Insider. They want it all.

Go through each section under Privacy in the Settings app and allow everything. Restart Windows after making the changes and try setting

HARDWARE
Don't drink and compute

Q I was sitting at my desktop computer and started to feel thirsty, so I went and got a glass of Coke. As I set it down next to my computer, I stumbled and spilled about half a glass over my keyboard.

I quickly turned the keyboard upside down on a towel and dried it, which seemed to work but, a day later, many of the keys are sticking. Some have to be hit hard to push down, while others jam when pressed and I get `hhhhhhh eeeee llll llll oooo`. What do you suggest?

Craig O'Neill, via email

A Sugary drinks become sticky when they dry and this is causing the keys to jam. If you're feeling brave or you know your keyboard is a splash-proof model, it might survive being rinsed in water. However, this is a last resort because it's likely to completely destroy your keyboard.

Unplug the keyboard or take the batteries out if it is a wireless model.

diagnostic data to Full again.

Some people have found that they also need to enable a service. Press Windows+R to open the Run box and enter `services.msc`. Double-click 'Connected User Experiences and Telemetry' and set the startup type to Automatic. Start the service, if it isn't already running, then restart Windows and try setting diagnostic data to Full.

GENERAL PC
Make an external drive the default

Q My laptop has a small SSD but I have a 1TB USB drive that I can connect to a USB port. It's a portable model that's powered by the laptop and doesn't need its own power supply. Would it be possible to use the SSD exclusively for Windows and put everything else on the external drive?

Nick Kelly, via email

A Some files can be stored anywhere, but others are essential for your computer to run and will cause problems if Windows can't find them, which could happen if you start your laptop without the external drive plugged in.

Keyboards are inexpensive: this Microsoft Wired Keyboard 600 costs less than £10 on Amazon

Hold it vertically and pour warm water over the keys so it washes away the sticky residue. Dry it, shake out the water, then put it somewhere warm for at least 24 hours to dry out thoroughly.

It'll probably never work again, but you never know. The keyboard is broken in its current state anyway, so it might be worth a try.

Replacement desktop keyboards are widely available and very affordable. We have seen them in supermarkets at £7 for wired models, or wireless keyboard and mouse combos for £10. It could have been worse – it could have been a laptop, where it is almost impossible to replace the keyboard.

In future, be careful not to place drinks next to your computer!

Photos, videos and music are easily stored on an external drive – just create a Photos folder on the external drive, such as D:\Photos, and save the images from your camera or phone to it. If you use the Windows 10 Photos app, click the three-dot button in the corner and select Settings from the menu. Under Sources, click 'Add a folder' and add the D:\Photos folder.
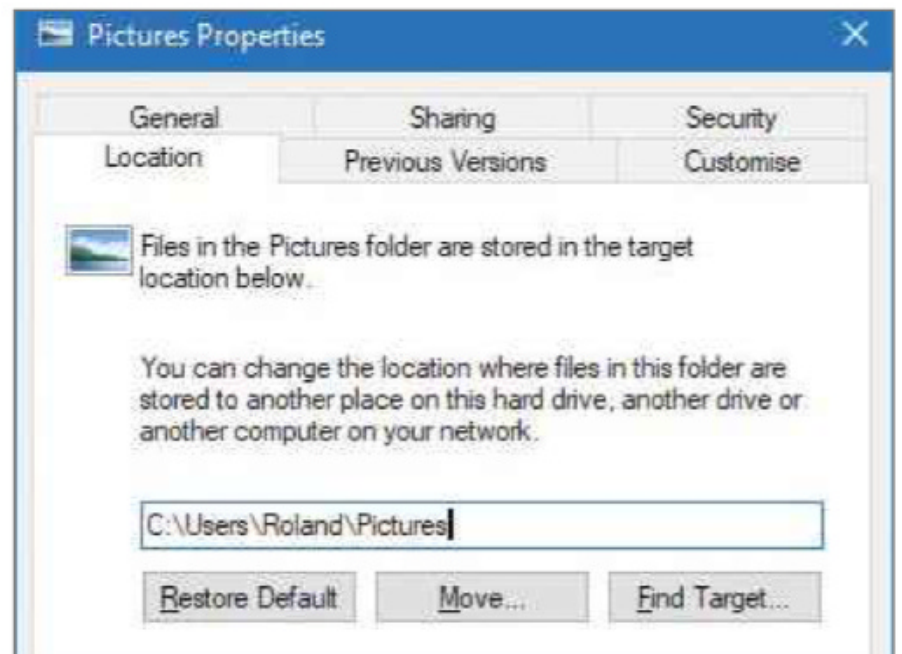
In the Groove Music app, click the cog icon and, under 'Music on this PC', click 'Choose where we look for music'. Click the plus button and add an external folder, such as D:\Music. Other photo and music apps have similar features, so you can easily add media folders to an external drive.

