MAKE WINDOWS 10 EVEN FASTER
Perform every dull task automatically p54

Your *ESSENTIAL* guide to

ENCRYPTING YOUR DATA

Photos 🔒 Videos 🔒 Documents 🔒 Phone calls 🔒 Emails
Passwords 🔒 Messages 🔒 Browsing 🔒 Hard drive
and much more* p38

*Can you decrypt this: Dvy fhvi rh gsv lmob nztzarmv blf mvvw (see page 3)?

PLUS

DOWNLOAD UPDATES BEFORE EVERYONE ELSE
Don't wait for new software tools p48

STOP YOUTUBE VIDEOS BUFFERING
Improve streaming quality to your TV p64

only £2.10
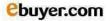
Encrypt your entire existence

In keeping with this issue's eight-page encryption special, I was tempted to write my entire blurb in specially created code.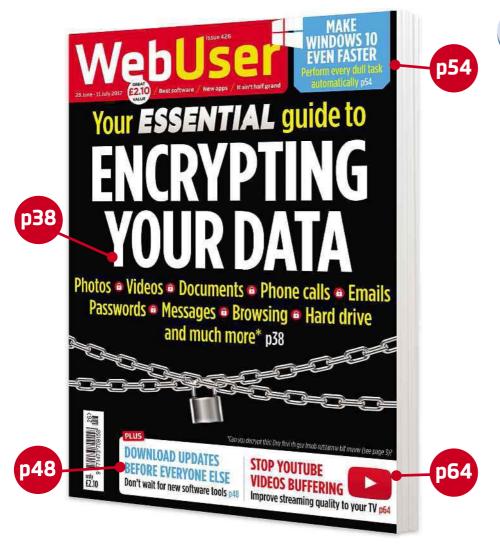 However, I dropped the idea after realising that it might look like I'd nodded off on my keyboard at the end of a long day so instead, you'll find a secret encrypted message on our cover.
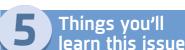
Our cover feature on page 38 takes the current political hot potato of encryption and slices it up into easily digestible fries. We look at the many useful ways you can disguise and protect your files, messages, passwords, devices and more from people who have no business nosing through them, and round up the best free tools for encrypting your data on your PC and phone to keep everything you say and do 100% private.

Now for the fun part: the first person to decrypt our secret message on the cover and email it to webuser@dennis.co.uk wins a *Web User* mug! Here's a clue: **t = g**.

Robert Irvine
robert_irvine@dennis.co.uk
#webuser

5 Things you'll learn this issue

1 How to try Amazon products for free for 14 days – before you buy them
page 6

2 How to sanitise your downloads to remove potentially malicious content
page 30

3 How to scan text in photos directly to PDF using a new app from Adobe
page 32

4 How to browse the web on your PC by using your iPad instead of your mouse
page 57

5 How to turn System Restore back on after upgrading to the Creators Update
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➕ Share your knowledge at forum.webuser.co.uk

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FREE Screwdriver Set

SUBSCRIPTIONS
Turn to page 62 for special subs offers

COVER FEATURE

Your *ESSENTIAL* guide to

ENCRYPTING YOUR DATA

How to protect your privacy against snoops, spies and criminals

p38

Apple unveils its latest gadgets **p36**

Which is the best Android calendar app? **p46**

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FAVOURITES   Must-read regulars

Are Apple's updates designed to kill off old devices? **p74**

Practical WebUser
Workshops, tips, projects and problem solving

16 pages

Schedule Windows maintenance **p54**

Use your iPad as a PC controller **p57**

Lock your files with a USB key **p58**

What's New Online

Tweet more easily on any device

Twitter has been trending itself thanks to its biggest redesign in years. Out go the square profile photos in favour of round buttons, while new fonts and bolder headlines declutter the social network, making it lighter, faster and easier to use. You can see the Like, Reply and Retweet counts updated in real time and take advantage of more intuitive icons, such as a speech bubble for instant replies.

If you have multiple Twitter accounts, you can now check the permanent profile image at the top of the screen to see at a glance which one you're using. Tapping the image opens a side-navigation bar that shows your profile, additional accounts, lists, moments, settings and privacy in one place. This debuted on Android last year but has now been introduced to iOS. Apple users also benefit from article and website links opening in Safari's viewer, which means any accounts you're signed into will open without fuss.

Other changes include a more prominent night-mode button in the side-navigation bar and an increase in the surrounding white space to create a less crowded, more readable page. Further design updates are promised soon.
www.twitter.com
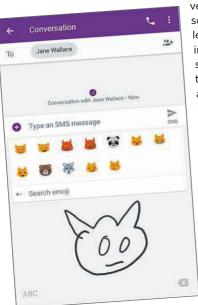
Search for emoji by drawing them

bit.ly/emoji426
Gboard for Android and iOS lets you search for emoji by typing a description, but what if you have a mental image of what you want but aren't sure how to describe it? The latest version of Google's keyboard solves this problem by letting you draw the emoji instead. Just tap the emoji symbol in the search box, then scribble on the screen and Google will try to figure out what you're drawing and suggest official emoji to use. If you see one you like, select it and continue typing. The new feature currently only works with the Android version of Gboard. It's not the only new addition, either: Gboard now predicts entire phrases as well as single words to make your overall typing speed even faster.

Try Amazon products before you buy

bit.ly/amazon426
One drawback to online shopping is that you can't try out an item before you order it. And if you decide you don't want a product after purchase, you're faced with the hassle of applying for a refund and having to package and send the product back. With Amazon's new 'Try Now, Buy Later' scheme, however, you can keep your cash in your pocket. Provided you're a Prime member, you can now choose a product sample, test it for 14 days and then return it before deciding whether you want to buy the item for yourself or someone else later down the line. The scheme is currently limited to one trial per customer, and there are only two products available – both of which are Canon cameras – but it's an interesting idea that may be extended in the near future. Just keep an eye out for the sample sticker on product pages.

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

Make Facebook comments using GIFs

www.facebook.com

Facebook now lets you communicate using GIFs – just tap or click the Comments box below a post and select the GIF button. Doing so lets you search a large number of mini-animations across your apps before choosing one to use. The feature was added after Facebook revealed more than 13 billion GIFs were sent via Messenger last year.

Visit an Australian national park

bit.ly/uluru426

Take a journey down under with the latest addition to Street View, which lets you check out the home of the Anangu people in all its natural glory. You can explore Uluru-Kata Tjuta National Park in Australia in your browser, admire Uluru (or Ayers Rock, as it's also known) and enjoy the native flora and fauna, vast waterhole and serene scenery. Each location is accompanied by a description and the ability to view it on Google Maps. You can also take a fascinating guided tour that is packed with songs and stories.

Discover the stories behind your clothes

bit.ly/wear426

Whether you pull on jeans, a smart suit or a dress, your clothes have a story to tell. Google Arts & Culture is uncovering those tales with its We Wear Culture project, which includes 30,000 fashion pieces and more than 450 online exhibits. You can explore the famous designers who have influenced what we buy, look at the trends that have emerged over the centuries and learn more about specific items of clothing. You can also watch videos, enjoy virtual-reality films in Google Cardboard and see craftsmanship in the finest detail.

5 TO FOLLOW ON TWITTER

@RealPressSecBot
Donald Trump's tweets rewritten so they sound more presidential

@LordBuckethead
Lord Buckethead had his own election manifesto and the spaceman is still tweeting

@HistoryInPics
Check out the most powerful and entertaining historical photographs

@andy_murray
Hopefully, last year's Wimbledon champion will find time to update his Twitter account

@newsthump
If the real news is getting you down, cheer yourself up with this satirical take

Download 100-year-old brushes

bit.ly/brushes426

Adobe has uploaded a set of digitally recreated brushes based on those used by master painter Edvard Munch. They are available for use in Photoshop and Sketch.

Archive Instagram posts

www.instagram.com

Instagram's new Archive feature lets you hide from public view images that you've previously shared. Tap "..." above your post and select Archive, so images can only be viewed via your Archive button.

See the effects of climate change

nsidc.org/soac

This interactive map uses satellite data from NASA to show how the Arctic's sea-ice cover, snow and frozen ground have shrunk over the past few decades. Use the slider to move through the years or cycle through them automatically.

Add football fixtures to your calendar

www.premierleague.com/fixtures

If you follow a Premier League team, then make sure you don't miss a kick next season by importing the fixtures into your Google, Apple or Outlook calendar. Simply visit the official website, click the 'Add Fixtures to Calendar' button and select your club, then click Sync Schedules and choose where to export the details.

Tell us your favourite new things at forum.webuser.co.uk

Kodi piracy crackdown as add-ons site shuts down

What happened?

A number of unofficial services providing add-ons for the popular media-streaming software Kodi have disappeared from the web, including TVAddons, which was one of the primary sources of add-ons linking to copyrighted material.

Kodi lets you stream content from the web to your TV, computer and other devices. This makes it attractive to pirates, which in turn draws negative legal attention from rights holders. The latest target of the authorities appears to be the popular TVAddons. Add-ons are software packages that add extra features to Kodi and can pull in content from sources including TV channels, YouTube and music-streaming services – places where pirated material can proliferate.

TVAddons was one of the largest collections of such tools, with 1,500 add-ons including Exodus. Reports suggest it had 40 million monthly visitors, but the site appears to have vanished from the web, with its various domain names redirecting to empty pages or error messages. It's not known exactly why the site has disappeared, but it may be connected to an ongoing lawsuit against TVAddons in Texas in the US.

Other add-on repositories have followed suit, shutting down their services to avoid legal action. Legal takedowns aren't always successful, however. Some add-on sites have been forced offline by legal action, but come back under a different name or via new domains.

Kodi has been a frequent target of action from the authorities and rights holders this year. Set-top boxes preloaded with Kodi and these types of add-ons have been banned from sale in the EU. There has been a series of arrests against those selling them, including five in the UK in February.

How will it affect you?

If you're a Kodi user who installed add-ons from TVAddons to watch streams, you'll need to find a new route. The shutdown will affect you regardless of whether the content you were streaming via TVAddons was legal or not.

Still, that doesn't mean that Kodi is no longer functioning. You'll simply need to find new add-ons for the content you were watching: while some add-on providers have disappeared, plenty of rivals remain online.
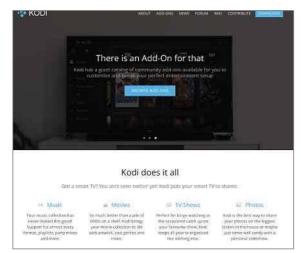
Although it's unclear at the time of writing exactly why TVAddons has disappeared or whether it will return, rights holders have been using legal action to target illegal streams over their content, so such sources may become tougher to find. That could make Kodi more difficult to use, regardless of whether you're using the add-ons to pirate or not.

What do we think?

The demise of TVAddons is being painted as a death knell for Kodi, but there's another way to look at the issue. Kodi's developers have frequently had to defend the software against accusations that it enables piracy, and it has indeed been used for that purpose. But as more and more illegal streams are removed from the web – by targeting add-on sites, for example – the case for Kodi as a legitimate streaming service actually grows stronger.

In other words, the closure of add-on sites – especially those that specialised in letting users stream pirated content – could help the legal case for keeping Kodi around. If users can no longer find pirated streams but are instead using the software to watch legal content, the argument by Kodi developers that their creation is benign grows in strength. So although the disappearance of add-on libraries may frustrate some users, especially those who *do* watch content illegally, it may help prevent Kodi itself from being shut down in the long term, which is good news for anyone using the software for legitimate streaming.

• **Our Complete Guide to Kodi is available to buy from Amazon at bit.ly/ completekodi.**

Kodi has sought to distance itself from add-ons that stream content illegally

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

Google Drive backs up your whole PC

What happened?

Google wants to take the hassle and tedium out of regularly backing up your files by offering to carry out the task for you. Backup and Sync is a new Google tool that lets you automatically sync and store all your photos, videos and other files online.

The tool is available from the end of June, and is essentially an extension of Google Drive and Google Photos. Previously, you could copy files and folders from your computer to Google Drive, and use the Photos app on your Android phone or tablet to back up pictures from your device to the cloud. Backup and Sync combines both features and extends their reach, letting you keep your entire Desktop and all your important folders synced to Google Drive.

How will it affect you?

If you plan to use Backup and Sync to back up your hard drive, you'll probably have to shell out for more storage from Google. The company offers 15GB for free, but that also covers Gmail and certain photos. However, if you let Google resize your photos to 'high quality' from the original size, they won't count against your total.

If you need more space, 100GB of storage costs $20 (around £15.60) a year, while 1TB costs an annual $100 (about £78). However, if you only have a few key files you want to keep protected online, these are likely to fit within the 15GB limit.

What do we think?

This sounds like a handy tool that's easy to use, particularly if you're already a Drive user, but it does mean handing over your most important data to Google. If that doesn't appeal to you, that's perfectly understandable – there are plenty of rival backup tools, such as Microsoft's OneDrive, which offers a similar service to Google's new one. Regardless of which method or service you choose, make sure that you regularly back up your data in case of a ransomware attack, hardware failure or other catastrophe.

Mobile roaming charges scrapped in EU

What happened?

After years of back-and-forth discussion, member countries of the European Union have officially scrapped roaming charges. Under the new rules, any EU citizens travelling in Europe will no longer have to pay extra to make calls, send texts or use data while abroad; they will just pay the same charges as they do at home.

How will it affect you?

Next time you take a trip to Europe, you don't have to worry about getting 'bill shock' from running up extra fees and charges when roaming. There are no hoops to jump through or special schemes to sign up to – just enjoy the privilege of paying less. It applies to any European Union citizen travelling in the area.

Critics of the regulations have suggested that data costs in the UK could rise as a result to make up for the loss of revenue to mobile operators. However, many companies including Three and Vodafone in the UK already offer free roaming in Europe and further afield.

And what about Brexit? If and when the UK does exit the European Union, the free roaming regulations will not automatically be incorporated into our own laws. That doesn't mean the British government will drop the idea, but it will have to pass its own law. In the meantime, however, you're safe to roam without extra charges.

What do we think?

Travelling to Europe for work or pleasure just got a lot easier. Although most operators put a cap on over-the-top charges and some already offer free roaming, that doesn't make this new ruling redundant. Those of you with long memories will recall the frequent headlines about Brits accidentally racking up huge bills overseas.

No matter what your thoughts on Brexit, there's no question that the shift towards more sanity and fairness in roaming charges was led by other EU members. Here's hoping that the UK keeps these rules in place when it finally leaves the European Union in two years' time.

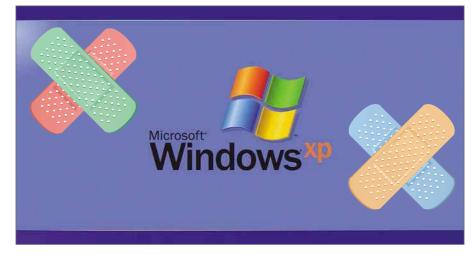# Microsoft patches XP against new exploits

What happened?

Microsoft has taken the extraordinary step of providing an emergency patch for its outdated Windows XP operating system following the release of a host of NSA exploits.

As part of June's Patch Tuesday, the company issued fixes for Windows XP – its outdated operating system stopped receiving support in 2014 – in anticipation of more WannaCry-style attacks against the platform. Windows XP's WannaCry vulnerability was patched in May.

The Shadow Brokers group released the three exploits that prompted Microsoft to patch its ancient OS. The flaws are considered to pose an "elevated risk of cyber attacks by government organisations", Microsoft's blog post warned (bit.ly/microsoft426).

"Due to the elevated risk for destructive cyber attacks at this time, we made the decision to take this action because applying these updates provides further protection against potential attacks with characteristics similar to WannaCry," said Adrienne Hall, general manager for Microsoft's cyberdefence operations centre.

Microsoft was criticised for its response to the WannaCry ransomware attack, because it patched Windows XP, which still retains almost 6% of the operating-system market share, much later than Windows 7, 8.1 and 10. Microsoft has said that the latest security patch will be available to all users, including those running outdated operating systems.

How will it affect you?

This update is in addition to the regular Patch Tuesday, and although patches will be received immediately by anyone with automatic updates enabled in Windows 7 or later, older systems such as Windows Vista and XP will need to be manually updated via the Microsoft Download Centre.

The three exploits, known as EnglishmanDentist, EsteemAudit and ExplodingCan, are all classed as remote-execution vulnerabilities that allow hackers to gain access with full user rights.

What do we think?

We always suspected that Microsoft would eventually have to bend its rule about no longer releasing updates for Windows XP. Although support ended over three years ago, XP still has more than 200 million users worldwide, which is a lot of people to leave unprotected against the latest malware exploits.

The WannaCry ransomware outbreak in May demonstrated how quickly such threats can spread, so it's essential for all operating systems to receive security patches as soon as possible.

FIRST LOOK

Xbox One X
bit.ly/xbox426

Microsoft has just announced Project Scorpio to the public – only, rather disappointingly, it's actually called the Xbox One X. The forthcoming console looks as powerful as we'd expect, with Microsoft claiming it's capable of six teraflops (that's 6 trillion calculations a second, in plain English). To put this in perspective, the Xbox One is capable of only 1.32 teraflops while the PS4 Pro achieves 4.2 teraflops. Although we definitely expected the Xbox One X to be more powerful than the PS4 Pro, that's a sizeable leap, and one that's likely to dent Sony's ego.

What's more, the Xbox One X's GPU (graphics processing unit) runs at 1,172MHz – a big jump from the Xbox One's 853MHz and 911MHz in the PS4 Pro. However, it's the memory and processor that are most impressive. The console has 12GB of GDDR5 RAM and a 2.3GHz CPU.

With all these elements together, the Xbox One X can run native 4K content for optimised games – and boost Xbox One games currently locked to a resolution of 900p or 1080p to 4K, too. Like the PS4 Pro, the Xbox One X will be compatible with almost all existing Xbox One games and should give most of them a performance boost, although you may only notice this if your TV is good enough.

Unfortunately, there are two catches (thankfully, one of them isn't how big it is!). First, you'll need to pay a whopping £449 in the UK, making it £100 more expensive than the PS4 Pro. Even though the Xbox One X comes with incredible graphics and a 4K Blu-ray player – unlike the PS4 Pro – it's still a high price. What's more, you'll have to be patient because the Xbox One X isn't out until 7 November this year. Still, that makes it a perfect addition to your Christmas list.

❓ WHAT'S THE RUMOUR

Is the government going to break encryption?

The European Parliament is bucking against the UK government's desire to weaken encryption systems, and is pushing for amended regulation that bans the use of 'backdoors' for the purposes of law enforcement.

A draft report by the EU Parliament's Committee on Civil Liberties, Justice and Home Affairs states that providers of services should "ensure there is sufficient protection in place against unauthorised access" to user data. It goes on to say that the "confidentiality and safety" of communications should be guaranteed, either by the method of transmission itself, or by end-to-end encryption.

The call for a ban on backdoors to encryption is in marked contrast to the recent policy of several other Western powers, particularly the UK and the US. The UK's Investigatory Powers Act, for example, makes it possible for authorities to order companies to remove "electronic protection" if necessary. After the London Bridge terror attacks on 4 June, the Prime Minister, Theresa May, emphasised the need for authorities to "deprive the extremists of their safe spaces online".

The EU draft report has to be approved by European Parliament, then reviewed by the EU Council, so there's always a chance it will be tweaked, softened or thrown out altogether. If the amendments do go through, however, it could lead to a legislative clash, where European companies are forced to keep encryption watertight, but UK or US firms are obliged to create backdoors to their software.

LIKELIHOOD RATING
✓✓✓✓✓

As we explain in our cover feature on page 38, creating a backdoor in an encryption system renders the technology useless and unsecure, so the government might as well ban encryption altogether. However, we think that the uproar this would provoke among technology companies and their users makes an outright ban extremely unlikely.

GO What's new on Indiegogo
Our favourite new project on the crowdfunding site

Glowstone smart mug
bit.ly/glowstone426 | **From £79**

There are few things worse in life than returning to a cup of tea only to find it lukewarm or colder. The Glowstone self-heating smart mug solves this very British problem by keeping your tea or coffee hot for an extra hour. Unlike similar vessels that are either plasticky or metallic, the Glowstone is made of fine bone china to optimise taste, and is lightweight and dishwasher-proof. It charges wirelessly, features no buttons or socket, and lights up when your drink is at the ideal temperature. The project has already met its £5,000 funding target with a month left to go.

⬆ WEBOMETER ⬇

WE LIKE...

⬆ **Google to tackle YouTube terror videos**
Google has revealed four new measures it will take to tackle the spread of terror-related material online, one of which involves using smarter software to identify videos "glorifying terrorism and violence".

⬆ **Atari to launch first console in over 20 years**
Atari, the company behind iconic games including Pong, has confirmed that it's making a video games console for the first time in more than 20 years. The company filed for bankruptcy in 2013.

WE DON'T LIKE...

⬇ **Three customers unable to receive EE calls**
Some Three customers were unable to receive calls and text messages from EE users in what a Three spokesperson described as "a problem at EE's end". Three and EE worked together to resolve the problem.

⬇ **Hackers clone Twitter accounts to spread fake news**
Hackers are employing a new type of attack that involves taking over the accounts of activists and journalists, cloning them and using them to spread false information. In most cases, the attackers have also managed to lock the victims out.

Stay Safe Online

News about the latest threats and advice from security experts

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

Ransomware attack hits University College London

A number of UK hospitals have suspended their email servers as a precaution following a substantial ransomware attack on University College London (UCL). UCL first noticed it had fallen victim to an attack on Wednesday 14 June, and was then forced to restrict access to both its network and shared drives. The university believes the malicious software may have infected its systems through a phishing email that was clicked by a user.
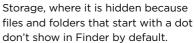

Photo credit: UCL

The system's virus checkers failed to pick up on the malware, which has led UCL to warn that it may be facing a 'zero-day' attack – exploiting a vulnerability that has not yet been patched or picked up on. It's unknown how similar the malware is to last month's WannaCry ransomware, which infected around 200,000 computers across 150 countries and led to the partial shutdown of many NHS systems. Regardless, a number of hospital trusts have suspended their email servers as a precaution.
bit.ly/ucl426

New Mac ransomware discovered

A new example of ransomware targeting Macs has been discovered, according to researchers at security company Sophos. The malware, which has been identified as OSX/Ransom-A (but is known popularly as MacRansom) is not in the wild, but a sample was obtained by the

security firm from its creators. When the app is run, it installs itself quietly on your user account, without asking for a password. It copies itself into a subdirectory called ~/Library/.FS_ Storage, where it is hidden because files and folders that start with a dot don't show in Finder by default.

Once installed, OSX/Ransom-A encrypts your files, including those on any currently attached drives (such as Time Machine volumes and USB drives) and offers to sell you a decryption key. Although the virus is not in the wild, it highlights that hackers are working on ways to target Mac users. Because attached drives are vulnerable to malware such as ransomware, Sophos recommends you always keep one backup not only offline, but off-site.
bit.ly/macransom426

Security Helpdesk | Your questions answered by security specialists

THIS ISSUE'S EXPERT: Darren Guccioni, Co-founder and CEO of Keeper Security (www.keepersecurity .com)

Q **What should I do to stay safe when using the web on holiday?**
Leon McLean, Facebook

A Just presume you are going to lose everything on all your devices. That way, all data will be backed up before you leave, so there's

no way for you to lose your important files.

• It's best not to carry around sensitive data that you aren't likely to use, so store it in the cloud or on removable media, instead of on your phone or tablet.

