

TRICKS & TIPS



- Advanced guides and tutorials ensure that you master your Windows 11 desktop

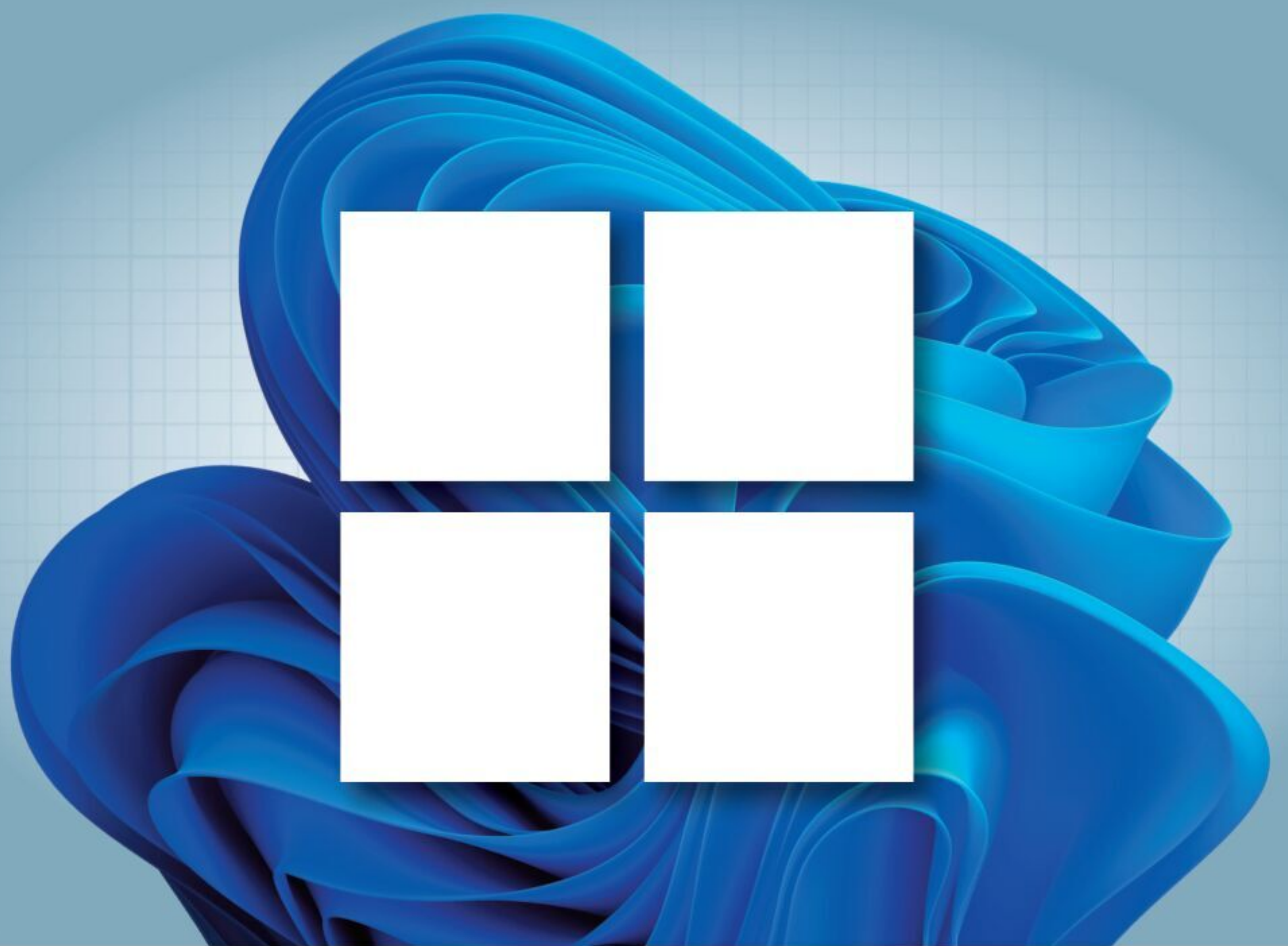
OVER
467
SECRETS & HACKS

- Next level fixes and secrets get to the heart of your PC and Laptop

- We share our awesome tips and tricks for Windows apps & software

Advanced guides for Windows 11

Everything you need to take your Windows 11 experience to the next level





Advanced guides for **Windows 11**

Welcome to the next level of understanding and expansion of your user experience!

For some it is enough to master the basics of your new device, software or hobby. Yet for many, like you, that's just the start! Advancing your skill set is the goal of all users of consumer technology and our team of long term industry experts will help you achieve exactly that. Over this extensive series of titles we will be looking in greater depth at how you make the absolute most from the latest consumer electronics, software, hobbies and trends! We will guide you step-by-step through using all the advanced aspects of the technology that you may have been previously apprehensive at attempting. Let our expert guide help you build your understanding of technology and gain the skills to take you from a confident user to an experienced expert.

*Over the page
our journey continues,
and we will be with you
at every stage to advise,
inform and ultimately
inspire you to
go further.*

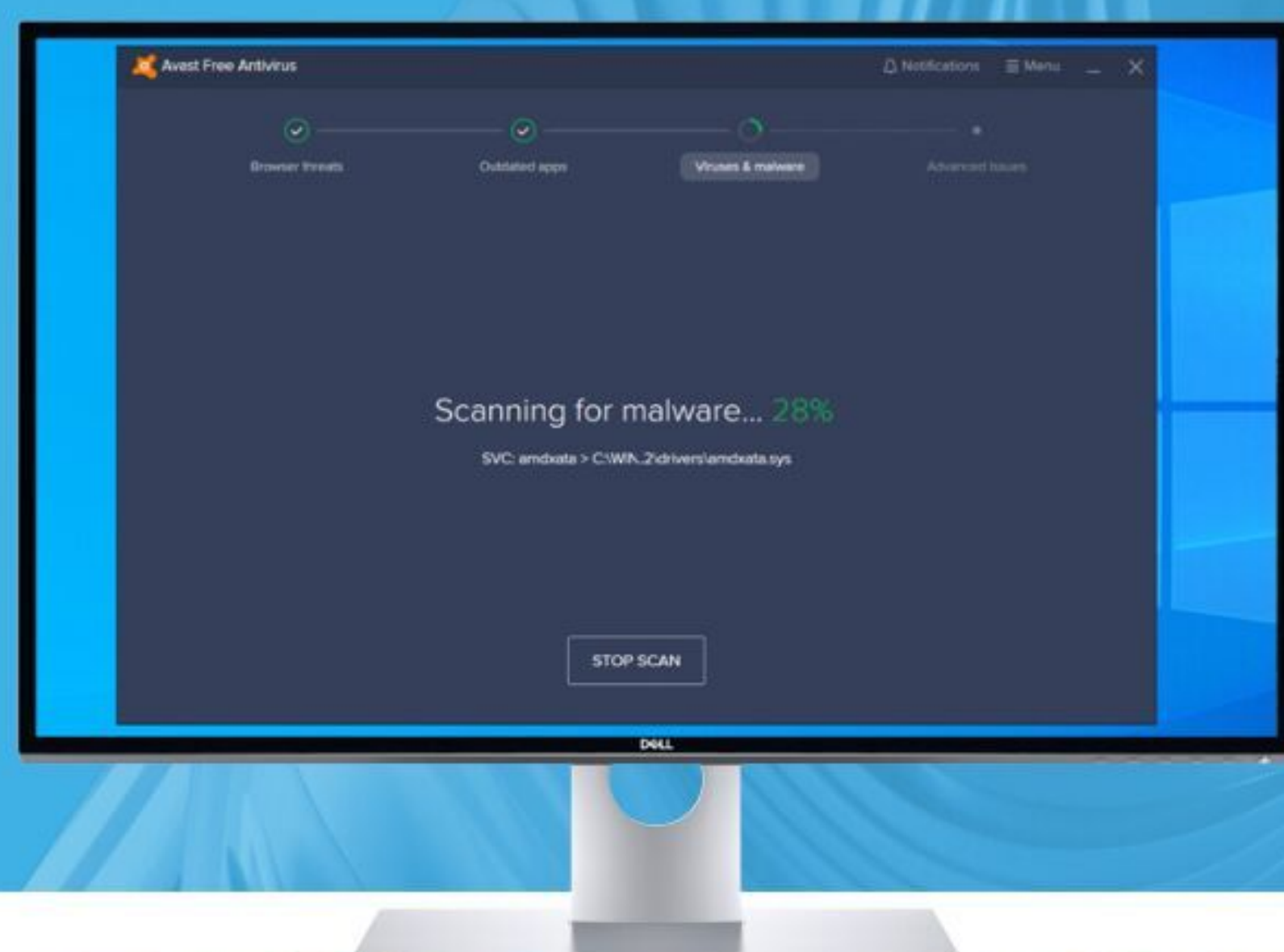
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“In here you’ll find tutorials and tips, secrets of the Windows 11 OS will be unlocked, and your understanding of everything works will help make you become an advanced user.”



Manage Libraries in Windows 11

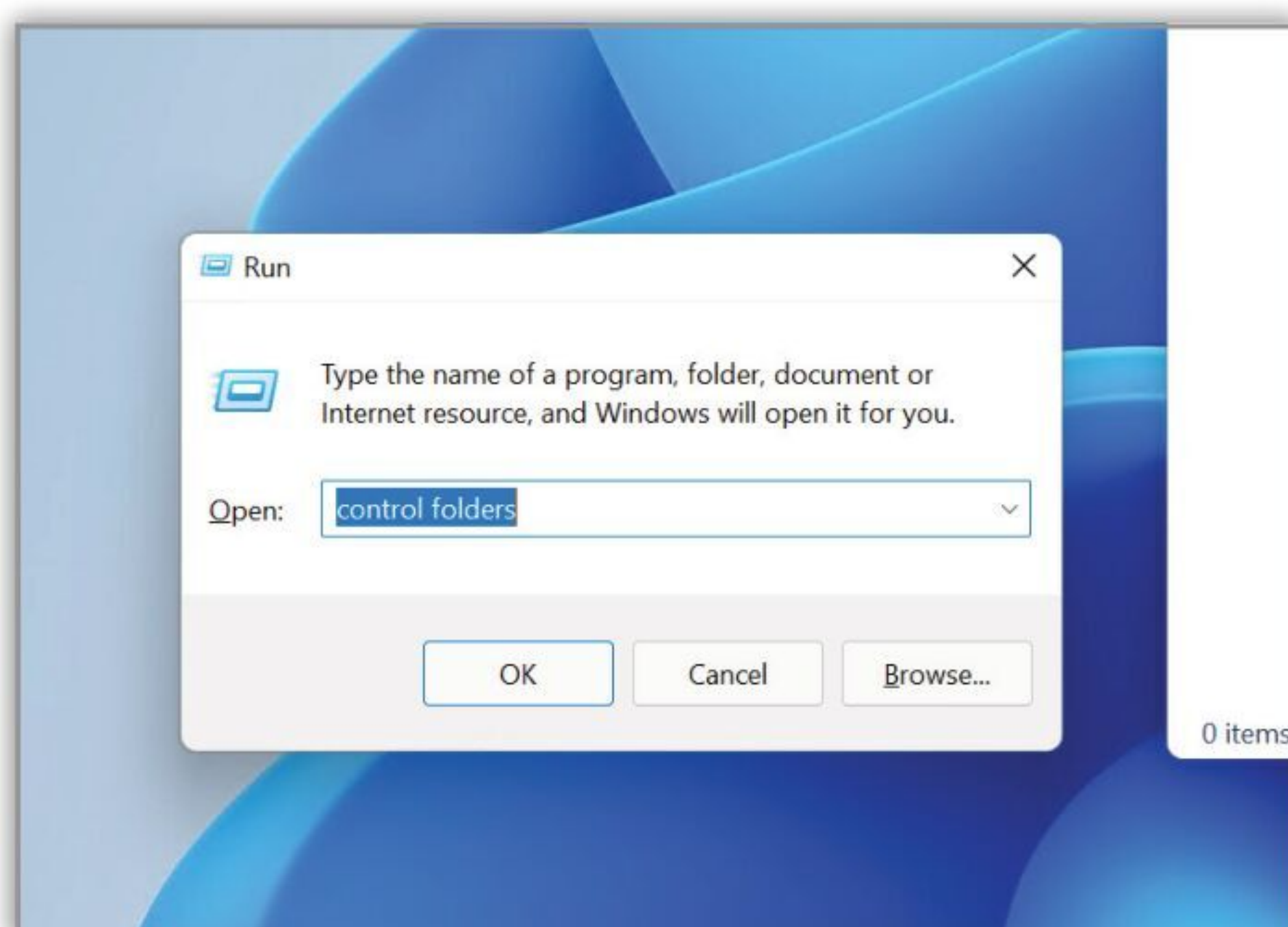
Libraries are virtual containers for users' content. A library can contain files and folders stored on the local computer or in a remote storage location. In Windows Explorer, users interact with libraries in ways similar to how they would interact with other folders.

Quiet in the Library

By default, Libraries are not displayed in Windows 11 – even later versions of Windows 10 did away with the Library display – so they'll need to be reactivated for them to appear.

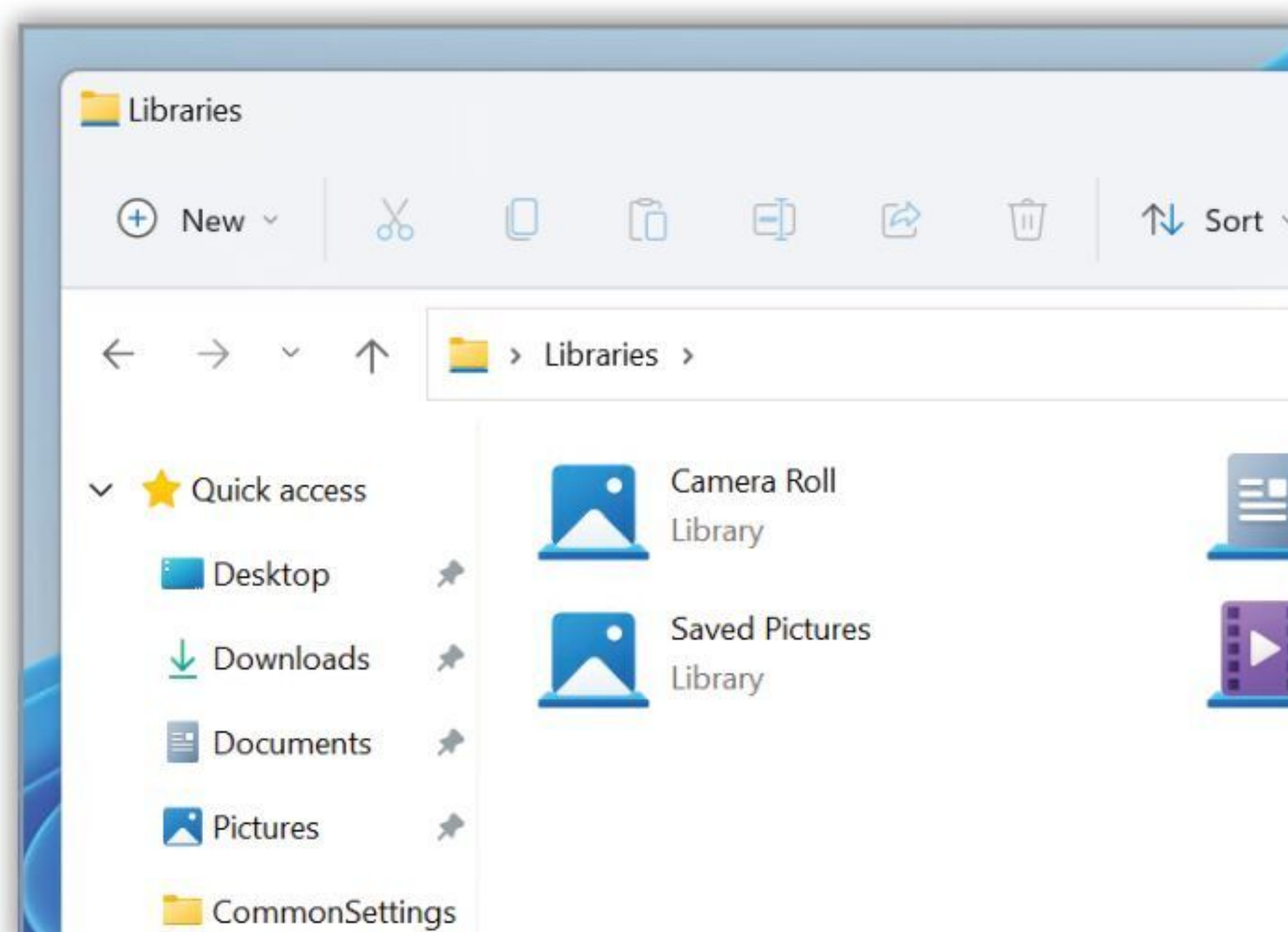
Step 1

If you open Windows 11 File Explorer, you'll notice that Libraries are no longer visible by default, which is a shame as many users rely on them. However, they can be returned, and the process is remarkably simple. Start by pressing the Windows Key and R, then enter: control folders.



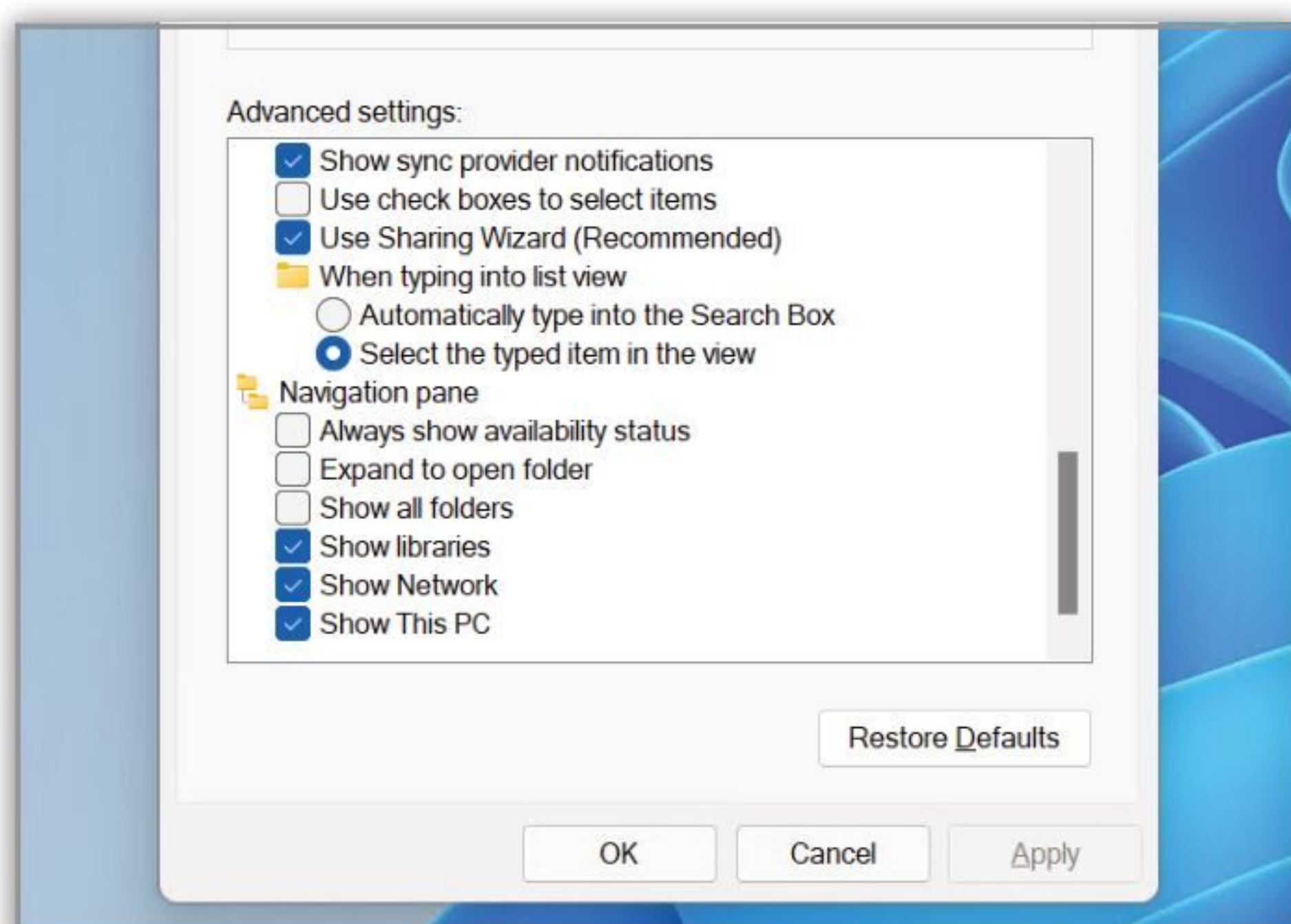
Step 3

At the bottom of the Advanced Settings section, you'll notice a box labelled Show Libraries. Click the box to tick, and re-enable the option. When you've done that, click the Apply button to activate the change and you'll see that the Libraries are now available via File Explorer.



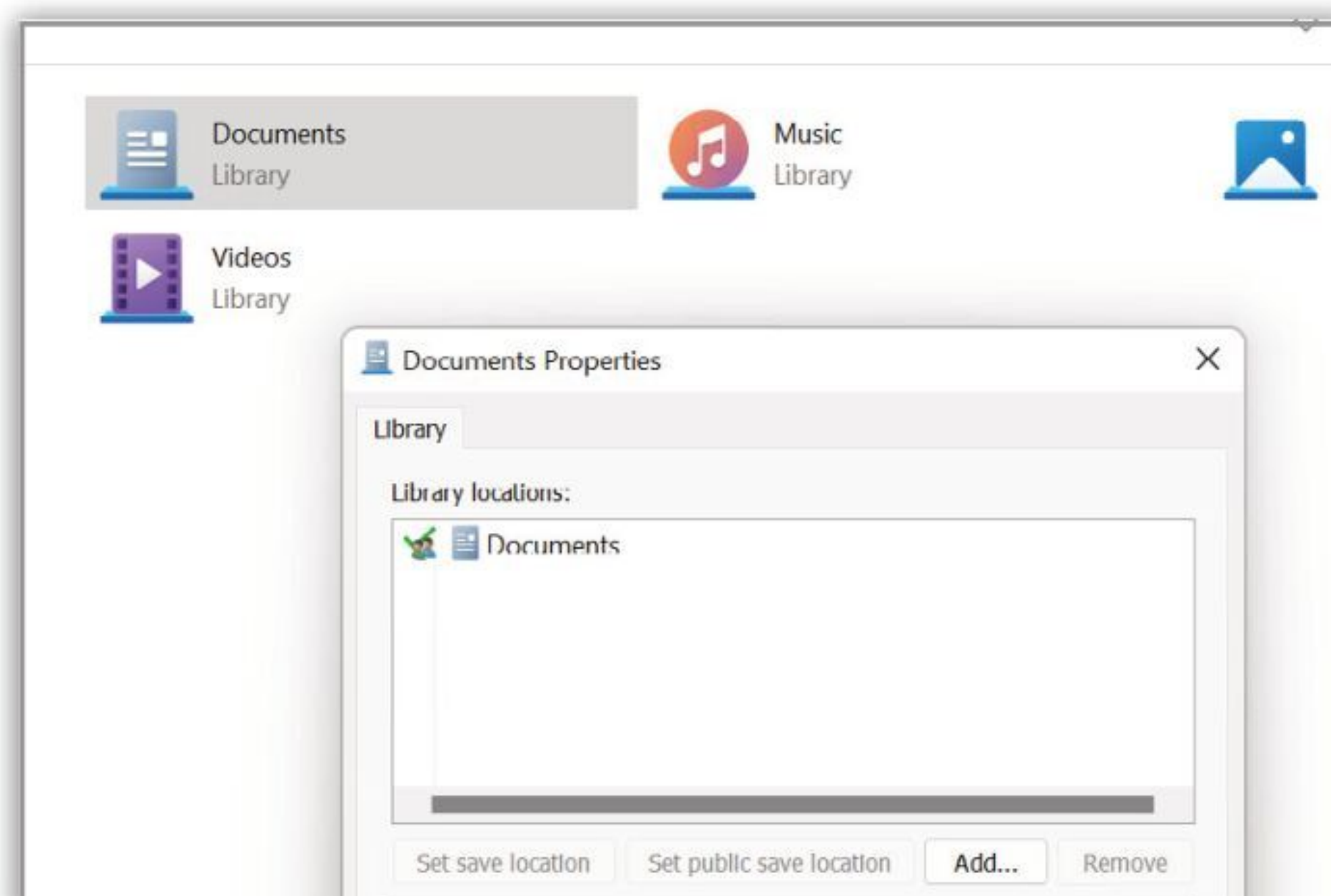
Step 2

Hit enter, or click the OK button and the File Explorer Options window will pop up. The options available in here can drastically alter the way Windows Explorer works, so be careful what you enable or disable. Head to the View tab, and scroll down to the bottom of the Advanced Settings section.



Step 4

You can now close the File Explorer Options pop-up window. The Libraries are, by default, setup as area specific shortcuts. You can right-click each Library entry, select Properties from the menu, and create new Library locations, change the icon and much more. Restore Defaults will return the Library to its original setup.





How to Use AutoPlay

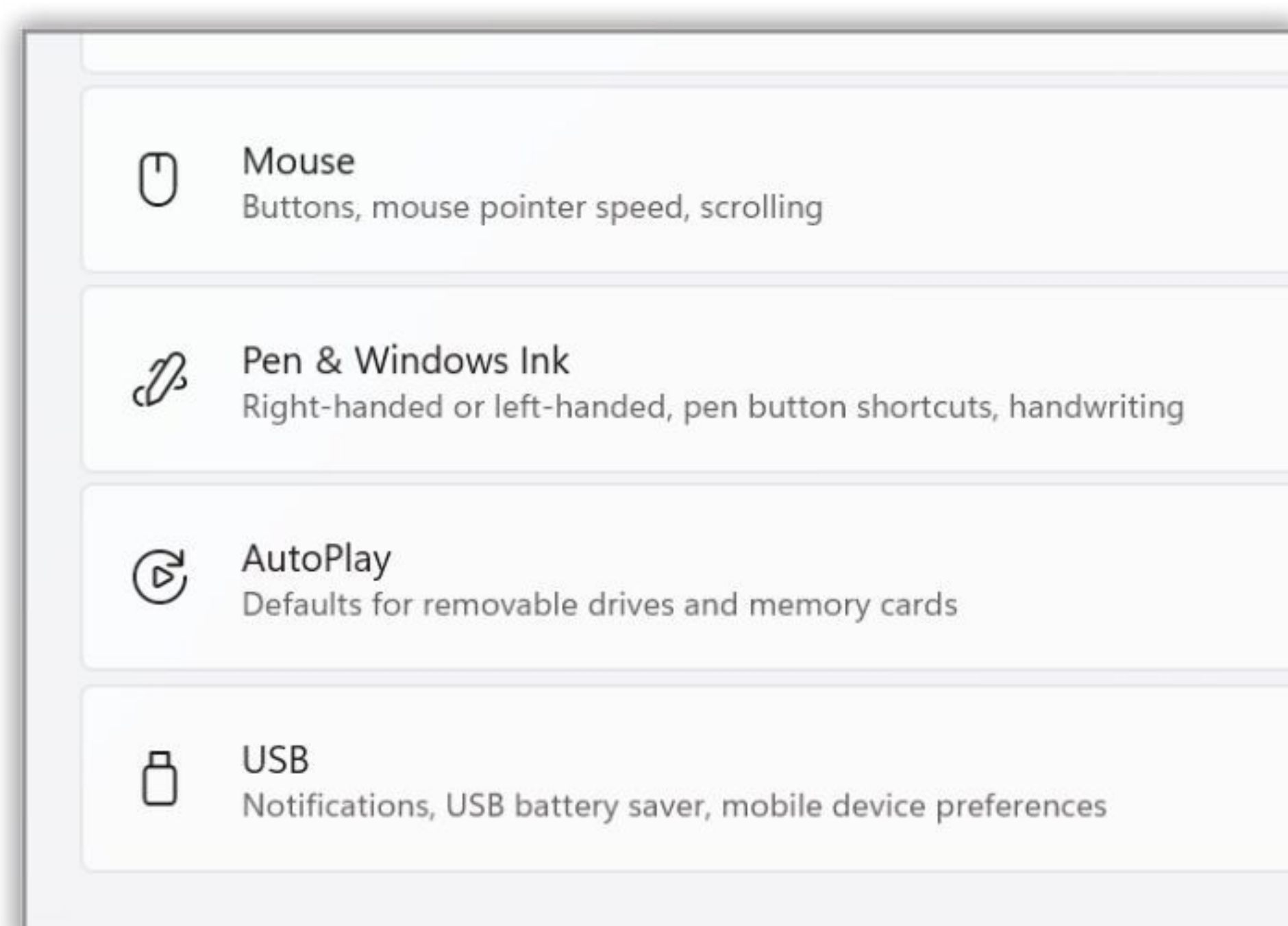
Windows AutoPlay is a feature that was first introduced back in Windows 98. It allows newly discovered media, based on content such as images, video or music, to begin playing via the appropriate application.

Rediscovering AutoPlay

AutoPlay has been seen as both a blessing and a curse. How we have enjoyed slipping a DVD in the computer and sitting back to enjoy it, but swore at the machine for auto playing a CD we inserted. Funny old world.

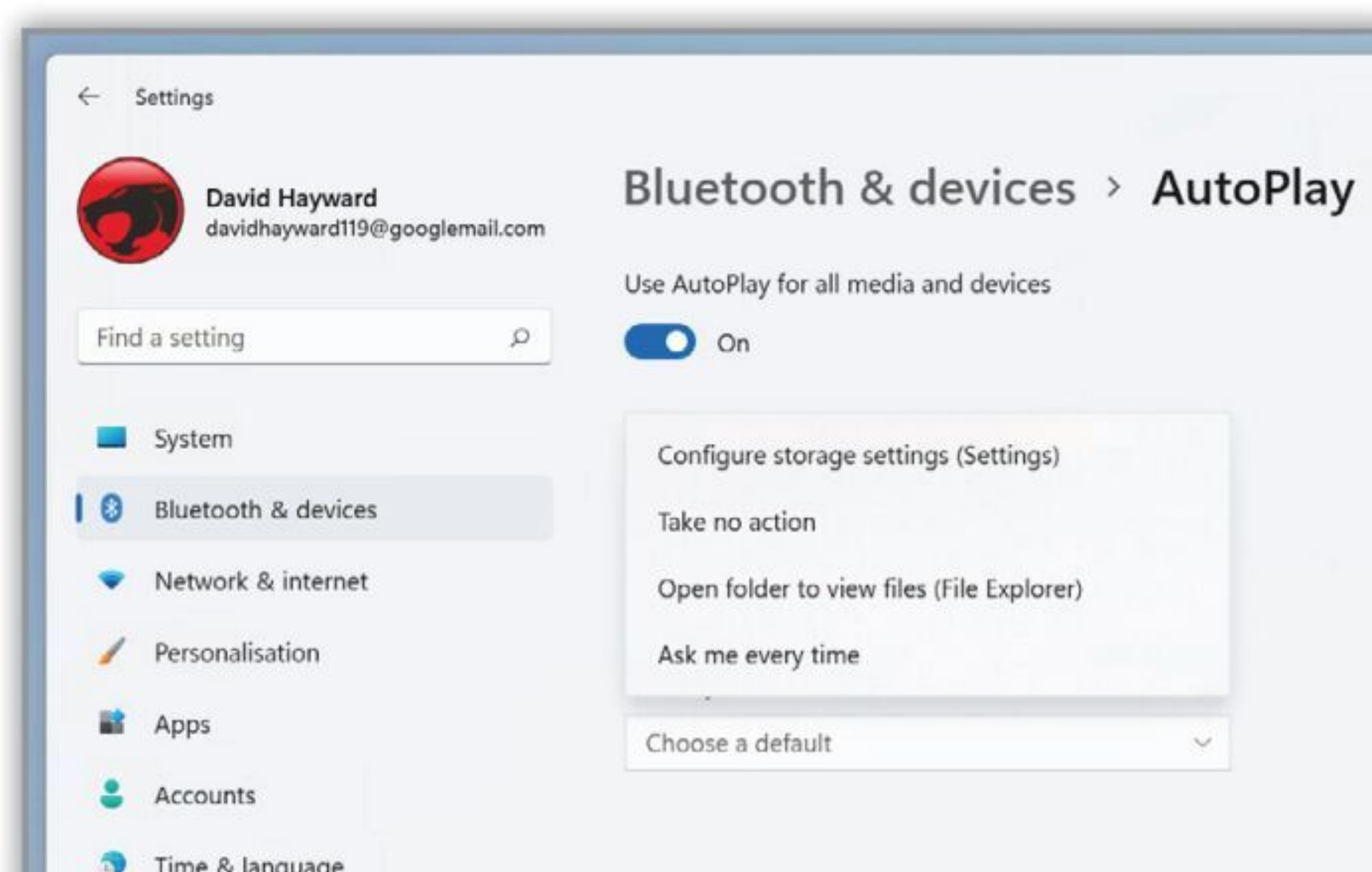
Step 1

Windows 11 seems to be having some issues with the default AutoPlay setting. At the time of writing, there's a bug that affects some but not others, in that the Windows 11 AutoPlay feature is either disabled by default, or not. To find out which you are, go to Settings > Bluetooth & Devices, and click on AutoPlay.



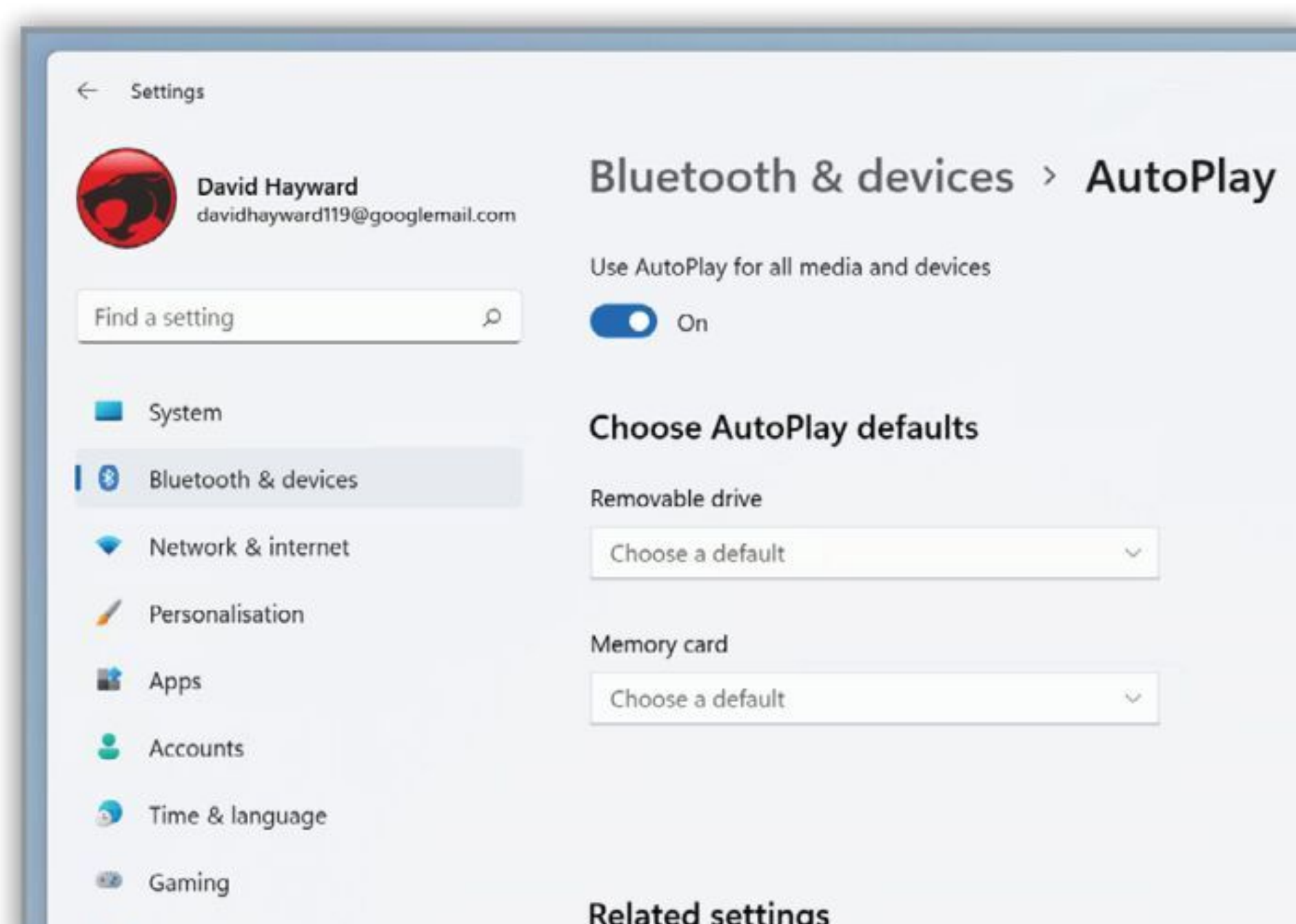
Step 3

If nothing happens when you insert any media, despite the AutoPlay feature being turned on, you may need to specify an AutoPlay default. Under the On button are two options for AutoPlay defaults: Removable Drive and Memory Card – depending on your computer setup, you may have more options available. Click the Removable Drive drop-down box - Choose a default.



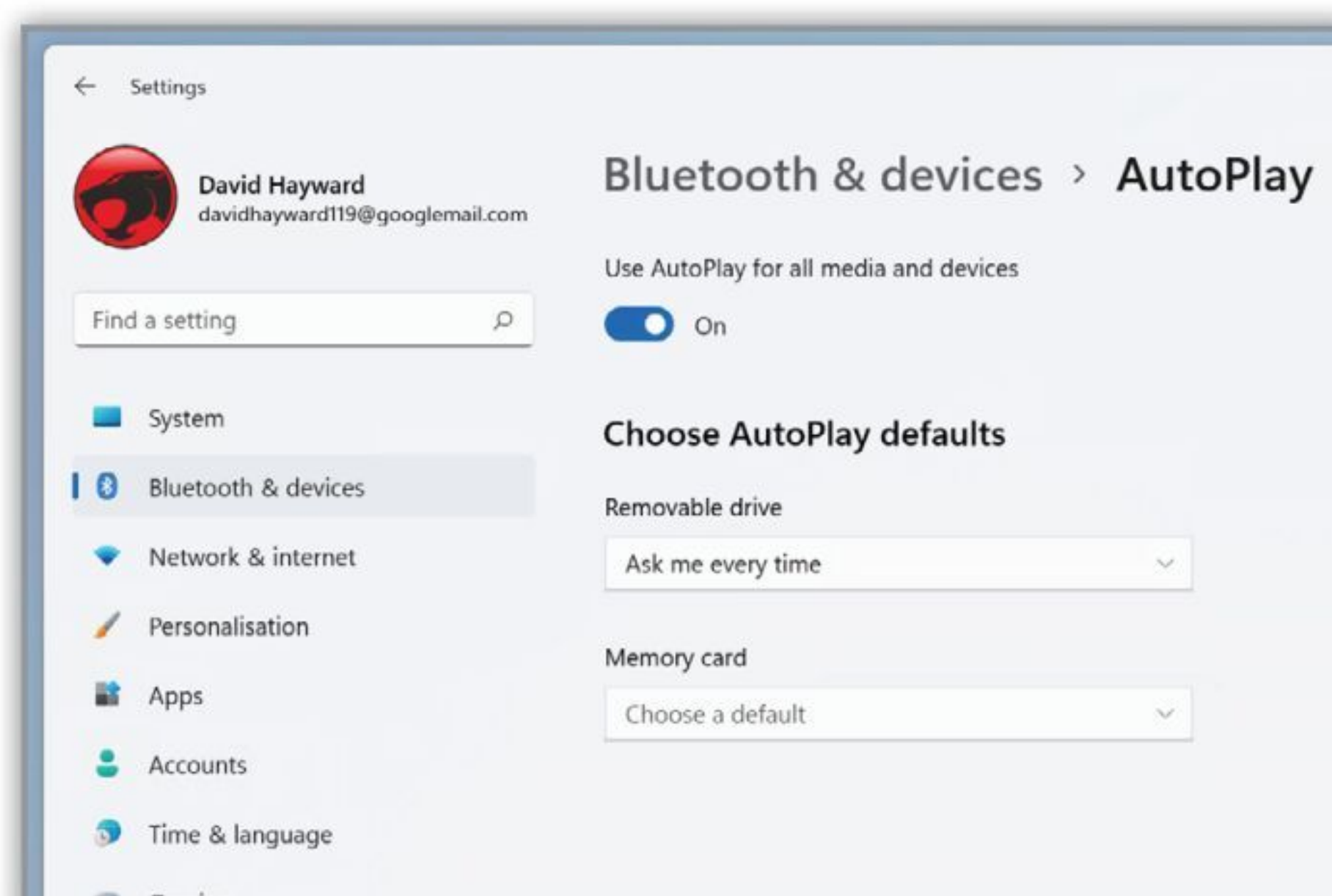
Step 2

In our example, the AutoPlay feature was enabled. This means that whenever we insert some media, be it a disc of some description or memory card, Windows 11 will auto launch the appropriate app. However, if your AutoPlay isn't working, start by clicking on the On button at the top of the screen.



Step 4

Here you'll have multiple options available. These options will depend on the apps you have installed on your system, but by default they allow you to access the Storage Settings in Windows 11 for removable drives and are; Take no action when a removable drive is inserted, Open the Windows File Explorer or Ask what you want to do with the type of media inserted.





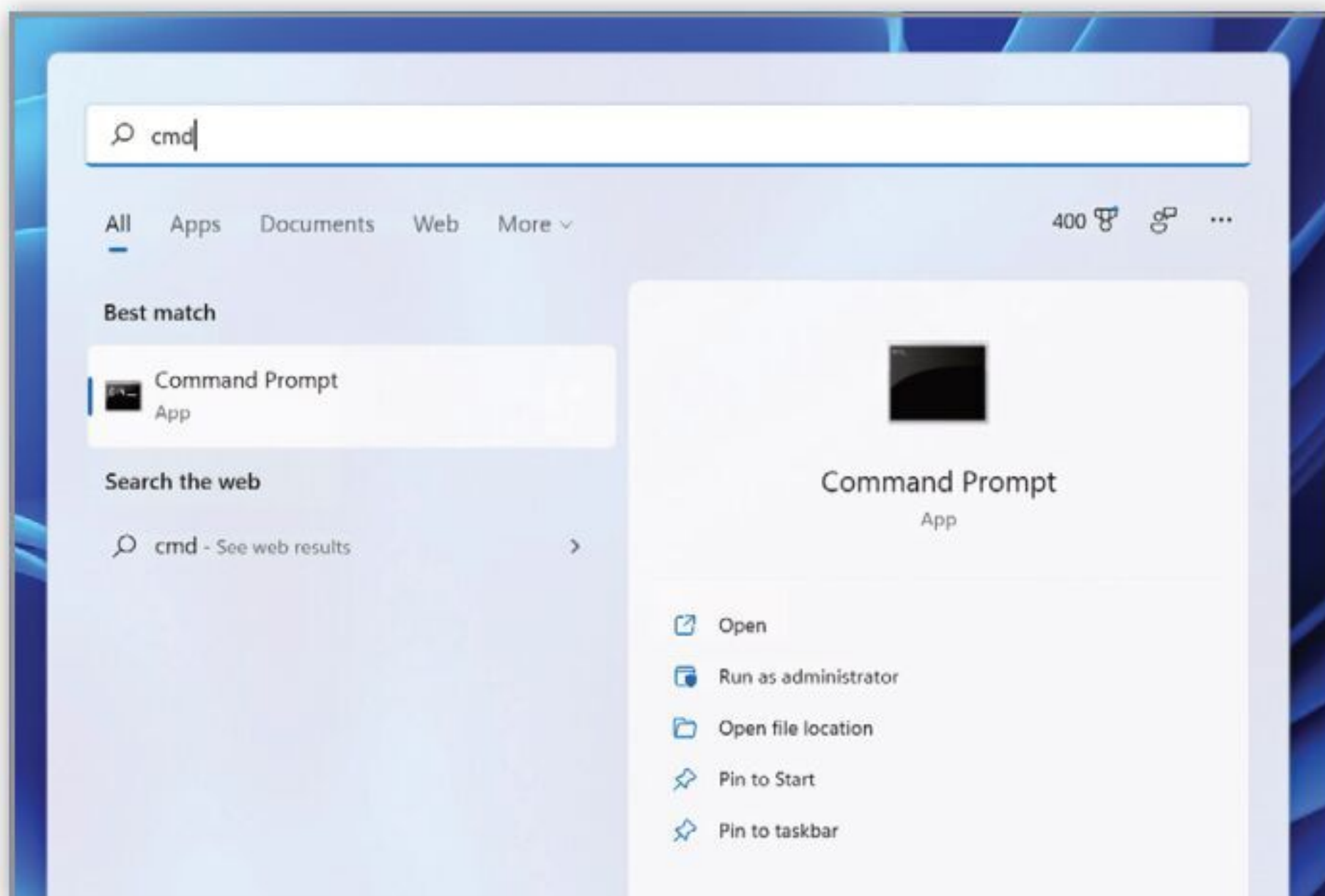
20 Command Line Actions for Windows 11

Ever since the early days of DOS, the command line has proved to be the ultimate playground for those who aren't afraid to delve into its murky depths. From the command line, you can do almost anything - even within Windows 11.

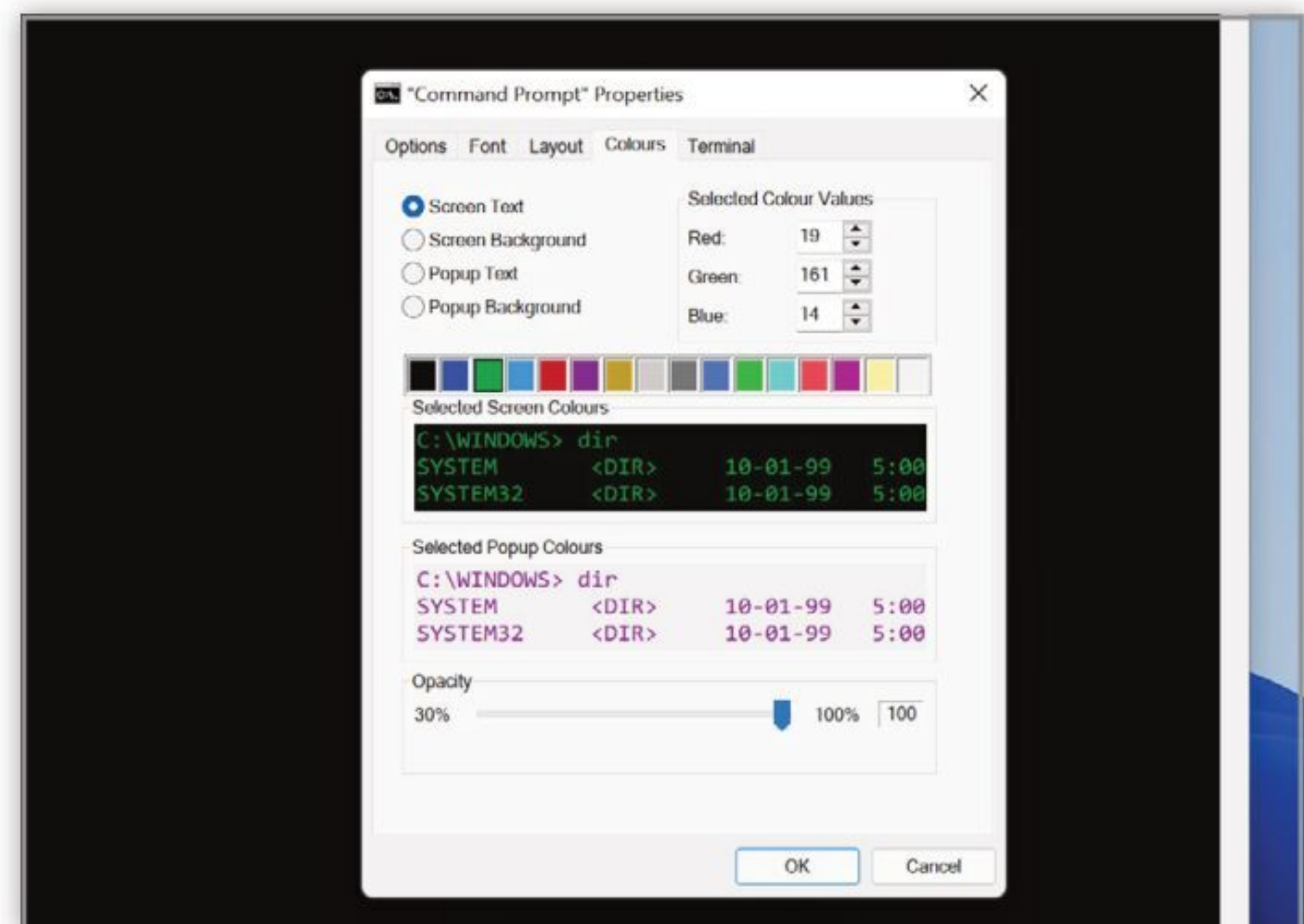
Take Command

The command lines used to be what early versions of Windows were built on top of, but there's still a lot that can be done from the old command line. Here are twenty cool actions for you to try out.

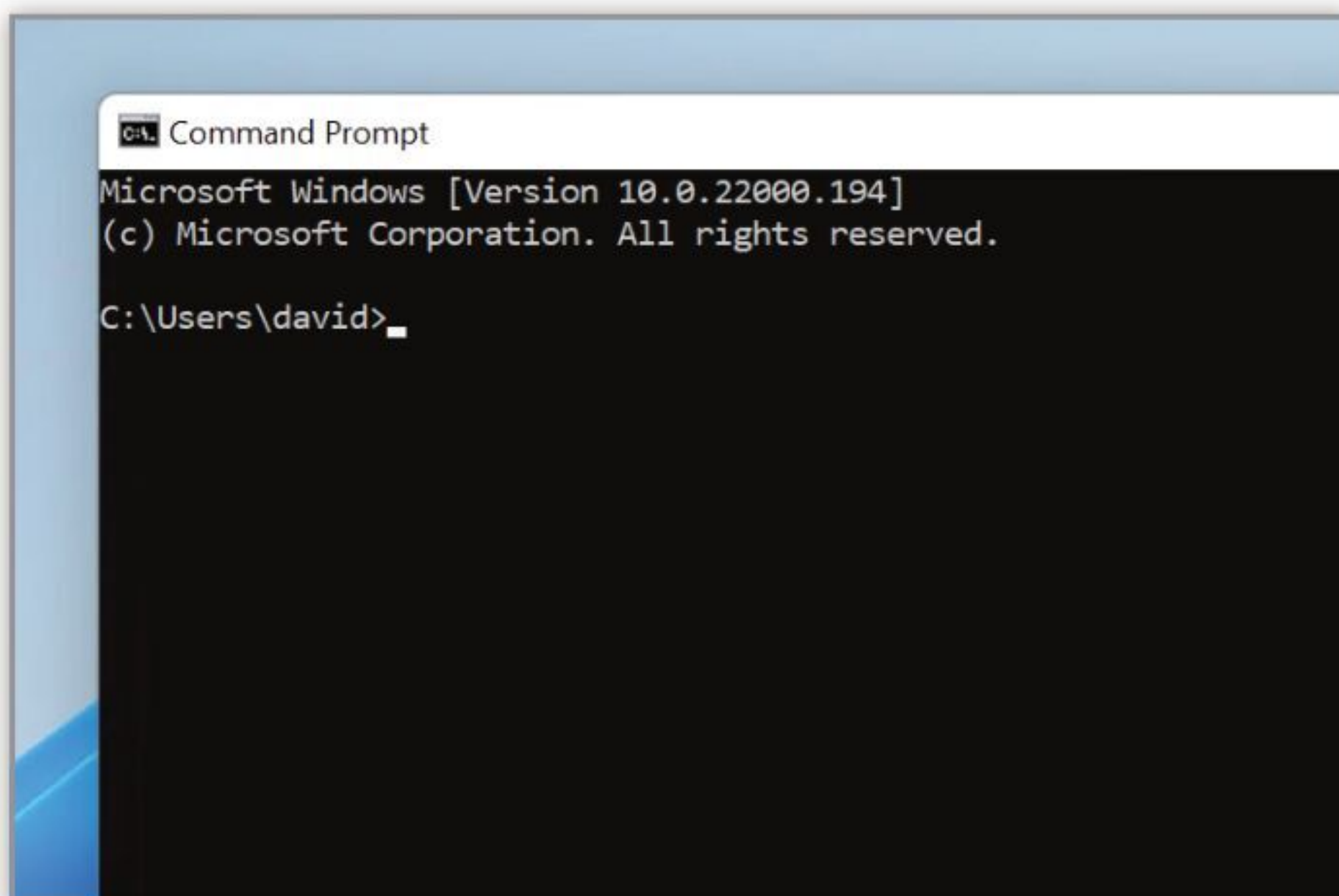
Action 1 To open the Command Prompt, where we'll enter the lines of commands, click on the Windows Start button and type: cmd. The first entry will be the Command Prompt. Click on this to open it. You can also click on Run as administrator, which will give you elevated access within the command line – but we won't do that just yet.



Action 3 You can change the colours of the Command Line by right-clicking the bar at the top of the window, choosing Properties from the menu, then clicking on the Colours tab. Screen Text, Pop-up Text and Background can all be clicked and altered using the colour bar. Green text on a black background is our favourite.



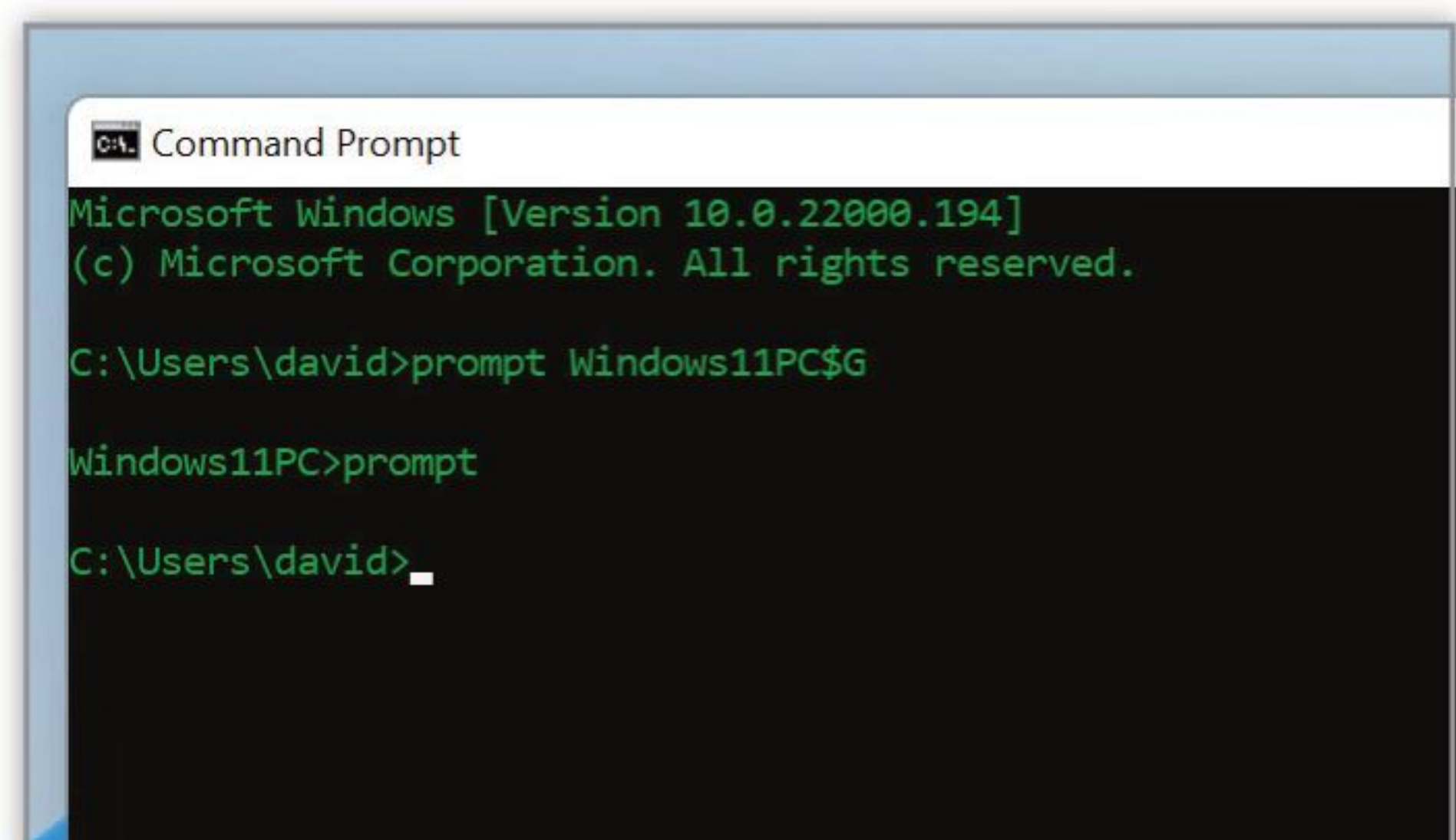
Action 2 This is the Command Prompt (or Command Line). It may not look like much, but here be dragons, so be careful. From this simple interface you can ping network routers around the world, connect to ancient Bulletin board Services, wipe your entire hard drive, or start Global Thermonuclear War (extra points to those who can spot the movie reference).



Action 4 The current prompt is your specific user account on the computer. In our case it's: C:\Users\David, since I'm signed in under my name. However, you can change that with the following command. Enter:

prompt Windows11PC\$G

The \$G part at the end ensures there's a > at the end of the prompt. To return to normal, type prompt.



Action 5

You can further customise the Command Prompt window by changing its title. By default it's Command Prompt, but it can be altered to anything you want, by typing:

title Awesome Lines of Power

Obviously, you'll choose a different title. When you close the Command Line window, and re-open it, the title will be gone.

```

C:\Users\david>title Awesome Lines of Power
C:\Users\david>
  
```

Action 6

Something a little more complex now. If you're trying to resolve a driver issue on Windows 11, you can list all the currently installed drivers on the system by entering:

driverquery /FO list /v

With this you can see the driver module name, type, start mode, path and more.

```

Microsoft Windows [Version 10.0.22000.194]
(c) Microsoft Corporation. All rights reserved.

C:\Users\david>driverquery /FO list /v

Module Name:      1394ohci
Display Name:     1394 OHCI Compliant Host Controller
Description:      1394 OHCI Compliant Host Controller
Driver Type:      Kernel
Start Mode:       Manual
State:            Stopped
Status:           OK
  
```

Action 7

Sadly, the list from number 6 is often ridiculously long to scroll through, and you'll soon come to realise a lot of available content via the Command Line is quite expansive. If only there was a way to output the content directly into a text file...? Try this:

driverquery /FO list /v > driverlist.txt

It makes things a little easier.

```

C:\Users\david>driverquery /FO list /v > driverlist.txt
C:\Users\david>
  
```

driverlist - Notepad

```

Module Name:      1394ohci
Display Name:     1394 OHCI Compliant Host Controller
Description:      1394 OHCI Compliant Host Controller
Driver Type:      Kernel
Start Mode:       Manual
State:            Stopped
Status:           OK
Accept Stop:      FALSE
Accept Pause:     FALSE
Paged Pool(bytes): 4,096
Code(bytes):      229,376
BSS(bytes):       0
  
```

Action 8

Did you know you can chain two separate commands together? Also, did you know that you can launch any of the apps on your system within the Command Line? Let's mix the last two entries, and auto-launch Notepad to view the contents:

driverquery /FO list /v > driverlist.txt && notepad.exe driverlist.txt

Providing the command after the && part is correct, the entire line will be executed.

```

C:\Users\david>driverquery /FO list /v > driverlist.txt && notepad.exe driverlist.txt
C:\Users\david>
  
```

driverlist - Notepad

```

Module Name:      1394ohci
Display Name:     1394 OHCI Compliant Host
  
```

Action 9

The Function keys are great shortcuts to learn when navigating the Windows 11 Command Line. F1 to F9 are used, with each doing a different task and making life a little easier when dealing with multiple commands, and commands that contain special characters that can be error prone when entering.

- F1: Tap or hold this key to retype your last command letter by letter.
- F2: Copies the current command up to a specified character.
- F3: Retypes the entire previous line
- F4: Auto-deletes the current command up to a specified character.
- F5: Similar to F3, but lets you cycle through previous commands.
- F6: Enters the EOF indicator into CMD.
- F7: Opens a list of previously entered commands.
- F8: Similar to F5, but doesn't stop at the end of your command history in the session. Instead, it goes all the way to the start.
- F9: Enters a previous command by entering a number associated with that line.

Action 10

You're able to list all the currently installed apps on your Windows 11 system by entering the following command:

wmic product get name

Remember, if the list is getting a bit too long to look at in the command window, use:

wmic product get name > productname.txt && notepad.exe productname.txt

```

C:\Users\david>wmic product get name
Name
OldSchool RuneScape Launcher 1.2.7
Windows PC Health Check
Office 16 Click-to-Run Extensibility Component
Office 16 Click-to-Run Localization Component
Office 16 Click-to-Run Licensing Component
Intel(R) Wireless Bluetooth(R)
Microsoft Visual C++ 2015 x86 Minimum Runtime - 14.0.24215
Microsoft Update Health Tools
  
```


20 Command Line actions for Windows 11 continued...

Action 11

Action 11 To change folders (or directories, if you prefer) in the command window, you'll need to use the CD (Change Directory) command. So, to change into the Documents folder, you would use:

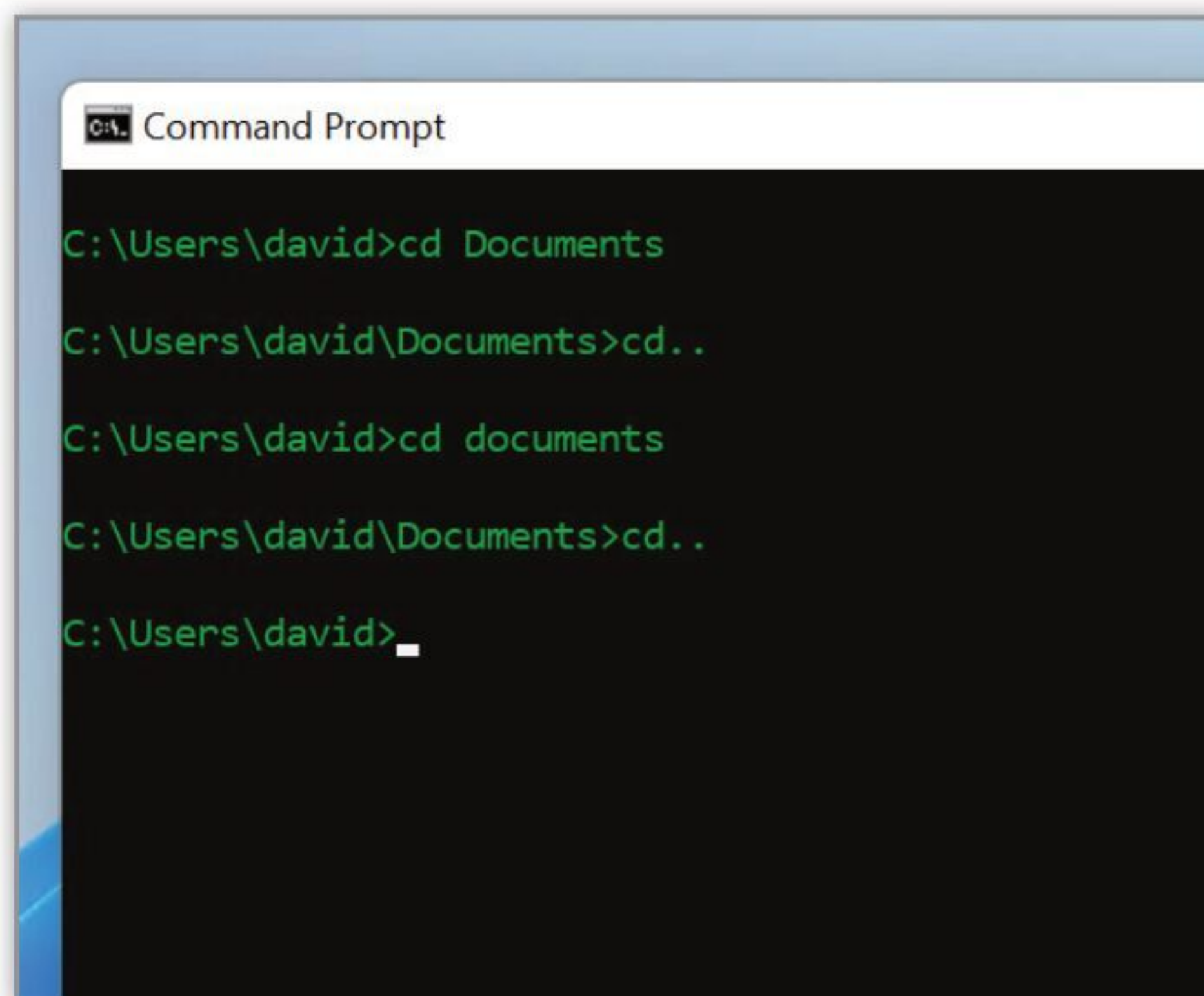
cd Documents

To change back a folder level, use:

cd²²

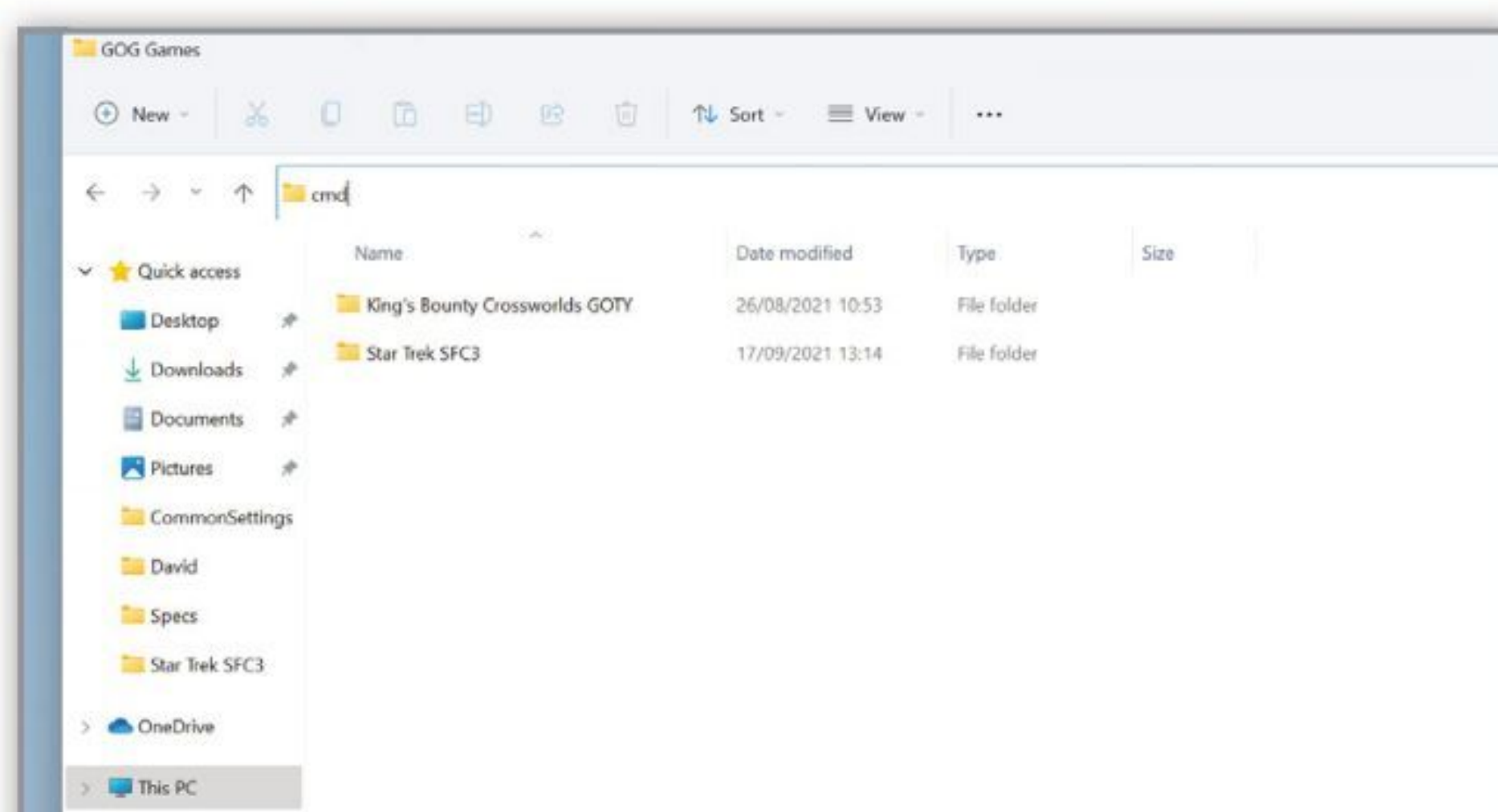
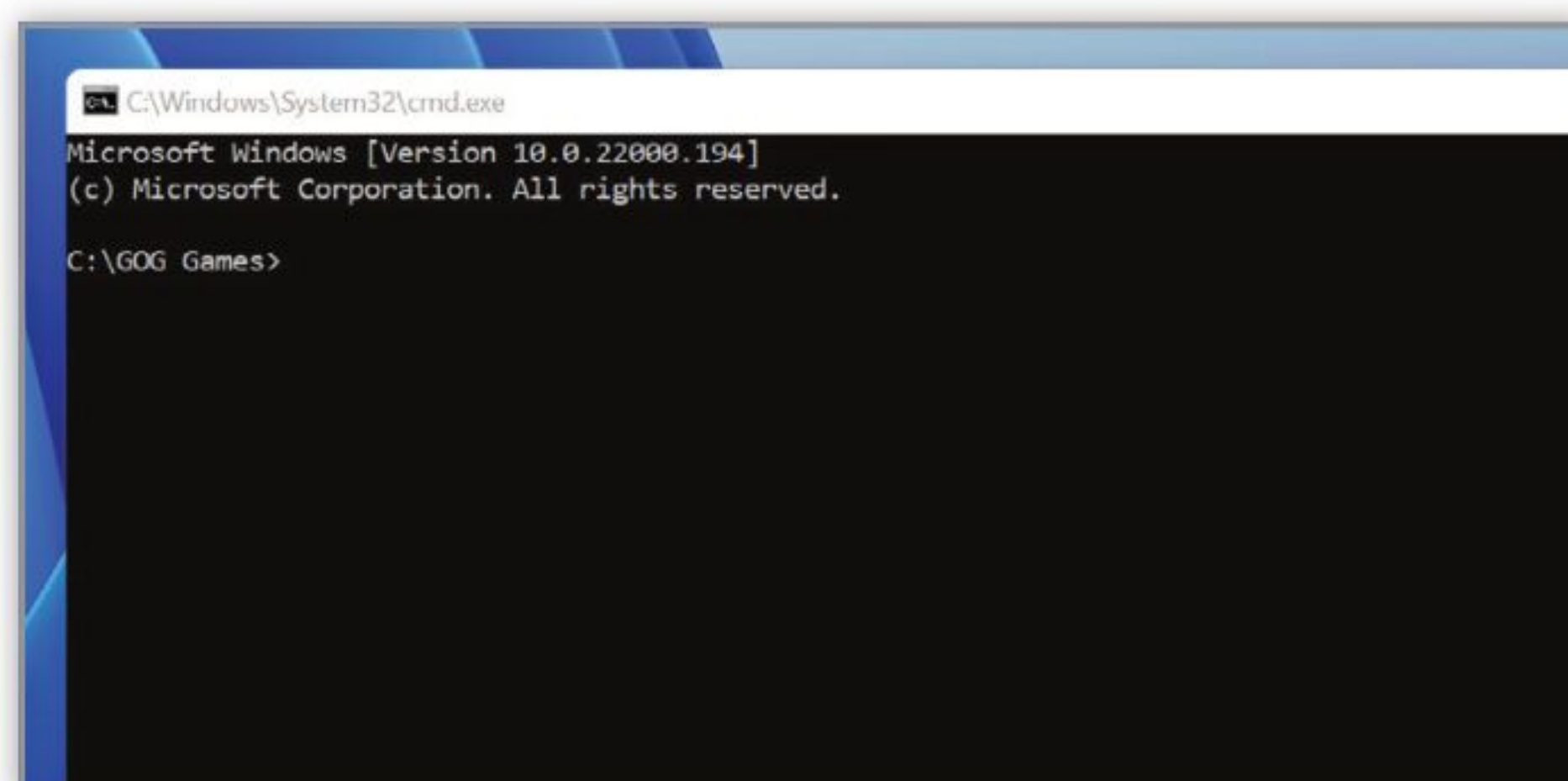
Note: the CD command isn't case sensitive, so the following works just as well:

cd documents



Action 12

Action 12 Instead of changing directories within the command window, you can instantly launch a command window from within the File Explorer. Simply open the File Explorer, go to the directory you want to open a command line window from, and enter: `cmd`, into the Address Bar. Hit Enter, and a new command line window will be displayed, in that directory.