It's possible to go further, moving system folders and installing software to an external drive. However, Windows may show error messages if you start your laptop without the external drive plugged in.

If you know your external drive will always be connected, go ahead and open File Explorer, right-click each of the system folders along with Desktop, Documents, Music, Pictures and Videos, and select Properties. In each case, there is a Location tab and a Move button that lets you move the folder somewhere else, like an external drive.

A less drastic step is to add the folders on an external drive to Libraries. In Explorer, click View to show the toolbar and click Options. On the View tab, scroll down to the bottom and tick 'Show libraries'. Extra Documents, Music, Pictures and Videos items appear under Libraries in the Explorer sidebar. Right-click one and select Properties.

A library consists of multiple folders and the Add button lets you add more folders to it. A Photos folder on an external drive could be added to the Pictures library. Select a folder and click 'Set save location' to make it the default when saving photos. Instead of clicking the Pictures folder in Explorer, click the Pictures library to view all the photos contained in all the library's folders.

HARDWARE
Boost sound from a laptop

Q The laptop I bought just after Christmas is great in every way

Change the location of system folders to put them on an external drive

except for the sound. It just isn't loud enough and I struggle to hear it. Admittedly, my hearing isn't the best, but even other people have commented that the volume is low.

Obviously, I have checked that the sound volume is turned up full. Is there anything else I can do?

Colin Nichol, via email

A A few *Web User* readers have experienced issues with sound following a Windows update, which sometimes replaces the manufacturer's audio drivers with its own. Go to the laptop manufacturer's website and search for your model, then download and install the drivers for it. Try to get the audio drivers separately from other software if that option is available.

If this doesn't improve things, it might simply be the case that your computer's built-in speakers don't produce enough output – a common problem in laptops, due to their limited space. An external speaker would solve the problem. These can cost as little as £5 or as much as £500, depending on what you want. A small portable speaker with a rechargeable battery would suit a laptop. Alternatively, use earphones or headphones.

GENERAL PC
Run programs in a sandbox

Q I have heard that Windows 10 has a Sandbox tool that lets you test programs downloaded from the internet without them being able to change any of your files. Malware or spyware, for example, can't get out of the sandbox and infect your PC. However, I've looked everywhere for this tool and I can't find it.

Eric Hyde, via email

A Sandbox is a feature in the Pro edition of Windows – it doesn't come with the more common Home edition. To check if you have it, press Windows+R to open the Run box and type `optionalfeatures`. Scroll down the list and see if there is an entry for Windows Sandbox. If it isn't there, it isn't available. If it is listed but the tickbox is clear, tick it to enable it. It will then appear on the Start menu.

Run Windows Sandbox and a new
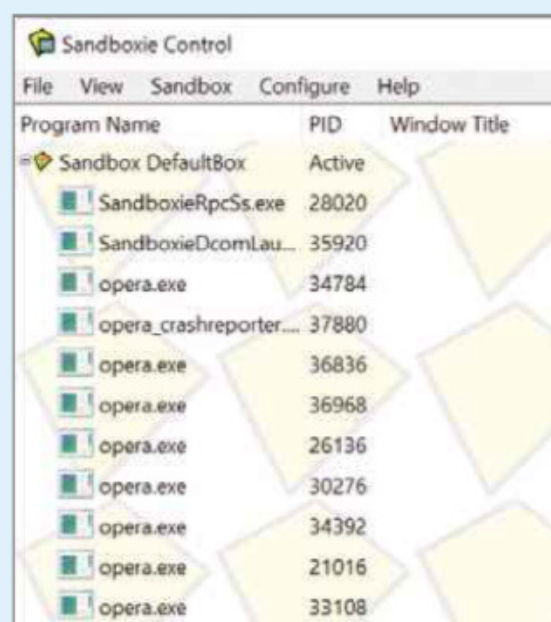
Run programs in safe isolation with Sandboxie

desktop appears in a window. Open Explorer in the real desktop and copy a program, such as a download, then click in the Sandbox window and press Ctrl+V to paste it. You can now run it in the Sandbox.