• This is a good time to change all your passwords for all your devices, and set up two-factor authentication if possible. Make your passwords eight characters or longer, using a combination of letters, numbers and symbols. Even better, download a free password manager to do all the work of creating complex passwords and remembering them for you.

• If you haven't checked

recently, this is an excellent time to make sure that your antivirus software is up to date. There are plenty of dangers lurking on the Wi-Fi networks of foreign hotels, coffee houses and airports.

• If your smartphone allows (and most do), enable the feature that automatically erases all data in the event of multiple failed password attempts (usually 10 or so). If anti-theft software is available, enable it so you can lock your device remotely if it is stolen. Enable and activate the 'find my phone/device' function so that if your phone or tablet is stolen, you can track it, disable it and change all the passwords.

• Disable Wi-Fi auto-

connect options from all your devices before you leave, so you have to manually connect when you think it is safe to do so. Ideally, you should buy a subscription to services that only connect to secure Wi-Fi hotspots throughout the world. Rates are inexpensive and becoming more so all the time. If you need to transfer or access sensitive data while you're abroad, use a VPN.

• Similarly, disable Bluetooth connectivity. If it's left on, cybercriminals can easily connect to your device in a number of different ways. Once they're in, your cyberworld is their oyster!

Email us your security questions at webuser@dennis.co.uk

AGON

AG352QCX

35" ultra-wide curved
gaming monitor with ***200Hz***

- 2560 x 1080 @ 200 Hz
- 4ms
- MVA Panel
- DVI, HDMI, Displayport, USB 3.0

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SYNC

AOC GAMING

www.aocgaming.com

OVERCLOCKERS UK

SCAN computers

amazon.co.uk

⭐ Best New Websites

INTERNET　　　**NEW**

Be Internet Awesome
bit.ly/awe426

We'll forgive Google's cringey down-with-the-kids use of the word "awesome" because this site makes slick work of encouraging children to stay safe online. It offers essential lessons about sharing, fake content, privacy, bullying and the importance of open communication, exploring these issues via a chirpy, educational game called Interland and a host of professionally created resources for teachers and parents, including a downloadable family pledge and lots of links to info on cyberbullying and good "digital parenting".

Our rating ★★★★★

VIDEOS
This video explains the concept of the site. There's also a Be Internet Awesome Challenge (see bit.ly/awesome426 for details)

INTERLAND GAME
The site's games provide a great way to explore specific issues related to online safety

Be Internet Awe...
Helping safe, co explorer online w
WATCH VIDEO

TRAVEL

Jet2 Villas
www.jet2holidays.com/villas

A villa is the perfect accommodation for a large family or group of friends looking to spend time in the sun, but booking one can be a hassle. Recognising this, Jet2 now offers villas as part of a package, together with flights and car hire. Specify where you're flying from and to, along with the dates and number of guests, and the site lets you quickly filter the results, see the villas on a map and check out their facilities. There are plenty of well-shot photos, with information and useful descriptions, while the booking process is speedy and easy to understand. You can also view alternative dates and airports, potentially bagging decent savings if you're flexible.

Our rating ★★★★★

GAMING

PlayStation Gear
www.playstation-gear.com
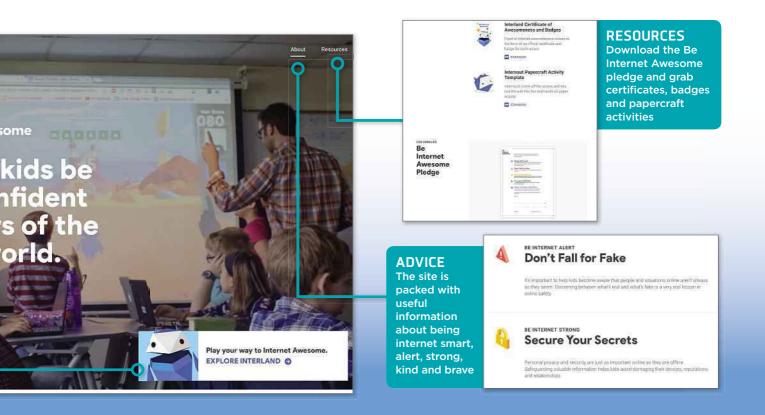
The PlayStation console made gaming fashionable back in the mid-Nineties, so it seems apt for this site to sell an official range of trendy PlayStation-related clothes and accessories. You can find t-shirts, jumpers, caps, bags, mugs and more, with the ability to filter the products by type, price range and brand as well as size, gender and colours for wearables. Each item is accompanied by a large photo and a brief description, and you can share products with friends or save them to buy later. We like that you can use PayPal at the checkout and track orders once you've set up your account.

Our rating ★★★★★

Reviews by David Crookes

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

RESOURCES
Download the Be Internet Awesome pledge and grab certificates, badges and papercraft activities

ADVICE
The site is packed with useful information about being internet smart, alert, strong, kind and brave

---

TRADESPEOPLE

NEW

Local Heroes
www.localheroes.com

If you need a reliable plumber to carry out work in your home, or require a heating, electrical or drainage expert in a hurry, this British Gas initiative vets and approves qualified tradespeople while offering a 12-month guarantee, the promise of a fair price and no call-out charge. Select a trade from the drop-down menu, specify your problem and postcode, and get an estimate. Once you've accepted the quote, you can book the person and pay online using PayPal or card, eliminating any dodgy cash-in-hand deals. You can also offer your own services if you're in one of the trades.

Our rating ★★★★☆

TRAVEL

NEW

The Best of Guernsey
www.thebestofguernsey.co.uk

The designers of this hub for all things Guernsey have channelled their energies into producing a clearer, bolder site that works much better across all devices. This puts it in line with other revamped Best Of sites, all of which boast a larger search box and an expanded set of icons, making them much easier to navigate. By reducing the homepage clutter, cleaning up the sidebars and making better use of colour, the site allows businesses, offers and events more room to breathe. The combined result is a faster, more professional-looking guide for anyone living on or visiting the island.

Our rating ★★★★☆

TYPOGRAPHY

NEW

Jeremy Tankard
typography.net

Jeremy Tankard was one of the first companies to offer a digital-font database, back in 1998. This relaunch makes it easier to sift through the huge collection of original type designs. You can view each font and use the built-in test tool to see how it looks in different forms and sizes. You can also download watermarked demos to evaluate the fonts further or take a peek at how they look in a magazine-style context at the sister site studiotype.com. With detailed design notes and info, and the ability to license fonts individually or as part of a package, it's certainly one to write home about.

Our rating ★★★★★ ➡

RELAUNCH

HEATING

Hive
www.hivehome.com

We're finding it hard to warm to Hive's new website given that the old version did a better job of selling the company's range of thermostats, sensors, lights and plugs. The new site involves a lot of clicking about to discover exactly how it works and wastes time with flowery marketing language and an unhelpful video, which makes it hard to discern exactly what it's offering. Get past that, though, and there are many positives. Hive has streamlined the navigation, tidied up the look, made buying items a doddle and improved online support. It has also started to update the blog after taking a six-month break.

Our rating	★★★☆☆

RELAUNCH

BOOKS

Bombshell Books
www.bombshellbooks.com

Specialising in women's fiction, chick-lit and romance, Bombshell Books is a digital imprint of crime and thriller specialists Bloodhound Books. It currently has only one novel available, *The Queen of Blogging*, but makes a decent attempt of keeping you up to date with forthcoming tomes and plotting the biogs of the authors it's signed up. However, the bubblegum-pink text on a black background is a chore to read and makes Bombshell Books feels amateurish and dated. Still, you can always sign up to the mailing list or keep abreast of the latest releases on social media.

Our rating	★★★☆☆

RELAUNCH

HEALTH

NHS Direct Wales
www.nhsdirect.wales.nhs.uk

This revamped site for NHS Direct in Wales is in much better health thanks to greatly enhanced navigation. It puts its most vital services at your fingertips with a more prominent symptom checker and local-service finder, and a handy section called Choose Well that highlights the services to use if you feel poorly. The site also has many accessible guides covering travel, vaccinations, pregnancy and various conditions and treatments. It even finds room for quizzes, online tools such as a BMI calculator and tips on reducing your alcohol intake. A permanent reminder of the new 111 phone service would be useful, though.
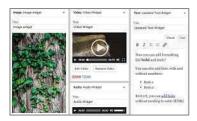
Our rating	★★★★★

Build a Better Site

Specialist tips, top tools and practical help

Top Tips of the Fortnight

What's new in WordPress

Along with the usual security updates, version 4.8 of WordPress (www.wordpress.org) adds a selection of new widgets for your sidebar. It's now a lot easier to add images, videos and audio files directly from the Media library. There's no need to enter any code – just click the appropriate widget and choose (or upload) the media from the library. You can also format text in widgets to use italics, bold and more.

Google ditches DMOZ

It would seem that the closure of website directory DMOZ, which we reported in Build a Better Site in Issue 419 (bit.ly/issue419), could have a wider impact on search results. Google has announced that it used the service to help create the descriptions ('snippets') that appear below websites in its search results, particularly for sites that don't use HTML's 'metadata' tools (which are coded into the HTML but don't show up on a web page). In a nutshell, this makes it even more important to ensure your site includes a metadata description. For more information, see Google's Webmaster Central Blog at bit.ly/snip426.

Deal of the Fortnight

Fasthosts (www.fasthosts.co.uk) is offering 50% off its Cluster group of web-hosting packages, with the Ignite package currently costing just £3 per month.

Web-building Helpdesk

THIS ISSUE'S EXPERT:
Oliver Burkill,
Enterprise Support
Manager, eUKhost (www.eukhost.com)

Q The hit counter on my homepage doesn't match the numbers I'm seeing on the stats from my host. Which is correct?
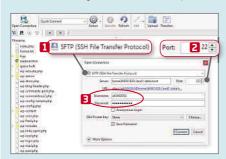
TheClash via Web User Forums

A Your web host is likely counting all requests to the server made by any one visitor. This includes images, stylesheets and other items, each of which can trigger a separate 'hit' to the server. Your hit counter only counts requests for the homepage but will include traffic from bots, such as search-engine crawlers, which skews your figures upwards. For the most accurate count of the kind of hits you're probably most interested in, use an external service such as Google Analytics (www.google.com/analytics), which categorises visit types and provides a wealth of additional info.

MINI WORKSHOP | Encrypt and hide sensitive files on your website
Cyberduck: cyberduck.io | ⏱ 10 mins | 🪟 Windows 7, 8, 10 🍎 MacOS 10.7

Cyberduck FTP's encryption tool (see Issue 424 – bit.ly/webuser424) lets you keep private files tucked away in a vault on your web server, so even if they're discovered, they can't be opened without the password

1 Log into your web host as you would normally. If this is your first time using Cyberduck, you'll need your FTP settings, which should be provided by your web host. You'll need the protocol type, **1** the server address, the port **2** and your username and password. **3**

2 From the File menu, select New Encrypted Vault. **1** Type a name for the new folder **2** and a password. **3** A horizontal bar shows how secure your password is. Confirm the password by typing it again and click the Create button. **4**

3 If you try to open the vault using Cyberduck, you'll be invited to enter the password. **1** Type it in the box to access the folder as normal. If you don't have the password, the folder will display as a number of other nested folders containing gobbledygook files. **2**

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

£500 PCs

£500 can buy you a brilliant new PC that will run Windows like a dream. We've reviewed eight of the best all-rounders

What most PC users want is a reliable, hard-working computer that runs Windows well. This is our focus for this Group Test – solid, all-round computers that cope with everything from browsing websites to watching videos.

Games are often the most demanding programs we run on our PCs but the computers in this test aren't customised with the top-end expensive components necessary for running the latest cutting-edge titles. However, we still use our Dirt Showdown performance test to make sure the PCs can handle a little casual gaming on the side.

The benefit of a solid PC with none of the flashy and expensive trimmings is that the price can be kept to a sensible £500, which is the case with all the PCs we've looked at here.

HOW WE TESTED

We tested all the PCs using our Windows benchmark tests, which consist of a series of demanding Windows applications. Each PC was given an overall score to show how well it performed. We also tested the PCs with Dirt Showdown, a racing game that shows the number of frames per second (fps) a PC can produce. The higher the fps, the smoother your games will look.

Mesh Home PC – CS | £499 | www.meshcomputers.com

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

PCs designed for domestic – rather than business – use usually come with the Home version of Windows 10, mainly because it's cheaper. This Mesh Home PC, however, runs Windows 10 Pro, which is something of a bonus because it has a few extra tools and settings, and provides greater control over Windows updates.

As well as a top-quality operating system, Mesh also aims high with its hardware. Intel's quad-core Core i5-7500 is a powerful chip to find in a £499 PC, and it has 8GB of fast memory to back it up. This combination produced the fastest Windows benchmark results in this Group Test, with an overall score of 105.

The Mesh contains a dedicated graphics card, rather than graphics hardware integrated into the processor, so you get a wider range of video outputs – two HDMI ports, two dual-link DVI-D ports and two VGA ports – than those provided by the other PCs in this test. However, it's only a cheap Nvidia GeForce GT710, so despite its 2GB of VRAM (Video memory), it didn't outperform Intel's latest integrated graphics in our Dirt Showdown benchmark, and only managed 33fps at 720p resolution.

Nonetheless, that's still plenty for a spot of basic gaming and the card doesn't need a fan to cool it, so there's no extra noise.

There are two USB 2 ports on the front of the case, which together with the four USB 2 and two USB 3 ports at the rear make connectivity practical but not exceptional.

The Mesh's storage consists of a 1TB hard drive and a 120GB SSD (a Kingston SSDNow V300 solid-state drive). It's interesting to note that a 1TB hard drive is now standard for PCs in this price bracket, but the Mesh's SSD looks a bit small next to the 240GB and 250GB drives that come with the other PCs reviewed here.

Web User GOLD AWARD

VERDICT
★★★★★

Frankly, we can live with a small SSD if it means we get to reap the other benefits of the Mesh Home PC. It's compact, quiet and has a great processor. Furthermore, it's reasonably easy to upgrade and comes with a premium operating system in Windows 10 Pro. Despite these welcome bonuses, the Mesh hasn't scrimped on hardware. Its inclusion of an SSD and a dedicated graphics card is a commendable achievement and leaves very little to complain about.

Palicomp i5 Titanium | £500 |
www.palicomp.co.uk
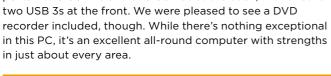
FEATURES ★★★★☆   PERFORMANCE ★★★★★
EASE OF USE ★★★★★   VALUE FOR MONEY ★★★★★

WebUser
SILVER AWARD

As its name suggests, Palicomp's i5 Titanium is powered by a powerful Intel Core i5-7400, aided by 8GB of fast memory. This served it well in our Windows performance benchmark, where it scored 96, second only to the Gold Award-winning Mesh PC.

Despite there being no dedicated graphics card, the PC surprised us in our Dirt Showdown test, where it achieved an average of 40fps – joint first of the PCs we reviewed.

The PC comes with a 250GB SSD in tandem with a 1TB hard drive. However, it only has the bare minimum of full-sized USB ports – two USB 2s and two USB 3s at the back, with another two USB 3s at the front. We were pleased to see a DVD recorder included, though. While there's nothing exceptional in this PC, it's an excellent all-round computer with strengths in just about every area.

VERDICT   ★★★★★
This PC is good at everything, whether you want to run Windows programs or games. It has a well-rounded set of components and, as a result, put in a good performance in our benchmark tests.

Chillblast Fusion Flanker | £500 |
www.chillblast.com

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

WebUser
BRONZE AWARD

We weren't so keen on the Fusion's lime green and black colour scheme, but everything else about its case deserves praise. Next to the front-mounted single USB 3 and USB 2 ports are integrated SD and microSD card readers, which is a significant benefit if you've got a digital camera or camcorder. At the rear, there are four USB 2 and two USB 3 ports. To connect a screen, you get a choice of HDMI, dual-link DVI-D and VGA, which should cover most options.

The 3.4GHz Intel Core i5-7500 runs alongside 8GB of fast memory, which meant the PC performed well in our tests, scoring an overall Windows score of 82. It also ran Dirt Showdown at 32fps, which is enough for all but the most demanding games.

Its 250GB SSD and 1TB hard drive also hit a good balance, providing healthy speed and generous capacity.

VERDICT   ★★★★☆
The Fusion Flanker is a great buy, particularly if you regularly use memory cards to access photos and videos. Its overall performance isn't quite up there with the other award winners but it's a close third.

BEST OF THE REST

The stand-out feature of the **Cyberpower Infinity X33 Optane** (★★★★☆ | **www.cyberpowersystem.co.uk**, **£499**) is its use of the new Intel Optane drive, which links a 16GB solid-state cache to a regular 1TB hard drive. However, it's paired with a lacklustre dual-core processor, which compromised its overall performance.
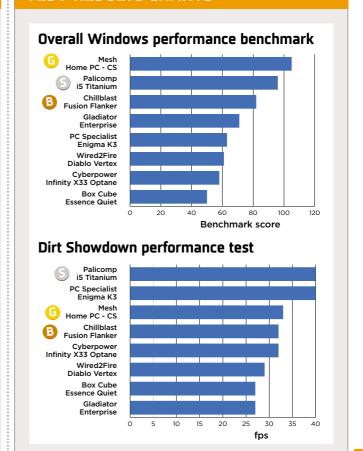
If you're looking for a no-frills option, the **Gladiator Enterprise** (★★★★☆ | **www.gladiatorpc.co.uk** | **£500**) fits the bill. Unfortunately, its performance wasn't up to scratch, coming fourth in our Windows tests and only managing joint last when running Dirt Showdown.

Like the Cyberpower Infinity, the **PC Specialist Enigma K3** (★★★★☆ | **www.pcspecialist.co.uk** | **£500**) comes with an Intel Optane drive. However, it has twice the memory, which means it performs faster, although it still only came fifth overall in our Windows tests. Its gaming performance was superb, though, coming second in our Dirt Showdown test behind out Silver Award-winner.

As its name suggests, the **Box Cube Essence Quiet** (★★★☆☆ | **www.box.co.uk** | **£500**) ran almost silently throughout our testing. Less successful, however, was the PC's performance, which was the slowest in our Windows benchmark and joint slowest in the gaming test.

The **Wired2Fire Diablo Vertex** (★★★☆☆ | **www.wired2fire.co.uk** | **£500**) looks good on paper and sat around the middle of the group in our performance tests, but it's lacking in some basic requirements, including HDMI and DisplayPort sockets for connecting a monitor.

TEST-RESULTS CHARTS

Overall Windows performance benchmark

G	Mesh Home PC - CS	
S	Palicomp i5 Titanium	
B	Chillblast Fusion Flanker	
	Gladiator Enterprise	
	PC Specialist Enigma K3	
	Wired2Fire Diablo Vertex	
	Cyberpower Infinity X33 Optane	
	Box Cube Essence Quiet	

0   20   40   60   80   100   120
Benchmark score

Dirt Showdown performance test

S	Palicomp i5 Titanium	
	PC Specialist Enigma K3	
G	Mesh Home PC - CS	
B	Chillblast Fusion Flanker	
	Cyberpower Infinity X33 Optane	
	Wired2Fire Diablo Vertex	
	Box Cube Essence Quiet	
	Gladiator Enterprise	

0   5   10   15   20   25   30   35   40
fps

	Mesh Home PC – CS	Palicomp i5 Titanium	Chillblast Fusion Flanker	Cyberpower Infinity X33 Optane	Gladiator Enterprise
PRICE	£499	£500	£500	£499	£500
BUY FROM	www.meshcomputers.com	www.palicomp.co.uk	www.chillblast.com	www.cyberpowersystem.co.uk	www.gladiatorpc.co.uk
PROCESSOR	Quad-core 3.4GHz Intel Core i5-7500	Quad-core 3GHz Intel Core i5-7400	Quad-core 3.4GHz Intel Core i5-7500	Dual-core 3.9GHz Intel Core i3-7100	Quad-core 3GHz Intel Core i5-7400
MEMORY (TYPE)	8GB (DDR4)	8GB (DDR4)	8GB (DDR4)	8GB (DDR4)	8GB (DDR4)
USB PORTS	Front: 2 x USB 2; Rear: 4 x USB 2, 2 x USB 3	Front: 2 x USB 3; Rear: 2 x USB 2, 2 x USB 3, 1 x USB Type-C	Front: 2 x USB 2, 1 x USB 3; Rear: 4 x USB 2, 2 x USB 3	Front: 1 x USB 2, 1 x USB 3; Rear: 2 x USB 2, 4 x USB 3	Front: 2 x USB2, 1 x USB3; Rear: 4 x USB 2, 2 x USB 3
NETWORKING	Gigabit Ethernet	Gigabit Ethernet	Gigabit Ethernet	Ethernet, 802.11n Wi-Fi	Gigabit Ethernet
STORAGE	120GB SSD, 1TB hard drive	250GB SSD, 1TB hard drive	250GB SSD, 1TB hard drive	16GB Intel Optane drive with 1TB hard drive	250GB SSD, 1TB hard drive
MEMORY-CARD READER	✗	✗	1 x SD, 1 x microSD	✗	✗
OPTICAL DRIVE	✗	DVD-RW	✗	✗	✗
GRAPHICS	2GB Asus GeForce GT710-2-SL	Intel HD Graphics 630	Intel HD Graphics 630	Intel HD Graphics 630	Intel HD Graphics 630
GRAPHICS/VIDEO PORTS	2 x HDMI, 2 x dual-link DVI-D, 2 x VGA	1 x HDMI, 1 x dual-link DVI-D, 1 x VGA	1 x HDMI, 1 x dual-link DVI-D, 1 x VGA	1 x DisplayPort, 1 x dual-link DVI-D, 1 x VGA	1 x HDMI, 1 x dual-link DVI-D, 1 x VGA
OPERATING SYSTEM	Windows 10 Pro	Windows 10 Home	Windows 10 Home	Windows 10 Home	Windows 10 Home
WARRANTY	Lifetime labour, two-years parts, one-year collect-and-return	Three-years return-to-base	Five-years labour, two-years collect-and-return	Three-years labour, two-years parts, one-month collect-and-return	Four-years labour, one-month parts, two-months collect-and-return

OUR VERDICT

The Mesh Home PC was the fastest Windows PC in this test, which was enough to win it our Gold Award. As a bonus, it also comes with Windows 10 Pro, which gives you more power and control over your Windows settings. The only disappointment is that its SSD drive isn't as large as some of its rivals.

If you want better performance when playing games, the Palicomp i5 Titanium is slightly slower at running Windows but has more going for it as an all-rounder, which is why we gave it our Silver Award.

Our Bronze Award goes to Chillblast's Fusion Flanker. Although it doesn't provide the power of the other award-winners, it has the added benefit of a memory card reader, making it extra convenient for getting your photos and home movies off a digital camera or camcorder. ■

Web User GOLD AWARD

Web User's Best Buys

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

HARDWARE

£500 PC

Mesh Home PC

NEW!

£499 from **www.meshcomputers.com**
Tested: Issue 426

The Mesh Home PC is compact and quiet, with a great processor. It has a premium operating system in Windows 10 Pro and includes an SSD and a dedicated graphics card.