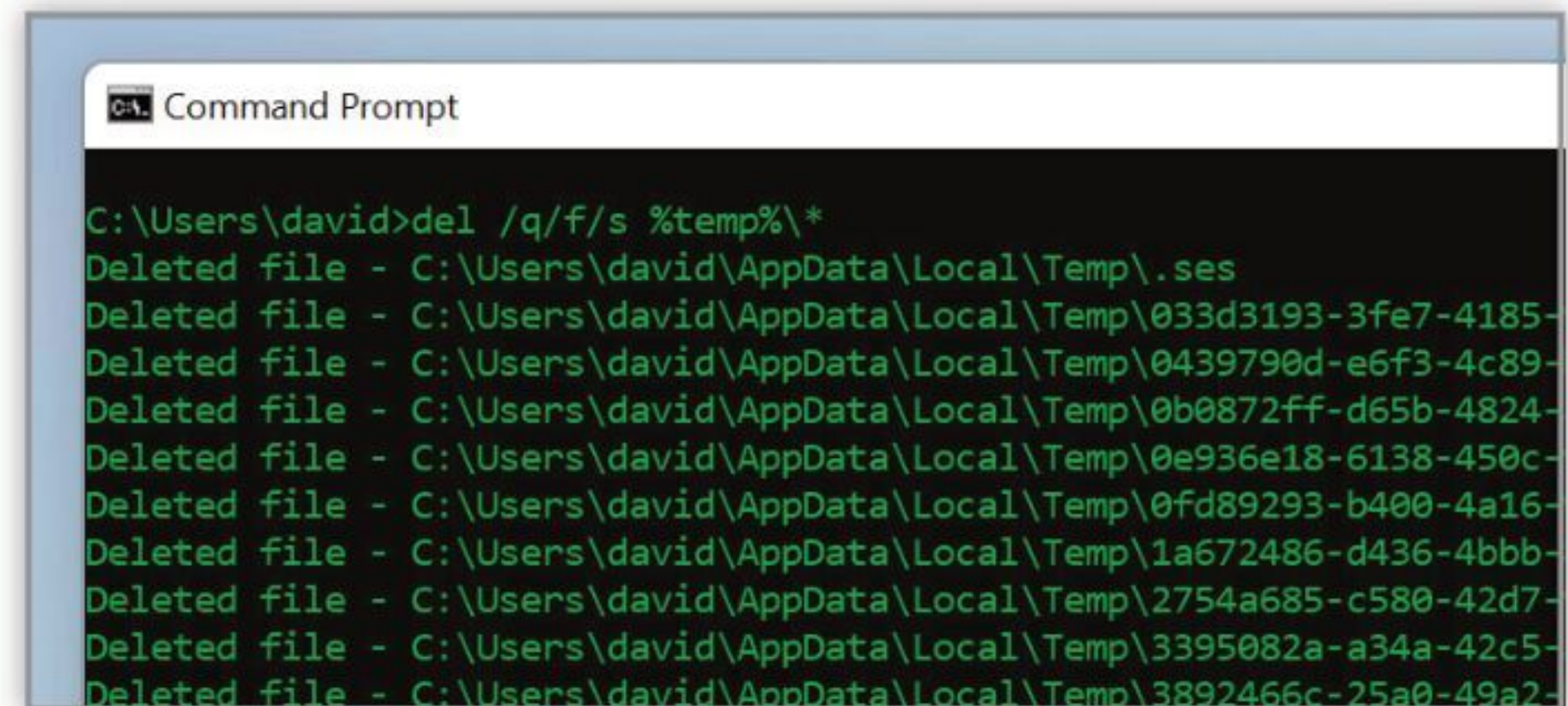


Action 13

Action 13 If you're running low on space, then it's recommended that you clean out the Temp area that Windows 11 uses to store stray and temporary data. You can enter this command:

del /q/f/s %temp%*

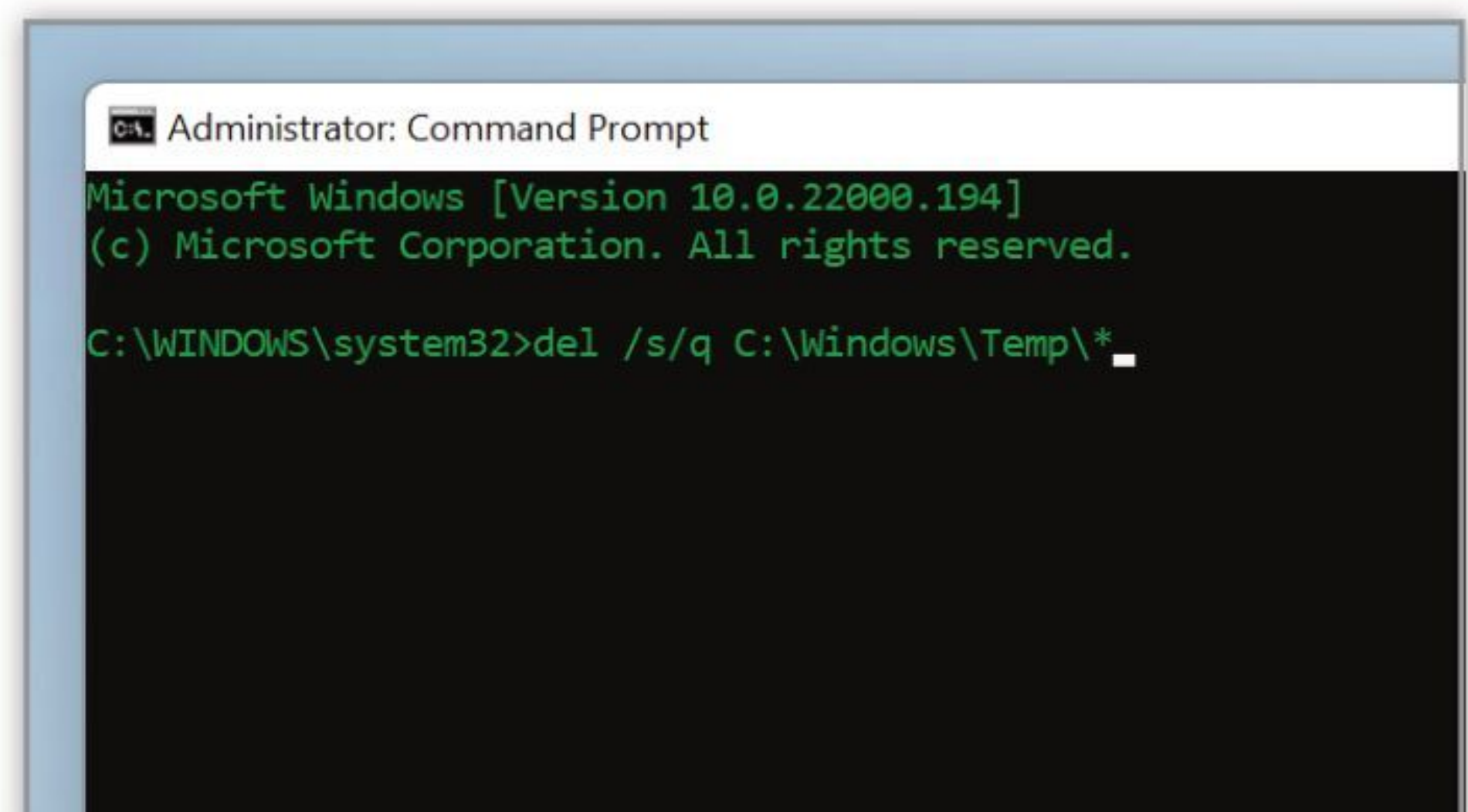
This is your localised temp storage area. To clear out the global (Windows whole) temp storage area, you'll need admin privileges.



Action 14

Action 14 Close your current command window, then return to the Windows Start button and enter `cmd` again. This time, however, click on the Run as administrator option. You'll be warned if you want to continue, so click Yes. This is the admin-level Command Line, so be careful in here. To clear the Windows global temp area, enter the following command:

del /s/q C:\Windows\temp*



Action 15

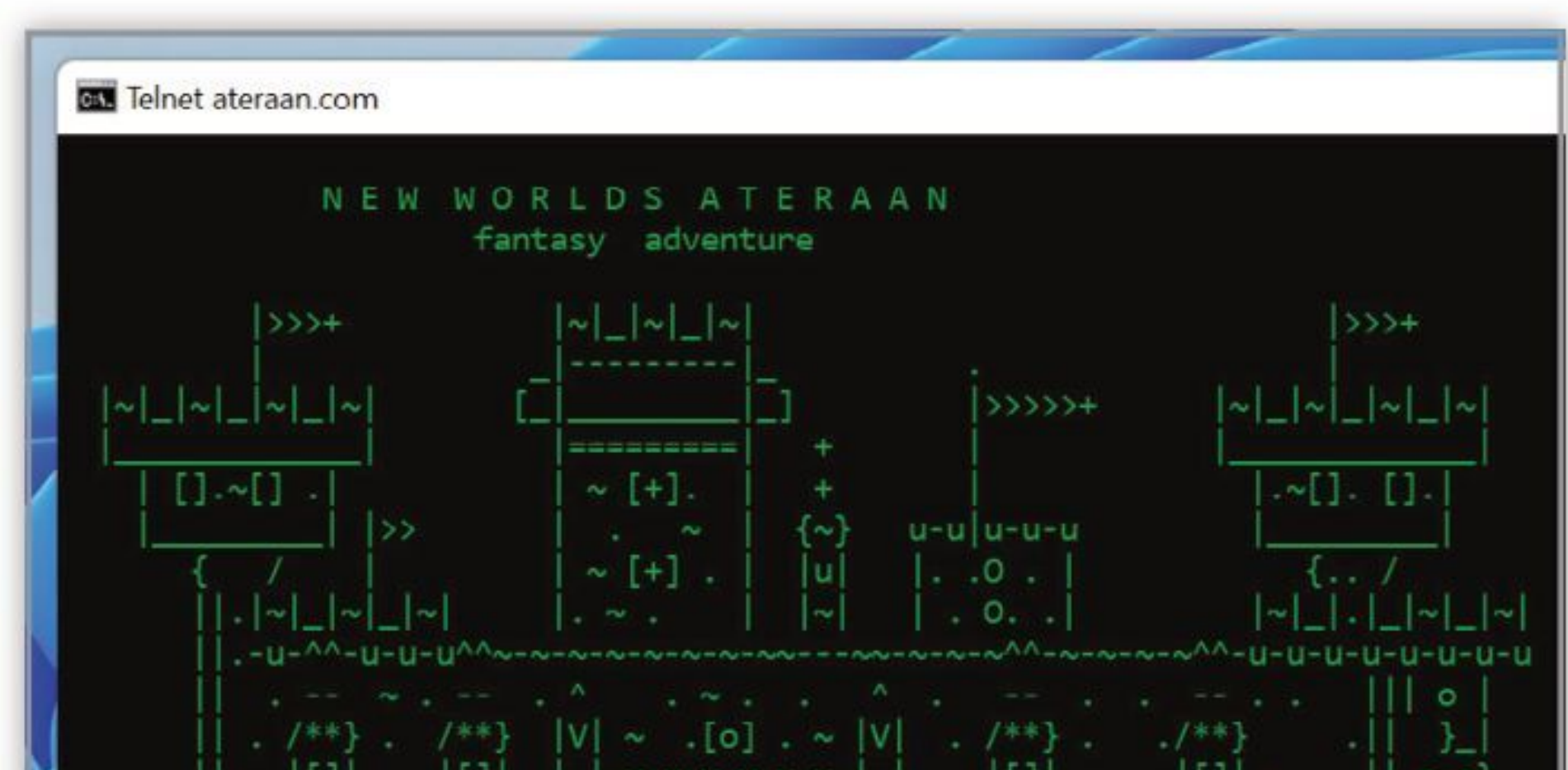
This one needs you to enable Telnet. Press the Windows Key + R, then enter:

pkgmgr /iu:"TelnetClient"

Click the OK button to install Telnet. Now, in the command window enter:

telnet ateraan.com 4002

Now you can play a remotely located, RPG game from inside the command line window.

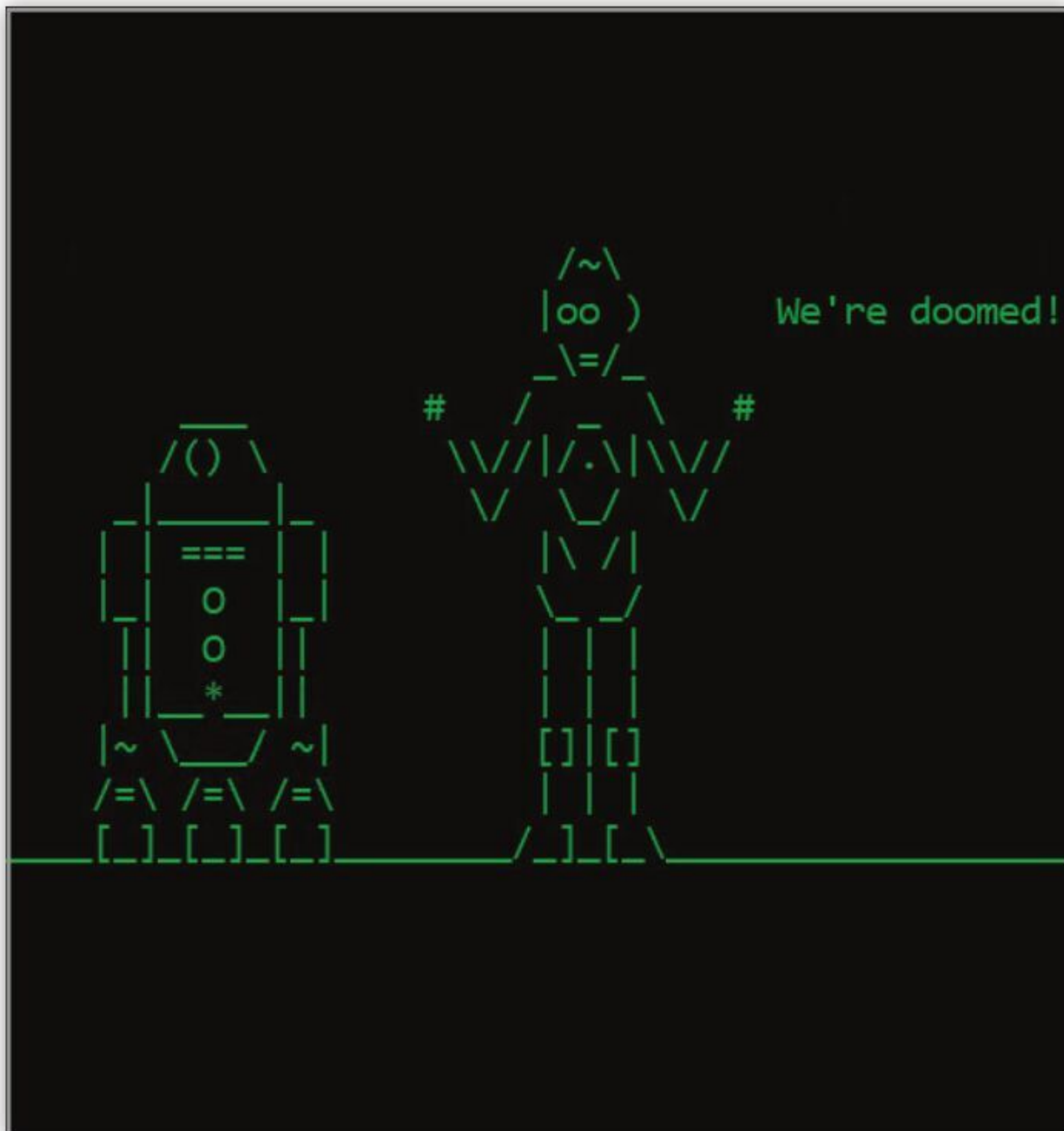


Action 16

Another favourite of the Telnet world, is the original Star Wars: A New Hope played out in glorious ASCII. Incredible as it sounds, here it is:

telnet towel.blinkenlights.nl

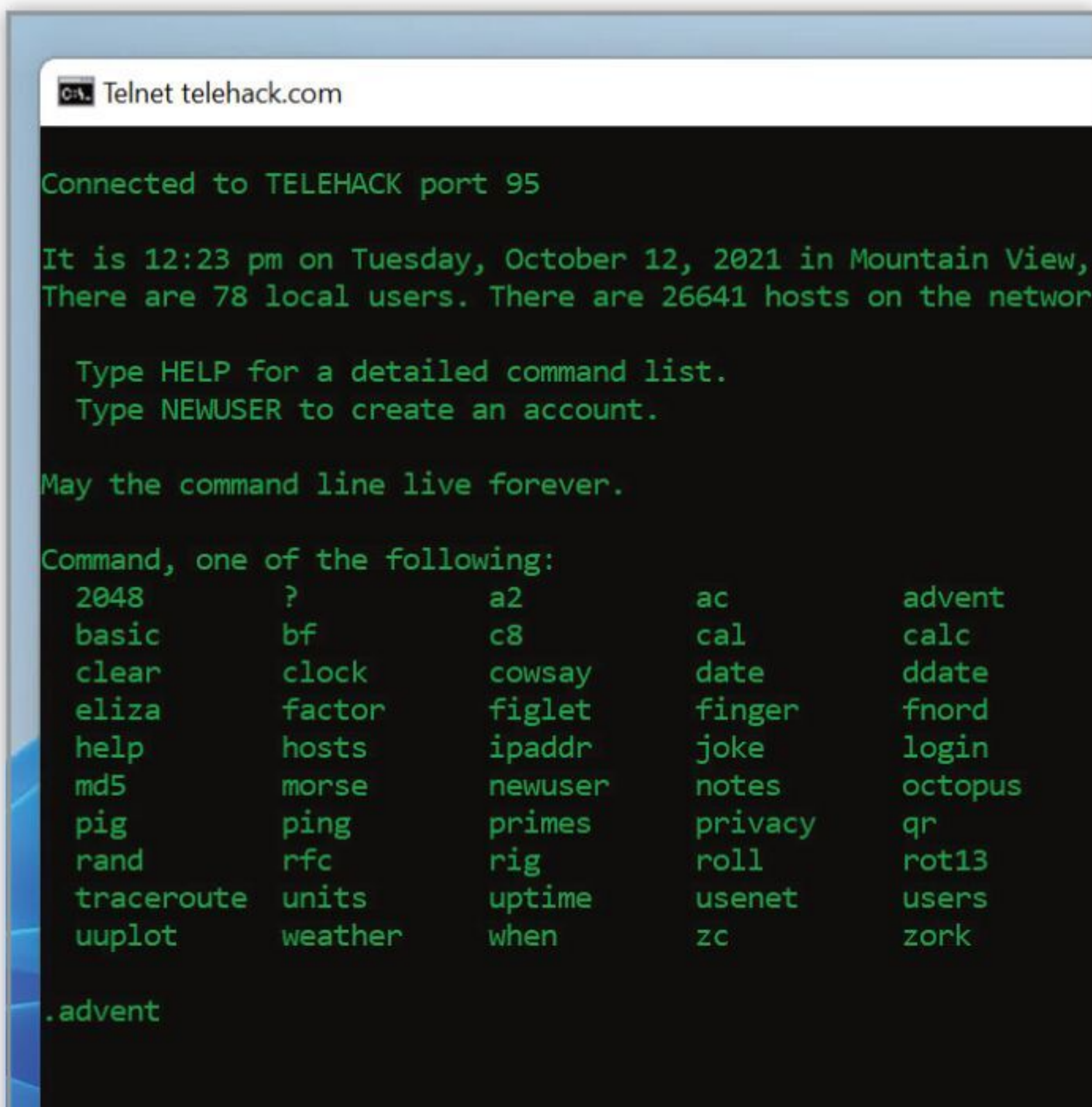
Remarkably, it's still better than the most recent trilogy of Star Wars movies. Hit CTRL +] to exit.



Action 17

One of the most remarkable Telnet servers available is Telehack.com. The server admin here has recreated most of the original ARPANet for users to explore. Features include Advent, the original 1976 text adventure, the Eliza Chatbot, and even the classic text adventure, The Oregon Trail. To enter it, use:

telnet telehack.com

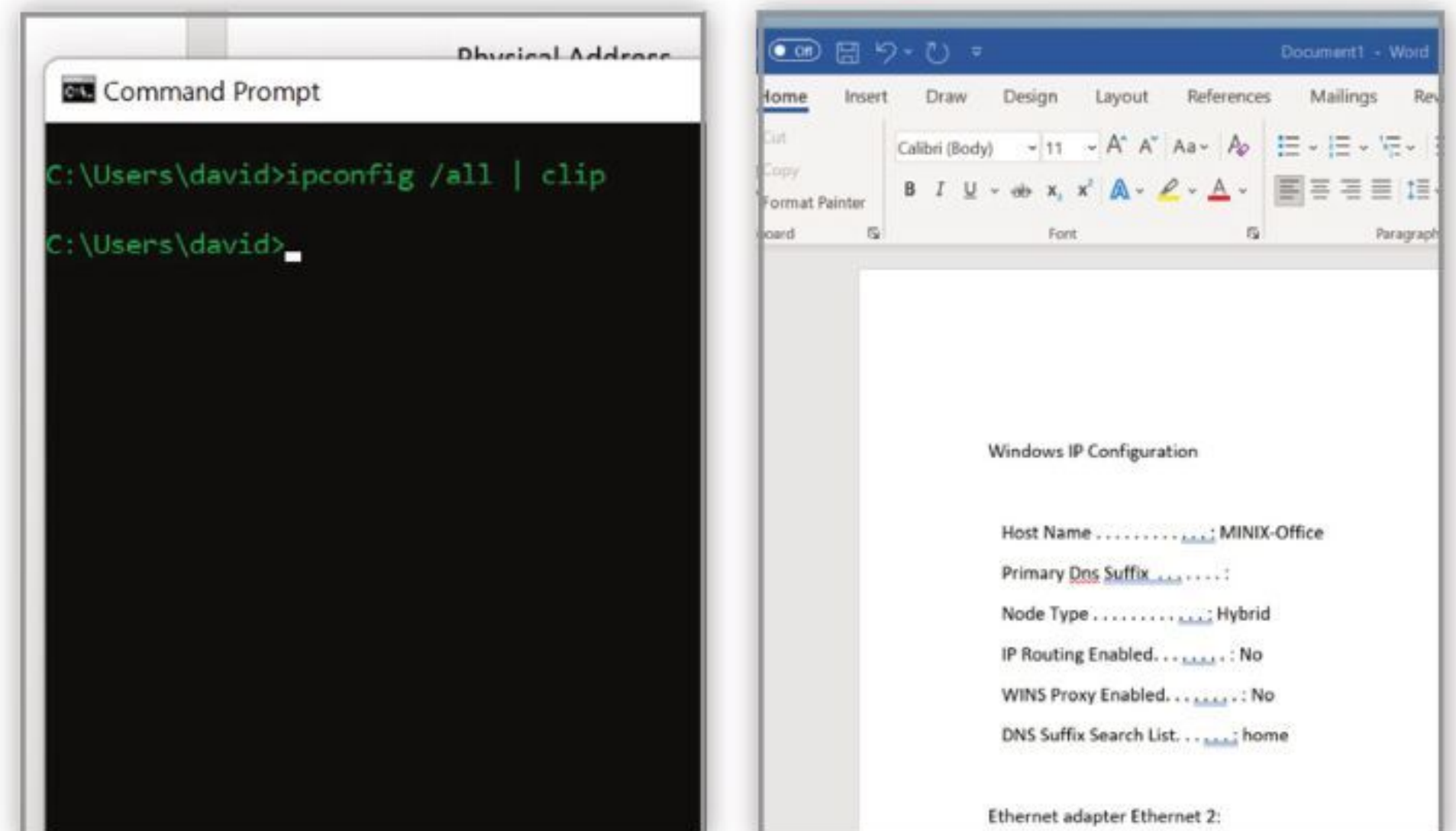


Action 18

If you don't want to send the output of a command through to a text file, which you can then open with Notepad, you can always copy the entire content from the command to the Windows 11 Clipboard. This way you can copy it anywhere you like. Try this:

ipconfig /all | clip

Now open Word, for example, and Paste the contents in.

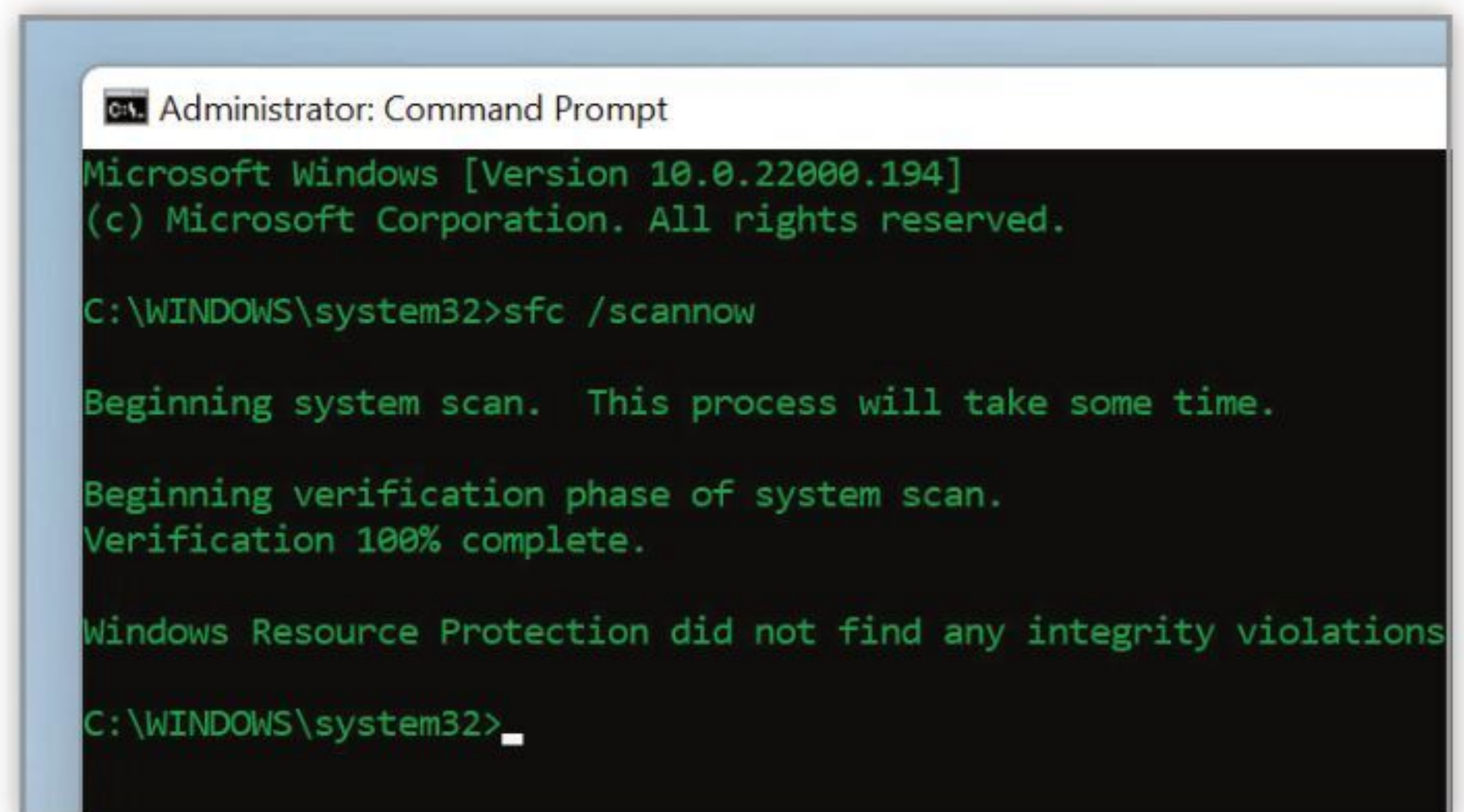


Action 19

You can scan the core Windows 11 system files for any discrepancies or problems by using the SFC command, but you'll need to be running the command line window at the administrator level. Do Run as administrator, then enter:

sfc /scannow

The process may take some time.

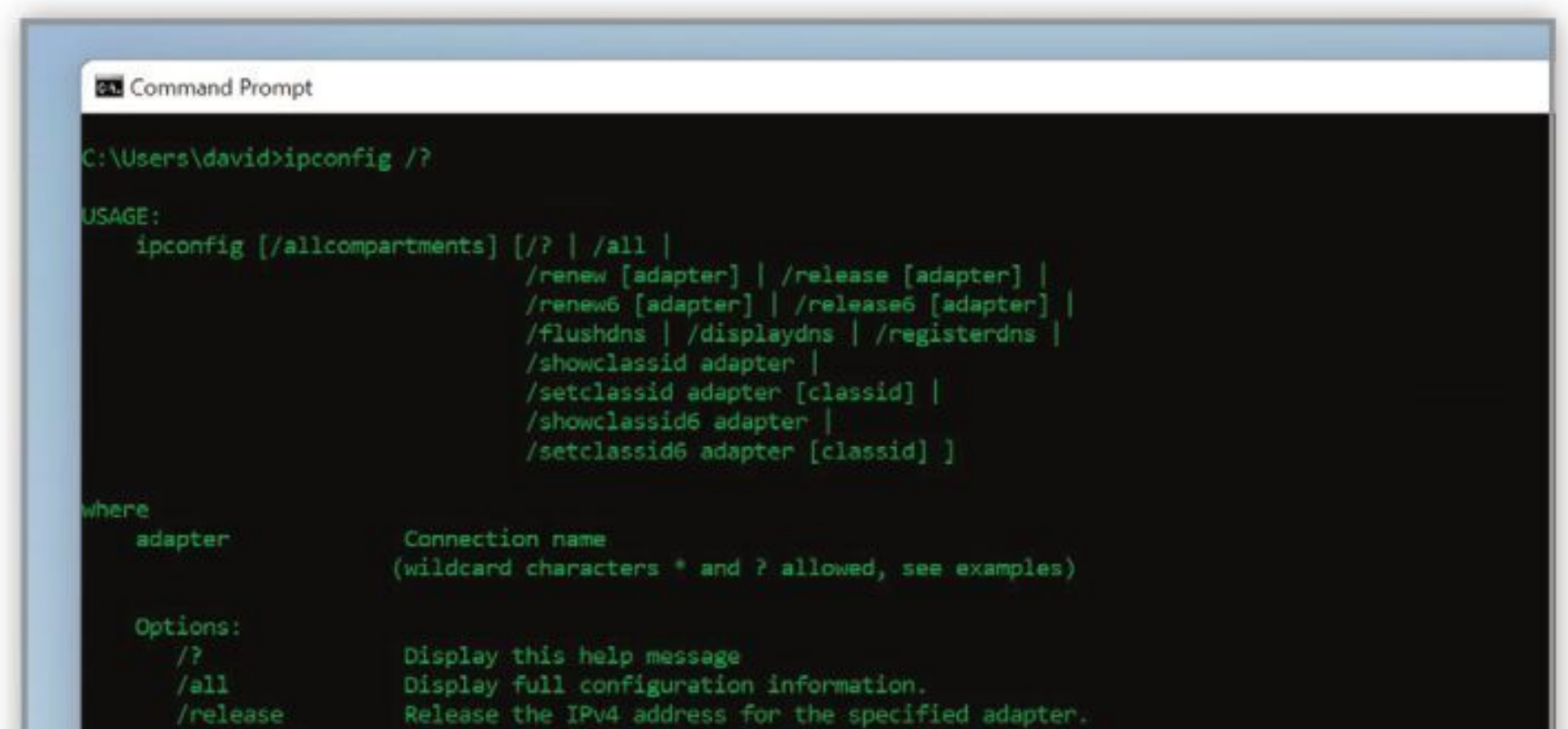


Action 20

If you ever need any extra help with the commands you're entering, all you need to do is ask. By this we mean, enter the command followed by a slash and a question mark. For example:

ipconfig /?

This will details all the various flags and options you can apply to the command to get what you want from it.





Windows Networking Command Cheat Sheet

Windows contains numerous built-in commands for networking. These utilities and tools will help you discover problems with your network, as well as help you improve performance and monitor what's going on.



Netstat

Netsat actually stands for Network Statistics. This command will display connection information, routing tables and so on. Entering the command will display what's going on while you use the network and Internet. Use netstat -e for interface stats.

```
C:\Users\david>nbtstat -c

Ethernet 2:
Node IpAddress: [0.0.0.0] Scope Id: []

    No names in cache

VirtualBox Host-Only Network:
Node IpAddress: [192.168.56.1] Scope Id: []

    No names in cache
```

NbtStat

The nbtstat command is a diagnostic tool for NetBIOS over TCP/IP. Its primary design is to help troubleshoot NetBIOS name resolution problems. It'll display the human-friendly names of devices on the network along with their IP addresses.

```
C:\Users\david>nbtstat -c

Ethernet 2:
Node IpAddress: [0.0.0.0] Scope Id: []

    No names in cache

VirtualBox Host-Only Network:
Node IpAddress: [192.168.56.1] Scope Id: []

    No names in cache
```

Tracert

Stands for Trace Route and is used to examine the path to a remote computer, either locally or on the Internet. For example, entering tracert google.com will display the hops taken over networking devices to get to one of the Google servers.

Arp

Stands for Address Resolution Protocol displays and modifies entries in the ARP cache, which contains one or more tables that are used to store IP addresses and their resolved Ethernet or Token Ring physical addresses.

Windows Networking Command Cheat Sheet

Ipconfig

Probably one of the most used networking command in Windows. Ipconfig will display information on the local computer's network interfaces, such as IP addresses (both IPv4 and IPv6), Hostname, gateway and so on.

Route

The Windows Route command allows you to view the device's routing tables. To do so, simply type Route Print. This will print the network interfaces, IPv4 and IPv6 route tables.

Pathping

This is a handy command that combines the best elements of Ping and Tracert. It will display the latency and packet loss between one computer and another (either locally or on the Internet), and after 300 seconds display a detailed report.

```
Command Prompt
C:\Users\david>pathping google.com

Tracing route to google.com [2a00:1450:4009:80f::200e]
over a maximum of 30 hops:
 0  Windows.home [2a00:23c7:c87:d101:5507:a05b:bd21:47d9]
 1  broadband.bt.com [2a00:23c7:c87:d101:46fe:3bff:fef6:d115]
 2  2a00:2302::1100:203:3c5
 3  * * 2a00:2302::1102:100:32
 4  2a00:2302::1102:100:3b
 5  2a00:2380:3014:9000::c
 6  2a00:2380:14::97
 7  2a00:2380:2001:7000::23
 8  2a00:1450:80ea::1
 9  2001:4860:0:1::22
10  2001:4860:0:1::1757
11  lhr25s02-in-x0e.1e100.net [2a00:1450:4009:80f::200e]

Computing statistics for 275 seconds...
Source to Here This Node/Link
Hop RTT Lost/Sent = Pct Lost/Sent = Pct Address
0 --- 0/ 100 = 0% 0/ 100 = 0% Windows.home [2a00:23c7:c87:d101:5507:a05b:bd21:47d9]
1 0ms 0/ 100 = 0% 0/ 100 = 0% broadband.bt.com [2a00:23c7:c87:d101:46fe:3bff:fef6:d115]
2 --- 100/ 100 =100% 100/ 100 =100% 2a00:2302::1100:203:3c5
```

Getmac

Every network interface has a unique Media Access Code assigned to it. Some routers are able to limit connection to the network by only allowing user-entered MAC addresses in. You can get the MAC address of a windows computer by entering getmac.

NSlookup

This troubleshooting tool can be used to look up and diagnose the Domain Name System (DNS) of a location on the local network or Internet, and check DNS records propagation and resolution with different servers.

Hostname

If you're struggling to find the name of a Windows computer you've got on your network, simply enter the hostname command and it'll display the computer's local name.

Netsh

This is a complex command that when entered will put you into a different shell, the Network Shell (netsh). It's capable of displaying and configuring information regarding a computer's networking setup.

Telnet

This is a command that can be used to connect to another computer, or manage a router or switch. You can send and receive files, send commands and much more. With Telnet you're also able to connect to active Bulletin Board Systems. For example, enter: telnet bbs.balcos.net

```
Telnet bbs.balcos.net
Mystic BBS v1.12 A34 for Linux Node 2
Copyright (C) 1997-2017 By James Coyle

Detecting terminal emulation: ANSI detected.

Welcome to:
A 90's Manila BBS

telnet://bbs.balcos.net
http://www.balcos.net/bbs
e-mail: michael.balcos@gmail.com

System Operator: Michael Balcos
Nodes: 12
Online: 24x7

Fidonet address: 3:772/500
fsxnet address: 21:1/192

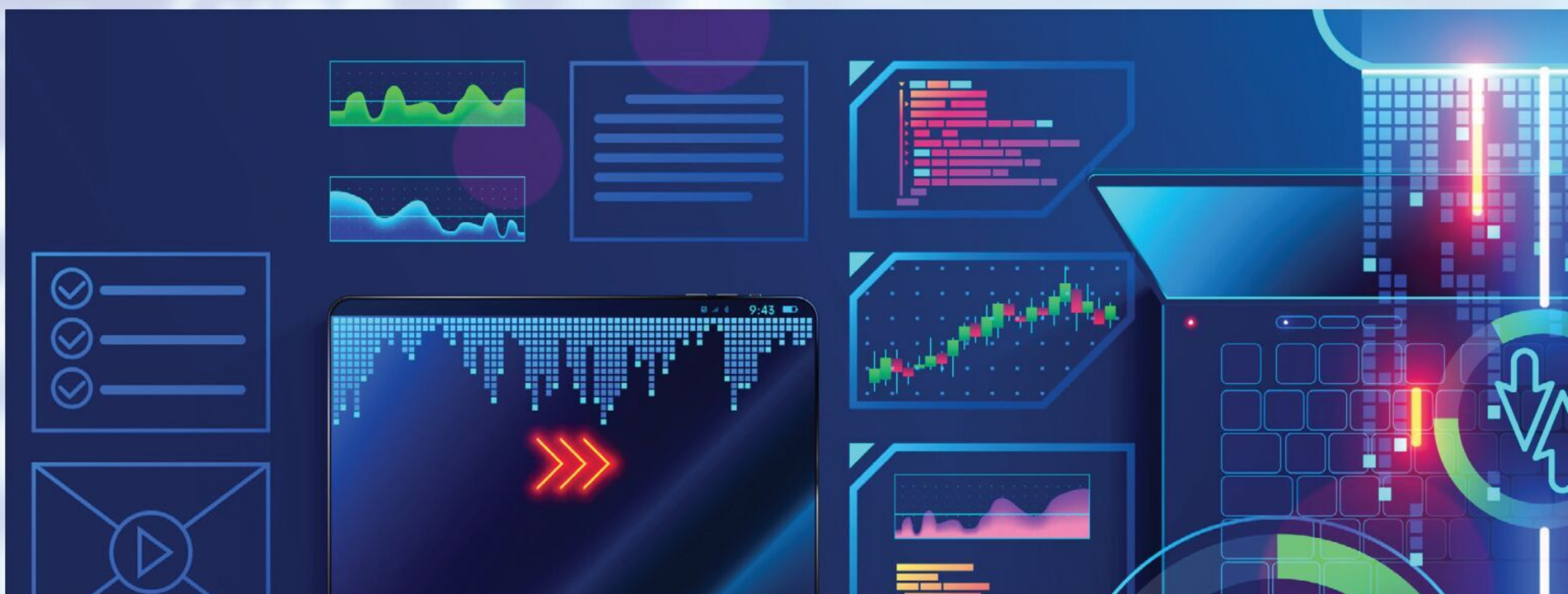
Launched: 12/30/16, 7:03AM, PM

Happy BBSing! :)

Enter your user name:
```

Ping

Ping is probably the most familiar of networking command line tools. With it you're able to send an echo request to a device locally, or on the Internet, and receive a reply.





Skype in Windows 11

Although Skype took something of a backseat to Teams during the world-wide Covid-19 lockdown, it still proved immensely useful for individuals to keep in contact with loved ones and friends around the world.

1

Although it's expected for you to appear on camera when using Skype, it's always best to remember that you don't have to. You can easily connect to a session and speak or type without showing your face by simply covering the camera.

2

This is your Profile, click the image to open details about your Microsoft account, as well as manage your Skype profile. Further settings are available, along with Bookmarks and being able to add call credit in your local currency.

3

This panel details the recent chats and calls you've had with others in Skype. From here you can arrange new Skype video calls, new chats, look at your contacts and see any notifications. Click recent chats to display the contents in the main Skype window. You can also run an Echo/sound Test here, to test your microphone and camera.

4

The main Skype window is where all your video calls and chats will take place. Grouped calls split the screen depending on how many people are in the call, and chats can have attachments added and viewed – such as images and videos.



5

Skype has been redesigned in recent years to perform better, and to offer a more high-resolution experience. If you think your video is lacking in quality, then take a look at the hardware settings for the webcam and see if you can improve it.

6

The top bar details the number of participants, any images and videos included in the chat or call, and allows you to find any specific keyword for participants. You can also Start a Call, and add more contacts as you need from the two buttons in the top-right of the screen.

7

It's worth mentioning that video quality can often be degraded due to a lack of bandwidth. Skype will automatically throttle itself to keep the connection alive, often at the detriment of video quality. If you find this happening, stop any other downloads from your browser, or check your Internet settings.

8

Use this link to send to others so they can join in the conversation. They will need access to Skype, either as their own installed app on their system, or they can use the link to access the call via the Skype webpage. You can also add more people via your contacts, or create specific shared invites.

9

You'll enter your chat and video message texts in here. You can also include emoji, attach files, share contact details, create a poll, schedule a call, share your location and access your OneDrive area to collaborate with others on content.





Making Calls with the Skype App

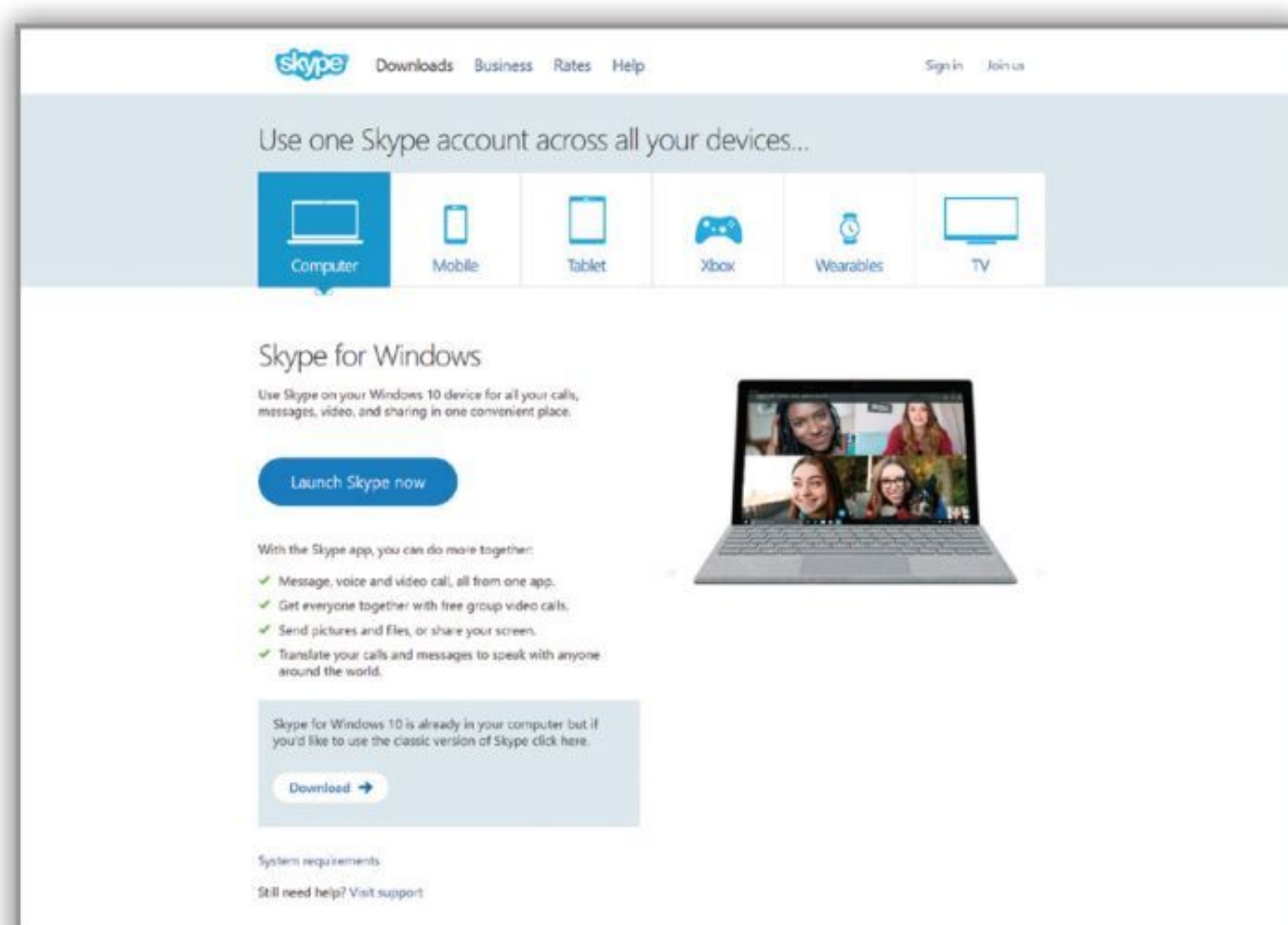
Skype is now a much bigger part of Windows 11 than it once was, and has its own app that comes pre-installed with the OS. Getting to grips with the different tools in Skype is fairly simple but learning how to use it more efficiently and easily takes a little more time.

Install and Use Skype

Recently updated, Skype has now been turned into a proper Windows 11 app and follows the Windows design style more closely.

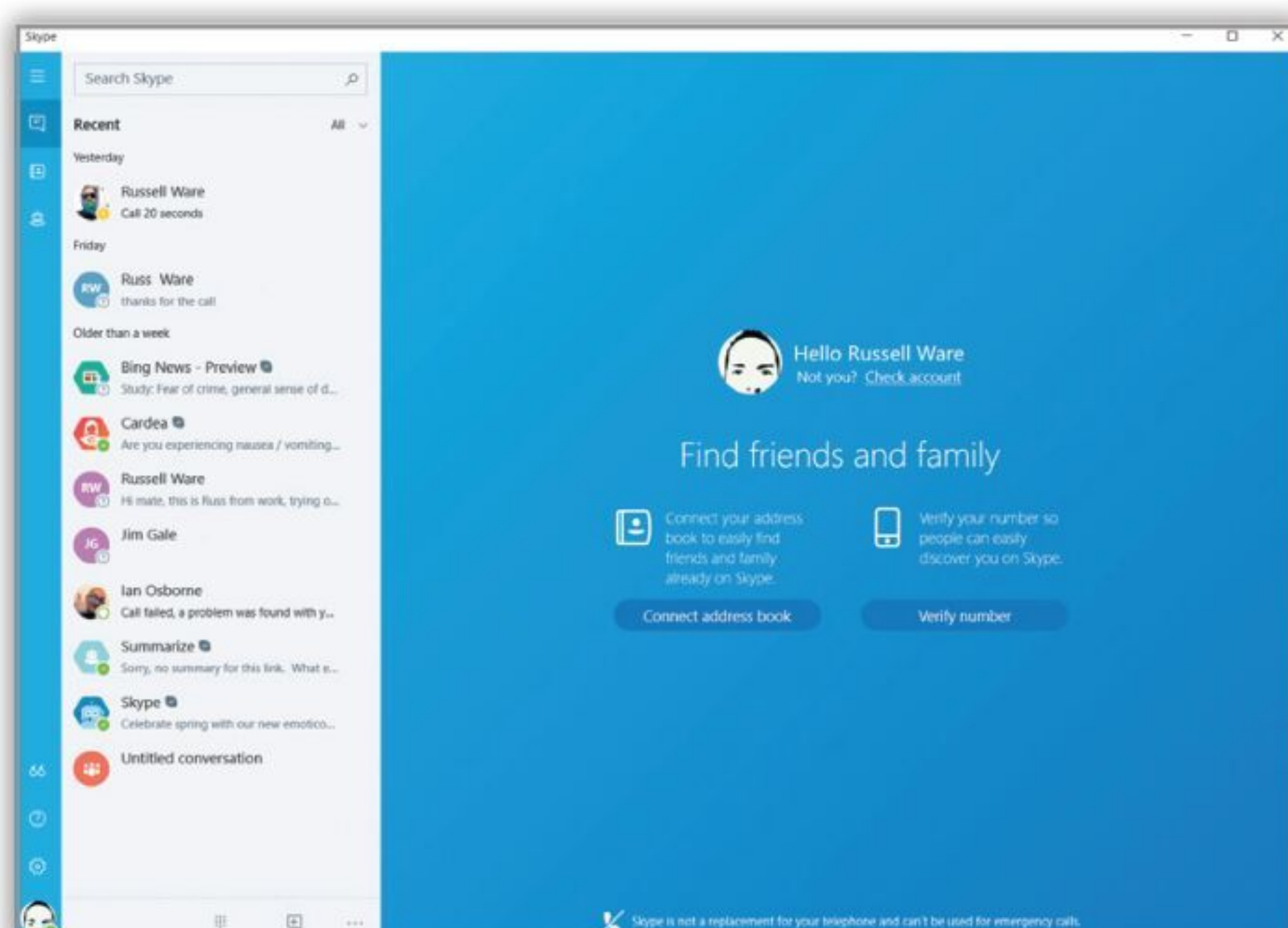
Step 1

Skype has a dedicated Windows 11 app and this may be preinstalled on your Windows PC but you might need to download it from the Windows store. You can also download Skype directly from www.skype.com as well as check that you have the latest version available.



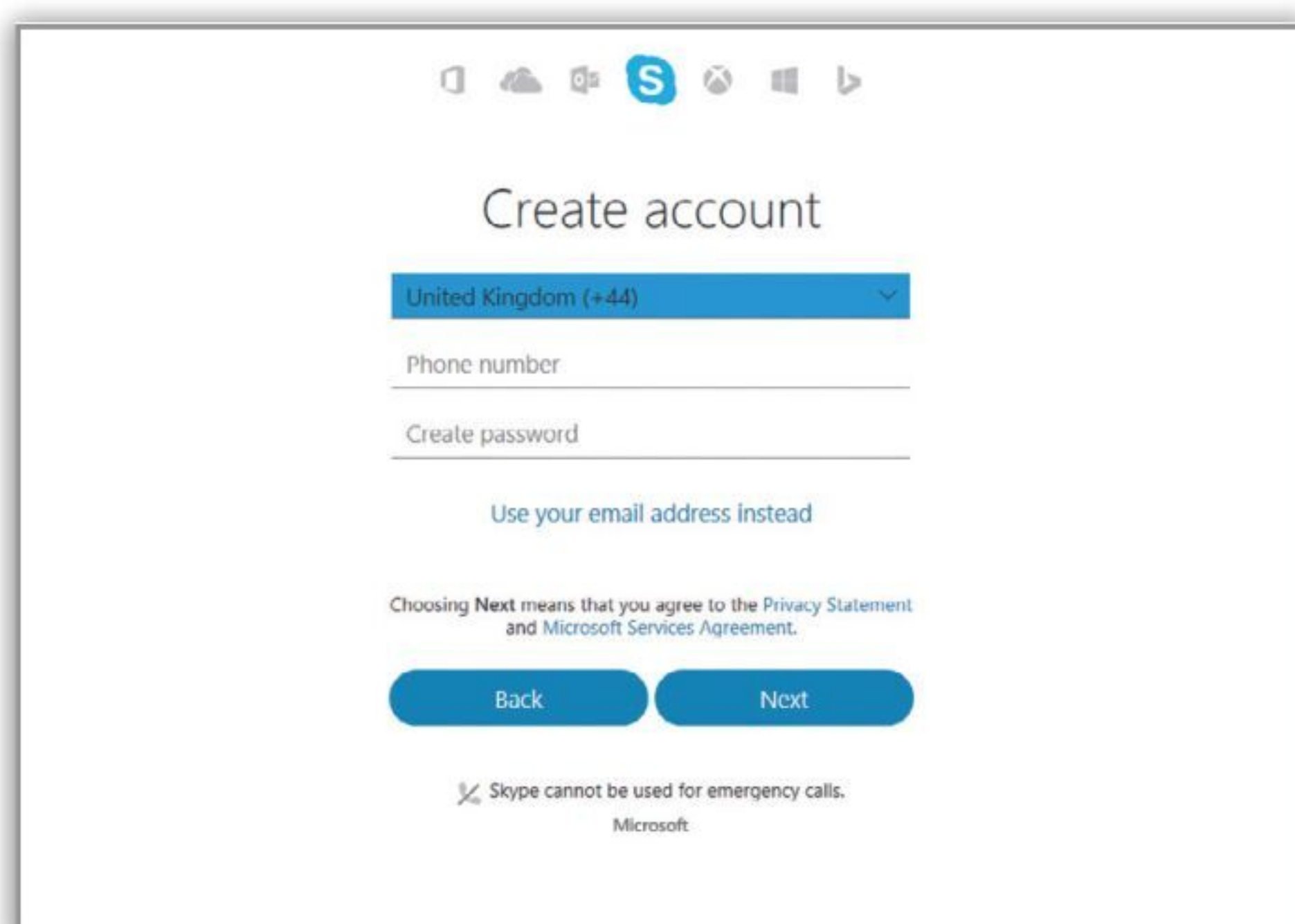
Step 3

The Skype window should now be open on screen. The default view is the Recent conversations screen but this may be completely empty if you are new to Skype. The first thing you need to do as a fresh user, is to begin adding contacts.



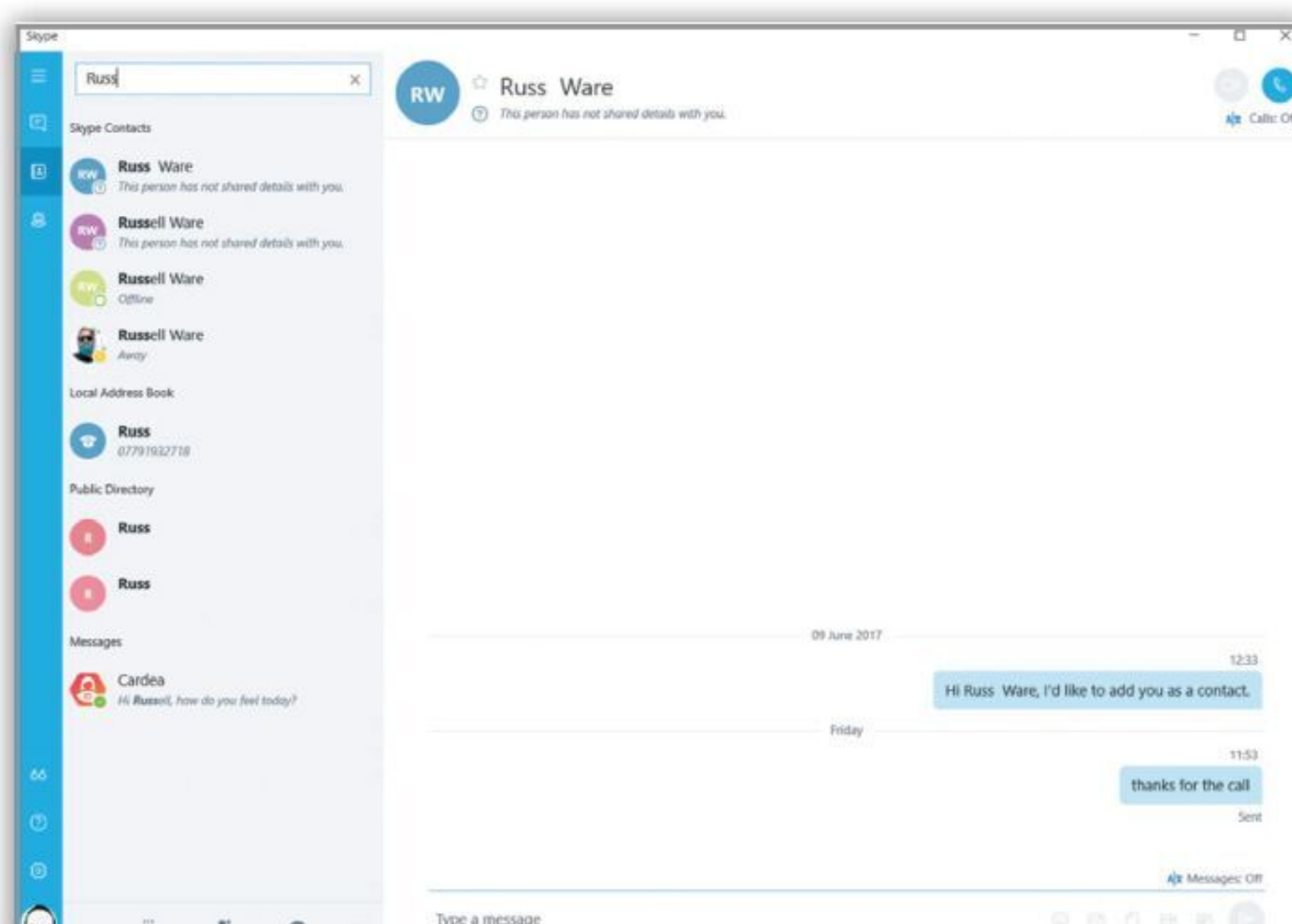
Step 2

Once installed, you will need to sign in to the Skype app. If you already have a Skype account, which is completely free to set up, just enter your login details when prompted. If not, you can go to www.login.skype.com and create a new account in just a few minutes.



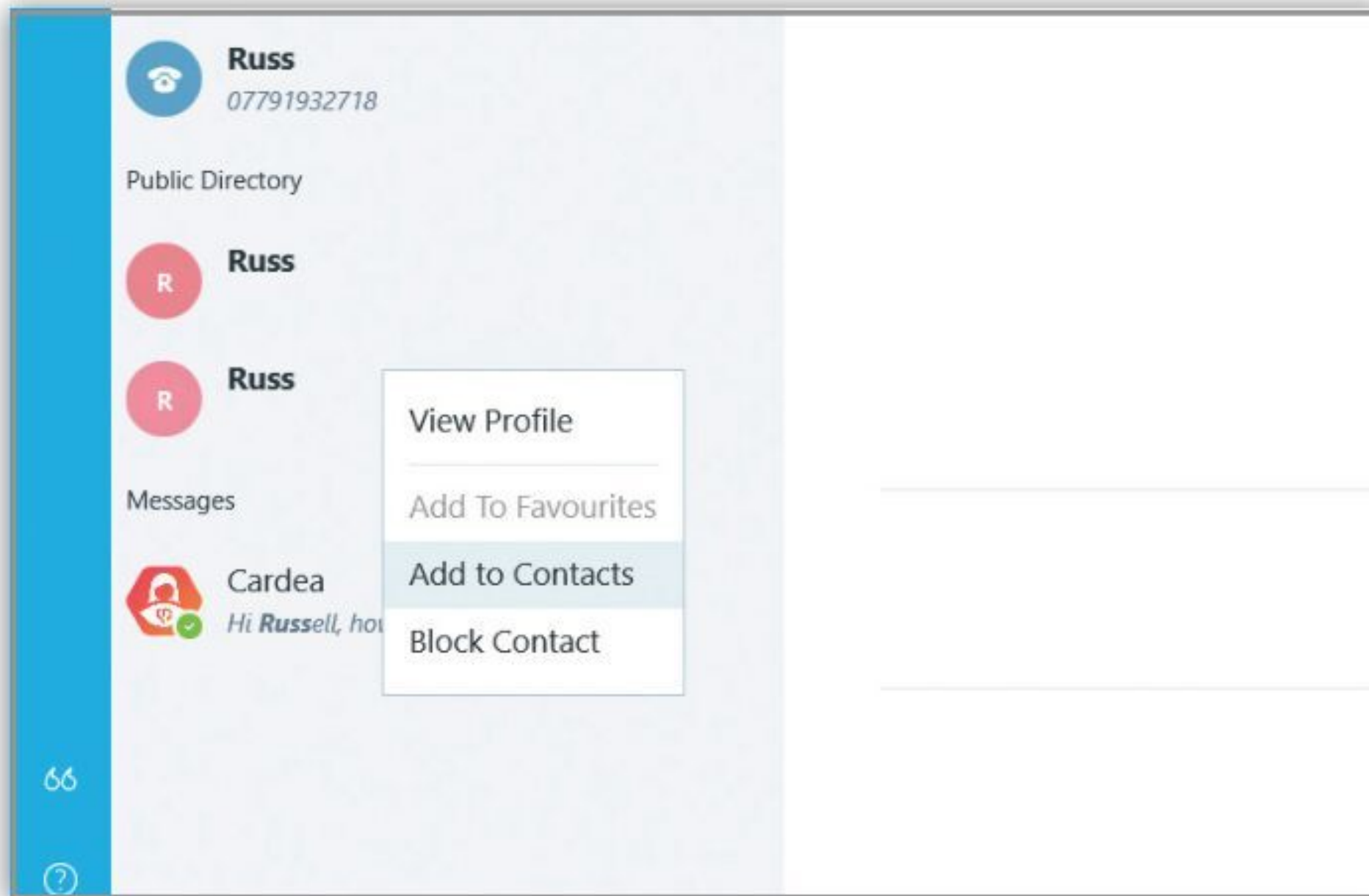
Step 4

Click the Contacts button (2nd button down from the top) and either select the add contact icon at the bottom of the sidebar or click directly in the search text box and type the name, Skype name or email of the person you want to add. Click Search Skype.



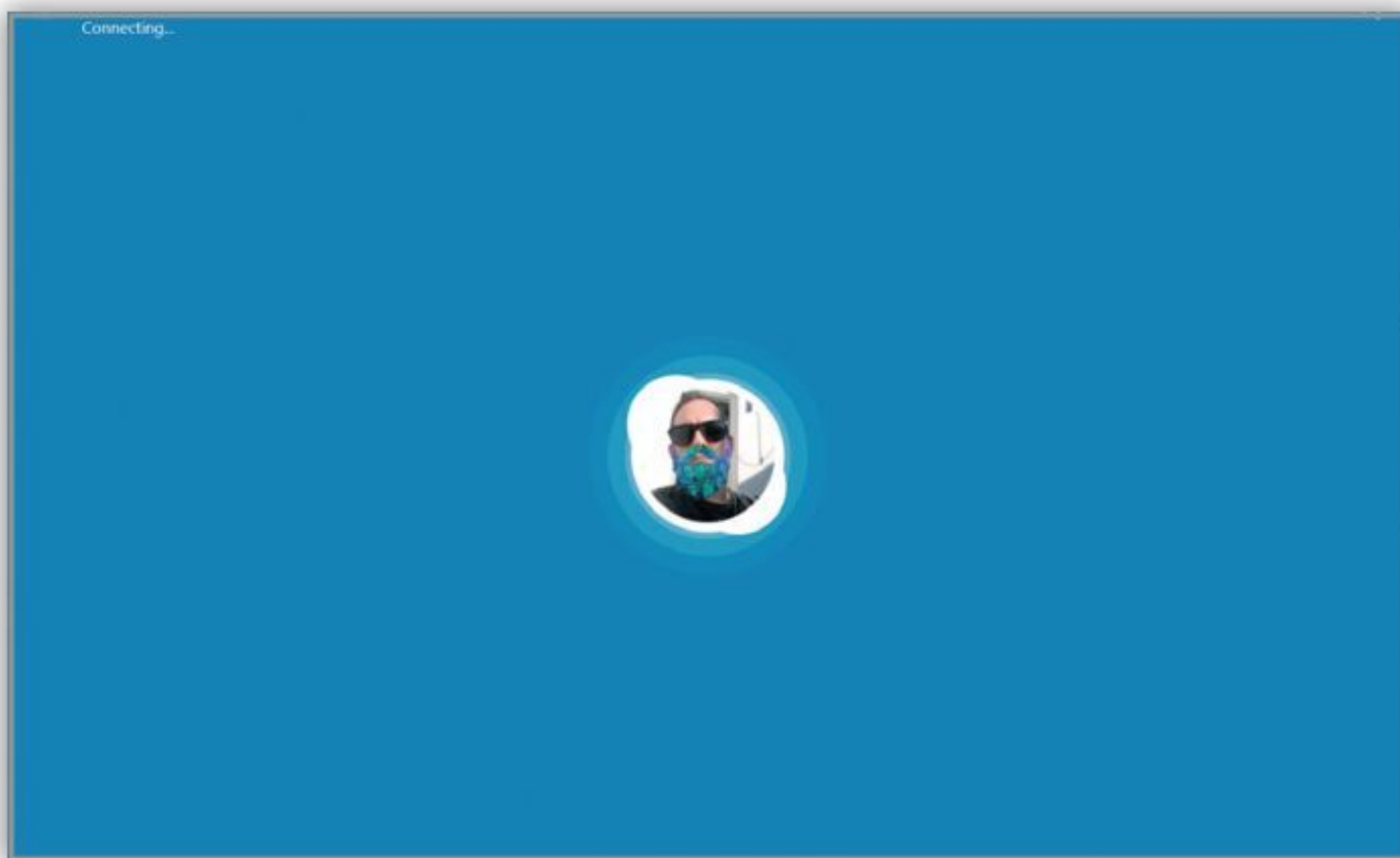
Step 5

Select your friend from the search results, assuming you can see them in the list, and click Add to Contacts. Type a quick note to introduce yourself and then click Send. They will receive a request from you, along with the message and can choose whether to accept you or not.



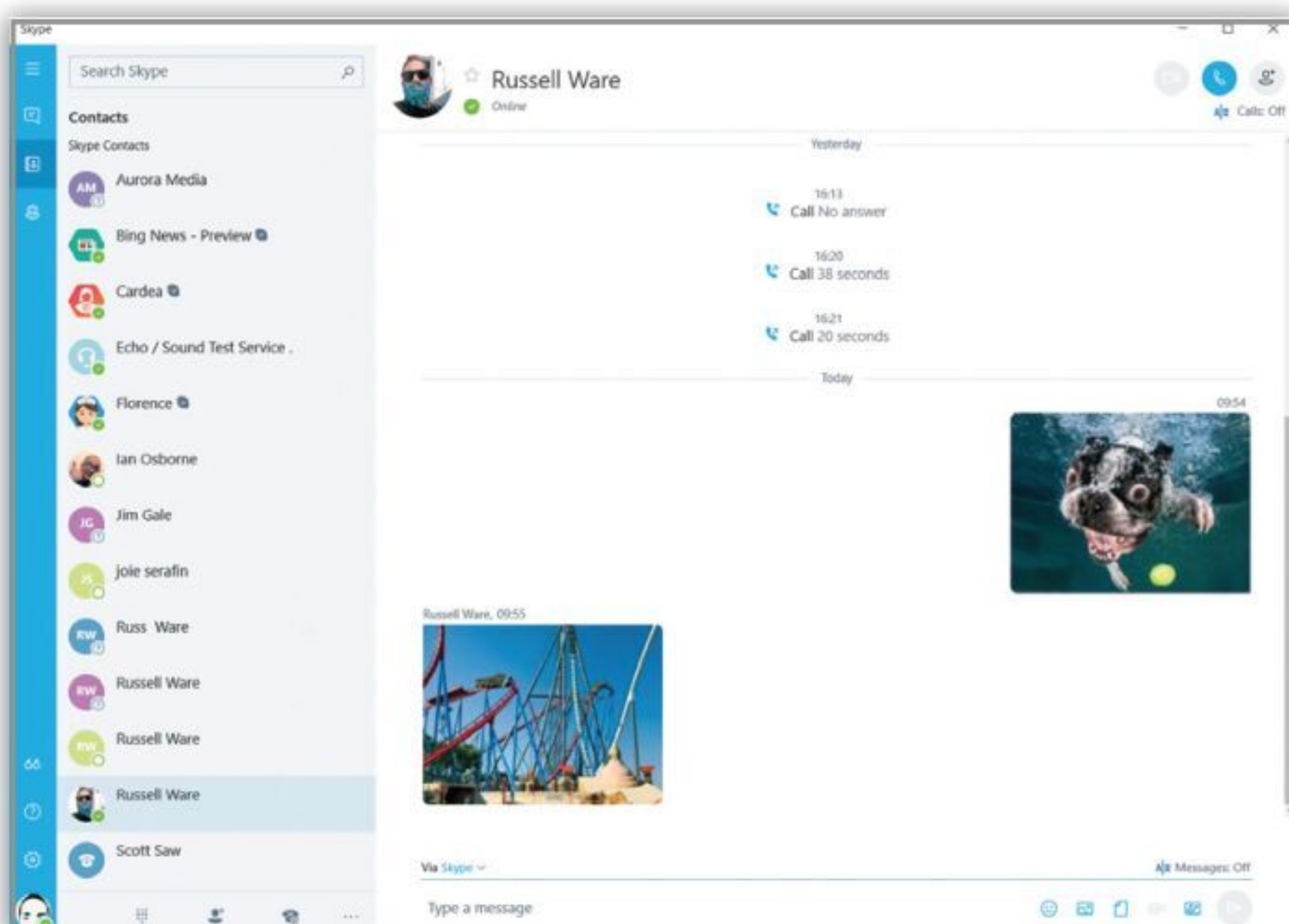
Step 6

You can select any contact from your contacts list and then either instant message them or start a voice or video call. If the contact you click on has Skype, the call option buttons will appear in the top right corner of the window. Click the relevant button to start a call.



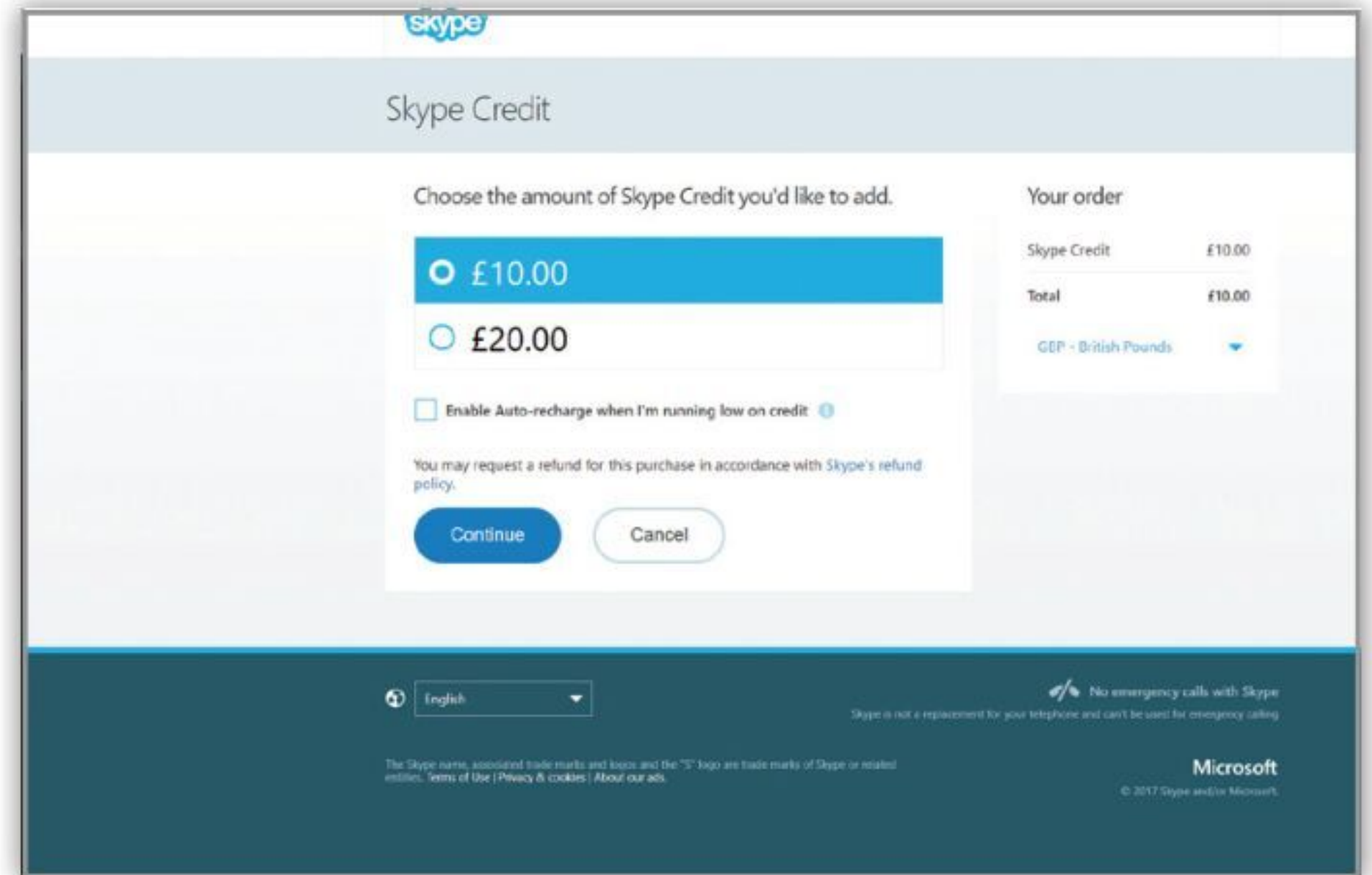
Step 7

Skype instant messaging makes it easy to keep in touch with your contacts and groups wherever they are. You can share files, photos and contacts. To instant message one of your contacts, select their name and start typing at the bottom of the main window.



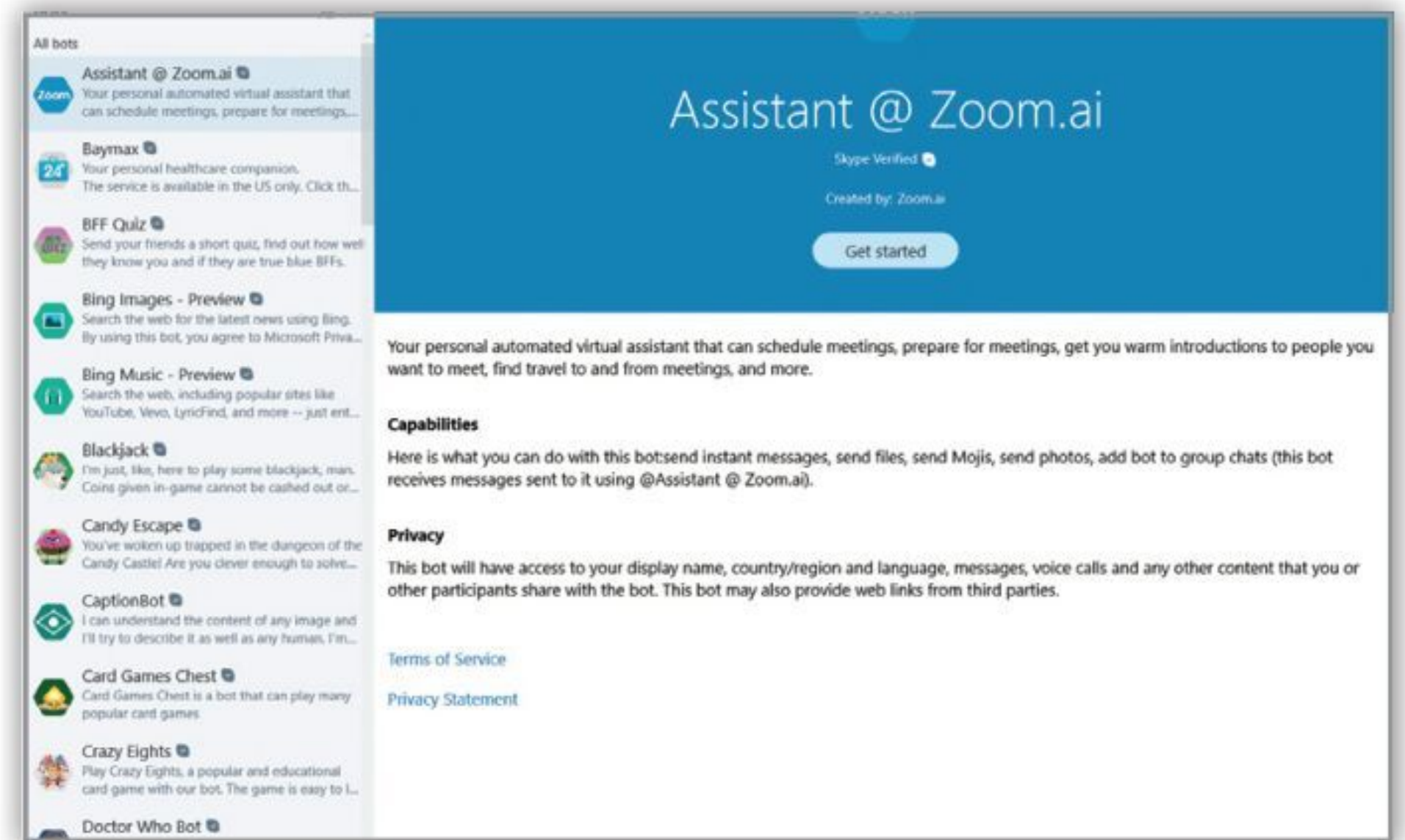
Step 8

If you want to make calls to contacts not using Skype (although you can make calls to mobiles and landlines too), you will need to add some Skype credit first. To do this, click on your profile picture in the bottom left and click the 'Add Skype credit' link.