Sandboxie (www.sandboxie.com) is an alternative to Windows Sandbox. It's free and a good option for Windows Home users.

Built-in laptop speakers can be poor quality, but USB speakers can improve matters

This fortnight Roland has been working from home, along with millions of other people

Readers' Helpdesk

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

READERS RESPOND

EMAIL
Read and compose emails offline

Q I subscribe to several newsletters, which I download on my phone to read offline later. I use Outlook for Android, which does the job, and Email by Edison, which is fast and intuitive, but lacks offline viewing. Can you suggest an Android email app that's quick, allows offline viewing and will download all my emails and images automatically, without me having to manually download them?

Minal, via email

Set Gmail to operate offline to save your mobile data

A The easiest way to get offline emails is to switch to the Gmail app (bit.ly/gmail499). Log in, go into the app's settings by clicking the three-line button, then choose the account you want to take offline and scroll down to 'Data usage'. Make sure you tick the box marked Sync Gmail.

Next, choose how many days to sync, bearing in mind you need space on your phone for all those messages and attachments. We have ours set to 30 days. You can now read, respond, and search your inbox while offline, and Gmail will update whenever you have an internet connection. You can also set Gmail to work offline on your computer by visiting bit.ly/offline499.

Steve Clark, Features Writer

VIDEO
Livestream your own events

Q I run spoken word events but, due to the virus, can no longer risk face-to-face live events. Do you have any advice on setting up a video link for live performances from various locations, with a central presenter and the option to stream to an audience? It would have to

WINDOWS
Force failing updates to install

A Like CJ Holmes, I had problems getting Windows updates to work. In Issue 497 (bit.ly/webuser497), Giovanni Gesugrande explained how to use the Microsoft Update Catalog to get updates to install, but I've found another workaround. Go to bit.ly/windows499 and click the 'Download tool now' button. This lets you reinstall Windows 10 without resetting all your files and settings. This fixed the problem on one of my machines but
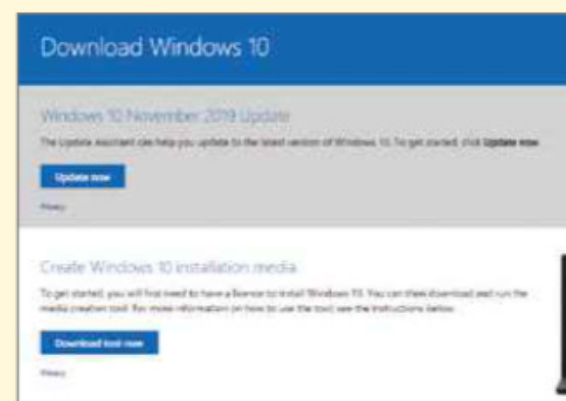
Having problems with Windows 10 updates? Here are some more fixes

not another, so I tried clicking 'Update now' and that did the trick.

L Bowlder, 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.

BROWSERS

Q Has anyone else noticed that the new Edge for Android has become really laggy over the last few weeks? What's the reason and how can I fix this?

Carl Dennis, via email

HARDWARE

Q I want to replace my old Toshiba L500-1CQ 15.6in laptop with one that has at least two USB ports and a Bridge media slot. Is there anything readers can recommend?

L Ashman, via email

operate over various device platforms.

I am sure your advice will help other groups to communicate with each other in these difficult times.

Willie Gowans, via email

A A timely question, Willie. There are a few ways you could livestream your events, but YouTube Live is one of the easiest to use. And because YouTube is available on just about every device, anyone can tune in. However, it still needs some setting up.

Before you start, download OBS Studio (obsproject.com), then prepare your stream for YouTube. Make sure to set the privacy to Unlisted, which lets you share a link to the stream. Once that's ready, open OBS and click Start Streaming.

Copy and paste the Stream Key into the text field. You'll need to add Scenes and Sources for all participants, too. Finally, revisit YouTube and click Go Live to begin streaming.

Zoom (zoom.us) also offers simple video conferencing, but the free version limits group sessions to just 40 minutes.