KEY SPECS

Quad-core 3.4GHz intel Core i5-7500 processor ■ 8GB memory ■ 120GB SSD, 1TB hard drive ■ 2GB Asus GeForce GT710-2-SL graphics card ■ 6 x USB 2 ports; 2 x USB 3 ports ■ Windows 10 Pro ■ Lifetime labour warranty, two-years parts, one-year collect-and-return

INKJET PRINTER

Brother MFC-J5330DW

£125.78 from **bit.ly/brot425**
Tested: Issue 425

Provided you can find space for this bulky printer, you won't be disappointed, because it's very reasonably priced, cheap to run and produces great-looking prints – especially photos. You won't have to wait long for them to print, either.

KEY SPECS

4,800 x 1,200dpi maximum print resolution ■ 1,200 x 2,400dpi maximum scan resolution ■ 250-sheet input capacity ■ 100-sheet output capacity ■ Double-sided printing ■ 802.11n Wi-Fi ■ 530 x 398 x 304mm ■ 16.9kg

TABLET

Apple iPad

From £339 from **bit.ly/ipad424**
Tested: Issue 424

Apple has reduced the price of its new standard 9.7in iPad, making this tablet the cheapest it's ever produced. Battery life is excellent, performance is swift and the screen and build are top quality.

KEY SPECS

Tri-core 1.5GHz processor ■ 8-megapixels rear camera ■ 9.7in 2,048 x 1,536 pixels-resolution screen ■ 1.2-megapixels front camera ■ 32/128GB storage ■ 2G RAM ■ iOS 8.1 ■ 240 x 169.5 x 6.1mm ■ 437g ■ One year return-to-base warranty

SMART ASSISTANT

Google Home

£129 from **bit.ly/home422**
Tested: Issue 422

Google Home is a remarkable home helper and we can't recommend it more highly. It can already control a variety of apps and services, with more to come, and has a good-quality speaker. It's simply designed to enrich your life.

KEY SPECS

High-excursion speaker ■ Supports HE-AAC, LC-AAC, MP3, Vorbis, WAV, FLAC and Opus ■ Far-field voice recognition ■ microUSB, DC power ports ■ Android 4.2+ and iOS 8+ ■ 477g ■ 142.8 x 96.4mm ■ 802.11b/g/n/ac Wi-Fi (2.4GHz/5GHz)

GRAPHICS CARD

Asus AMD Radeon R7 250

£78.59 from **bit.ly/250amd416**
Tested: Issue 416

This graphics card provides enough power to make less challenging games run smoothly in 1080p resolution with high-detail settings enabled. It's very cheap and benefits from plenty of speedy stream processors.

KEY SPECS

2,048 stream processors ■ 128 texture-mapping units ■ 32 render-output units ■ 926MHz GPU frequency ■ 4GB RAM ■ Supports up to six displays ■ 4,096 x 2,160 pixels resolution ■ DisplayPort, DVI-D and HDMI video connectors

WI-FI REPEATER

TP-Link RE450

£44.99 from **bit.ly/tpl414**
Tested: Issue 414

The TP-Link RE450 provides a strong signal at a price that's hard to resist. It's better at extending the 5GHz network than the 2.4GHz, but it also acts as a bridge to transfer older devices to the newer network.

KEY SPECS

2 x 60mm, 1 x 42mm antennae ■ 3.8W power consumption ■ 2.4GHz (450Mbps) and 5GHz (1,300Mbps) ■ 802.11ac Wi-Fi ■ WPS button ■ Repeater and access point modes ■ 163 x 76 x 37mm ■ Three-year return-to-base warranty

All prices correct at time of review

SOFTWARE & SERVICES

CLOUD BACKUP

CrashPlan

£49 per year from
www.crashplan.com
Tested: Issue 420

If you've got a substantial archive of data, CrashPlan is an impressively versatile and cost-effective way to keep it safe.
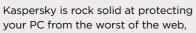
KEY FEATURES
$59.99 (around £49) per year for 1 PC ■ Unlimited storage ■ Back up external drives ■ Compatible with Windows 7/8+/10, MacOS 10.9+, Linux, Android 3.2+ and iOS 7+

INTERNET SECURITY

Kaspersky Internet Security 2017

£19.95 from **bit.ly/kaspersky2017**
Tested: *Computeractive* Issue 493

Kaspersky is rock solid at protecting your PC from the worst of the web, and has come top in nine of our most recent tests. Use the URL above to save £15.04 (normal price £34.99).

KEY FEATURES
Antivirus and firewall tools ■ Protects online shopping and banking ■ Identity and privacy tools ■ Advanced ad blocking

ONLINE STORAGE

Google Drive

From free from
drive.google.com
Tested: Issue 389

Google Drive is easy to use and has lots of free storage, and syncing files is like keeping them in any other PC folder.

KEY FEATURES
16GB free storage ■ Web-based office software ■ Works with XP, Vista, 7, 8+ and 10 ■ Chrome browser add-on ■ Android and iOS apps ■ Extra paid-for storage available

Web User Gold Award winners

STREAMING MEDIA RECORDER

ActivePresenter

Free from **bit.ly/active425**

NEW!

Tested: Issue 425
ActivePresenter does an excellent job of capturing streaming video and provides an exhaustive set of editing tools.

TO-DO LIST TOOL

Todoist

Free from **todoist.com**
Tested: Issue 424
Todoist is the ultimate to-do list tool. Adding new tasks is simple, whether you're managing small projects or complex ones.

PRIVATE BROWSER

Epic Browser

Free from **www.epicbrowser.com**
Tested: Issue 423
For total privacy online, Epic Browser is fast, easy to use and offers all the tools you need to stay anonymous.

VIDEO-CALLING APP

Google Duo

Free from **duo.google.com**
Tested: Issue 422
Google Duo is designed to put you at your ease. Calls are smooth and it's easy to set up.

REMOTE-DESKTOP SOFTWARE

TeamViewer

Free from **www.teamviewer.com**
Tested: Issue 420
This powerful free remote-desktop program has an impressive array of features.

⬇ Best Free Software

Bitdefender Home Scanner

bit.ly/bhscan426
Min requirements: Windows 7/8+/10
File size: 9.5MB
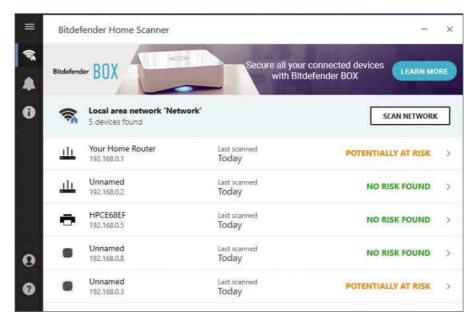
Antivirus software protects your PC against most types of malware, including headline-hitting ransomware, but you could still be at risk from other threats that target your network. Bitdefender Home Scanner is a free tool that aims to identify any potential security problems. It scans your wireless network, identifies and maps connected devices – including PCs, phones, tablets, and smart home devices such as games consoles, Wi-Fi cameras, smart TVs and streaming boxes – and highlights any security flaws it finds.

This powerful free program looks for potentially weak login credentials (such as router defaults) and vulnerable or poorly encrypted communications. Information gathered during the scan is checked against online vulnerability databases and presented in a report that prompts you to take action.

This tells you everything you need to know about each connected device, helping you to recognise ones that belong to you, and spot any that don't – such as devices belonging to neighbours who are cheekily piggybacking on to your Wi-Fi.

Although Bitdefender Home Scanner highlights any possible problems found during the scan, it can't fix them for you. Instead, it provides you with the advice you need to solve the flaw yourself. This tends to be a bit basic, and could be something you already know, but if it spurs you into taking action against a security risk, then the application has done its job.

The software also offers a handy 'On connect' mode which, when enabled, allows Bitdefender Home Scanner to scan new devices as and when they connect to your home network.

⚙ MINI WORKSHOP | Secure your home network using Bitdefender Home Scanner

1 Before you start using Bitdefender Home Scanner, you'll need to sign up for a free Bitdefender account. Run the software and you'll be asked if the network you're connected to is your home network. If it is, click Yes. **1** If not, you can click the link to connect to a different one. **2**

2 Once you've confirmed your home network, the program will carry out a scan to find all connected devices **1** – including your router – and check for problems. The process takes a while and you can stop it at any time. **2** It will identify any devices that are potentially at risk. **3** Click one to find out more.

3 The Device Details page tells you about the selected device, including its manufacturer, device type (if known) and MAC and IP addresses. **1** Click the arrow **2** to learn about any vulnerabilities. You can scan the device again at any time. **3** Notifications can be viewed by clicking the bell icon **4** in the sidebar.

This fortnight's top new software downloads to help you make the most of your PC, and they're all FREE
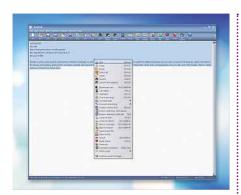
DISK-CLEANING TOOL
FreeDriveC
bit.ly/freec426
Min requirements: Windows XP/Vista/7/8+/10 **File size:** 22.7KB

As you can guess from its name, the tiny FreeDriveC liberates space on your system drive. Its simple interface provides access to Windows tools, so you can enable or disable Hibernation, access the Advanced Power Settings, adjust virtual memory, manage System Restore settings and run the Disk Cleanup tool. It also has buttons for Disk Optimiser, Management, Uninstaller, Security and Configuration. You can see which version of Windows you're running, and the amount of remaining space.
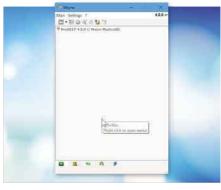
TEXT EDITOR
Doc Pad
bit.ly/docpad426
Min requirements: Windows XP/Vista/7/8+/10 **File size:** 8.9MB

DocPad is a more powerful alternative to Windows Notepad, and it's free to use. As well as letting you write and edit notes, it offers a range of useful features including case conversion, file backups, search and replace, file history, print preview, spell-check, calculator, calendar and character map. It also tells you the number of characters, words, lines and paragraphs, and can undo up to 100 changes.

CHAT TOOL
BeeBEEP 4
bit.ly/beebeep426
Min requirements: Windows 7/8+/10, MacOS or Linux **File size:** 9.8MB

BeeBEEP is a secure instant-messaging tool that lets you talk to and share files with anyone on the same local area network, be it at home or in the office. It works across Windows, Mac and Linux, and version 4 sports a new interface, with all the main options grouped in the Settings menu. The software will now automatically disconnect when your system goes to sleep and reconnect when it wakes.

New Windows Apps

Krita
bit.ly/krita426
Min requirements: Windows 10
File size: 285.8MB
Krita is a free, open-source painting app that offers numerous tools for both amateur and professional artists. There are tools for mirroring, transforming, layer-management features and more.

Photo & Video Import
bit.ly/photovid426
Min requirements: Windows 10
File size: 18MB
From the author of the popular FastPictureViewer, this app simplifies importing photos and video from your smartphone, digital camera, camcorder or memory cards to a Windows 10 PC.

Film Database
bit.ly/filmdb426
Min requirements: Windows 10
File size: 19.2MB
This app helps you manage a collection of DVDs and Blu-rays and, if you have a webcam, it can even scan the information from a barcode. You need to register a free account to use it.
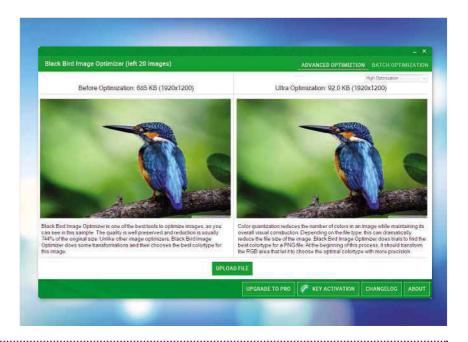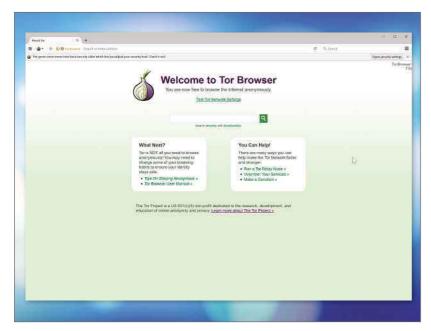
IMAGE TOOL
Black Bird Image Optimizer
bit.ly/bbio426

Min requirements: Windows XP/
Vista/7/8+/10 **File size:** 1.3MB

High-quality images are often large and
take up a lot of space. Black Bird Image
Optimizer aims to reduce their file size
without any discernible loss of quality.
The software is very easy to use: you just
upload your picture and select the level of
optimisation you require in the drop-down
menu – Brutal, High, Medium or Low. The
preview window lets you compare the
optimised version with the original, and
displays the difference in file size.
Unfortunately, the free version limits you
to just 20 optimisations (a counter shows
how many you have remaining). Upgrading
to the Pro version costs £41.24.

SECURE WEB BROWSER
Tor Browser 7
bit.ly/torbrowse426

Min requirements: Windows 7/8+/10, MacOS X
or Linux **File size:** 51.8MB

Tor Browser is designed to safeguard your
privacy when you're browsing the web. It's
based on the same engine as Mozilla Firefox,
and uses the Tor network to disguise where
you're browsing from. The latest version updates
the Firefox engine, allowing the software to use
the multiprocessor mode and (eventually)
sandbox. In addition, the Tor component has
been updated in this release, as have the
NoScript and HTTPS-Everywhere add-ons.
There have been numerous other improvements
and bug fixes made throughout, too. If you're
concerned about your privacy when online, this
is a great way to safeguard it. See our cover
feature on page 38 for more privacy advice.

VIDEO EDITOR
HD Video Converter Factory 11
bit.ly/hdvid426
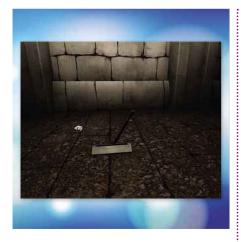
Min requirements: Windows XP/
Vista/7/8+/10 **File size:** 4 6.6MB

HD Video Converter Factory can trim, crop
and merge your videos, and convert them
from one format to another. It also lets you
download videos and music from YouTube
and other video-hosting websites. The free
download is actually a cut-down, older
version of a paid-for product, which means
there are some restrictions to be aware of,
such as conversions being limited to 720p
resolution.

   The software is very straightforward to use:
you just drag your video file to the main
window, make whatever changes are required
using the Clip, Crop and/or Effects tools, pick
an output format and click Run.

GAME

The Temple of Adventure

bit.ly/temple426

Min requirements: Windows XP/
Vista/7/8+/10 **File size:** 431MB

The Temple of Adventure is a short, amusing fully narrated first-person exploration game. Describing too much about it would ruin the experience, so we'll just wish you luck in your hunt for the Tigress Emerald and remind you to read the description on the game's website before you begin to play so you have some idea of what the developer has planned for you. Enjoy!

❌ Don't install...

Piranha

iffxsoftware.com
Min requirements:
Windows XP/
Vista/7/8+/10, MacOS
or Linux
File size: 43.6MB

Piranha is an advanced video editor that comes with loads of useful features but its head-spinning $995 (£785) price tag will take a major bite out of your finances. It also takes a non-linear approach to editing, which some users may find confusing, although it's difficult to fault the quality of the results.

...Install this instead ✓

Lightworks

www.lwks.com
Min requirements: Windows XP/Vista/7/8+/10, MacOS or Linux
File size: 86.7MB

This professional video editor has been used to produce many Hollywood blockbusters over the years including *LA Confidential*, *Pulp Fiction* and *The King's Speech*. The free version offers all the main features of the paid-for software, although it limits you to exporting your finished film to YouTube and Vimeo at a maximum resolution of 720p (this is fine for most home movies). The latest version of the software (14) also lets you add a voiceover to your videos. Lightworks is very straightforward to use and a good replacement for Windows Movie Maker.

🔄 UPDATED | New tweaks and fixes for your favourite free programs

SYSTEM TOOL
Glary Utilities 5.77
www.glarysoft.com
Min requirements:
Windows XP/Vista/7/8+/10
File size: 16.1MB

Glary Utilities is a collection of tools for fixing problems, optimising Windows and protecting your privacy. The new version of the suite adds cleaning support for more programs and optimises the Tracks Eraser. Make sure you decline the bundled junk during installation.

PRIVACY TOOL
PrivaZer 3.0.23
privazer.com
Min requirements:
Windows XP/Vista/7/8+/10
File size: 14.4MB

PrivaZer is a very thorough PC and privacy cleaner that's designed to remove all traces of private usage data that can be found lurking on your computer, so it can't be recovered. This latest release improves the cleaning of the Windows Icons Cache and the display of the ThumbCache.

VIDEO EDITOR
OpenShot Video Editor 2.3.4
www.openshot.org
Min requirements:
Windows XP/Vista/7/8+/10
File size: 128MB

OpenShot offers all the features you'd expect from a video editor, including a drag-and-drop timeline, and a range of effects and transitions. The updated version updates several components, fixes various bugs and updates the translations file.

PDF TOOLKIT
PDF24 Creator 8.2
en.pdf24.org
Min requirements:
Windows XP/Vista/7/8
File size: 19.9MB

This suite of tools lets you easily create, split and merge PDFs, as well as rotate and reorder pages, and add identifying watermarks and stamps. The program now supports Windows DPI scaling, and includes a new automatic image-compression option. ■

Best New Browser Tools
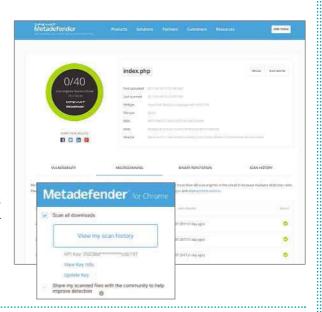
Sanitise your downloads to remove malware

Sadly for us web users, malicious files are seldom labelled things like MALWARE.EVIL but are disguised as innocuous downloads with familiar extensions such as '.pdf', 'docx', 'zip' and 'exe'. You can defend yourself against these devious threats by installing Metadefender for Chrome (bit.ly/meta426) from the respected cybersecurity company OPSWAT. This extension scans your downloads using more than 40 antivirus engines from the likes of Bitdefender, Kaspersky and F-Secure, to ensure there's nothing nasty lurking in them. You can either perform this check manually by right-clicking a link and choosing 'Scan with Metadefender before downloading' or select the option to 'Scan all downloads' automatically. The latest version of Metadefender also 'sanitises' content that could be exploited by hackers, such as scripts, macros and links, stripping the code from files to give you a 'clean' version.

Installing Metadefender generates a licence key that provides free use with some limitations: you can only sanitise files of up to 140MB in size and perform 25 scans per hour. The paid-for version costs upwards of £330, so it's probably best to stick to the free one!

Restore Chrome's old Settings page

Over the last two years, Google has been gradually applying its Material Design to elements of Chrome to give it a cleaner, more modern feel. The latest feature to get the treatment is the Settings page, which you either access via chrome://settings or by clicking the menu button and choosing Settings.

WITH MATERIAL DESIGN

WITHOUT MATERIAL DESIGN

As well as a bolder, metallic-blue look, the revamped page rearranges several elements, moving the Appearance options to the top and the 'On start-up' settings to the bottom. You'll also notice that the tick boxes for individual options have been replaced by sliders.
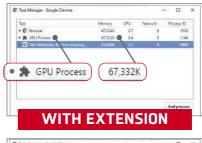
If you preferred things the way they were, it's easy to change the Settings page back to its old settings. Type `chrome:flags` into your address bar, press Enter and find the option 'Enable Material Design settings' (using Ctrl+F will make this easier). Select Disabled from the drop-down menu, restart Chrome and your old Settings page will be restored.

Speed up Chrome by loading 'lazy' tabs

One of Chrome's most useful features is its ability to load all the tabs you had open during a previous session when you start a new one – an option you can turn on by going to Settings, 'On start-up', 'Continue where you left off'. The problem with this batch-reopening of tabs is that it instantly drains Chrome's memory and slows down the browser, making you wait until all the pages have loaded.

Happily, help is at hand in the form of Native Lazy Tabs (bit.ly/native426),

which lets you delay the loading of saved tabs until you need them. When you launch Chrome, it automatically discards all tabs but the last active one, freeing up system resources for a fater startup. The add-on doesn't have its own interface – this would only waste valuable memory – but you can reopen 'lazy', discarded tabs by clicking their titles. Press Shift+Esc to open Chrome's Task Manager and you'll see that Chrome is using much less processing power and memory.

WITH EXTENSION

WITHOUT EXTENSION
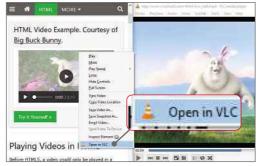
This fortnight's most useful tips and add-ons to help you get the most from Chrome, Firefox, Opera and more

FIREFOX

Open web video and audio in VLC

Everyone loves VLC, especially because unlike bog-standard embedded media players, it's packed with useful features and flexible settings. Install Open In VLC Media Player (bit.ly/vlc426) and you can instantly view streaming content in this brilliant media player simply by right-clicking a video and choosing 'Open in VLC', or by clicking the orange traffic-cone icon in your address bar. This launches the player automatically – assuming you have it installed – so you can enjoy the video or audio using VLC's superior controls.
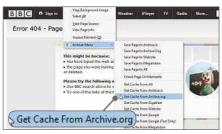
There's an additional tool to download, extract and install before you can use the add-on, but full instructions are provided and, once that's done, Open In VLC Media Player works instantly and smoothly.

Save and retrieve archived web pages

Content on the web is constantly changing and a page you view today might not be there tomorrow – perhaps removed for legal reasons or tucked behind a paywall. A handy new Firefox add-on called Archiver Menu (bit.ly/archiver426) provides protection against disappearing web pages by letting you save them to an online service. The most well-known of these is the fantastic Internet Archive (archive.org), but other choices include Archive.is (archive.is), WebCite (www.webcitation.org) and Megalodon (megalodon.jp) – all of which offer the option to save a page.

What's more, Archiver Menu lets you retrieve cached versions of the page you're viewing – or trying to view – from the supported archive services, as well as Google. Using the add-on is as simple as right-clicking a page and choosing an option from the side menu, while additional features let you force the use of encrypted HTTPS, save cached content as a PDF and always open archived pages in a new tab.

Mark the videos you've watched on YouTube

The YouTube mobile app helpfully shows you which videos you've watched on your phone or tablet by displaying a full-length red bar below their thumbnail images. In contrast, the YouTube website only marks those you've played recently as watched, and presents a selection in its Watch It Again section, which isn't as useful for at-a-glance reference. YouTube Watchmarker (bit.ly/youtube426) provides a solution to this problem by automatically marking all videos you've played as 'watched', across the whole site – including in search results and sidebar suggestions. You can sync the extension with your browser history, to add videos you viewed in the past, and even export your watchlist as a backup.

OTHER BROWSERS

Protect your eyes against strain

In Issue 424, we recommended an Opera add-on called Quasimodo (bit.ly/quasimodo424), which improves your posture by reminding you to sit up straight at regular intervals. Eyes & Body Rest (bit.ly/eyes426) is a similar tool for protecting your peepers against eye strain – or asthenopia, to give it the proper medical name. Adhering to the 20-20-20 rule, the extension suggests that after every 20 minutes, you take a break for at least 20 seconds and look at objects that are 20 feet away from you – "and a little stretch is always more than welcome". You can pause it for periods when you'd rather not be interrupted.

Customise your Speed Dial thumbnails

The thumbnail images that represent your favourite websites on your Speed Dial page are often rather dull – just a logo or a picture of the homepage. Vivaldi has decided to spice things up by letting you customise them. Right-click a thumbnail or click the plus sign in the bottom-left corner, then choose Select Custom Thumbnail to replace the default image with one of your choice. You can even use an animated GIF. It certainly makes the Speed Dial page look more attractive.