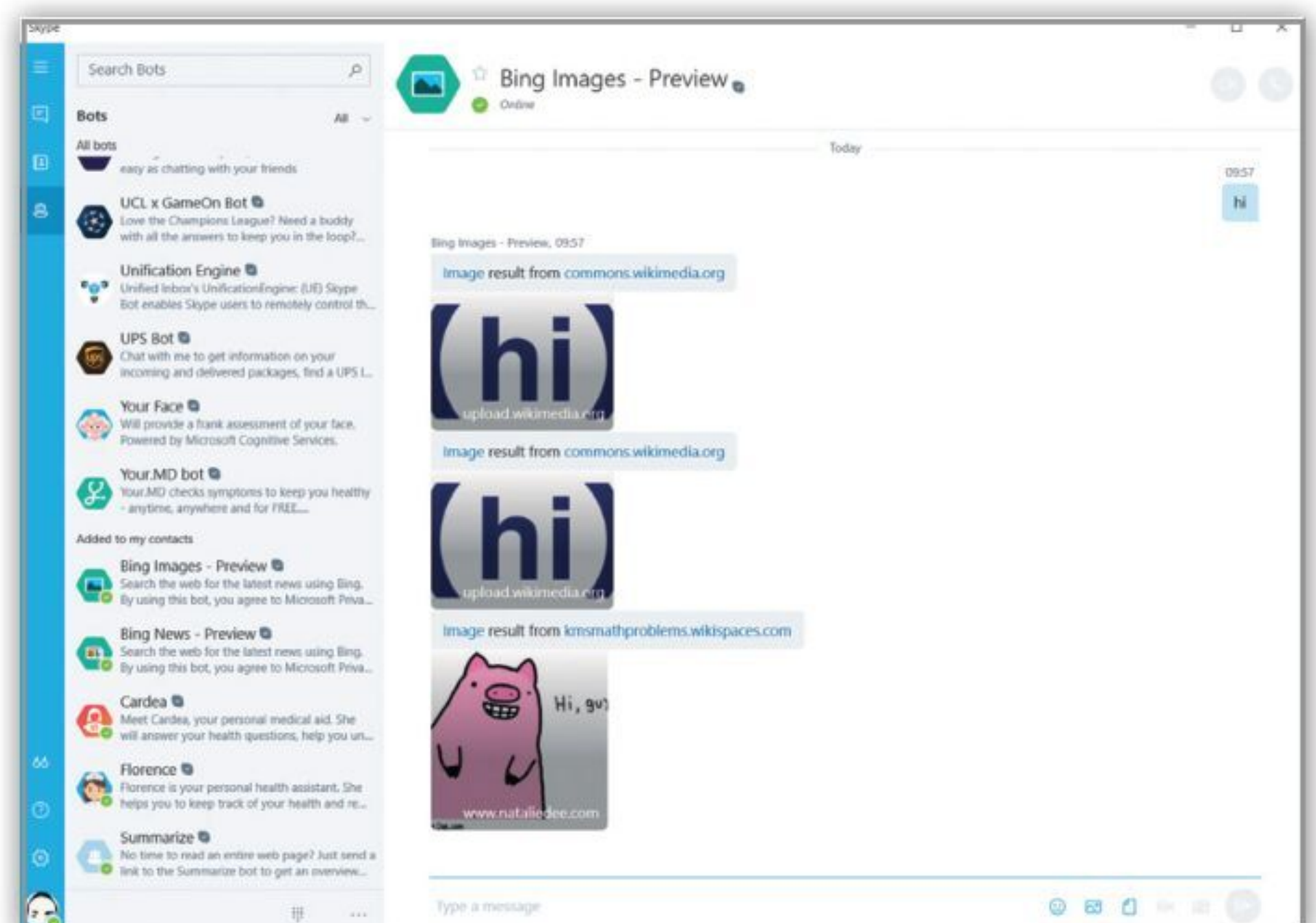
Step 9

Skype also now includes Bots. Bots are artificially intelligent programs that can do many useful things like search for news, summarise webpages, play games and more. You can start chatting with a bot just like you chat with friends, just choose a bot and click Get started.



Step 10

Bots vary in how useful they are but some are well worth taking a look at. Take the Bing News bot for example. Add this and then type a word ("Crime" for example) in the conversation window. The bot will return news stories based on that subject.





Using the Cloud Clipboard

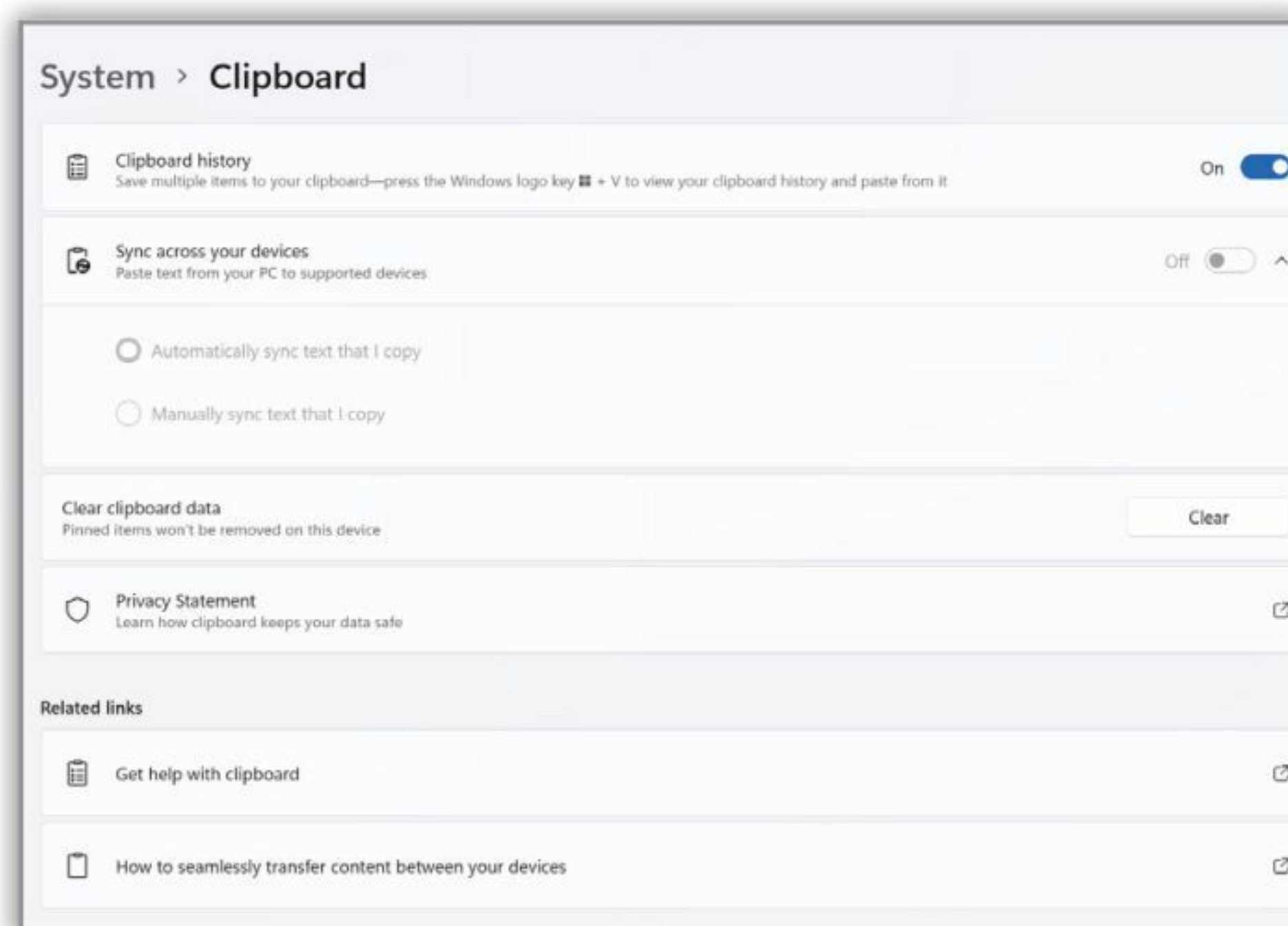
Copying and pasting is something we all do. However, what do you do if you need to copy the same few things again and again and how do you copy content across your devices? The new Cloud Clipboard solves both of those problems in a single, simple interface.

A New Way to Copy + Paste

The Cloud Clipboard gives you a new way to cut and paste. Simply press the Windows key + V at any time and you'll see the Cloud Clipboard panel appear in the bottom corner of the screen.

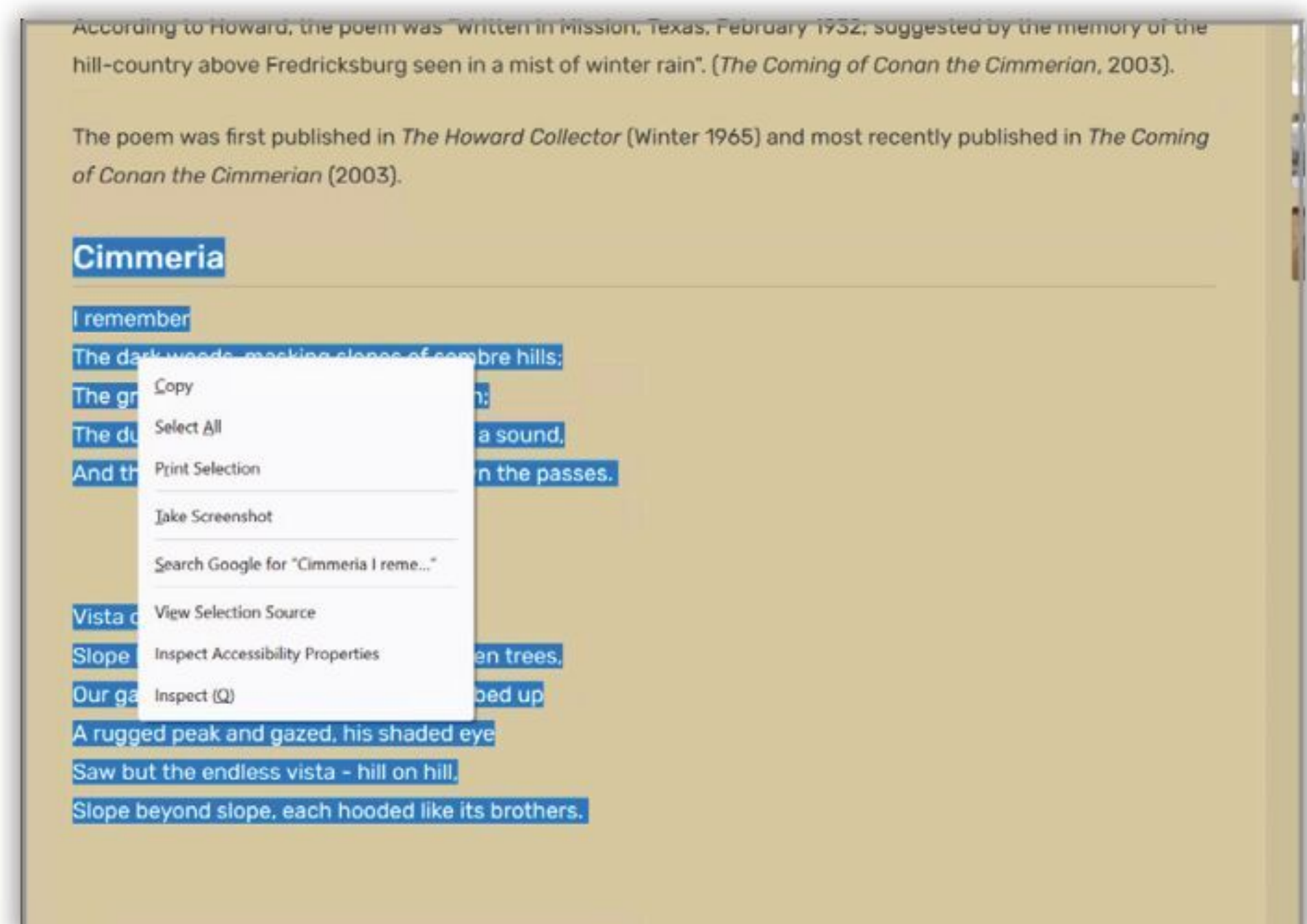
Step 1

Before you can use all the features of the Cloud Clipboard in Windows 11, you will need to enable them in the settings. Go to Settings > System and look for the Clipboard section. You can turn on the clipboard history using the slider toggle. To sync across devices, click 'Get started'.



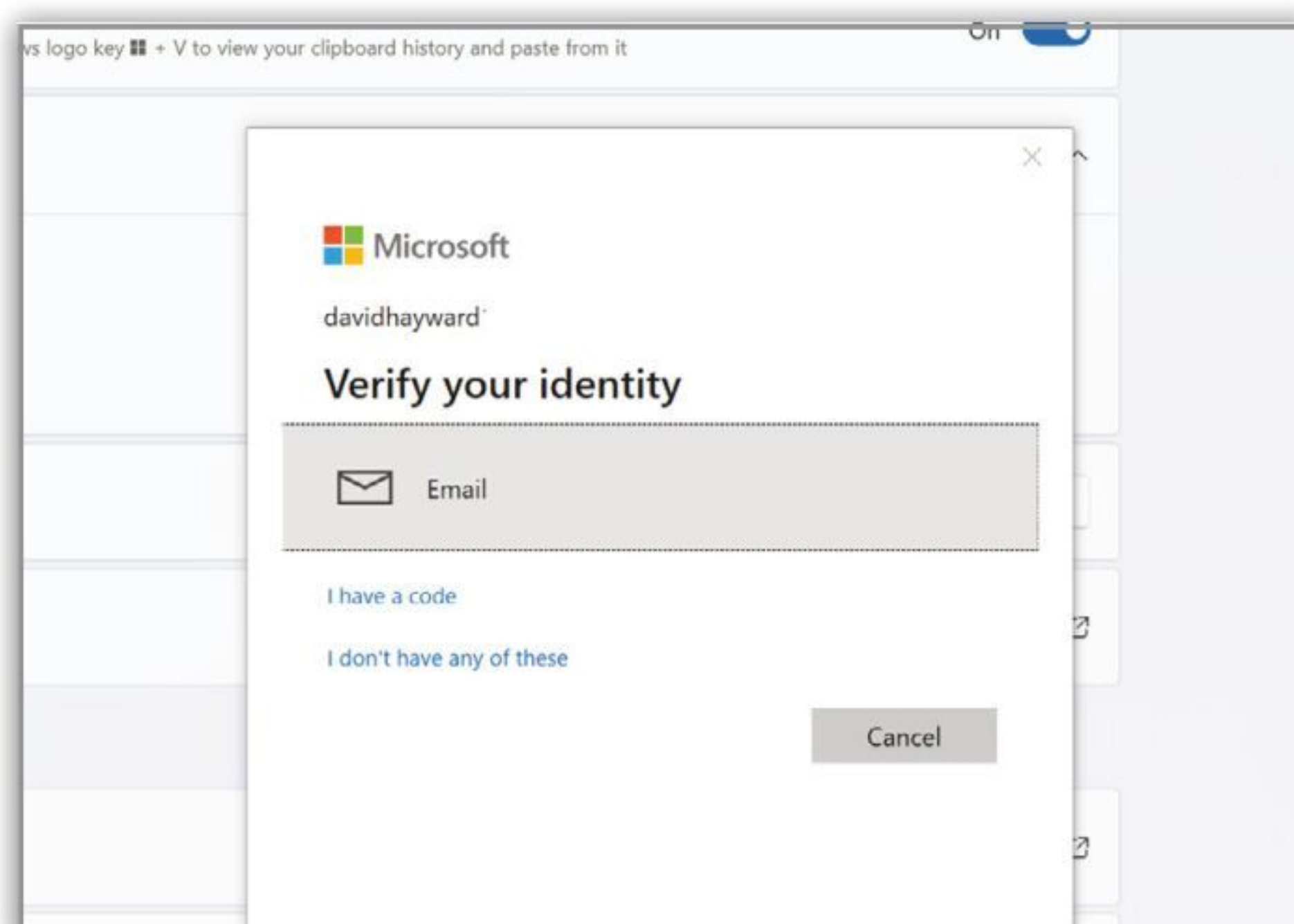
Step 3

With the Cloud Clipboard settings configured to how you want, you can start using the feature. Just like the old clipboard, things are added to it when you copy something. This can either be by pressing Ctrl + C with some text highlighted or right-clicking on an image or file and selecting Copy.



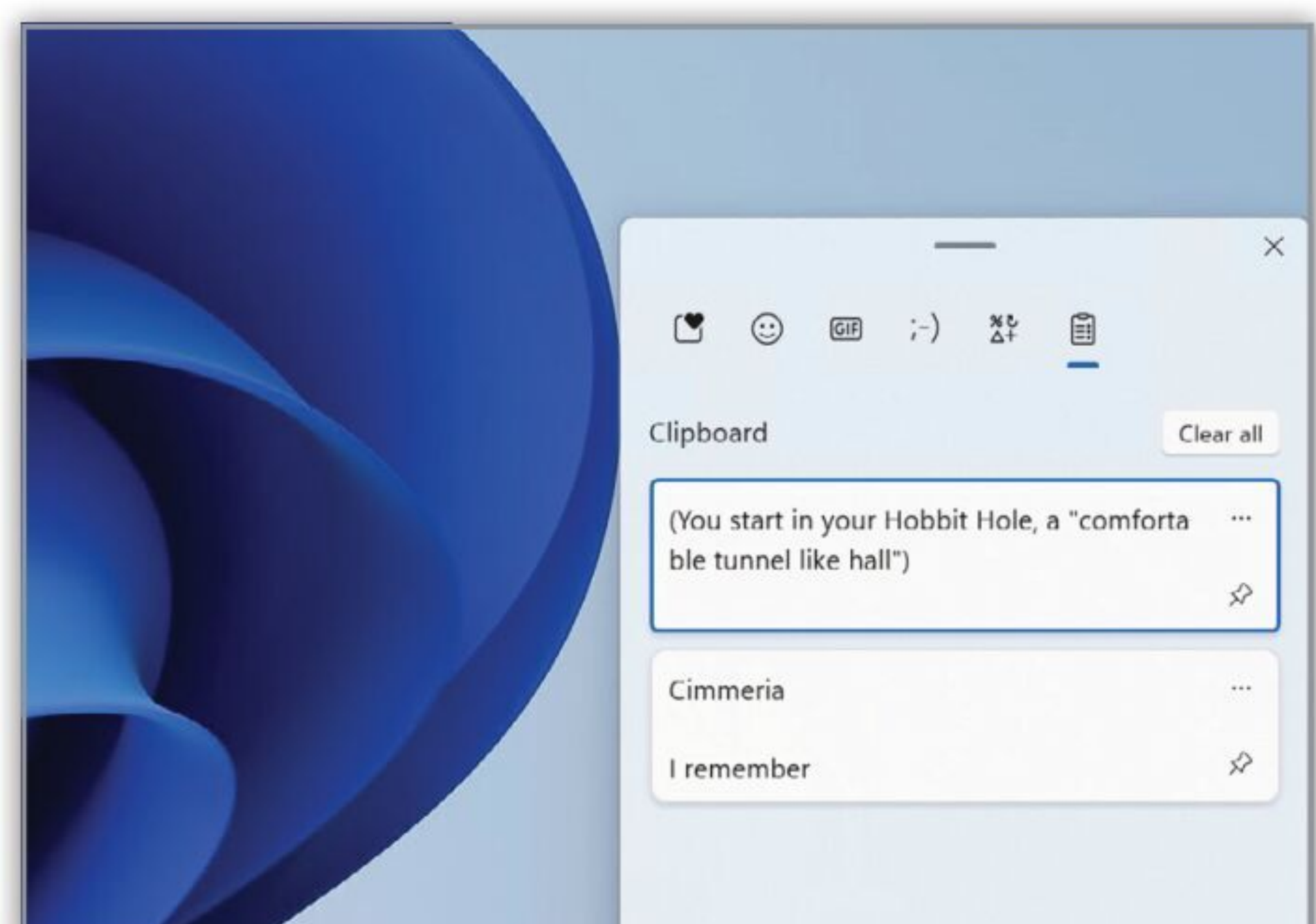
Step 2

Follow the instructions to confirm your Microsoft account (if this is requested) and then choose whether you want to enable automatic syncing across devices or not. If you want to be able to sync the clipboard to your phone, you will also need to download and install an app on that device.



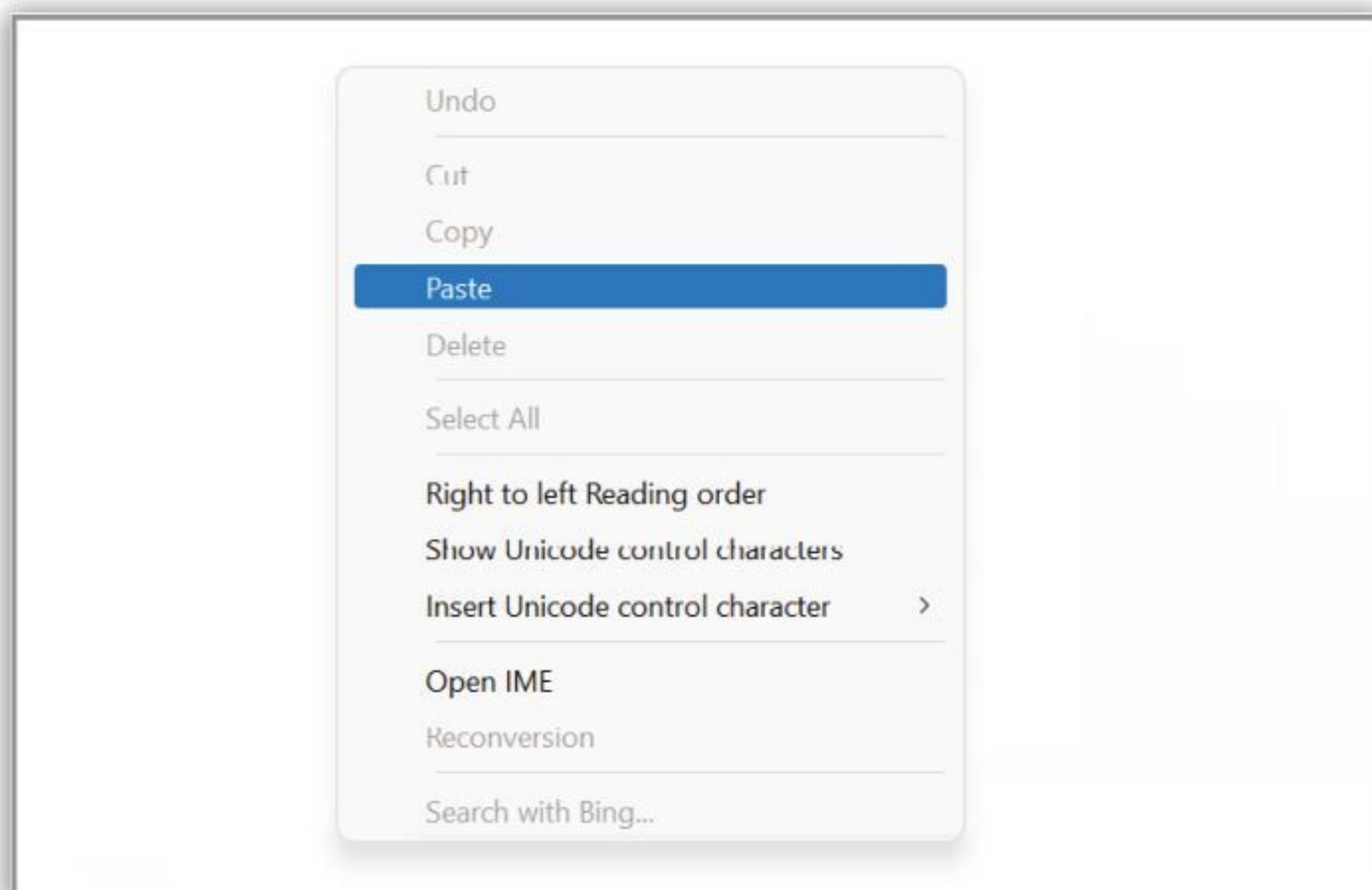
Step 4

The difference now is each thing you copy is stored in the clipboard, rather than being overwritten by the next thing you copy. To see the things stored in the Cloud Clipboard, press Windows Key + V. In the new Cloud Clipboard window, you will see a list of the things you have copied.



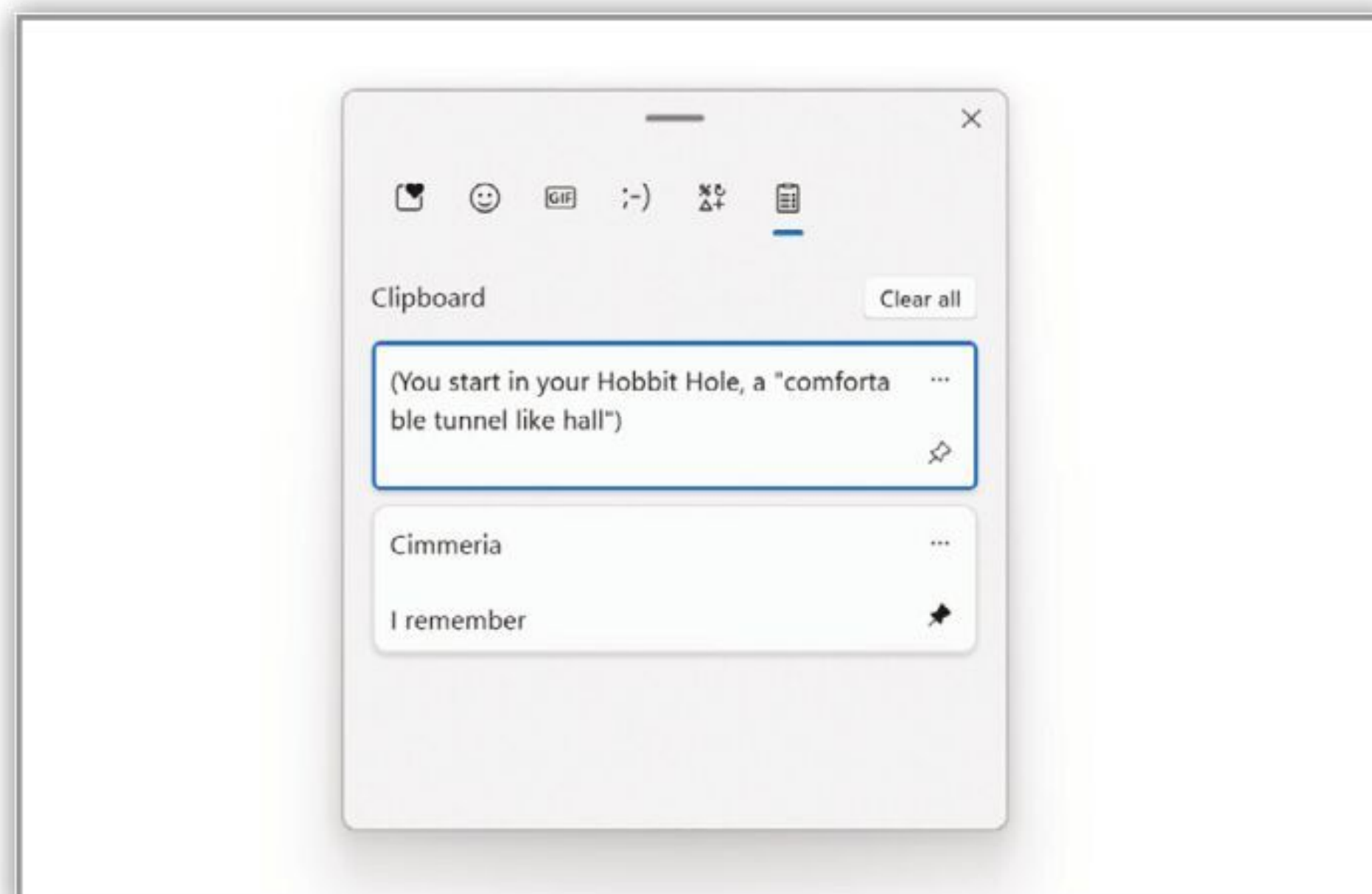
Step 5

The things you have copied can be made ready to paste by selecting them in the Cloud Clipboard. You can then use Ctrl + V to paste or right-click and select Paste from the menu. When you select something in the Cloud Clipboard, it remains there to be pasted again.



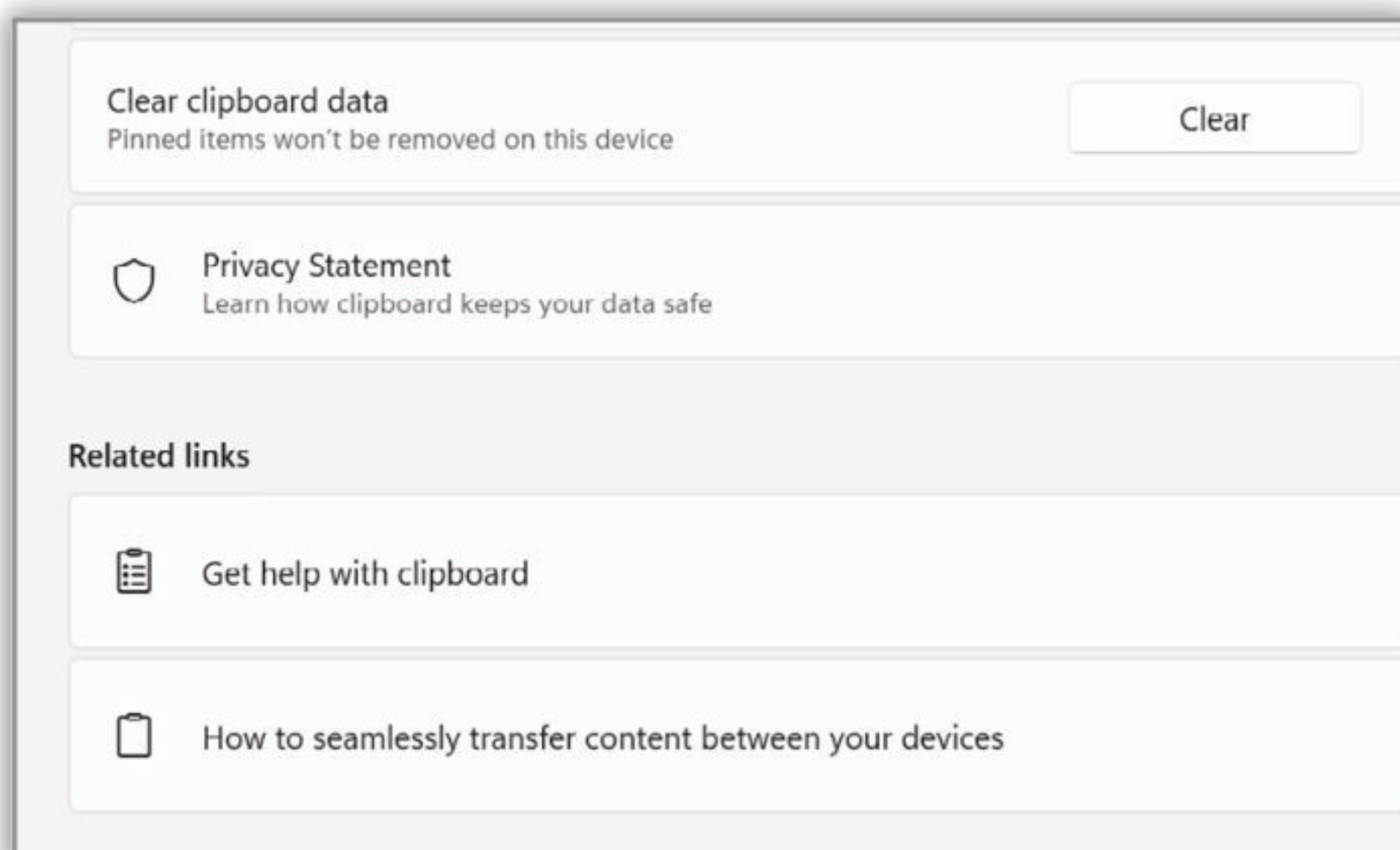
Step 8

Pinned items even remain in the Cloud Clipboard when you restart your computer. The only way to remove them now is to unpin them from the clipboard. To do this, highlight the item again and click the pinned icon. Copying something that is already saved in the clipboard doesn't overwrite it.



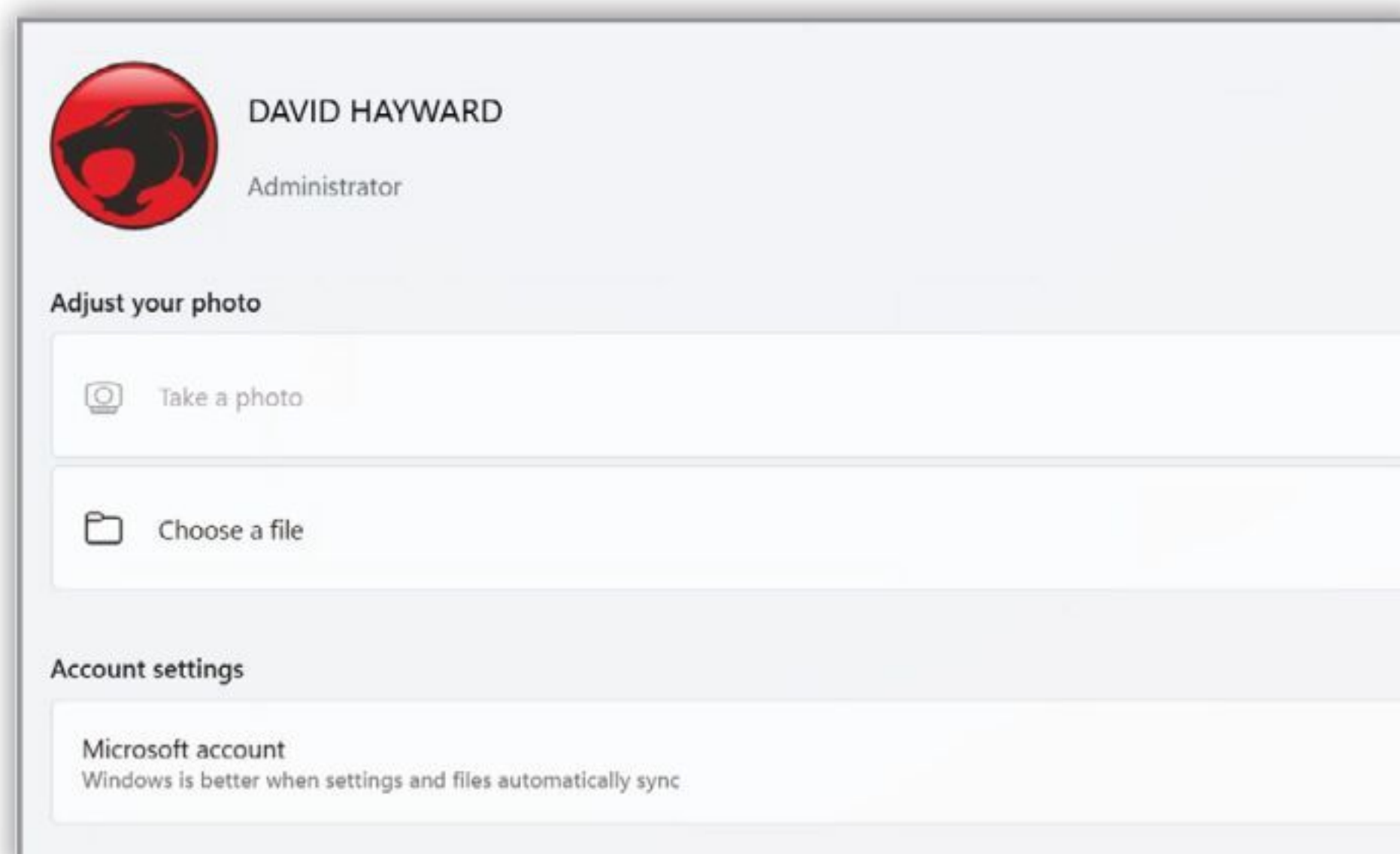
Step 6

You can clear the items from the clipboard easily, either by opening settings > System > Clipboard and clicking on 'Clear clipboard data' or by opening the clipboard window and clicking the 'Clear all' button. Once the clipboard is cleared, you cannot recover the copied data.



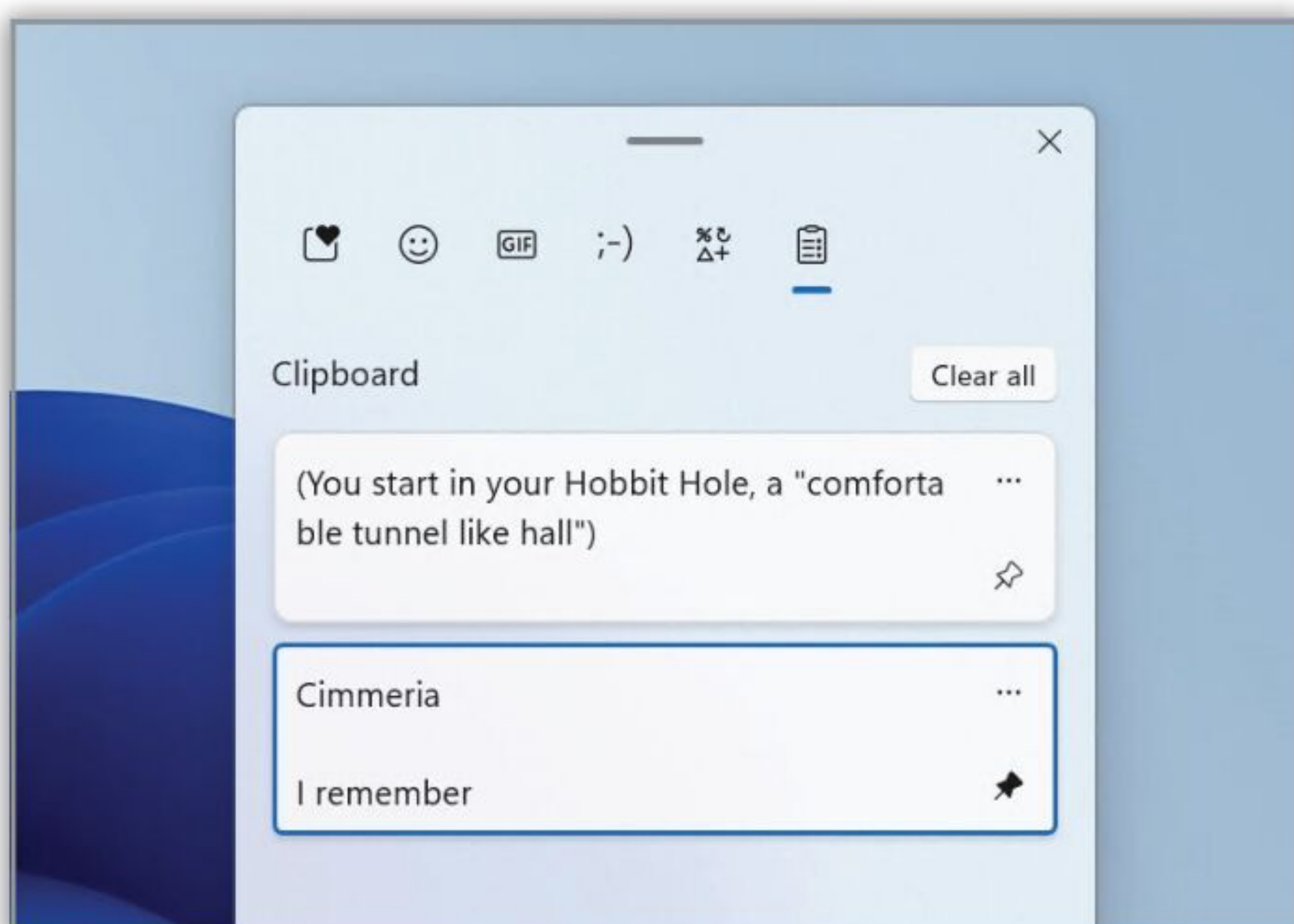
Step 9

Syncing clipboard data between devices works using the same Microsoft Graph technology that powers the Timeline, introduced in Windows 10's April 2018 Update. You need to be signed into both devices with the same Microsoft account for this feature to work.



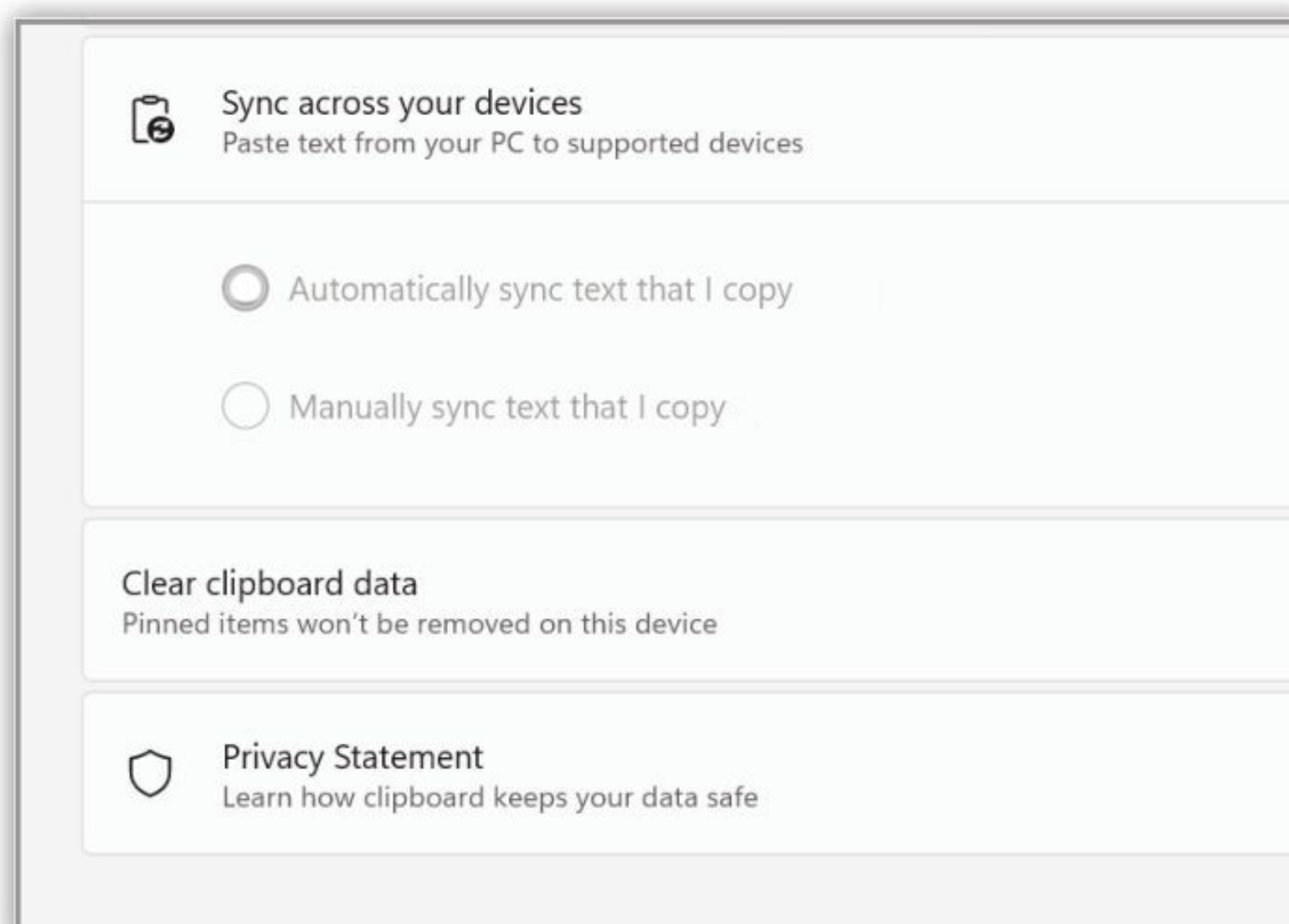
Step 7

If there is copied data in the Cloud Clipboard that you think you will always need to keep, you can pin it. Pinned items in the clipboard do not get cleared when using the methods described in the previous step. To pin something, move your mouse over the item and then click the pin icon that appears.



Step 10

If you select 'Never automatically sync text that I copy', you'll have to manually choose what you want to copy. To do so, open your Clipboard history with Windows+V, hover over an item in your Clipboard history and click the cloud-shaped Sync to Other Devices icon.





Facebook App on Windows 11

Facebook's popularity peaks and falls with alarming regularity throughout the course of the year. However, it's still one of the most used social media platforms. Naturally, an app is available for it in the Windows Store and, once signed in, it offers the user a wealth of options.

1 Within the app you can search for people, places, companies and Facebook pages from the Search function in the top-left of the app. A list of recent searches is displayed, which can be cleared by clicking on the 'x' next to the name, or by clicking on the Edit link.

2 The options to the left of the main timeline Feed allow you to switch views, browse the Marketplace for a local bargain that someone is selling, look for Facebook Groups setup by likeminded individuals, Watch Facebook Videos, Find Friends, look back at your previously posted Memories and much more.

3 The Your Shortcuts section is where you'll find quick launches to Groups and Pages you're a member of or have Liked on Facebook. This saves you trawling through your Facebook Feed to find any relevant new posts that may have appeared while you've been away, or have missed. You can edit your available Shortcuts by hovering over the section and clicking Edit.

4 This is your main Facebook Feed, where you'll post your own comments, videos, photos and so on, and where you'll see your friends posts and any Groups or pages you've Liked and signed up with to receive notifications. You can create video chat rooms, and quickly see who's currently online via their profile image.

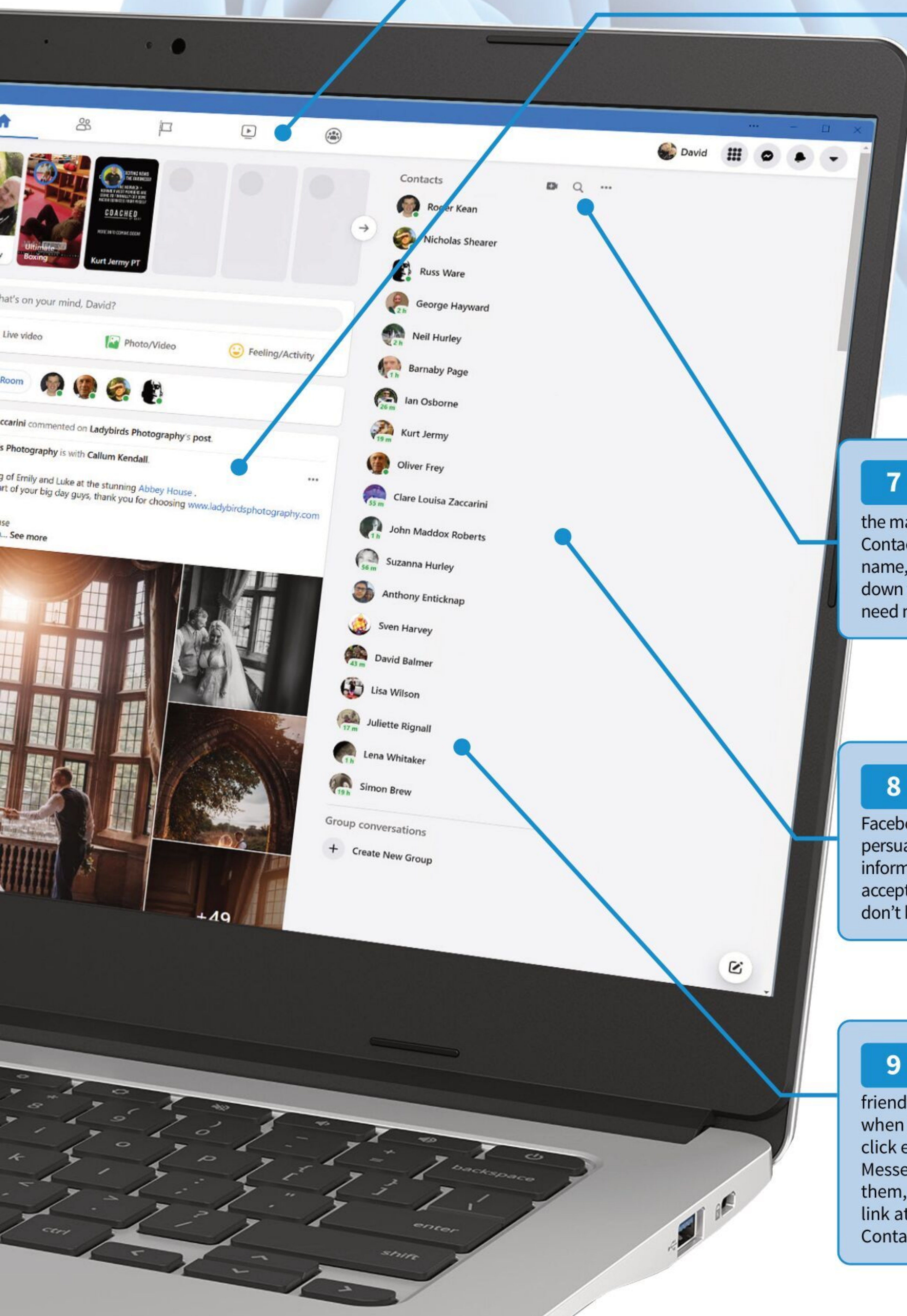


5

The top bar options include: Home, your main Facebook Feed; Friends, where you can find new Friend suggestions and manage Friend Requests; Pages, which covers items like invitations and where you can create your own unique business page; Watch, which displays Facebook's video library from around the world; and finally Groups, where you can browse groups you're a part of, and find new ones. Further to the right is your Profile, followed by Menu (detailing all of Facebook's functions), Messenger for private and group chats, Notifications and finally Account settings.

6

Sometimes, the App version of Facebook won't display a post from a friend properly. This is usually when a video or an animated GIF appears in the Timeline. If this happens, try refreshing the Feed, and if it still doesn't work, then open the Feed in a browser to check if it's loaded properly.



7

It's easy to search through your friends by clicking on the magnifying glass icon in the Contacts pane. Simple start typing their name, and Facebook will begin to drill down the choices available. All you need now is more friends – unlike us!

8

It's always responsible to mention that safety on Facebook is paramount. Don't let anyone persuade you into divulging personal information, or passwords, and don't accept friend requests from people you don't know or recognise.

9

The Contacts drop-down link will display all your friends, and whether they're online or when they were last online. You can click each contact and start a Messenger text or video chat with them, or click the Create New Group link at the bottom to group individual Contacts together for a group chat.



Twitter App on Windows 11

The Twittersphere is often a place for some very interesting discussions, but also a haven for news that's not published in the mainstream media. Like it or loathe it, Twitter has its uses and is freely available in the Windows Store; so you too can join the 'debates'.

1

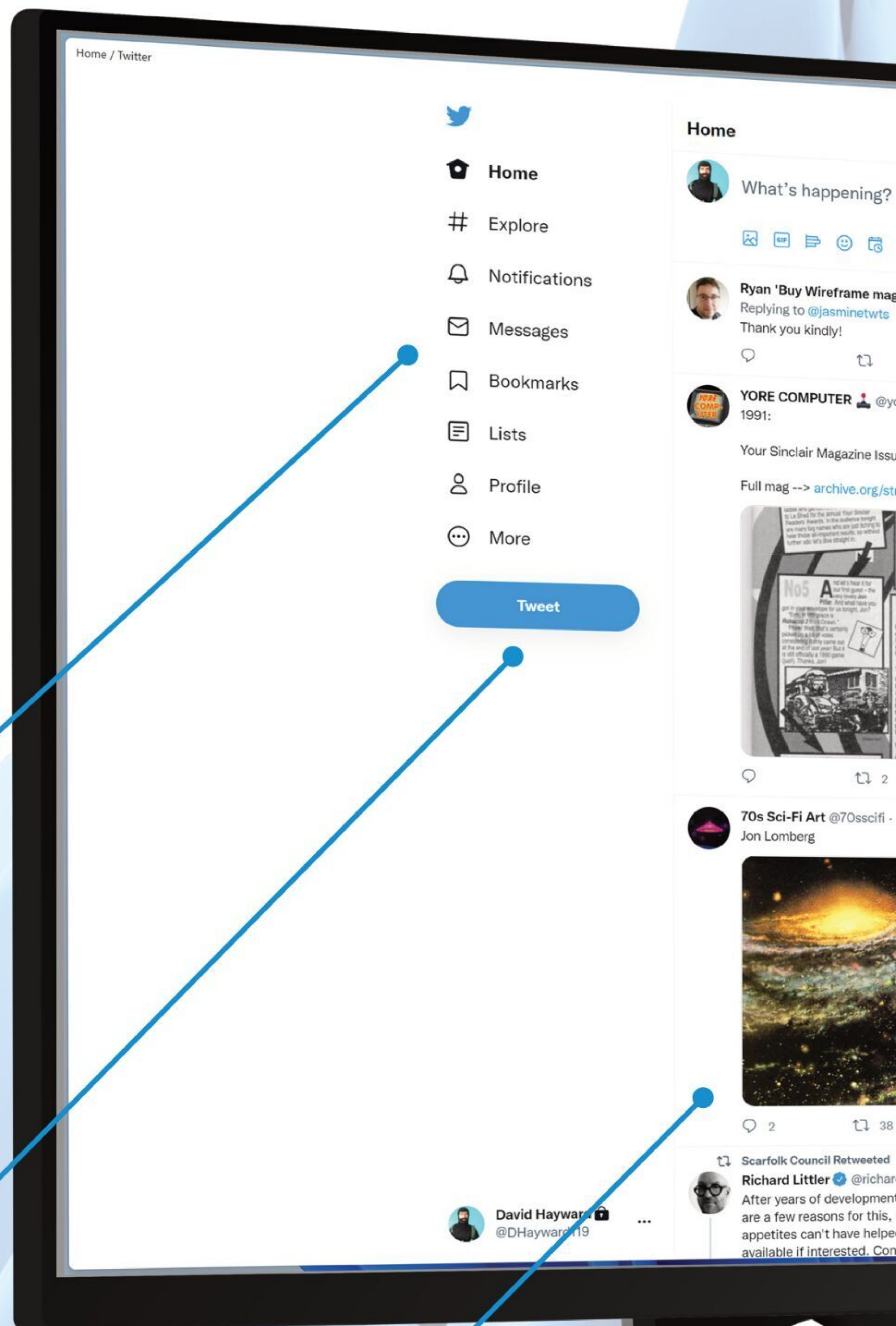
The menu on the left-hand side of the Twitter app will give you access to everything from your profile setup and management, through to exploring trending Tweets. Plus, any Notifications you've had from your own Tweets, DMs (direct Messages), Bookmarks and Lists you've made, and quick links to privacy settings, analytics, ads and a help centre.

2

The Tweet button brings up a pop-out window where you can enter a new Tweet, and post it for the world of Twitter to see, comment on and hopefully like. It does exactly the same function as the What's Happening section at the top of your Twitter Feed, so it's a little redundant these days – it seems to be left over from older versions of the platform.

3

Your Twitter Feed, where you can view your own posts, as well as those who you've liked and followed, alongside any advertising the company decides to place on your Feed. It's from here you can like, comment, share, delete, report and generally remark on how you feel about the current government or whether aliens exist or not.



4 Don't Feed The Troll! If you engage on Twitter, you'll likely come across, sooner or later, someone who disagrees with you on such an extent that things get a little too personal for comfort. If this happens, back off, and as the saying goes, don't feed those trolls.

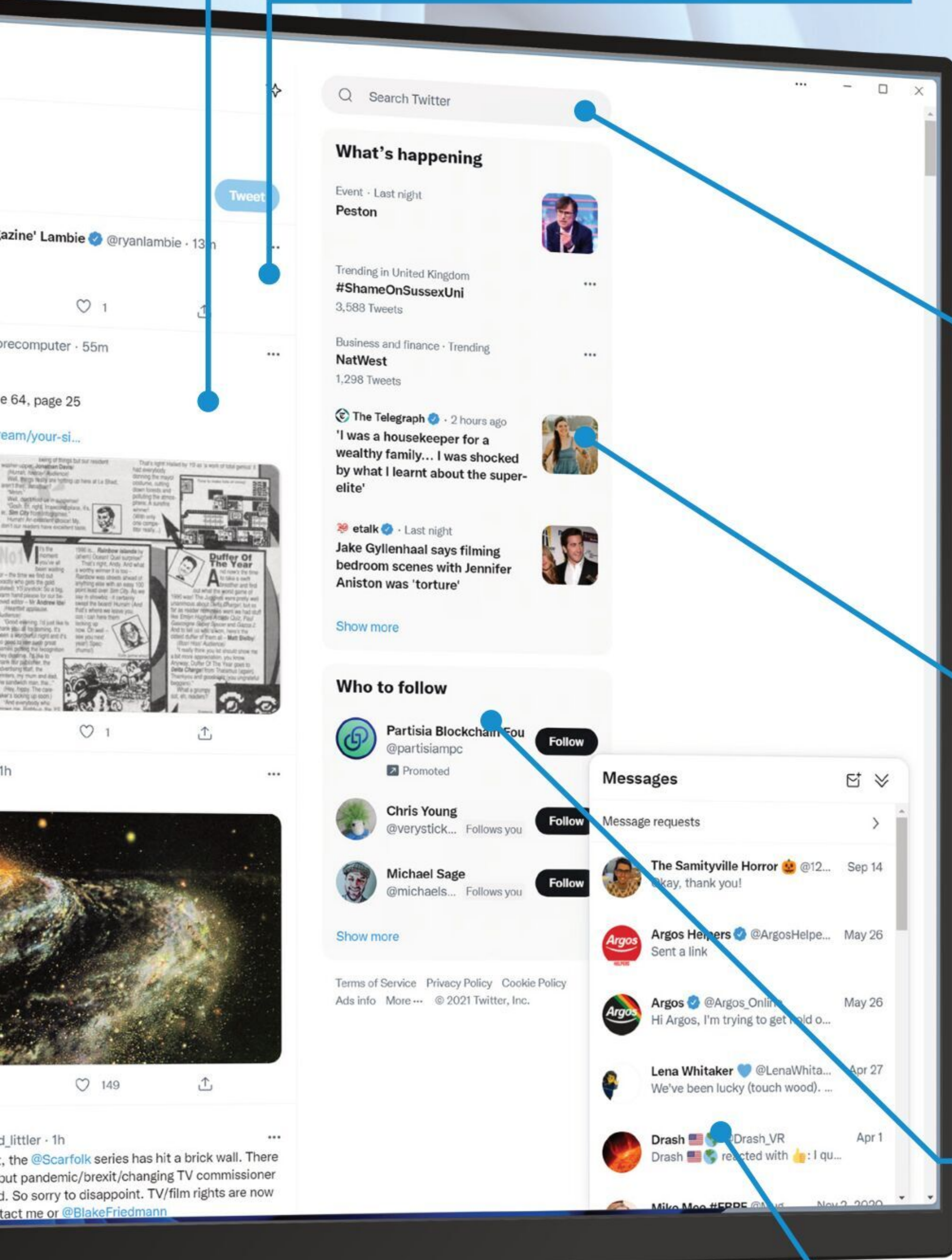
5 Like Facebook, or any other social media platform, safety comes first. Don't be fooled into giving away personal details, don't be click-baited into clicking on links you can't identify, and always be on guard for those who try to scam others.

6 You can search for people from the Twitter Search function in the upper-right of the app. Enter a person's name, be they a celebrity, politician, or humble writer of Windows 11 books, and the results will appear here.

7 This is the What's Happening section – which is different to the What's Happening section where you can enter your own Tweets. This section displays the current trending stories in the Twittersphere depending on your location. In the UK we'll naturally have a different set of trending feeds compared to someone in the US. Click the Show more link to display trends that have dropped off due to the limitations of your screen size.

8 Who to follow displays a brief list of people who Twitter thinks you'd like. Some of them may already follow you, but you don't follow them back, whereas some are promoted by Twitter to help boost their follower numbers.

9 The Messages section here is collapsible, and contains all the current and previous Direct Messages you've had over your time on Twitter. Open it, click a person, and you can continue the message or start a new one.





WhatsApp Desktop on Windows 11

WhatsApp has proved to be a vital addition to many of us in our daily digital lives. It's used to keep in contact with family, friends and work colleagues, and thanks to its high levels of encryption and easy to use interface, it can be used by even hardened technophobes.

1

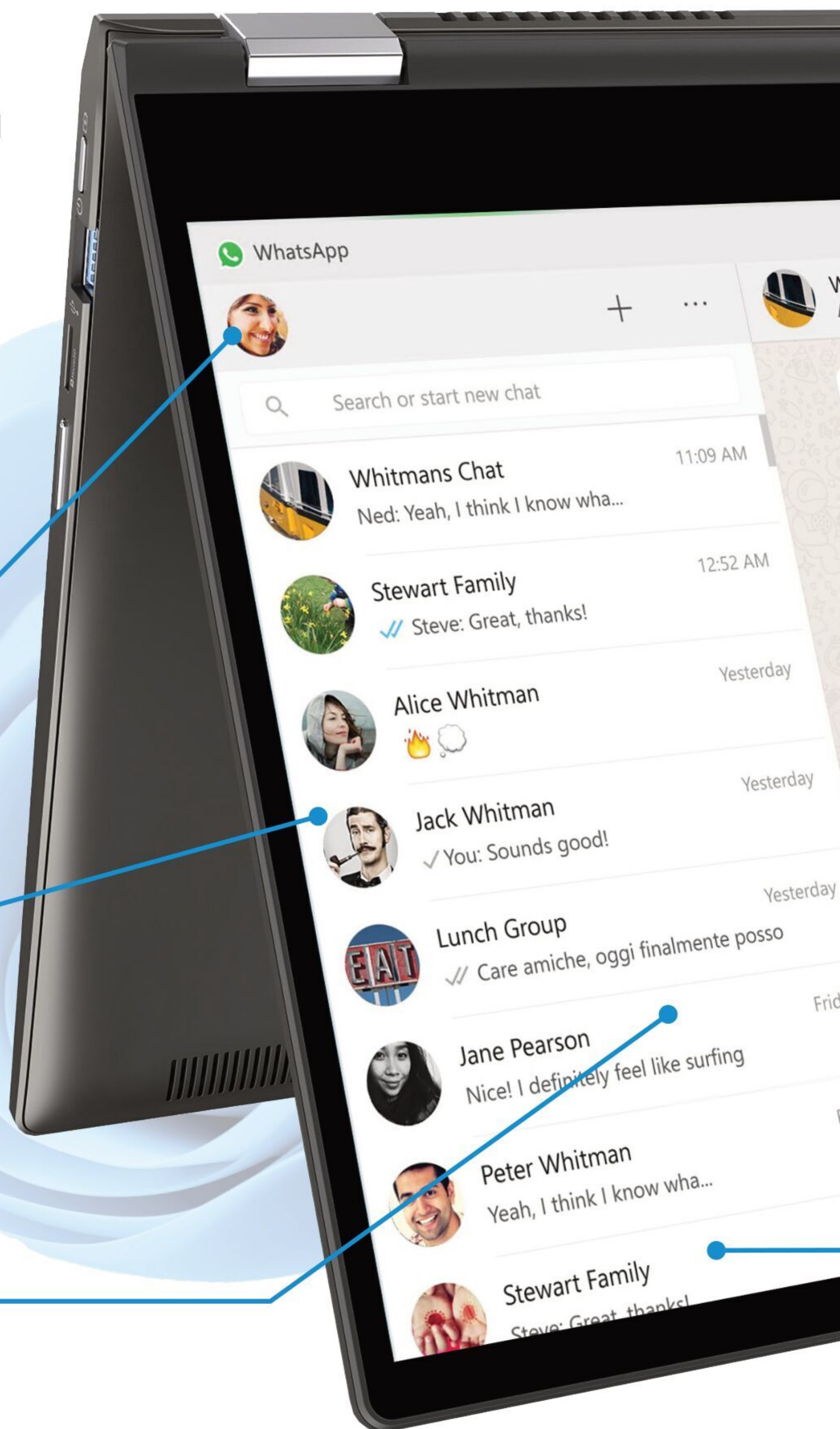
This section displays your WhatsApp profile picture, as well as enabling you to start a new conversation with any of your WhatsApp contacts, or start a new Group chat. Click the Plus symbol for a new chat, or the three dots for more options and group setups.

2

These are all your contacts, along with the last comment they made on either the group chat or with you individually. You can see when they last commented, as well as be informed on any profile status updates they may post about themselves.

3

Scroll down the contacts list for more, and you can also use the Search bar at the top of the contacts list to look for individuals; and even start a new chat. Click an individual to open more options, such as mute, archive, delete or pin to keep for later.



4

WhatsApp has the unique ability to encrypt all of its point-to-point communications. That means anything you post in a chat with someone else is encrypted to the highest current level, AES-256 Military Grade.

5

This section displays all the contacts currently involved in a group chat, as well as the name of the group you or someone else has created. From here, you can also attach any photos or videos, or click the three-dots more options.

6

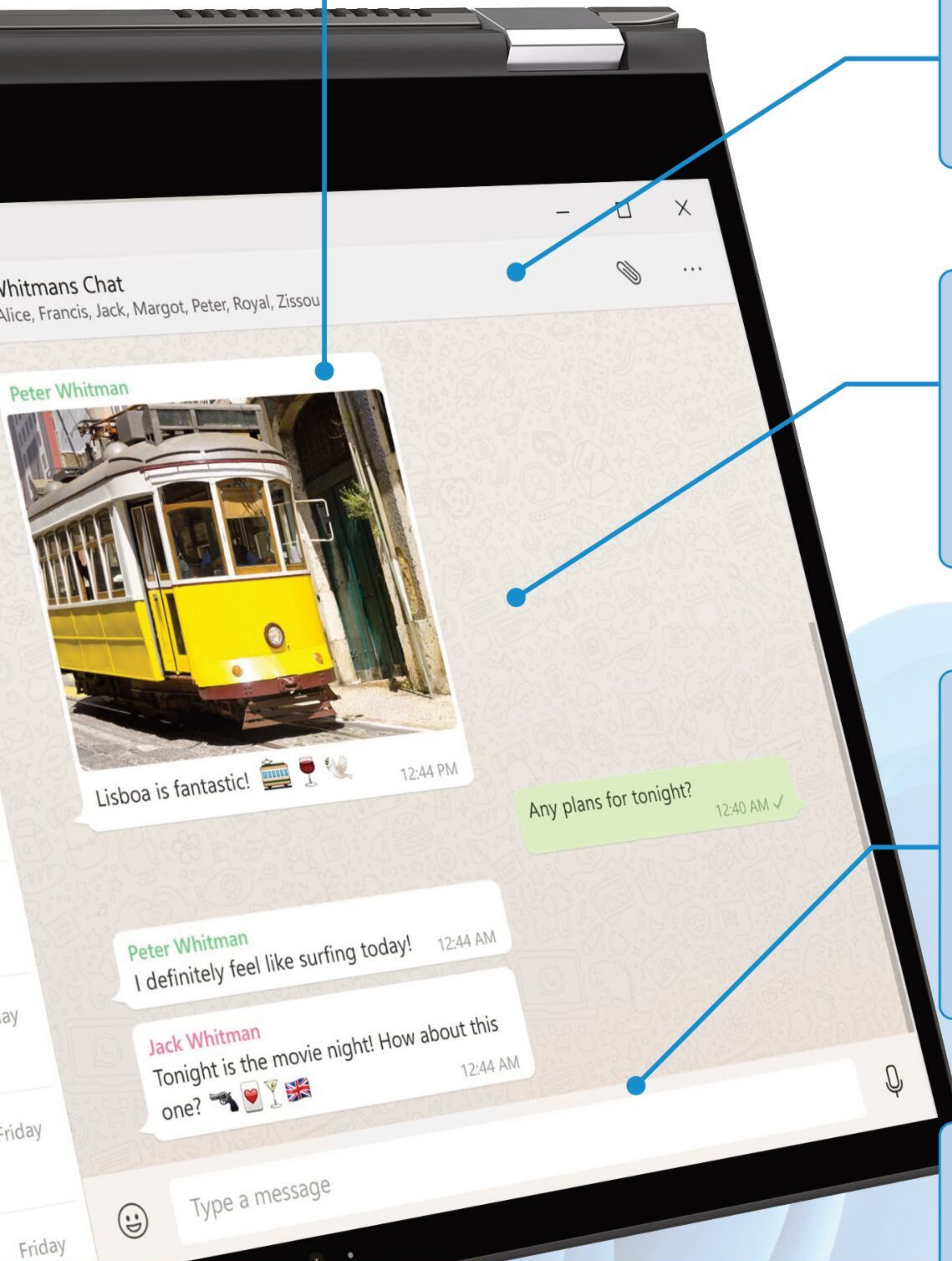
The main part of WhatsApp, this is where all the chatting takes place, as well as any media you or a member of your contacts will upload. Your comments are highlighted to the right of the chat pane, whereas your contacts are put to the left of the pane. Photos and videos can be clicked to expand and then viewed.

7

Enter your chats in this box, and then they'll appear in the main chat window. You can also click the microphone icon to begin a voice conversation. This is handy, as the voice communications are as encrypted as the text communications. Clicking the smiley face icon will open the available emoji list, where you can insert all manner of strange and useful iconography.

8

There's a rise in WhatsApp scamming incidents, so if you find yourself being asked to join a group by someone you don't know, or someone you don't know is trying to add you, opt to ignore or delete them as soon as you can. Scams can be quite clever, so on be your guard.





Windows 11

Touchpad Gestures

There's so much you can do with gestures, and Windows 11 has greatly improved the technology over its predecessor. Some apps have their own, unique, gestures, but the default and majority are listed here.

Touchy Feely

Gone are the days where we paw ineffectually at our screens, like a cat trying to capture a video of a bird. Windows 11 gestures encompass nearly every aspect of the operating system.

Touchpad Gestures

Here are the main gestures for use on Windows 11 touchpad laptops. It's worth noting that some of these gestures will only work with new precision touchpads. To find out if your laptop has one, click **Start > Settings > Bluetooth & devices > Touchpad**.



Action

Select an item

Tap touchpad



Scroll

Place two fingers on the touchpad and slide horizontally or vertically



Zoom in or out

Place two fingers on the touchpad and pinch in or stretch out



Show Context Menu

Tap the touchpad with two fingers or press down in the lower-right corner



Gestures

Show all open windows

Swipe with three fingers up on the touchpad



Show the desktop

Swipe with three fingers down on the touchpad



Switch open apps or windows

Swipe with three fingers left or right on the touchpad

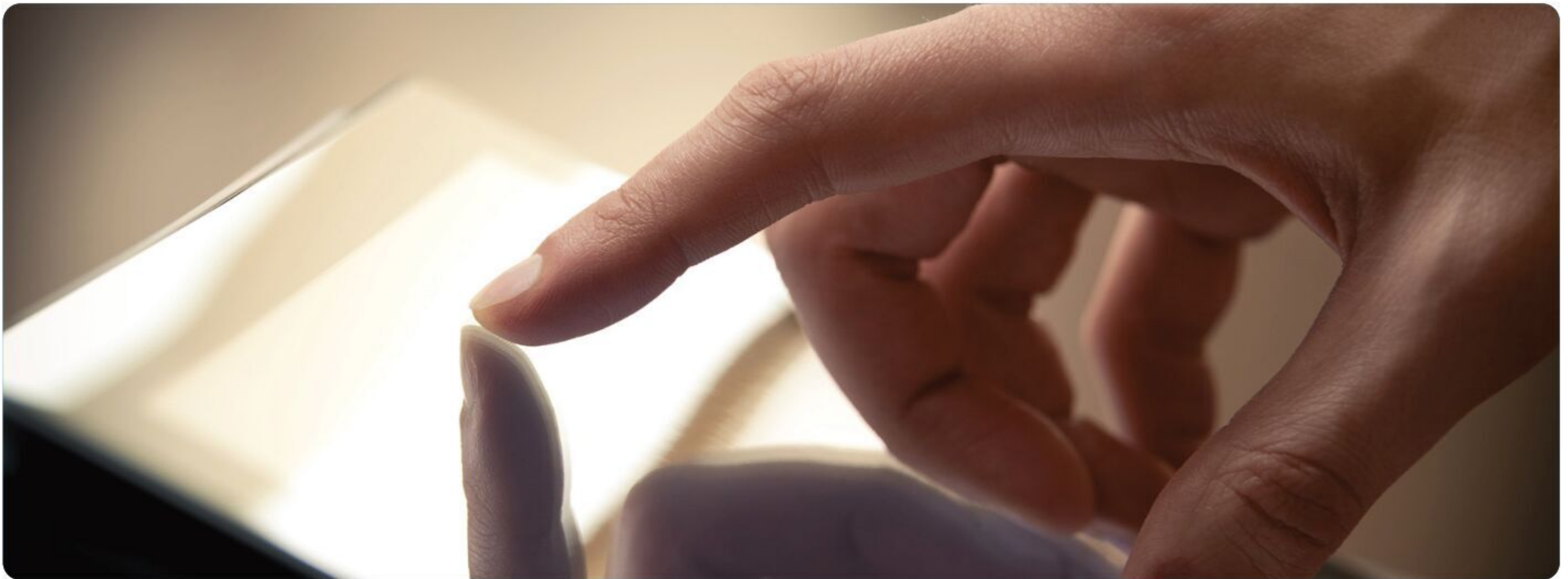


Switch desktops

Swipe with four fingers to the left or right on the touchpad

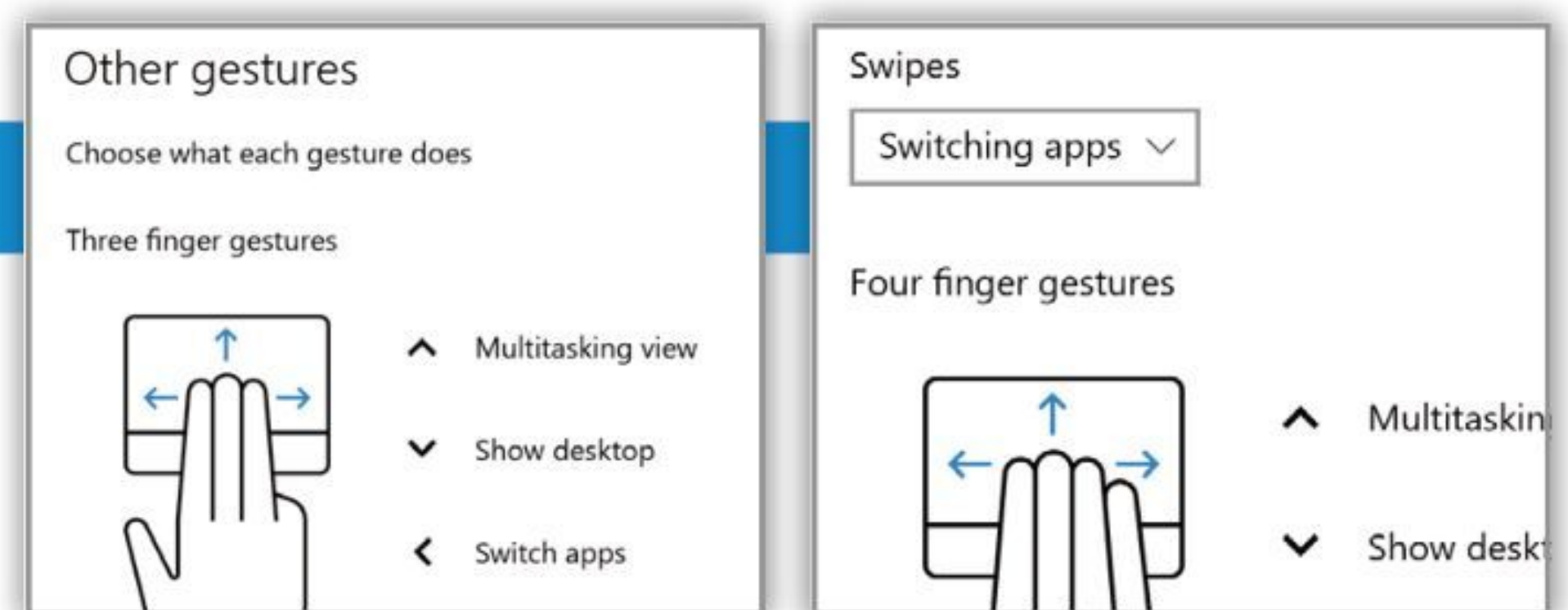


Note: Remember, some laptop manufacturer touchpads may operate differently to others. That shouldn't be the case, but for a long time there was little standardisation. This doesn't happen so much now, but if you own an older model laptop that works with Windows 11, then you may experience some problems or simply different gestures depending on the touchpad device you're using. In such circumstances, it's always best to consult the laptop manual, or see if there's an updated BIOS or driver to apply.