Steve Clark, Features Writer

Being socially distant doesn't mean you can't be digitally connected

Your Top Tips

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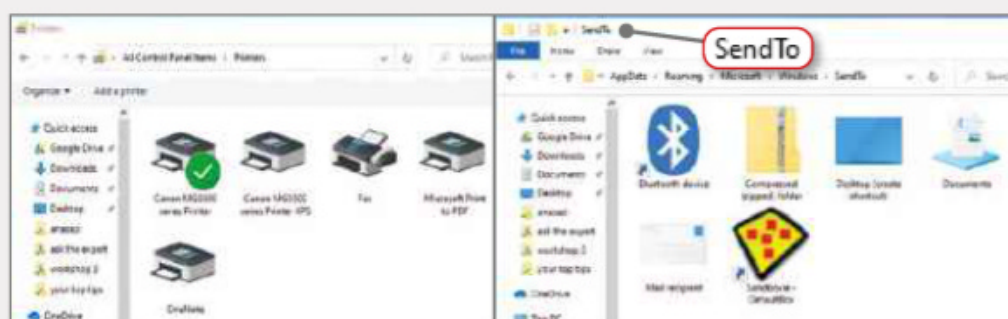
TOP TIP

GENERAL PC

Add Printer to the Send To menu

I've always found it peculiar that Printer isn't one of the options in the Send To context menu, while lesser-used destinations like Fax Recipient are. There is, however, a way to rectify this oversight.

Open File Explorer and enter `shell:PrintersFolder` in the address bar. You should see a list of printers. Next, open a second File Explorer window and, in this address bar, enter `shell:sendto`. Place these two instances of Explorer side by side, then drag and drop your chosen printer from the Printers folder to the Send To folder. Doing so adds the printer to your Send To menu.

Gary Webb, via email

Add a print option to the Send To menu

BROWSER

Turn off detachable tabs in Firefox

If you've ever accidentally dragged a tab out of its window to create a new window – I know I have – then you'll appreciate Firefox's ability to turn off this frustrating feature. In the browser's address bar, enter `about:config` to view advanced configuration preferences. Next, search or look for `browser.tabs.allowTabDetach`. Double-click the option to change the setting from True to False. The option takes immediate effect.

I've heard that this functionality is a response to a bug, but I find it useful to stop creating unnecessary windows when I'm trying to rearrange tabs.

Bob Scarfe, via email

Use this setting to stop Firefox tabs escaping when you move them

WINDOWS

Open more Explorer windows

My big wish for the next Windows update is for tabs in File Explorer. It's such a pain browsing the hard drive and copying and moving files in separate windows. In the meantime, I have some useful shortcuts.

Click the File Explorer icon in the taskbar to open a window, then hold down Shift while you click to open a second, third and more. For an even quicker method, press Windows+E to open a new Explorer window every time.

When copying and moving files, right-click a drive or folder in Explorer and select 'Open in new window'. You can then drag and drop between windows. Alternatively, click and drag a drive or folder and drop it in the 'Quick access' list on the left. You can drag files to it to move them. Right-click and remove it from 'Quick access' when you've finished.

Gary Kennedy, via email

WINDOWS

Run without the Run box

I recently discovered a strange feature in File Explorer. You know how you can press Windows+R to open a Run box for entering commands such as `cmd`, `regedit`, `msconfig` and so on? If you already have an Explorer window open, you don't need to open the Run box.

The top of the Explorer window shows the path, such as 'This PC > Windows (C:) > Users' and so on. Click in this box and enter the command you want. It works just like the Run box. Try it by entering `regedit`, for example. You don't even need to delete what's there – just click and type.

Brett Dicken, via email

Type the commands you'd normally use in the Run box into Explorer's address bar

MOBILE

Turn on Google Assistant's Ambient Mode

Not a lot of people know this, because it's not available for all phones, but the Google Assistant Ambient Mode is great for adding extra tools to your lock screen for when your phone is on charge.

Download Google Assistant (bit.ly/assistant499), then open it and tap your profile picture. Swipe across from You to the Assistant tab, then scroll to 'Assistant

devices' at the bottom. Tap Phone and, under Personalisation, you should see Ambient Mode. This offers to let you "See a slideshow of your photos, get commute info, control media and more while your device is charging".