Best Free Apps

PDF SCANNER
Adobe Scan
bit.ly/scan426

🤖 5 🍎 10

NEW

Your starter for 10: who invented the PDF? Answer: it was Adobe, back in the mid-Nineties. Adobe may be more famous for Photoshop these days, but PDF is still close to its heart, and Adobe Scan is the latest tool to showcase this useful format. This app turns your device's camera into a powerful document scanner that recognises text in photos – of posters, packaging, receipts or whatever – then converts it to PDF and saves it to your Adobe account, fast and free.

Unlike Google's newish scanning app, PhotoScan, Adobe Scan isn't designed for digitising your old photo collection. It's not interested in pictures at all, just words (well, pictures of words). In fact, it starts looking for text the moment you switch it on. You can disable this 'auto-capture' mode if you want more control over your scanning, but we found it very useful. It makes quick and accurate work of turning a pile of bills into a digital document, using built-in OCR (optical character recognition) to automatically recognise words and convert them to digital text. You can rearrange, crop, rotate and enhance your scans before exporting the multi-page PDF, and the results are great quality.

Adobe Scan doesn't let you edit or sign PDFs, contrary to what its online descriptions suggest. It doesn't even save them to your device. Instead, it uploads them to your Adobe account, so you can access and edit them using Adobe Document Cloud (bit.ly/cloud426) – which gives you 5GB of free storage space – or the Adobe Acrobat Reader app (bit.ly/acrobat426). You can cheat the system and export the PDF to your device by tapping the Share button and "sharing" it with yourself, but there's no way to dodge the Adobe ID login requirement – sadly, you have to sign in or create a free account to use this app.

Our rating ★★★★☆

MINI WORKSHOP
Turn paper documents into PDFs using Adobe Scan

1 Install and launch Adobe Scan. If you have an Adobe ID, tap Sign In. Otherwise, tap Sign Up to create a free account. Tap Allow to permit camera access. Auto-capture is switched on by default, so your camera will automatically snap anything it recognises as text. To disable this, tap the stars icon. **1** To export your current batch of scans as a PDF, tap the thumbnails. **2**

2 Swipe left to view the pages of your PDF-to-be, then tap the icons at the bottom to edit and rearrange them. The first icon lets you add more images from your device. **1** The second lets you rearrange pages; **2** and the others are for cropping, rotating, colouring and deleting the displayed page. **3** Tap the title to give it a name, **4** then tap Save PDF. **5**

3 Your pages are now converted to a single PDF and saved to Adobe Document Cloud. You can set the app to save your scans (tap the menu, **1** then Preferences, then 'Save original images to Gallery'), but if you want to save the exported PDF, you have to tap Share, **2** then Share File and share it with yourself. To edit the PDF or add a signature using the Acrobat app, tap Open In Acrobat. **3**
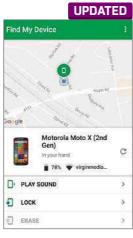
This fortnight's top free and paid-for apps for Android, iOS and Windows phones and tablets

SECURITY **UPDATED**
Find My Device
bit.ly/find426
🤖 4

The app formerly known as Android Device Manager has been redesigned, renamed and relaunched. New features allow you to check your device's battery level and Wi-Fi connection remotely, but a less welcome addition is the requirement for location access, which is a bit of a privacy intrusion. It's broadly the same app as before, though, using GPS to track your device so you can locate it, lock it and erase it remotely via your browser (www.google .com/android/find).

Our rating ★★★★☆
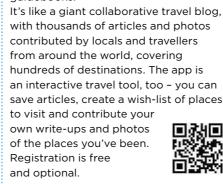
TRAVEL **NEW**
Townske
townske.com
🤖 4.1 🍎 9.3

Townske may sound like a suburban Womble but is actually the latest attempt to free you and your suitcase from heavy travel guidebooks. It's like a giant collaborative travel blog, with thousands of articles and photos contributed by locals and travellers from around the world, covering hundreds of destinations. The app is an interactive travel tool, too – you can save articles, create a wish-list of places to visit and contribute your own write-ups and photos of the places you've been. Registration is free and optional.

Our rating ★★★★★

TRANSPORT **NEW**
Zipcar UK
www.zipcar .co.uk
🤖 4 🍎 9.3

Pay-as-you-go car hire company Zipcar has operated in this country for 17 years, but it hadn't got round to launching a UK mobile app until now. You can use it to find a car or van for hire nearby (24/7, any day of the year), then book by the hour, day or week. But it's more than just a mobile version of the website because it also helps you locate your vehicle – you can follow the map directions and tap Honk to sound the horn. You can then lock and unlock it remotely, and even find a parking space.

Our rating ★★★★☆

NAVIGATION **NEW**
Path Guide
bit.ly/path426
🤖 4.2

Microsoft's latest tool brings navigation indoors by helping you find your way around unfamiliar buildings. There's no map and no GPS – instead, you record step-by-step routes ('paths') around unfamiliar places, such as shopping centres and car parks, then use them to retrace your steps.
   The app is fairly easy to use. You can take photos and add voice notes while you record, and if your device has a barometer sensor it'll record level changes such as stairs and lifts, too. Annoyingly, you have to keep your phone or tablet horizontal while recording, and we were miffed that our paths (including addresses) were shared publicly by default. We couldn't even get the Public setting to switch off, but hopefully that's just a bug that'll be fixed soon.

Our rating ★★★★☆

Best Free Apps

GENEALOGY

We're Related
bit.ly/related426
(varies with device) 9

NEW

Who do *you* think you are? If Danny Dyer is a direct royal descendant, there's every chance you are, too – and you can find out using this new tool from Ancestry.com. Sadly, the app doesn't live up to its promise. First, its suggestions are vague. It offers Marilyn Monroe as a "possible" third cousin but doesn't explain what the connection might actually be. Moreover, you won't get any suggestions at all unless you create a family tree first. You do get the option to seek out ancestors using your Facebook account and phone contacts instead, but this entails spamming multiple friends – who are unlikely to thank you.

Our rating ★★★☆☆

SPORT

SofaScore Live Score
bit.ly/sofadroid426
bit.ly/sofaios426
4.2 8

NEW

Get live scores, video, analysis and stats for all leagues and competitions across 17 sports including football, tennis, F1 and darts, as well as disciplines often ignored by TV, such as ice hockey and badminton. It's rare to see such glowing user reviews, especially for a new app that you'd expect to suffer from a few bugs. People simply love it – for the speed and accuracy of its scores and notifications; filters that make it easy to find and track the matches that interest you; imaginative features such as the ability to track certain players; and the sheer breadth of its coverage.

Our rating ★★★★★

5 NEW APPS WORTH PAYING FOR

MUSIC

Informusic
www.informusic.org
Price: 89p (Android), £2.99 (iOS)
4.3 8

Sound the trumpets! This much-loved app for classical music fans is now on Android as well as iOS. Download sheet music, listen to audio clips and interact with historical timelines.

DOCUMENTS

PDF Assistant Pro
bit.ly/pdfpro426
Price: £6.19 (£3.09 until end of June)
10 Mobile

Create and edit PDFs on your Windows 10 device or PC with this new app that lets you handwrite your signature (or scribble doodles), highlight text and even lock your PDFs with a password.

CAMERA

PhotoPills
www.photopills.com
Price: £9.99
4.1 8.1

Among its many talents, this virtual-photography assistant tracks the sun, moon and even the Milky Way, then uses augmented reality to predict light conditions so you can judge the perfect time, position and date to get the best shot.

GAME

Monument Valley 2
bit.ly/monument426
Price: £4.99
9

You don't have to know the wildly successful geometrical puzzle Monument Valley to enjoy its much-anticipated sequel, which challenges you to guide a mother and child through a series of optical illusions.

WILDLIFE

Collins Bird Guide
www.natureguides.com
Price: £12.99
4

The ultimate birding guide is now available on your phone and tablet. More than 700 species are covered, with thousands of world-class illustrations, audio files and a tool for recording your sightings.

| Informusic | PDF Assistant Pro | PhotoPills | Monument Valley 2 | Collins Bird Guide |

Best New Mobile Games

WORD `UPDATED`

Baikoh
playbaikoh.com
🤖 4.0.3 🍎 9

Described as "a typing game about love and suffering", Baikoh combines the word-building challenge of Scrabble with the spacial strategy of Tetris. Tap the letter tiles that randomly cascade down your screen to spell out words and clear the layers of tiles. As with Tetris, if the tiles reach the top, it's game over. There are exploding power-ups to collect while further peril is provided by bombs, boulders and freezing tiles. Baikoh is free to play on your own or against friends, with inevitable in-app purchases to remove ads and get upgrades.

| Our rating | ★★★★☆ |

SIMULATION `NEW`

Pokémon: Magikarp Jump
bit.ly/magikarp426
🤖 4.1 🍎 8

Remember Pokémon Go? Boy, did that get old fast. But this effort may have more staying power, despite being based on Magikarp – the weakest, most useless Pokémon ever. Feed and train the feeble fish to raise it from an embarrassment to a "majestic Magikarp" to be proud of. Unlike other Pokémon, it can't master any moves and merely flops, splashes and jumps in the air, but with patience, attention and help from other Pokémon, you'll be surprised by what it can achieve. Once you've raised one Magikarp, you can create more.

| Our rating | ★★★☆☆ |

ARCADE `NEW`

Fidget Spinner
www.ketchappgames.com
🤖 4.0.3 🍎 8

Fidget spinners are the sensation that's sweeping the nation, but if you're too old or too ashamed to play with one in public, you can install this simulator instead. Swipe your screen to spin the spinner as fast as you can, then wait for it to stop and "sweep the sweet rewards". These basically entail unlocking additional fidget spinners and colourful stickers to decorate them with. You have five swipes to get a decent spin, and can compare your score with friends. Be warned that some of the user reviews on both app stores are rather infantile and unpleasant.

| Our rating | ★★★★☆ |

❌ Don't install...

Device Info Pro
bit.ly/info426

There are lots of Android apps that list the specifications of your device, but this is one of the ugliest we've seen. Luminous green text on a dreary grey background makes its information difficult to read as well as baffling to comprehend, unless you know what 'Scaling Governor: pegasusq' means. Not only that, but it charges you 69p just to access details you can find out yourself. If this is the Pro version, we'd hate to see the basic one!

...Install this instead ✔️

My Device
bit.ly/mydevice426
🤖 4.0.3

As long as our mobile devices are working properly, few of us stop to consider what happens under the bonnet of these pocket computers. My Device reveals the secret specifications of your Android phone or tablet, providing all manner of interesting information about their technical make-up and current status. From a single menu, you can learn more about your processor, memory and operating system; check your battery health and memory; and view at-a-glance lists of all the apps you have installed, the sensors on your device and every feature that's available to you. My Device is a simple app, but it's endlessly fascinating. ■

Apple's latest products

Apple used its recent Worldwide Developers Conference to unveil new products and enhancements. **David Crookes** rounds up the best

HomePod

What is it?

Smart, voice-activated speakers have become all the rage so it was inevitable that Apple would eventually create one of its own. HomePod is designed to compete with the Amazon Echo and Google Home and, although it is powered by virtual assistant Siri, Apple is placing a greater emphasis on the speaker's advanced audio quality.

Why is it interesting?

This 7in speaker undoubtedly sounds better than its chief rivals, with audio experts favourably comparing it to the high-end speakers made by Sonos and Bang & Olufsen. It includes the same A8 chip that made its debut in the iPhone 6 and 6S, an upward-facing woofer for a deep bass, seven beam-forming tweeters with their own amplifier and six sensitive microphones that ensure Siri can detect your voice. Apple says the HomePod can also sense its position in a room, to deliver the best possible sound.

Do I really need one?

That depends. If you're in the market for an attractive, technologically advanced, voice-controlled speaker, then it's certainly one to consider. It will have access to 40 million songs via Apple Music and can be placed at the heart of your smart home. Yet Siri is arguably not as good as Alexa or Google's assistant, which is perhaps why Apple downplayed its inclusion when it announced the HomePod. It depends on your priorities.

When is it out and how much will it cost?

Apple says the HomePod will be on sale in December and, although UK pricing is yet to be confirmed, it will cost $349 (£269) in the US. If you already own a high-end speaker, then pairing it with an Echo Dot, which costs just £50, may be a more sensible and cost-effective option.

iOS 11

What is it?

Apple unveiled the forthcoming version of the operating system it uses on the iPhone, iPad and iPod Touch.

Why is it interesting?

Several major new features are set to be introduced, the most notable of which are aimed at iPad users. These include a customisable Dock (a row of icons at the bottom of the screen), a new app switcher and the ability to drag and drop apps around the screen. There will also be an enhanced keyboard that gives you fast access to numbers, symbols and punctuation by swiping down on the keys; and there will be better integration for Apple Pencil, especially within Notes. Meanwhile, a new Files app will not only let you view files stored on your iPad but those saved in iCloud Drive and other services such as Dropbox.

Those using iOS 11 on the iPhone will also benefit from a more personal and natural-sounding Siri, as well as a redesigned App Store, a one-screen Control Centre and a handy Do Not Disturb When Driving feature that silences notifications and darkens the screen. Apple Maps will now provide lane guidance as well as indoor maps for airports and shopping centres, and there will be enhanced camera features and support for augmented reality, too.

Do I really need it?

Yes. It adds some very useful functions and, for iPad users especially, it could revolutionise the way you work. Whether you will actually be able to get it is a different matter since – controversially – iOS 11 is only compatible with 64-bit devices, ruling out the iPhone 5 and below, the fourth-generation iPad and earlier, and anything before the sixth-generation iPod Touch. Turn to page 74 to read Barry's views on this matter.

When is it out and how much will it cost?

Apple says iOS 11 will launch in the autumn and, like all its upgrades, will be free to download and install.

MacOS High Sierra

What is it?

As expected, the annual update to the Mac operating system was announced at the conference, with Apple hoping to get people to upgrade from the current MacOS Sierra.

Why is it interesting?

Along with many under-the-hood improvements, MacOS High Sierra enhances a good number of built-in apps. Photos, for instance, benefits from better organisational tools and support for external editors such as Photoshop, and there will be faster Mail searching along with support for tables in Notes. But the big news (for us, anyway) concerns the web browser Safari. This will now prevent videos and audio from playing automatically, use machine learning to make it more difficult for advertisers to track you around the web and let you permanently turn on Reader to strip the clutter from sites as soon as you open them.

Do I really need it?

Yes. It refines Sierra and makes it more efficient as well as addressing privacy concerns.

When is it out and how much will it cost?

As always, the update will be available for free from the Mac App Store this Autumn.

iPad Pro

What is it?

The iPad Pro is the high-end version of Apple's tablet. The company unveiled a new 10.5in model and has refreshed the 12.9in device.

Why is it interesting?

The tablet market is not particularly buoyant, and experts suggest that users tend to hold on to them for longer between upgrades. But if you're ready to buy a new model, the 10.5in iPad Pro is certainly attractive. As with the larger device, it uses the 30%-faster A10X Fusion chip and a display which has a noticeably fluid refresh rate of 120Hz. It also makes use of the same 12-megapixel back-facing camera and 7-megapixel front-facing camera of the iPhone 7. Combine it with the pro-features of iOS 11 and it's well worth looking at.

Do I really need one?

The iPad Pros are primarily aimed at professionals who need solid computing power and want to multitask. If you're mainly using your tablet to browse and shop, you may find the Pro is over-powered, in which case you should look at cheaper iPads or Android tablets instead.

When is it out and how much will it cost?

Both models are out now. The 10.5in display costs from £619 and the 12.9in display costs a wallet-busting £769.

New iMacs

What are they?

Apple has finally refreshed its iMac line, offering a new base 21.5in model along with the same-sized Retina 4K version, as well as a 27in 5K iMac and a stunning iMac Pro.

Why are they interesting?

As well as seventh-generation Intel processors and bright displays, the iMacs include Thunderbolt 3 USB-C ports, high-spec graphics cards and faster solid-state drive options. The iMac Pro, meanwhile, is a true powerhouse. Unlike the other Macs, it comes in space grey and boasts up to 18-Core processors and 22 Teraflops of graphics-processor performance.

Do I really need them?

That depends on whether you want to jump ship from Windows. Apple's machines are always going to be more expensive than their PC equivalents, but these iMacs are – for the first time – powerful enough to support virtual reality and they are very well made.

When are they out and how much will they cost?

The cheapest non-modified iMac costs £1,049, going up to £2,249 for the 27in version (not including any extras such as extra memory or storage). The iMac Pro's launch is pencilled in for December and it's set to cost $4,999 (£3,860) – it might be worth sticking it on your Christmas list!

Your *ESSENTIAL* guide to

ENCRYPTING YOUR DATA

Don't leave your private files, activities and conversations accessible to anyone. **Wayne Williams** rounds up the best tools and methods for encrypting all your data across all your devices

Encryption is a hot topic in the news, what with the government threatening to ban it in the interests of national security and the nasty WannaCry ransomware causing widespread chaos. But there are plenty of non-criminal reasons to encrypt your data, and protecting your files, messages and browsing habits from prying eyes needn't mean you've got something to hide. After all, it's nobody else's business what you say and do on your PC, phone and on the web.

In this encryption special, we reveal the best free ways to encrypt everything in your digital life, and explain why you might want to do so. Over the following eight pages, we look at how to secure your communications; encrypt files and folders; prevent anyone from spying on your browsing (and that includes your ISP); and protect all your devices.

We also look at the controversy currently surrounding encryption and examine how it actually works.

ENCRYPTION FAQ

What is encryption?
Encryption is the process of encoding messages and information so they can only be accessed by authorised parties, usually via a key that's generated using an algorithm. The encrypted data can only be decrypted by another party in possession of the key.

Are there different types of encryption?
The two main types of encryption are symmetric and asymmetric: symmetric uses the same key for both encryption and decryption; asymmetric uses a combination of a private and a public key. The private key is kept secret by the owner while the public key is shared for anyone to use to encrypt messages – PGP (Pretty Good Privacy) is one of the most widely used public-key encryption methods. Data encrypted with the public key can only be decrypted with a corresponding private key.

What is end-to-end encryption?
End-to-end encryption – as used by messaging services such as WhatsApp and iMessage, as well as online banks and security companies – is asymmetric. It is commonly used to prevent third parties from intercepting and reading sensitive and private data because it virtually eliminates the risk of messages and documents falling into the wrong

Home Secretary Amber Rudd has been criticised for her hazy grasp of encryption

hands. Anyone who intercepts the encrypted data without the private key will only see gobbledegook or nothing at all.

What are the arguments against encryption?
Following the Westminster terrorist attack on 22 March, it emerged that Khalid Masood had used WhatsApp seconds before carrying out his crimes. Home Secretary Amber Rudd was frustrated that the intelligence services were unable to access his encrypted messages to search for clues, and she called for tech companies to include 'backdoors' in encryption, saying: "There should be no places for terrorists to hide". This led the *Guardian* to criticise her "hazy grasp" of the technology. Rudd repeated her call to weaken encryption services after the London Bridge attack on 4 June, suggesting her grasp still hadn't improved.

Are such backdoors possible?
No. Encryption is binary, so either something is encrypted and therefore

secure from everyone, or it's not. There is no in-between. WhatsApp's end-to-end encryption is there for a reason: to prevent cybercriminals, hackers and snoopers from seeing what users are sending each other. It's so effective that WhatsApp itself is unable to see the content of messages.

The only way to break encryption by introducing a 'backdoor' would be to ditch the encryption altogether. The only other option is to ban all services that use end-to-end encryption, but this would only drive terrorists and criminals to find alternative tools.

> **" The only way to break end-to-end encryption would be to ban it altogether "**

Why don't more companies use encryption?
That's a question for those companies to answer. The technology is certainly there. Even Google, which is increasingly forcing websites to use encrypted HTTPS connections or else slip down its search results, only encrypts your Gmail messages on its own servers and not during transit. Similarly, most Android devices aren't encrypted by default, whereas all passcode-protected iPhones and iPads are. Indeed, Apple caused controversy last year when it refused to let the FBI gain access to a password-protected iPhone belonging to a gunman.
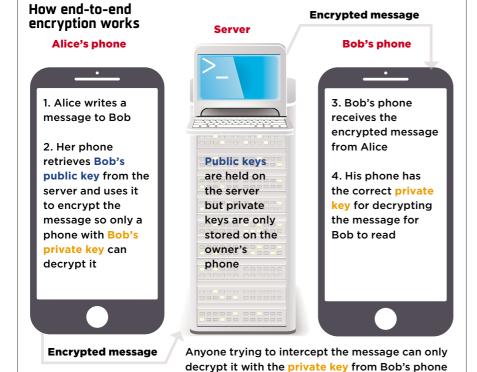
How do I ensure that my data is encrypted?
Well, that's the purpose of this essential guide. Most encryption tools are free and very straightforward to use, and we've rounded up what we believe are the very best available. It's surprising how much content – both on the web and on your PC – remains unencrypted, when it so easily could be, so we hope the advice in this feature helps to put your mind at rest about keeping your data secure and private.
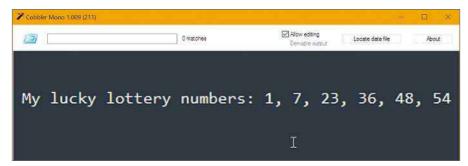
Can I encrypt anything?
Just about, although some websites limit the use of third-party encryption tools. We think you'll be pleasantly surprised at all the different types of data that can be encrypted nowadays. Naturally, we're not encouraging you to encrypt other people's files without their permission, which would also require devious malware-writing skills!

How end-to-end encryption works

Alice's phone

Server

Encrypted message

Bob's phone

1. Alice writes a message to Bob

2. Her phone retrieves **Bob's public key** from the server and uses it to encrypt the message so only a phone with **Bob's private key** can decrypt it

Public keys are held on the server but private keys are only stored on the owner's phone

3. Bob's phone receives the encrypted message from Alice

4. His phone has the correct **private key** for decrypting the message for Bob to read

Encrypted message

Anyone trying to intercept the message can only decrypt it with the **private key** from Bob's phone

The process of asymmetric encryption is essentially a tale of two keys

Use Cobbler to encrypt personal notes so no one else can read them

Office provides several ways to protect documents, including encryption

Encrypt your plain text

Plain text is fine for jotting down notes, but it's not appropriate for sensitive information such as a list of passwords, or your bank or credit-card details. However, many people use it for just such purposes: indeed, Chrome even includes a feature to export a list of your passwords in plain-text format.

Fortunately, there are numerous programs you can use to secure these confidential details to stop anyone reading them. One of our favourites is Cobbler (bit.ly/cobb426), a tiny tool

Secure your passwords using free tool Dalenryder Password Generator

that encrypts your notes and is very easy to use – just run the software, enter a master password and type in the text you want to protect.

Another program worth looking at is Dalenryder Password Generator (bit.ly/password423). This is a security tool that creates and manages passwords and PINs, but also includes a powerful Encryption Tool that can secure text. We featured the program as our lead tool in Best Free Software in Issue 423 (bit.ly/webuser423).

Lock Microsoft Office files

You can password-protect Word, Excel and PowerPoint files directly within Microsoft Office. The process varies depending on which version of the suite you're running, but if you have a newer version of Office, simply click File, Info and select Protect Document. You can make your file read-only (final), forbid editing, restrict access, add a digital signature and password-protect it.

As is the case with most encryption, when securing an Office file in this way,

be careful not to lose or forget the password because there's no way of recovering it. Anyone opening the locked file will be prompted to enter the correct password to gain access.