Touchscreen Gestures

You can use these gestures on the touchscreen of any of your modern Windows 11 devices. To turn touch gestures on, click **Start > Settings > Bluetooth & devices > Touch > Three- and four-finger touch gestures**.



Action		Gestures	
Select an item Tap the screen		Show the desktop Swipe with three fingers down on the screen	
Scroll Place two fingers on the screen and slide horizontally or vertically		Switch to the last open app Swipe with three fingers to the left or right on the screen	
Zoom in or out Place two fingers on the screen and pinch in or stretch out		Open notification centre Swipe with one finger in from the right edge of the screen	
Show Context Menu Press and hold the item		See widgets Swipe with one finger in from the left edge of screen	
Show all open windows Swipe with three fingers up on the screen		Switch desktops Swipe with four fingers to the left or right on the screen	



Essential Windows 11 Apps

The new Windows Store is crammed full of useful apps for your computer. You'll find nearly everything you'll ever need in here, from music to movies, performance to productivity and coding to collaboration. Here are some of the top Windows 11 apps we think are worth taking a closer look at.

Minecraft



Cited as one of the greatest video games of all time, Minecraft is now considered an essential app for a huge number of Windows 11 users. You don't have to be an avid gamer, nor do you need to be of a certain age, Minecraft allows you to freely explore a world that's estimated to be bigger than the surface area of Neptune.

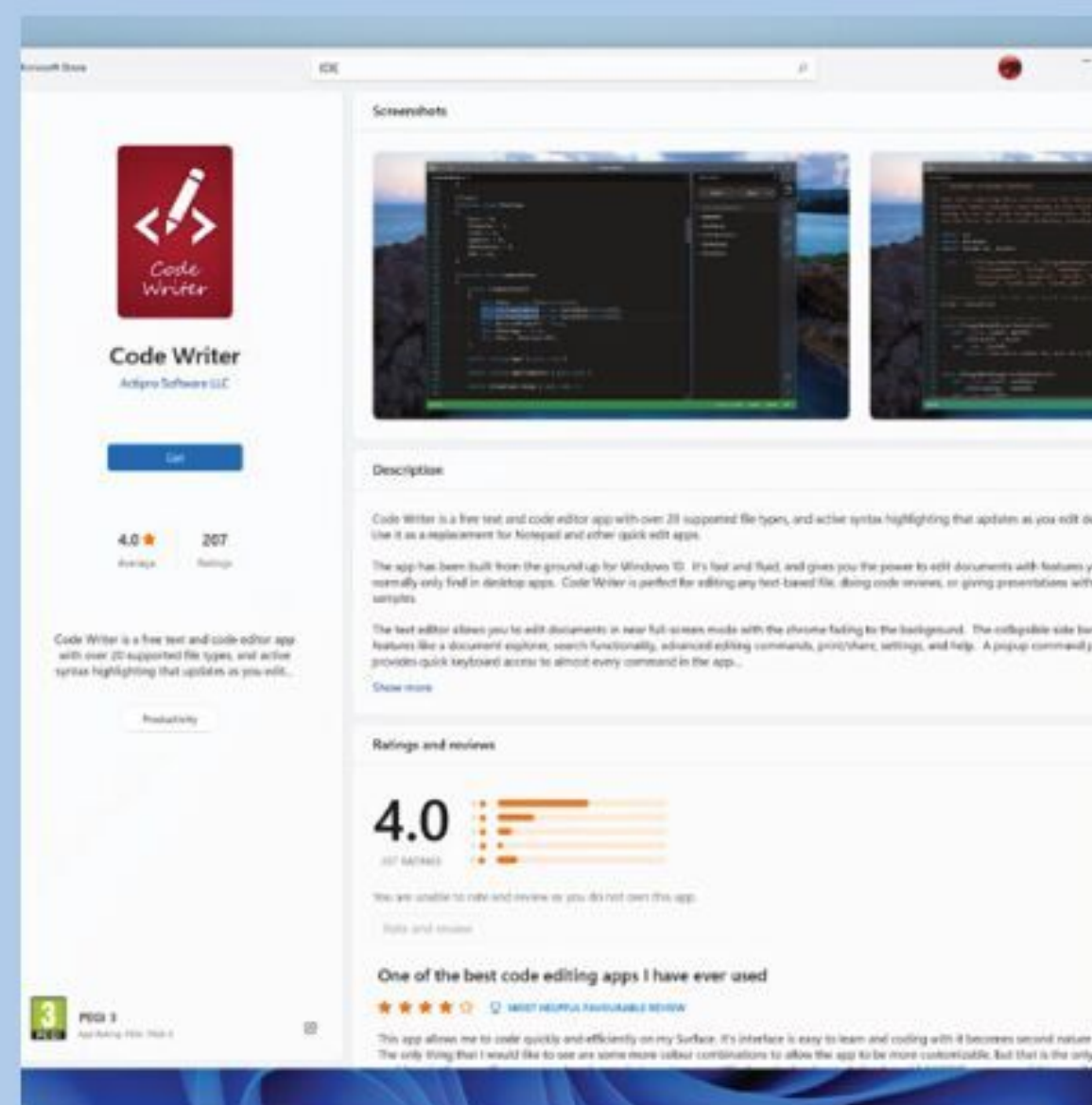


Code Writer

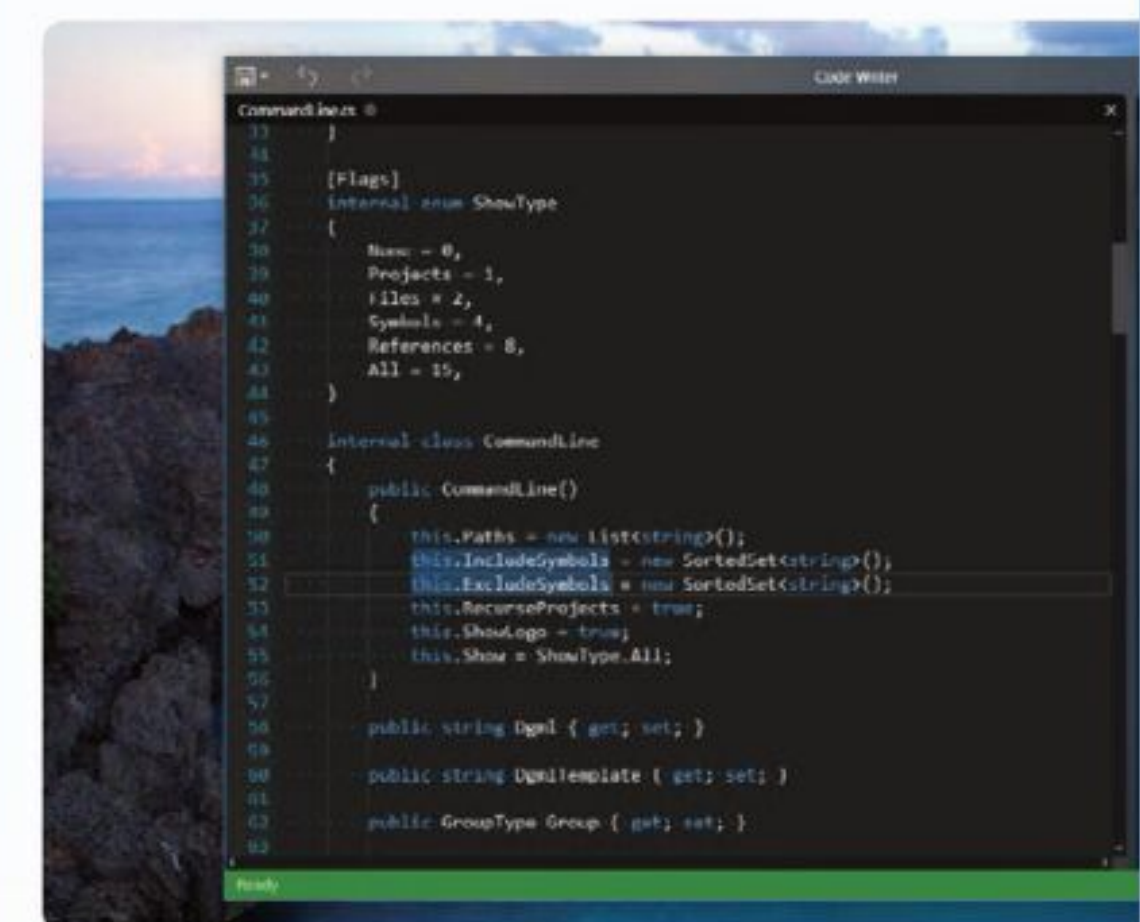


If you're interested in learning how to code on Windows 11, then you'll need a comprehensive IDE (Integrated Development Environment). Code

Writer is one of the best freely available IDEs with over twenty syntax-highlighted file types that support HTML, CSS, Python, C++, Ruby, SQL, C#, VB, Perl and many more.



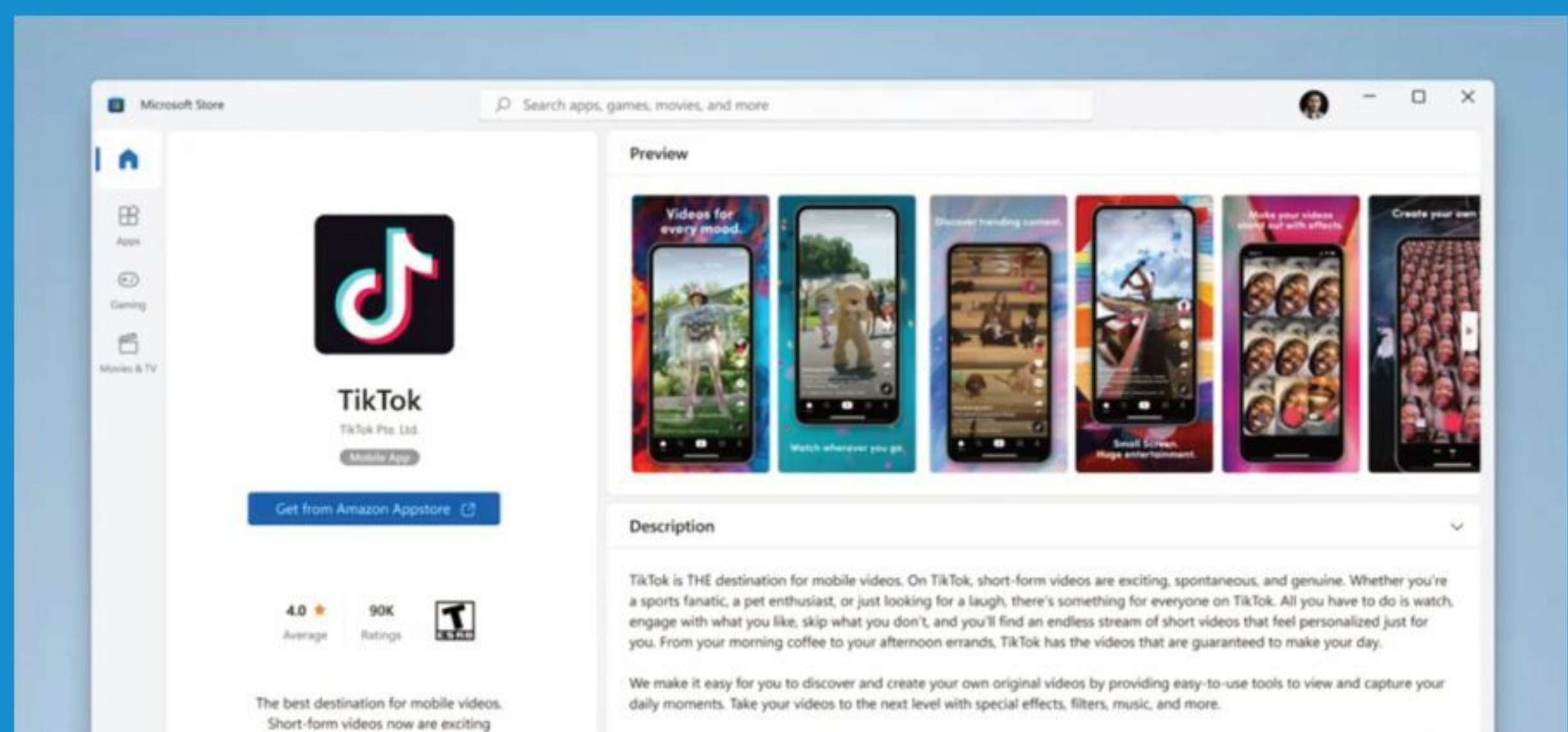
Screenshots



Tik Tok



TikTok is a video-based social media platform, where individuals post quick videos of themselves dancing, creating something, or commenting on something important. It's popular with the younger generations, but us older ones do have some input from time to time. There's more content on here than you see in one lifetime, so take a look if you're interested.



Netflix

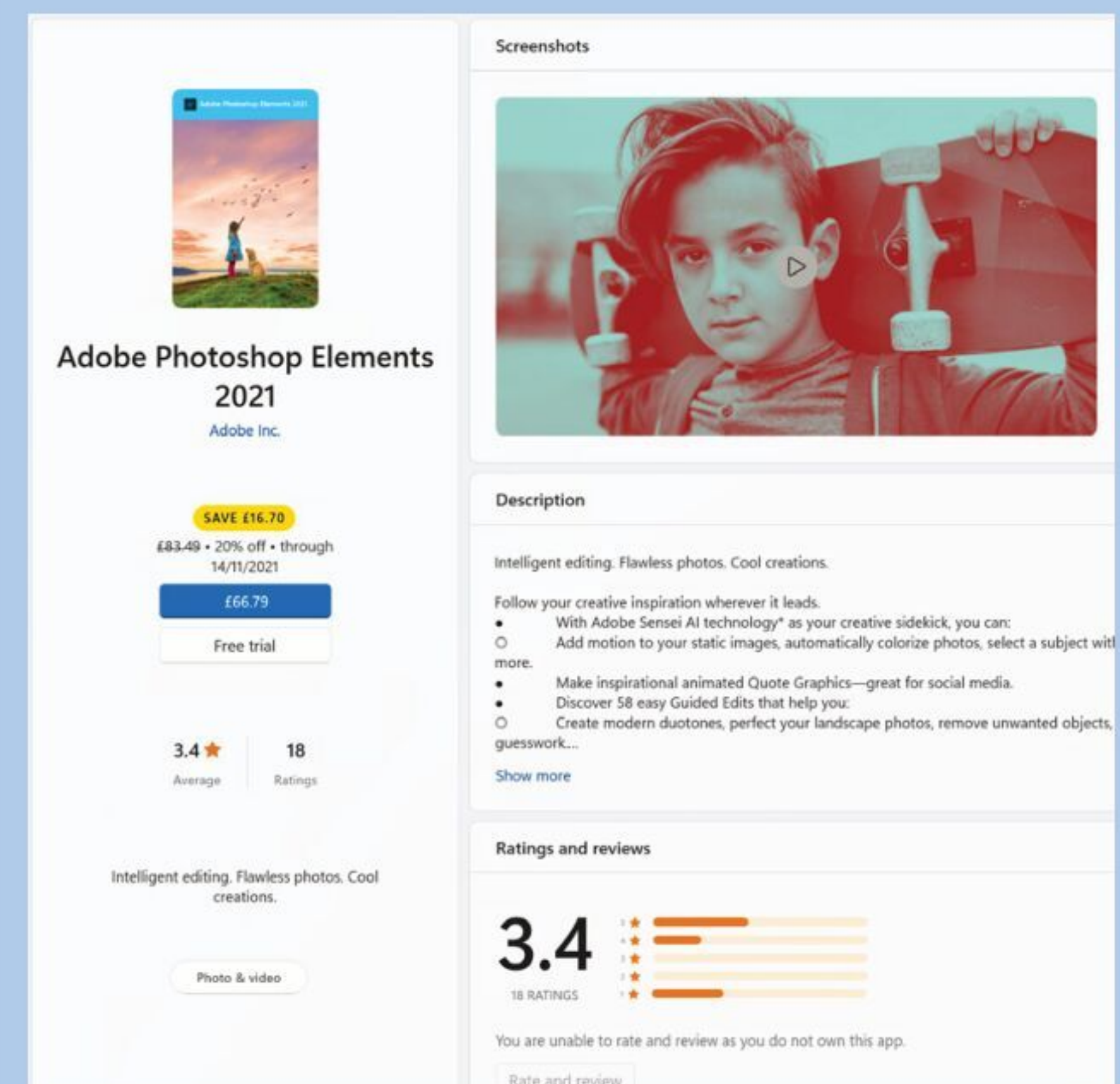
NETFLIX

The king of the streaming services, Netflix has become one of the most installed apps across any platform. Watch your favourite films, and binge on top series until the wee hours of the morning; there's something for everyone within the ever-growing genres on Netflix. Don't forget though, after the first month, Netflix is a paid subscription service.



Adobe Photoshop Elements

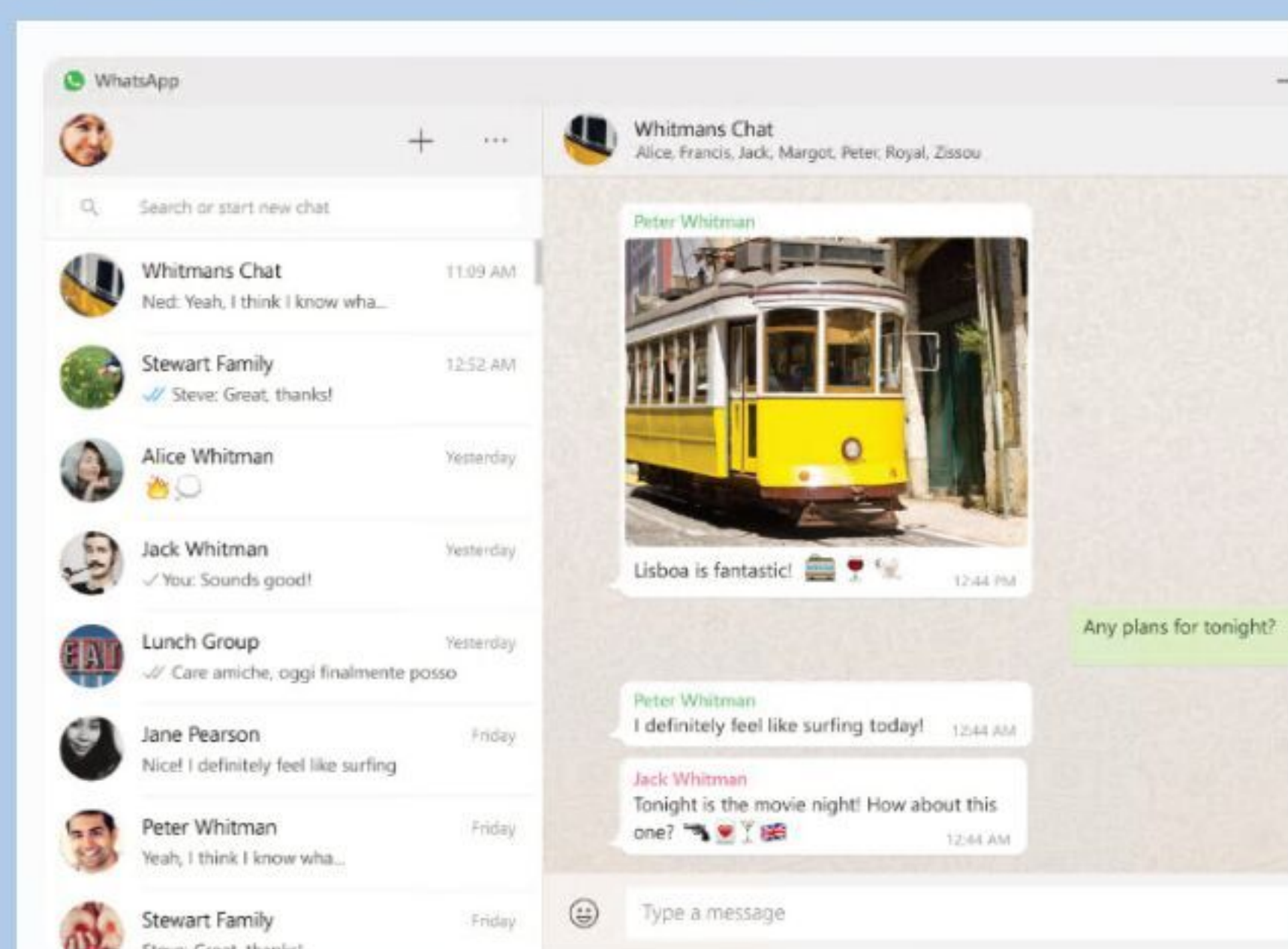
Unleash your inner digital photographer and artist with Adobe's Photoshop Elements. If you don't want to go down the Adobe Photoshop Professional route, then this is the app for you. There's tons of features available that will greatly enhance your photos and unlock your hidden potential. It costs £83.49, but there are often deals available, so keep checking back.



WhatsApp Desktop



WhatsApp has increasingly become an essential part of communications between colleagues, friends and family. Thanks to encrypted chats, group communications, and voice and video calling over Wi-Fi, it's easy to see how important the app is in today's modern, digital world.



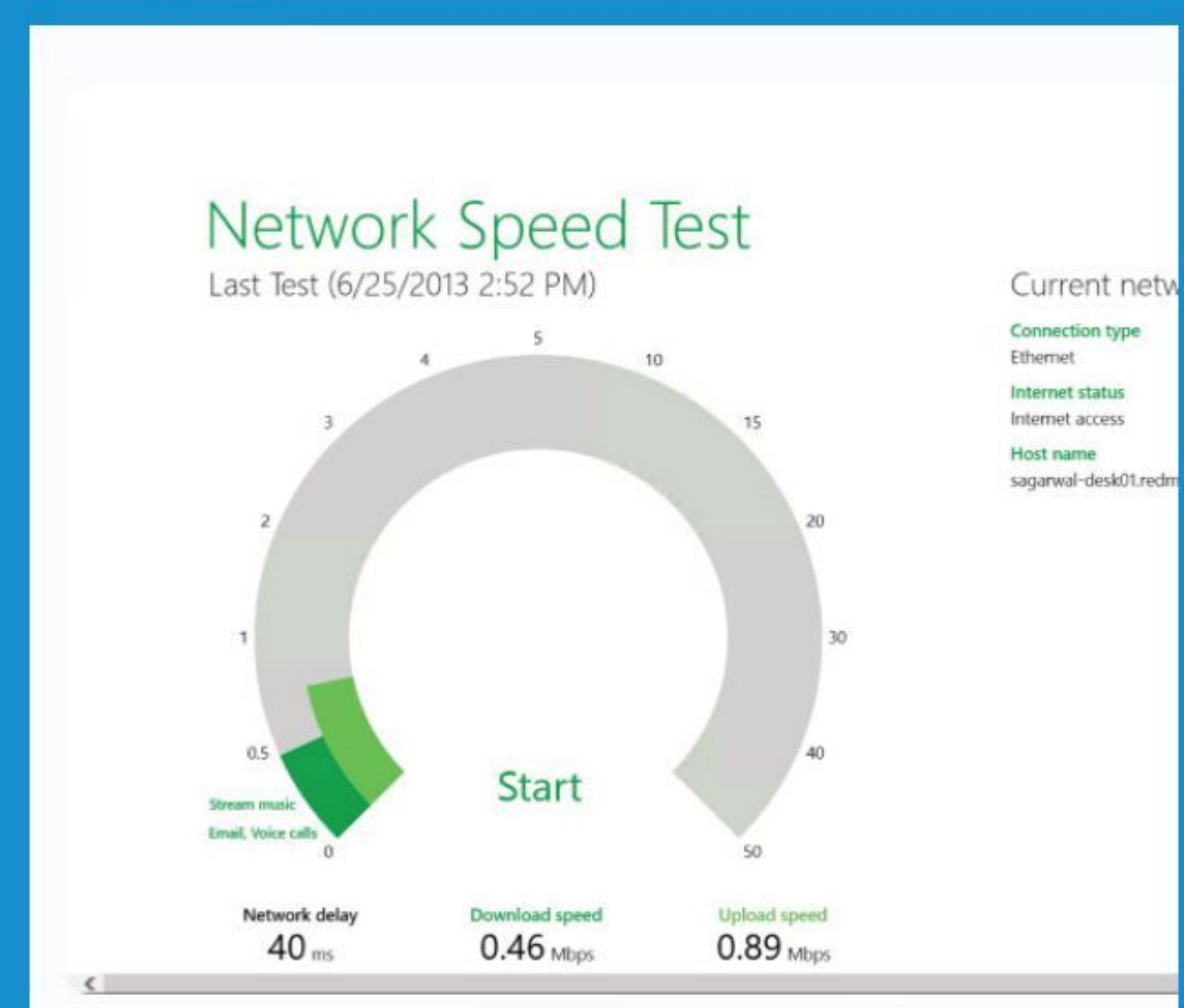
Description

With WhatsApp on the desktop, you can seamlessly sync all of your chat convenient to you.

Ratings and reviews

Network Speed Test

Working from home over the last year has proved just how vital our Internet connections really are. The slightest drop in connectivity can cause havoc, especially when you have deadlines to meet and gigabytes of work to upload. With Network Speed Test you can closely monitor your bandwidth, and ensure you're getting the maximum from your ISP.



Essential Windows 11 Apps continued...

Microsoft Flight Simulator



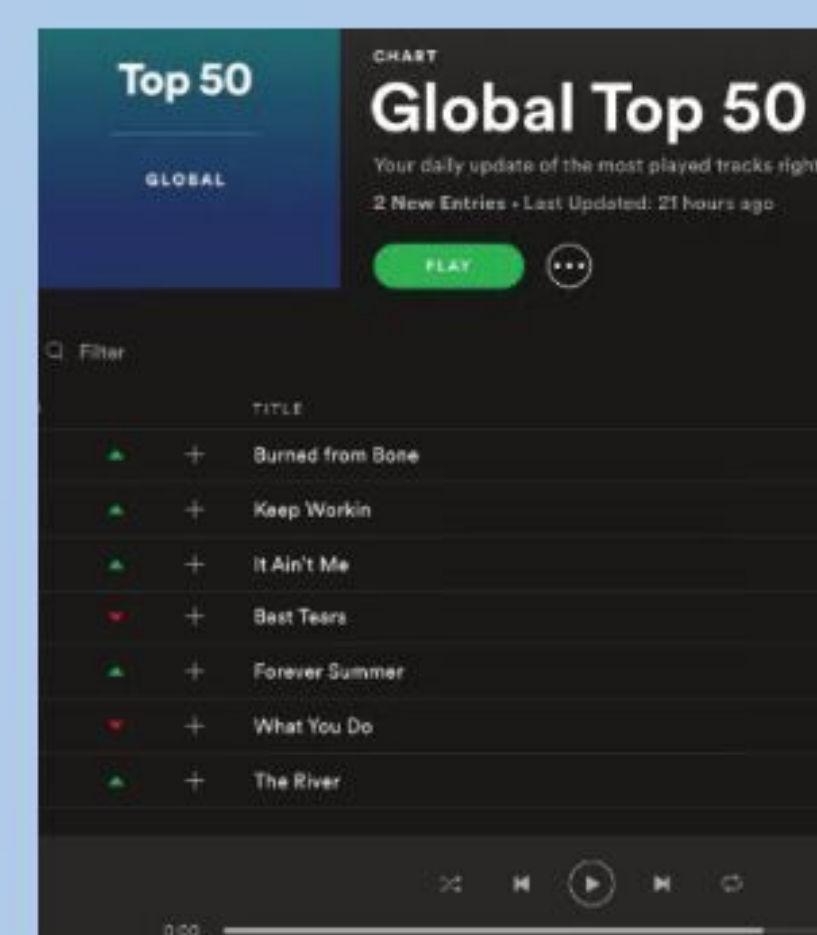
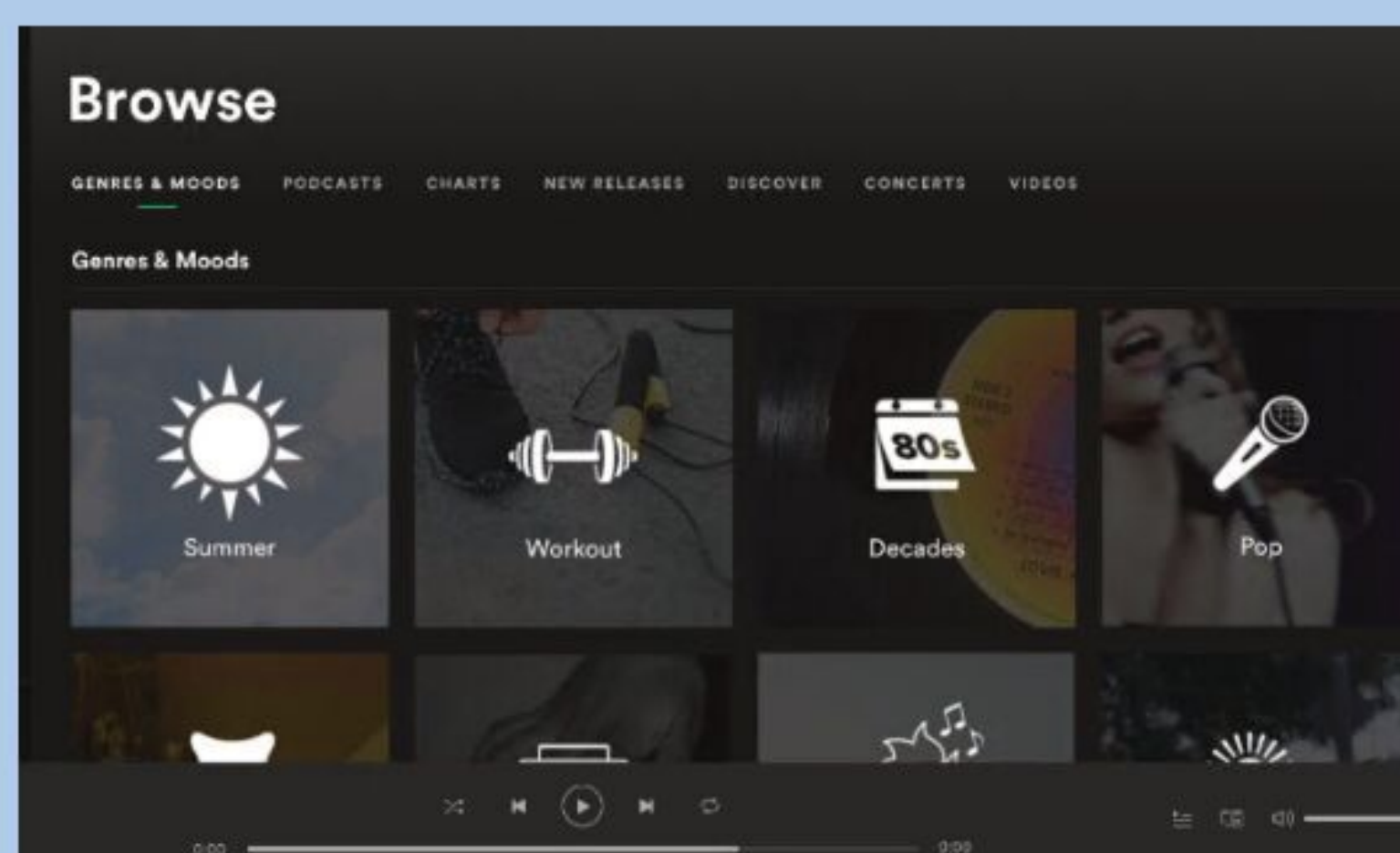
If you're into a different kind of gaming on your PC, then why not give Microsoft's latest Flight Simulator a try? This is the next generation of the famous, and long-running sim, and features incredible realism and graphics that will blow your mind. According to Microsoft, the sim uses actual satellite terrain footage, so you could fly over your own house!



Spotify



With a catalogue of music numbering the tens of thousands, Spotify enables you to browse everything from Abba to ZZ Top. You can go free and tolerate the occasional ad break, or pay for a Premium subscription and play across multiple devices without any ads.



Drawboard

Drawboard PDF allows you to mark-up, read, edit and annotate any PDF. You can create hyperlinks, linking text to web pages, or other PDF pages within the document; add grids and lines to enhance note taking; including engineering line styles; choose colours for annotations, and much more. It's free, but there's also a paid for Advanced Toolset you can buy to further the experience

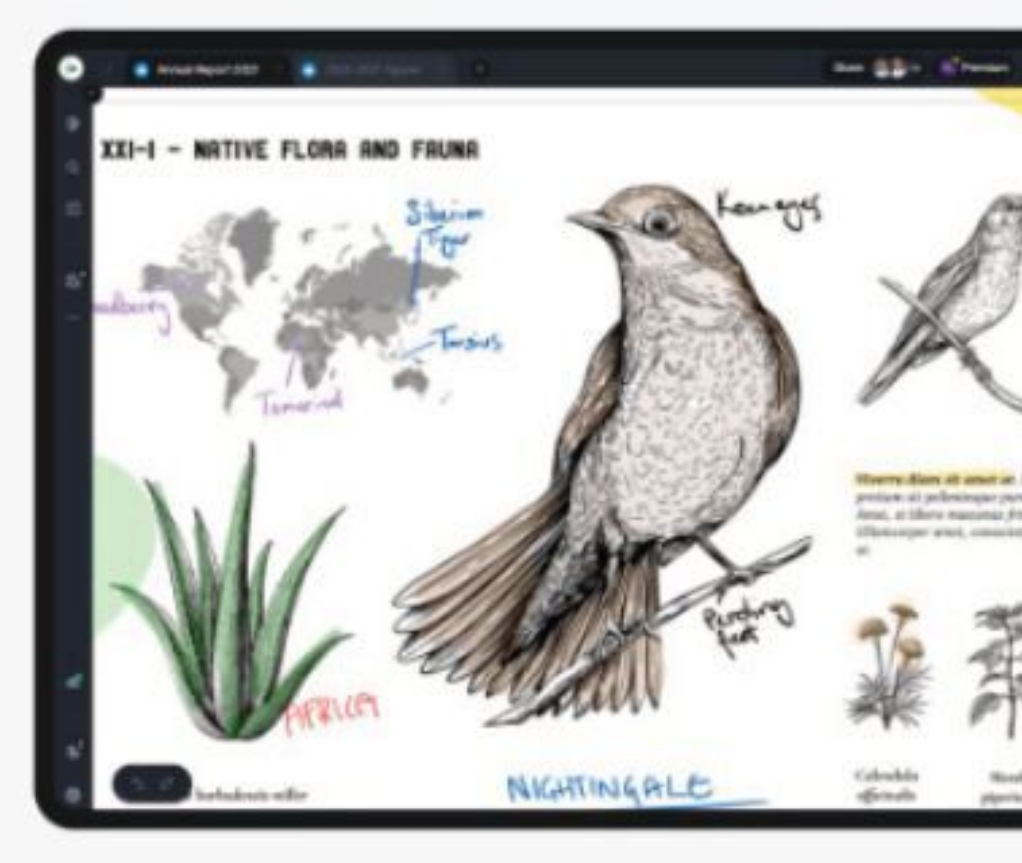


DrawboardPDF

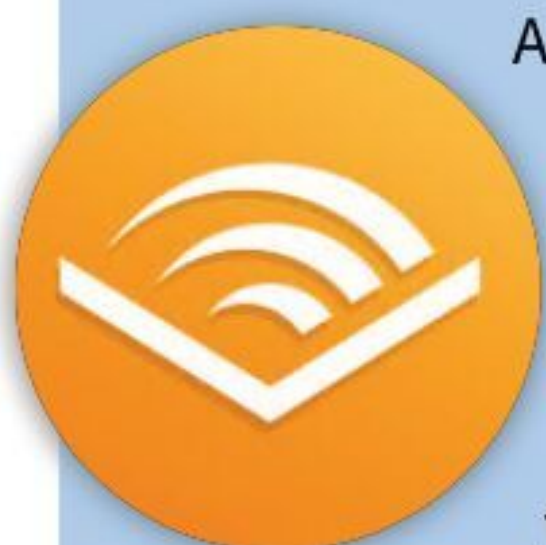
PDF markup tools to help you work wonders.



drawboard.com/pdf



Audible



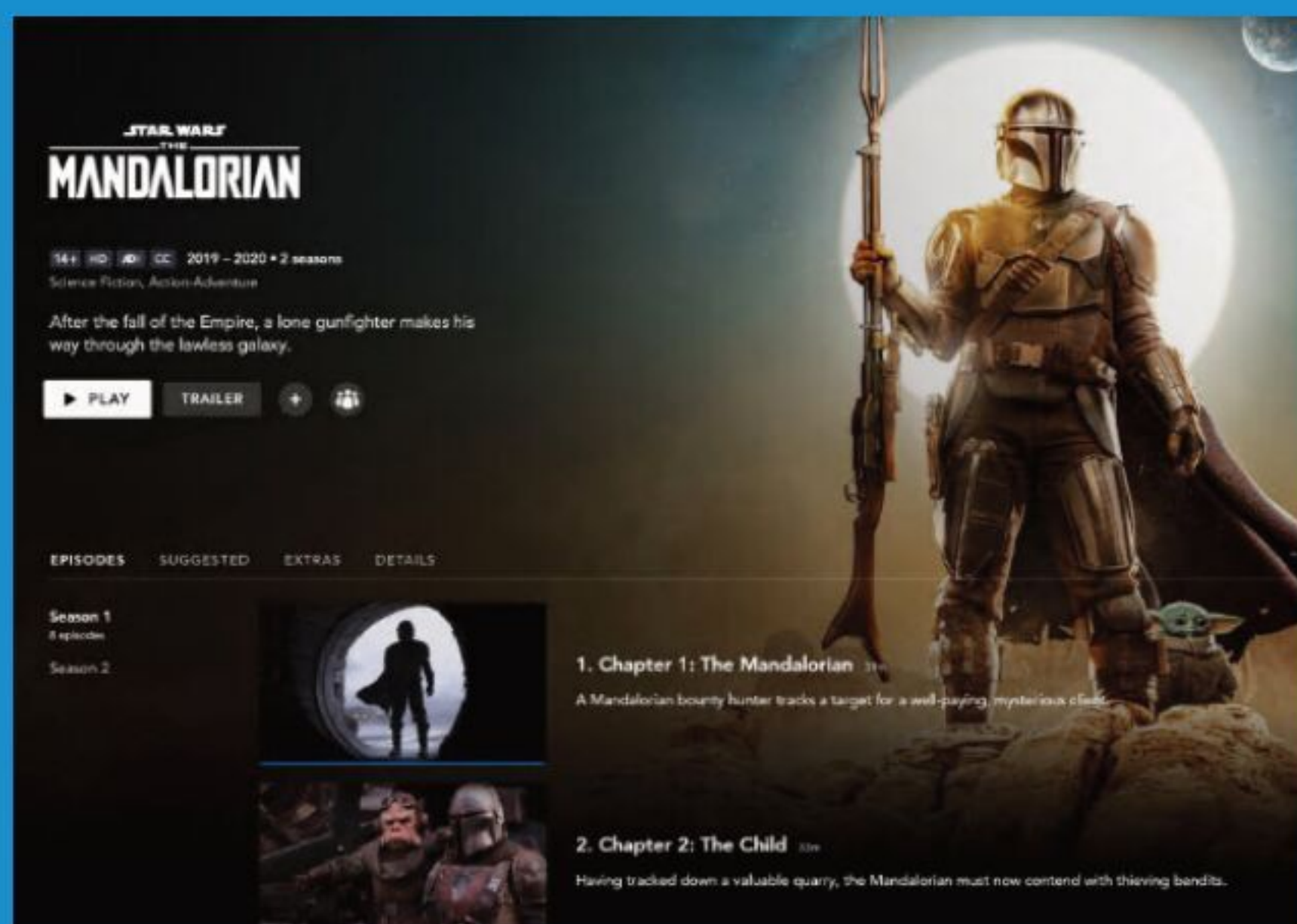
Audio books are a great way to get into the classics, as well as new and upcoming titles without having to pick up a book and read it. For many, that's an ideal setup, as work and life can get in the way of a good book. Listen to the Adventures of Sherlock Holmes while doing your work, or The Handmaid's Tale during your break. Audiobooks from Audible will open even greater worlds for you to explore.



Disney+

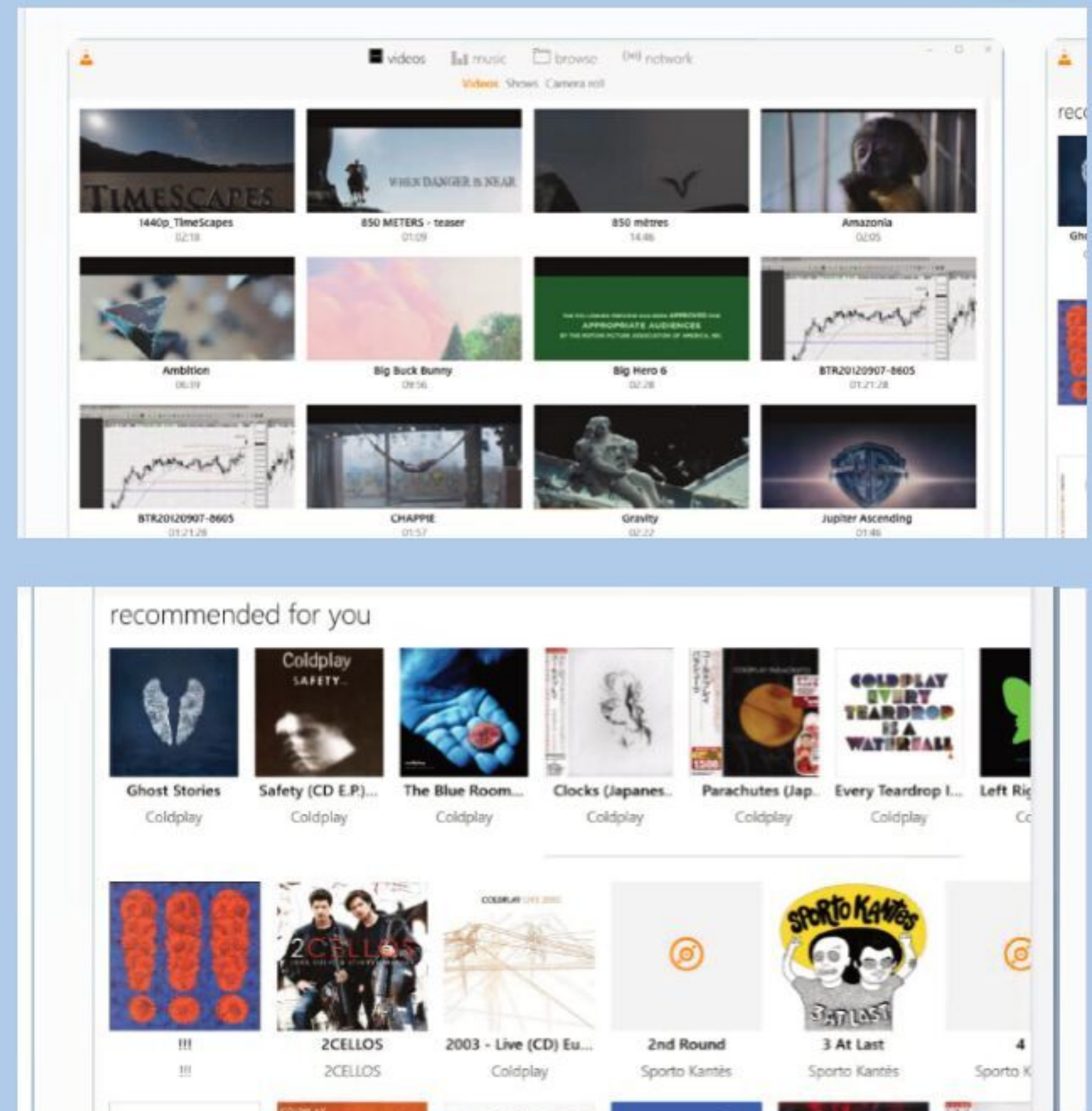


Despite being the newcomer to the streaming video service model, Disney+ has quickly become one of the most downloaded apps in the Windows Store. With shows such as The Mandalorian, What If...?, and WandaVision, you can catch up on everything that's Marvel, Star Wars, Pixar and National Geographic. Remember, though, it's a subscription service.



VLC

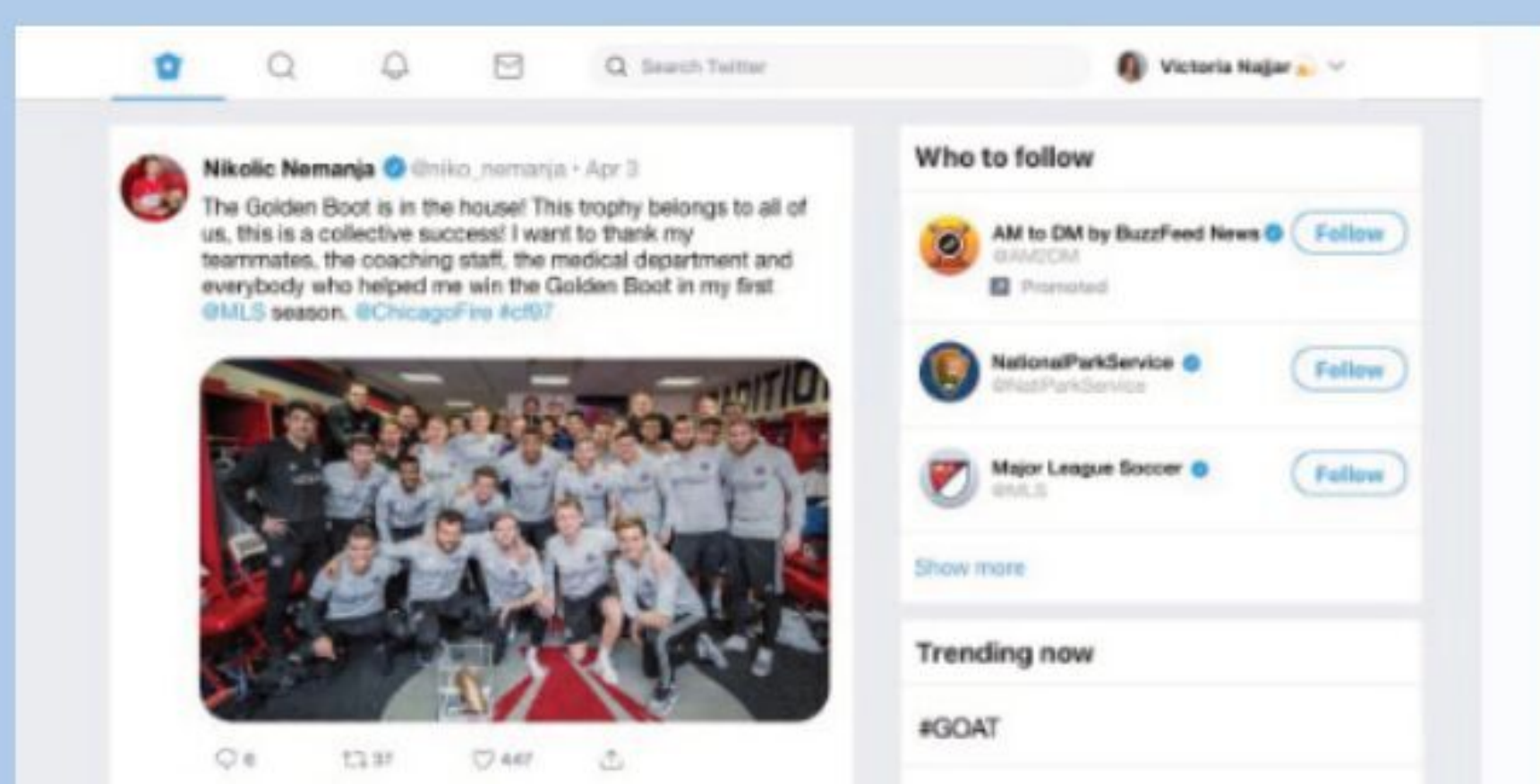
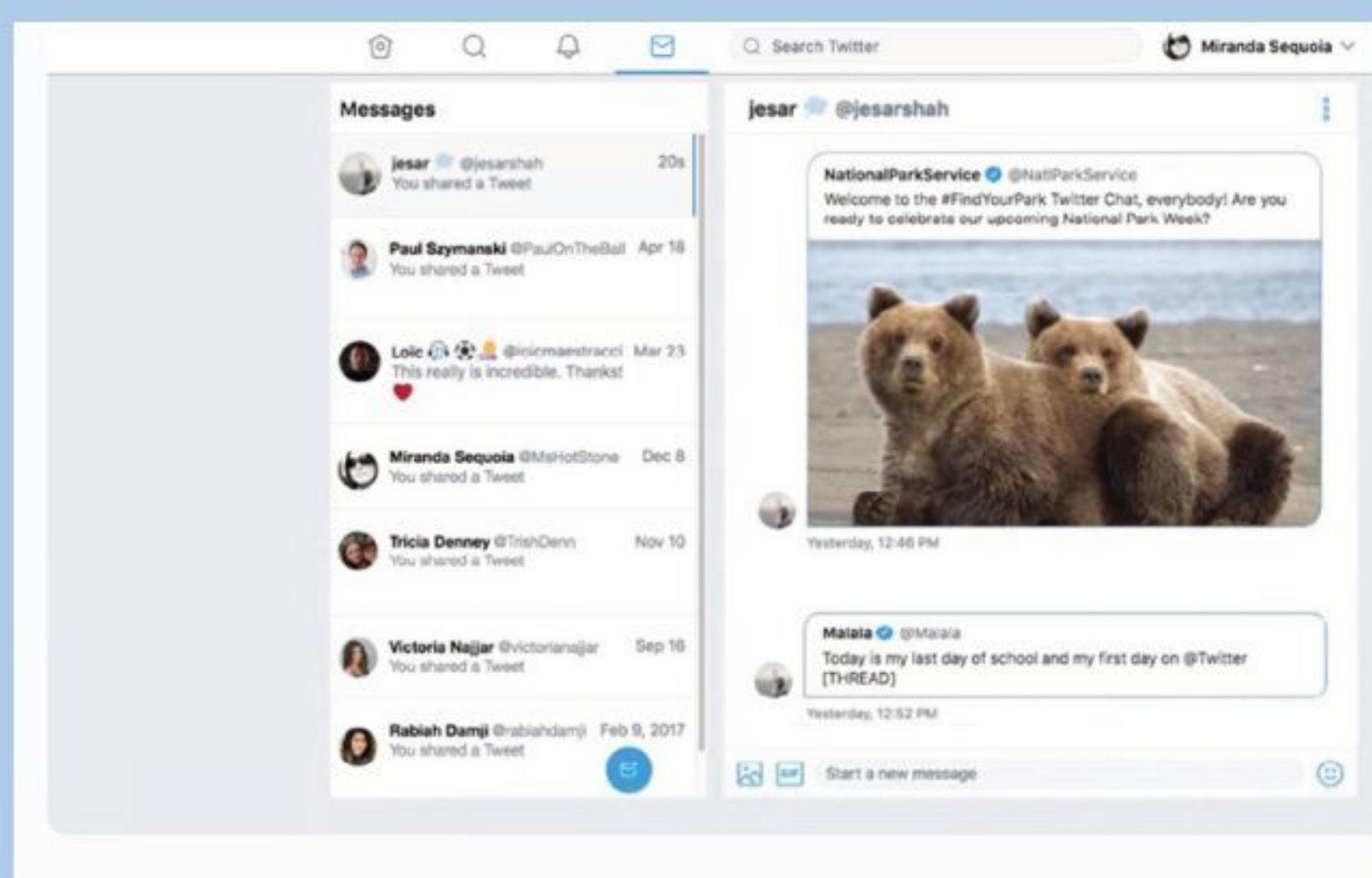
Known as the Ultimate Video Player, VLC can play pretty much anything you throw at it without the need to install extra codecs. This particular version is cut-down slightly, so you won't be able to play DVD or Blu-Ray discs, but any digital media file can be played without a problem – and it's free!



Twitter

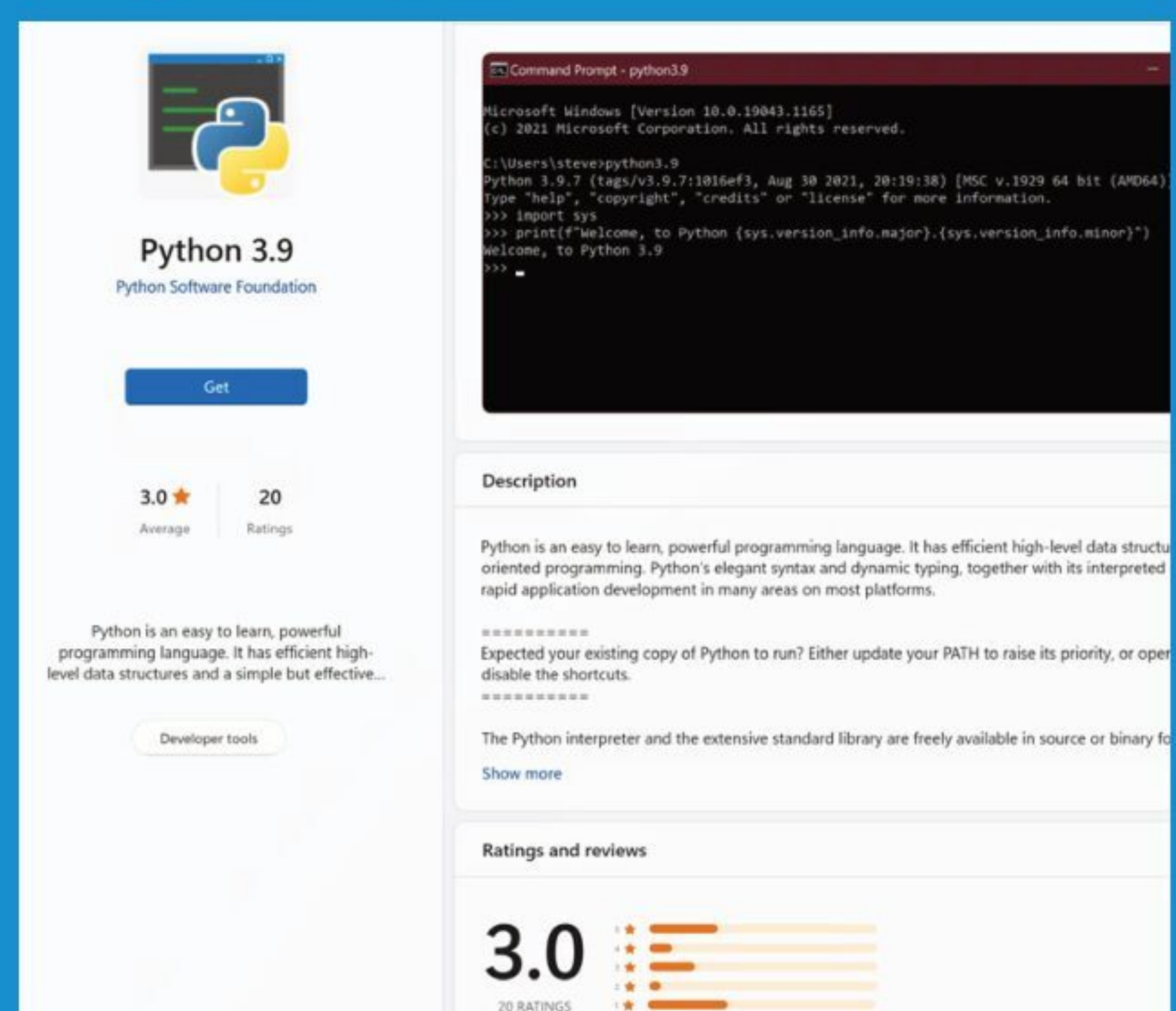


Say what you like about Twitter, you can't ignore the fact that it's often better informed than the news presented on the TV or in the paper. Instead of going to the website, install the app, and you can join the many millions who always seem to take the opposite view from you; and end up shouting at each other.

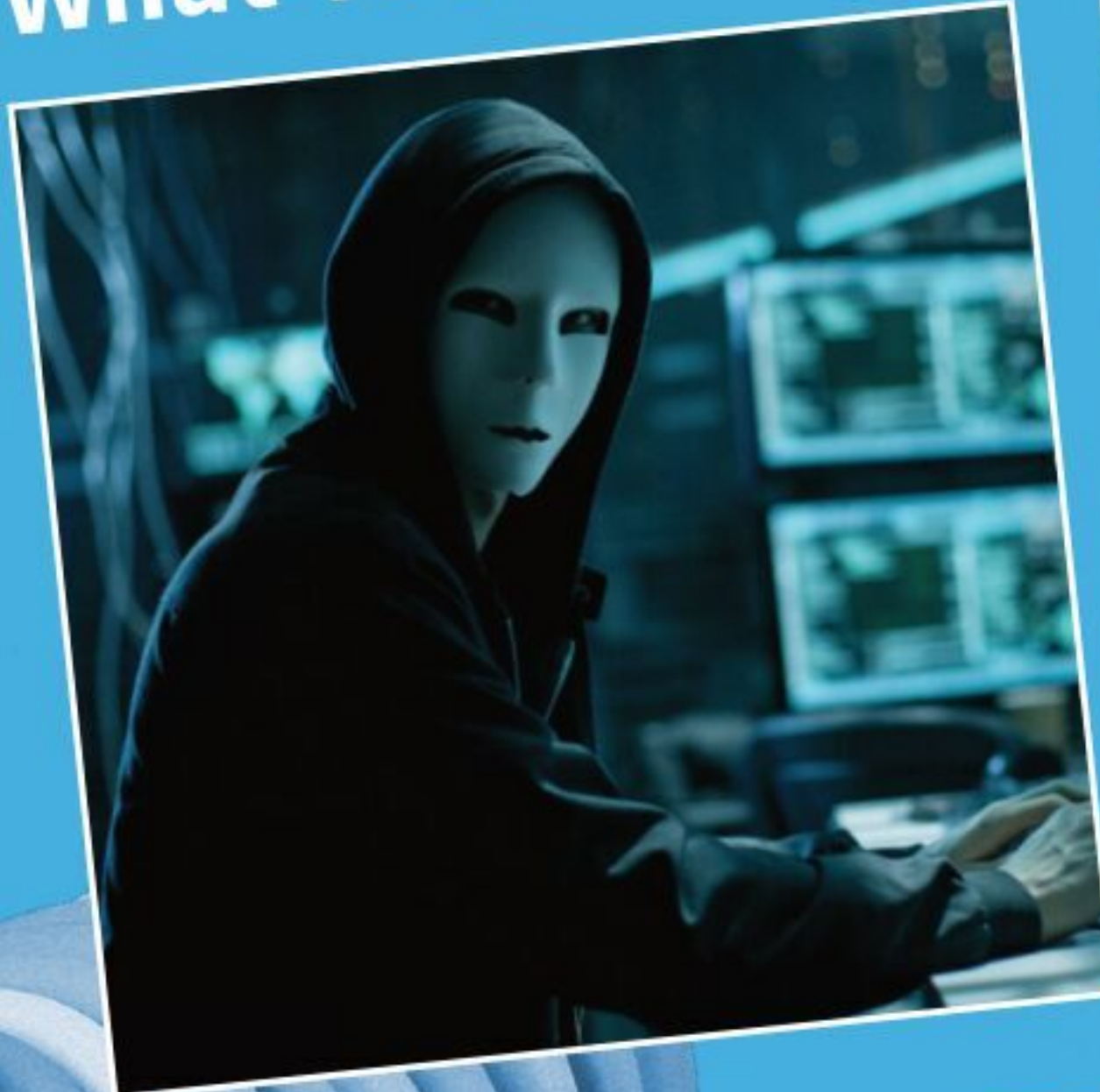


Python 3.9

Python is a powerful programming language that's easy to learn and use, and can be found throughout the Internet, as well as onboard the ISS. This is the latest version of the free-to-use language, and can help open many doors for you in terms of career opportunities; as well as just enjoying learning how coding works.



What To Do If You're Hacked



Laptop Care and Maintenance

What is Encryption?



Secure Your Home Network

Maintain and Protect Windows 11

What do you do if you're hacked? How do you protect your devices on a public Wi-Fi? What is encryption? These and many more questions are answered throughout this chapter, as you begin to move into the more advanced user techniques and skills needed to make Windows 11 both secure, while keeping it in tip-top shape.

Learn how to manage your system's memory more effectively, how to create a system image, manage your privacy and get much needed maintenance and performance tips.



Using the Windows 11 Defender Tools

The Windows Defender set of tools may not be quite as comprehensive as one of the bigger Anti-Malware suites, such as BitDefender, but it does a good job of protecting the average user from the wealth of nasties out in the Internet.

1 Virus & Threat Protection

This is where to check and scan for viruses and other threats to your Windows 11 security. Here you will find tools for preventing viruses and other malware from ever taking hold of your computer, as well as the tools needed to check for anything which already got through your defences.

2 Account Protection

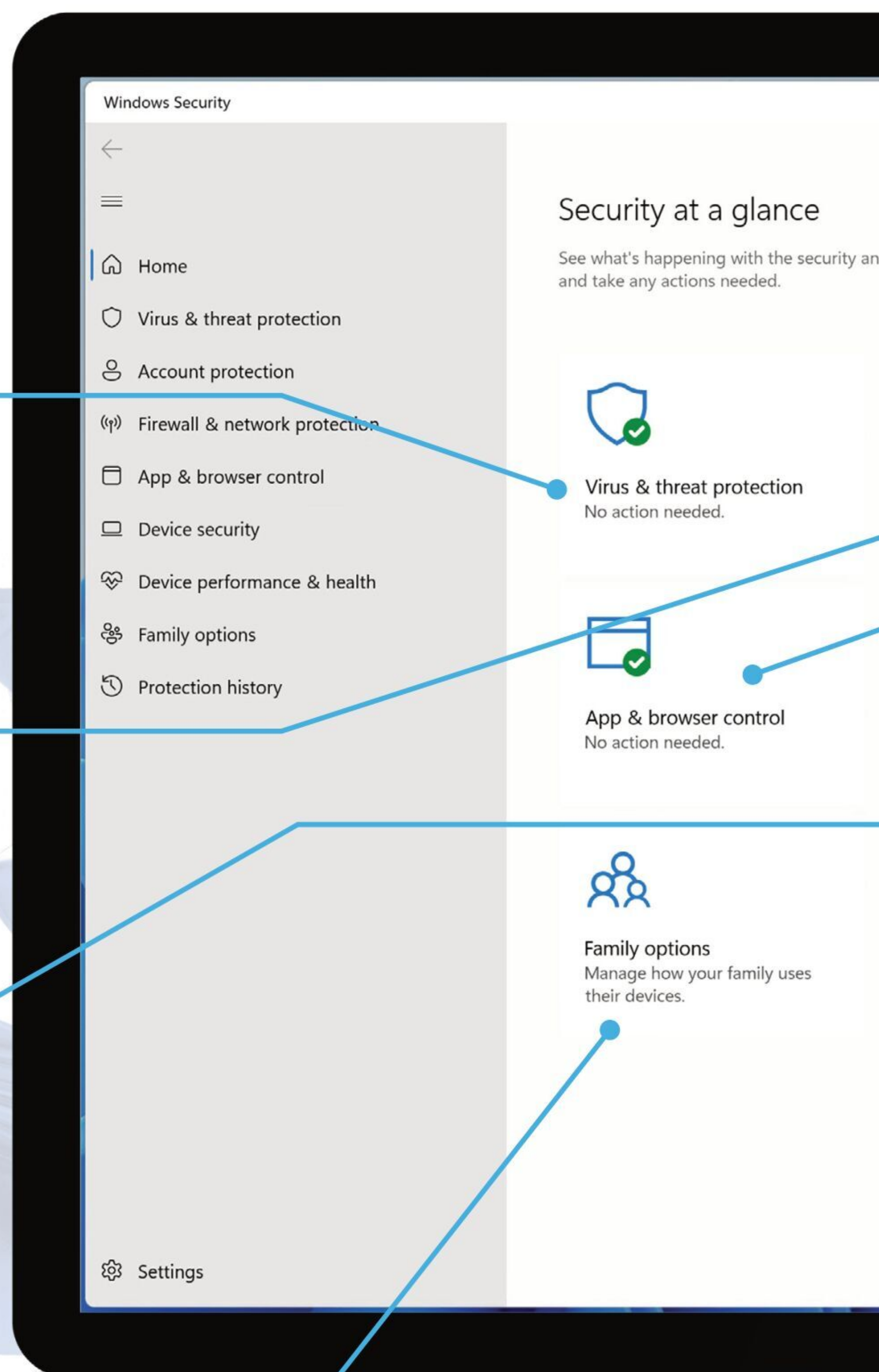
This is where you manage account and sign-in security for Windows 11. This includes the Microsoft account you are signed in to (or the option to sign in to one), Windows Hello and Dynamic lock. Clicking on any of the options here will simply take you to the relevant area of the main settings.

3 Device Performance & Health

Displays issues with the health and performance of your computer, including the status of the Storage capacity, Apps and software and the Windows Time service. This is also where you come if you want to begin the process of performing a Fresh Start on your computer.

4 Family Options

The Family options feature in Windows Security provides you with easy access to tools for managing your children's digital life. Use Family options to help keep your children's devices clean and up to date with the latest version of Windows 11 as well as protecting your kids when they're online.



5

Apps & Browser Control

This section contains the settings for Windows Defender SmartScreen. This helps to protect your Windows 10 device from potentially dangerous apps, files, websites and downloads. It also includes a link to download Application Guard and lets you control Exploit protection.

6

Firewall & Network Protection

Windows Defender includes three firewalls, for: Domain network, Private network and Public network. You can turn each of these firewalls on or off at will, although you will normally only be connected to one type of network at a time (if you are at home, usually a Private network).

7

Device Security

Despite the title, this isn't really a hub for device security. You can learn more about Core isolation (virtualisation-based security) and enable the memory-integrity feature, helping to prevent malicious attacks to core, high-security processes. Note: The exact options here can vary depending on device.

8

Protection History

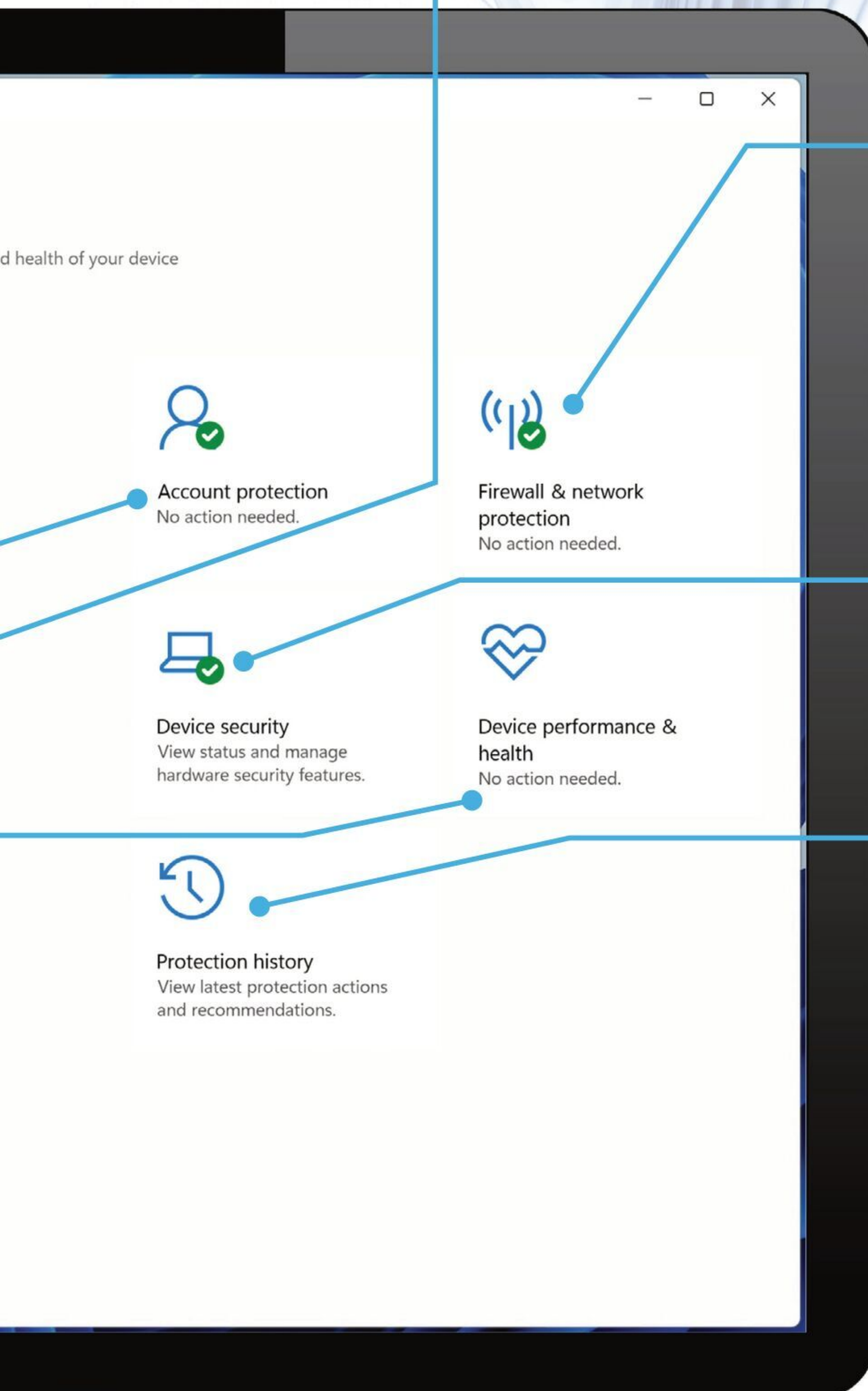
The Protection History option really speaks for itself. In here you will find a history of all the actions and recommendations that the Windows Security system has discovered. You can look through the history and see if any trends form, so you'll know what to avoid in the future.

Windows Defender Dashboard

The dashboard is the main screen of Windows Defender and opens when you click the "Defender shield" icon in the taskbar. It lets you check the security of your computer at a glance, but doesn't really give you much information beyond whether an action is needed or not needed within the various security sections.

Ideally, you want to see a green tick on each section of the dashboard.

If you see a warning symbol, there are suggested actions that you should take a look at, while a red X means something needs your immediate attention.





What To Do if You're Hacked

There are literally hundreds of millions of email addresses and account details stolen by hackers each year, sometimes in a single massive breach, such as the Equifax attack from a few years ago, but sometimes directly from your own computer. Being the victim of a hack sounds scary to most people, but while you should take it seriously, there is often no need to panic. If you think you have been hacked, just follow the instructions here to get your online life back on track.



How Will You Know?

You may hear about a big data breach in the news, or from friends and colleagues, and if the company hacked is one you have accounts with, it is worth following all of the steps below just in case. Often, the first you will know about being hacked is a call from your credit card company or bank about unusual activity, or from friends/relatives suddenly receiving strange requests for money from you.

Many of the large email providers, such as Gmail, will alert you if there is a new login to your account from an unrecognised location or device. Or you may simply find that you have been logged out of an account and your password is no longer working.