Roger Hanwell, via email

GENERAL PC
Access hidden menu options

We all know you can right-click files and folders to access a context menu, but did you know that if you hold down the Shift key as you right-click, you get extra menu items that aren't normally there? These menu items are specific to the item clicked, so they are different if you click on files, folders and drives. Try it and see. Usually there is at least one extra item and, sometimes, two or three.

Paul Cole, via email

BROWSER
Change Edge's default search engine

I love the new Edge browser but I still can't stand Bing. Now, Microsoft has added an option to change the New Tab's default search engine. It's an easy fix – just open Edge's Settings, go to 'Privacy and services', then 'Address bar'. You can then use the drop-down menu to choose a new search engine (there are loads listed), or select 'Manage search engines' to add one yourself such as DuckDuckGo or Yahoo.

H Bellamy, via email

Just because you're browsing with Edge doesn't mean you have to use Bing

WINDOWS
Upgrade desktop wallpaper

For those that like to put photos on the desktop and use them as a background, you should know that Windows downgrades their quality as they are added. It only does this a little, and it's debatable whether you can see any difference, but here's a way to ensure you get the best quality wallpaper.

Use a photo editor to make the image the exact same size as your desktop, then save it. Normally, you would now right-click the image in File Explorer and select 'Set as desktop background', but Windows applies JPEG compression to reduce the file size of images before it puts them up, so if you want to keep the image as sharp as possible, press
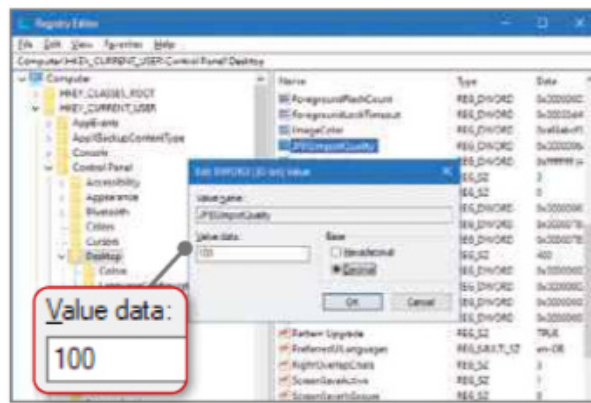
Create this value in the Registry and set it to the JPEG compression quality you want

Windows+R and enter `regedit`. Go to:
    HKEY_CURRENT_USER\Control Panel\Desktop

Now go to the Edit menu and select 'New DWORD (32-bit) Value'. Name it `JPEGImportQuality`, then double-click it, select Decimal for the base and enter a value, such as 100 for maximum quality (JPEG compression is rated from 1 to 100). Close the Registry Editor and restart Windows. Now you can right-click your photo and set it as the desktop background without losing any quality.

Stephen Hogan, via email

BROWSER
View broken web pages

Brave (brave.com) is my favourite browser and it's recently added a cool new feature that automatically detects web page errors such as 404 or 502. Should you stumble across such an error code, you'll see a message at the top of the screen saying, "Sorry, that page is missing. Do you want to check if a saved version is available on the Wayback Machine?". Click 'Check for saved version' to view any cached versions of the web page, should any exist.

If you don't use Brave, try the Wayback Machine browser tool (bit.ly/wayback499). It provides a similar experience, though it's not as integrated.
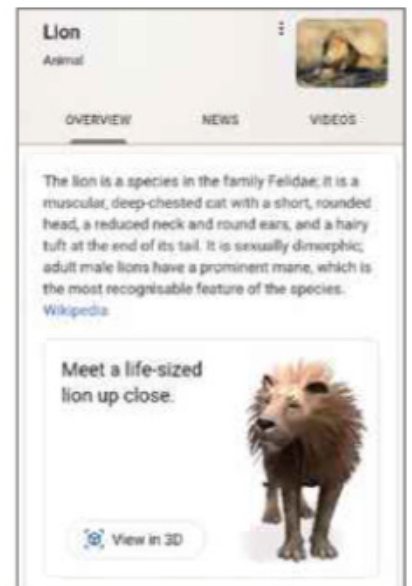
Jack Merchant, via email

GOOGLE
View animals in 3D

Here's a fun tip that my friend showed me. Go to google.com on your phone and search for a well-known animal, such as a lion. Scroll down and you'll see a box that says something like 'Meet a life-sized lion up close' with a button labelled 'View in 3D'. Tap this to see a computer-generated, three-dimensional lion (or whatever animal you chose). There's also the option to 'View in your space', which brings the animal into your home via augmented reality.