Create secure PDF files in Office

Microsoft Office lets you save documents directly to PDF format: just click File, Save As and select PDF in the 'Save as type' box. To encrypt the file at

When you create a PDF in Microsoft Office, you can encrypt it, too

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⚙ MINI WORKSHOP | Encrypt your online storage folders using Viivo

1 You'll need to create a Viivo account and verify it before you can begin using the software. Once that's done, right-click the Viivo icon in the system tray and open the Manager. Your details – including name, email and password – are stored under Account. **1** To protect a service, click Lockers **2** and choose Create New. **3**

2 The next step is to select a folder to secure. **1** Click the magnifying-glass icon and browse to a synced cloud folder. You can also select one of the popular folder locations (for Dropbox, OneDrive or Google Drive) by clicking the relevant button. **2**
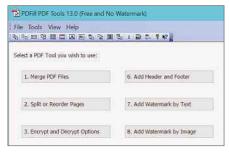

3 You'll be asked if you want Viivo to keep a decrypted copy of your files somewhere (just in case), and sync will be enabled or disabled accordingly. The secured folder will appear under My Lockers **1** and can be shared. **2** Open Settings. **3** The menu offers options to set up filters and enable filename encryption. **4**

the same time, so that unauthorised people can't view its contents, click the Options box underneath. Under PDF Options, tick the option to 'Encrypt the document with a password'. You'll then be asked to enter a password twice. This needs to be between six and 32 characters in length.

Encrypt PDF files using PDFill Tools

PDFill Tools (bit.ly/pdfill426) offers a selection of useful functions for PDFs, including the ability to encrypt or decrypt your files. It supports both Adobe Standard 40-bit and Adobe Advanced 128-bit encryption, and password-protects PDF files to prevent them from being printed, copied, changed, filled, extracted, signed or merged.

PDFill protects your PDFs to stop them being copied, edited or printed

Hide and encrypt files and folders

You can keep personal files on your computer safe from prying eyes by using Wise Folder Hider (bit.ly/ wise426). This free tool can hide files, folders and even connected USB drives so they aren't visible in Windows Explorer unless you 'unhide' them by entering a password in the software.
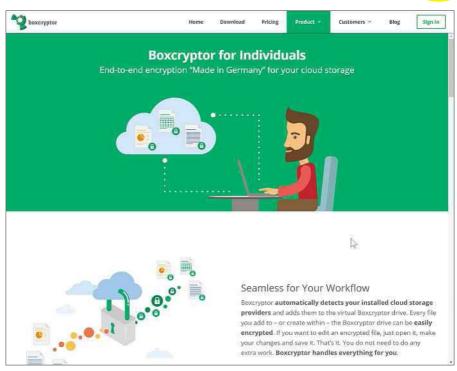
Upgrading to the Pro edition for £19.32 lets you encrypt your files and folders, as well as simply hiding them, making it almost impossible for snoopers to access your private content.

Hide your personal folders so that nobody even knows they're there

Encrypt files stored in the cloud

Most people keep at least some of their important personal data in the cloud using online-storage services such as Dropbox, Google Drive and OneDrive. If you're concerned about how safe your files are in these services, you can secure them using the excellent tool

Protect the files that you store in cloud services by using Boxcryptor

Boxcryptor (www.boxcryptor.com). This is free for personal use and supports more than 20 popular cloud-storage providers. It's available for Windows, MacOS, iOS, Android, BlackBerry and Chrome.

Like Boxcryptor, Viivo (www.viivo .com) encrypts your files before they are synced to popular cloud-storage services including Dropbox, Google Drive and OneDrive. It's available for Windows, MacOS, iOS and Android, and as well as encrypting your files, it can compress them to save space.

See our Mini Workshop on the opposite page for instructions on how to use Viivo.

Share your private files securely

If you want to send a private file to someone over the internet, you should encrypt it beforehand. There are lots of ways to do this, but Secureshare (securesha.re) is one of the easiest. This website encrypts the file on your PC using 128-bit AES encryption before uploading it to the web server and
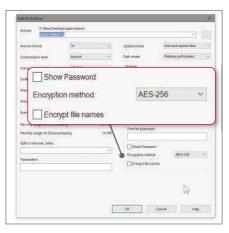
Secureshare lets you encrypt files without downloading any software

generating a self-destructing URL and password. Send both to your recipient (preferably using separate means, for extra security) and they'll be able to download and unlock the file. You can select the number of times the file can be downloaded or how long it's available for.

Encrypt compressed archives

Whether you want to encrypt a few files for emailing or archive a large amount of content for secure safekeeping, 7-Zip (www.7-zip.org) is the perfect tool for the job. Add some files to the free compression tool and enter a password to lock the archive. The program can encrypt both 7z and ZIP files using powerful AES-256 or ZipCrypto (ZIP only) methods. The AES option lets you encrypt the file names as well to prevent people guessing their contents.

7-Zip offers two reliable encryption methods to keep your archives private

Chat completely securely in WhatsApp

WhatsApp (www.whatsapp.com) uses end-to-end encryption to keep your messages private – something which the Home Secretary, Amber Rudd, called "completely unacceptable" back in March, before later backtracking. WhatsApp's protection means that, provided you and the person you're chatting with are using the latest version of the app, all communications are

WhatsApp lets you check that your messages and calls are encrypted

secure and not even WhatsApp itself can see them. Encryption is turned on in the app by default – there's no need to enable it manually. However, if you want to check that your messages are secure, tap the three-dot menu in the top-right corner, select 'View contact' and under Encryption, you should see a notice stating that all chat and calls are secure. To verify this, click the note and scan the displayed QR code on your contact's phone, or vice versa.

Have Secret Conversations in Messenger

Secret Conversations is a useful hidden feature in Facebook Messenger for Android and iOS that lets you send end-to-end encrypted messages to your friends. The option isn't enabled by default and you have to start a new private conversation – rather than just continue an existing thread – to use it. Also, it doesn't work in group chats.

To start a secret conversation, tap your profile photo and scroll down to Secret Conversations. Open this option and make sure the feature is turned on

Facebook's Secret Conversations feature lets you encrypt your chats

(enable it, if it isn't). Next, tap the New Message button and select the Secret link in the top-right corner. Choose a friend from your contacts and start writing a message. The recipient has to agree to enter a Secret Conversation with you.

Text and call securely using Signal

A growing number of chat apps – including the aforementioned WhatsApp and Facebook – use end-to-end encryption to keep your conversations private, but Signal (whispersystems.org) is more secure than most. This free app, which is used and recommended by NSA whistleblower Edward Snowden, doesn't store information about its users and lets you chat securely to contacts in your existing phone and address book.

Available for both iOS and Android, the app lets you send hack-proof text, and picture and video messages to individuals or groups, and also make secure phone calls. Most recently, the developer added support for end-to-end encrypted video calls.

See our Mini Workshop, below, to find out how to use Signal.

Secure your Gmail messages

Although Gmail offers encryption over an HTTPS connection when you're reading and writing messages, it doesn't encrypt them while they're in transit. You can significantly increase your privacy by installing the CryptUp (cryptup.org) extension for Chrome and Firefox, which secures messages and attachments sent through Gmail in your

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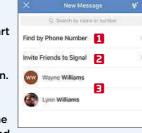
⚙ MINI WORKSHOP | Chat to people securely using Signal

1 The first time you open the app, you're prompted to enter your phone's country code **1** and number. **2** When that's done, tap Activate This Device. **3** If you already have a Signal account, you can tap this link. **4** You're sent a code to verify phone ownership. Enter this to complete the activation.

2 You're now ready to start your first Signal conversation. Tap the Compose button at the top right, and grant the app access to your contacts. You can search for someone by name or number, **1** and invite friends to install Signal. **2** Contacts who already use the app will appear below. **3** Choose someone to chat with.
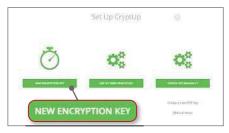
3 Start typing a message. You can add an attachment or record a voice message. If you tap the contact's name, you can verify the encryption **1** and enable disappearing messages, **2** which vanish once they've been read. You can mute conversations **3** and block a nuisance user. **4** Tap Edit **5** to customise the contact info.

Add end-to-end encryption to Gmail messages by installing CryptUp

browser using PGP (Pretty Good Privacy) end-to-end encryption. It works by adding a Secure Compose button to Gmail so you can quickly send secure messages whenever you need to. If your recipient doesn't have CryptUp installed, or any other email encryption for that matter, you can secure your messages or files with a password.

CryptUp's developer is planning to release Android and iOS apps, along with an Outlook add-in, later this year.

Use MailStore Home to stop your old emails being read by unauthorised people

Encrypt your email backups
MailStore Home (bit.ly/mshome426) backs up all your emails, and works with any mail provider including Gmail and Outlook.com. Just select the service(s) to back up and it will get to work. You can password-protect the archives, and the software fully encrypts all databases to make it impossible for anyone other than yourself to view the messages.

BROWSING
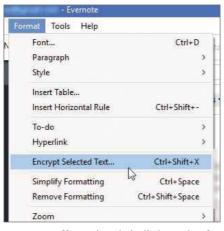
Encrypt your DNS requests
As we explained in our 'Hacker's Guide to Faster Internet' cover feature in Issue 424 (bit.ly/webuser424), DNS (Domain Name System) is the service used to translate site names into IP addresses that web servers and internet routers can understand. When you type a website name into your browser, a DNS server will look up the IP address that's linked to it. Unfortunately, attackers can eavesdrop on these requests to see which sites you're visiting, or spoof DNS services and redirect you to a fake site. Simple DNSCrypt (simplednscrypt.org) is a useful free tool that encrypts your DNS requests to make sure nothing is interfered with, and to stop hackers stealing your data.

Encrypt your DNS requests to stop hackers sending you to fake sites

Encrypt content inside Evernote
If you use Evernote to store information – such as content from the web, personal notes or account details – you can encrypt anything that's for your eyes only. Just open the note, highlight
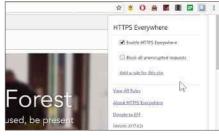
Evernote offers a handy built-in option for encrypting saved content

the part you want to encrypt, right-click it and choose to Encrypt Selected Text. When prompted, enter a passphrase to lock the section. When you want to view that text in future, click it and select 'Show encrypted text', then enter the passphrase. You can't encrypt an entire note or notebook.

Always access secure versions of sites
A growing number of websites now offer the secure HTTPS (Hyper Text Transfer Protocol Secure) version by default and will switch you to it automatically if you try to go to the non-secure HTTP version. This protocol encrypts your data to stop snoopers, including your ISP, from being able to tell which pages you visit on a site.

However, not every website

Force websites to encrypt your data by using HTTPS Everywhere

automatically redirects you, which is where HTTPS Everywhere (bit.ly/https426) comes in. This essential add-on for Chrome, Firefox and Opera automatically sends your browser to the secure version of a site – if it exists. In other words, if you only type in the basic address, you'll still end up on the secure site. It's updated regularly with new rules to cover additional sites, and lets you block all unencrypted requests by default. HTTPS Everywhere can also be installed in Firefox for Android.

Hide your searches with a duck and a bear
Searches performed in Incognito or Private Browsing mode aren't secret because, although the details of what you've searched for aren't recorded on your PC or mobile device, the search provider (Google or Bing, for example) still keeps a record of them. The best way to hide your searches is to use a VPN tool such as TunnelBear (www .tunnelbear.com) to disguise your browsing location. You need to log out

of your Google or Microsoft account before running any searches or use DuckDuckGo (duckduckgo.com) instead, so your searches aren't stored.

One important note: you may have used encrypted.google.com in the past, but don't make the mistake of thinking your searches there are any more secure. This is an outdated redirect that
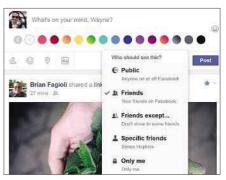
Use DuckDuckGo with TunnelBear to disguise all your searches

was in use before Google switched all searches to the secure HTTPS protocol. You're just as safe using the regular Google search these days.

Restrict your social-media posts

The whole point of a social network is that people see your posts, but you can limit this to only friends or even just yourself. When you make a new status update, click the down button next to Post and choose who sees it – Public, Friends, Friends Except, Specific Friends or Only Me. Be aware that when you tag someone – in a photo, for example – all their friends will be able to see that post. To keep something between just you and the person you've tagged, share


Control who sees your posts and photos on Facebook

it via Facebook Messenger instead, and use that tool's end-to-end encryption (see the tip on page 42: 'Have Secret Conversations in Messenger').

DEVICES

Add a secure external drive

If you have a lot of personal files that you don't want falling into the wrong hands, you can store them on a PIN-authenticated, tamper-proof USB drive. The diskAshur Pro 2 range (istorage-uk .com) offers drives in 500GB, 1TB and 2TB capacities, and uses XTS-AES 256-bit hardware encryption. You lock and unlock the drives by typing a PIN on the keypad on the front. The drive automatically locks itself after a period of inactivity and can "self-destruct" if someone tries to break in. The drives are priced from £209.

The same company also sells secure USB flash drives with a built-in keypad that work in the same way. These cost from £69 for an 8GB drive.

Invest in an encrypted USB drive to protect personal files

Secure your hard drive with BitLocker

BitLocker can protect your files and folders from unauthorised access by locking your drives. The feature was first introduced in Windows Vista and has been included in all subsequent updates of Microsoft's OS, although it's only available in the Ultimate and Enterprise editions of Windows 7; the Pro and Enterprise editions of Windows 8+;

The Windows tool BitLocker provides a simple way to encrypt your files

and the Pro, Enterprise, and Education editions of Windows 10.

The tool scrambles the contents of your drive and then unscrambles it when you enter your password – so if your computer gets stolen, your data will still be safe. To use it, either right-click a drive letter in File Explorer and select 'Turn BitLocker on'; or type `BitLocker` into the Search box, launch the Manage BitLocker control panel, and turn the feature on or off for any drive there.

Secure everything you do your PC

Tails (tails.boum.org) – The Amnesiac Incognito Live System – is a privacy-focused live Linux operating system that you can boot into from a DVD, USB
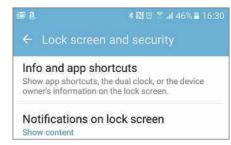
Switch to the Tails operating system to encrypt everything you do

memory stick or SD card. Use it to encrypt your files, emails and instant-messaging chats, and browse the web anonymously. You can boot into it whenever you need privacy and it's very easy to set up and use.

Encrypt your Android device
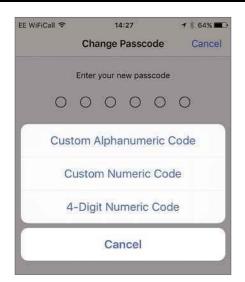
Not only can you encrypt your Android phone or tablet's data, you can also secure the device's SD card (if you have one). The process varies depending on the version of Android you're running, but usually you just go to Settings and tap 'Lock screen and security'. Scroll down to 'Encrypt device' or 'Encrypt SD card'. You need to plug your phone into a power source because the encryption process can take an hour or more to complete (the device should be at least 80% charged). Make sure you don't interrupt the encryption process at any point because this can lead to a loss of data.

Encrypt your whole Android phone or tablet, or just your SD card

Encrypt your iPhone or iPad

Apple devices are automatically encrypted, provided you use a passcode. The trick to making sure your device remains secure is to pick a strong six-digit passcode (rather than the default four digits) or – best of all – an alphanumeric key of any length. To do

Make sure you use a passcode to keep your iOS device encrypted

this, go to Settings, Touch ID & Passcode and enter your existing PIN. Tap Change Passcode, enter your PIN again and then tap Passcode Options.

Lock your Samsung phone with Knox

If you have a Samsung device, such as a Galaxy S7 or S8, you can use Knox to remotely lock it or set it to automatically encrypt all of your data. This prevents access to both your internal and SD card storage. Entering your Knox password will decrypt the data. Knox uses a very strong 256-bit AES cipher algorithm to encrypt data on the device.

Samsung's Knox technology encrypts all your data automatically

WHICH IS THE STRONGEST ENCRYPTION?

One of the most confusing aspects of encryption is the array of algorithms – each of different strengths and sizes – used by various tools and services. Here's a brief guide to the most common encryption standards

AES

Advanced Encryption Standard (AES) – also known as Rijndael – is the industry-standard symmetric encryption algorithm used by the US government to protect classified information. It's considered impervious to all attacks. AES offers three different key lengths: its default of 128-bits, along with keys of 192 and 256 bits for heavy-duty encryption purposes.

Camellia

This Japanese-developed symmetric algorithm is used by popular encryption programs such as VeraCrypt and GNU Privacy Guard. Like AES, it creates keys of 128, 192 and 256 bits and has never been broken. Camellia is also used by TLS, the standard technology for creating an encrypted link between websites and your browser.

Twofish

Twofish is a symmetric encryption algorithm that creates key sizes of up to 256 bits. It's renowned for being fast, flexible and efficient, and is often the encryption algorithm used by password-management tools and secure-payment systems.

RSA

RSA is an asymmetric encryption algorithm that creates keys with at least 128 bits. RSA keys of this length have been broken in a matter of seconds, so security experts now recommend that keys of 1,024 bits or more be used.
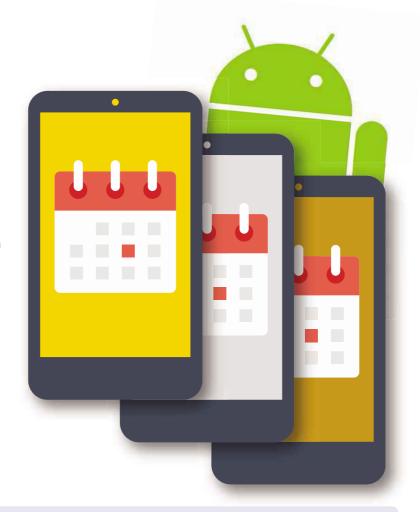
Triple DES

The original Data Encryption Standard (DES) algorithm was eventually recognised as being easy to crack. It was replaced by Triple DES, which uses three keys of 56 bits each (168 bits in total) – once considered the industry standard – but this, too, is now being phased out. ∎

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43 AMAZING FREE APPS TO IMPROVE YOUR LIFE

The best Android and iOS apps you're not using – but should be

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Best Android Calendars

Google Calendar comes installed as standard on most Android devices, but is there a better alternative? **Edward Munn** finds out

Google Calendar | **Free** | bit.ly/googlecal426 | ★★★★★
FEATURES ★★★★☆   PERFORMANCE ★★★★★   EASE OF USE ★★★★★   VALUE FOR MONEY ★★★★★

What we liked:
Google Calendar is compatible with all popular calendar formats including Microsoft Exchange, which makes it perfect if you have several calendars spread across different work and home accounts and need one app to display them all. The app's sidebar lets you quickly and easily choose which calendars are visible, toggling them on and off with a single tap, and you can also choose to show Google Reminders, if you use it.

It offers the full range of different viewing options, including Schedule, Day, 3-Day, Week and Month; and tapping the down-arrow at the top of the screen displays a split view, so you can quickly jump to another date.

To add a new entry, you simply tap the '+' button, but a significant perk of Google Calendar is that you can also dictate details of an event using the virtual assistant that comes installed on most Android devices — just say "OK Google". The app also recognises 'natural language', which means that when you type (or speak) names, times and places, Google suggests relevant information to help complete the entry. If you give it permission, it'll also add events such as flights and other appointments from your Gmail inbox.

One of our favourite features is that if an entry includes an address, images of the location are displayed in the 'Schedule' view, to help you identify it easily. For everyday activities (without addresses) such as a lunch meeting, going for a run or having a haircut, Google displays its own clip art.

Schedule and Month widgets let you display upcoming events on your Home screen, and there's a handy Goals tool that prompts you to be more productive. Suggestions include exercising, learning a skill and making time for friends and family, but they're only suggested when they won't clash with existing entries in your schedule.

How it can be improved:
There's very little to criticise about Google Calendar, but some users will be put off by its lack of customisation options and small range of widgets. Another inconvenience is that for more complex actions, you sometimes have to use the Google Calendar website instead of the app.

OUR VERDICT
Google Calendar offers the perfect combination of usability and features. Adding entries to your schedule has never been so quick and easy.

Sol Calendar | Free | bit.ly/solcalendar426 | ★★★★☆
FEATURES ★★★★☆ PERFORMANCE ★★★★★
EASE OF USE ★★★★☆ VALUE FOR MONEY ★★★★★

WebUser SILVER AWARD

What we liked: Sol Calendar distinguishes itself from the other calendars created by smaller developers in this round-up because it's totally free, so you won't be bothered by pop-ups asking you to upgrade to a Pro version. Like Google calendar, it supports all popular calendar formats (including Exchange) and doubles up as a to-do list tool that can be synced with Google Tasks.

The app's interface is simple and easy to use, and offers three different views, which can be easily accessed by swiping left and right. Its standout features are that it shows the weather forecast for the next week on the month view; and, every morning, it sends you a notification prompting you to view a summary of the day ahead.

As in Google Calendar, you can set personal goals. Sol Calendar also offers an excellent range of widgets and lets you mark important events with stickers, so they are easy to spot at a gance.

How it can be improved: Although the widgets have themes, you can't change the overall colour scheme. The app's interface is perfectly functional, but we found its design less appealing than our other award winners.

OUR VERDICT
It's not particularly pretty, but if you're looking for a free app that integrates multiple calendars with a to-do list, Sol Calendar is our recommended choice. Sadly, there's no support for 'natural language' input, as there is in our Gold and Bronze Award winners.

Today Calendar | £3.59 | bit.ly/today426 | ★★★★☆
FEATURES ★★★★☆ PERFORMANCE ★★★★☆
EASE OF USE ★★★★★ VALUE FOR MONEY ★★★☆☆

WebUser BRONZE AWARD

What we liked: Today Calendar is a highly intuitive app with a great-looking design that's reminiscent of Google Calendar. Like its rival, you can choose from Split, Agenda, Day, Week and Month views. It also has an 'Invites' view (accessed further down the sidebar) showing a summary of all the events you've been invited to (as opposed to those you've created yourself), with filters for Open, Accepted, Not Sure and Declined. If you need to change your response to an invitation, this is the quickest way to do it.

We particularly like Today Calendar's 'Busy Body' tool, which helps you see, at a glance, how busy any day is, so you know immediately if there's time to squeeze in another meeting or not.

Today Calendar offers an excellent range of customisable widgets and, unlike our other award winners, you can also pick the app's colour scheme.

How it can be improved: After the 7-day free trial, you have to pay £3.59 to keep using Today Calendar. Unlike our other award winners, the app only supports events and not to-do lists or tasks.

OUR VERDICT
If you're prepared to pay a small fee for a calendar app, we'd recommend Today Calendar above any other. It offers great tools that you won't find in Google Calendar and has an elegant interface that's both intuitive and free from unnecessary distractions.
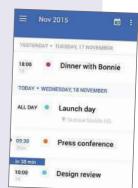
BEST OF THE REST

Outlook | Free
bit.ly/outlook426
Outlook was the only app we tested that offers email and a calendar in one place, and it also includes Word, Excel and Powerpoint integrations to help you work on the go. Unfortunately, we found the app was very temperamental: on more than one occasion, our events disappeared, reappearing only when we created a new event.

DigiCal | From free
bit.ly/digical426
DigiCal was unlucky to miss out on an award. Along with an excellent interface and impressive selection of views and widgets, the app offers some innovative features including the option to import sport calendars and TV schedules directly into your schedule. However, you need to pay £3.50 a year to unlock these calendars and a further one-off fee of £4.99 to unlock the app's other premium features. The free version is supported by ads.