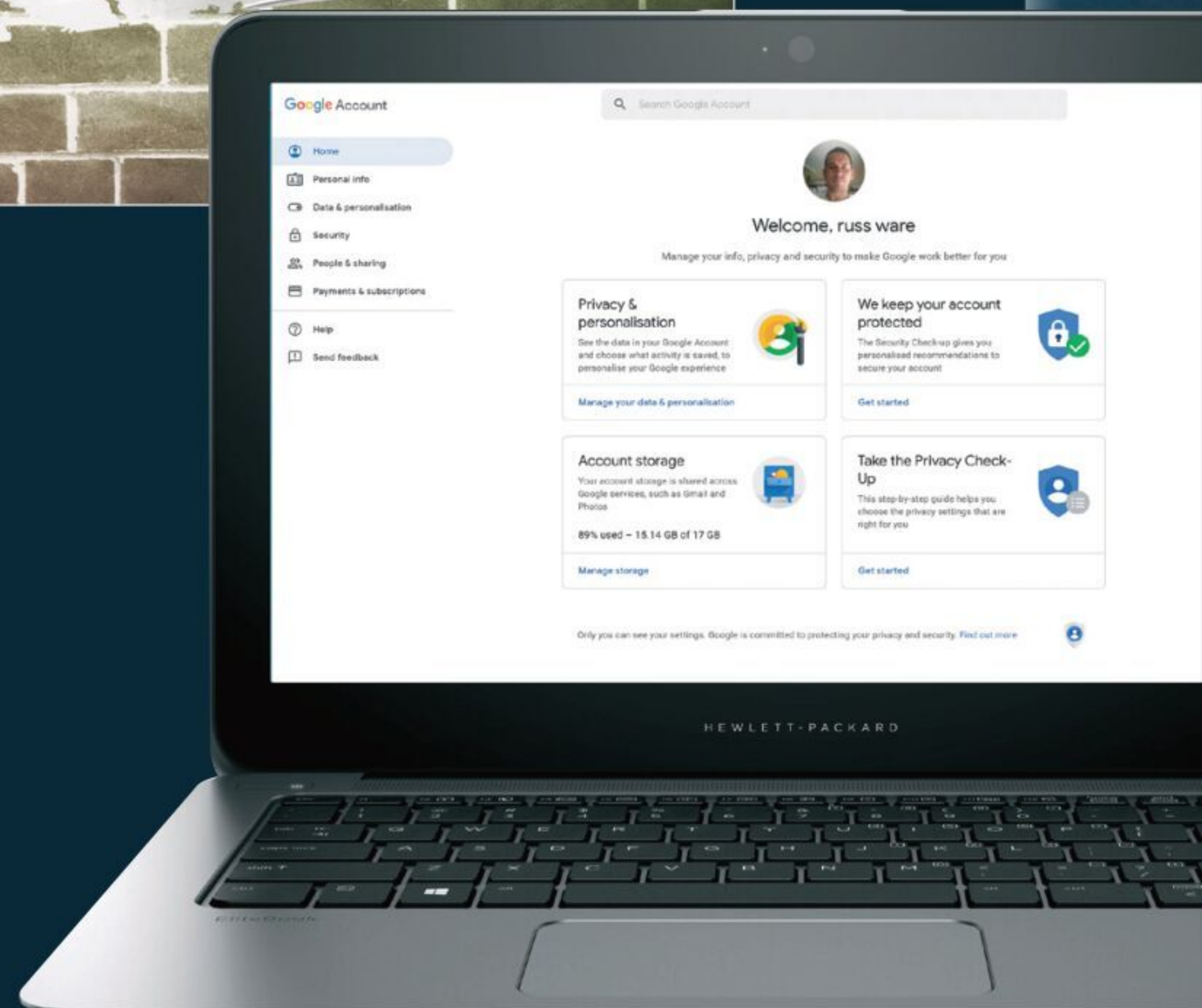
The most important thing is not how you discover how you have been hacked, although we urge you to keep a close eye on all your online activity, but how you act immediately after you find out.

You can check if your email address has potentially been involved in a data breach by entering it in to the Have I Been Pwned website.

<https://haveibeenpwned.com/>

What To Do Next

Even if you think only one account has been targeted, you should still move to protect ALL of your important accounts. This is especially true if your main email account has been breached, or if you use the same email and password for all of your online accounts.



Change Your Passwords

The very first thing you need to do is change all of your passwords, especially for your email account, banking accounts, credit card accounts, PayPal, etc. Many online accounts now offer 2-step verification, which adds an extra layer of security by sending you a passcode each time you try to log in. If this is available, set it up as soon as possible.

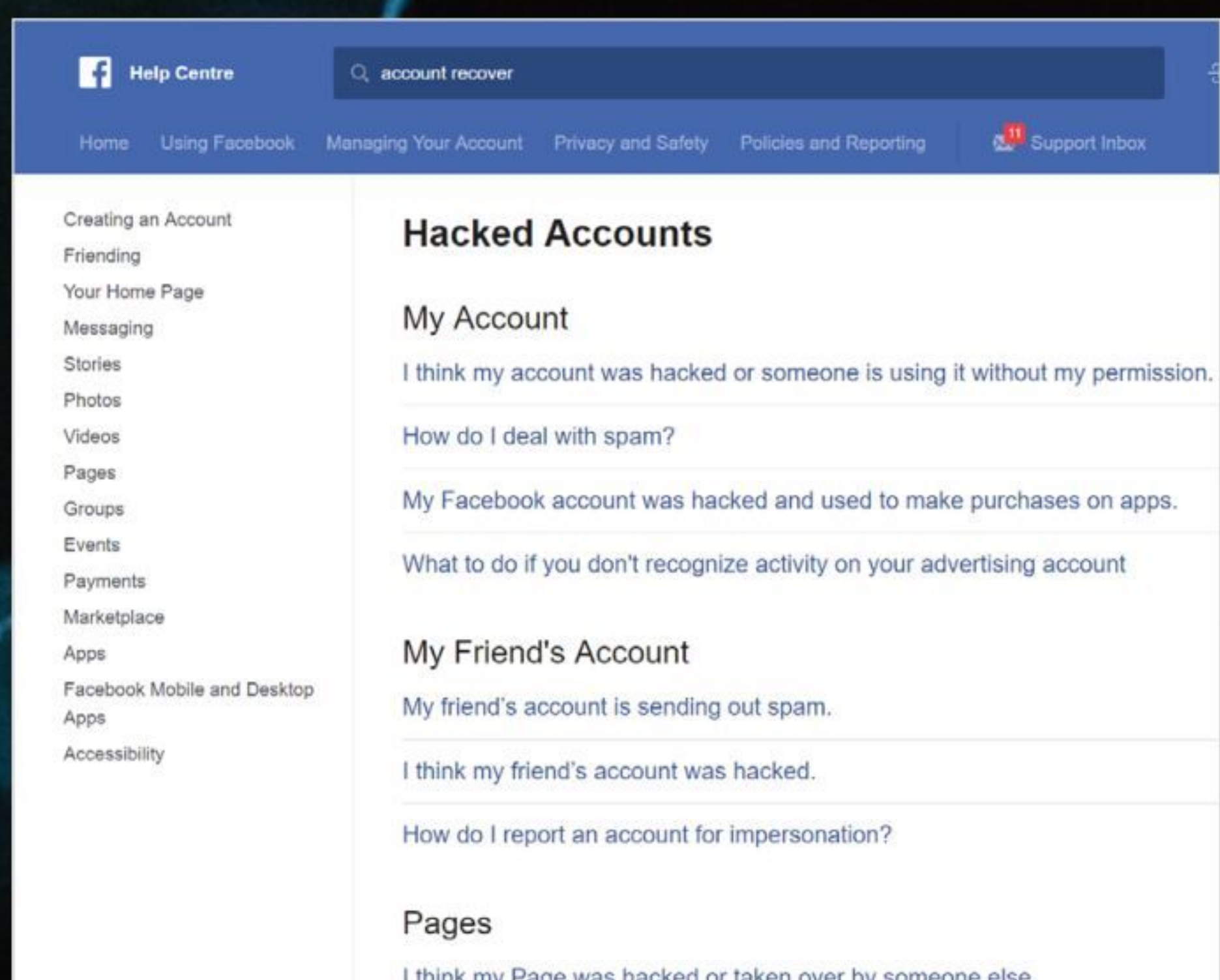
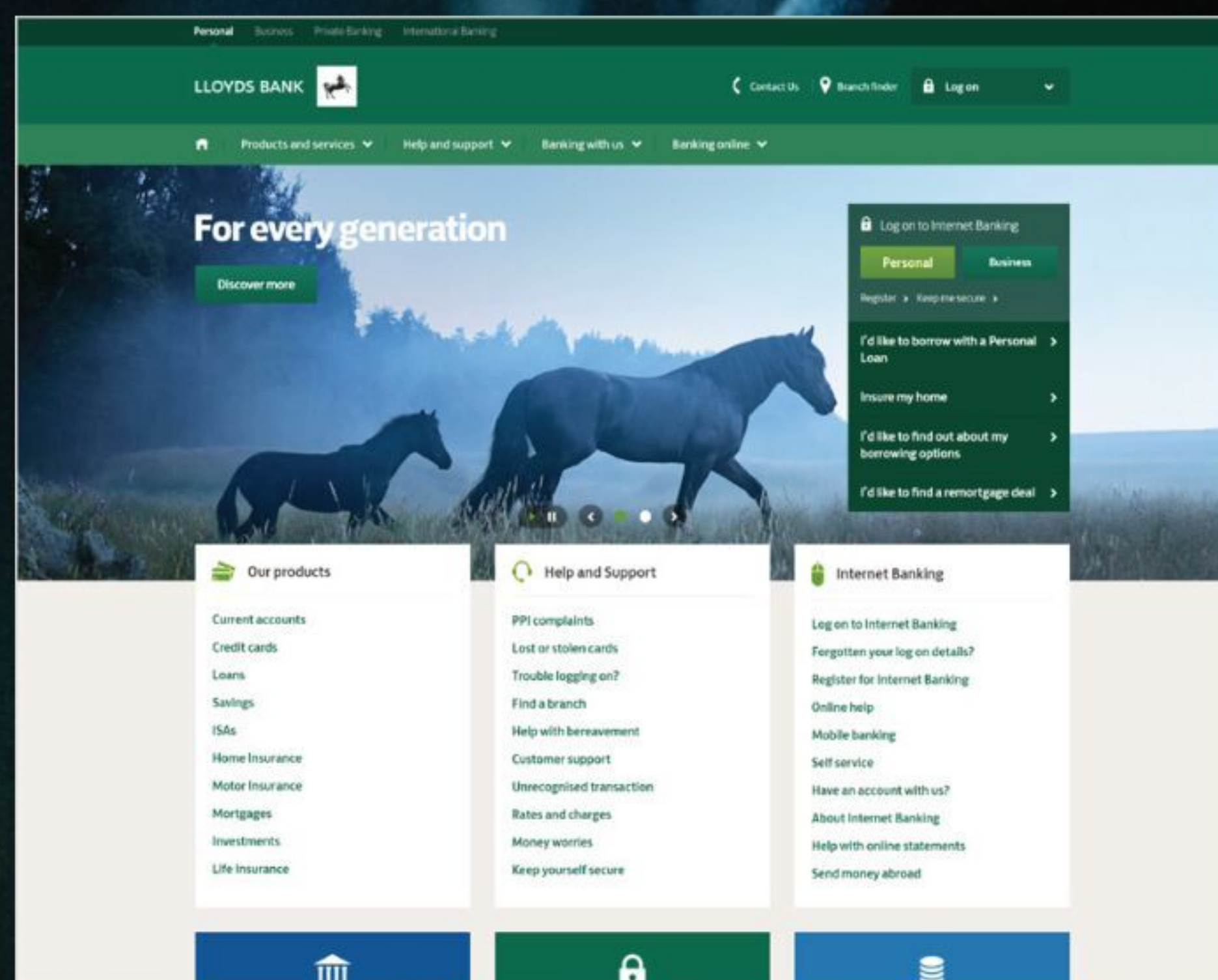
If your email account password has been changed by the hacker, you will need to contact the provider and prove you are the rightful owner of that account. For Gmail, there are instructions for recovering a hacked account on the Google support pages (<https://support.google.com>). The other main email providers should offer similar advice.

Examine All Your Accounts Carefully

This includes banking, email, online shopping accounts, especially if you use the same password for multiple logins. Check your email inbox and sent mail box for things you haven't signed up to or sent. Think about how you recover a forgotten password on almost any website: You request a password reset to your email address. If someone has got hold of access to your emails, they could do the same.

Look for any unusual activity at all, and if you spot some, contact the website or company to let them know your account may have been breached. Often, they can help you sort it out the fastest way.

If your email account has been taken over, and the password changed, you will need a way to prove that you are the rightful owner. This is why it is important to have two separate email addresses, as you can usually use a second email address as the alternate contact for the main address.



Check your bank and Credit Card Statements

Check both your bank account and credit card statement for any unusual activity (online and immediately if possible, but if not contact your bank/credit card company and ask for a statement). It is also worth informing both your bank and credit card company what has happened, so that they can be aware and alert for any unusual activity in the near future.

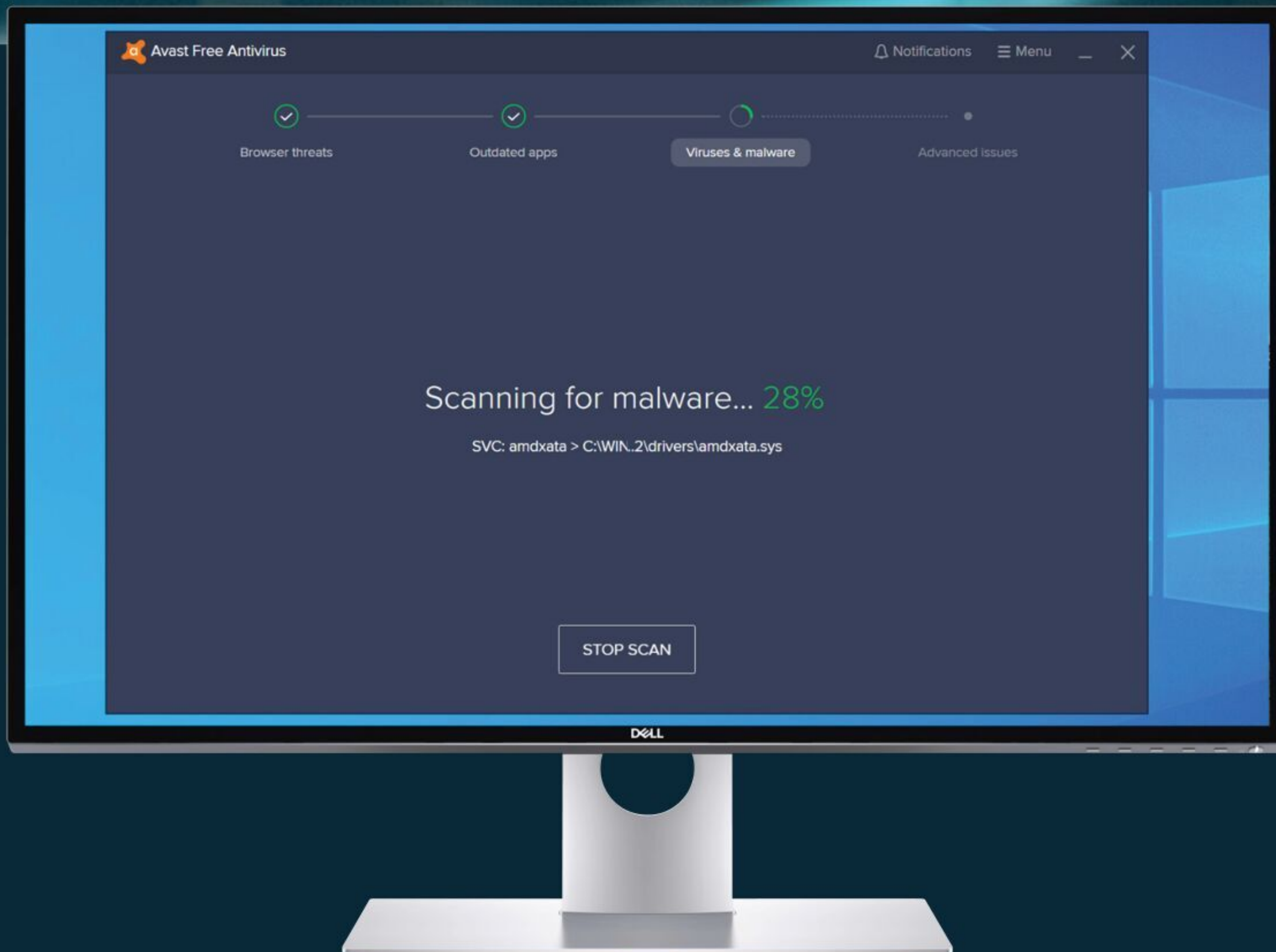
Having to get new cards issued may be a hassle, but it is less hassle than trying to sort out the mess left when a hacker starts buying things using your card details.

Recover Your Accounts

Major companies such as Google, Facebook, Twitter and Microsoft are well aware of the possibility of accounts being hacked, and most offer processes to get the account back to normal. Indeed, the company may well be the first to realise an account has been hijacked and shut it down for you. Head over to the homepage of the website in question and check the knowledge base/help desk for advice on what to do next.

Just remember that if you get an email from Facebook, Twitter, etc., telling you that your account has been breached, make sure that it is legitimate and not someone phishing for your login information.

You can read more about spotting scam emails at <https://bdmpublications.com>.



Scan For Viruses and Malware

If your computer has been infected with a virus or malware, this could be where the hacker got your details, so none of the steps above are any use if the underlying source of the breach is still sitting on your device waiting to send all of your updated information to the hacker. Run a complete virus scan, using reputable scanning software from the likes of Norton, Kaspersky, Panda or McAfee.

If using Windows 11, then the Windows Defender tool offers an Offline Scan, which can find even particularly well-hidden malware on your computer. This scan will take at least 15 minutes to complete, but is the most in-depth scan offered by the free anti-virus software.



Contact Friends, Family and Colleagues

If you think that your email or social media account has been hacked, contact friends, family and colleagues to let them know. There have been many cases where a family member or friend has received an email supposedly from a stranded person, asking for help (in the form of money) so that they can get home. Making people aware, means they will be less likely to fall for this sort of scam.





Using the Windows 11 Task Manager

The Task Manager is a very useful tool but even if you have been using Windows for some time, you might never have looked at it before. The Task Manager contains information on PC performance, the number of running apps, how many processes are pulling power from the processor and much more.

1

Processes Tab

The Processes tab is the default tab when the Task Manager is opened. You can open the task manager by simply searching for it in the main search panel. Just as with any other app or piece of software in Windows 11, you can pin a shortcut to the Task Manager, to the taskbar or as a desktop icon.

2

Start-up Tab

The Start-up tab contains a list of all the apps, programs and processes that are enabled every time you start your computer. If your computer is brand new, this list should be fairly small and filled with essential items. But as you install new apps and software, this start-up list can become bloated and slow down boot up. You can disable auto start-up here.

3

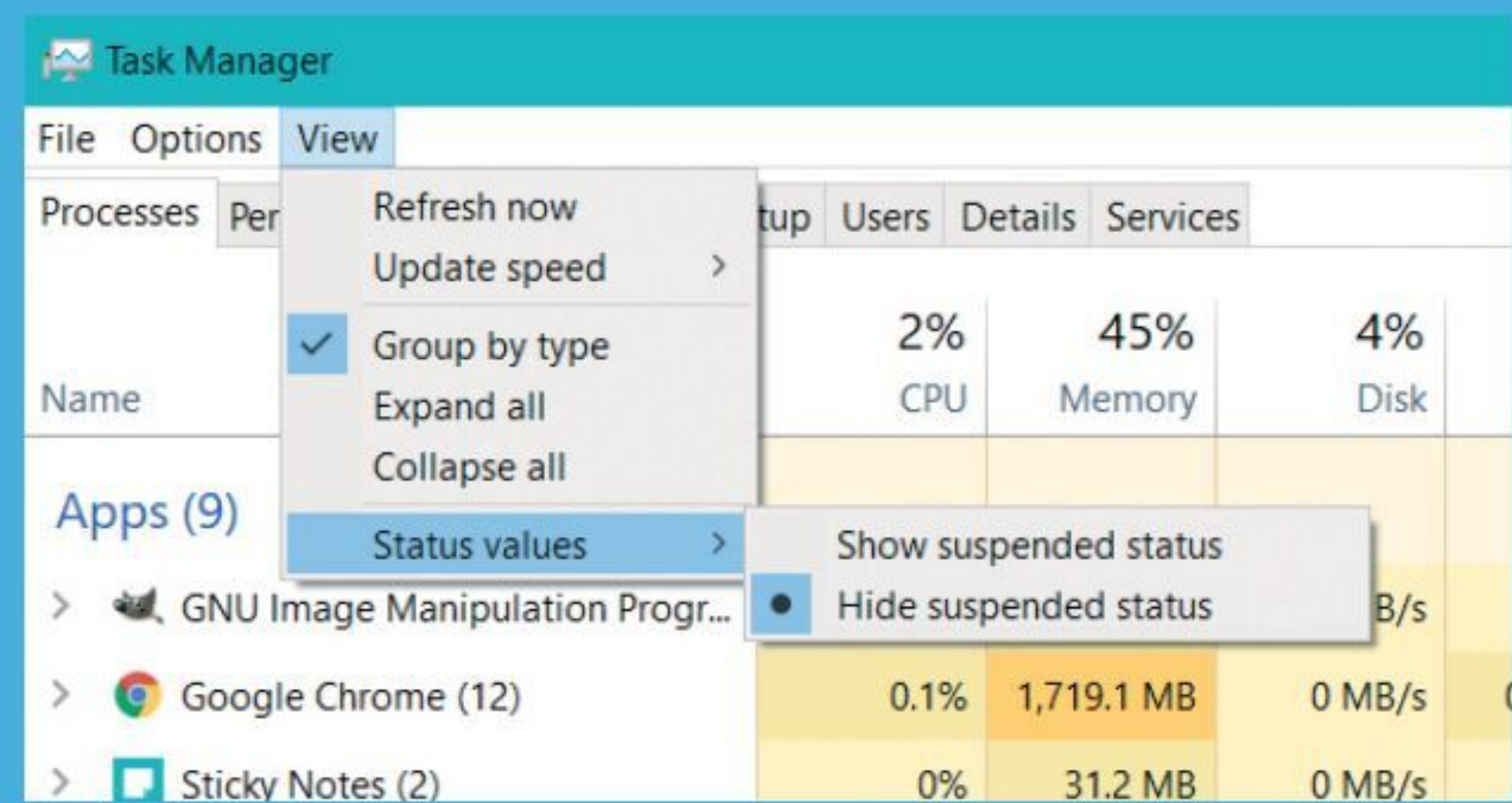
Process List

With the Processes tab selected, a list of all processes is shown. Processes are bits of software that run in the background, either running or waiting to run when a corresponding action is taken. As you can see from the list here, things like Cortana and AVG are shown; these you would obviously want to leave.

Name	Status	15% CPU	39% Memory	1% Disk	0% Network	1% GPU	GPU engine	Power usage	Power
Apps (1)									
Task Manager		3.7%	21.6 MB	0 MB/s	0 Mbps	0%		Low	Very low
Background processes (47)									
AggregatorHost		0%	0.6 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Antimalware Service Executable		0.7%	102.3 MB	0.1 MB/s	0 Mbps	0%		Very low	Very low
Antimalware Service Executable Content Process		0%	82.5 MB	0 MB/s	0 Mbps	0%		Very low	Very low
COM Surrogate		0%	1.1 MB	0 MB/s	0 Mbps	0%		Very low	Very low
COM Surrogate		0%	2.9 MB	0 MB/s	0 Mbps	0%		Very low	Very low
COM Surrogate		0%	1.1 MB	0 MB/s	0 Mbps	0%		Very low	Very low
CTF Loader		0%	2.6 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Device Association Framework Provider Host		0%	0.6 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Device Association Framework Provider Host		0%	4.5 MB	0 MB/s	0 Mbps	0%		Very low	Very low
DSASvc (32 bit)		0%	26.4 MB	0 MB/s	0 Mbps	0%		Very low	Very low
DSASvcUpdateService		0%	10.2 MB	0 MB/s	0 Mbps	0%		Very low	Very low
ExpressVPN Service (32 bit)		0%	14.0 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Google Crash Handler		0%	0.3 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Google Crash Handler (32 bit)		0%	0.4 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Host Process for Windows Tasks		0%	1.7 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Host Process for Windows Tasks		0%	2.2 MB	0 MB/s	0 Mbps	0%		Very low	Very low
igfxCUIService Module		0%	1.1 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Intel Driver & Support Assistant Tray (32 bit)		0.3%	13.0 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Intel HD Graphics Drivers for Windows(R)		0%	0.7 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Intel(R) Dynamic Platform and Thermal Framework		0%	0.6 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Intel(R) System Usage Report		0%	10.6 MB	0.1 MB/s	0 Mbps	0%		Very low	Very low
Intel® Graphics Command Center (2)		0%	32.9 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Intel® Graphics Command Center Service		0%	16.2 MB	0 MB/s	0 Mbps	0%		Very low	Very low
IntelCpHecSvc Executable		0%	0.7 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Microsoft Network Realtime Inspection Service		0%	2.3 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Microsoft Office Click-to-Run (SxS)		0%	8.4 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Microsoft Windows Search Indexer		0%	8.0 MB	0 MB/s	0 Mbps	0%		Very low	Very low
PresentationFontCache.exe		0%	3.5 MB	0 MB/s	0 Mbps	0%		Very low	Very low
RD* Clipboard Monitor		0%	2.1 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Runtime Broker		0%	3.6 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Service Manager		0%	0.6 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Spooler SubSystem App		0%	5.0 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Start		0%	24.9 MB	0 MB/s	0 Mbps	0%		Very low	Very low
System Guard Runtime Monitor Broker Service		0%	3.5 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Usermode Font Driver Host		0%	1.4 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Usermode Font Driver Host		0%	1.2 MB	0 MB/s	0 Mbps	0%		Very low	Very low

View Options

The View options at the top of the Task Manager window allows you to do several things. You can manually refresh the current tab and also change the automatic update speed. For example you can change how the processes are displayed. Either by grouping them by type, expanding or collapsing the list, or showing status values.



4

Performance Tab

Another useful tab in the Task Manager is Performance. This gives you a real-time performance overview, allowing you to pinpoint exactly how well your hardware is coping with whatever you are doing at the time. If Task Manager is the only app open, the performance chart should be very stable but if you are running several apps, it will show any power spikes.

5

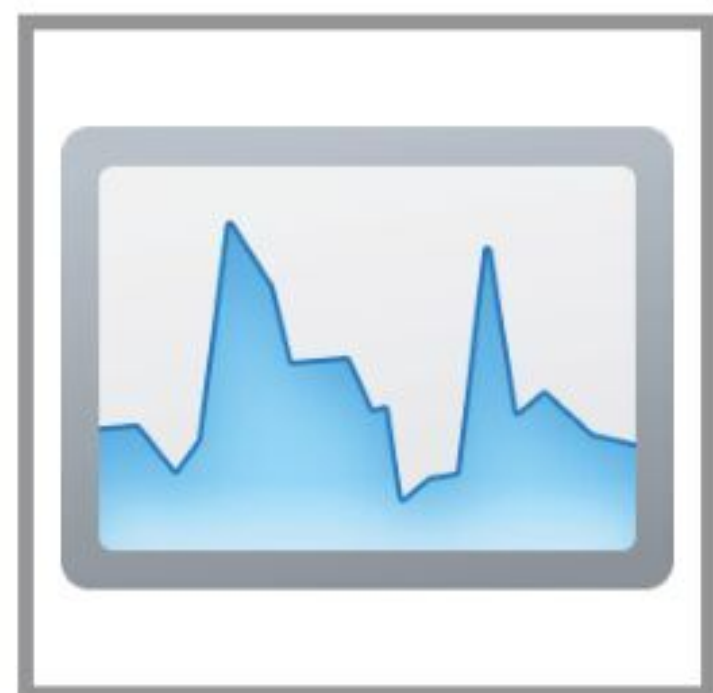
Resource Usage

If you find your PC becoming slow and sluggish during normal use, you may have too many processes running. By looking at the resource usage chart, you can see exactly which apps are taking up the most processing power, physical memory, disk space and even network bandwidth. If something is particularly resource hungry, you can right-click and stop it.

6

Fewer Details

You can view a limited version of the Task Manager by clicking on the "Fewer Details" button at the bottom of the window. This makes the window small enough that it can be left open, in the corner of your desktop for example, but still show relevant information. You can get more information at any time by clicking "More Details"



Monitor Tasks with the Task Manager

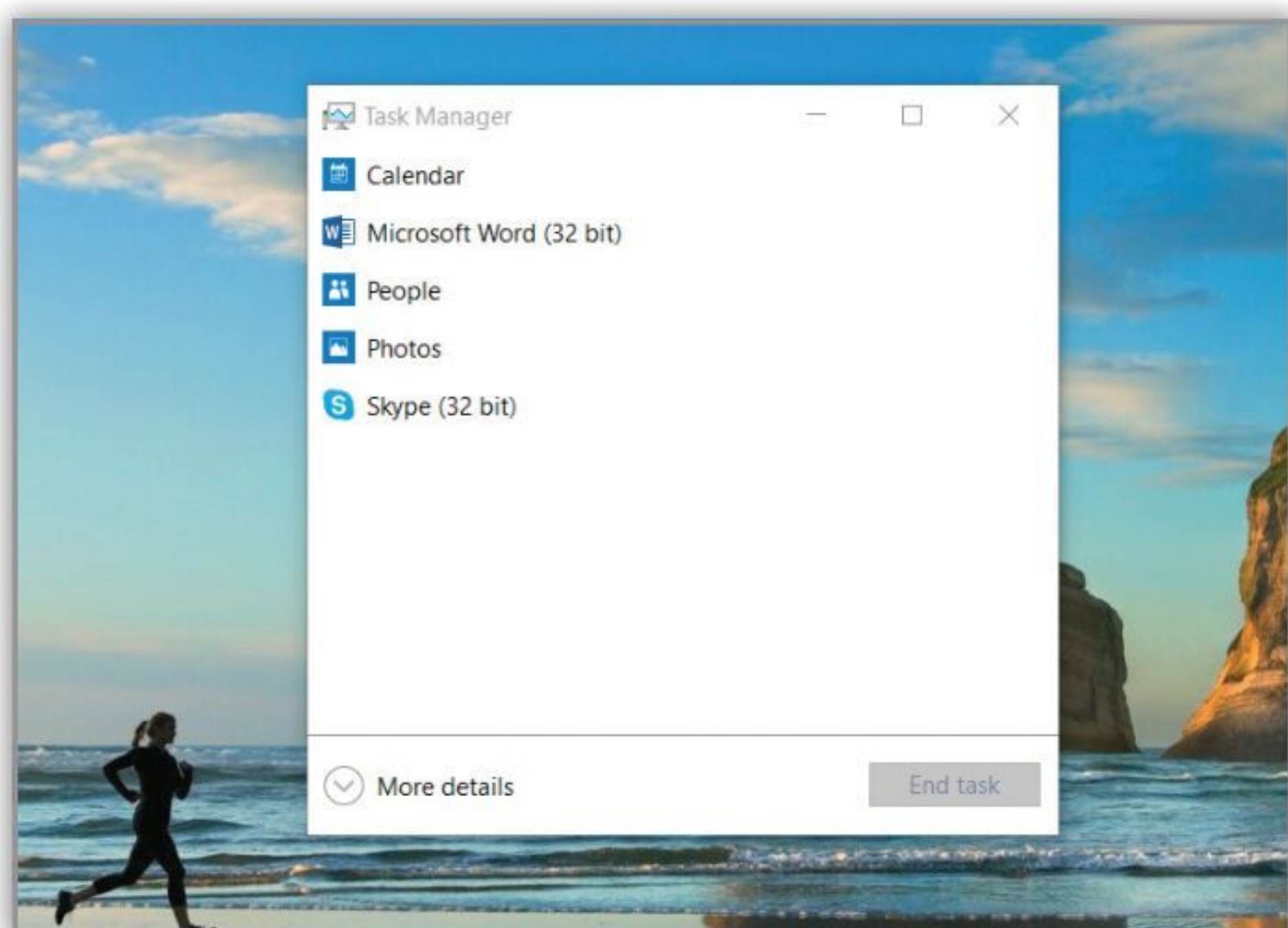
If you have a program that isn't working, want to control what starts up when your PC does or you want to see what's running on your PC, then Task Manager is the place to go. Access it via the Power Menu (right-click on Start) or by pressing Ctrl+Alt+Delete and selecting it from the Security Options menu.

Manage Your PC

Task Manager is a lot more complex than it used to be and it's now a useful insight into your PC and app performance, allowing you to check anything from Wi-Fi usage to app crashes and much more.

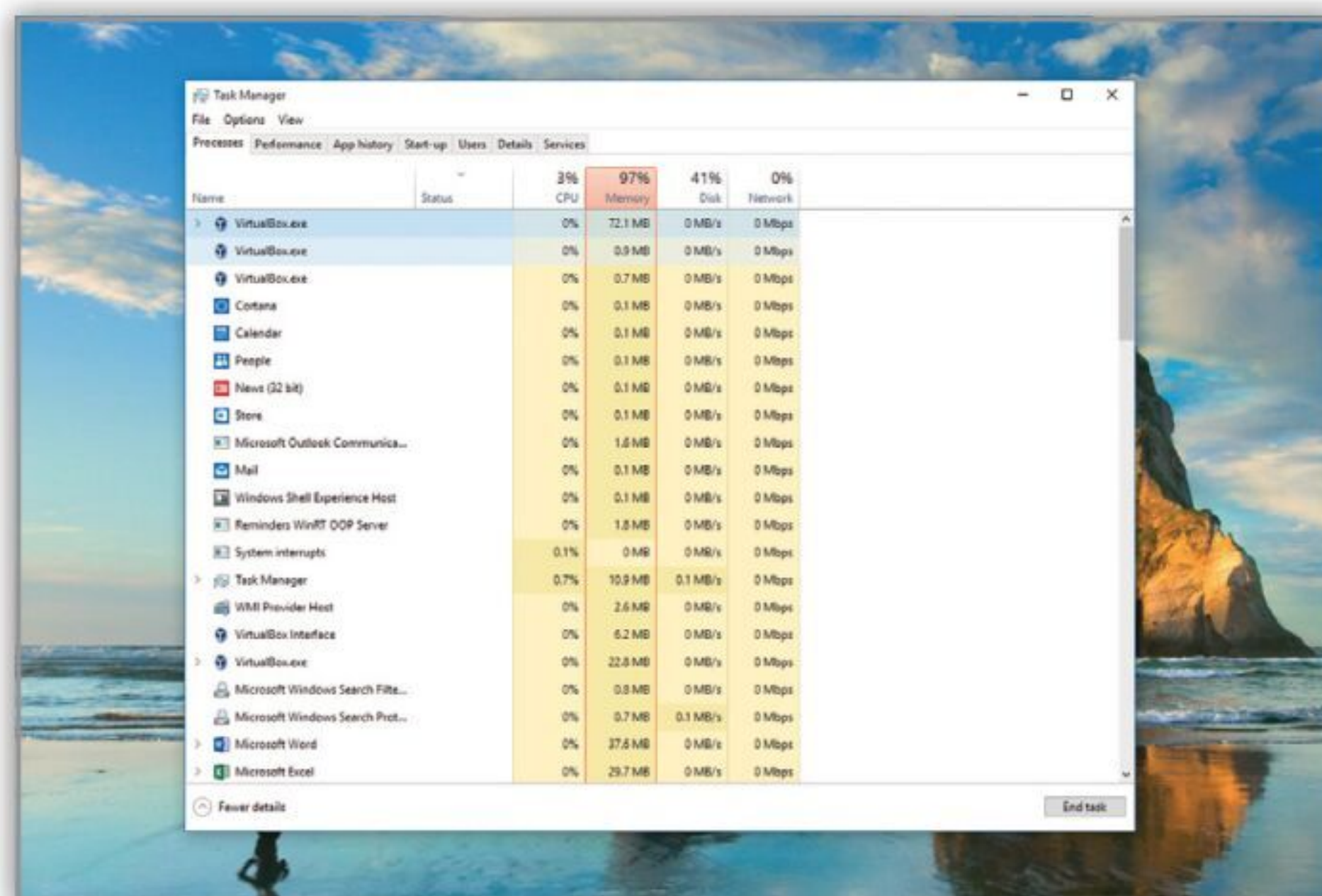
Step 1

Task Manager starts life as this fairly unassuming little window. If you have an app that is unresponsive, select it and click End Task. Beware that if you do this to an app with unsaved work in it, you will lose your work. Clicking the More Details button will expand the Task Manager window.



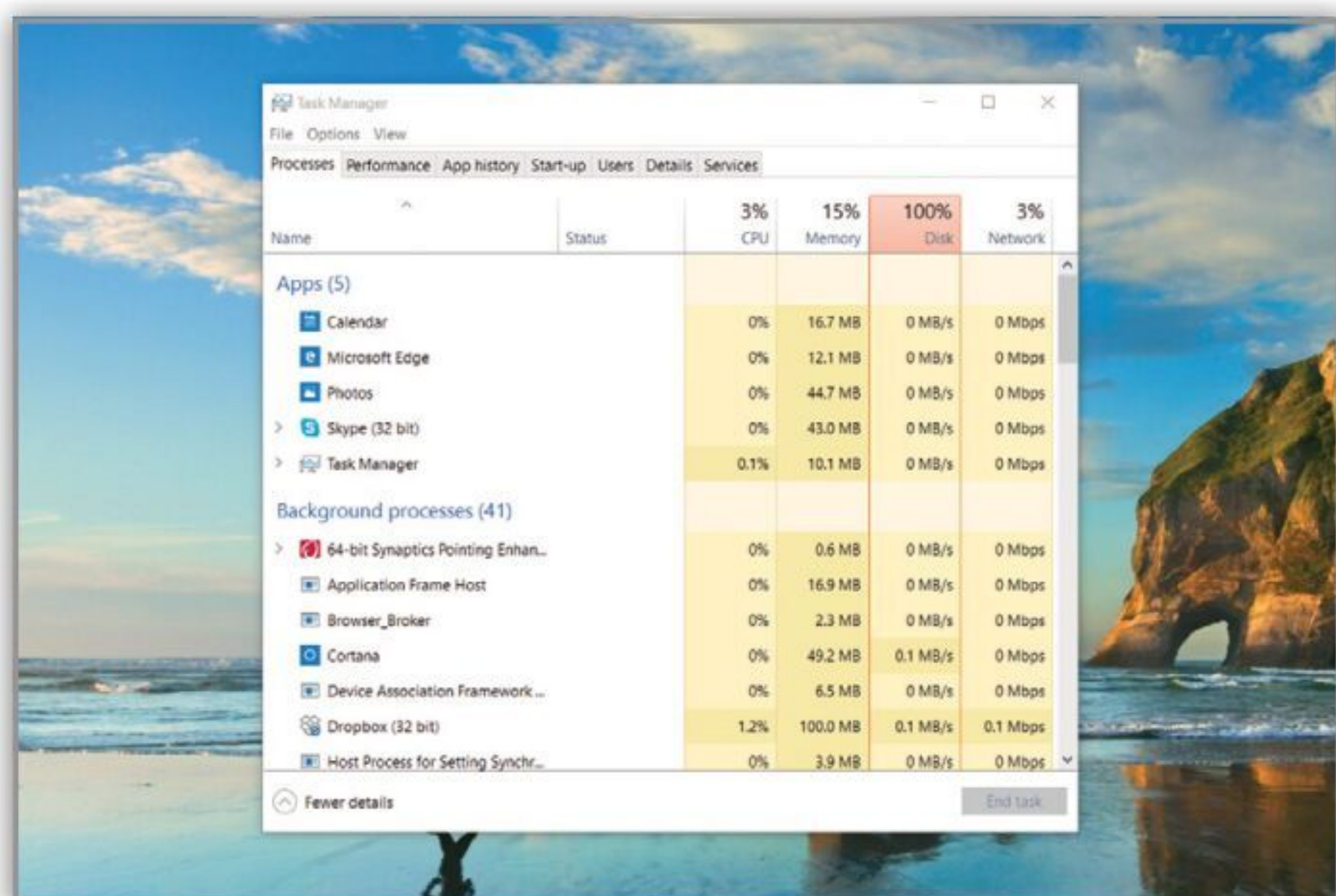
Step 3

You can see what system resources each app is using in each column. Here Excel is using around 74MB of memory, for example. Memory use is almost at its maximum, as you can see at the top of the column. Maxed out resources are no bad thing – after all your PC is there to be used – but when apps crash, they are usually using resources and not relinquishing them.



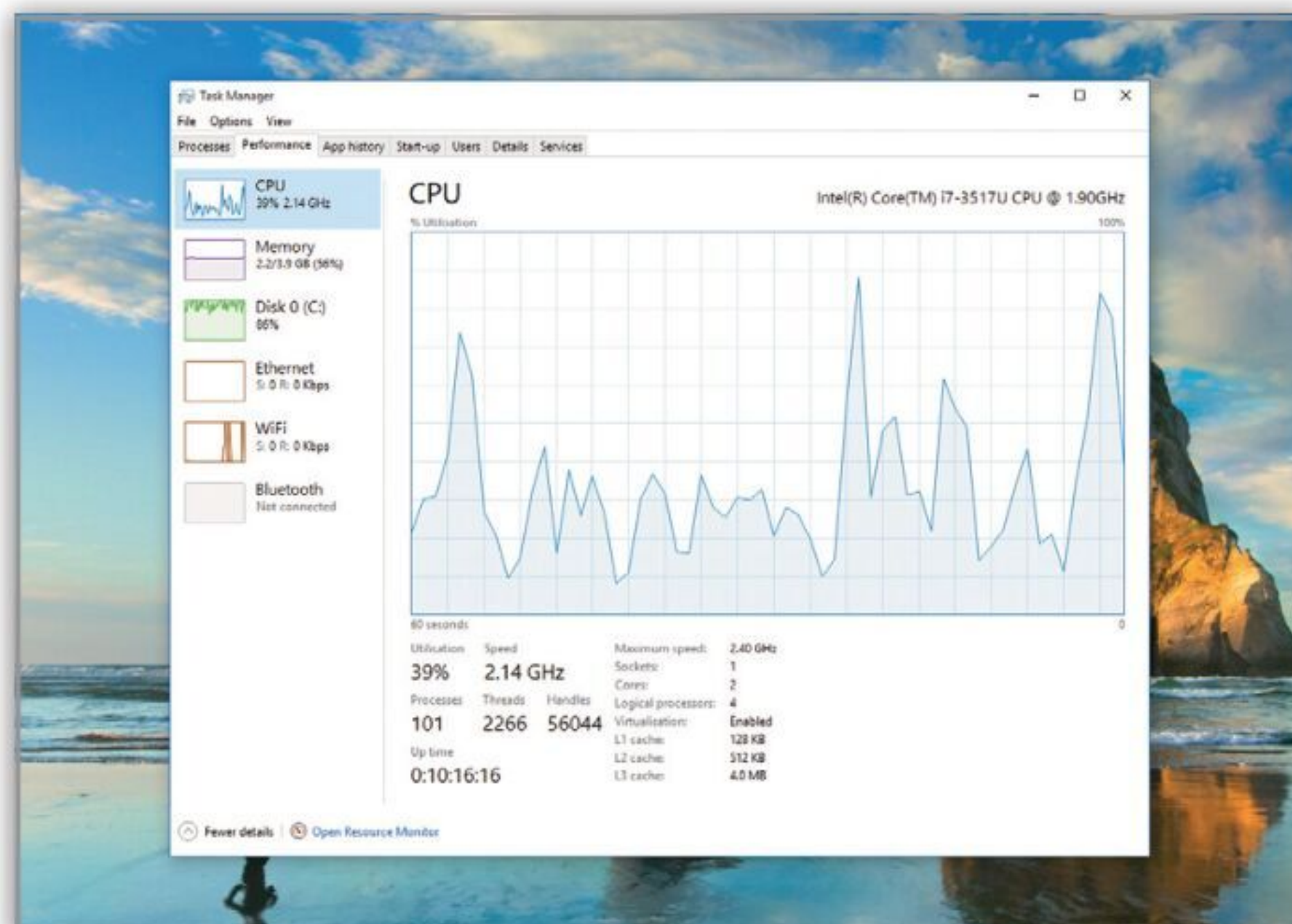
Step 2

This window is a little more complex, but the 'Apps' part of the window is essentially what we were looking at in Step 1. Now the apps have been joined by background processes. Your PC will most likely be running tens of these unless it's box-fresh. Here we've got 41. These are things such as Cortana, which runs in the background, and our trackpad software.



Step 4

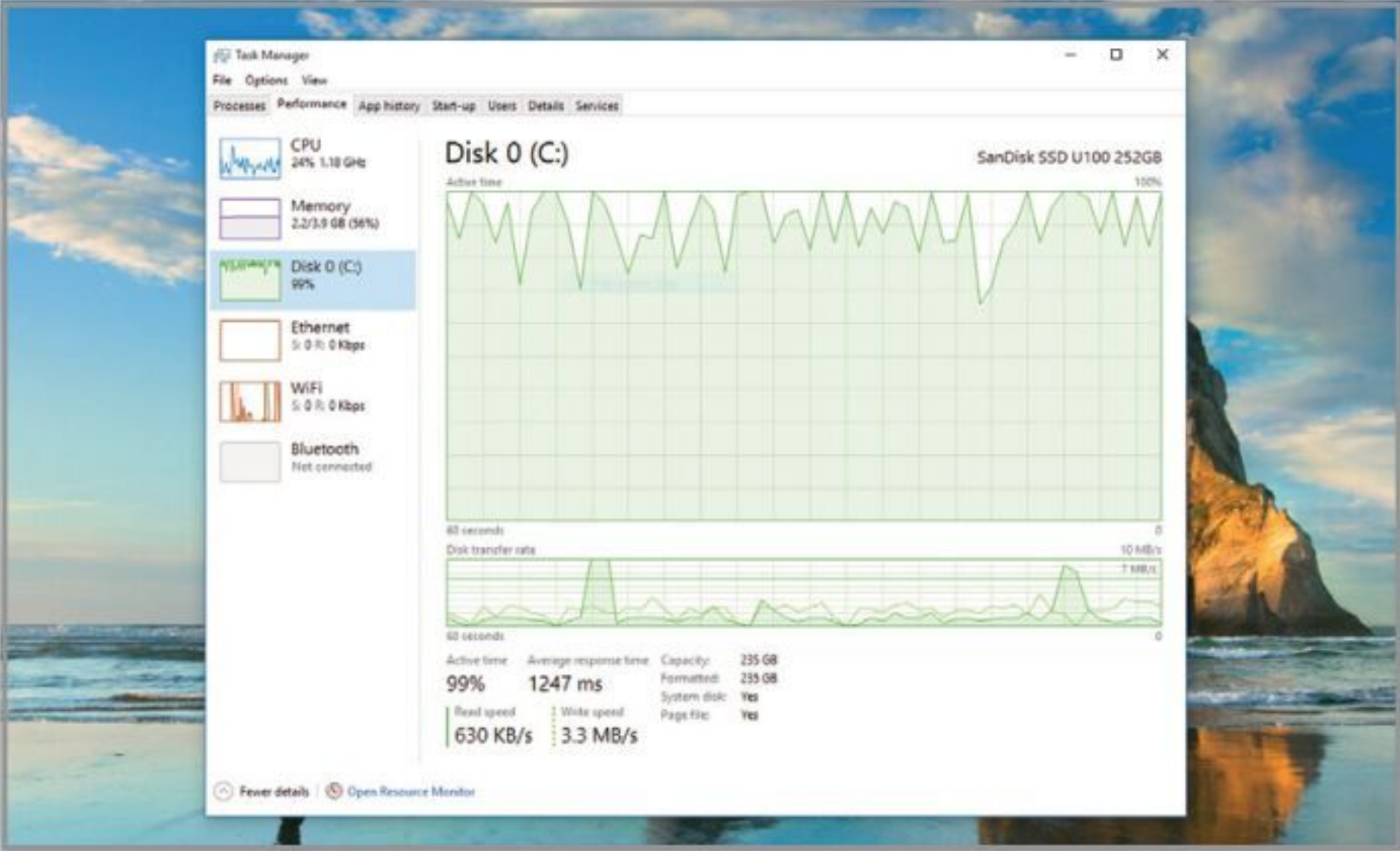
If an app crashes, then you need to select it and click End Task as before. You should always try and give it time to recover (especially if you will lose work). Now we've clicked the Performance tab at the top of the window and we can see the usage of important elements of our PC.



Monitor Tasks with the Task Manager

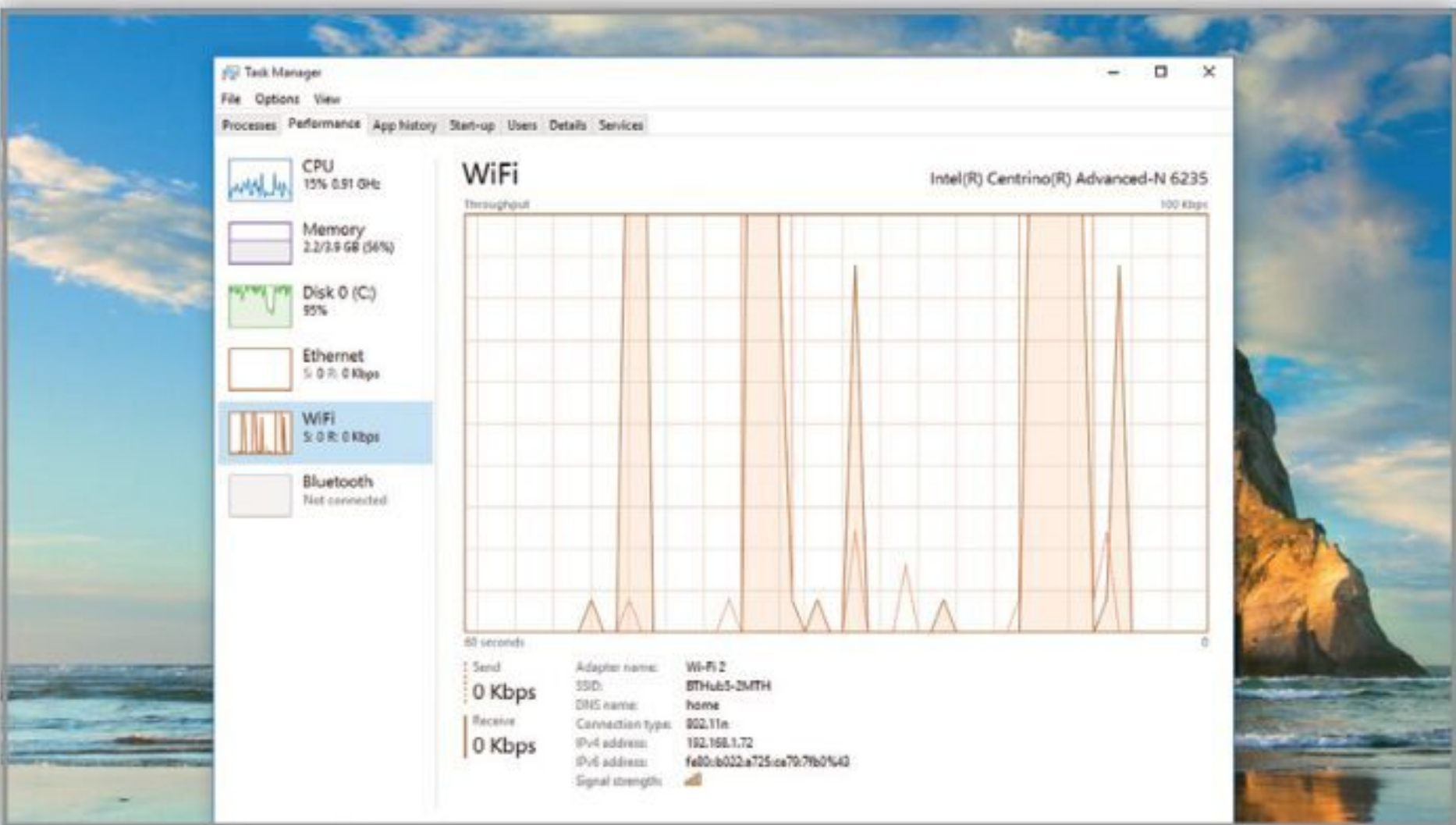
Step 5

Here's our disk usage – as you can see it's pretty active! You will also have this if you have several apps open. We've got Edge, Spotify, Word and Excel open in the previous step you could see our processor usage. You may have noticed, we've only been using about 10% of its capability during the last minute.



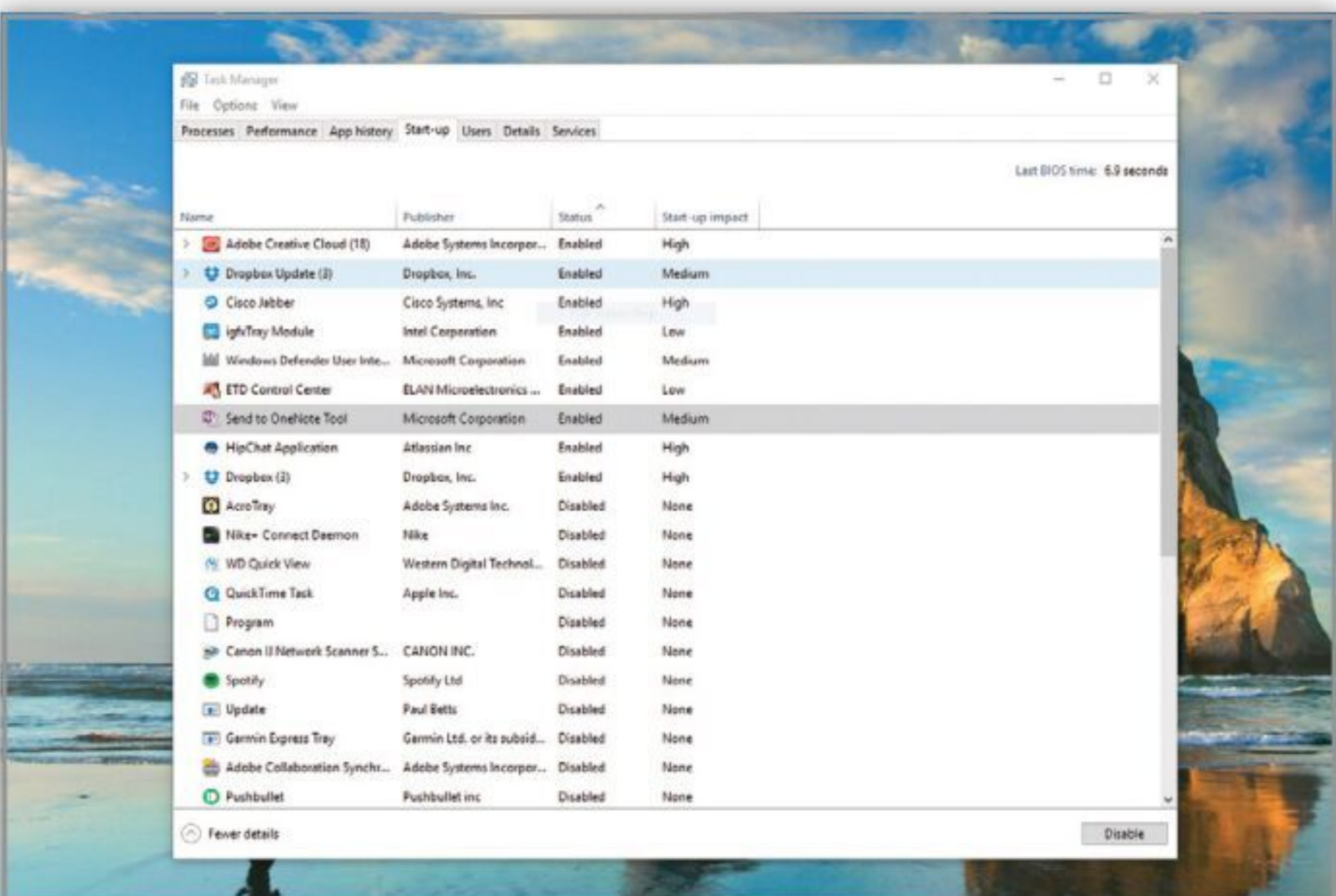
Step 6

Wi-Fi usage (you can also see wired network usage if you use that to connect) is more network connection tends to be used unless you're copying files or similar. Here we're c, which appears to download in chunks. Notice being received or sent right at this moment.



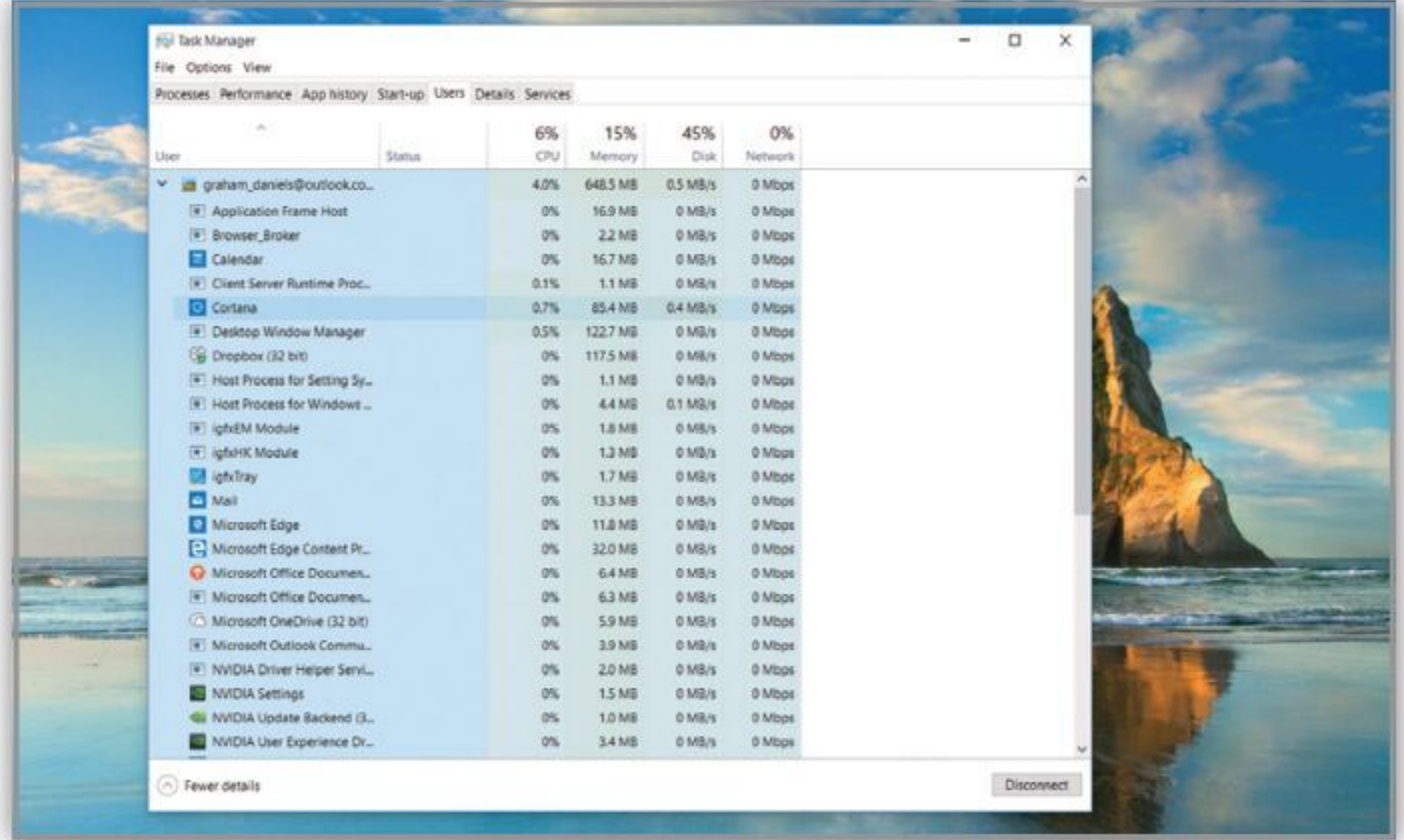
Step 7

The Start-up tab is one of the most important in Task Manager. While you can configure an app to start-up when Windows does and disable the app, some applications are sneaky and enable start when Windows does. Here you can select the enable or stop this from happening.



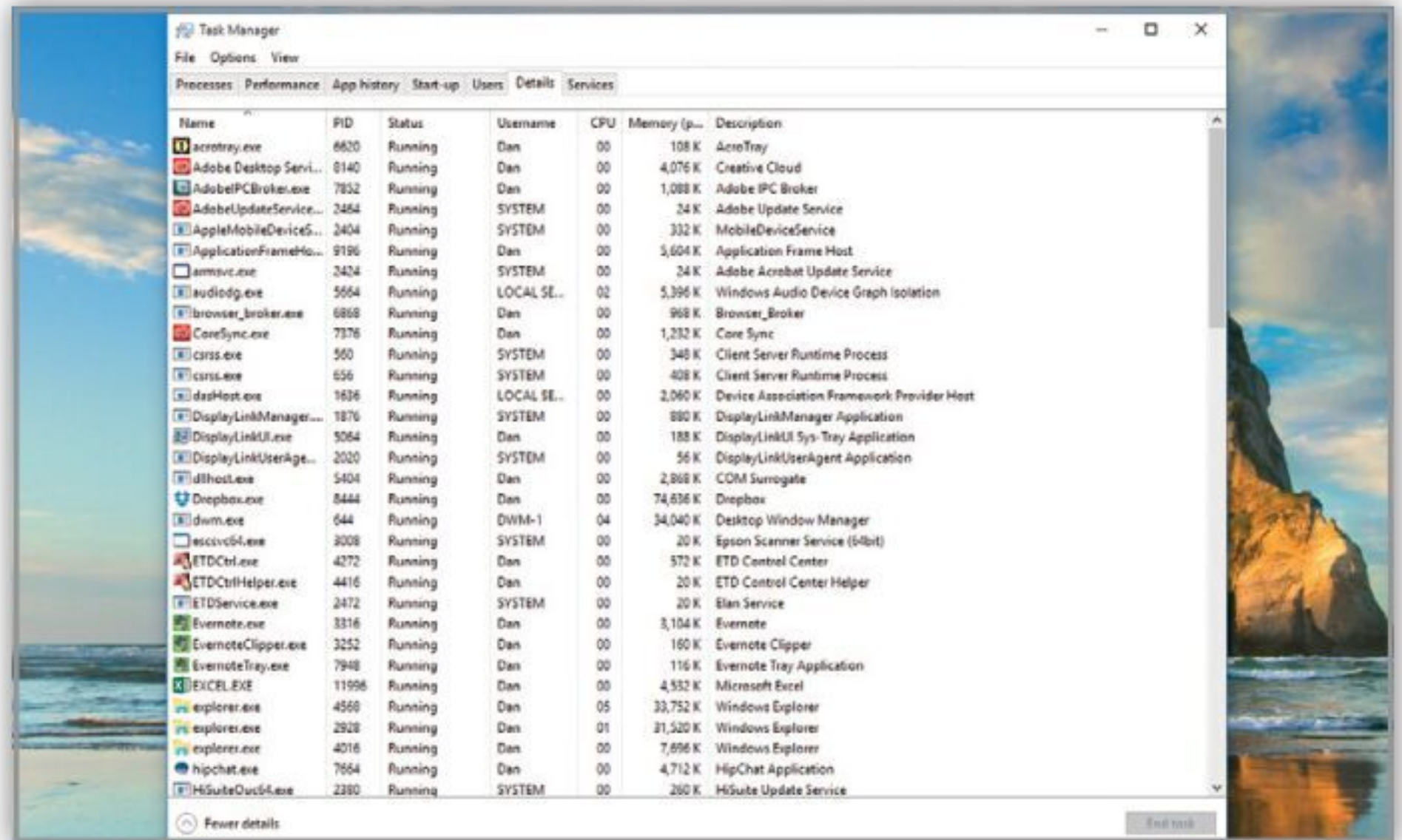
Step 8

Although it's of limited general use, the Users tab details what apps and processes are running on This might be useful if your PC is running slowly see what resources someone else who is logged gging. They might have something wasteful background, for example.



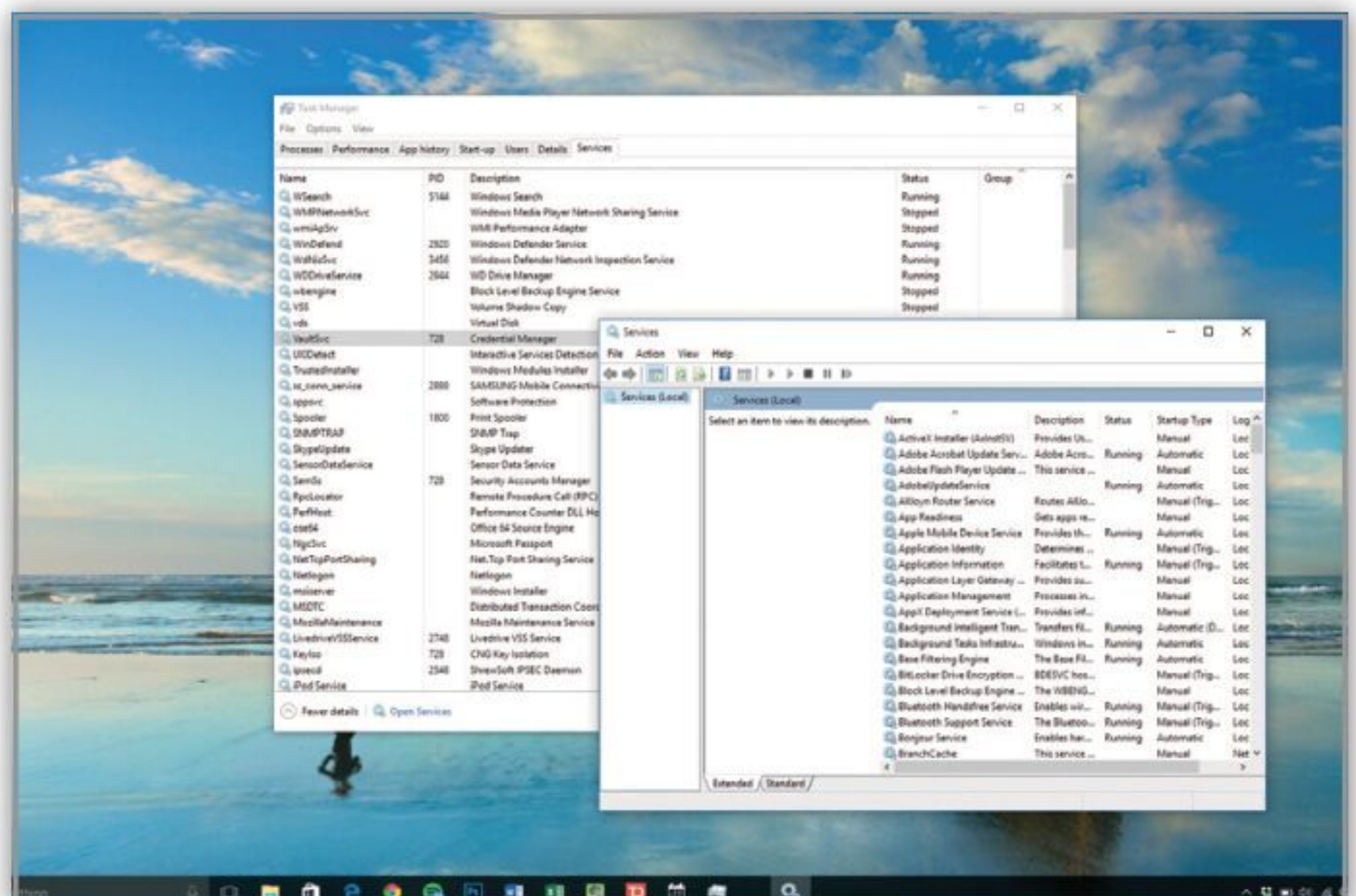
Step 9

The Details tab is really for pro users only and has full information on each running process and possible for it. You can also see how much process is taking up as well as what is called a PID, that identifies the process on your machine.



Step 10

Services are programs that run in the background. The chances are your PC is running an example Windows Defender, the built-in security in the background as a service. As well as viewing services in Task Manager, you can click the Open link to manage services on your PC.



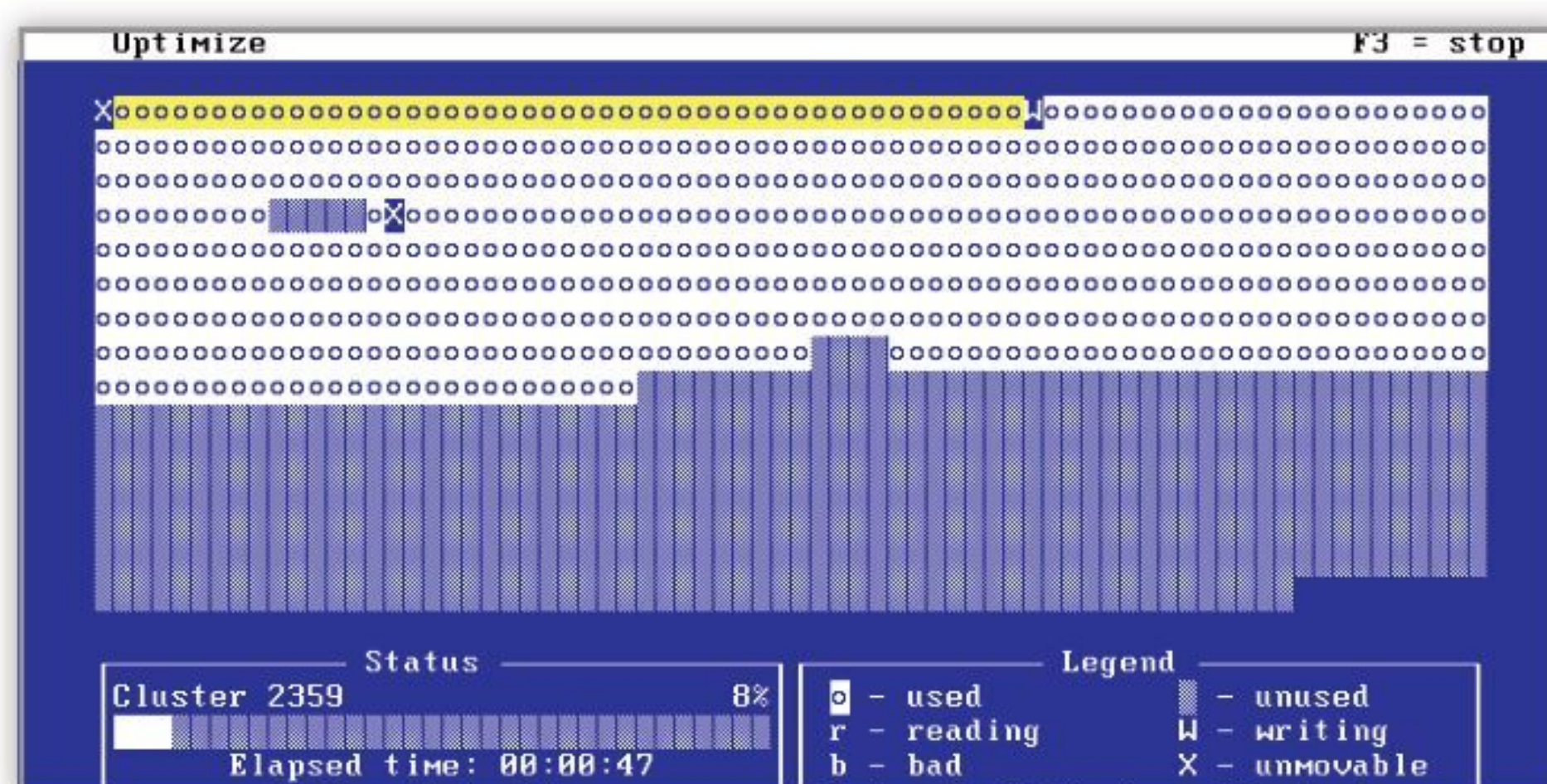
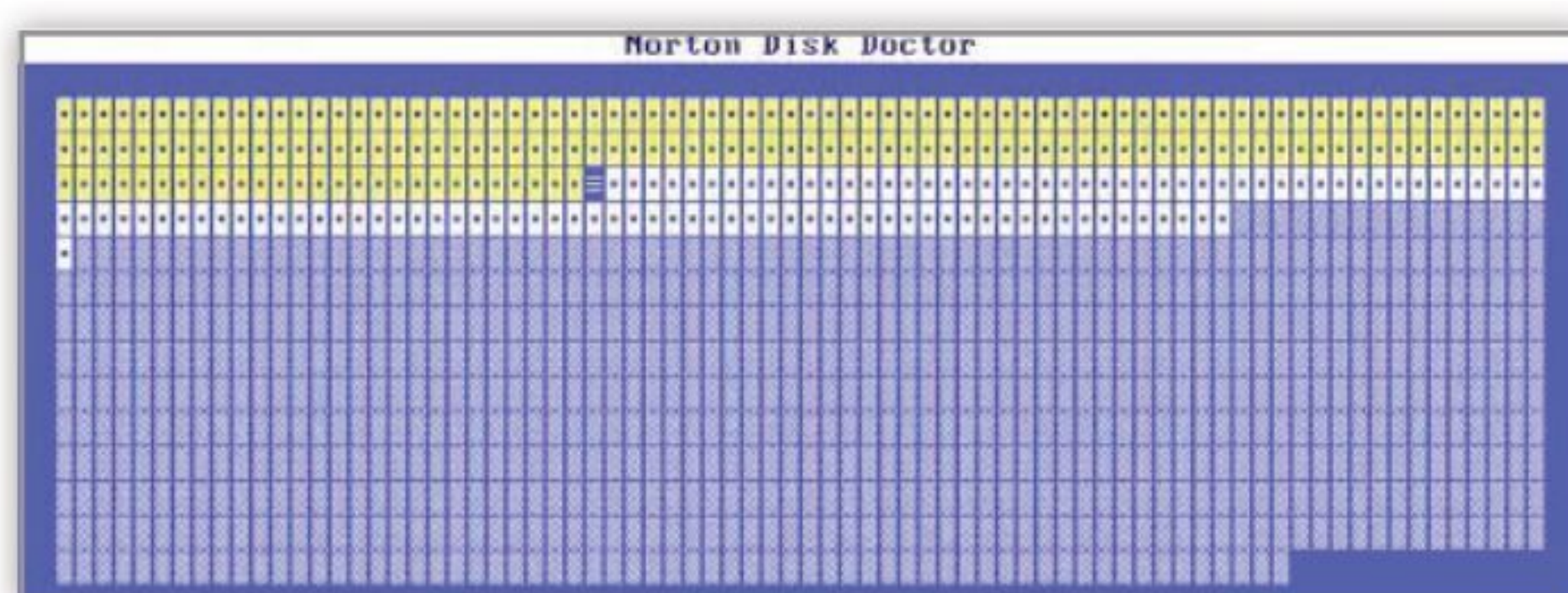
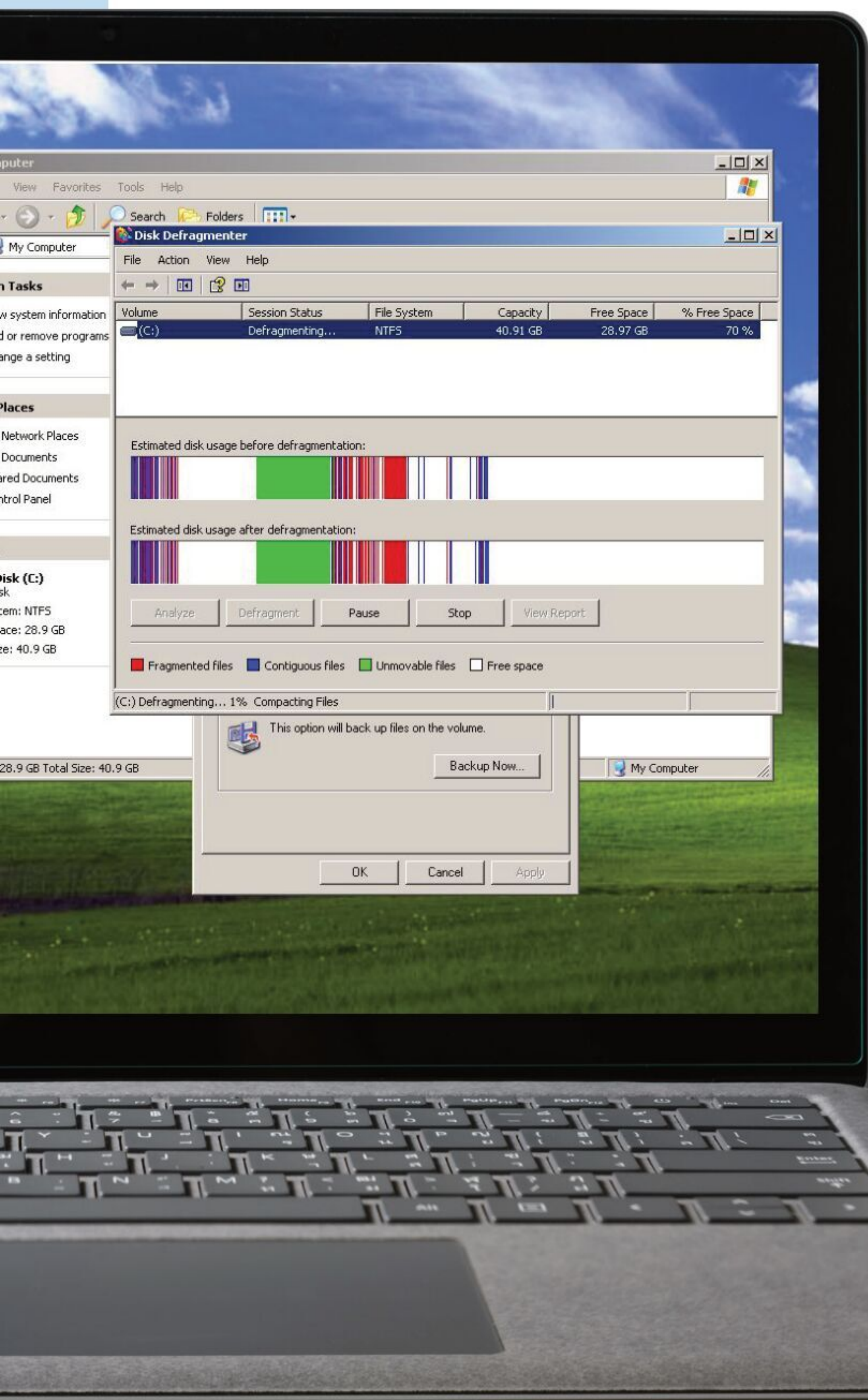


Defragment Your Hard Drive

The act of Defragging your drive goes back to the early days of computing, where data was written to the drive in various sectors across the disk platters. This data could be spread all over, taking time to read, so a Defrag packs it all neatly into readable areas.