Get up close with animals like never before
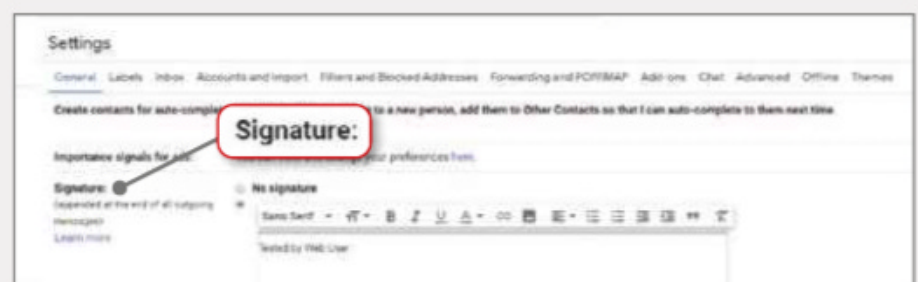
Verity-Loren Mortis, via email

BLUNDER OF THE FORTNIGHT

EMAIL
Create multiple Gmail signatures

For the longest time, I refused to include a signature in my emails – I'm a permanent contractor for a number of businesses, so I was worried that I might accidentally send an email with the wrong signature attached. Instead, I kept a copy of each signature in a separate document and pasted in whichever one was required.

Finally, you can switch between email signatures

I've now discovered that I can save myself a lot of time by using Gmail's new multiple-signature support. In your inbox, click the cog icon and scroll down the General settings page to Signature. Set up and save your various signatures. Now, when you compose an email, clicking the pen icon on the quick-action toolbar lets you switch between signatures.

The feature is still rolling out, so if you don't yet have it, keep your eyes peeled.

Colin James, 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

Don't spend lockdown entirely online

Brian Sherman makes a good point in your Star Email in Issue 498 that we're lucky to have access to the internet to help us through the coronavirus outbreak. I dread to think how awful it would be if I was unable to get online during this unprecedented time, and was left to rely on my phone for communication and the television for news.

However, it's also important to bear in mind that excessive use of the web can have a detrimental effect on your health, and that self isolation isn't an excuse to sit at your computer all day (and night) long. There are lots of other things you can be doing other than watching YouTube, browsing Amazon and constantly refreshing social media. Read a book, do some gardening, sort out your wardrobe, clean your oven – even go for a walk, provided you stay two metres away from other people.

Staring at a screen for hours is very bad for your eyes, poor posture can lead to back problems and too much mouse clicking can cause RSI. So even if you can't think of anything to do except go online, make sure you take regular breaks to rest your eyes and stretch your legs.

Also, as Barry points out in his column, with lots of people now working from home, massive demand is being placed on our bandwidth, which causes connections to slow down. If you're glued to an online game for hours every day, you could be preventing others from doing their important jobs.

By all means, enjoy the benefits of the web to alleviate your boredom and stay in touch with the world, but use it responsibly.

Alan Tilbury, via email
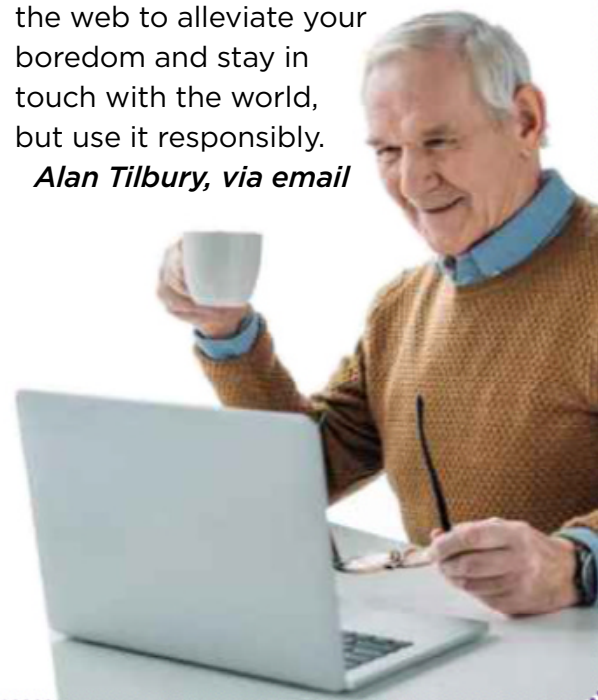
Coronavirus scammers have no shame

I am shocked and appalled that cybercriminals are exploiting the coronavirus pandemic to scam people out of money and spread malware. Yes, I know that these idiots have no shame and that we shouldn't expect any better from them, but to prey on the fears of the vulnerable and weak just beggars belief.