Business Calendar 2 | From free
bit.ly/business426
Business Calendar 2 is a powerful event planner and task-management tool, perfect for anyone with a very busy schedule. However, as its name suggests, its complex interface is probably overkill for most casual users and unlocking the app's Pro features – which include weather forecasts, advanced widgets and themes – will cost you £3.99.

Speed up your software updates

Beat the crowd and get the newest features for Windows and your browser before everyone else. **Edward Munn** explains how to install software updates as soon as they're available

Join the Windows 10 Insider program

The only way to make sure you get Windows 10 updates before anyone else is to join the Windows Insider Program. After enrolling, you can choose whether to receive updates on a Fast, Slow or 'Release preview' ring. The Fast ring gives you new builds as soon as they're available, but risks making your PC unstable; the Slow ring gives you early access to builds with minimal risk to your devices; and the 'Release preview' lets you access updates to the latest version ahead of their public release.

To sign up, visit insider.windows.com, click Get Started and log into your Microsoft account. You'll be asked to accept a number of warnings about the potential instability and security vulnerabilities of installing early builds. Click Submit, then open Windows 10's Settings menu and select 'Update & Security'. From here, click Windows Insider Program in the left-hand column, make sure the appropriate Microsoft account is listed and click

'Get started'. After following the instructions on screen and restarting your PC, you'll be able to choose your 'Insider level' (Fast, Slow or 'Release preview') from the Windows Insider Program menu.

You can leave the Insider Preview at any time by clicking 'Stop Insider Preview builds', or else pause them for up to seven days. Bear in mind that in some cases, you may have to reinstall Windows after leaving the Insider Preview.

Install Windows 10 updates manually

Installing updates is mandatory in Windows 10, but that doesn't always mean you'll receive them right away. If an update becomes available and you haven't yet received it, you can install it manually by visiting the Microsoft Update Catalog (bit.ly/updatecatalog426). Search for the update you want (you need to know its number) and download the appropriate version for your PC – either 64-bit or 32-bit. To find out which version you need, type `system type` into the Start menu, open System Information and

look for the System Type entry. Click the link to download the MSU file and, once it's finished, double-click it to install the update.

Note that the Microsoft Update Catalog works best with Internet Explorer, but it's also compatible with Google Chrome and Microsoft Edge.

Install all Windows 10 updates at once

If you find that your PC is constantly installing updates, and this is stopping you from working effectively, you can trigger a handy option that lets you

pause updates for up to seven days. Open the 'Update & Security' menu from Settings, then click 'Advanced options' from the 'Update settings' menu. Scroll down and turn the Pause Updates button to On. When you're ready to download the updates, just switch the pause function off again.

From the same menu, you can also opt to put off feature updates for a chosen period. Find the entry that reads 'A feature update includes new capabilities and improvements…' and choose the number of days you'd like to delay them for.

Alternatively, another workaround stops Windows 10 installing anything but essential updates, so you can download and install all the other, less important ones at a time that suits you. For this to work, you need to set your everyday internet connection to a metered connection. Open the 'Network & internet settings' menu from the taskbar, click the appropriate network (you must be connected to it) and select Properties. From this menu, flick the switch for 'Set as metered connection'.

Remember, though, that failing to install Windows updates leaves you vulnerable to security exploits.

Keep Windows 10 apps updated

To install updates for Windows 10 apps as soon as they're available, you must have automatic updates turned on. To do this, open the Windows Store from the Start menu, select the Account menu and click Settings. Next, under App Updates, make sure that 'Update apps automatically' is switched on.

You can also check for updates manually by clicking the Account menu, then selecting 'Downloads and updates' and 'Check for updates'.
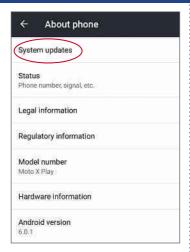
Switch to a beta or developer browser

If you want to jump ahead of the crowd and get the latest browser features before everyone else, you can install beta versions of Chrome, Firefox and Opera. As with any beta software, it's important to remember that they are

GET ANDROID UPDATES FASTER

Not all smartphone and tablet manufacturers make Android updates available to users at the same time: In May of this year, only 7% of devices were running Android Nougat, a smaller percentage than those running Android Jelly Bean, which was last updated in 2013. Google recognises this 'fragmentation', as it's known, and has promised to tackle the problem.

In Android O, there's a feature called Project Treble that lets manufacturers update their devices without having to make lots of tweaks to the software first. How well this will work in practice has yet to be seen but in the meantime, the only way to guarantee you have Android's latest features and security patches is to buy one of Google's own devices: the Pixel or Pixel XL. If you have a phone from another manufacturer, you can still check that you're running the latest available version of Android by opening Settings, 'About phone' and then tapping 'System updates'.
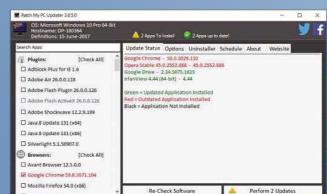
more likely to contain bugs, but by sending feedback (this is often done automatically) you can help to make the browsers better for everyone. Opera's built-in VPN is one example of an excellent feature that was made available to beta users long before it was pushed out to the wider public.

To get new features in Firefox, we'd recommend downloading the beta version from bit.ly/firefox426. This page also includes a Developer Edition, designed for web developers, and a Nightly edition, which pushes new features to you daily but carries greater risk of instability. For beta and Nightly versions for your smartphone or tablet, simply click the Android tab.

Chrome users will find a beta version of the browser at bit.ly/chromeb426, and for even faster updates, you can install Chrome Canary (bit.ly/chromec426). Again, the latter is aimed squarely at developers and early adopters, so it carries the risk of breaking down entirely. To get the beta version of Chrome

for Android, visit bit.ly/chromea426.

Like Chrome, Opera offers two different versions for early adopters: 'Opera beta browser' and 'Opera developer browser', both of which are available from www.opera.com/computer/beta.

Update all your favourite programs at once

Updating software that you've downloaded from outside the Windows Store is often tedious and time-consuming. Instead of tackling each program individually, you can use Patch My PC Updater (patchmypc.net) to update all your favourite programs at the same time. This handy portable application scans your PC and identifies any programs that have updates available. You can then choose which you want to update, and the software takes care of everything else.

To make sure all your programs are up to date without you having to remember to run Patch My PC Updater, you can set the software to perform scheduled updates automatically. ∎

Broadband Deals

Give your eyes a rest from your computer by taking our fortnightly challenges. Can you guess our song-title emoji and solve our word puzzle?

CAN YOU GUESS THE SONG TITLES FROM THE EMOJI?

1. 😋 👍 🐺
2. 😮 ➡️ 🐒
3. 😘 ⬅️ 🌹
4. 🐊 👞 👠
5. ⏰ 🕊️ 🕊️ 😢
6. 🦁 💤 🌆

WEB USER WORD PUZZLE

Enter the answers in the grid to reveal a computer term in the highlighted column

1. Author who created Tom Sawyer and Huckleberry Finn (4,5)
2. Soviet leader, 1982-84
3. Massachusetts island, south of Cape Cod
4. Genus of the monkey puzzle tree
5. Greek temple on the Acropolis of Athens
6. US cult TV series directed by David Lynch (4,5)
7. Romanian gymnast, the first to score a perfect 10 in the Olympics
8. 20th century Dutch artist

COMPETITIONS

WORTH £50 EACH

WIN 1 OF 3
KitSound Arena Matte Wireless Headphones
KitSound's new Arena headphones have a rechargeable battery that lasts up to 10 hours, and an in-line microphone for handling phone calls. You can change tracks and adjust the volume using earcup controls. To enter, email your address to webusercomp@dennis.co.uk with 'arena' in the subject line. For more info, visit www.kitsound.co.uk and follow @KitSoundUK on Twitter.

WIN 1 OF 4
Peli Vault iPad cases
In this competition we're giving away four Vault cases from Peli – two for the iPad Air 2 (£77.99), and two for the iPad Mini (£67.60). When it's closed, the case minimises impact to the screen; when open, it provides multiple viewing angles. To enter, email your address to webusercomp@dennis.co.uk with 'air' or 'mini' in the subject line, depending on which case you want. For more information visit www.pelimobileprotection.com/en.

Turn your videos into shareable memories with Movie Moments

Movie Moments is a Windows 10 app for creating short movies to share. Here's how to use it

Movie Moments: **bit.ly/momo426** | 🕐 20 mins | ⊞ Windows 10

I t's easy to share videos directly from your PC or smartphone, but Movie Moments lets you transform the clips into something more polished.

The free Windows Store app is designed to produce short, 60-second videos. You can quickly trim out the part you require and add background music, using either tracks provided in the app or songs from your own collection. Colourful captions are available in a range of styles, and the finished result can be shared via Windows Mail and Microsoft OneNote. Your moments can also be shared on Facebook, Facebook Messenger and Twitter, though you'll need to download each of the relevant apps from the Windows Store first.

MENU BUTTON
Click here to create a new film, open the Share box or access the About and Help options

SPLIT
Right-click the edit screen and you'll have the option to split the video and create a new section, or cancel your film

1 Getting started with Movie Moments is very straightforward. You can either 'Take a video' (if you're running the app on a device with a camera, such as a Windows laptop, tablet or phone) **1** or 'Pick a video' from your collection. **2** Most people will choose the latter, which is what we are going to do.

2 Browse your hard drive for the video that you want to use. Movie Moments supports all the major video formats, including 3GP, AVI, MOV, MP4, and WMV. Select your video and click Open. The clip will load **1** and you can preview it by clicking the Play button in the centre of the screen. **2**

3 Movies are restricted to a maximum duration of 60 seconds (after all, these are supposed to be "moments"). Move the left slider **1** to the start point, and the right-slider to the end point. **2** As you adjust these, the current total length is shown. **3** It won't let you go beyond 60 seconds.

4 There are two bubbles above and below the slider. The purple bubble **1** above the slider lets you add a title or caption, while the grey one **2** below moves you through the video to any point. If you go outside the selected portion, the screen will darken to indicate this.

5 Go to the point in the video where you want to add a caption and click the pink bubble. Type some text **1** and it will appear on screen. **2** Click the Styles button **3** to select a different design. **4** There are 17 styles to choose from but you can't change the caption's position.

CAPTION MARKERS
The purple markers on the time slider show where any captions appear

MUSIC
If you download the recommended songs, they will appear in a long list. Click a track's Play button to preview it or select a song to add it to your movie

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6 You can change a word to uppercase by selecting it in the bar below **1** and clicking the 'Emphasise text' button. **2** If you want the video to pause while the caption is on screen, click the 'Freeze frame' button. **3** Click Done **4** to return to the editing screen.

7 To see how the movie looks with your caption, click the Preview button. **1** After a few seconds, your movie will begin to play. To add a soundtrack, click the Music button **2** and choose between 'No music', 'Download recommended songs', 'Pick a song from my collection', and 'Mute audio from video'.

8 When you've finished making your movie moment, click Preview, then save **1** or share **2** it. If you're not happy with the finished result, click the Edit button **3** to return to the editing window and make additional changes. Right-clicking anywhere on this screen will bring up the option to start a new film.

Automate boring and repetitive Windows 10 tasks

Z-Cron: www.z-cron.com | ⏱ **20 mins** | 🪟 **Windows XP, Vista, 7, 8, 10**

One of the responsibilities of owning a house or a car is that you have to maintain it. Similarly, your PC will only function well if you perform certain routine jobs on a regular basis. We all know about these jobs, not least because *Web User* mentions them time and again: back up your data, scan for viruses and other malware, check that your hard drive is healthy and empty the Recycle Bin. Of course, knowing about these tasks is one thing, but getting round to doing them is another.

In this Workshop, we show you how to schedule tedious PC chores using Z-Cron, which offers a range of maintenance tools and lets you schedule other programs to run. We've also found a handy workaround that lets you run command-line programs with parameters, a feature that's normally limited to the paid-for version of Z-Cron.
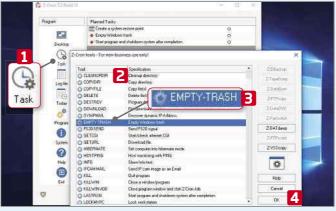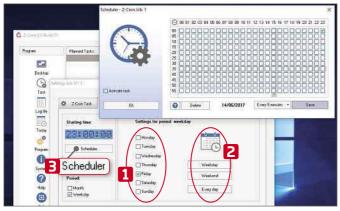
EXPERT TIP

Andy Shaw says

If you're having trouble getting a batch file to work, Windows 10 is probably forcing a '.txt' extension on it. To fix this, open File Explorer and find the batch file. Click the View tab and make sure the 'File name extensions' box is ticked. If your file has a '.txt' extension (such as 'norton .bat.txt', for example), click the file to highlight it, then click the name and remove the '.txt' extension.
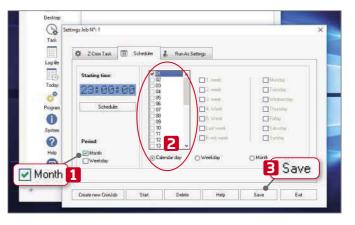
1 Z-Cron requires full access to Windows tools to perform certain tasks, which means you need to give it administrator rights every time you run it. To do this, right-click the shortcut icon you use to run the software **1** and choose Properties. Click the Advanced button **2** and tick 'Run as administrator'. **3** Click OK, then OK again.

2 To set up a task, click the Task icon **1** and the Tools button to choose from the long list of built-in tools that Z-Cron has to offer. **2** For demonstration purposes, click EMPTY-TRASH **3** to highlight it, then click OK. **4** This tells Z-Cron to empty the contents of the Recycle Bin regularly.
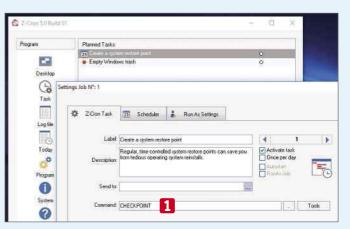
3 Select the Scheduler tab and decide how often you want to run the task. To choose the frequency, either tick a specific day on which to run the task **1** or click the Weekday, Weekend or 'Every day' buttons. **2** To choose a time, click Scheduler **3** and tick the appropriate box or boxes.
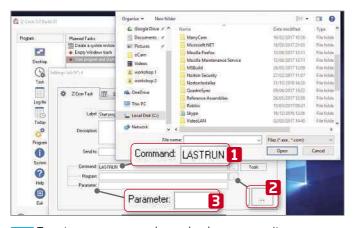
4 If you'd prefer to run your task on a weekly or monthly schedule, tick the Month box. **1** This lets you choose calendar days **2** or specific days, which can recur on specified weeks according to a repeating monthly schedule. Once you've set the schedule, click Save. **3**
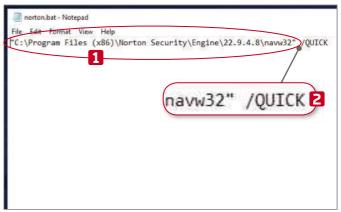
5 Your task will now appear in the list of Planned Tasks on the main screen. **1** You can double-click the task to change the schedule or, if you just want to change the time that it runs, right-click it and choose Schedule. **2** You can also Delete **3** the job or click Start **4** to activate it immediately (which is a good way to check that it works).
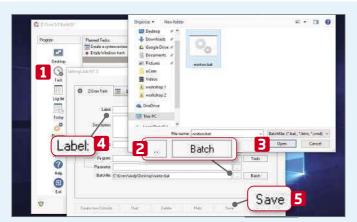
6 CHECKPOINT **1** is another useful tool. It creates a Windows system-restore point, and could be run once a week or a couple of times a month. If something goes wrong with your PC, this lets you roll Windows back to a time before the problem arose – the point when the system restore was created. This tool won't work without Administrator Rights.
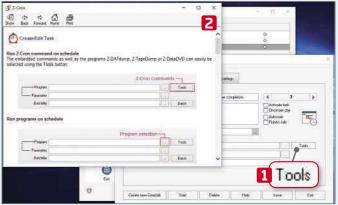
7 To set a program – such as a backup or security scan – to run just before your PC shuts down, choose LASTRUN. **1** You also need to specify the program to run. Click the Browse button next to Program **2** to find the program's EXE file on your PC. Sadly, the Parameter box **3** doesn't work in the free version, so anything you enter here will be ignored.


8 You can work around this limitation and run files with parameters by using a 'batch' file. This is a simple text file saved with a '.bat' instead of a '.txt' extension . Open Notepad and type the full location and filename of the program you want to run in double quotation marks (" "). **1** Leave a space, then add the parameter, usually preceded with a '/'. **2**

9 To run a batch file in Z-Cron, click the Task button, **1** then the button to the left of Batch. **2** Locate the file and click Open. **3** Name the task in the Label box, **4** click Start to test that it works properly, then click Save. **5** You can do this with most security software and many Windows tools. Search online for your software and 'command line' to see what works.

10 You can also associate a batch file with another tool, such as LASTRUN (see Step 7) by first selecting the batch file, then adding the tool from the Tools button. **1** Z-Cron isn't the easiest software to use, but if you press the F1 key at any time, a help window **2** will open to guide you through the section of the program you're using.

Share files without using email or cloud uploads
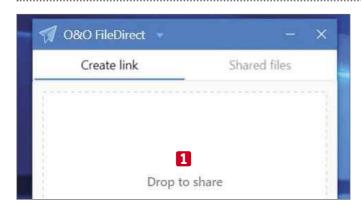
O &O FileDirect is a free, lightweight program that lets you share large files with others. It's quick, secure and uses a simple drag-and-drop interface.

Although you have to download and install the software to use it, there's no need for the recipient to do this because file transfers are controlled from your PC and can be received in most popular browsers.

O&O FileDirect: bit.ly/oofile426 | ⏱ **10 mins** | 🪟 **Windows 7, 8, 10+**

1 Download O&O FileDirect and follow the instructions on screen to install the program. Run the software, then drag and drop the files (or folders) you want to share to the cut-out area. **1** A sharing link appears.
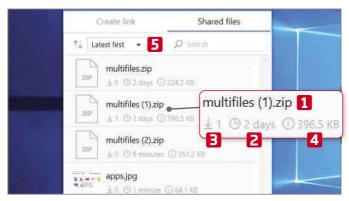
2 Click Copy **1** to copy the sharing link to your clipboard or use the buttons to share it via email, Facebook or Twitter. **2** When you share this link with recipients, they can download the files directly to their PC. Your computer needs to be switched on for them to do this.
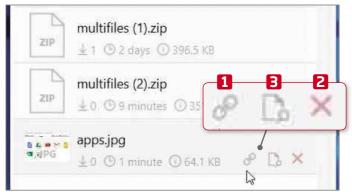
3 Recipients don't need to install O&O FileDirect, but they must open the link **1** in Firefox or Chrome, or another Chrome-based browser such as Opera. To share more files, simply drag them to the app to create a new, unique link.

4 Clicking the 'More settings' button lets you set a maximum amount of time or number of downloads **1** that your files are available for. To add an extra layer of security, simply enter a password in the appropriate box **2** and click Save. **3**

5 You can review all your shared files by clicking the 'Shared files' tab. This shows the file share's name, **1** how long ago it was created, **2** how many times it's been downloaded **3** and its total size. **4** Clicking the drop-down menu **5** lets you sort the list of shared files by newest, name or type.

6 Hover your cursor over a file to bring up buttons for copying **1** and deleting **2** the link (which stops it being shared). Alternatively, to locate a file on your PC, click the icon that looks like a magnifying glass on a sheet of paper. **3**

Browse faster by controlling your PC with an iPad

Browsing the web involves a lot of mouse work – clicking links, pressing buttons, opening menus and controlling various elements such as tabs and bookmarks. Quadro turns any iOS device into a control panel of shortcuts so you can perform many of these tasks with a single tap, leaving your mouse free to scroll and click links.

Quadro: www.quadro.me | 🕐 **10 mins** | 🪟 **XP, Vista, 7, 8, 10;** 🍎 **MacOS 10.9+; iOS 8.0+**

1 Install the Quadro app (bit.ly/qu426) on your iOS device and the PC software (from www.quadro.me/sync) on your PC. Make sure they are both connected to the same Wi-Fi network or via a USB cable. Follow the instructions on the iOS device. **1**

2 To use the app on your iOS device to open a browser on your PC, tap the star, **1** then tap Open Library and select your preferred browser from the list. **2** The app comes with preconfigured controls for Chrome, Firefox and Internet Explorer.

3 The app shows a selection of colourful buttons for controlling your browser. These work like shortcuts for your PC's screen. Tap New Tab, **1** for example, and a new tab will open in Chrome on your PC. Buttons with the corner cut off **2** have a sub-menu with more options.

4 Swipe up from the bottom of the screen to access the keyboard **1** and move the text cursor around using the arrow buttons. **2** The central bar **3** has Undo and Redo buttons, along with copy and paste. Return to the app by tapping the keyboard button. **4**

5 The app works with over 50 programs but only a handful are installed. To see what else is available, tap the star, then tap Open Library and Application. This lists the applications on your PC, **1** not all of which are available. Click Presets **2** to see the list of ready-made options.

6 The favourites list appears above Open Library when you tap the star. To add your most-used programs to this list, tap the stars by the names in the Open Library menu. **1** Quadro is customisable so you can set up your own tools but only in the $14.99 (£11.89) per year Premium version.

How to...

Enhance your PC and web security with a USB key

Wayne Williams shows you how to use two-factor device-based authentication to improve your security

Hardly a week goes by without news of yet another security breach, usually coupled with a request for users to change their passwords. Hacks aren't the only way your personal data can be compromised, though – there are phishing and keylogging scams to be concerned about, too.

The truth is that on their own, passwords don't always provide the high level of security your data requires. Fortunately, there are steps you can take to add a second layer of protection that will ensure your files and accounts can't be accessed, even if your passwords get leaked.

Two-factor authentication

The strength of two-factor authentication (2FA for short) is that knowing (or guessing) login details isn't enough to access an account. The 'something you know' element of a username and password is coupled with a physical item – 'something you own' – such as a mobile phone or a USB key. So, to log into a website, you would have to type a password (something you know), then enter a code sent to your smartphone (something you own).

2FA isn't new and you're likely to be familiar with it if you use internet banking. Some banks have been using customer card readers for over a decade. These devices act as a hardware token: you stick your bank card into the reader (something you own) and enter the PIN (something you know) – thus authenticating your details in two ways.

Most major websites – including Gmail, Facebook and Twitter – offer 2FA. As we explained last issue, it's worth setting up 2FA on each of those sites because they are likely to be the gateways to your most important personal data. The process varies slightly for each site, and you can either use your mobile phone (a code will be sent to you) or plug a FIDO U2F (Fast Identity Online – Universal 2nd Factor) USB security key into your

Yubico's FIDO U2F Security Key can secure a range of web services

Yubico has a selection of security keys to suit various devices

computer. The latter method assigns unique public and private keys to each web service, and only the USB key you used to set up the 2FA will log you in.

While using two-factor authentication provides extra security for your logins, it also means having to carry out an additional step – initially, at least. Once you've successfully logged in using 2FA,

Secure Dropbox and other cloud-storage services using a USB security key and two-step verification

you're given the option of storing your browser information. This means your information is recognised the next time you log in, and you can avoid the second step of entering a code or plugging in a USB key to access a secured site. The downside to this is that if you've set up 2FA and stored your browser info on a laptop that gets stolen, the thief will be able to log into your accounts without needing your phone or security key.