Defrag

Most of us have a modern PC with a relatively modern operating system installed on it, regardless of whether that's Windows 11, macOS or the latest distribution of Linux. These systems have been updated and tweaked in accordance with the advanced hardware technology that's now available, and will more than likely see you through a good year or so without you ever having to even look at a defrag tool.



Defragging is one of those utilities that exist to cause arguments. The for camp declare it the best thing you can do with a PC, and therefore it must be done every week. The against camp laugh heartily at the amount of time wasted, watching little blocks being moved around the screen while your hard drive has the computing equivalent of an extreme workout.

Although there are studies that show defragging every so often can help older operating systems and hardware, there's nothing concrete that suggests a weekly defrag will help out a modern operating system and hardware. In fact, if you've got a solid-state drive (SSD) installed you shouldn't be defragging at all, especially if the SSD is one of the first or second generation models. But, and here's where things get a little grey, there are also many experts who think that defragging a modern SSD won't do too much harm, and won't necessarily impede the overall lifetime of the device – since SSDs have a significantly lower read/write lifespan compared to a more traditional, mechanical hard drive.

In truth, a monthly check of the state of fragmentation of your drives is considered a good idea. If Windows 11 recommends that you perform a defrag, then go ahead and do one. Otherwise, stick to the old adage: if it ain't broke...

So, What is Defragging?

As explained in the main intro of this page, over time the operating system will write numerous files to your hard drive. Those files can be the data you're working with, your personal data, work and such, and it can be temporary files that the OS works on in the background. For example, when you browse the Internet, temporary files are created for every page you visit, sometimes many per page depending on what's going on with the page in question. Most of these files are deleted once the browser has been closed down, some aren't. This creates areas of a drive that files now exist on, and areas where files did exist, which causes fragmentation.

Each of these blocks of saved, deleted and moved data soon create fragmented sectors across the physical disk platter (we're talking about hard drives here, not SSDs). As the drive heads move along the platters to retrieve and write data – much like the needle on a vinyl record player – it has to travel more and from one end to the other to fetch the data, due to the inconsistencies created by the frequent writes and deletes.

Defragging will move all that readable data to areas at the front of the drive platter, so the drive heads don't have as far to travel to read the data. This speeds up the reading of data, and helps get rid of any unwanted leftovers from the number of times a disk is accessed.

Granted it does go into further depth, but we're not going to delve too deep here. If you want to understand more, then we'd recommend you look up defragmentation online.

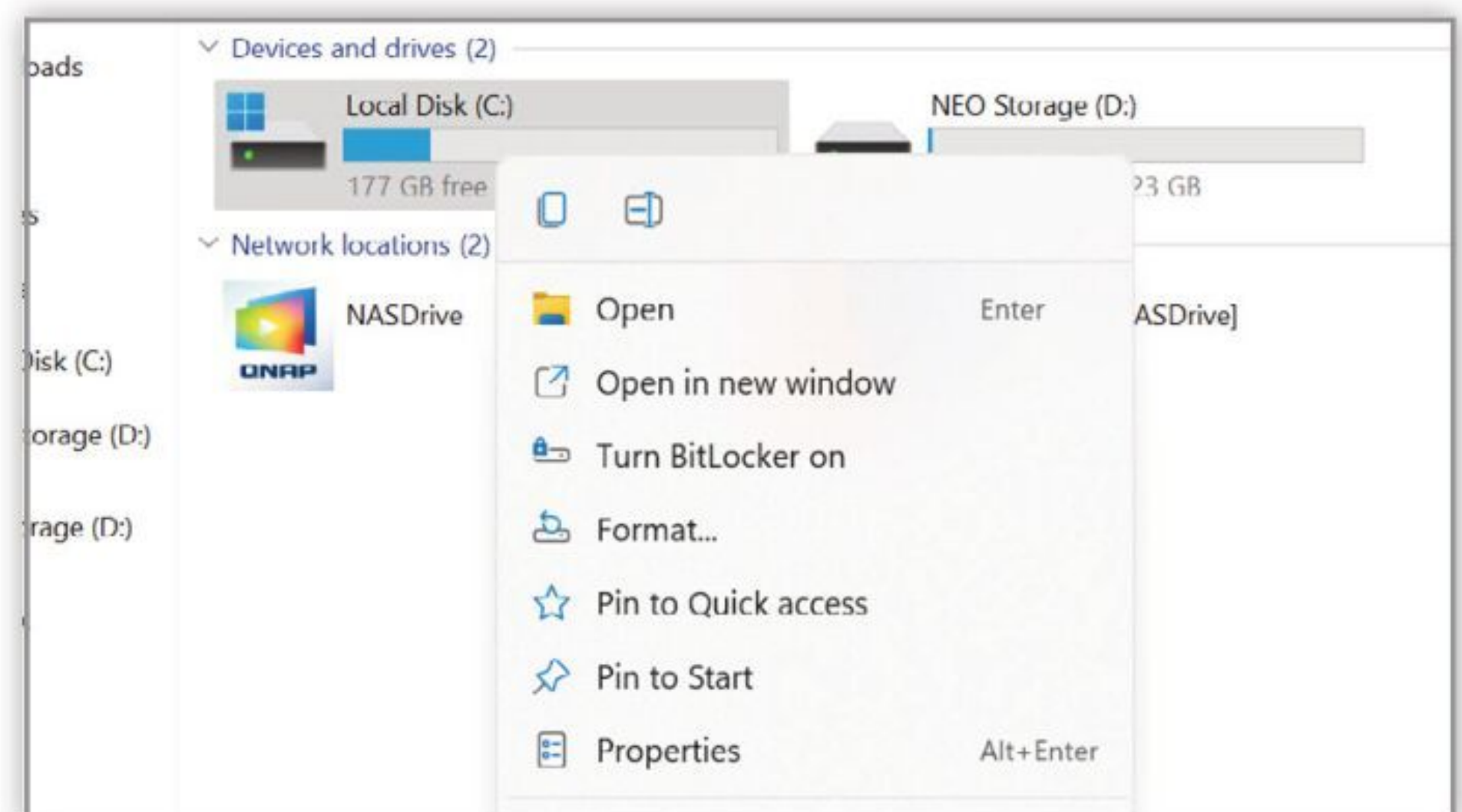
Do SSDs need Defragging?



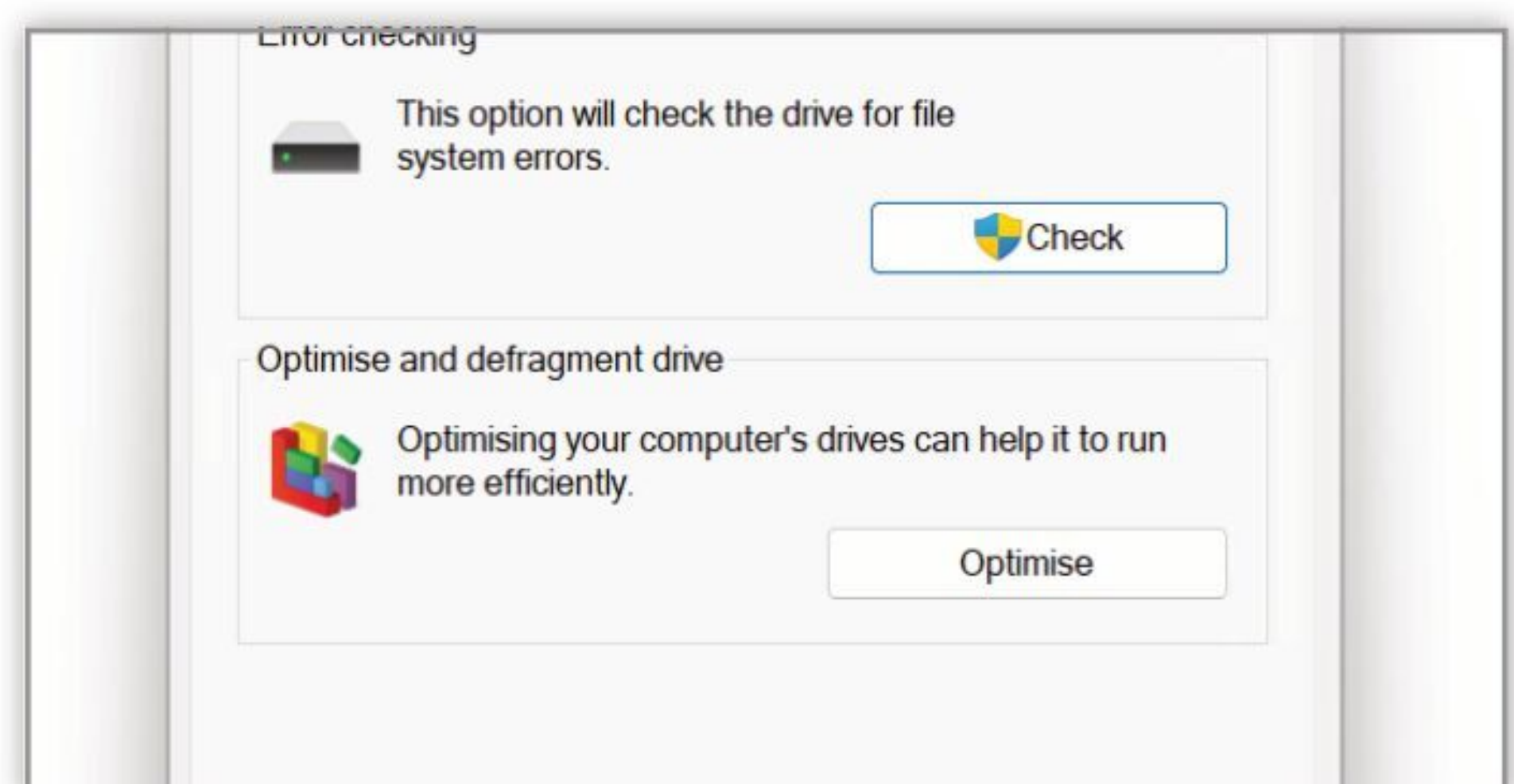
Ask most folks in the know, and they'd say no, an SSD does not need to be defragged. This is understandable, as there are no physical platters or drive heads. The data written to an SSD via a modern operating system is often put into a temporary position first, then committed to an area of the drive. If you defrag an SSD, then you're moving temporary files around before they're committed, then moving them once they are, so you're doubling the workload of the SSD. And, as we've already mentioned, an SSD has a much lower read/write lifetime than a mechanical drive.

Plus, mechanical drives have average read/access times of around 15ms, whereas an SSD has access times measuring in the 0.1ms mark. So a defrag won't make any difference in access times.

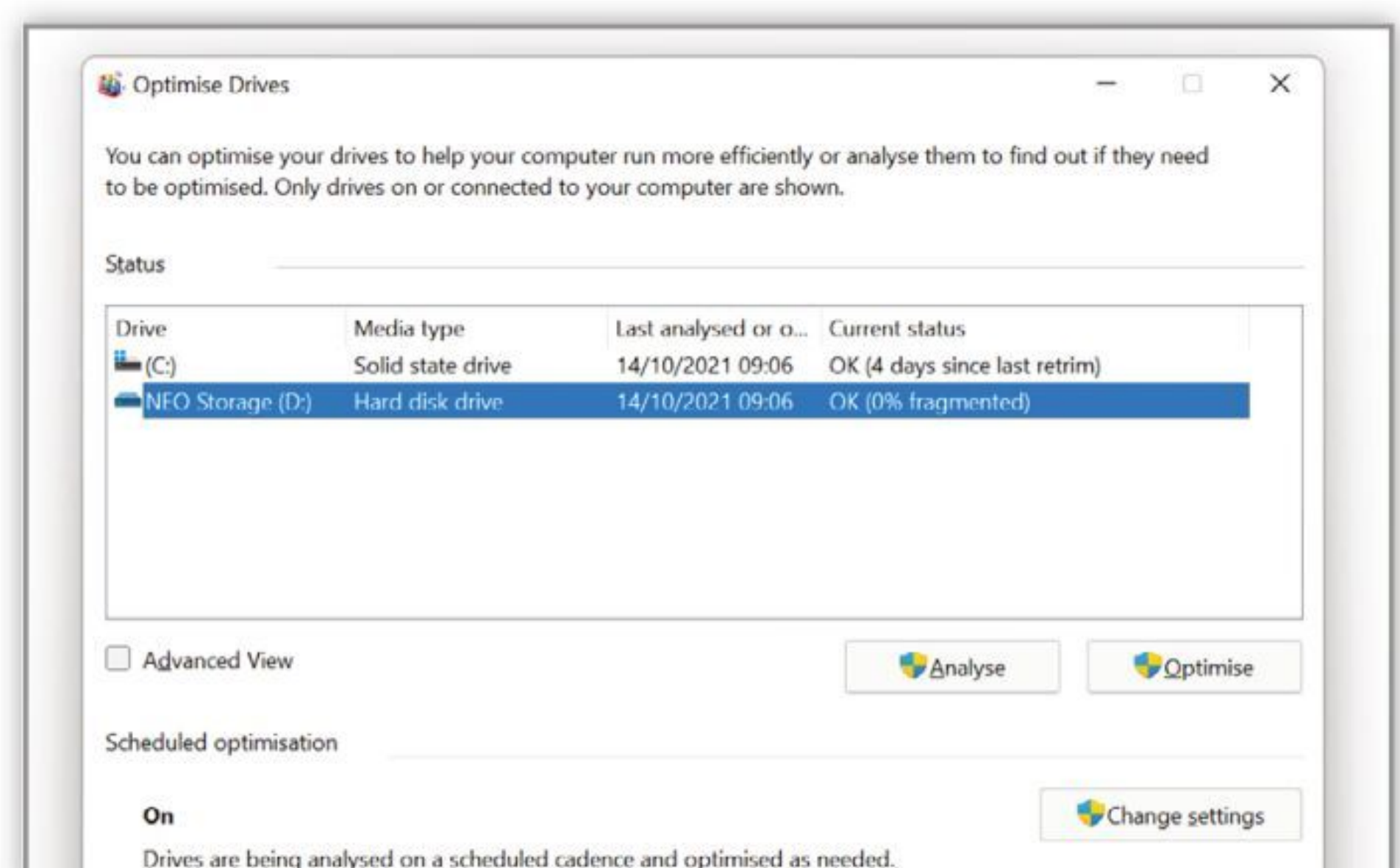
However, even ones and zeros written to solid state memory can get slightly fragmented over time. In which case, it's often best to check the state of the drive.



To do this, right-click the drive in File Manager, select Properties from the menu. Click the tools tab, and click the Optimise button in the Optimise and Defragment Drive section.



In the Optimise Drives window, click Analyse, to check the state of the drive. If Windows 11 recommends a defrag, click the Optimise button.



Conclusion

In short, checking on the health of your drive(s) is something you should factor into your monthly computer checks – updates, AV updates, drivers etc. However, you may never need to use a defrag during the lifespan of your Windows 11 PC.



Update Your Device Drivers

Keeping your device drivers up to date ensures that your Windows 11 computer is running at its maximum efficiency. Using the latest drivers for your peripherals and internal devices improves performance and keeps Windows 11 secure.

Updating Drivers

There are different ways to keep your device drivers up to date. One of the easiest is via the Windows 11 Updater. Here's how it works.

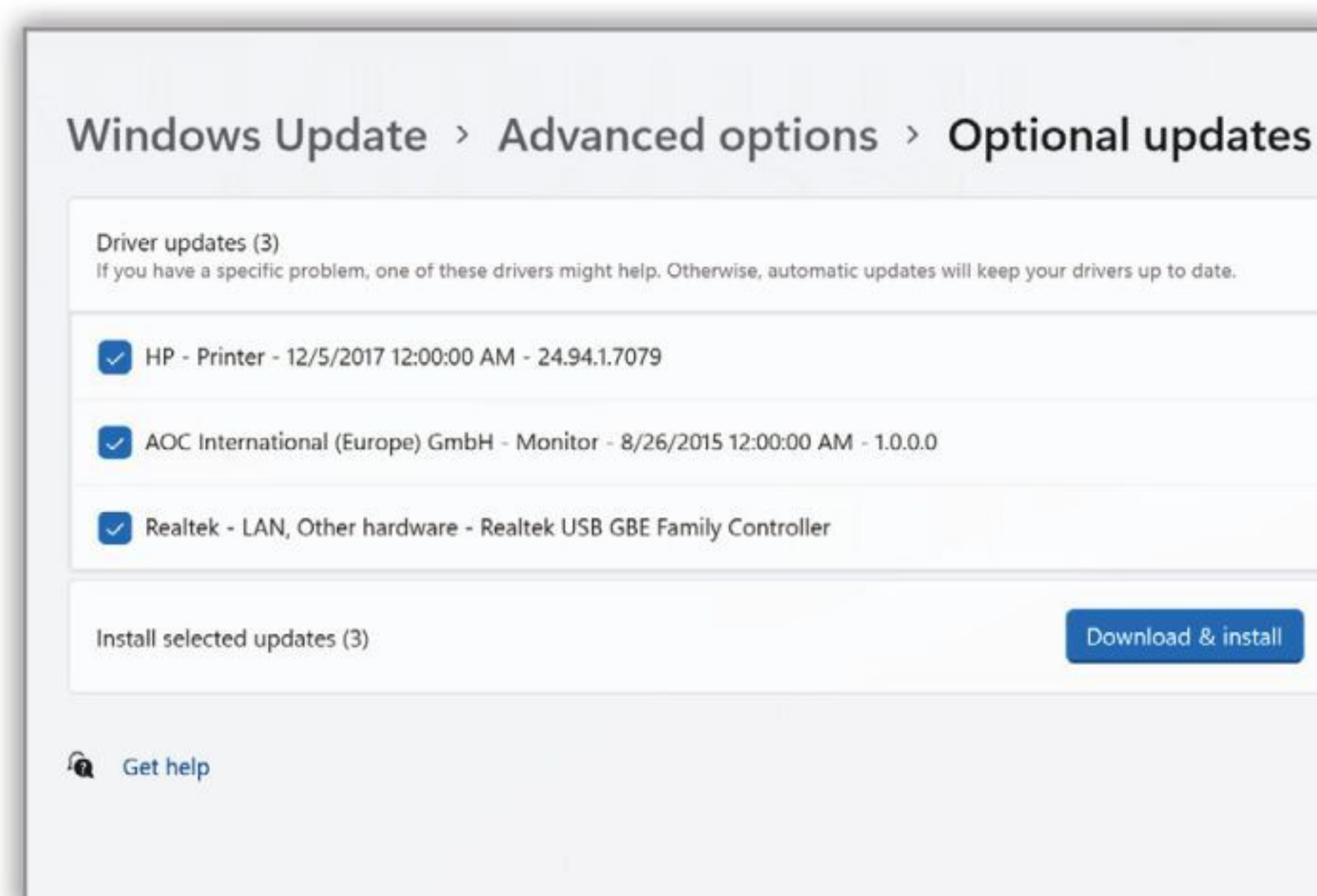
Step 1

Updating your device drivers through the Windows Update service is a perfect solution for those who don't want to trawl the manufacturer support web pages or forums for the latest drivers. To start click on the Windows button in the taskbar. Go to the Windows Update Section, and look for the Advanced Options entry.



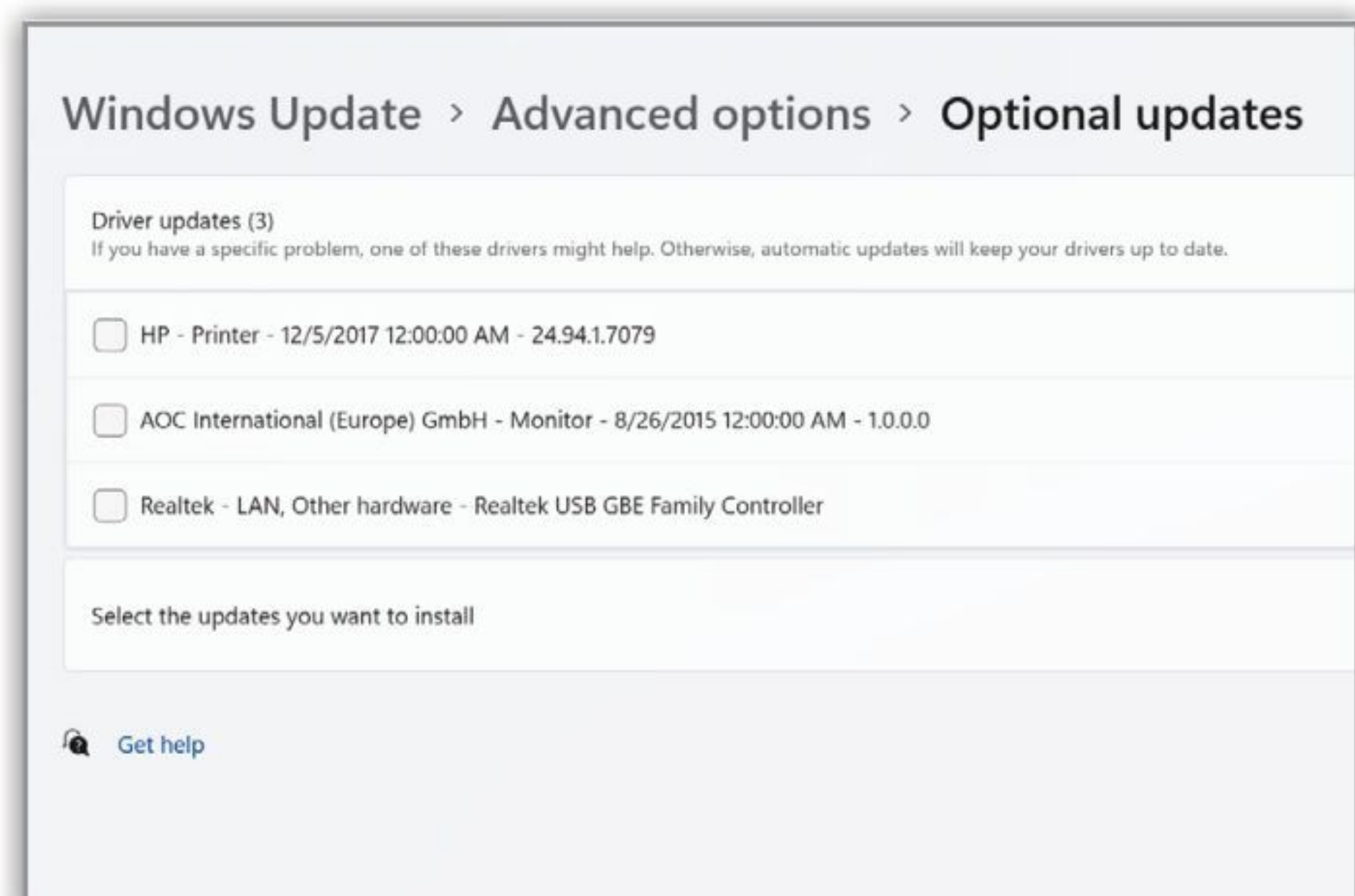
Step 3

Each individual update, be it a device driver or some update to a third-party, supported product, will have a tick box to the left of its title. Click each device and update you want to have installed, then click on the Download & Install button located in the bottom-right of the current update window, to begin the update process.



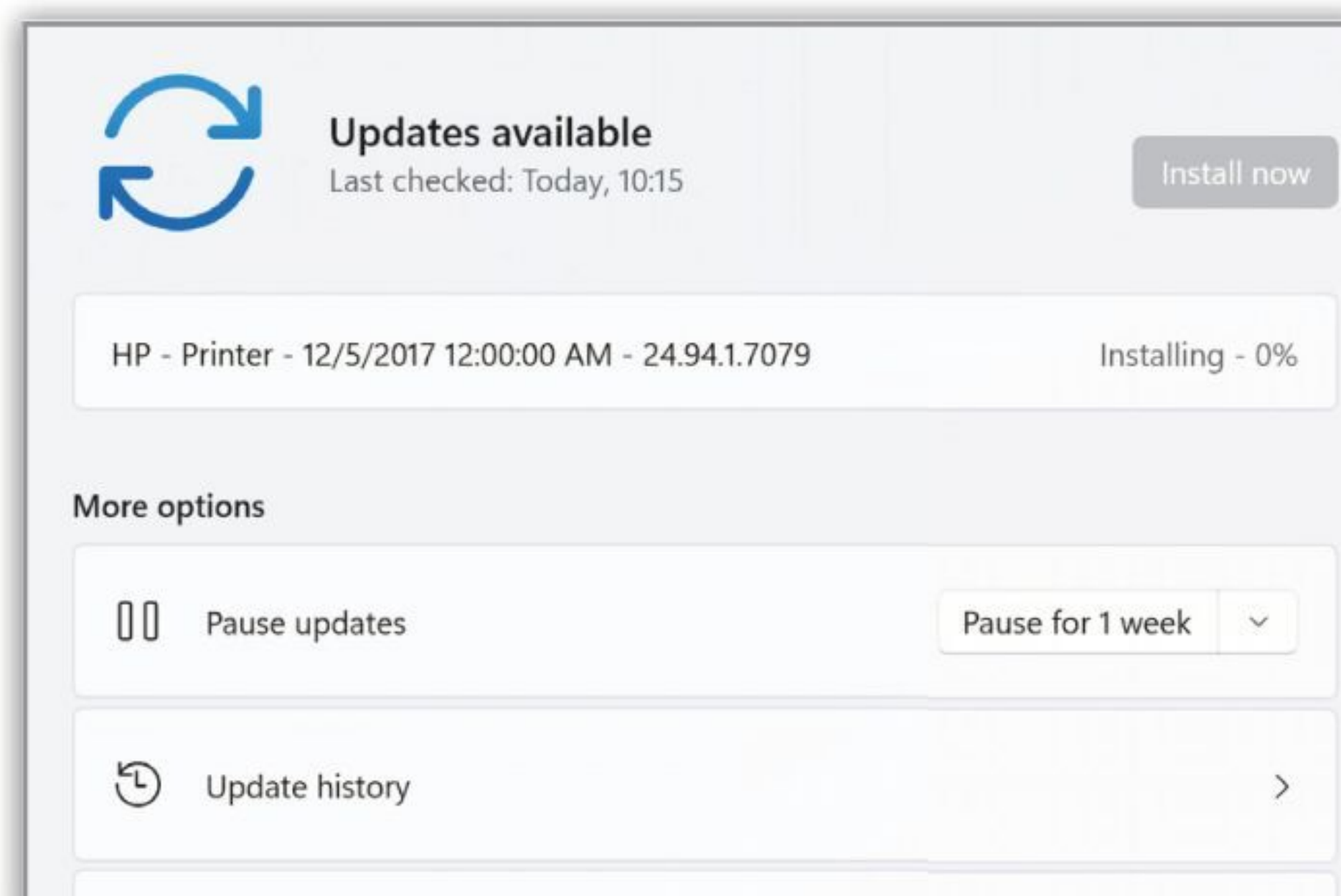
Step 2

Within the Advanced Options window, click on the Optional Updates entry. In here are where all the official Microsoft supported updates for your device drivers will be, among other specific updates for non-Microsoft related apps. You may need to click the Driver Updates entry to expand and view what's available.



Step 4

Windows 11 will now download the install the selected updates. Depending on the size of the update and the speed of your Internet connection, it may take some time to download. Once the selected entries are downloaded, they'll automatically be installed and updated. You may need to restart your computer; Windows 11 will inform you if necessary.

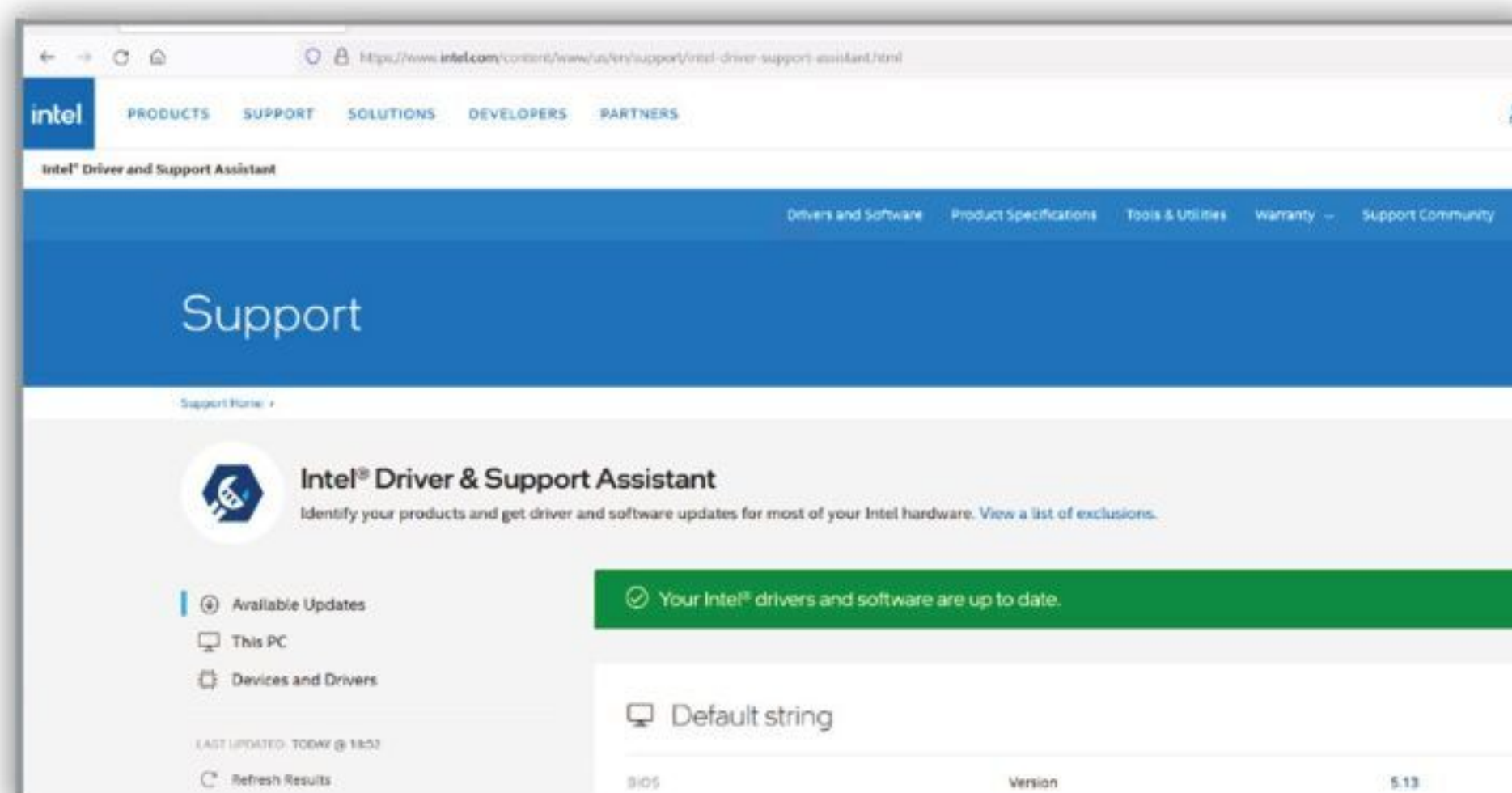


Finding Other Drivers

Good as it may be, the Windows 11 Update service doesn't pick up all the latest drivers. A graphics card driver may offer better performance in a new game, so you'll need to look elsewhere.

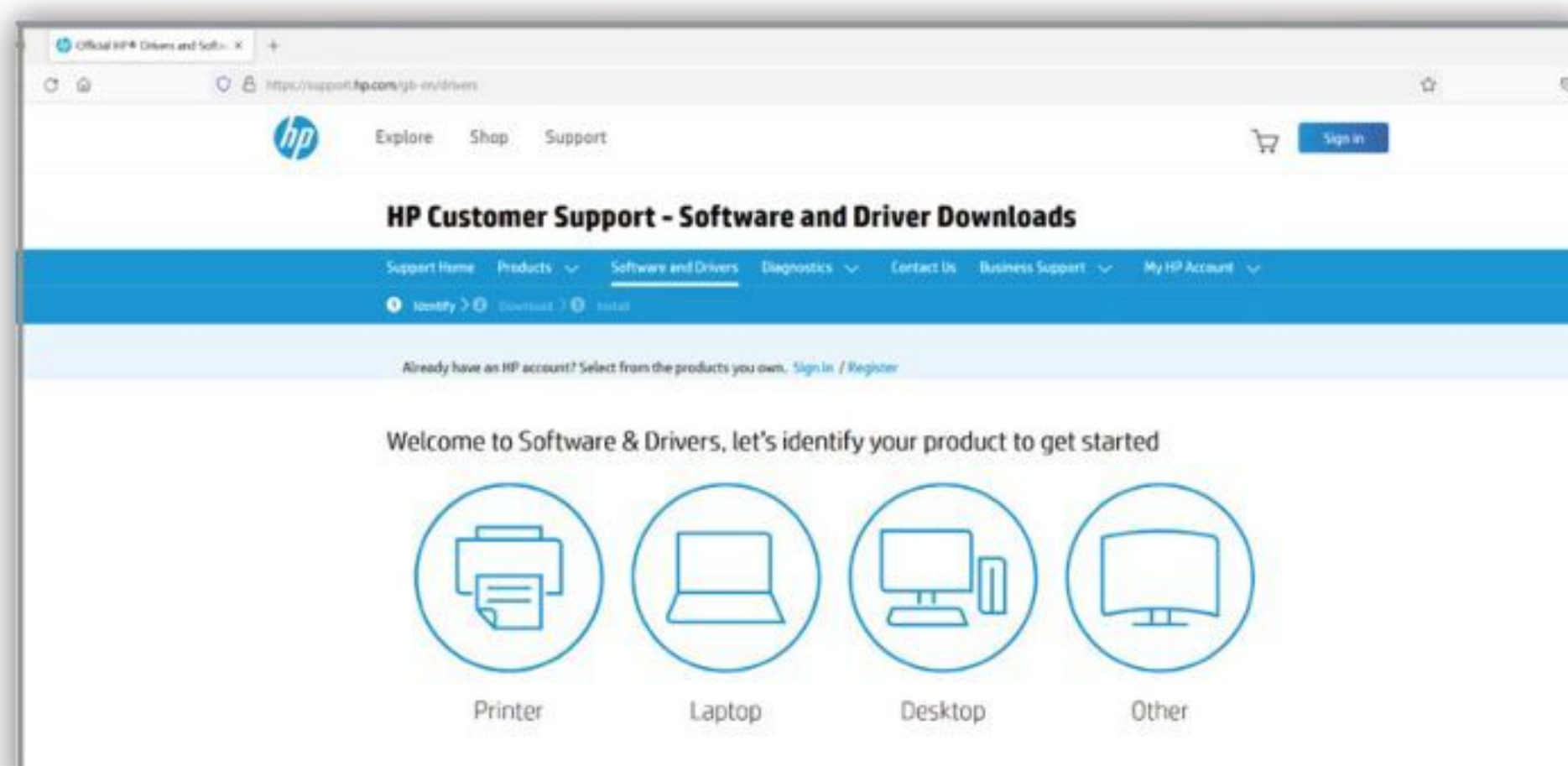
Step 1

Many device manufacturers develop their own driver update software. The major graphics card manufacturers do (Nvidia and AMD), as well as the processor manufacturers, Intel and AMD. For example, Intel uses the Intel Driver and Support Assistant. Simply click the icon in the taskbar, choose Check for Drivers, and you can download the latest available.



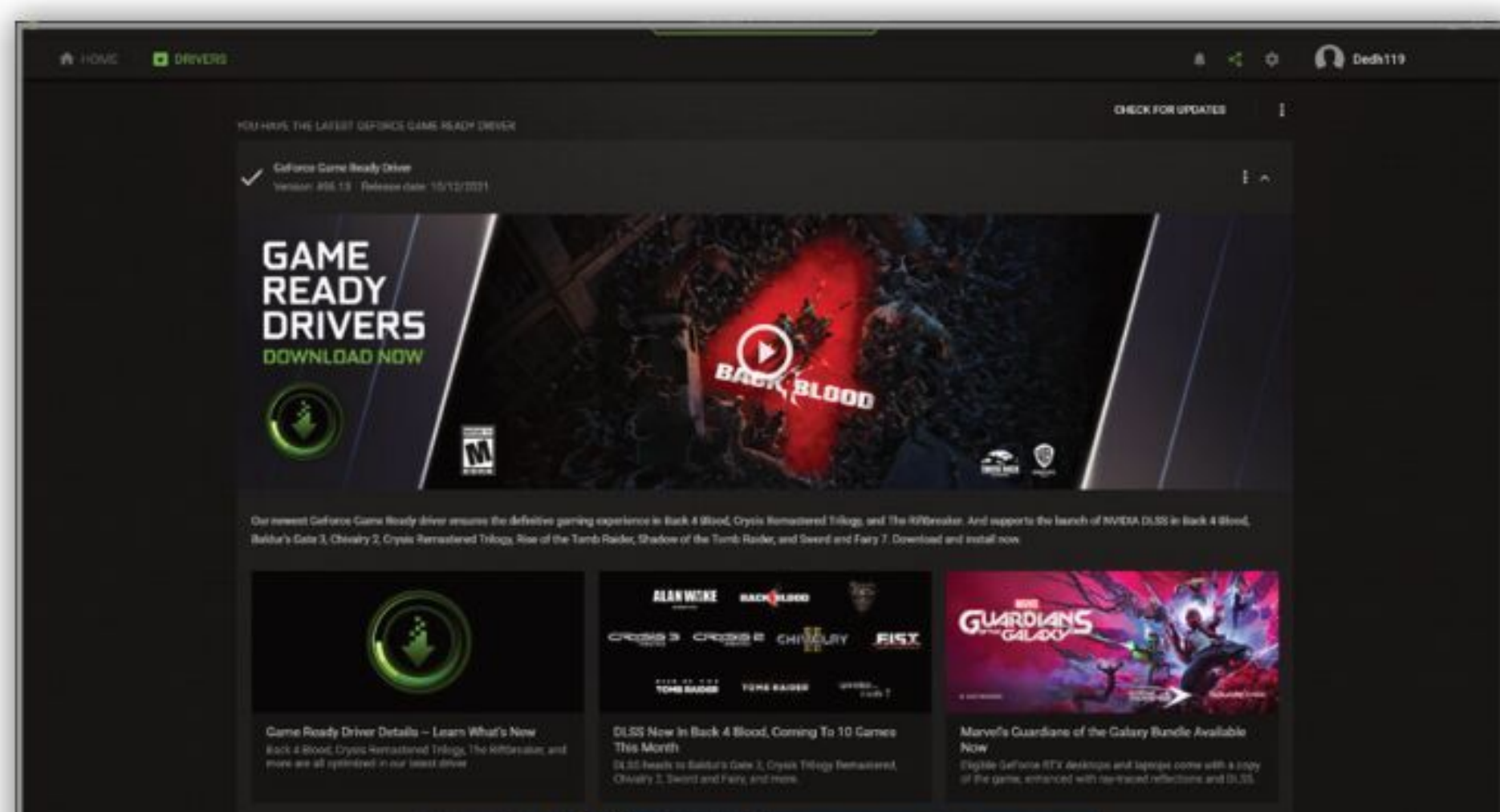
Step 2

You may need to dig a little deeper to locate updated drivers for your devices. Printers are often covered by the Windows 11 Update service, but they can take time to filter through the service before reaching your desktop. To check on the latest drivers, go to your printer manufacturer's support page, look for drivers and find the product you have.



Step 3

Graphics card are devices that frequently having driver updates. This is mainly due new games being released, and tweaked for certain cards, be that an NVIDIA or AMD card. There are also security fixes, and quality updates that can be applied, as well as some performance updates over time. Windows 11 is still quite young, so expect better drivers over time.



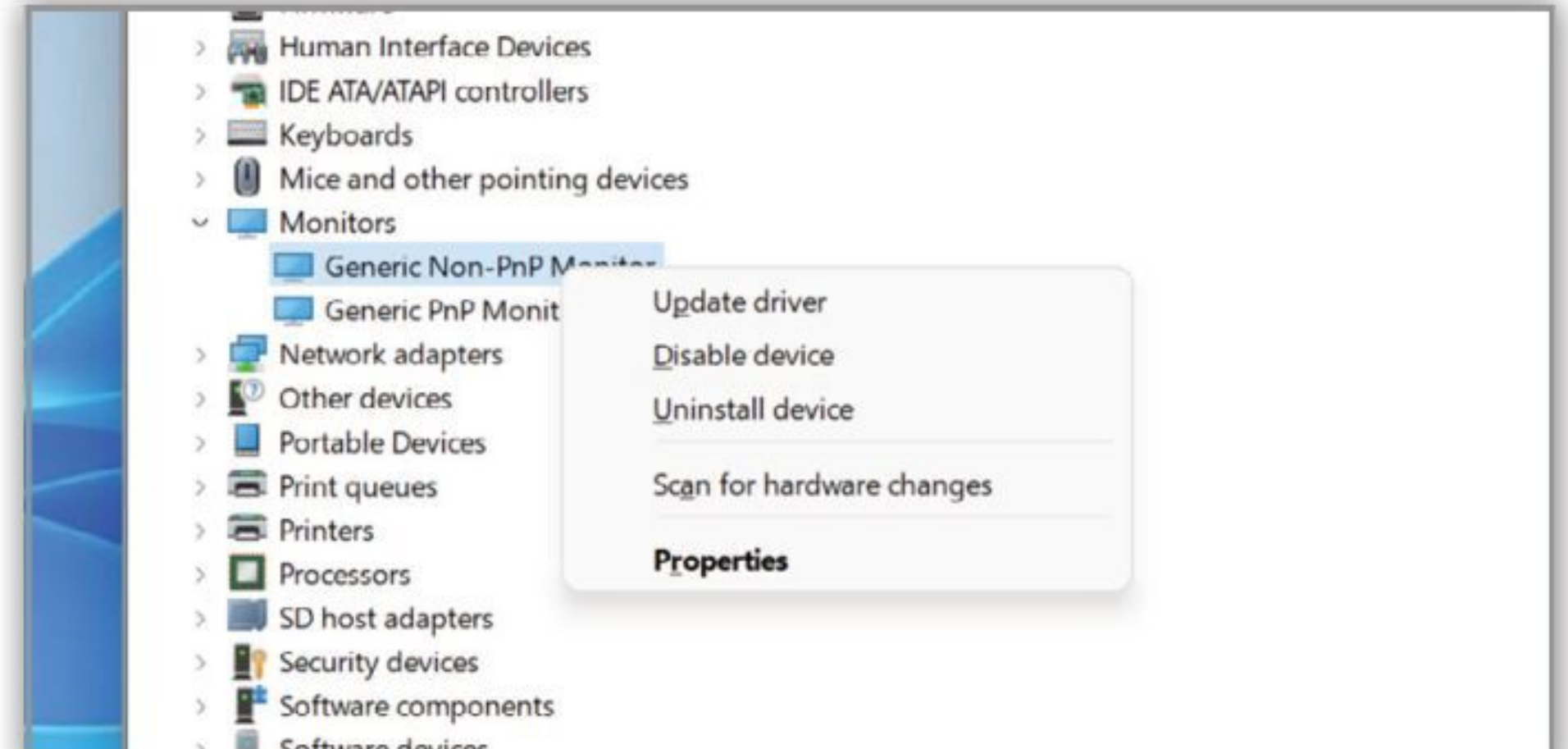
Step 4

There are times when you may need to force Windows 11 to look for an updated driver beyond the one that it's installed by default. When you connect a device, Windows 11 will automatically interrogate the device, and install the driver that fits the device signature. However, these aren't always the best drivers. Right-click the Windows Start button, and select Device Manager.



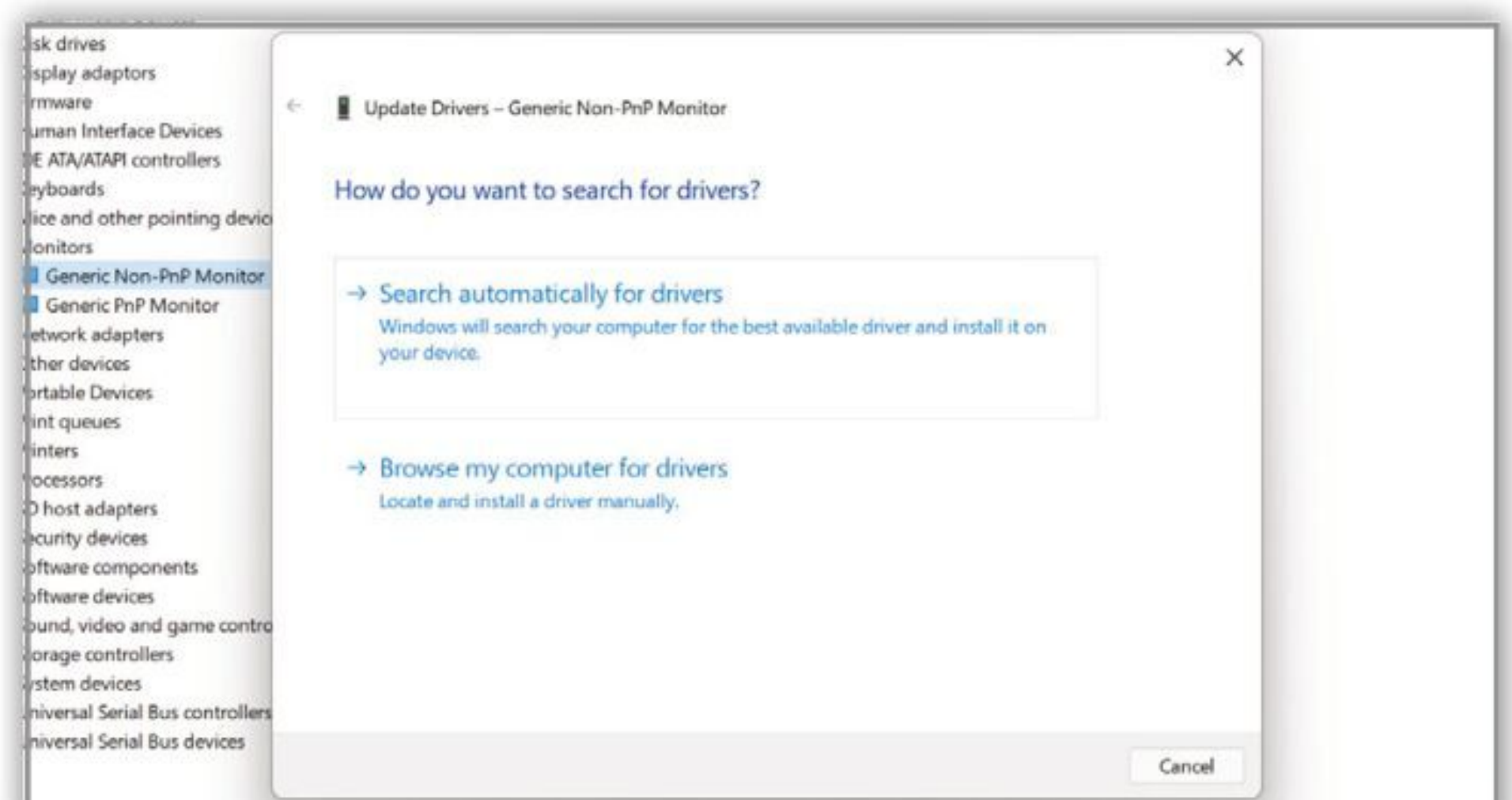
Step 5

From within Device Manager, find the newly installed device from the available list of categories. Click the arrow to the left of it to expand its details – in case there are more than one device available in the category. Right-click the device, and select Update Driver. This will open a new Update Driver window.



Step 6

The Update Driver window enables you to search for the device driver. There are two options: you can have Windows 11 automatically search your computer for updated drivers, or you can specify a location for Windows 11 to look for any drivers (such as any you've downloaded). Click the option that applies best for you.





Using the Power Menu

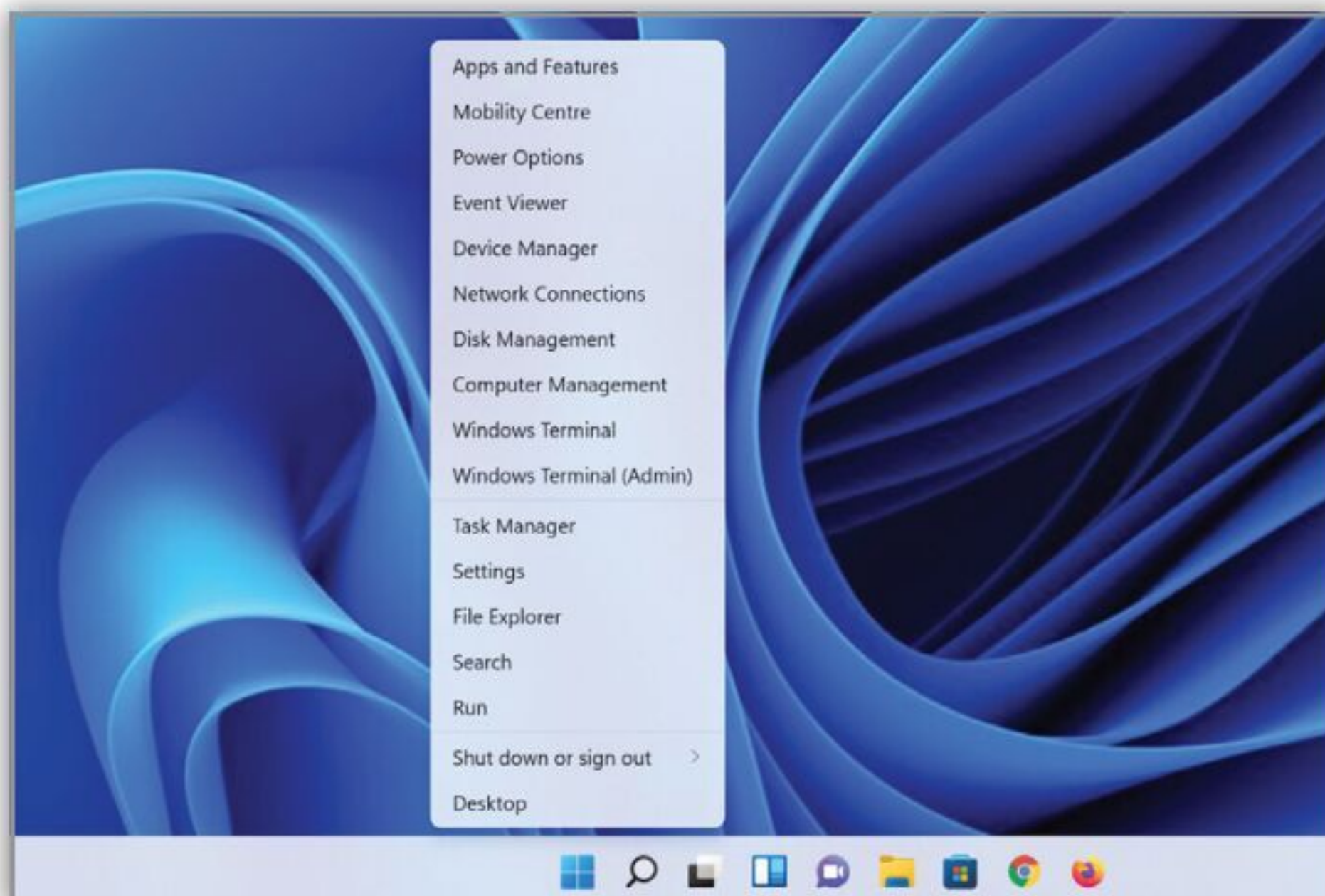
Windows 11 boasts a secret power menu, that gives you access to several useful system and maintenance tools and features. We show you how you can use it to your advantage to quickly access networking settings and extra features that power users need.

Power Up

The secret Power Menu enables the more advanced Windows 11 users among you to quickly access key settings that you probably commonly use, but are buried deeper within the system.

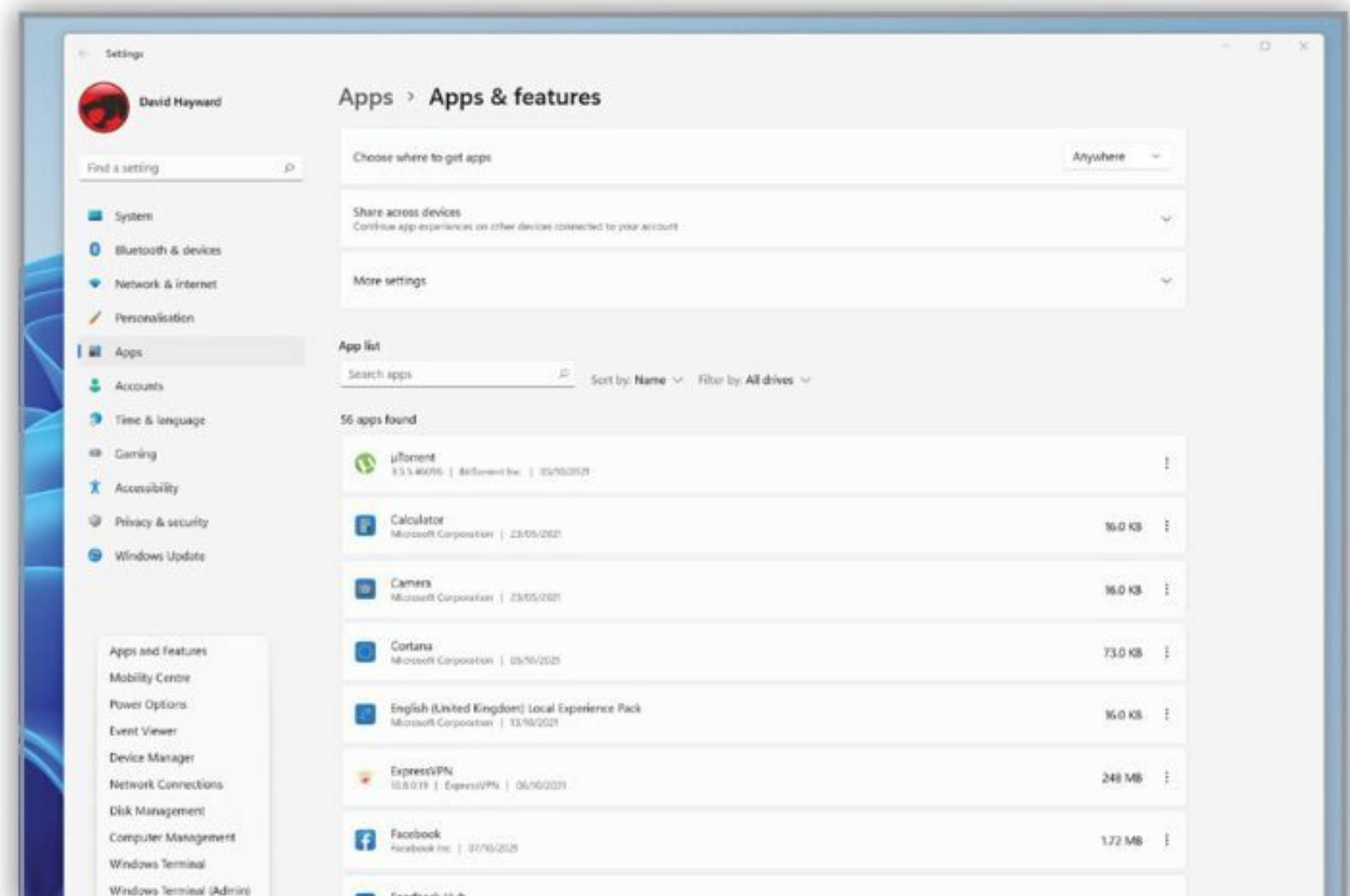
Start it Up

Open the Power Menu using the Start button, but instead of just left-clicking it to open the Start menu, right-click the button. Note that you can also shut down or sign out here, too. This menu was originally created for users who felt the old Windows 8 Start screen didn't give them access to what they needed.



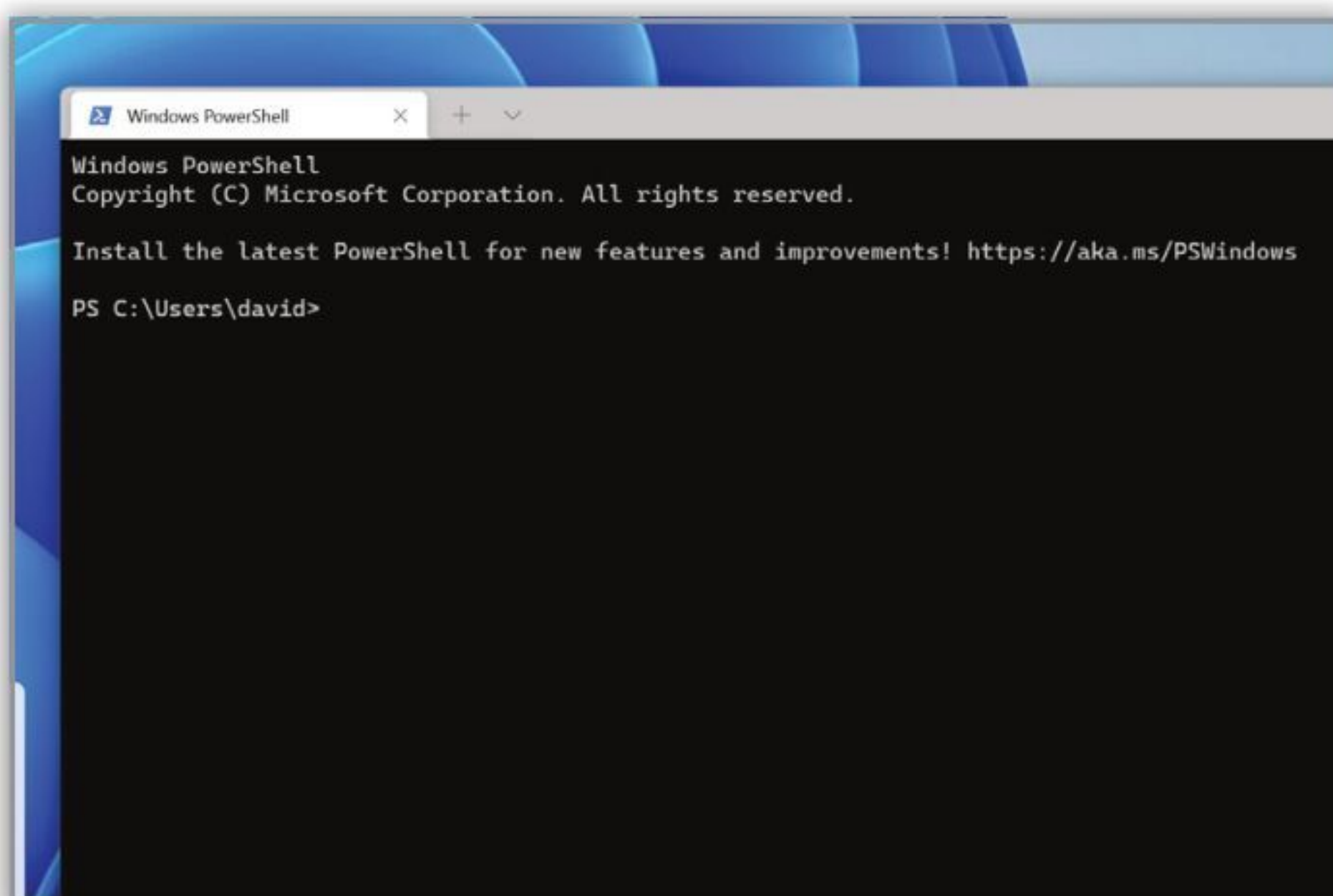
Uninstall Desktop Apps

The topmost available option within the Power Menu, Apps & Features, takes you directly to the Apps section within the Windows 11 Settings. From here, you can modify, uninstall and get to advanced options for all the apps you currently have installed on your system. It may only save a couple of clicks, but every shortcut saves time.



Command

There are numerous shortcut access options available in the Power Menu. For example, you can access the new Windows 11 Terminal, both as standard access or as an elevated, Administrator access. You can also Run commands directly from the Power Menu, Search for files or folders, and more; plus view your Windows 11 Events and logs.



Hot Keys

You can access the Power Menu by pressing the Windows key + X on your keyboard. As well as opening the Power Menu, it enables you to use hot keys to quickly launch any of the options within the menu. You can only use the hot keys if you use the Windows shortcut key to open the Power Menu – unless Microsoft change that option in a future update.

Option	HotKeys	Description
Programs (Apps) & Features	F	Opens Windows Programs & Features
Mobility Center	B	Launch Windows Mobility Center
Power Option	O	Opens Windows Power Options
Event Viewer	V	Opens Windows Events viewer
System	Y	Opens Windows Systems Properties
Network Connections	W	Opens Network Connection pane
Disk Management	K	Opens Disk Management on Windows
Computer Management	G	Opens Computer Management settings
Command Prompt	C	Opens Windows Command Prompt
Command Prompt as Admin	A	Opens the Command Prompt as Admin



Using Storage Sense

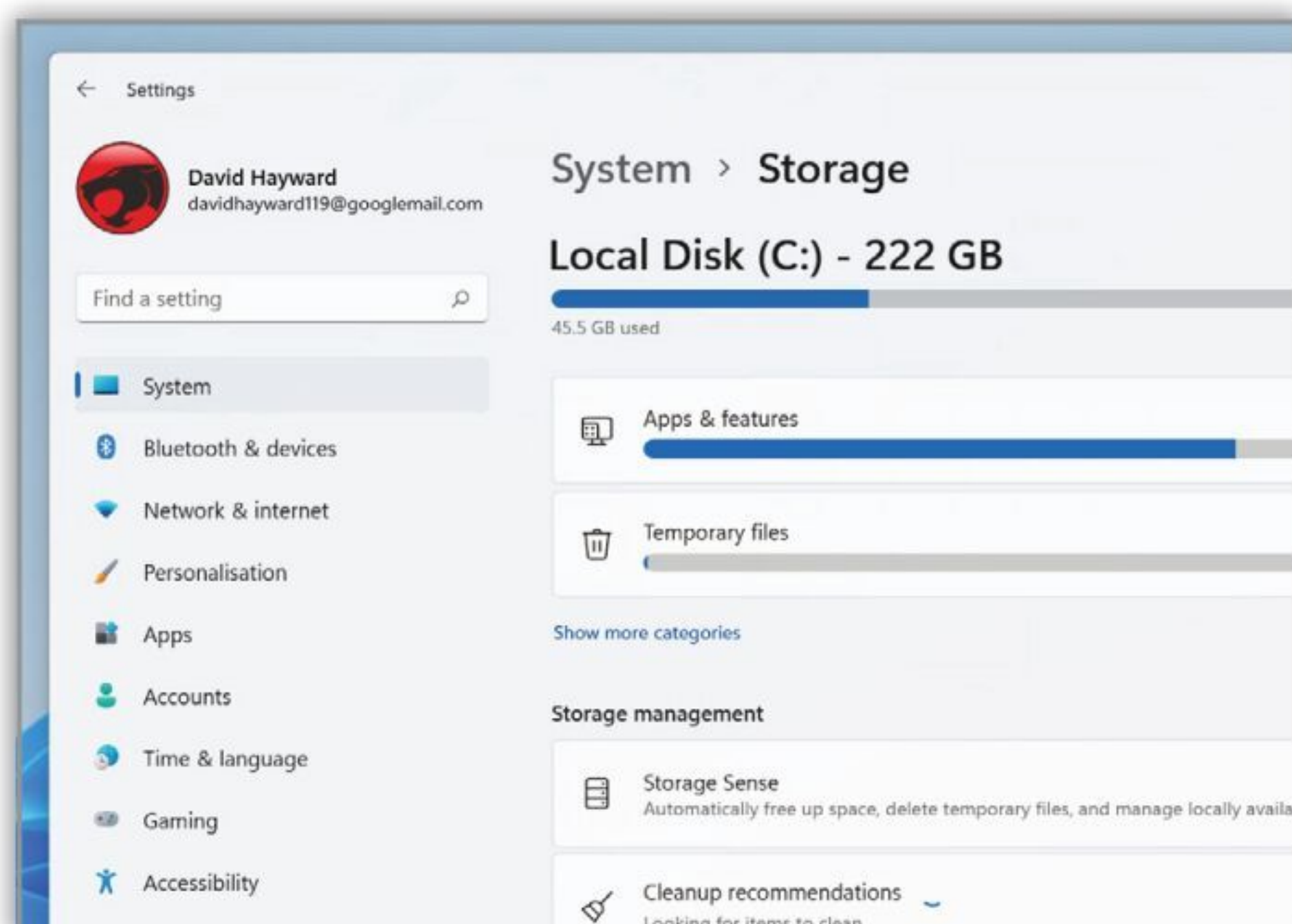
Carrying over from Windows 10, Windows 11's Storage Sense helps keep your computer in tip-top shape by deleting unwanted content as your hard drive begins to run out of space – which it inevitably will do.

Sense and Sensibility

Storage Sense looks different in Windows 11 compared to Windows 10, so if you're used to using it, check this page out first to see how it works.

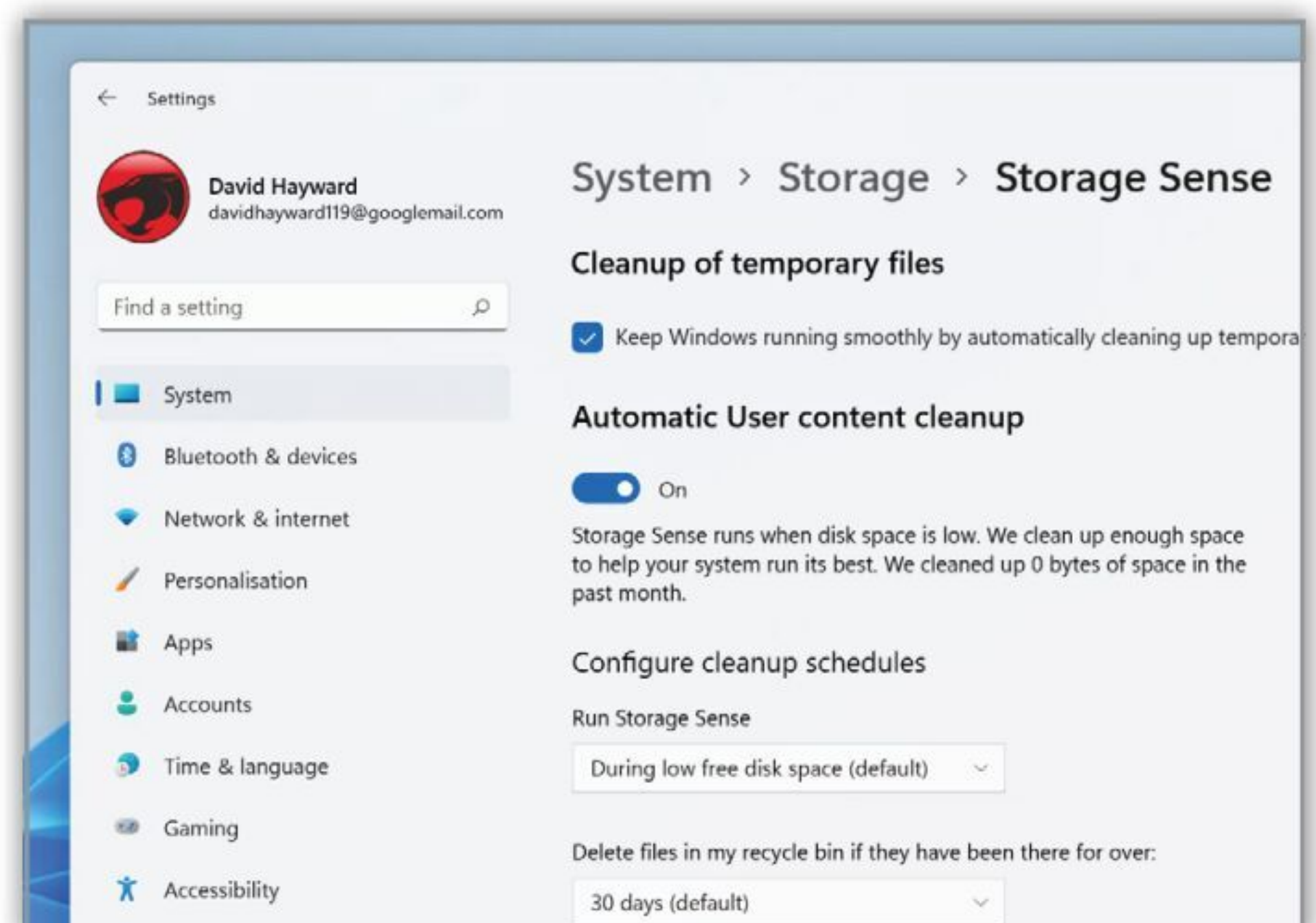
Step 1

To get to the Storage Sense options, click on the Windows Start button, and go to Settings > Storage > Storage Sense. Alternatively, you can get there via the Power Menu (right-click the Windows button, or press the Windows key + X) and choose Settings, then Storage.