At a time when every message we receive about the virus could contain essential information, it is callous and cruel for hackers to trick people into downloading viruses and sharing their personal details. I know that the authorities have got their hands full at the moment trying to cope with the crisis, but I hope that these scammers can be brought to justice once it's over.

Peter Owen, via email

Why I can't face video chats

Everybody seems to be raving about video-chat apps at the moment, as the best way to stay in touch while we're in coronavirus-imposed lockdown. Personally, I can't think of anything worse than having face-to-face conversations with people on my phone, but I realise I may be in the minority here!

The best thing about email is that you can communicate at your own pace without having to reveal how you currently look to the person you're speaking to – and likewise for them. I certainly don't want people seeing my unbrushed hair, scruffy clothes and tired eyes while I'm confined to my home, and I'm not going to smarten up just for the sake of a quick chat.

Typing messages may be more hassle than speaking to people, but at least it gives you a degree of privacy and you don't have to moderate your facial expressions so as not to offend the other person.

Call me old-fashioned but I'll be politely declining any requests for video calls.
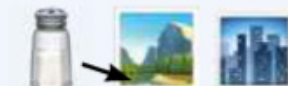
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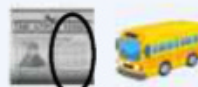
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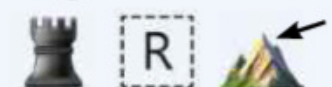
1 *Chicago*

2 *Salt Lake City*

3 *Anchorage*

4 *Columbus*

5 *Chesapeake*

6 *Seattle*

WIKIPEDIA ARTICLE

Tetris

My Chromebook is my most useful machine

I couldn't agree more with Barry Collins's views about Chromebooks in Issue 497. My 2013 Acer C-730E 11in Chromebook is my most versatile machine.

It was bought as a gift for a family member, but they never used it. I happily adopted it and use it for working at home, as it's up and running in seconds. Quick emails or website changes are completed in minutes.

My Chromebook was due to stop receiving updates in August 2019, but that's now been extended to 2021. Even without Android apps on this product, which cost £199 in 2013, the value for money is stunning.

John Cunningham-Smith,
South Gloucestershire

My 100% secure password manager

I am amazed by how many password managers there are, given that their alleged flaws could let hackers obtain your passwords.

I have a password manager that's 100% safe from hackers, doesn't need electricity or any hardware, and can be accessed much faster than any computer software. It's called a notebook and cost me about £1, plus the price of a pen.

The only possible problem is that the notebook could be destroyed in a house fire – but then so could a computer.

Robin Window, via email

Avast won't uninstall

Following the advice in your magazine, I deleted Avast Free Antivirus several days ago using IObit Uninstaller, yet today it reinstalled itself (I'm using Windows 8.1). It refused to complete the uninstallation unless I completed Avast's 'Exit survey'. Is this another corrupt tactic? Watch this space.

Coincidentally, an Avast icon appeared on my desktop that stubbornly returns every time I delete it and restart my PC.

John Lockett, via email

What you say...

WILL YOU SIGN UP FOR DISNEY PLUS, NOW THAT IT'S LAUNCHED IN THE UK?

I signed up for the special offer of £50 for the year, on up to four screens. It's better value than the competition.

Jayme Carne

I signed up for 12 months for £50. I'm a *Star Wars* fan, so I have to be able to watch *The Mandalorian* and *The Clone Wars,* and anything else Disney brings out that's *Star Wars*-related.

Stuart A Hordern

No, there are simply too many different streaming companies now. There has to be a point where your wallet gets a rest.

Rich Grove

I'll certainly give the free trial a go. Looks like there's lots of good stuff on there, including *The Simpsons*.

Dan Barrow

Yes. I've cancelled Netflix now as it never has any good films. At least you know Disney Plus will have something worth watching.

Sarah Beasley

DO YOU OWN A CHROMEBOOK OR HAVE YOU CONSIDERED BUYING ONE?