Yubico keys

Yubico (www.yubico.com) offers a selection of security keys for protecting your data. These are small, flat and have a hole in the top so you can carry them around on a keyring. The YubiKey 4 (expect to pay around £40) can be used to secure your computer and popular websites. It comes in three versions: YubiKey 4 (for standard USB ports), YubiKey 4C (for USB-C ports) and YubiKey 4 Nano (a smaller version that also works in standard USB ports). If you want to protect your Android phone as well as Windows, Mac and Linux computers, there's the multi-protocol YubiKey NEO with NFC (around £50).
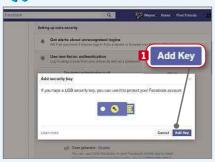
If you only need the USB key to secure web services such as Gmail and Facebook, there's the FIDO U2F Security Key (around £18). You can tell the difference between the FIDO U2F key and other Yubico offerings because it's blue (all the other products are black). It also has a golden key button in the centre of the device that flashes when connected.

One caveat with the FIDO U2F is that it only works with Chrome and Opera. We show you how to secure Facebook with a Yubico FIDO U2F key in our Mini Workshop, below.
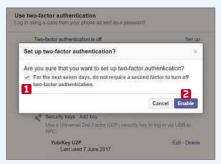
⚙ MINI WORKSHOP | Secure Facebook with Yubico FIDO U2F

1 To get started, open Facebook in Chrome or Opera. Log in as you would normally. Go to the Security and Login Settings page (bit.ly/fbsec426) and scroll down to 'Use two-factor authentication'. Click the Edit button. Find the Security Keys entry and click Add Key. **1** The 'Add security key' window opens.
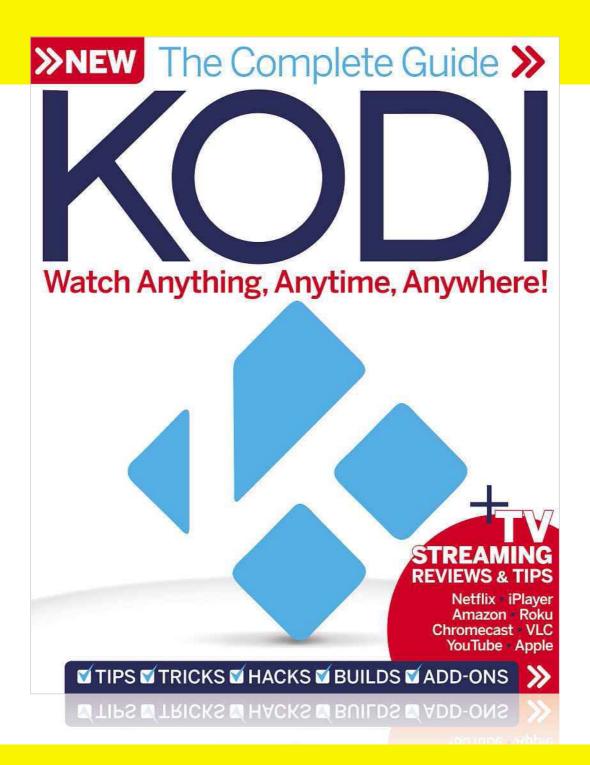
2 Click Add Key, then insert your device into a spare USB port. The gold button will flash. Press it. The key should be recognised and you'll be taken to the 'Name your security key' page. You can change the key name or accept the default. **1** Click Continue, **2** then click Set Up Two-factor Authentication.

3 Make sure 'For the next seven days, do not require a second factor to turn off two-factor authentication' is ticked, **1** then click Enable. **2** Log out of Facebook, then log back in. You'll be prompted to insert your key and press the button. Once you've done so, you'll be logged in.

Yubico keys have a hole for attaching them to a keyring, so they don't get lost

Lock and unlock your PC with Predator
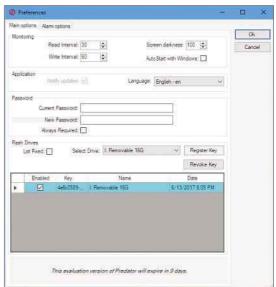
You can't turn a standard USB flash drive into a Yubico-style security key, but you can turn one into a key to lock or unlock your PC, preventing anyone from gaining access. The main benefit is that you won't need to enter a password to log into your computer; the downsides are that you lose the use of a USB port to the key while your PC is in use, and there's a risk that the key could be lost or damaged.

There are several tools you can use for the task, but the best known is Predator (bit.ly/ pred426). This used to be free, but it now costs $10 (£8). However, you can try it free for nine days to see if you like it.

The way Predator works is very straightforward. Once it's installed, you insert the drive into your PC when you want to use it. If you need to step away for any reason, take the key with you and Windows will lock itself so no-one will be able to use it. Reinserting the drive unlocks it again.

You can use the same USB flash drive on multiple PCs and protect several user accounts. Predator can also take pictures of any attempts at unauthorised access, log the time and even send you email alerts.

We show you how to set it up in our Mini Workshop, below. Just remember,
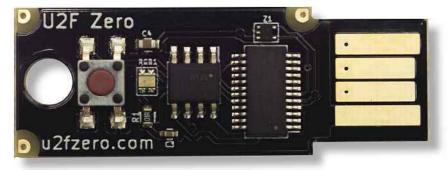
Right-click the Predator icon in the notification area to access its settings

Predator can't be easily bypassed and using Ctrl+Alt+Del won't work.

Make your own FIDO U2F USB key

It's possible to create your own secure FIDO U2F key, although it isn't as straightforward as you might think. You'll need to buy some components and solder everything together, then program the key. All the instructions you require can be found at bit.ly/u2f426.

You'll obviously save yourself a lot of time and hassle if you buy a ready-made key, but if you're looking for an advanced project to challenge yourself, you may enjoy giving this a try. ∎

Building your own FIDO U2F secure USB key requires some soldering and programming

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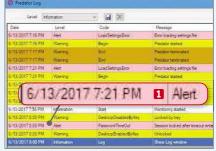
⚙ MINI WORKSHOP | Control access to your PC with Predator

1 Install Predator on your PC and launch the program from the Start menu. When prompted, insert the USB drive you want to use as a key and click the OK button. Make sure the correct drive is selected in the Flash Drives box. **1** If it isn't, switch to it in the drop-down menu.

2 Enter the password you want to use with the USB key. **1** You can opt to show it as you type. **2** Click OK. Predator will save the information to the USB key and then begin to monitor it, checking every 30 seconds that the drive is still connected. You'll see a green icon in the notification area.

3 If you unplug the drive, Predator will lock your PC. If you enter a password in time, you'll be able to access your computer – otherwise, you'll need to reconnect the drive. When you do, you'll be shown a log of all activity that's happened, including any login attempts. **1**

NEXT ISSUE **How To...** Find out if you need more memory – then install it

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STEP 3 Tap 'Subscribe'

available on
kindle fire

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STEP 2 Tap the 'Subscribe' button

STEP 3 Choose whether to create an optional Zinio account

STEP 4 Enter your Apple ID password to confirm

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Balance resolution with streaming quality

Streaming video sites such as YouTube can be accessed on a variety of devices, including computers, smart TVs, set-top boxes, phones and tablets. All these devices have different screen resolutions and connections speeds, and for this reason, videos are provided in a variety of resolutions from 4K down to 144p. Not all resolutions are always available – there's no point in boosting a video above the resolution it was filmed in – but when there is a choice, you will see smoother video streaming when a lower resolution is selected, particularly if you're experiencing choppy video at high resolutions.

Click the gear icon on YouTube and select Quality, or click HD on Vimeo. It may be set to Auto, which is usually fine, but manually selecting a lower resolution will help if your streaming is struggling.

It's worth thinking about the device you're watching on, too. Lower resolutions looks fine on a 13in laptop, but not on a 50in TV, which is to say that smaller screens can use lower resolutions and still look pretty good.

Choose a lower resolution if you are having streaming problems

Change your 'power plan'

If streaming is poor and video playback is stuttering, it may be because your PC is struggling to keep up with the video. Try turbo-charging your PC by switching its power plan. Open the Control Panel, choose Power Options and click 'Show additional plans'.

The 'Power saver' plan is great for making a laptop battery last longer, but it severely limits the computer's performance because the CPU and other components are set to their lowest power, which affects the software being run. Select the 'High performance' power plan and the computer runs at maximum speed, which helps when streaming video.

Wait before starting a video

It can take five minutes for Windows to settle down when you first switch it on, so don't try to start streaming as soon as Windows loads because your video might not be working at its best. Close any programs that are running and close all browser tabs except the one you are using. If the streaming service allows it, you could even download your video and watch it later.
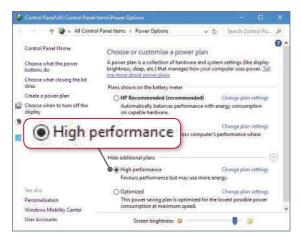
Switch off Wi-Fi

Wireless networking is great for connecting the mobile devices in your home, but the amount of bandwidth available is limited. If you live in a busy household or in a built-up area, you'll be sharing that bandwidth with other people on your network, and the wider bandwidth available to Wi-Fi with your neighbours' routers. It's not practical to turn everything else off when you want to watch streaming video, so consider going back to a cabled connection and choosing Ethernet instead.

At the back of the router, you'll find one or more Ethernet LAN sockets. Most computers also have a LAN socket. Connect the two with a cheap LAN cable, then turn off the WiFi on the computer. The wired connection will kick in automatically and should be noticeably faster and more reliable than Wi-Fi. There are no dead spots, no dropouts and nothing to interfere with the signal.

The downside is that the computer needs to be within reach of the router so you can plug in the cable. Ethernet can work over long distances, so

Try selecting the 'High performance' power plan if your video isn't streaming well

there's nothing to stop you from running a long cable from one room to another – just make sure no one trips over it!

Another way to span rooms using Ethernet sockets is with a pair of HomePlugs. These aren't as fast as an Ethernet connection but they usually offer a significant improvement over a poor Wi-Fi signal.

Clear the airwaves

If your computer is too far from the router to use Ethernet or you're using a mobile device that doesn't have Ethernet ports, you can try reducing the network traffic by turning off the Wi-Fi on your other phones and tablets. It's a bit of a hassle but it only takes a couple of taps on each device.

Switch to Game Mode

Security software performs a lot of tasks in the background, from downloading updates to scanning new files. This uses processing power and memory, and impacts the performance of your hard drive. To ensure that these background activities don't interrupt your gaming fun, some security suites provide a gaming mode. This keeps the software's activity to a minimum, and what's good for gaming is also good for video streaming. Look through your security software's settings to see if there's a gaming mode available.

Windows 10 Creators Update also has a gaming mode that should enable smoother video streaming by reducing background activities. Open Settings (Windows+i) and click Gaming. Select Game Mode on the left and, under Use Game Mode, flick the switch to On. If this works, you might want to set it to switch on every time you play a video. When you've got one playing, press Windows+G to open the Game Bar (say 'yes' when it asks if you're playing a game), then click the gear icon in the Game Bar and tick the box next to 'Use Game Mode for this game'.

There are other gaming tools that can also be used to iron out streaming problems. They work by temporarily stopping unnecessary programs and services, to boost processing power and memory. For a free option, try Razer Cortex (bit.ly/raz426).

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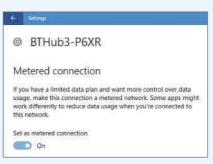
TAKE IT TO THE NEXT LEVEL
More advanced tips for when you're feeling brave

Enable metered mode

Windows and the programs installed on it are constantly checking for updates and syncing in the background, which slows down your PC and hogs internet bandwidth. This can affect video playback.

In Windows 10, you can use the 'Metered connection' tool to instruct Windows to override these programs. Open Settings (Windows+i) and click 'Network & Internet'. Select Wi-Fi on the left, then click the internet connection on the right. Switch on 'Set as metered connection', then right-click the OneDrive icon in the taskbar and select pause syncing. This limits background activities, leaving all the processing power and internet bandwidth for your video streaming.

Enable 'Metered connection' to stop Windows' background activities

Improve streaming to your Chromecast

If you have a Chromecast and cast movies to it from your computer, there is a hidden setting that can make a significant improvement to the quality. This is most noticeable on large, high-resolution TVs.

Open Chrome and enter `chrome://flags` in the address bar to access the hidden browser settings. Some of these are experiments and don't always work, but they are still worth trying. Press Ctrl+F and search for 'Media Remoting during Cast Tab Mirroring', then change the setting to Enabled and restart Chrome.

This turns on an optimisation tool that forwards the stream directly to your TV instead of processing it first. Sending only the raw data means less work for low-powered computers, which stops them slowing down.

Go to a video-streaming

site with high-resolution content and start it playing in Chrome. Go to the Chrome menu, select Cast and then your TV (as you would normally). When it starts playing, switch to fullscreen video on the computer. A message appears on your PC saying that it is now casting to the TV.

This was originally an experiment in the beta version of Chrome and is now in the release version. Sooner or later it's likely to become the default setting. Manually enable it for now.

Change the channel

Click the Wi-Fi icon on your computer or go to the Wi-Fi setting on your phone or tablet. You may see some networks you recognise, which probably belong to your neighbours.

Wi-Fi can be split across 11 basic frequency channels and if you and your neighbours are all using the same channel, you'll be slowing each other down. Everyone's network will be faster if you each use a different channel. Some routers are intelligent and will scan the channels to find an empty one when they start up. Switch off your router, wait a few seconds and then switch it back on. You might find that streaming over the network is more reliable.

Routers that don't automatically select a free channel have to be manually configured. Open a browser and enter your router's IP address, such as 192.168.1.254. If you don't know your router's IP, press Windows+R, type `cmd` and press Enter. Type `ipconfig`, press Enter and look for the Default Gateway.

You will need to enter your router's username and password to configure its setup. If you don't know these details, look for a sticker on the back or base of the router. Once you're in the settings, search for the wireless channel number and change it to a different one. Use Acrylic WiFi Scanner (bit.ly/acr426) to see which channels are used and which are free.

Try a different wireless channel in the router settings to avoid interference from neighbours

Ask the Expert

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

SECURITY

Switch security software

Q My Windows 10 PC has Windows Defender and Windows Firewall installed, but I'd like to update to Norton Internet Security (uk.norton .com). Do I have to turn off Defender and Firewall to avoid conflicts?

Fred, via email

A Windows can tell when you're installing antivirus or anti-spyware and automatically disables Windows Defender. Similarly, if you were to uninstall Norton, Windows would switch Defender back on, so your PC is always protected.

It's a good idea to check, however. Press Windows+i to open Settings, click 'Update & security' and select Windows Defender. In older versions of Windows 10, the On/Off switches are here, but if you've installed

Only turn on Windows Defender if you don't have any other security software

Creator's Update, open Windows Defender Security Center, click 'Virus & threat protection', then 'Virus & threat protection settings'. The two switches should be set to Off. Select 'Firewall & network protection' on the left and click the public and private networks on the right to access the On/Off switches.

If you don't have the Creators Update, you'll also have to check Windows Firewall, which is found in the Control Panel.

SOFTWARE

Recover a master password

Q I downloaded Dalenryder Password Generator (bit.ly/dalryd426) but I must have unwittingly created a master password, and I don't know what it is. Is there a way I can still use this software, because I know I would find it useful.

Brian Chester, via email

A This password generator creates passwords and stores them in an encrypted vault. There isn't much you

Use IObit Uninstaller Free to remove all traces of a program

can do without the master password because the app won't let you into the vault. To use it, you'll have to install it again. First, uninstall the Windows 10 app by right-clicking the tile on the Start menu. Alternatively, open Settings, Apps, click the app, then Uninstall. Restart Windows and install it again.

If you're still locked out, IObit Uninstaller Free (bit.ly/io426) may do a better job of removing the software and its associated files and settings.

GENERAL PC

Fix drag and drop in Windows 7

Q I have a problem with cut and paste, and drag and drop. I can't paste anything or drag anything anywhere. When I try, the PC says there is a problem with Windows Explorer and restarts. I've tried the shortcut keys and the same thing happens. If I try to use the 'Send to' option in the context menu, I get the same result.

I've also tried clicking and holding the left mouse button on the file and pressing the Esc key, but with no luck. Please can you suggest a fix?

Ian Wood, via email

A It sounds as if you've already tried this, but anyone else who has this problem may find that the following trick works. Click an icon or file that's affected and, while holding the left mouse button, press the Esc key. Also try pressing Ctrl+Esc. Some people found that their Esc keys were faulty and that this was causing the problem.

Another possible cause is software you have installed, particularly programs that modify the way Windows works, such as Stardock Fences (bit.ly/stdo426). Open 'Programs and Features' from the Control Panel (one of the list views) and uninstall anything you don't use.

To find out if it's a software problem, boot your PC in Safe mode by pressing F8 a few times straight after switching on the power, and select the 'Safe mode' option from the menu. If you can now drag and drop, the culprit must be a program that's starting automatically with Windows. Press Windows+R, type `msconfig` and press Enter. Look at the items on the Startup tab.

Sometimes a user account becomes corrupted and you need to set up a new one. Open the Control Panel, click User Accounts, 'Manage another account', 'Create a new account'. Restart and log into your new account. If everything works, use this instead of the old one.

A corrupted user account can cause problems, so try creating a new one

GENERAL PC
Stop Windows account failure

Q My daughter and I have identical HP laptops, which have been upgraded from Windows 8 to 10. Most of the time, Windows 10 works well, but some user accounts fail. I have an account on my daughters laptop, and vice versa. My granddaughter has accounts on both.

When we haven't used an account for a while, we can't log in properly. My daughter's account works on her own laptop but not on mine. My account works on my laptop but not on hers. My granddaughter's account, which she rarely uses, failed on both. The accounts my daughter and I use on our own laptops aren't affected. Is there a time limit to how long accounts last?

Anthony Bethell, via email

A We've seen this, too, and suspect it's due to updates that failed to finish. Windows sometimes needs to perform tasks to finish an installation when you log on. You see this with major updates such as the Anniversary Update and Creators Update, where messages appear on screen saying 'preparing your account', 'getting it ready' and so on.

If you rarely use an account, it may have multiple updates pending. Logging in completes the updates and solves the problem. To keep your account active and in working order, just logging in after an update should be enough to keep it working properly.
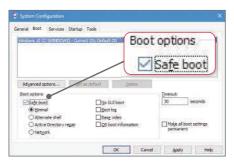
GENERAL PC
Fix a kernel problem

Q During and after updates, I get a Kernel Security Check Failure when I try to log into Windows. I've tried various programs to fix it but nothing seems to work. I'm running Windows 8.1 with an AMD R7 200 series graphics card and 16MB memory.

Peter, via email

A There's no simple cause or solution to this problem, but it may be due to something other than Windows, such as software, drivers or hardware. You'll just have to update everything, and uninstall or unplug everything else.

So where do you start? Press Windows+R type `msconfig` and press Enter. Select the Boot tab, tick Safe-boot and choose the Minimal option. Click Apply, then restart Windows. If the kernel error appears, press Windows+S and search for `command prompt`. Right-click it and select 'Run as

Run `msconfig` and select 'Safe boot' to check for problems in Windows

administrator'. Type `chkdsk c: /f` and schedule it for the next boot. Restart Windows and run Command Prompt as an administrator again. This time, run `sfc /scannow`.

If the kernel error doesn't appear, it means a driver or software program – not Windows – is to blame. Open Device Manager in the Control Panel. Expand a section, right-click each item and select Update Driver Software. There's no need to update every section – just obvious things such as 'Audio inputs and outputs', 'Display adapters', 'Network adapters', 'Mice and other pointing devices', and so on. It's possible that the latest driver for a device isn't compatible. Right-click a device and select Properties. Select the Driver tab and click 'Roll back driver', if available.

GENERAL PC
Update Windows yourself

Q I wrote in April 2016 regarding the lack of Windows 7 updates from Microsoft. A couple appeared in June 2016, but those are the last I've received.

My PC is set to accept updates but lets me decide whether to load them. Has Microsoft done this as a way of ignoring Windows 7 users? I've had two problems with security in the past year.

Paul McAlroy, via email

A Windows Update problems are some of the most common we hear about, and sometimes it just stops working. It can be difficult to repair, but the following has helped many people.

Open Windows Update in the Control Panel and click 'Change settings'. Select 'Never check for updates', click OK and restart the PC. Open a browser, go to support.microsoft.com and search for KB3102810, KB3083710, KB3020369, KB3050265 and KB3172605. Download each fix but don't install them yet.

Press Windows+R, type `services .msc` and press Enter. Scroll down to the bottom of the list, right-click Windows Update and select Stop. Open Explorer, open the Windows folder and delete the SoftwareDistribution folder. Now double-click the support files you downloaded earlier to install them.

Restart the computer, then return to Windows Update in the Control Panel. Click the button to check for updates. Windows Update should now be fixed.

Alternatively, you can download and install updates manually. Go to www .catalog.update.microsoft.com, type `windows 7` into the search box and press Enter. Click the Last Updated column to sort the updates by date, then start downloading and installing the oldest at the bottom of the list.

GENERAL PC
Help, I've lost £££s!

Q Ever since I bought my Acer E1-572 laptop, any '£' signs in documents I receive or download appear as a Chinese symbol. This happens even when I copy or save a document or spreadsheet. How do I reinstate the '£' symbol?

David Felsenstein, via email

A Windows is designed to run on PCs all over the world, so it has dozens of currency symbols. Problems can occur when a particular copy of Windows isn't correctly configured for the region it's in.

All versions of Windows store regional settings in the Control Panel. Open it and click Region. Click

Set the currency symbol in Region in the Control Panel

'Additional settings' on the Formats tab. Select the Currency tab and choose the currency symbol to use. While you're there, check the other tabs for Numbers, Time and Date to make sure they're also set to the correct region and language.

This fortnight Roland has been implementing a new backup regime by installing a new hard drive and software

+ Find more solutions to PC and web problems at forum.webuser.co.uk

Your Top Tips

Our pick of the best advice from our readers. To get help or offer it to others, visit forum.webuser.co.uk
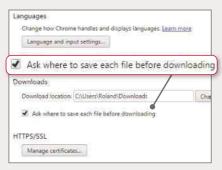
TOP TIP

BROWSERS

Avoid drive-by downloads

I have been reading about drive-by downloads and how hacked sites can infect devices that visit them, and I think I've found a way to stop this happening in Chrome.

Open the main menu and select Settings. Scroll down to the bottom, click 'Show advanced settings', find the Privacy section and click 'Content settings'. Scroll down to 'Automatic downloads' and select 'Ask when a site tries to download files automatically after the first file'. Click the Finished button, then scroll down the Settings page a bit further. Under Downloads, select 'Ask where to save each file before downloading'.

From now on, you'll be notified about every download and will have to confirm the folder to save to.

Chrome should be set to ask before saving any files from a website

If something downloads without you clicking a download link, you can cancel it. I think other browsers may have similar options for choosing the download folder.

Andy Edwards, via email

GENERAL PC
Stop your PC overheating

Now that the weather is warming up, it's worth making sure your PC isn't overheating, especially when you hear the fan working hard. A useful program for checking the temperature of your PC is Speccy (www.piriform.com/speccy). It shows the temperature of your computer's processor, motherboard and storage devices.