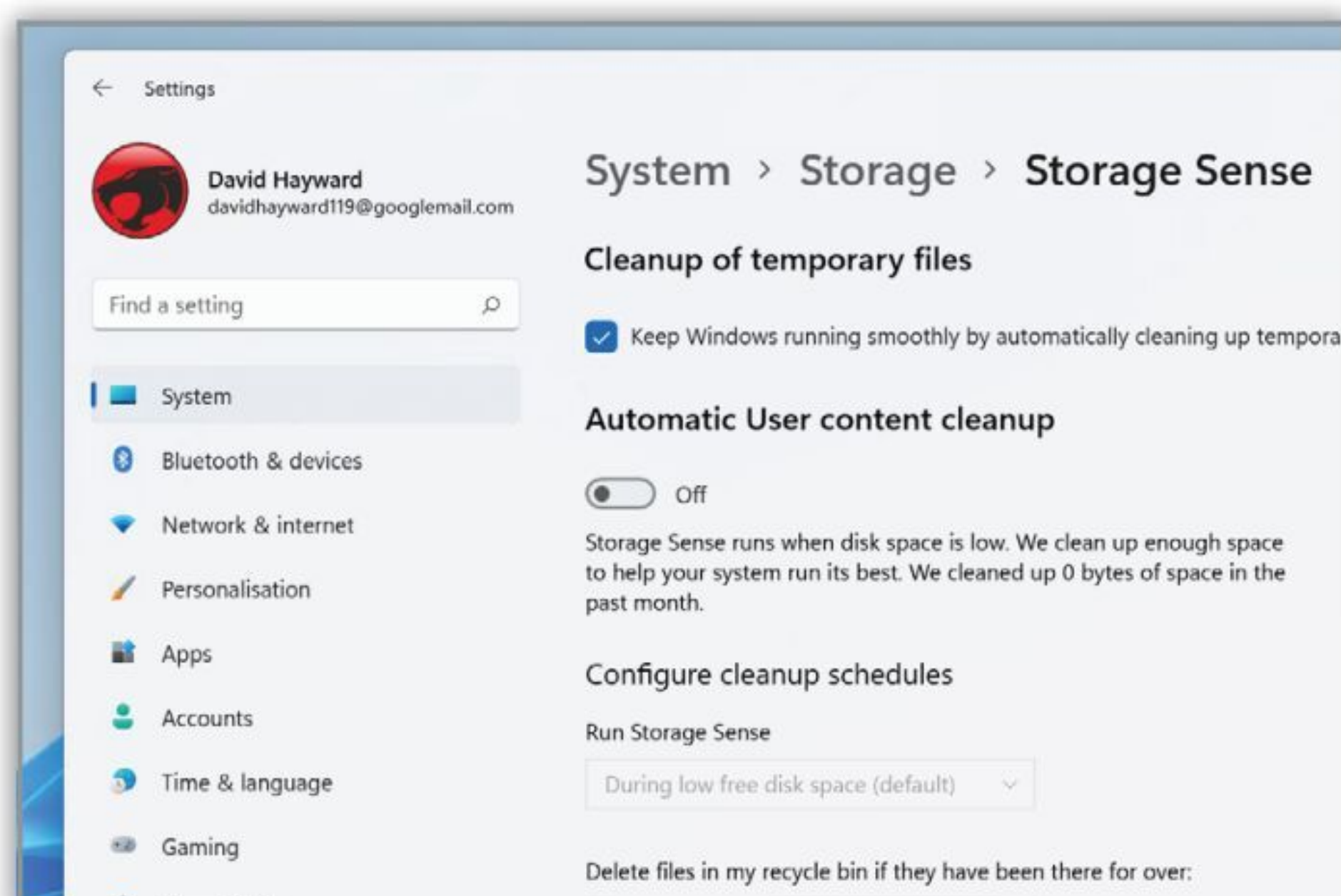
Step 3

Click the sliding button to enable Automatic User Content Cleanup. Here you can opt to configure cleanup schedules, such as removing files every day, week or month; or just when Windows 11 reports that your hard drive is running low on space.



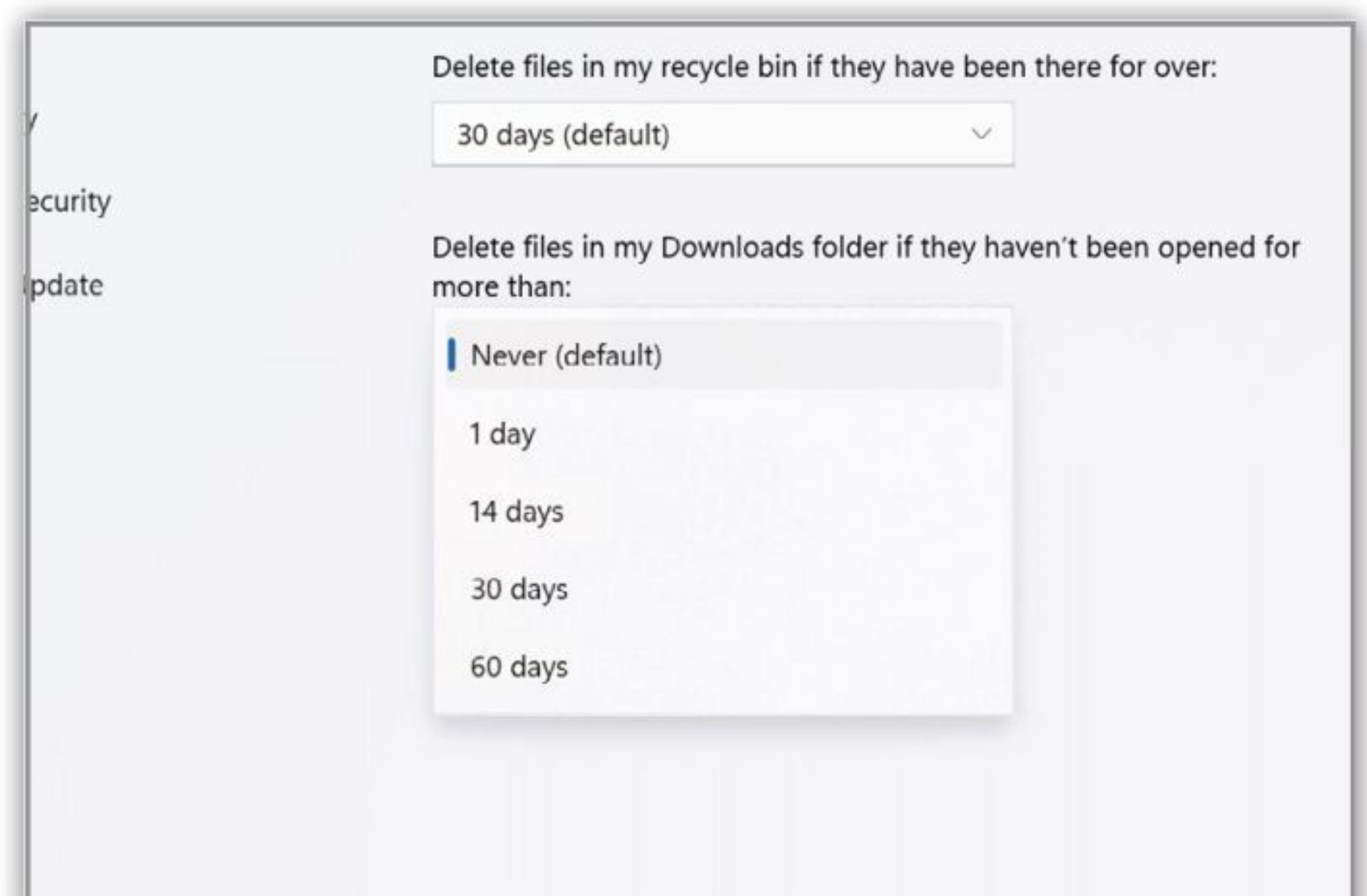
Step 2

Click the Storage Sense option within the Storage section, if you haven't already done so. Don't worry about turning on just yet, though. In Storage Sense you have a number of options available. The first is enabled by default: 'Cleanup of temporary files', which will remove unnecessary temp files from your system as you update Windows 11.



Step 4

You can choose when to delete files in your Recycle bin. The default is 30 days, but you can opt for 1, 14 or 60 days. Files in your Downloads folder can be auto-deleted if they haven't been opened for more than 1 day, through to 60 days. However, ensure you backup your files, if Storage Sense deletes them from the Downloads folder.





Improving the Windows 11 Firewall

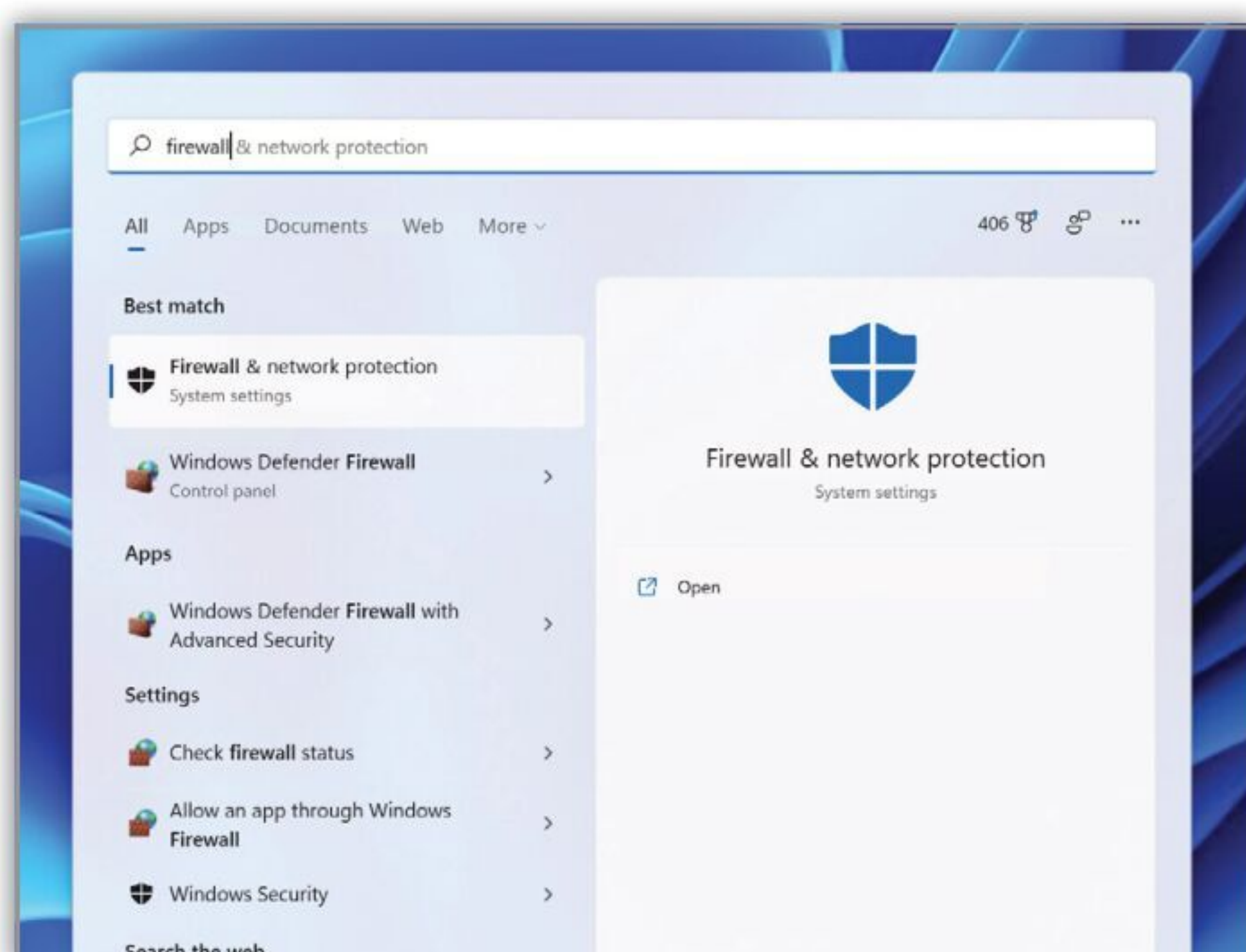
The built-in Windows 11 firewall is a surprisingly good security application. While it may not be as efficient as something offered by one of the third-party security suites, it's certainly more than adequate for the average user.

Getting to Know Your Firewall

Generally, there's little need to ever configure the Windows 11 firewall. However, getting to know how it works and improving it, is part of being more security conscious. Here's some tips on how to better manage it.

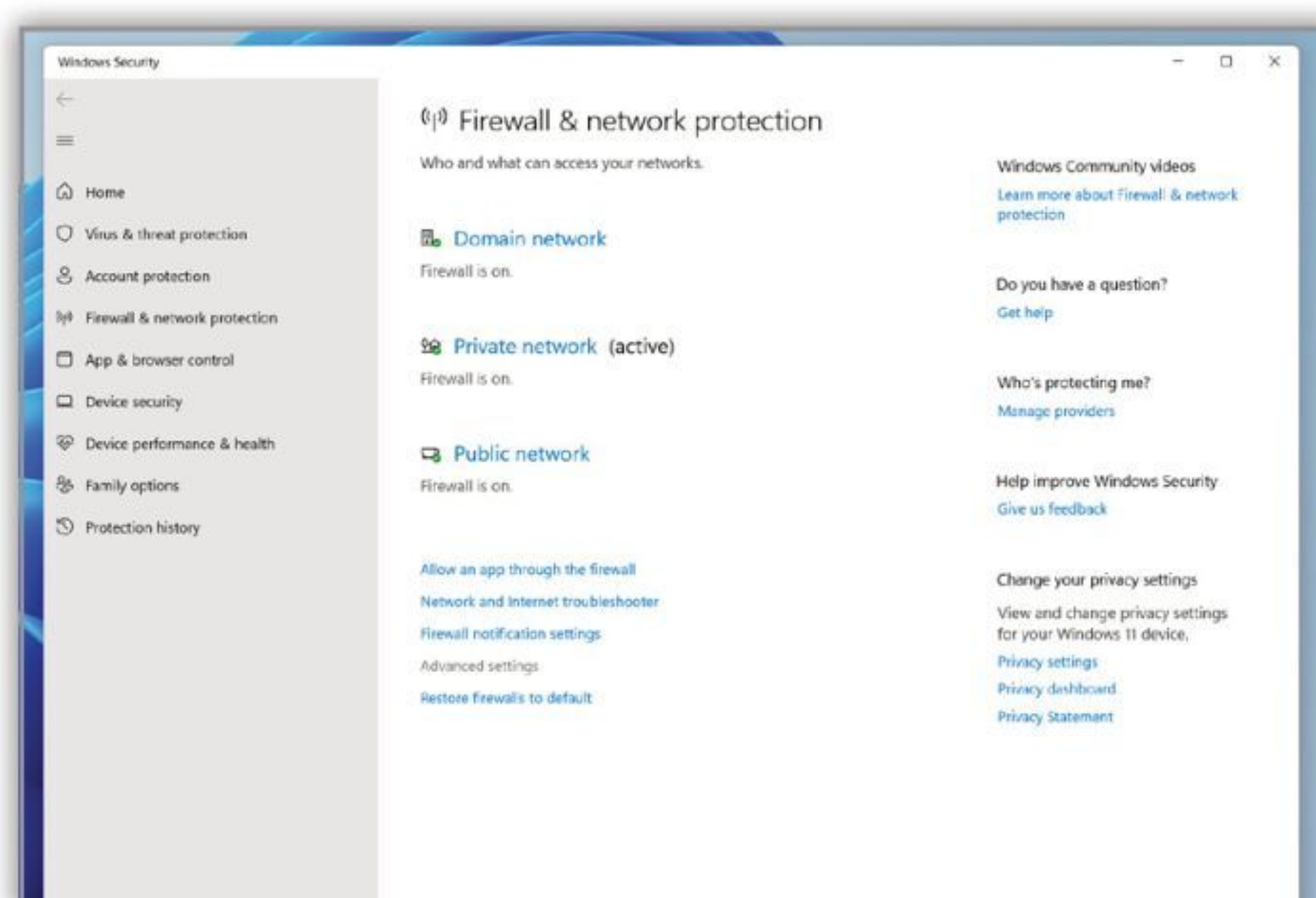
Step 1

You can open the main Windows 11 firewall console window by clicking on the Windows Start button and entering **'firewall'** into the search box. Click the returned link, Firewall & Network Protection, to launch it.



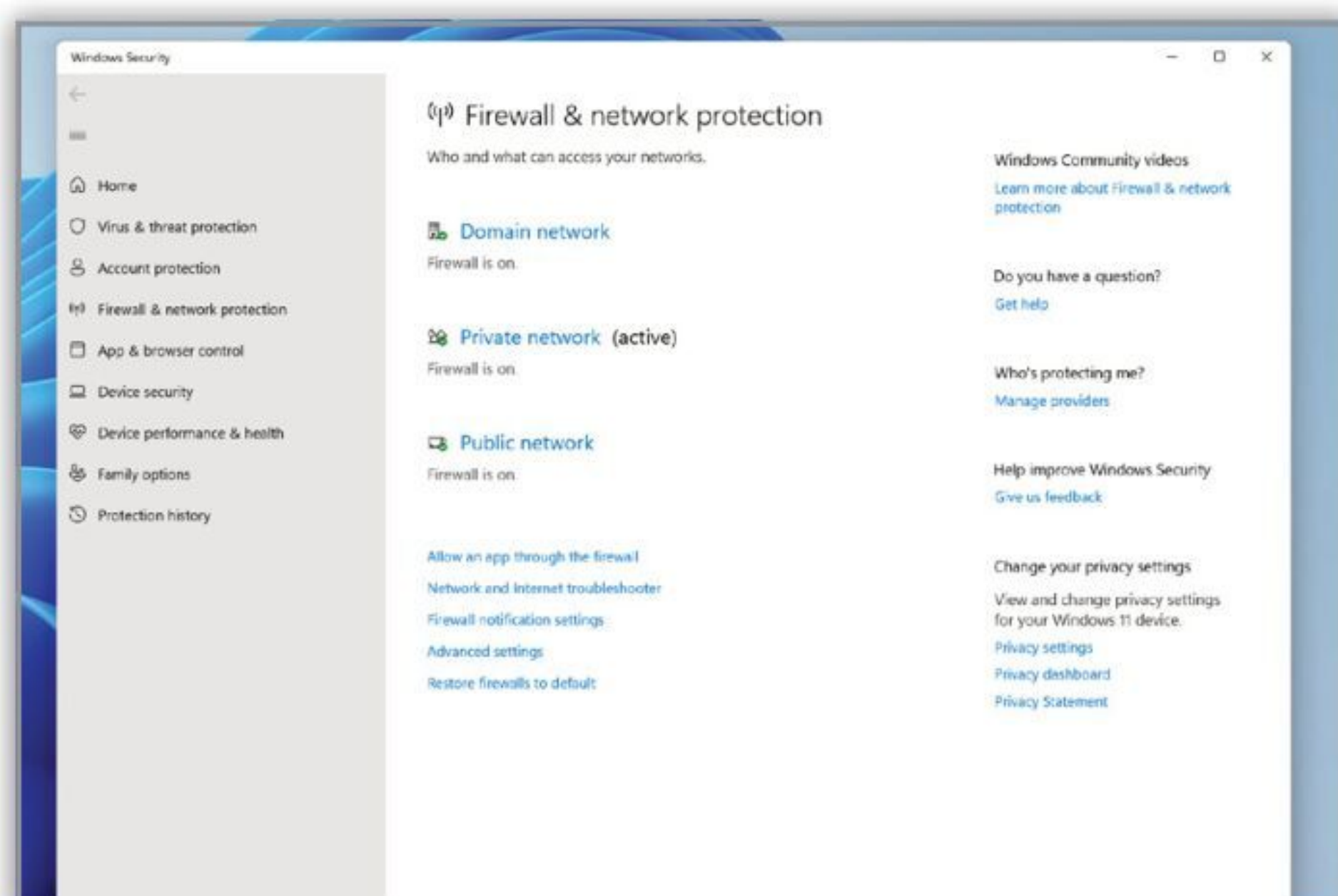
Step 3

Under the status of the networks are some links that will help you configure and improve the firewall, as well as turning it on or off (which isn't recommended under any circumstance other than the installation of an improved third-party firewall). To begin with, start by clicking on the Advanced Settings link.



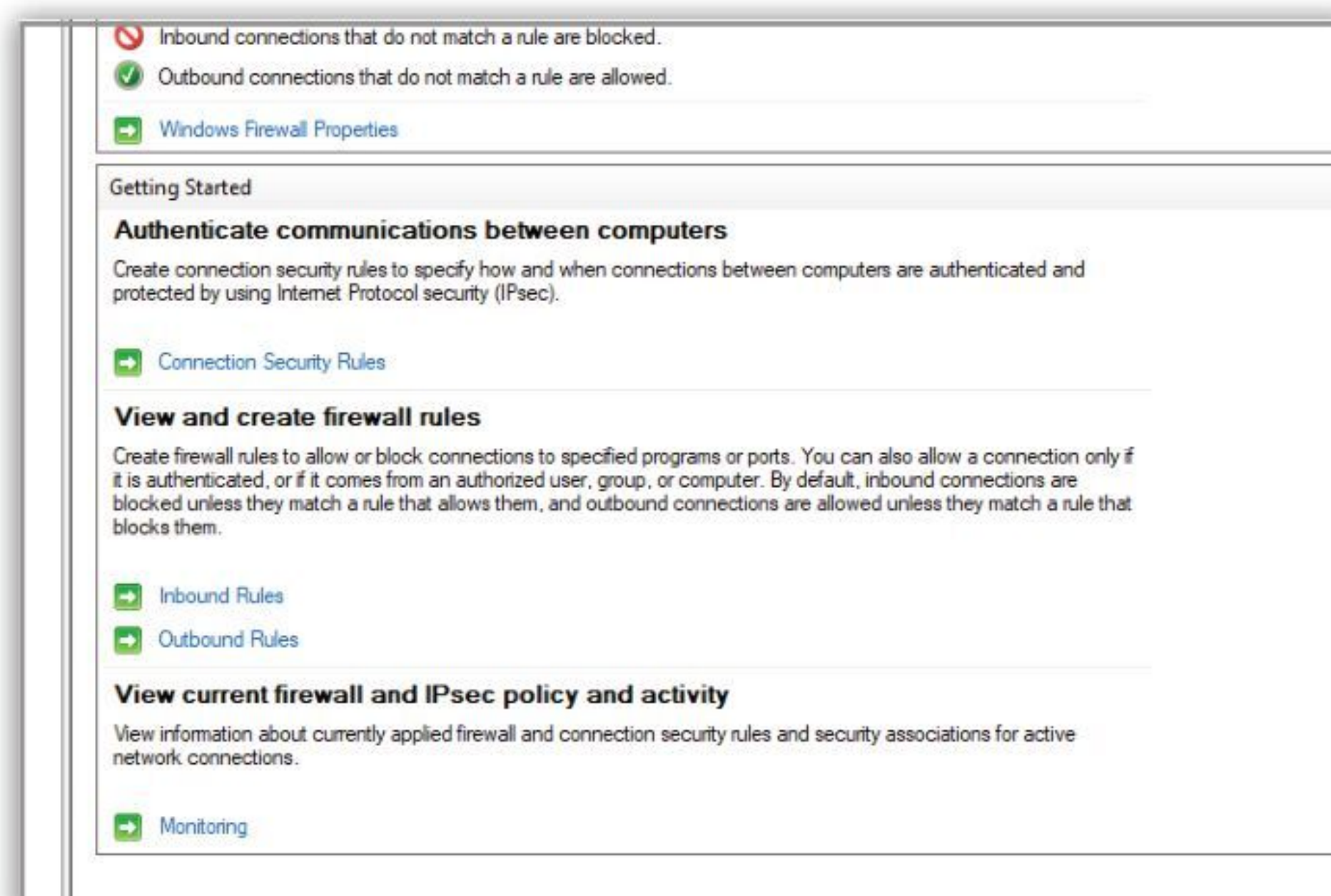
Step 2

The Windows 11 firewall console window should be On by default, unless you've installed a third-party security suite which contains its own firewall. There are two kinds of network listed: Private and Public (and Domain if you have Windows 11 Pro version). Private is for home or work, whereas Public is for cafés and the like.



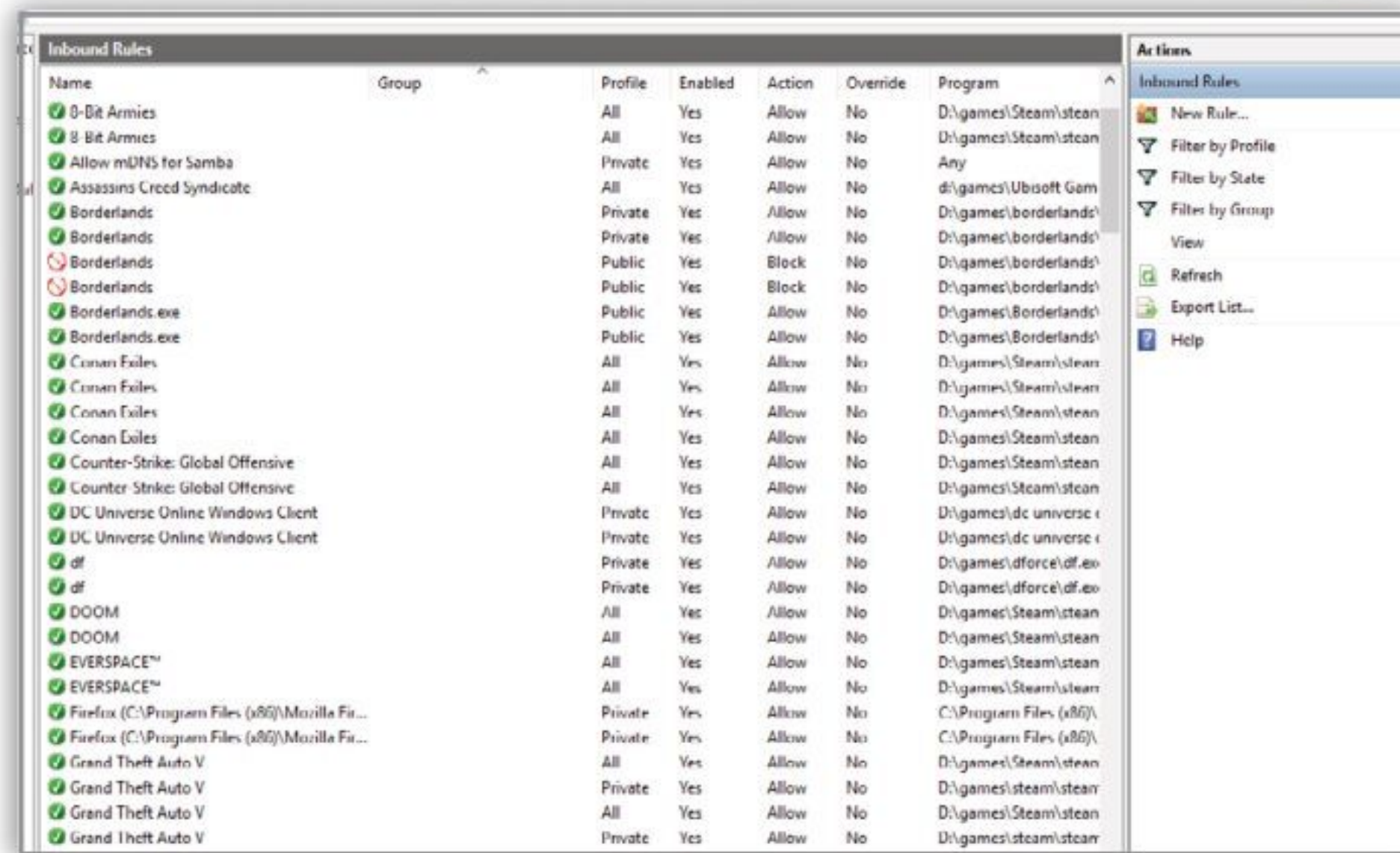
Step 4

The Advanced Settings link launches a new console window. This new console defines the inbound and outbound rules for the entire system and its installed programs and applications. You can set authentication rules between computers, view and create new firewall rules, view the current firewall policies, and even monitor what's being blocked in real-time.



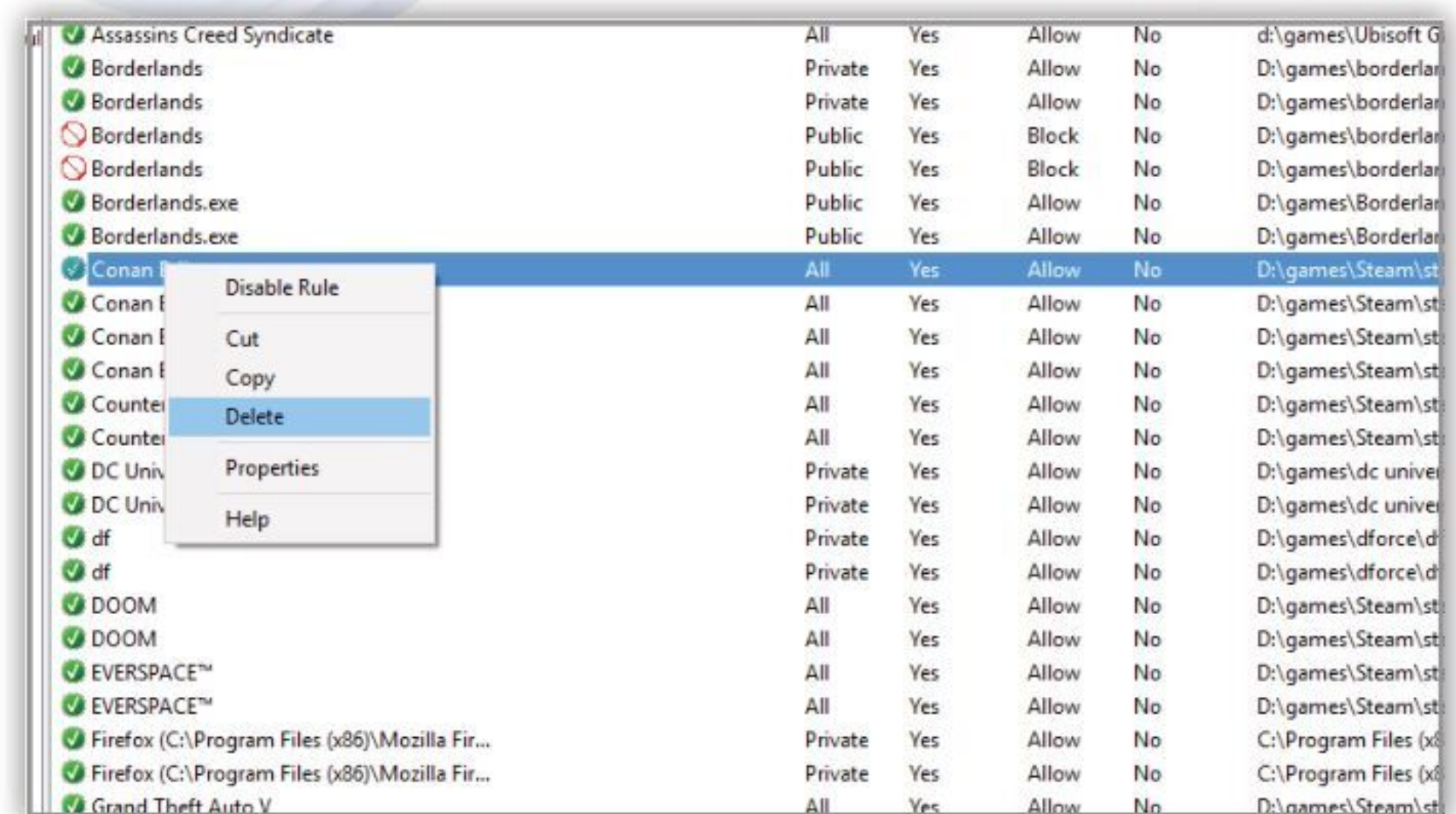
Step 5

Click on Inbound Rules to the right-hand side of the main console window. This will list the current rules that allow traffic onto your computer and to the applications that require it. For example, in this screenshot there's rules for various games that allow multiplayer interaction and the ability to 'talk' to the game server, as well as install updates.



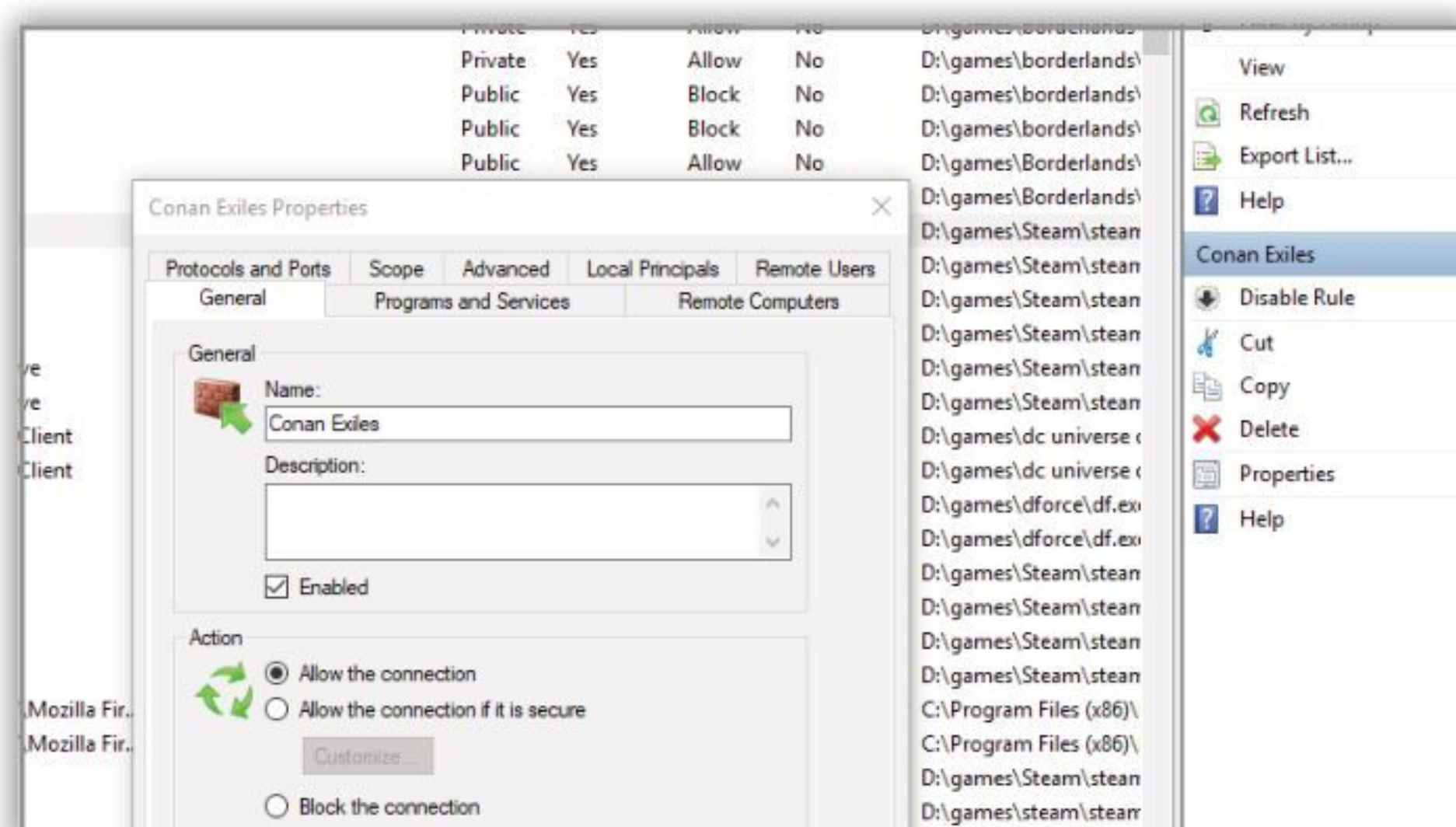
Step 8

Sometimes, uninstalling a program doesn't automatically remove it from the Windows firewall. The exact reasons why are varied, but to help improve the efficiency of the Windows firewall, whenever you remove a program from your system, it's worth checking the firewall to see if its entry has been deleted. To delete an entry, right-click then select Delete from the menu.



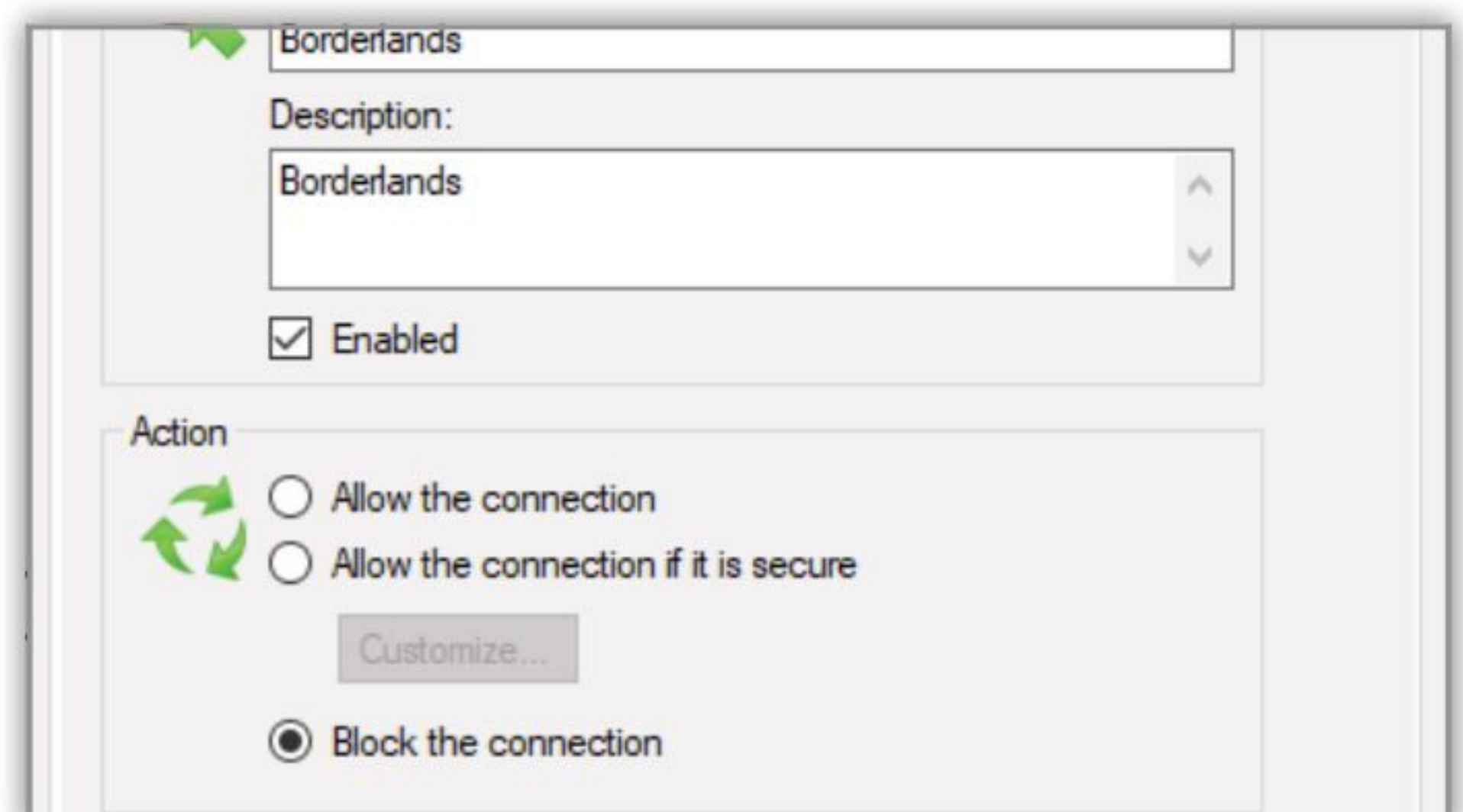
Step 6

These rules are automatically entered into the firewall when you install the program, game or app. When you install a program you're required to accept and authenticate the process, clicking on Yes to start the installation. This level of administrative access also allows entry of the program into the firewall. Pick one of the entries and double-click it.



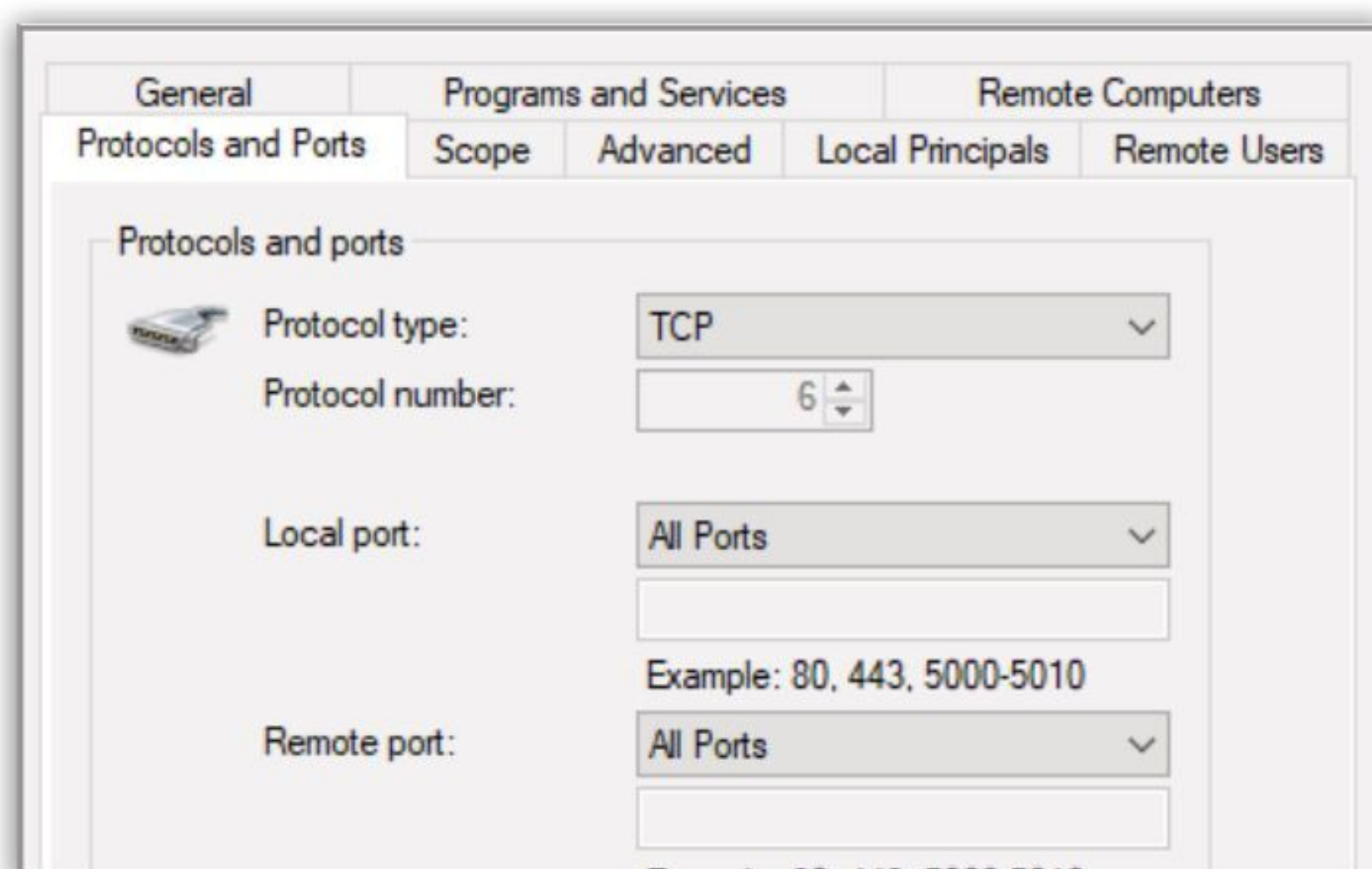
Step 9

You may not want to delete a rule as it could be used later, or if you re-install the program and it fails to re-create the firewall entry. The recommended process then is to block the rule from communicating with the outside world. To do this, double-click the rule, and from the General tab click the Block the connection button.



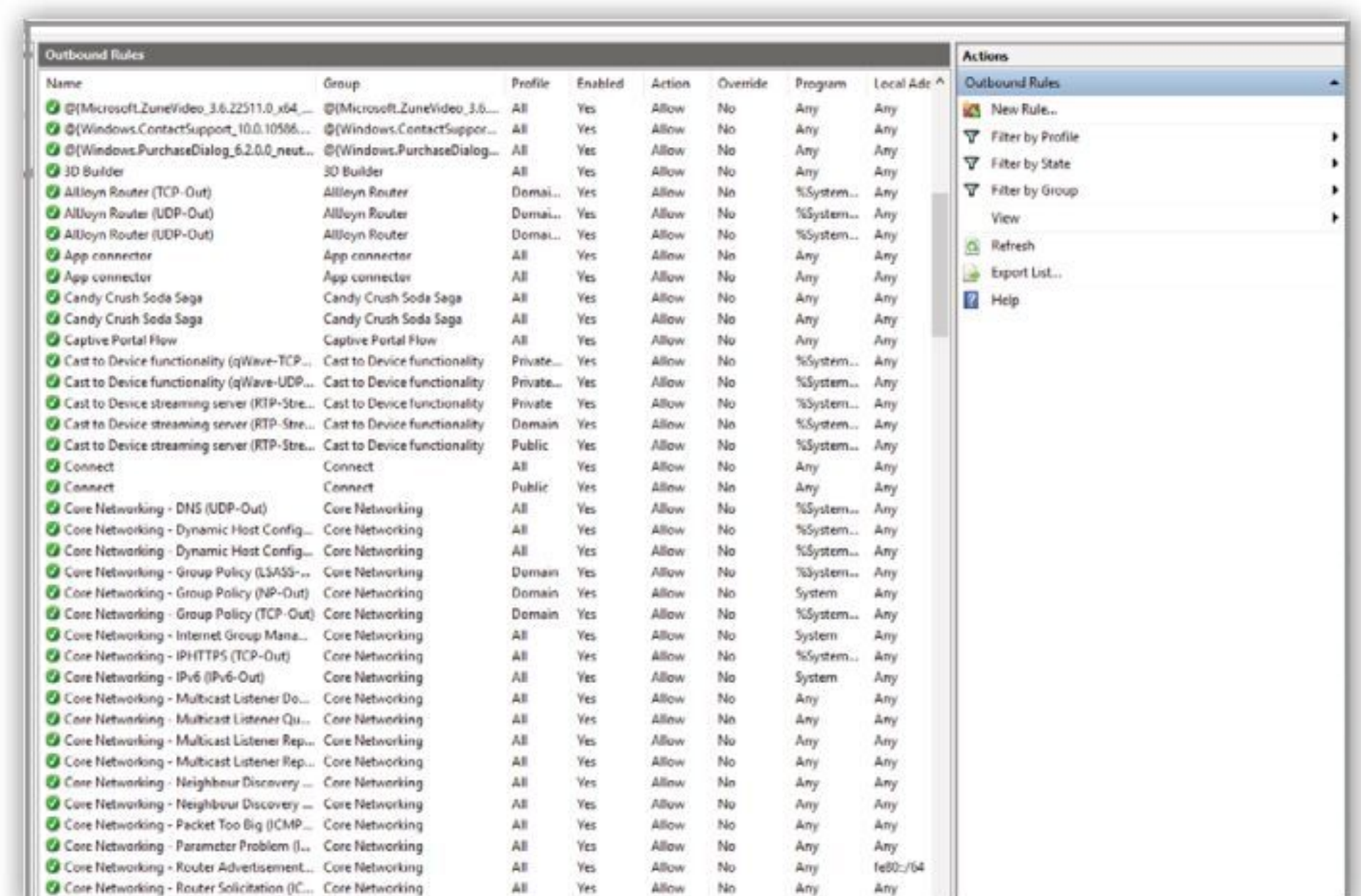
Step 7

The properties of each firewall entry allow a greater degree of control for that particular program. You can change the name of the entry, allow or block the connection, define the physical location of the program on your computer, allow access to the program from remote computers, set the protocol and port number it'll use, and even which network controller to use.



Step 10

Similarly, the Outbound Rules link will detail the various programs that are allowed to communicate from your computer to an external destination. It's good practise to familiarise yourself with the rules of the firewall, as a rogue program will need to set a rule to communicate. You can then block that rule and stop the threat from reporting out.





Secure Your Home Network

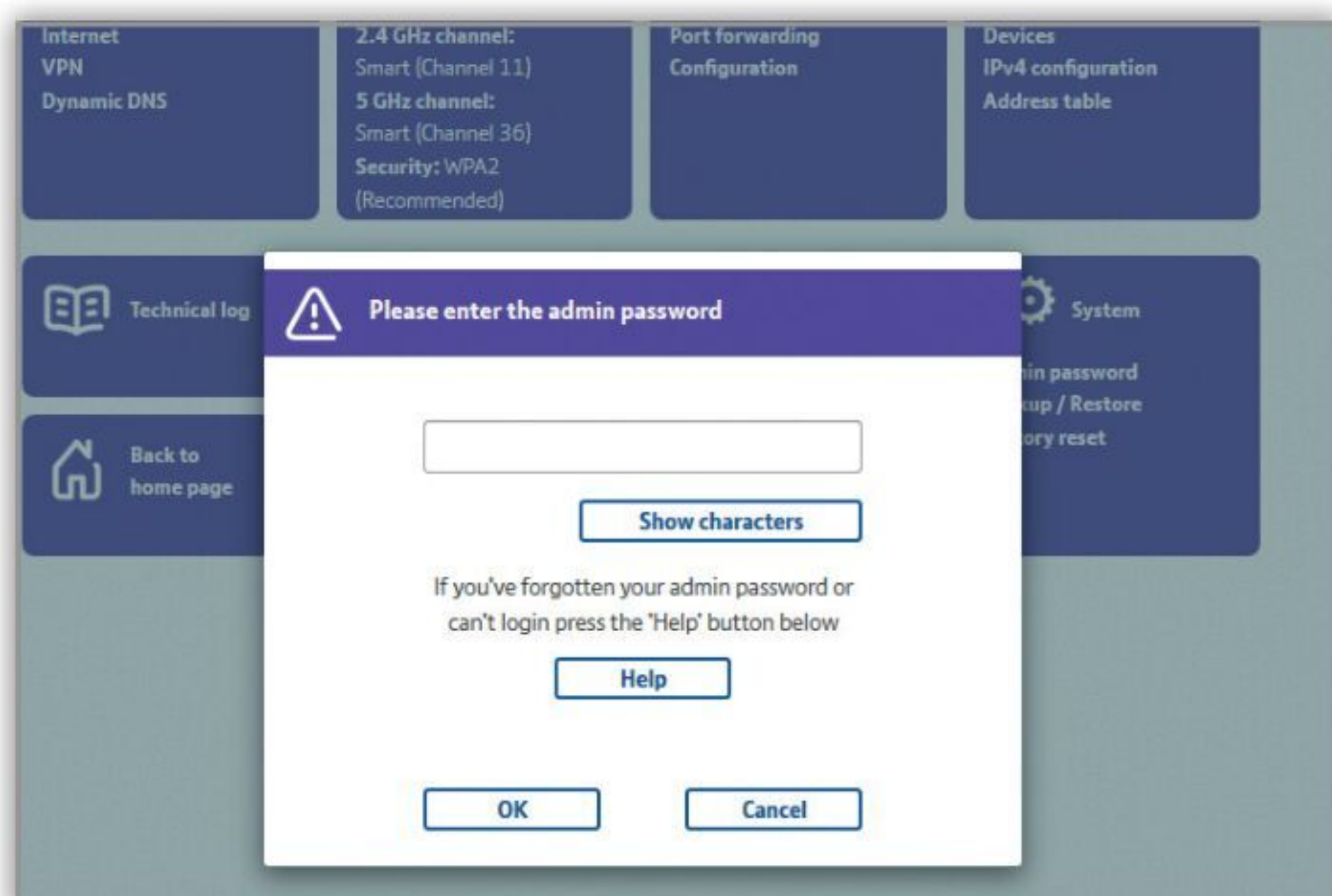
We've mentioned previously that an attack doesn't always come from the other side of the globe but can indeed be a little too close to home at times. Home network hacking is possible with the simplest of tools; easily found on the Internet.

Network Protection

Without being too paranoid, it's remarkably easy to get into a neighbour's home network. If you live in a block of flats or you use powerline adapters, you may need to consider these ten steps for better network protection.

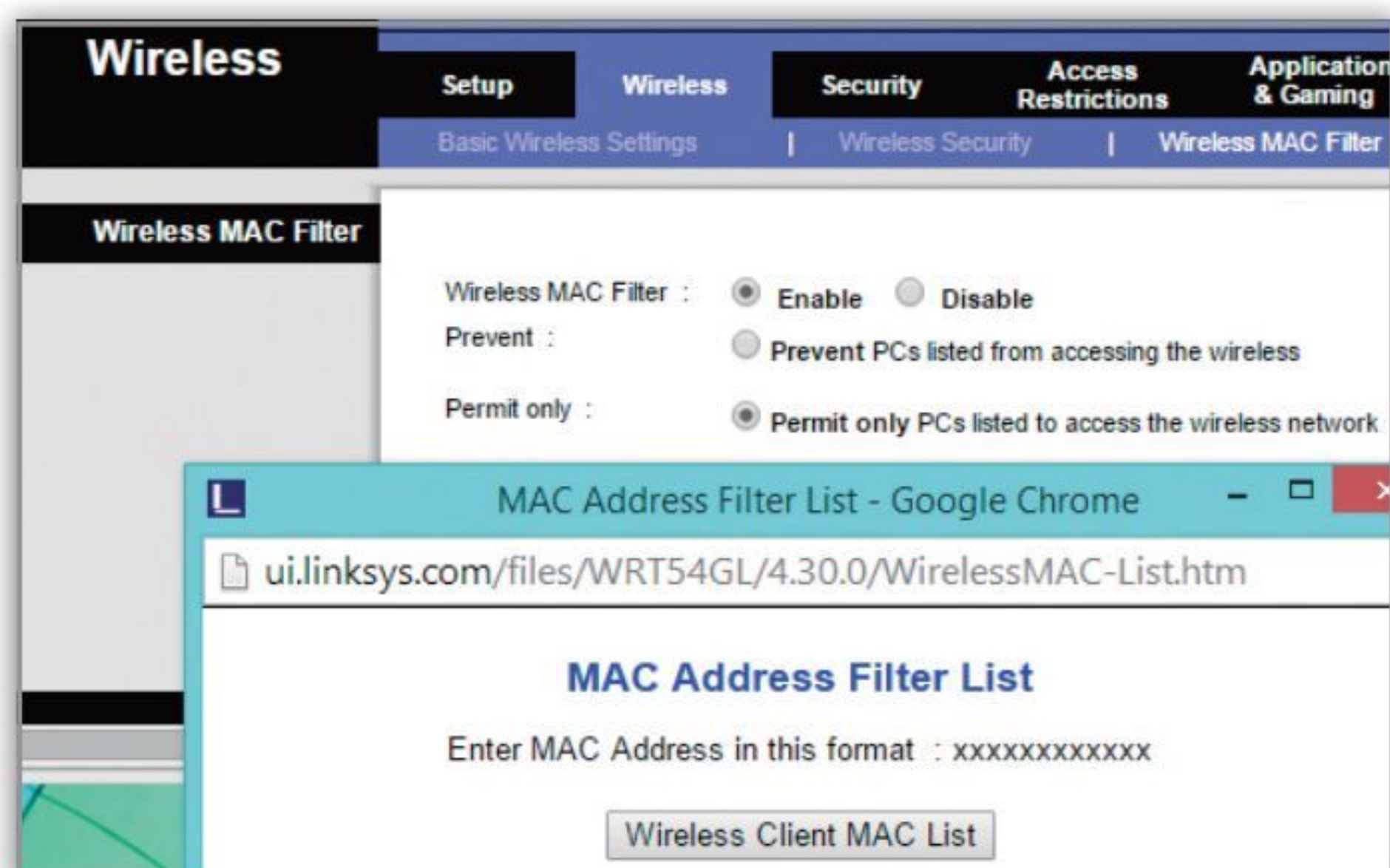
Step 1

The most common entry point to gain access to your network is via the router. The router from your ISP may well be offering the latest forms of encryption but it doesn't take a genius to trawl the less reputable sections of the Internet to obtain a list of passwords. Therefore, change the default username and password needed to access it.



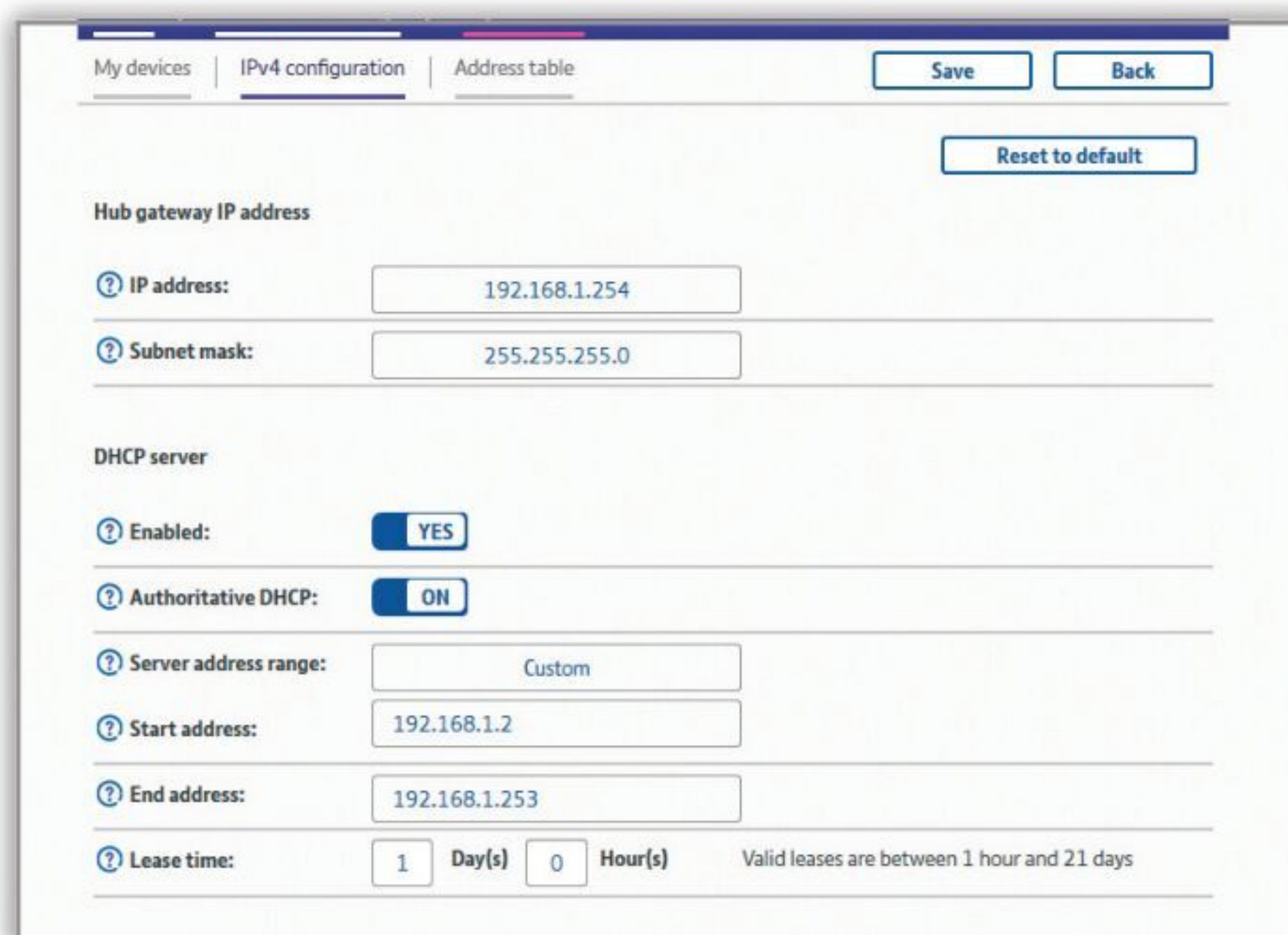
Step 2

Most routers these days come with a form of authentication called MAC (Media Access Code) address filtering. Every networkable device, computers, tablets, games consoles, come with a unique MAC address. The filtering allows you to enter the MAC addresses of your devices, so only they can be used on your router. Consult your router documentation for more details if required.



Step 3

It can be a pain but try disabling DHCP on your router and opting for static IP addresses. Every device that connects to a DHCP router will receive an IP address. By eliminating that you get to specify the address range available. It's not fool proof but it's worth considering.



Step 4

According to Trustwave's 2013 Global Security Report, many home network hacks are conducted when the household is away or asleep. This leaves the hacker with ample opportunity to steal bandwidth and view files you may have on a NAS drive. The short, simple solution is to power off the router at night or if you go out for the day.



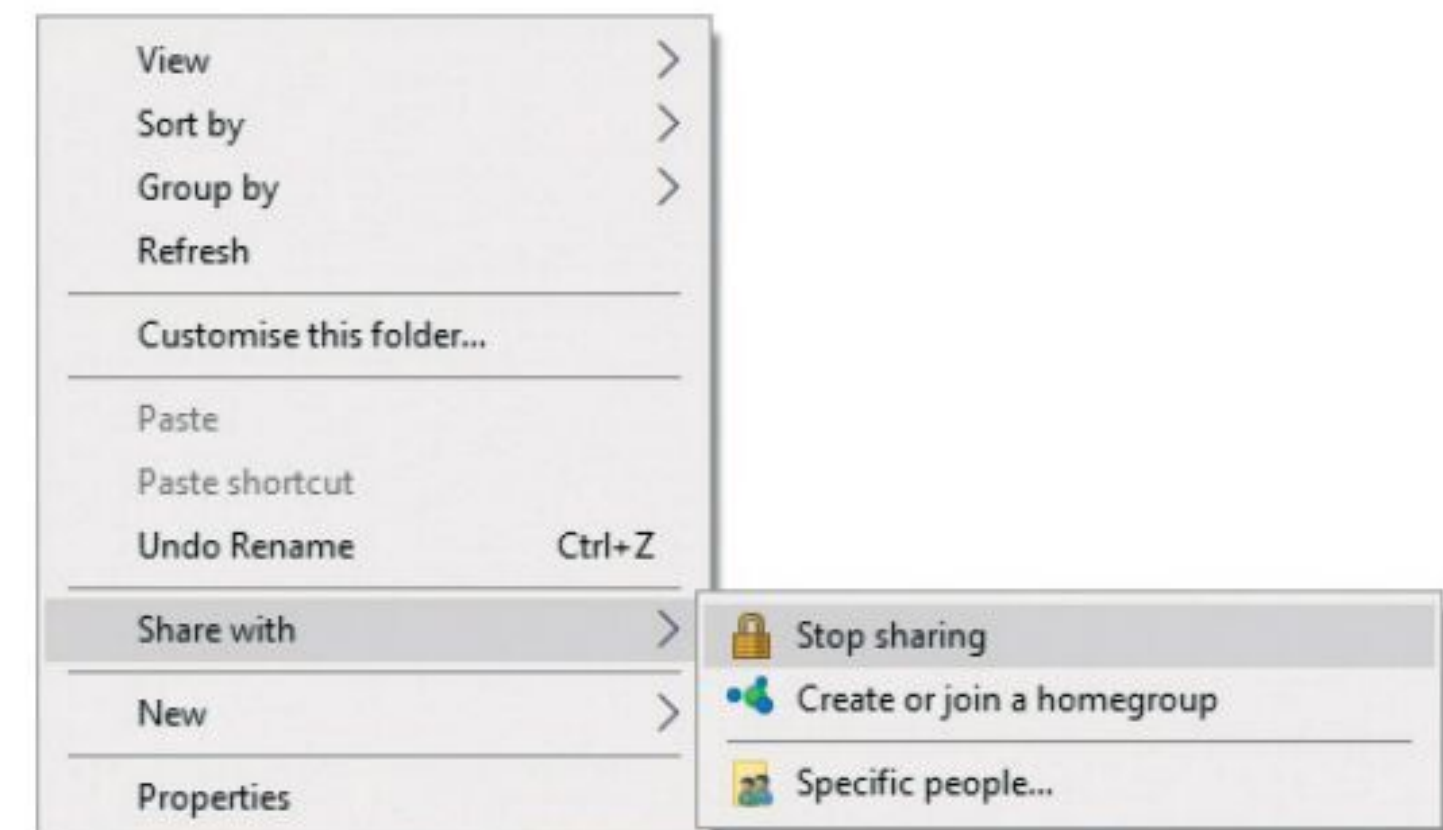
Step 5

Powerline adapters are an excellent resource for connecting wired network devices, without trailing lengths of cable around the home. However, depending on the adapter, it is possible to use another adapter to gain access to yours. In newer homes it's an easy enough task to pick up another user's network, so use the Encryption button if the adapter has one.



Step 8

Sharing resources and files from one computer to another is perfectly fine but consider sharing less if you live in close proximity to others. Once a hacker has gained access to your network, getting to any shared folders you have will be a doddle. In extreme cases don't share anything, but generally tighten password control.



Step 6

Networking a home with Ethernet cables isn't a difficult project and it offers faster connection speeds than that of wireless. However, if you're living in shared accommodation or a block of flats, make sure that any unseen cable lengths can't be accessed by a neighbour. It's easy enough to splice into an Ethernet cable and steal bandwidth.



Step 9

Remote administration on both the router and computer certainly can help you out when you're not at the keyboard. Perhaps you connect to your home network from work? Whatever the reasons, it does leave a potential gap in your home network security. Consider closing it completely or double-checking the authentication is top notch.

☒ Allow this computer to be controlled remotely

Invitations

Set the maximum amount of time invitations can remain open

6

Hours

☐ Create invitations that can only be used from computers running Windows Vista or later

OK

Cancel

Step 7

Consider using a network mapping program, such as Open-Audit, to gain a better understanding of what devices are attached to your network. Become familiar with the addresses, manufacturer, model IDs and so on of every connected object. That way, should anything new appear, you'll know it's not something you allowed.

Open-Audit					
What's on your network?					
HOME QUERIES ADMIN HELP					
List Devices					
Hostname	Description	IP Address	Type	OS / Device	Tags
system-1	Workstation	172.16.0.1		Microsoft(R) Windows(R) XP Professional	172.16.0.0, All, Windows, XP
system-10		172.16.0.10		Debian Sarge	172.16.0.0, All, Debian, Linux
system-11					All, Linux, Virtual
system-2				7 Ultimate	172.16.0.0, All, Win7, Windows
system-3				Model VMware Virtual Platform	172.16.0.0, All, Linux, Ubuntu
system-4				Serial 1234511	10.255.0.0, All, Printers
system-5	Printer	10.255.0.5		HP Laserjet 4100tn	10.255.0.0, All, Printers
system-6	Workstation	192.168.0.6		Microsoft(R) Windows(R) XP Professional	192.168.0.0, All, Windows, XP
system-7		10.255.0.7		Microsoft Windows 2000 Server	10.255.0.0, All, Win 2000, Win Svr
system-8	Router	192.168.0.8		Cisco 1841 Router (IOS v10.1)	192.168.0.0, All, Routers
system-9	Router	192.168.0.9		Cisco 1841 Router (IOS v10.1)	192.168.0.0, All, Routers

Step 10

If you run a small office make sure that all your wall ports are located in areas where they are secure. Behind desks and generally away from where the public or any visitors may be able sneakily plug a laptop in.





Limiting Data Usage when Tethering

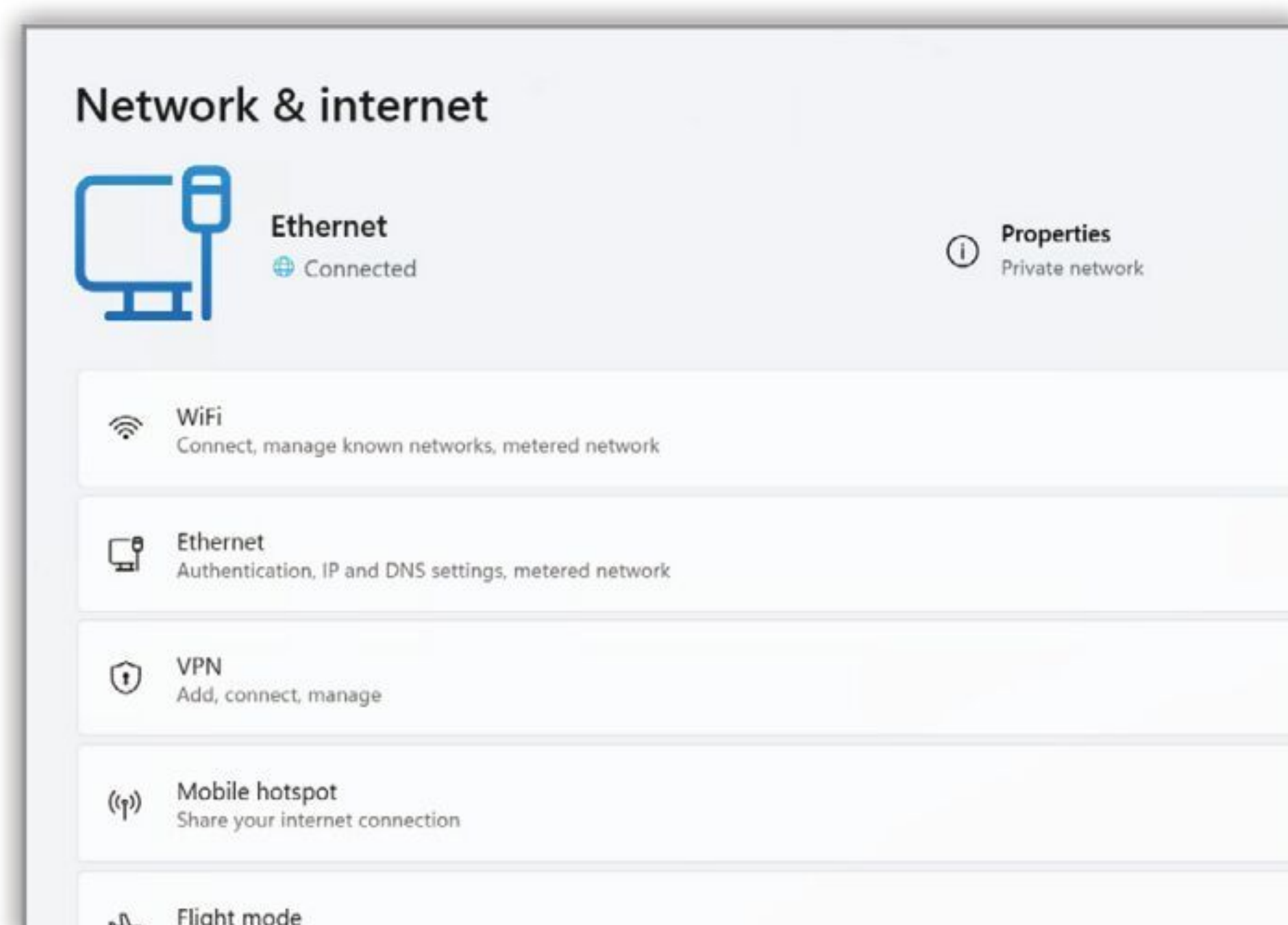
Tethering means connecting your phone to the mobile data network and then connecting a second device via Wi-Fi to the phone to make use of that connection. Windows 11 can be data-heavy; a problem if your phone has limited mobile data allowance.

Set Your Tethered Connection to Metered

Windows 11 can be quite data-heavy, as mentioned, especially if an update happens to become available when tethered. Luckily, you can tell Windows to automatically limit data use.

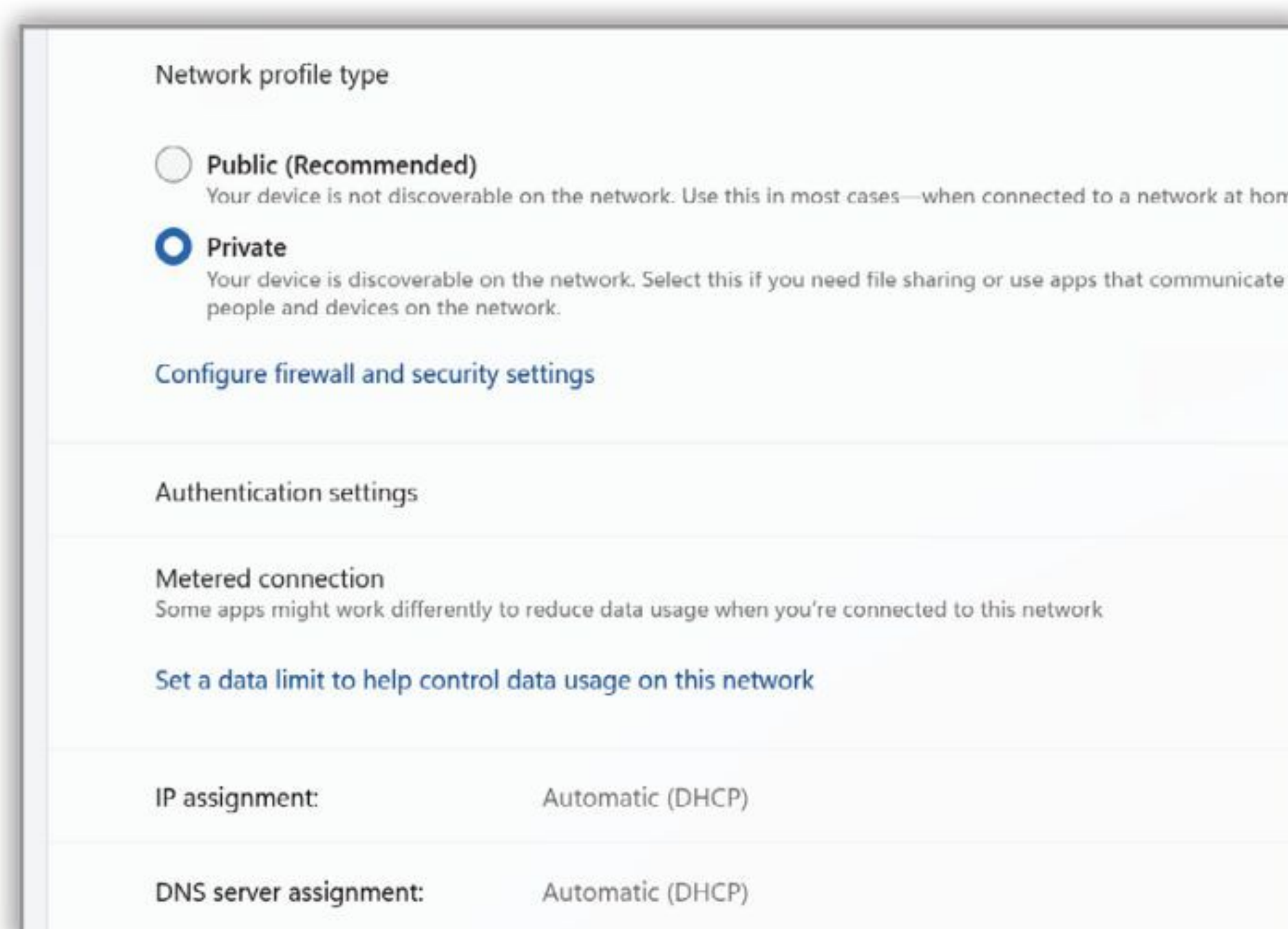
Step 1

Cellular data connections are set as metered by default. Wi-Fi and Ethernet network connections can be set to metered but aren't by default. Some apps might work differently on a metered connection to help reduce your data usage. Some updates for Windows won't be installed automatically either.