I bought a Chromebook a few years ago. It was good for browsing and shopping on the internet, but suffered from the lack of a proper operating system and low storage volume. I gave it to a relative in the end.

Geoffrey Boow

I love my HP Chromebook. My Acer Windows laptop is a piece of junk, but sometimes I have to use it.

Tim Cooper

I bought a really cheap one, without doing enough research. I didn't realise it was just a glorified, overgrown phone. The model I had never allowed you to install Google Play store apps, so it was a total waste of time and effort. I have bought a proper laptop since!

Nat Grove

No, because Chromebooks are too limiting and most creative software needs Windows. But for security and data storage, Linux is the way to go.

Jack Gold

Chromebooks were invented by Google to spy on you. That's why you can't use one without signing into a Google account. I'm not falling for that one!

Keith Jacobs

WILL YOU TRY PIRIFORM'S NEW CCLEANER BROWSER (see page 30)?

I'll download it and have a look, but it's going to take a lot to convert me from Firefox.

Brian Brown

I'll stick with Chrome on my PC and Firefox on my Linux netbook, thanks. The browser market is overcrowded as it is.

Caroline Chapman

Seems a bit pointless to me. There are enough browsers to choose from already. And who trusts Piriform/Avast any more?

Alan Gibbons

CCleaner has got a nerve launching a "privacy focused" web browser, after all the scandals it's had in the last few years.

David Foulds

No. I'm quite satisfied with my current browsers (Firefox and Chrome).

Lynn Sharpe

No, I am enjoying Microsoft's new Edge browser.

Mark Short

⚠ Page 404

There's another epidemic that the world needs to be rid of, says **Barry Collins**

Stop using our data to target us with ads

I realise the world has bigger problems at this precise juncture, but once *that* virus has been quashed, there's another epidemic that needs dealing with: the practice of selling our personal data.

You already know this because you read *Web User* every fortnight, but pretty much every move we make these days is tracked. Google knows which shops you visit because it tracks your Android phone; Amazon knows what you've been browsing for on the web and then flings ads at you; newspapers know precisely which topics press your buttons and publish articles accordingly; and political parties know exactly which ads to shove in your Facebook feed because the social network has told them which topics fire you up. It's how the modern world works.

Except, it shouldn't. That's the argument of David Heinemeier Hansson, the co-founder of tech company Basecamp, who recently told a US Congress hearing that the selling of personal data for targeted advertising should be banned. Not regulated, not restricted, but outlawed. I couldn't agree more.

A brilliant recent piece in *Wired* articulated many of the reasons why banning the sale of our personal data would make the world a better place. For starters, there's us media folk. A decade or two ago, respectable news organisations used to shy away from provocative, rabble-rousing content because it might upset advertisers. Now, in a world where social media users are sucked into controversial content – even if only to vent their disgust at it – it's become the prime source of income for online publishers.

These days, ads are targeted at you, rather than the published content. Volkswagen, for example, never sees the stories its online ads are run against. Instead, the publishers feed you what they know you like/hate because they know what you like/hate

> " Targeted advertising should be banned. Not regulated, not restricted, but outlawed "

will drive traffic in their direction.

The same is true of politicians, who have risen to power by playing to people's prejudices. You might not see this because you're not targeted by certain ads. The party doesn't always have a consistent message – it tailors that message to what you want to hear, based on your online profile. Policy is picked not because of political conviction, but based on what the data says will bring them to power.

Now, let's not pretend all was well with the world before targeted advertising. Newspapers ran rotten stories and politicians lied their way into power decades before social media showed up. But we are being played – every single time we open a browser, we're feeding more data into a machine that will be used against us. Have no doubt.

How do we stop it if they won't? By taking back control. The Firefox browser, for example, now has a brilliant built-in tool called Facebook Container, which prevents Facebook from tracking you across the internet, cutting off much of its data supply. Those Facebook Like buttons you see on almost every site? They're tracking you even if you don't click them, unless you use a Container-type tool.

Mobile is a massive source of much of this targeting, so switching off any location-tracking settings and opting for a more privacy-friendly browser such as Brave, Vivaldi or the forthcoming mobile version of Firefox will help.

Put it this way: if they can't track you, they've got nothing to sell. So don't be their business model.

Illustration: Andrew Torrens

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