The temperature for my CPU was in the region of 65°C, so I disconnected it from the power, took the side off and used a can of compressed air to remove

Speccy reports lots of information you might need to know about your PC

the dust. My PC is now running much more quietly, and at a maximum temperature of 45°C.
mal23 and Madeline, Web User Forums

ANDROID
Access settings faster

The recent Android Nougat update to my Samsung S6 introduced many improvements, but I miss the 'Quick settings' panel that has been removed from the top of the Settings menu. I've discovered another quick way to access some of the most important settings, without having to dig around in the newly renamed menus. Indeed, if something has a button in the notification tray, you can long-press it to access its associated settings. To see your data usage, for example, long-press the 'Mobile data' button rather than toggling it on and off. Alternatively, to see the apps responsible for running down your battery, long-press the 'Power saving' button. This method should work on many Android devices, irrespective of what model you have.
Ed Wright, via email

GENERAL PC
Silence the Action Centre

In Windows 10, one of the icons in the notification area shows the number of notifications waiting for your attention, and pop-up messages show notifications as they occur. If you don't want to be distracted by this, right-click the Action Centre icon and select 'Don't show number of new notifications' and 'Turn on quiet hours'.

Mike Kirby, via email

MOBILE
Translate as you type

I have a friend in Italy who writes to me in English and I write to him in Italian, just for fun! My Italian isn't that good so I used to write my emails in Google Translate (translate.google.com) before copying the translated text by clicking the button and pasting it into a new email with Ctrl+V.

However, I have found a better way. I installed the replacement keyboard Google Gboard (bit.ly/gobo426) on my phone. As you type your email in English, it is translated on the fly into any language you want. I type Hello and Ciao appears in the email. It's really clever.

To switch this option on, press the G button in the top left corner of the keyboard, then press the Google Translate icon, which is the second one in the toolbar. Select the language from a list and from now on, everything you type in English appears in the selected language.

GBoard translates your messages as you type
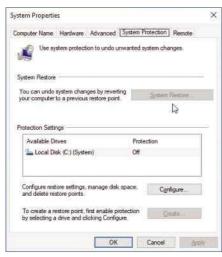
Harry Brooke, via email

GENERAL PC
Re-enable System Restore in the Creators Update

Just a small reminder for those of you who have installed the Creators Update that you need to manually re-enable System Restore. I've updated three PCs so far and all had System Restore turned off after installation. To enable System Restore, type `System Restore` into the Start menu and click 'Create a restore point'. Click Configure, 'Turn on system protection', Apply and OK.

It's also worth noting that because it's effectively a new version of Windows 10, all old System Restore points will be gone because they were only usable in the previous version. In fact, due to the continuous development of Windows 10, you'll often notice old restore points disappear even after smaller, incremental updates, so it's always a good idea to have another form of backup in place to keep your PC safe.

scrimper and Helmut, Web User Forums

System Restore is automatically turned off when you install the Creators Update

SOCIAL
Add photos from last 24 hours to Instagram Stories

I really enjoyed the feature about Instagram in the last issue of *Web User* (bit.ly/webuser425), but just wanted to add one comment about the mini-workshop on posting 'Stories' in the app. As well as choosing from the different capturing modes by swiping left and right, there's also an option to add images you've taken earlier, providing they were captured within the last 24 hours. Just swipe up or down on the screen and a menu appears letting you choose the media you want to upload.

It's worth noting that the 'Stories' feature is designed to work in portrait, so landscape photos and videos might not appear in this menu.

Jamie Sanders, via email

ANDROID
Record your screen

There are lots of videos on YouTube of gamers showing you how to play various games and if you want to share videos of your own gameplay online, you may wonder how it is done. I am not much of a gamer myself, but my teenage kids use an app on their Android phones called DU Recorder (bit.ly/durec426). You just start a game, press a button and it starts recording. You can then play the game and press the stop button when you are finished. There is an option to post the videos on YouTube from within the app.

I saw a question recently from someone wanting to use Android tablets for training and it struck me that this might help them. You can record any screen activity with DU Recorder, so you could make training videos for Android or apps that could be watched on YouTube.

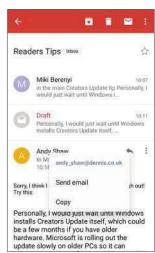**Sarah Coleman, via email**

EMAIL
Start a new conversation in Gmail

If you've ever wanted to send a new email to someone you've contacted previously using Gmail for Android, but whose contact details you haven't saved in your address book, I've discovered a quick workaround that doesn't involve copying and pasting the address. Simply open your correspondence with the person you want to contact, long-press their name at the top of an email they sent and Gmail gives you the option to 'Send email'.

If you're reading an email thread from multiple people, I find this is the easiest way to send a new email to just one of them. You can also tap the person's initial in the coloured circle and tap the button to add them to your contacts, if you think you might need to email them again in the future.

Ethan Robson, via email

Long-press a name in Gmail to send them an email in Android

BLUNDER OF THE FORTNIGHT

SERVICES
Get faster internet at home

When I moved house recently, I stupidly forgot to research the broadband speeds in the area. It turned out that the situation was very bad indeed and after signing up to BT, my download speeds were no more than 0.5Mbps. There was no option to upgrade to fibre optic or to buy cable from another ISP, so I was at my wits end.

At this point, a friend came to my house and used Speedtest.net (bit.ly/speedtest426) on his smartphone. To our amazement, the app logged the fastest 4G download speeds he'd ever seen, at more than 85Mbps. He asked if I'd considered signing up for a mobile broadband contract. I'd always thought mobile broadband involved plugging a dongle into your PC, which wouldn't be a practical alternative to home broadband, but I've since learned that devices such as Three's HomeFi can offer the above speeds while letting you connect up to 32 devices at a time.

One slight caveat is that the connection is limited to 40GB a month, but it's competitively priced (£24 per month) and signing up for a year gets you the HomeFi box for free.

If your broadband is maddeningly slow, there's hope yet! If you decide to make the leap, just make sure you test the download speeds of the relevant mobile network first.

Alice Morrison, via email

Consider using a 4G HomeFi device if your broadband is too slow

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

Readers' Helpdesk

Our pick of the best solutions posted on our reader forums. Visit forum.webuser.co.uk – it's friendly and free!

GENERAL PC
How can I get a Gmail shortcut on my taskbar?

Q I had a Gmail shortcut on my taskbar before I had my PC repaired, but the technician had to perform a factory reset and now it's gone. Can anyone tell me how to get it back?

howdoudo, Web User Forums

A If you use Chrome, open up Gmail and click the main menu, select 'More tools', then 'Save to desktop'. Once you've made the shortcut, you can right-click it and choose to send it to the Start menu or the taskbar.

If you don't use Chrome, right-click an empty space on the Desktop, choose New and Shortcut, then enter the following into the location box:
`%windir%\explorer.exe`
`http://mail.google.com`

Click Next, then choose an appropriate name, such as Gmail, and click Finish. The first time you click the shortcut, Windows lets you choose which browser it opens in. To distinguish your Gmail shortcut from File Explorer, download the Gmail icon from bit.ly/icon426, then right-click the shortcut, select Properties and 'Change icon'. Click the Browse tab and navigate to where you saved the downloaded ICO file. Select it, click Open, then click OK and OK again. Now drag the Gmail shortcut to the Taskbar.

FratPark and lizzygraham, Web User Forums

Web User says: If you use Chrome, you can also use the built-in option to add a

Chrome lets you add Desktop shortcuts for Google apps

GENERAL PC
Do I have the Creators Update?

Q The Windows 10 version I have installed is: 1607 (OS Build 14393.1198). Is this an up-to-date version or am I still waiting for the Creators Update? Most of my friends tell me they recently had a very large update.

Pups, Web User Forums

A No, you don't have the Creators Update yet. The latest version is 1703 (15063.296) – the '1703' refers to March 2017. To see the latest Windows version numbers, open Settings (press Windows+i), then select 'Update & security', Windows Update. Scroll down to 'Looking for info on the latest updates?' and click 'Learn more'. You'll see the latest version number with all the most recent builds listed below.

Personally, I would just wait until Windows installs Creators Update

Click 'Learn more' in Windows Update to find out the latest version of Windows 10

itself, which could be a few months if you have older hardware. Microsoft is rolling out the update gradually on older PCs so it can spot and fix any problems as it goes, making it a smoother upgrade for the rest of us. However, if you want to update manually, visit bit.ly/creators426, then click 'Update now'.

alanrwood, Cantrel and Helmut, Web User Forums

Gmail shortcut. Click Apps from the Bookmarks bar, then right-click Gmail and choose 'Create shortcuts'. Tick the box next to Desktop and click Create. You can then right-click the Desktop shortcut and choose 'Pin to taskbar'.

FILE SHARING
How do I share large files?

Q In the good old days, I remember being able to access FTP sites by entering a URL into Internet Explorer and then simply entering the appropriate username and password. Once logged in, you could drag and drop files from Explorer to the browser window and vice versa, which was great for people who aren't tech-savvy.

I am trying to obtain a large file from someone in Mexico who doesn't know how to use FTP, but I've not been able to upload files in this way with Chrome, Internet Explorer, Pale Moon or Firefox, so is there another easy way he can upload the file?

welshgasman, Web User Forums
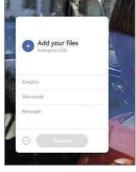
A You can access FTP sites relatively easily from File Explorer, so he shouldn't need to install FTP software. For instructions on how to access FTP sites directly from Windows, there's a good article at Better Host Review at bit.ly/ftp426. Alternatively, if you just want to send a single large file, try using WeTransfer (wetransfer.com). The sender just uploads the file, then enters their email address and that of the recipient. There's no need to set up an account and you receive a download link in an email.

lizzygraham, Web User Forums

WeTransfer.com offers large file transfers for free

Web User says: For another way to transfer large files, see our Workshop on page 56.

Inbox

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Star Email

Mug winner WebUser
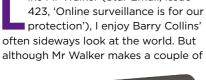
Online surveillance is an abuse of power

Like Mr Walker (Star Email, Issue 423, 'Online surveillance is for our protection'), I enjoy Barry Collins' often sideways look at the world. But although Mr Walker makes a couple of valid points, he seems to live in a world of fluffy rainbows and unicorn farts.

The surveillance/human rights issue is one of the areas I cover as a researcher, and I agree that no one should be permitted to use the law to escape criminality. But that is a long way from saying we should trust our masters to engage in the total surveillance – online and otherwise – that they constantly seek, and such laws have to be much more tightly controlled and transparent than this and other governments currently wish. Who decides who is "criminal and malevolent", Mr Walker?

The "distrust" of surveillance can and *must* be sustained.

One need only look at the overreach of both the NSA and FBI in America, especially over the last five years.

And how about Police Scotland's misuse of the laws that Mr Walker advocates to secretly obtain the notes and contacts of journalists who were simply exercising their constitutional rights to do their job? What about the Met's persecution of a journalist for doing the same thing? That man had a prosecution hanging over him for the better part of two years before it was quietly dropped.

Also, examples abound of the police and other state agents who have blatantly breached legal professional privilege by using those laws that Mr Walker is a fan of.

Mr Walker's way and that of too many of those in power is the way of fascism and totalitarianism. Didn't we fight a war against such people?

John Lockett, via email

I got charged £54 to call my ISP

Barry's column in Issue 424 covers the interesting topic of 118 numbers but he overlooks the fact that it's not only the 118 companies that are ripping you off. So too is your ISP, which charges a premium rate for the call. Hence a call to 118 118 cost me £54 for 1 min 23 seconds! Although, to be fair, I did get a reduction after protesting to 118 118.

Why did I make that call? Well, I had just changed ISP, I had no internet and they only do paperless, so how else could I get their phone number? Fool that I am.

Peter Masters, via email

Ofcom is to blame for rip-off prices

I always enjoy reading Barry Collins' page. I see "Ofcom is very concerned about the rising prices of some 118 numbers". They should be more concerned about their incompetence, which allowed it to happen in the first place.

I only pay rental for my line and route all my calls through 1899.com, which saves me a fortune. This service and others like it announce the per-minute call cost before connecting you, so you have time to put the phone down.

If Ofcom had any clue, they would have years ago required that all calls have the connection and per-minute charge announced. The rip-off merchants would have had to find another revenue "opportunity".

Ah well, keep up the good work!

Ivan Drake, via email

Unlocking hidden speed is highly illogical

I've been a regular *Web User* reader for over 10 years and I love the mag – it's so useful and has saved my family a lot of headaches and money when the PCs get
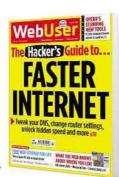
Quiz Answers: Issue 425

1 *Willy Wonka & the Chocolate Factory*

2 *Titanic*

3 *ET the Extra Terrestrial*

4 *Psycho*

5 *The Lord of the Rings*

6 *The Exorcist*

WINNER!
William Troup
was the first to email us the correct answers and wins a Web User mug

WORD PUZZLE
Download

a bit mischievous.

Anyhoo, in Issue 424 you published a note from another reader calling himself Jon98 in which he wondered if we were being attacked by aliens from the planet Geek due to the unintelligible phrases used by programmers. I just hope he didn't read your front-page promise to "unlock hidden speed", or the poor guy's brain might have exploded.

Even the guys on *Star Trek* would have a job hiding or unlocking speed!

Richard Topping, via email

Tablet review wasn't a fair comparison

In your review of the Samsung Galaxy Tab S3 and the new iPad in Issue 424, it seems strange that you compare the Galaxy Tab to the cheapest iPad when it is closer to the Pro version and very clearly undercuts that model in price. The fact that Samsung does not offer a cheaper version seems irrelevant in this context.

You also fail to mention that the Galaxy has a micro-SD slot and thus the 32GB storage can be increased by 256GB – an option that has never been offered by Apple and likely never will be.

Also, why is a £119 keyboard "expensive" for the Galaxy Tab but £145 for the Apple keyboard and an additional £99 for the pencil not commented on? There does seem to be an element of bias towards the iPad family evident in this review.

Probably more relevant is that I doubt that any Android user would seriously

consider changing to Apple and vice versa, so what is the point in choosing a winner? A first-time user of tablets with no existing 'loyalty' would probably choose the iPad due to price and superior marketing or peer pressure.

Yes, I am an Android user, but I am also able to appreciate that the iPad does some things a lot better. I just think that any comparison should be impartial – comparing oranges with oranges.

Ian Haynes-Bowers, via email

Fight scammers with exotic pets

Following Mike Palmer's letter in Issue 424 about dealing with phone scammers, I have a feeling that there is going to be an increase in exotic domestic pet owners. Not only will the blue rabbit population breed like – well, rabbits – but I foresee an increase in yellow ducks (not only for bathtime), green cats and other rare coloured breeds. Those who are scammed can share the joy of owning these pets in the knowledge that the scammers will be so jealous that they will suddenly end their call. Nice one, Mike Palmer.

Mike McCormack

My Family Tree is the best tool for me

I read with interest the letter from Bill Anderson in Issue 424, 'Barking up the wrong family tree'. I had previously signed up to both My Heritage and Ancestry at horrendous cost but I have been using the My Family Tree software for some time. It provides me – particularly with my Scottish ancestry – with the perfect tool for recording my findings from search engines such as Scotlands People (www.scotlandspeople.gov.uk) and various other search sites, including the one that I think Bill Anderson was alluding to, which is called Family Search (familysearch.org). It is a similar sounding name to My Family Tree but, as *Web User* rightly states, My Family Tree bears no direct connection to the Church of Latter Day Saints whereas Family Search is connected and run by the Church.

In my research with Family Search, I found very little information (so far) –

partly, I guess, from either my surname (Dall) or the fact that I am originally from north of the border. This is not a specific criticism of Family Search because I find the same problem with most other genealogy search engines including My Heritage and Ancestry.

My point of writing was to show how easy it is to confuse the sites' names when they sound so similar.

John Dall, via email

Other Windows 10 browsers are available

I'm writing to correct an error in the Windows 10 S article on page 37 of Issue 424. In the "Can I use any browser I want?" section, you say that Google Chrome isn't available in the Windows Store and that until it appears, we're stuck with Microsoft Edge. *Au contraire!* In fact, many browsers are available in the Windows Store. Although Opera and Firefox are not there, Google is (bit.ly/google426), along with some lesser-known browsers, including UC Browser HD (bit.ly/ucbrowser426) and the Monument Browser (bit.ly/monumentbrowser426). So, at least we aren't stuck with Edge, after all.

MysteryWriter101, via email

Kodi doesn't have to be used illegally

I am shocked by the letter from Frank Christensen in Issue 424, in which he says
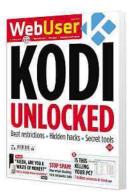
he is bored with Kodi – and then goes on to admit he tried it but found it too complicated! Could it be that it's his lack of skill that has him ranting against Kodi? I personally found the eight-page article in Issue 422 fascinating and have now installed Kodi on my system.

I'm a huge documentary fan and also a photographer, so I have enjoyed the photography sites, finding them interesting and incredibly useful. Not everyone finds Kodi tricky if they follow instructions; and not everyone wants to download or stream illegally.

Christensen's comment that illegal streaming is Kodi's main purpose leads me to ask if that was why he tried to install it in the first place? Please don't tar us all with the same brush. We're not all incapable and neither are we all wanting to stream film and music.

Keep bringing us news about Kodi, please. If we don't wish to read it, we can always turn the page! *Web User* has plenty of other interesting content.

Roz de-Layen Vian, via email

Trick scammers with a virtual machine

In reply to Jeff Hurst (Inbox, Issue 424, 'Confuse phone scammers by asking for specifics'), it was fun to read about him playing along with the scammers. However, he should go a step further: create a virtual machine and let the scammers connect and spend 30 minutes wasting their time trying to find problems on a brand new install. I have VMWare ready and waiting for the call to come through.

Simon Mellor, via email

What you say...

DO YOU THINK IT'S TIME THE UK INTRODUCED INTERNET VOTING IN ELECTIONS?

Yes, if it's possible to do it safely with minimal fraud. It would encourage a whole new range of people to vote, especially the younger demographic.
Isabel O'Brien

No, because there will be allegations like 'Russia hacked the election'. The losers will argue for seven months after. Not up for that, personally.
Liz Lambeth

No. It leaves the vote open to hackers unless there is a foolproof way of protecting the votes.
Stephen Cruise @stepheneverton

Yes. It's long overdue. Technology is the way forward and will encourage more votes, especially from those who can't be bothered to get out to their local polling station.
Gary Olsen

HAVE YOU EVER USED THE AMAZON LOOPHOLE THAT REFUNDS YOU AND LETS YOU KEEP THE ITEM?

Sort of. I bought a cable I didn't need and got a refund, but was told not to bother sending it back. I'm waiting for the day it might serve a purpose.
Lee Dodgson

No, and I would find it disgusting if someone did that to me. I sell on eBay and have seen stuff like that happen there. It's totally wrong.
Gerrit Max

I bought a DVD on Play.com but it was a copy. I got a refund and was able to keep the pirated DVD.
Brian Brown

It's not fair on the small private retailers that sell through Amazon. They lose out as they don't get paid for the products. Many people are abusing this Amazon policy to simply get free products.
John Wells

ARE YOU LESS LIKELY TO USE KODI IF ADD-ONS KEEP GETTING SHUT DOWN?

I don't bother much with the add-ons. I already have the digital versions of all the boxsets that I want to watch. But yes, I think a lot of people will use it less, especially those that bought fully loaded boxes that no longer work and don't know how or where to get add-ons that still work.
Daniel Roe

More add-ons will probably be created by someone to replace those that have been shut down.
John Scott

These add-ons were shut down for a reason: because they break the law. If people can't cope without them, then tough.
Colin Jameson

HOW WORRIED ARE YOU ABOUT BEING SPIED ON BY INTERNET-OF-THINGS DEVICES?

Not at all because I eschew smart products. Why do I need a Wi-Fi-enabled fridge? Why have a smart meter? Owl works perfectly. Why should I hold conversations with a box in my living room? Get a grip, people.
Iain Kenworthy-Neale

Not at all – because over the last 25 years, I have (with the help of publications such as yours) taken the trouble to understand how to use and protect my computer and devices.
Richard Morgan

Very little, provided the device is open source, which means you're okay. Most are closed source, which spy on you.
goldmaster @imthegoldmaster

⚠ Page 404

Our phones and tablets should come with an expiry date, argues **Barry Collins**

Apple's upgrades downgrade our devices

Can you hear that screaming? That's the sound of millions of Apple owners discovering that their devices have just been placed on death row. A lethal injection for the wallet, if you will.

Every year, Apple releases a new version of iOS, and every year a new set of Apple device owners find they're not going to receive the upgrade. My iPad 2 has already been handed the death sentence, now terminally saddled with 2015's iOS 9 for the rest of its useful life, while my three-year-old iPad Air is braced for the bad news next year, having just about made the cut for iOS 11, which will come out this autumn (see our FAQ on page 36).
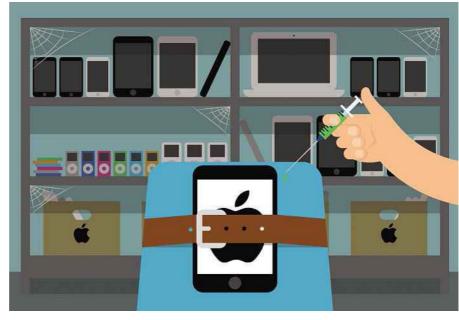
Granted, even if your device can't update to the latest operating system, it'll still work; but I use "work" in the loosest possible sense of the word. My iPad 2 ran perfectly smoothly on iOS 8 but iOS 9 was already a step too far. Ever since I upgraded, it's been running like Boris Johnson through a hot tub of treacle. Apps take an age to open, prods often fail to elicit a response and that spinning wheel has become a despairingly common sight.

You can't help feeling that Apple pushes devices to their very limits so that you end up resigning yourself: "My iPad's got awfully sluggish, time for a new one".

It's not only performance that suffers when your Apple device starts lagging behind iOS updates; its apps do, too. Some of the latest apps demand iOS 10, while others specify that your device isn't supported in the small print of their app description. But unless you're

> **❝** Ever since I upgraded to iOS 9, my iPad 2 has been running like Boris Johnson through a hot tub of treacle **❞**

keenly tuned to Apple's device schedule, how the blinking hell are you supposed to discern if your device meets requirements such as "iPad 3 and upwards"? Even Apple stopped referring to its iPads by version number some time ago. No wonder so many apps get one-star reviews from people furious that they've paid a fiver for an app that's not compatible with their device.

Some good old-fashioned honesty is called for. Do you remember a few years ago, when there was a big fuss about England releasing a new football shirt every six months or so, forcing beleaguered parents to hotfoot it down to Sports Direct and hand over another £50 so young Tarquin wasn't beaten up for wearing last season's kit? To solve the problem, the kit manufacturers were forced to sew a label into the kit, showing exactly when it would be retired – although the England team arguably solved the problem themselves by being so irredeemably awful that kids would rather be caught down the park in their mum's underwear than parade their allegiance to the nation's disgrace.

A similar scheme could be applied to iPhones, iPads and the like. Etched on the back of the device, alongside the "Designed in California by magical pixies" guff could be an expiry date, showing exactly when the device will effectively be retired from service, unable to receive the latest updates.

It would take a little foresight from Apple, but when you're paying anything up to £769 for a tablet, that's not a tremendous amount to ask. After all, nobody wants an Apple that's past its sell-by date.

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

WebUser

ENJOYED THIS ISSUE?
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Thank you for reading this issue of *Web User* – we hope you found the tips and advice useful. The good news is that you don't have to wait too long for the next issue. If you subscribe to *Web User* by Monday 3 July (8pm)*, you'll receive it through your letterbox before it's available in the shops!

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