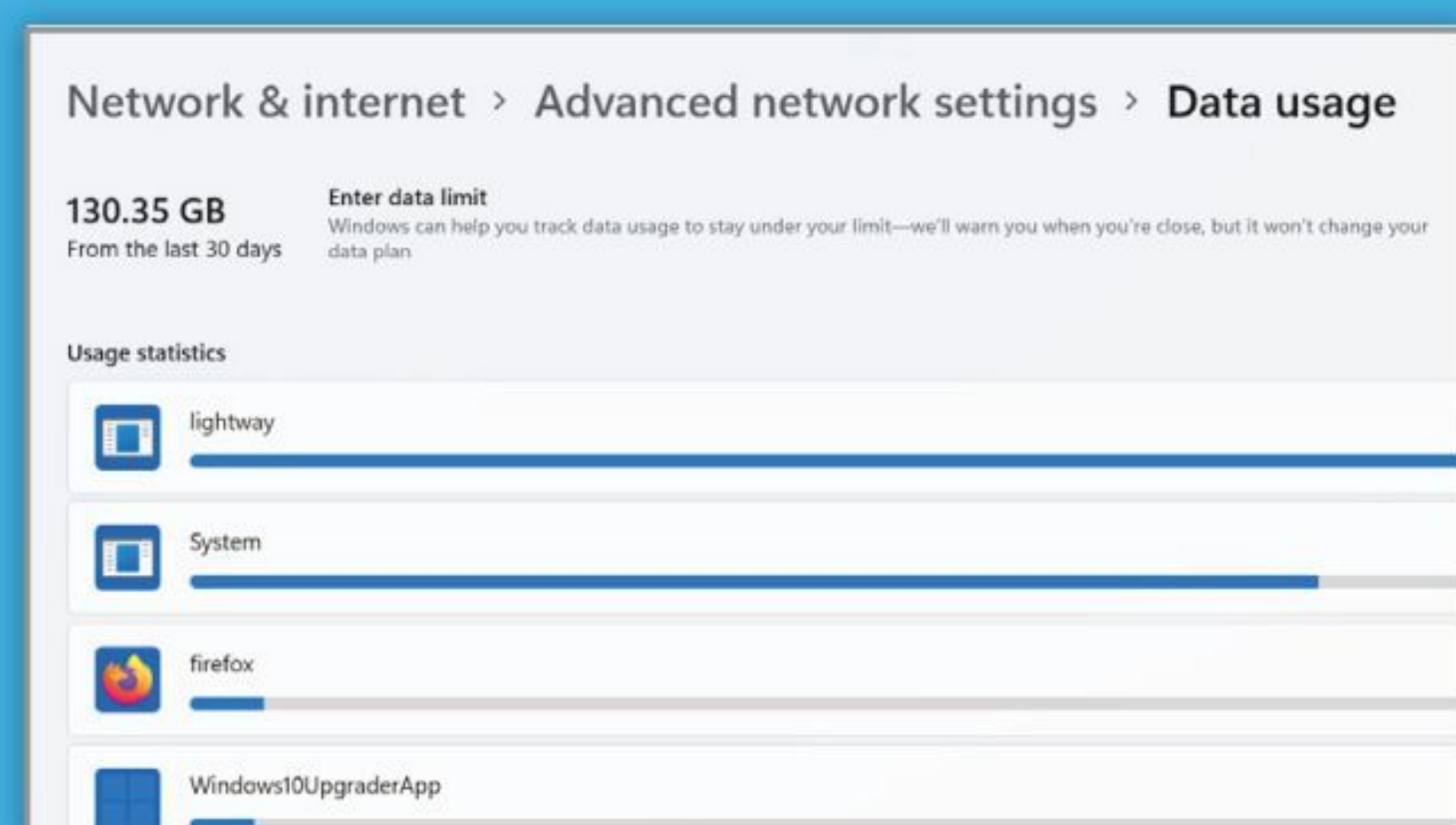
Step 2

To set a Wi-Fi network connection as metered, click Start > Settings > Network & Internet > Wi-Fi > Manage known networks. Select the Wi-Fi network > Properties > turn on Set as metered connection. Unfortunately, many Windows apps completely ignore the metered connection setting.



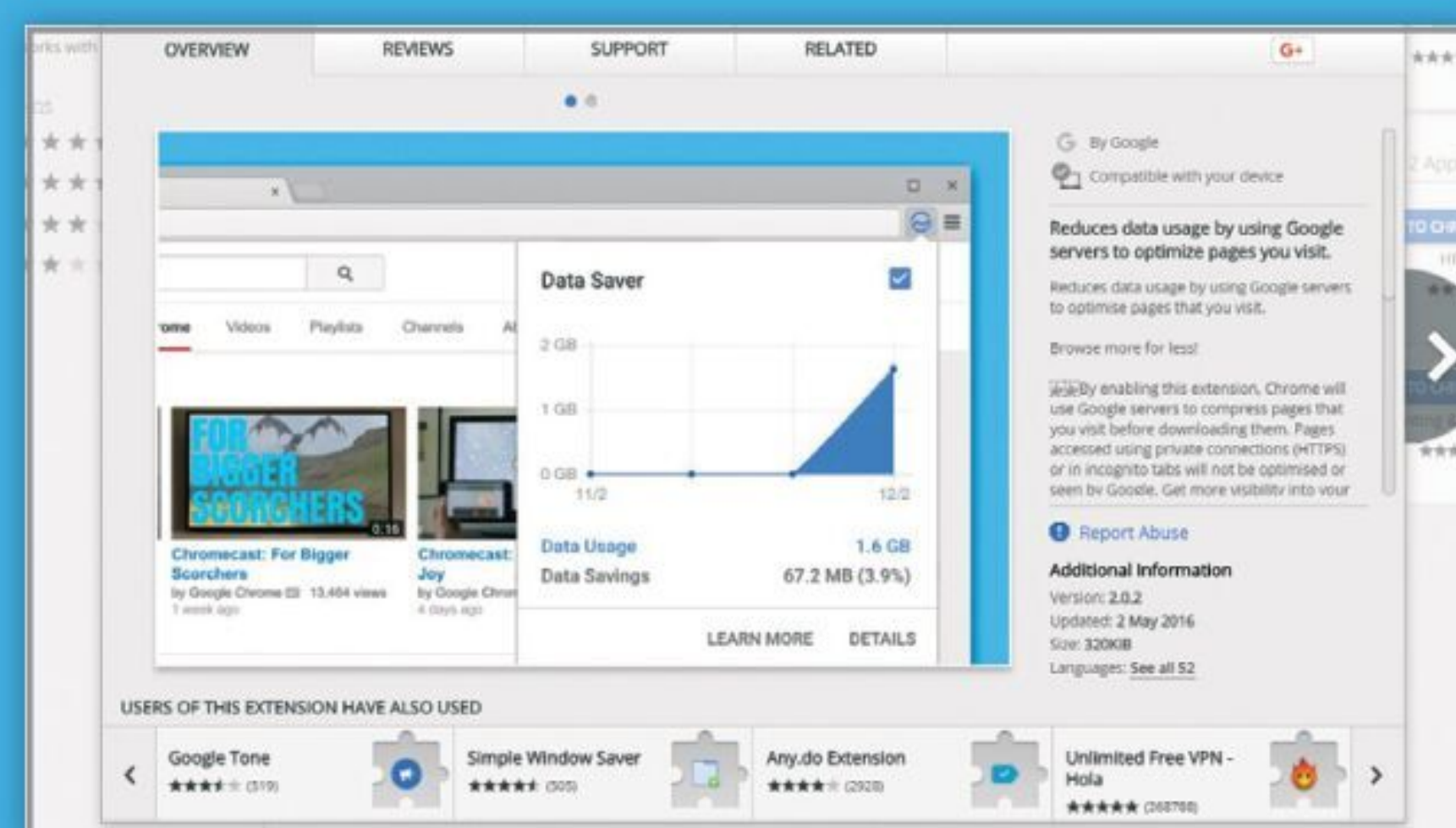
Check Network Usage Details

You can also view a log of how much data applications on your PC have used in the last 30 days. This can help you identify applications that might be using data in the background. To check this, head to Settings > Network & Internet > Data usage and click the graph to see more details.



Manage Browsing Data

You should now have reduced background data use, including updates and cloud syncing, so data use will be in the apps you use; for example, Google Chrome. You can install a handy extension for Chrome which limits data. Go to www.google.com/webstore/ and search for Data Saver.

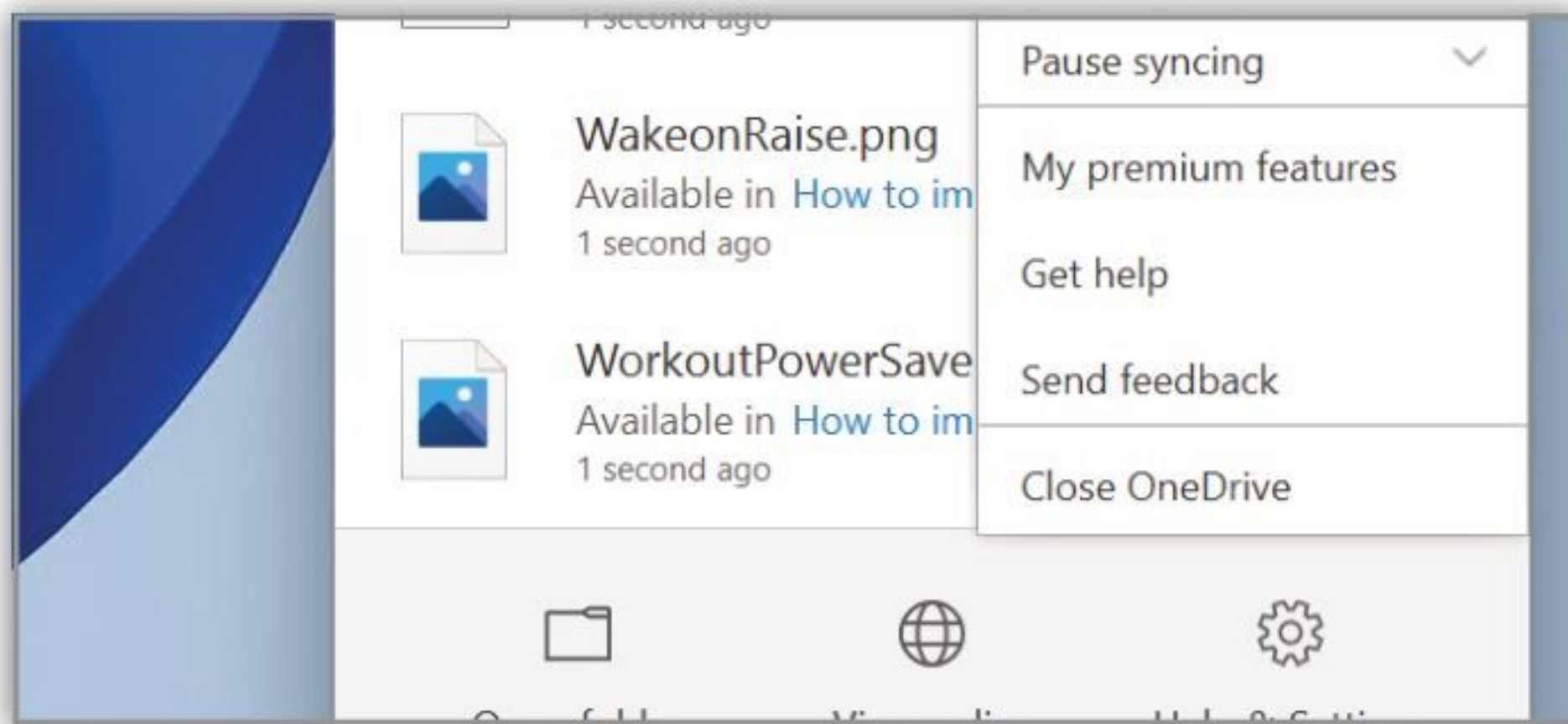


Pause or Disable OneDrive

If you use OneDrive to backup images etc., pausing it while you are tethering can help to reduce data use. If you never use OneDrive, you can even completely disable it.

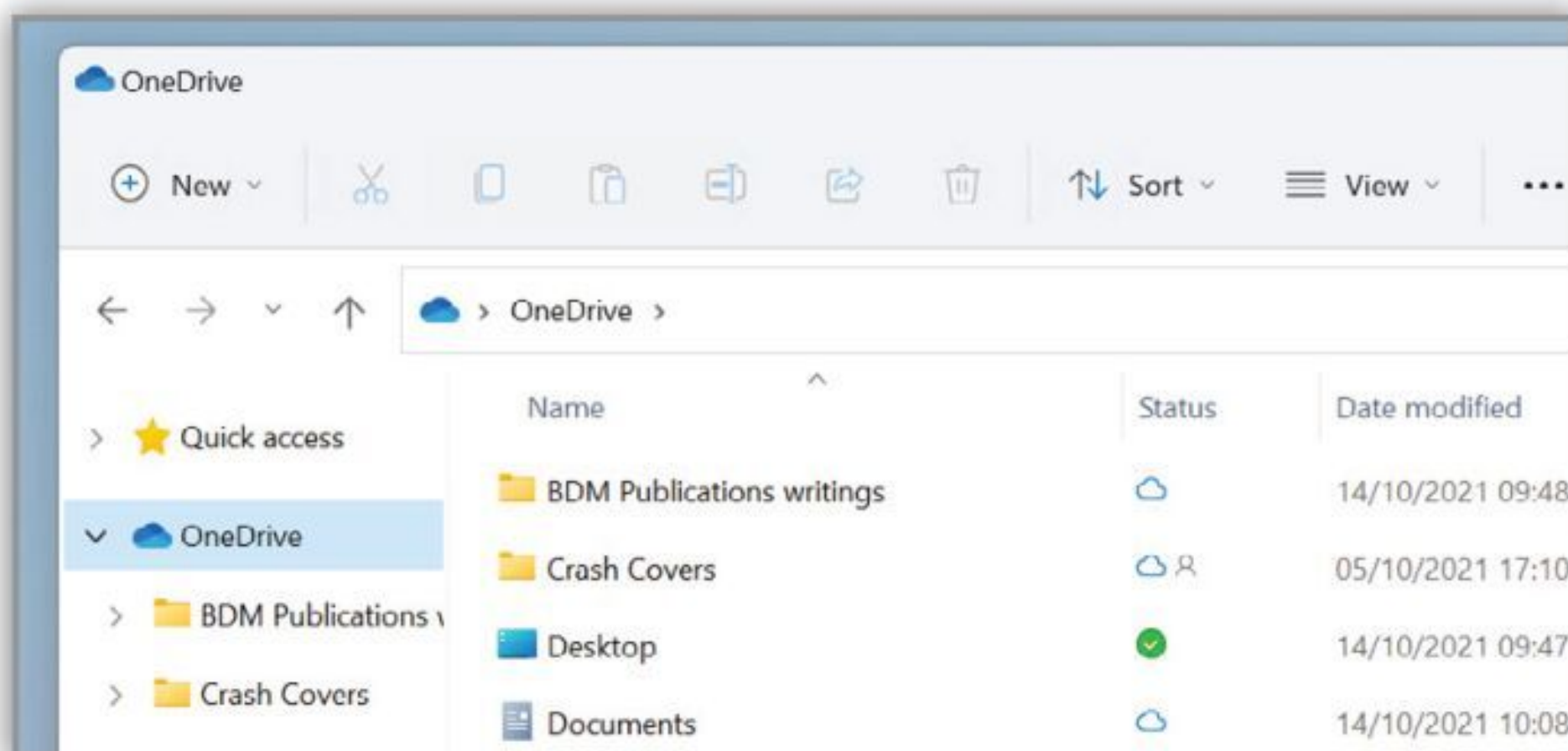
Step 1

When you close your laptop lid, the default setting will be for Windows 11 to go into low power sleep mode. This is obviously no good if you are using your laptop with an external monitor, as it will make the laptop unusable. To solve this problem, click on the Battery icon > power and sleep settings in the taskbar.



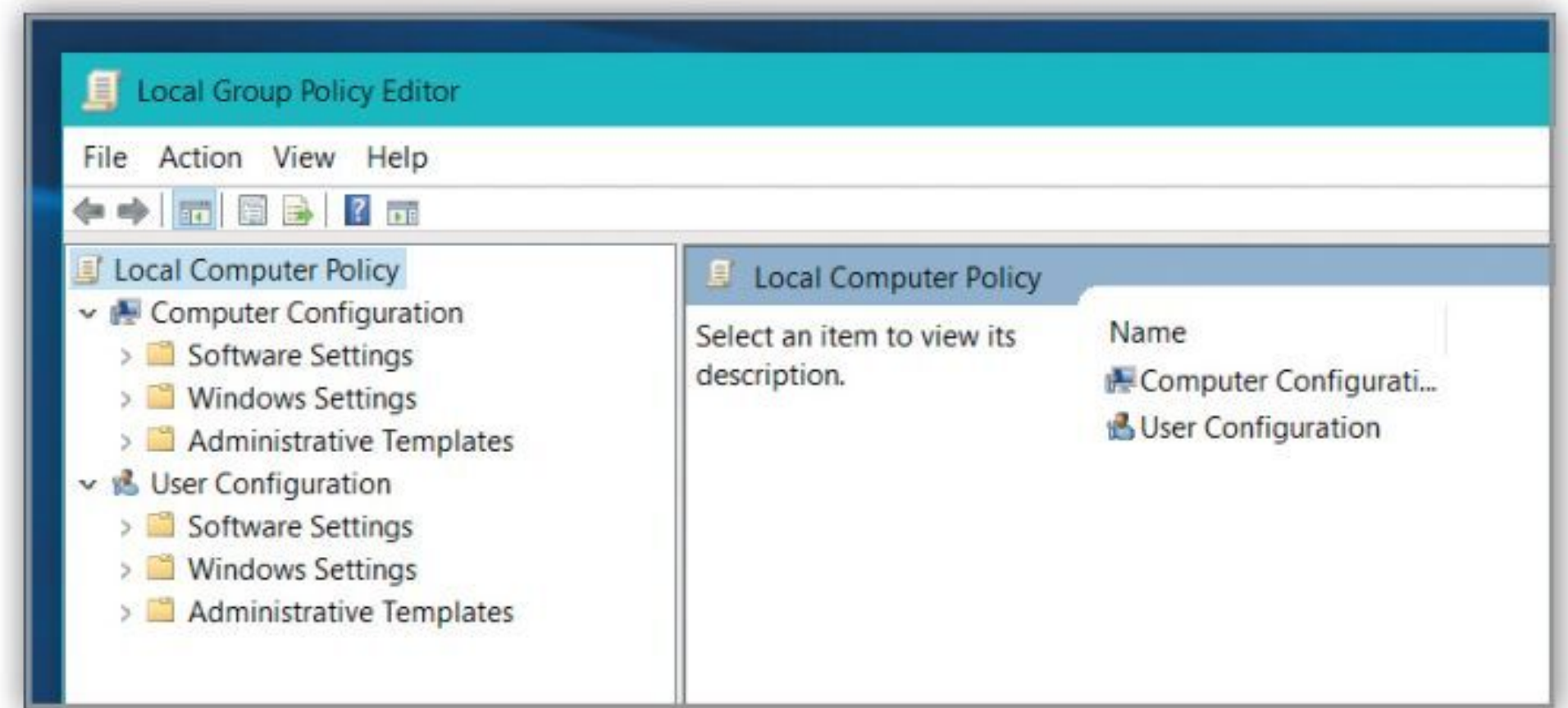
Step 2

OneDrive in Windows 11 can be disabled through your computer's Local Group Policy Editor. This doesn't remove OneDrive from your PC but it stops it from syncing with the cloud or connecting with other apps, and removes it from the navigation pane in File Explorer.



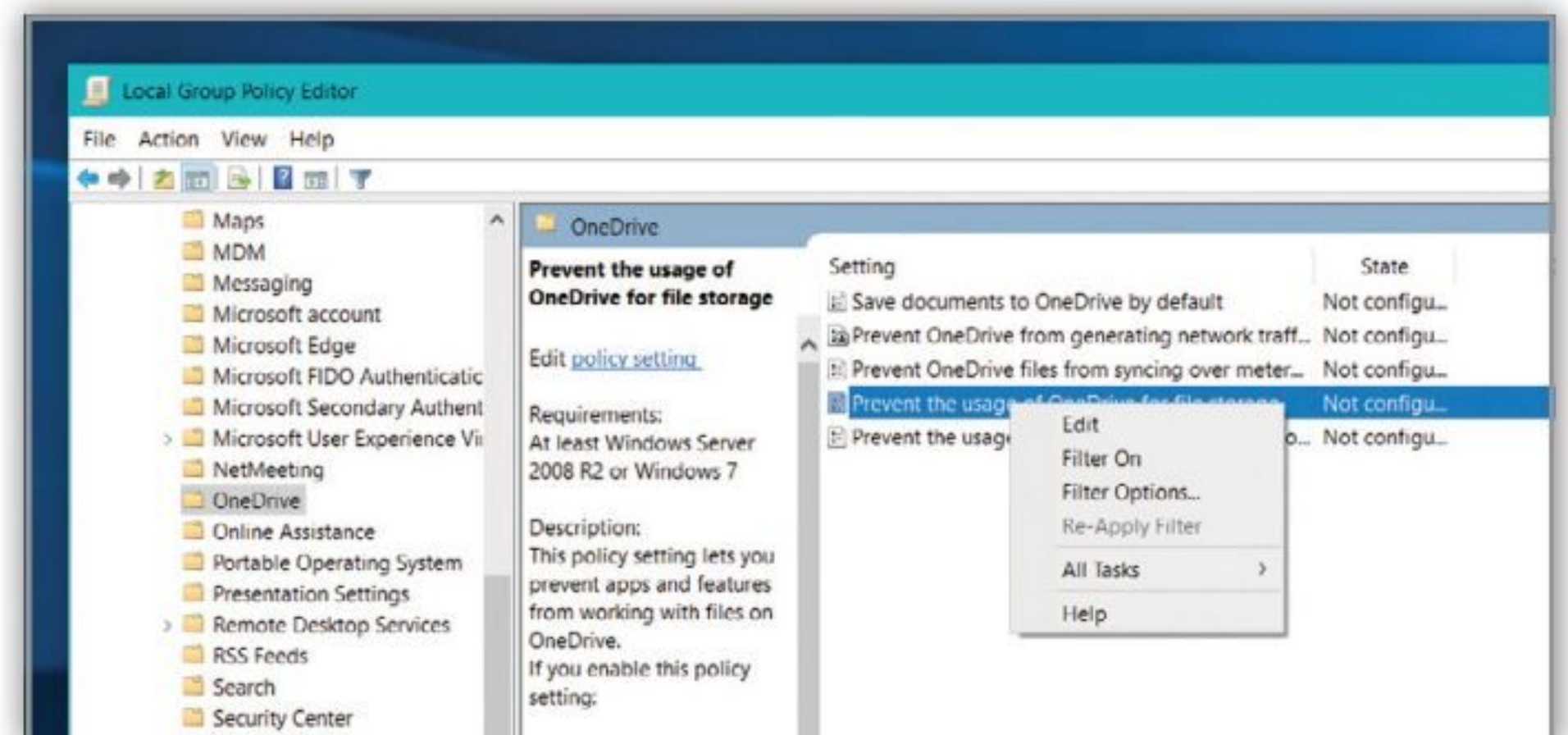
Step 3

Press the Windows key + R to open the Run box. Type `gpedit.msc` and click OK. In the Local Group Policy Editor, in the folder list under Local Computer Policy, navigate the folders to Local Computer Policy > Computer Configuration > Administrative Templates > Windows Components > OneDrive.



Step 4

On the OneDrive screen, under Settings, click Prevent the usage of OneDrive for file storage. In the Prevent the usage of OneDrive for file storage box, select Enabled, then click OK. Be aware that disabling OneDrive like this will disable it for all users of the PC, not just you.



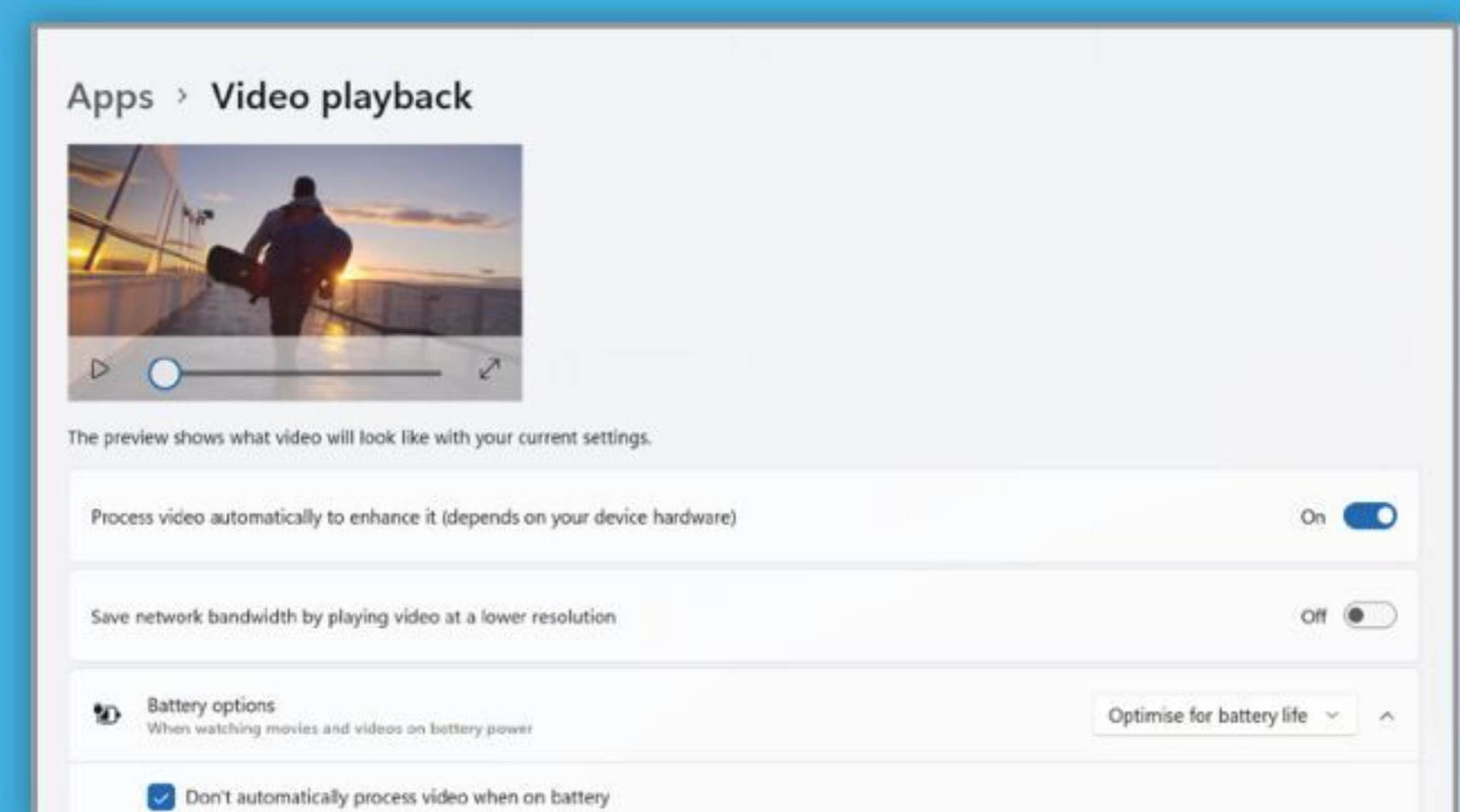
Check Task Manager

The Task Manager is a great tool for checking to see which apps or services are using a lot of data at any time. To open the Task Manager, press `Ctrl+Shift+Esc` or search for it in the Start menu search field. Click at the top of the Network tab to display high usage services at the top.

Name	CPU time	Network	Metered network	Tile updates
Microsoft Edge	0:04:35	165.4 MB	0 MB	0 MB
Microsoft Store	0:08:52	128.8 MB	0 MB	0 MB
Skype	0:07:07	41.8 MB	0 MB	0 MB
Get Started	0:03:03	23.1 MB	0 MB	0 MB
Tips	0:00:01	3.5 MB	0 MB	0 MB
Microsoft Teams	0:00:24	1.5 MB	0 MB	0 MB
WhatsApp	0:00:31	1.2 MB	0 MB	0 MB
Xbox Game Bar	0:00:53	0.9 MB	0 MB	0 MB

Reduce Streaming Video Quality

Streaming or downloading videos is a surefire way to burn through your data quickly and is best avoided when tethering. However, if you need to view video over a tethered connection, you can tell Windows to reduce quality in Settings > Apps > Video Playback. Click 'Allow video to play at low res'.





Protect Devices on Public Wi-Fi

There are few places where you can't now find a wireless connection for your laptop. And while this is great for those of us that want to stay connected day and night, accessing Wi-Fi in a public place does bring with it some dangers not found on your home network.

What Makes Public Wi-Fi Unsafe?

The very same features that make publicly accessible Wi-Fi hotspots desirable for you and us, such as the lack of authentication needed to connect, also makes them desirable for hackers.





Let us start by saying that not all public Wi-Fi is equally unsafe. A coffee shop that has a new Wi-Fi password chalked up on the board every day is probably safer to use than one where the password has been the same for five years, but not by much. As a rule of thumb, you should assume that any network connection you do not control will have fewer defences against interception and should be treated as unsafe.

Hackers are able to insert themselves (virtually) between your device and the network connection point, so all of the information sent to and from the network passes through the hacker, who then passes it on. As this information passes, it can be collected without you even knowing it has passed through a third party device. Even if a hacker doesn't want to farm your data directly, if you allow

file-sharing across a network then public Wi-Fi connections can be used to distribute malware. This malware could hide itself on your device and cause all sorts of problems, from logging keystrokes to sending spam emails to contacts as if they are from you.

As the use of public Wi-Fi increases, you can expect the number of different ways hackers can find to attack those using it to increase, as well. That doesn't mean you need to stop using Wi-Fi Hotspots, you just need to ensure that you are not the easy target most hackers are looking for.

If you want to stay connected, but also want to keep yourself and your device safe, there are a few simple things you can do to tighten up security without compromising your Internet access.

Five Ways to Make Public Wi-Fi Safer to Use

Following any one of these steps will increase your security when using public Wi-Fi. Using all of them will make your PC many, many times safer and more secure.

1 - Keep Your Device Updated

Software updates, as well as providing new features, will often include security updates, so it is important to make sure all of your device software is the most recent version. This includes apps and programs, as well as OS updates. Almost all modern devices, from your laptop to the smartphones and tablets you use, make it very easy to keep things updated, often alerting you to the availability of an update or processing updates automatically.

If you have turned off automatic updating on your device (and don't want to turn it back on in the settings), make a point to regularly check for them yourself and of course apply them, as soon as possible, especially on devices that may be used to connect to public Wi-Fi.

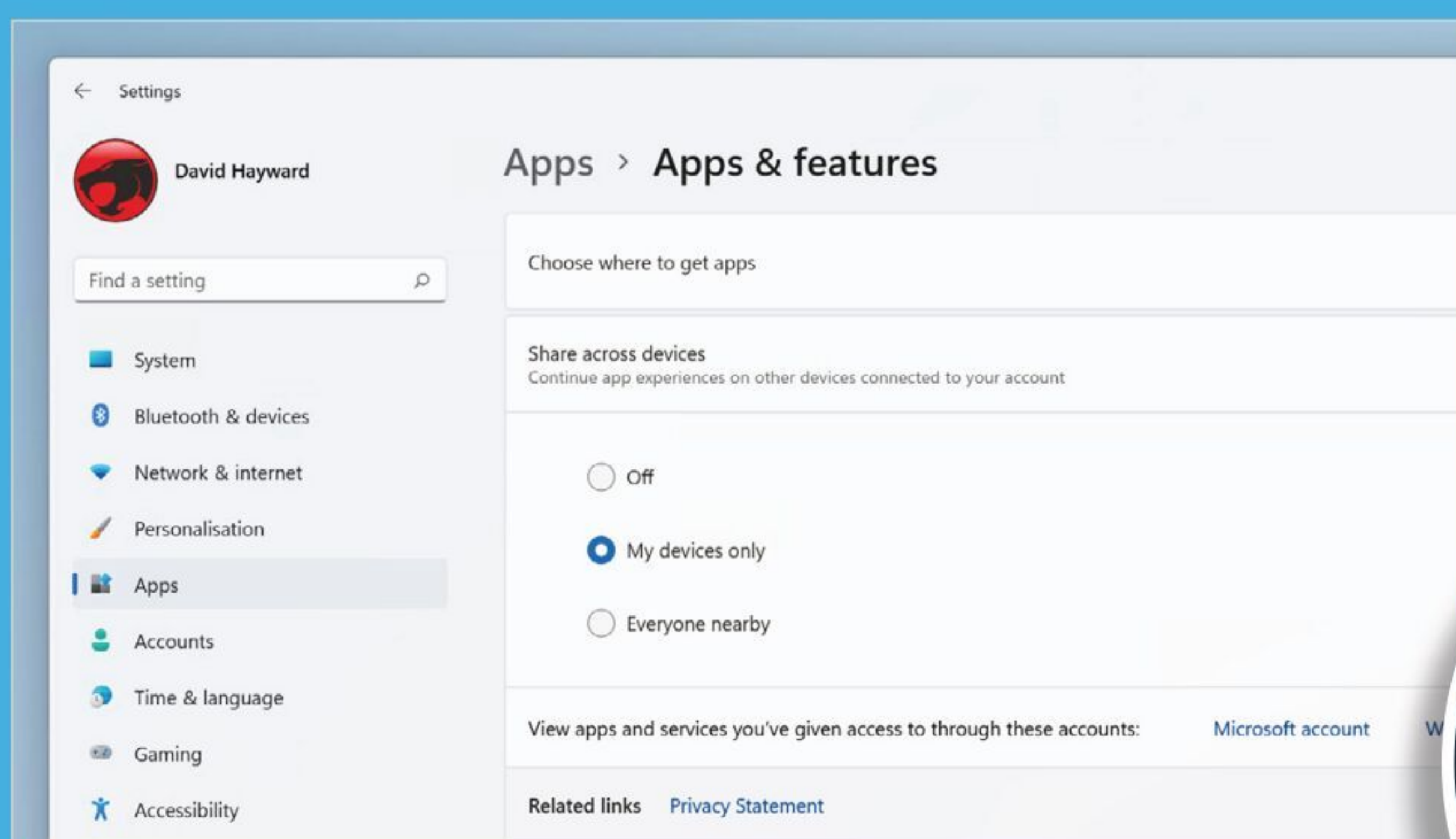
In Windows 11, you can find update information in Settings > Windows Update. If updates are available to download, they will be displayed here (along with any previous failed updates, etc.).



Protect Devices on Public Wi-Fi continued...

2 - Turn off Sharing

Your PCs, phones and tablets are designed to interact easily with other devices you own, using a system known as Sharing. Sharing, as the name suggests, allows data or files to be shared or accessed from devices on the same network. This is normally perfectly fine when all of your devices are connected to your home network, but not so fine when you are connected to a public Wi-Fi hotspot. When using your devices online in public, you should always turn Sharing off. This can be done in Network and Sharing (on a Windows PC). In Windows, you can also just select “Public” when asked about a new network connection. Many mobile devices also allow you to turn off Network Discovery or Device Visibility, meaning it is hidden from other devices connected to the same network. You can normally find this option in the Connections or Wi-Fi settings. In Windows 11, you can find further sharing options in Settings > Apps > Apps & Features > Share Across Devices.



3 - Use a VPN

A VPN, or Virtual Private Network, is a great way of protecting yourself and your device from hackers. They are becoming increasingly popular and therefore increasingly cheap and easy to use.

A VPN provides you with a secure, private and encrypted network to log in to, from your device. Any data sent to and from your device is then encrypted by the VPN at both ends (known as end-to-end encryption). Anyone trying to access your data would need the encryption key to decode it.

There are hundreds, if not thousands, of VPN services available, for computers, smartphones and tablets. Some of these are free and others charge a small monthly fee, depending on the level of security offered. Even a basic, free VPN is better to have than no VPN at all!



Once the VPN is set up, all you need to do is log in to it from the device you want to protect before using the public Wi-Fi connection as you normally would to browse the Internet, send emails, etc.

4 - Install and Maintain Anti-virus Software

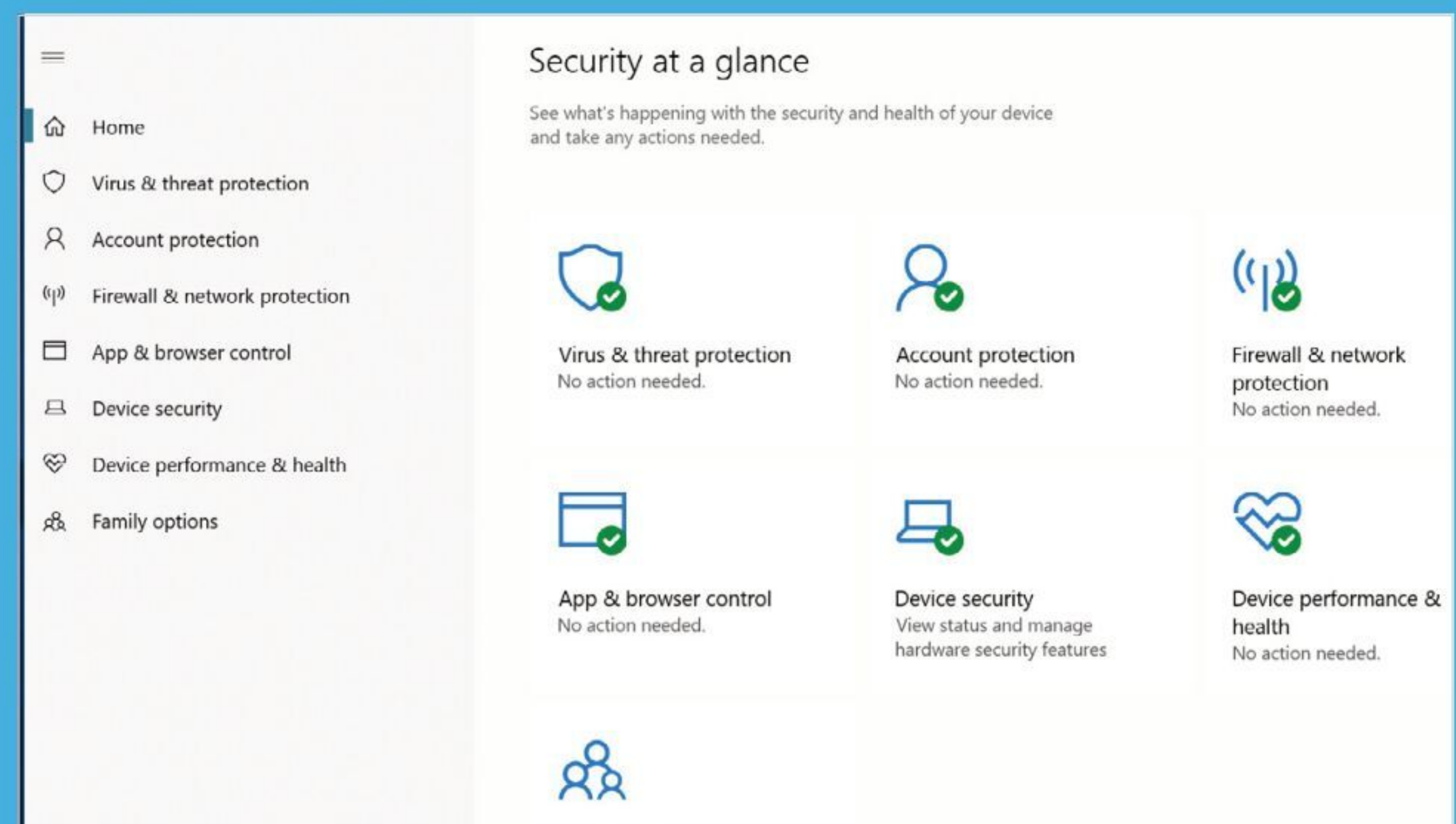


Having a good Antivirus package installed is extremely important, even if you only ever use your device in your own home and even more important if you regularly use public Wi-Fi hotspots.

Many modern antivirus packages offer browser protection, helping you to identify malicious websites before you click a single link on them. They also make it very hard for hackers to install malicious software on your device remotely, by offering improved firewalls and malware scanning.

Notably, it is not enough simply to have antivirus software installed. You also need to make sure that it is regularly updated with the latest malware definitions, so that it knows about the latest threats and is able to counter them effectively.

Some of the biggest names in Antivirus software include: Norton, McAfee, Symantec, Bitdefender and Kaspersky, all of whom offer a range of packages for home and business. You can also find very good, free software from the likes of AVG, Panda Security and Avast.

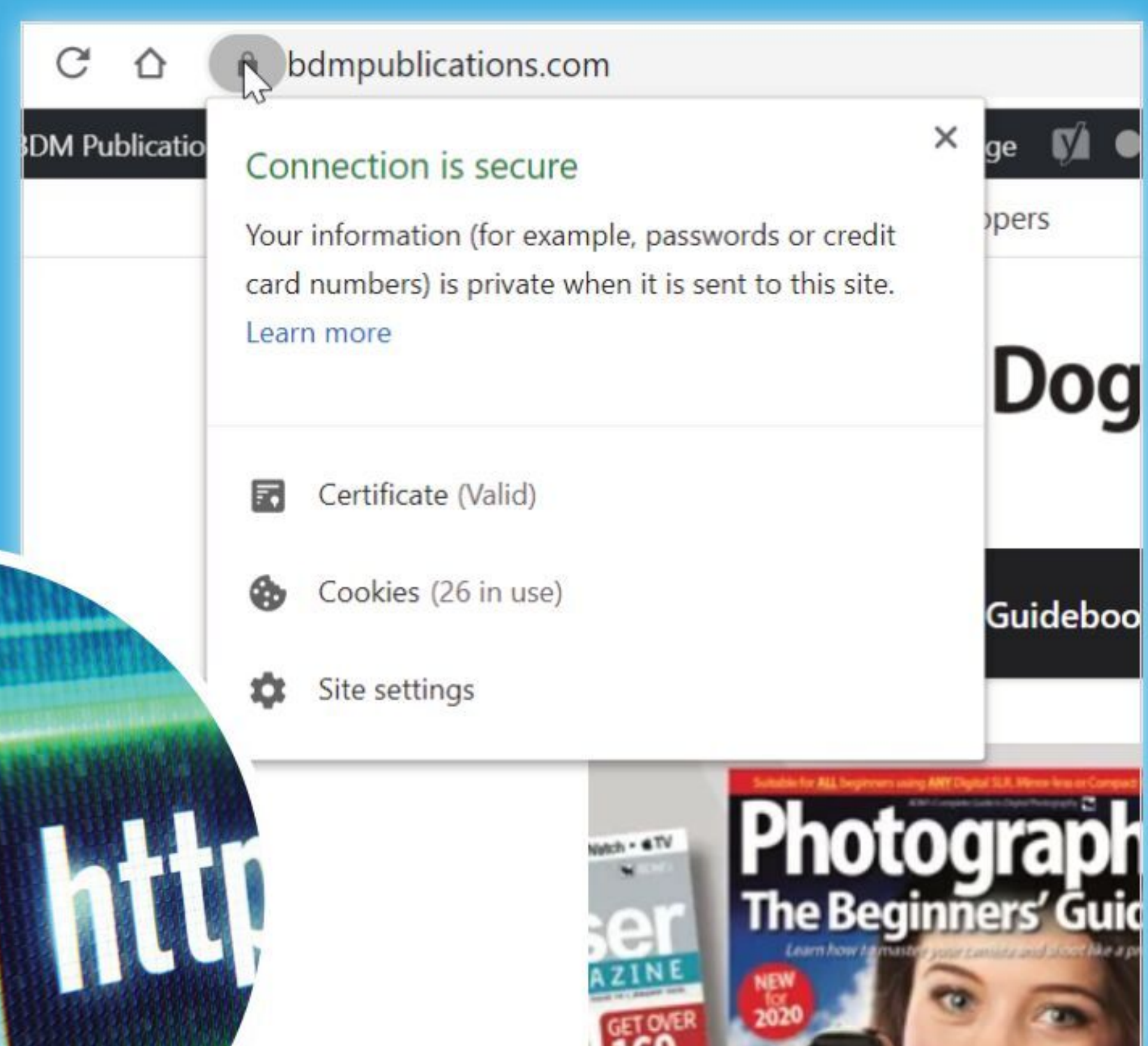


5 - Use Only SSL Connections

Many of the biggest, frequently used websites, now use SSL connections (particularly since Google suggested that websites not using the HTTPS protocol would be flagged as unsafe and potentially appear lower in the search results).

As a general rule, even when not browsing through public Wi-Fi, any websites you use regularly and that require you to log in or enter your credentials, should be set to "Always use HTTPS". Most websites that ask for details about you have an HTTPS option somewhere in their account settings (if they don't already force HTTPS across the site).

This might not seem as important on a videogame forum as it does on a banking website, but hackers are aware that people use the same passwords over and over again, so seemingly "safe" websites can be a goldmine of information about you for those clever enough to realise it.





How a VPN Can Improve Windows Security

We've emphasised the enhanced privacy that a VPN offers when you're connected to its services, and the heightened levels of anonymity, but what security benefits does a VPN bring to a Windows 11 computer with an antivirus program already installed?

Security Beyond Anonymity

It's a good question: how can a VPN improve Windows security? While the privacy side is well catered for, there are some good security enhancements and features a VPN brings to the table.

Feature 1

This doesn't happen often, but an ISP can become compromised and details of user activities leaked or stolen. Using a VPN can hide your browsing activity from trackers and even your ISP, enabling you to browse without the fear of having your details leaked or accessed by others.



Feature 2

Many VPN providers utilise a level of antimalware into their security layers. This enhances your security by filtering any downloads through the VPN first. Should there be a virus present, then it can be removed or stopped at the VPN before it even reaches you.



Feature 3

To expand the previous feature, VPNs filter web pages that are dangerous or contain threats. Even with a good antivirus client installed, you can still access a dangerous site. Using a VPN prevents the site from even being loaded.



Feature 4

The connection between you and the VPN server is encrypted to the highest possible standards. This makes it near impossible for some external element to gain access to the data you're transmitting. Online banking and shopping are extremely secure with a VPN.



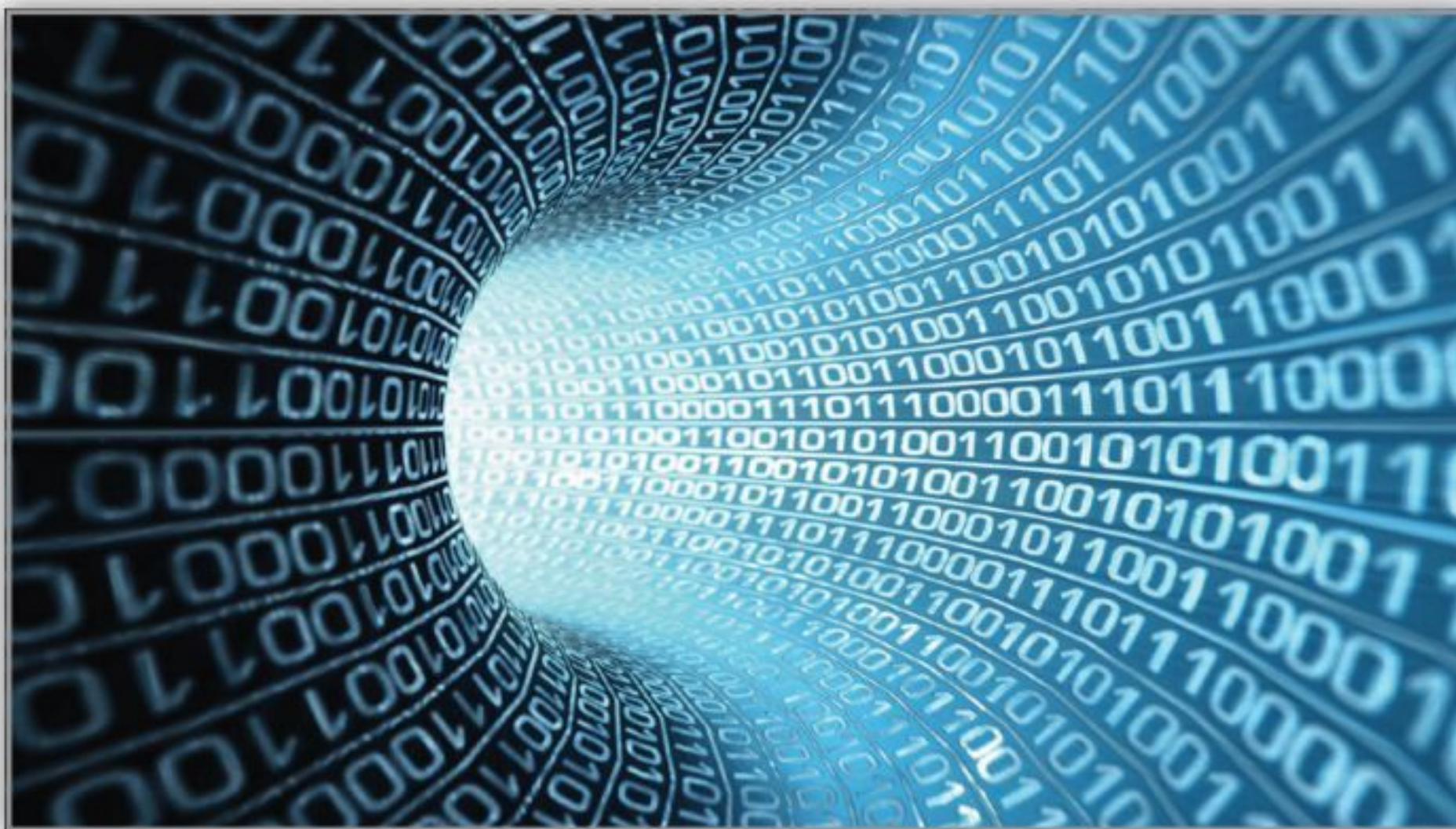
Feature 5

Public and free Wi-Fi hotspots are notorious when it comes to mobile security. Anyone with a little knowledge and some free tools via the Internet can intercept public Wi-Fi networks and hijack your connection, revealing all your data. A VPN encrypts the data and protects you.



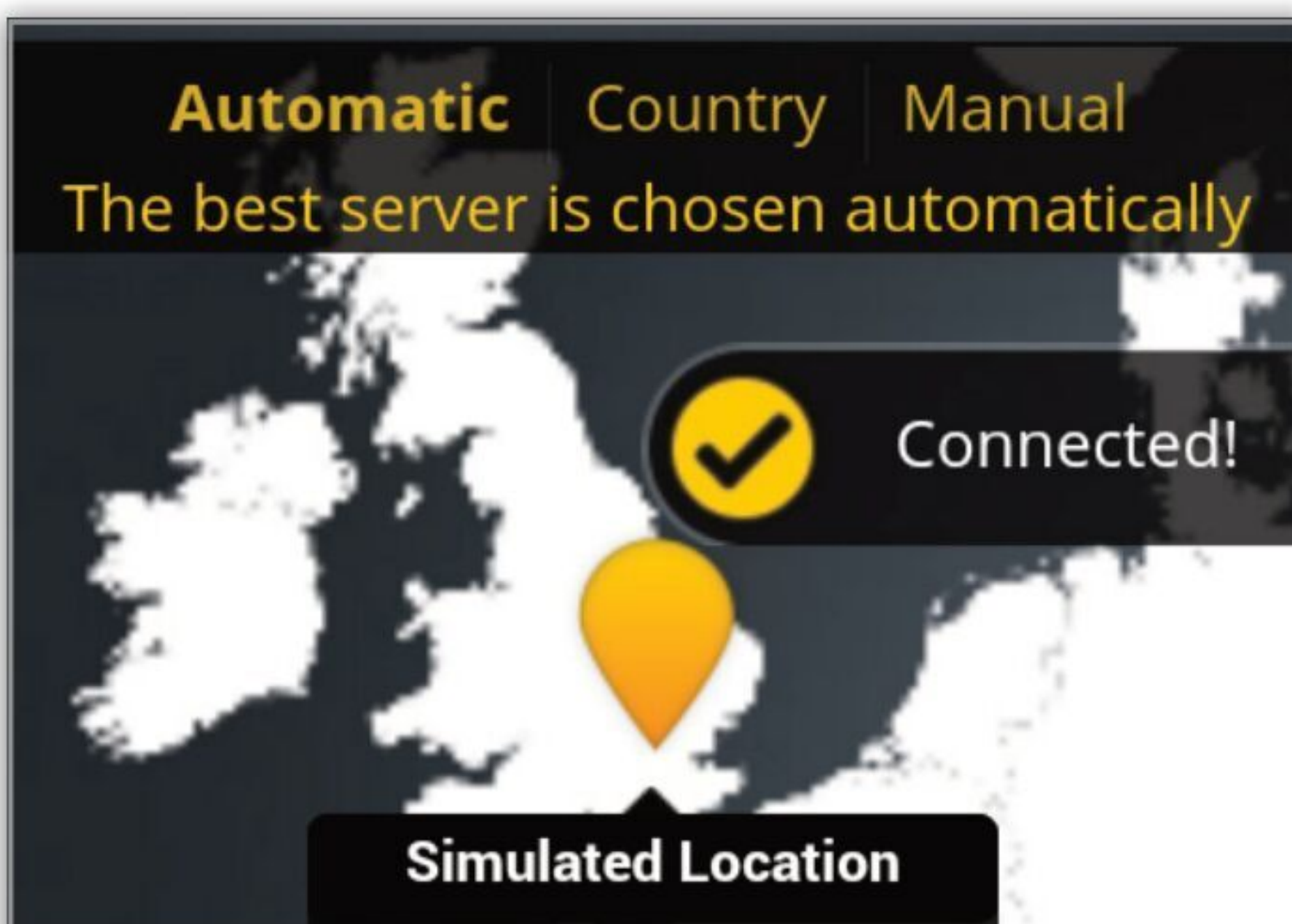
Feature 6

If you're working abroad, or you're a remote worker, a VPN connection to the company's servers ensures that all the sensitive business data remains secure. It's difficult for a company to ensure 100 per cent security with mobile and off-site workers, but a VPN provides a secure tunnel straight to the company itself.



Feature 7

The availability of iOS and Android VPN clients means that your call data and data stored on your device is also secure. Mobile VPN apps use the same levels of protection and security, so your data can't be stolen when you're not even aware of it.



Feature 8

Most VPNs also add an extra layer of security whereby they actively block any advertising from websites. Internet ads are a necessary evil in some ways, as they provide much-needed funds for your favourite freely available websites. However, some contain malicious content and need to be blocked.



Feature 9

Using HTTPS instead of HTTP utilises the secure side of the Internet protocol. Sadly, it's not always implemented either in browsers or by users. Many VPNs force all websites to use the secure connection that a HTTPS site offers, thereby enhancing your browsing security.



Feature 10

In some countries, data retention laws are quite archaic, meaning governments and other bodies are able to access your data log for as long as you've been able to access the Internet. A good VPN won't detail any logs of your browsing and in most cases won't even hand over any personal information relating to you to other agencies.





Blocking PUPs with Windows Defender

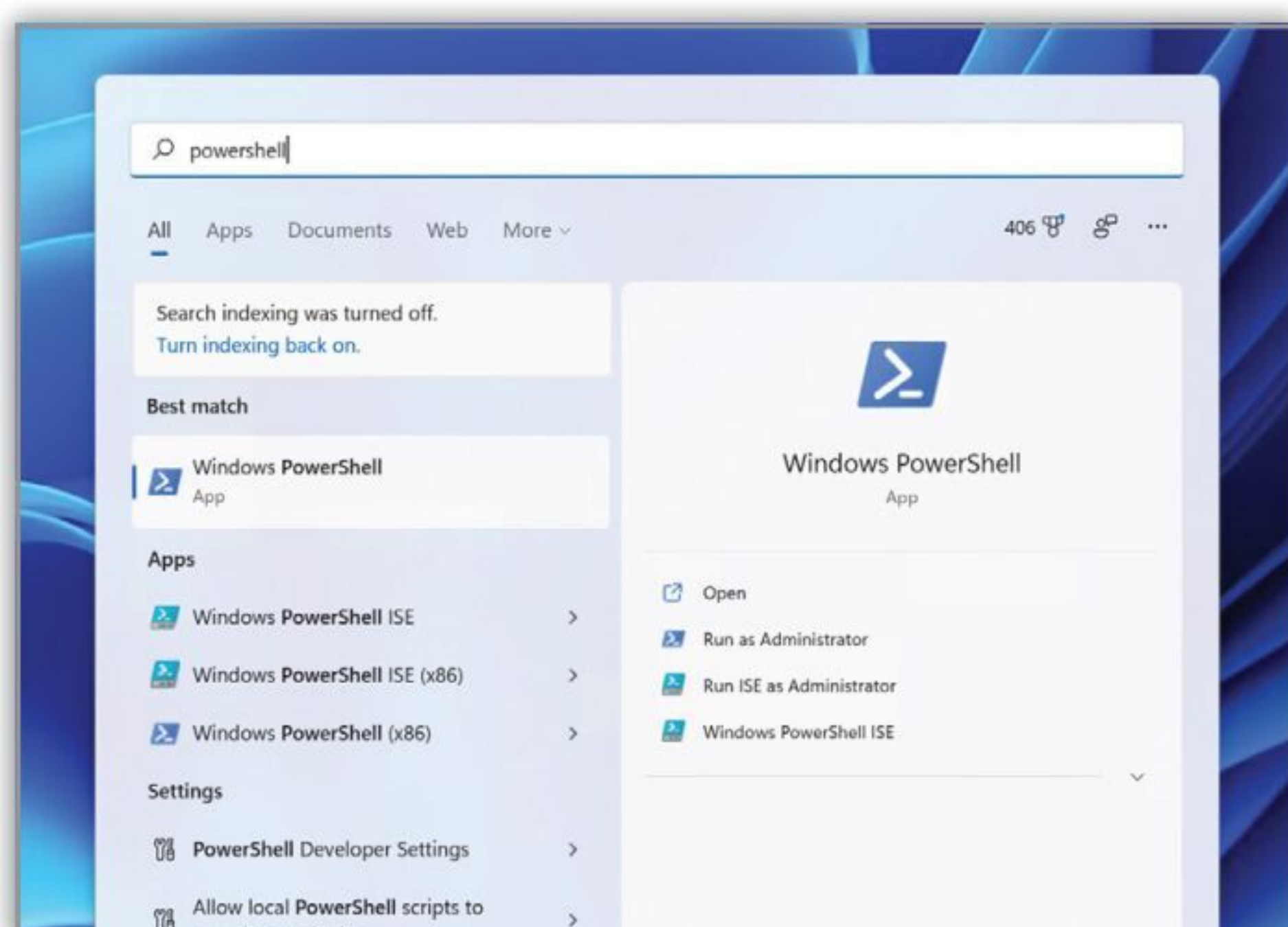
PUPs, Potentially Unwanted Programs, are bits of software that can sometimes be stealthily installed when you install other free software, usually by making it a default installation option with the choice to opt out.

Enable PUP blocking

PUPs can include toolbars, browser extensions, adware and other unwanted software. In almost all cases, this software should be called DUPs (Definitely Unwanted Programs).

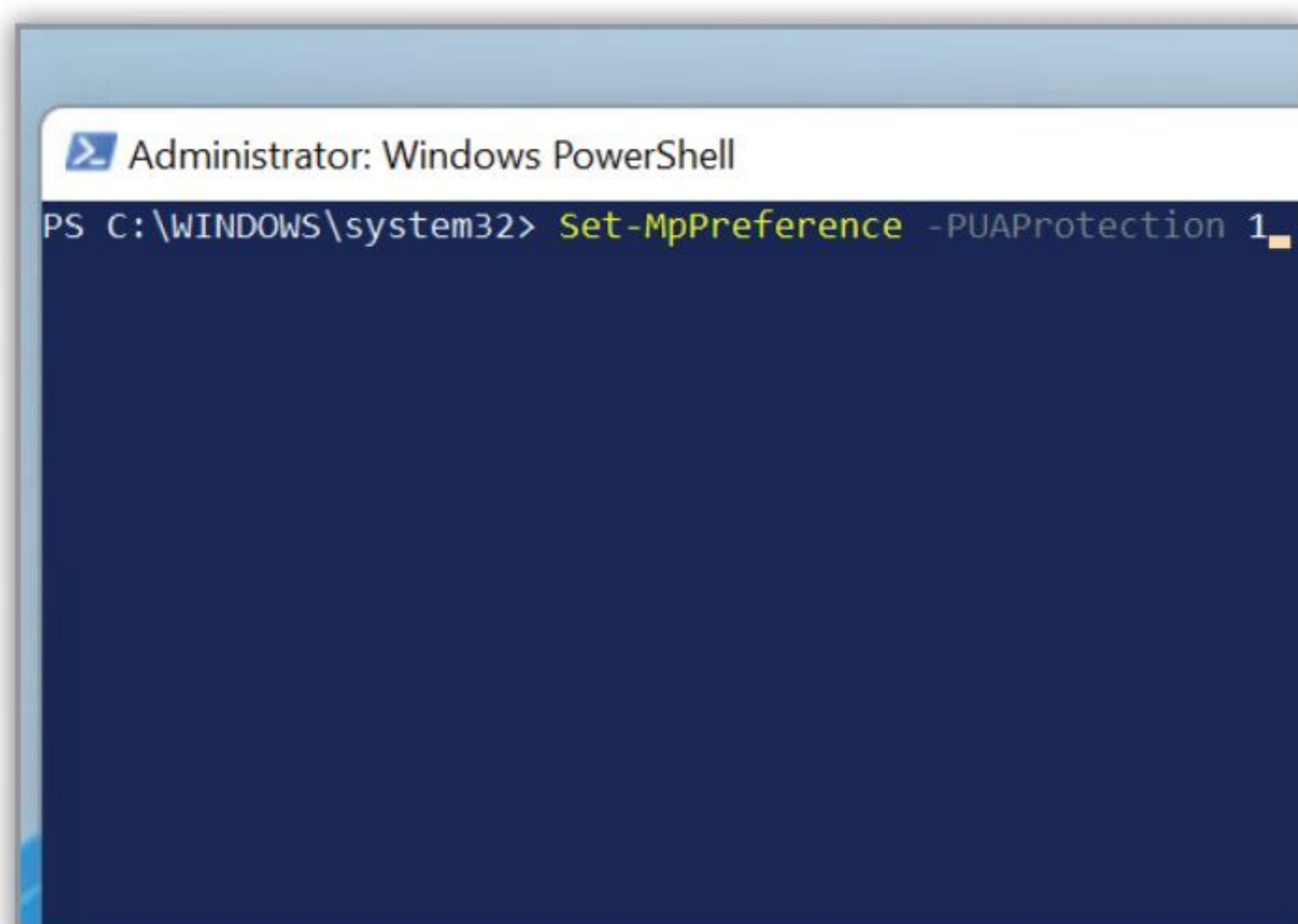
Step 1

You can enable PUP protection with System Centre Config Manager, PowerShell or Microsoft Intune. For this guide, we'll be using the PowerShell, as this is available within Windows 11 without installing any additional software; as long as you follow the instructions carefully, it isn't as scary as it sounds.



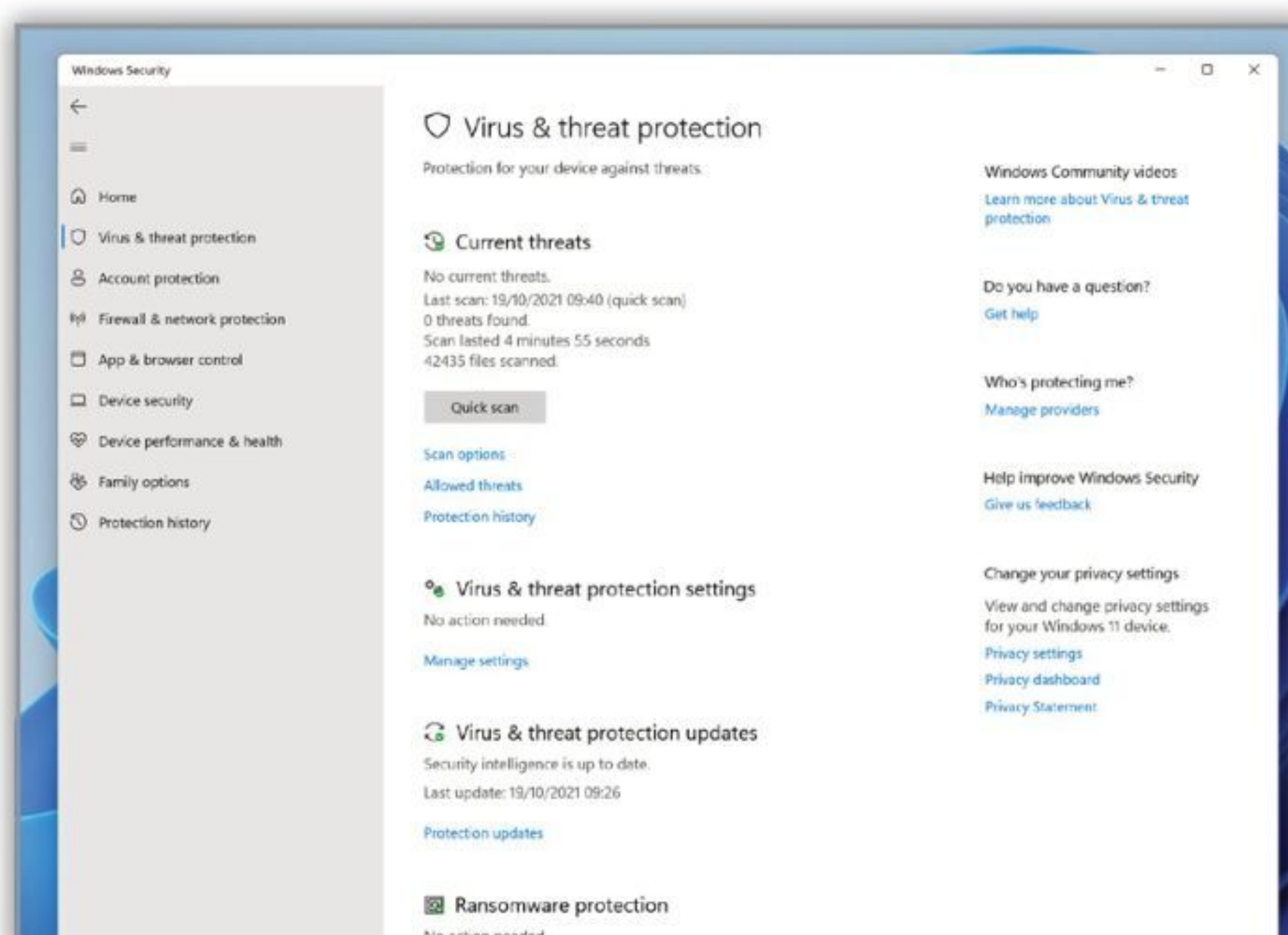
Step 2

To access the PowerShell interface, click the Windows Start button and type 'powershell'. Within the returned result, for Windows PowerShell, click on the Run as Administrator. Type the following command at the prompt: **Set-MpPreference -PUAProtection 1**, and press Enter.



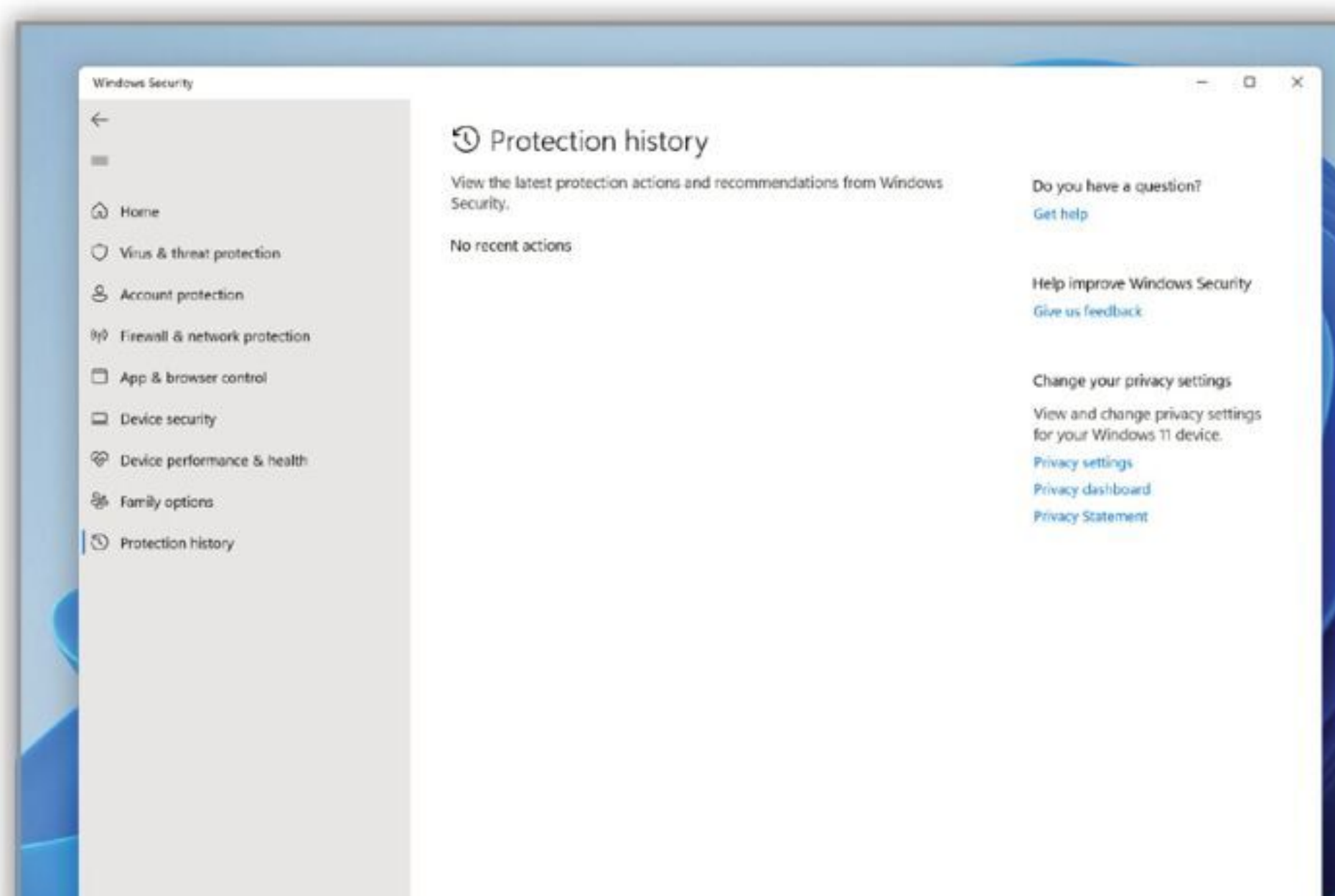
Step 3

The PUP blocker is now enabled on your PC. You will not see any new options displayed in Windows Defender but you will see "Potentially unwanted software" listed once something is blocked. If you want to disable it in the future, just run the above command again, replacing the 1 with a 0.



Step 4

PUPs are blocked when a user attempts to download or install a suspicious file or if the file meets one of these conditions: the file is being scanned from the browser, it is in a folder with "downloads" in the path; or it is in a folder with "temp" in the path. The offending file will then be placed in the quarantine section.



Aa

Installing New Fonts

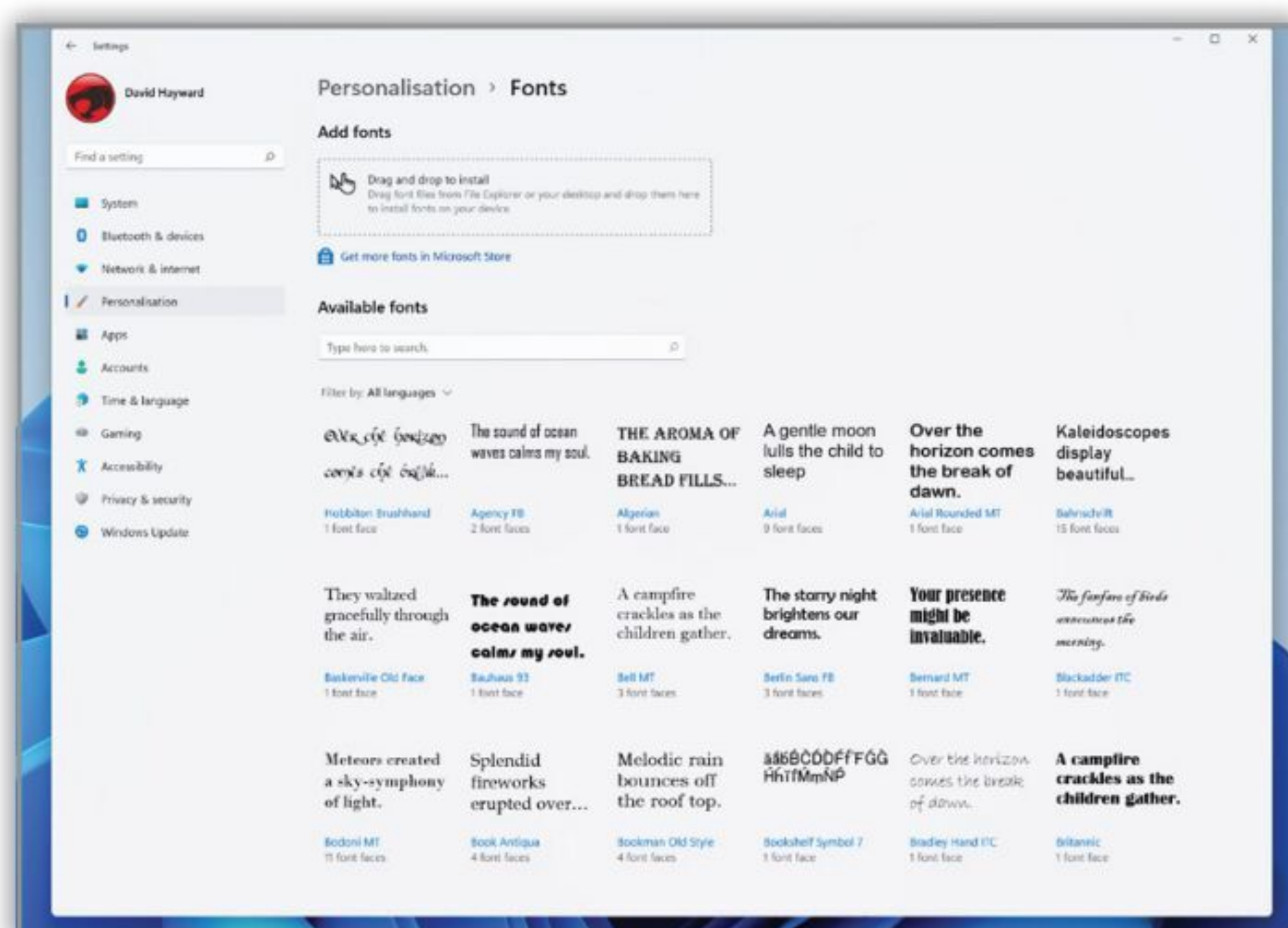
Windows 11 now includes a new, easier way to install and manage system fonts. This is part of Microsoft's ongoing process of moving all the system options and features to the main Settings interface. It even allows you to download from the Store.

Install and Manage Fonts

Installing and Managing fonts required a bit of effort, but now you can install any font available for download in the TrueType, OpenType or PostScript file formats.

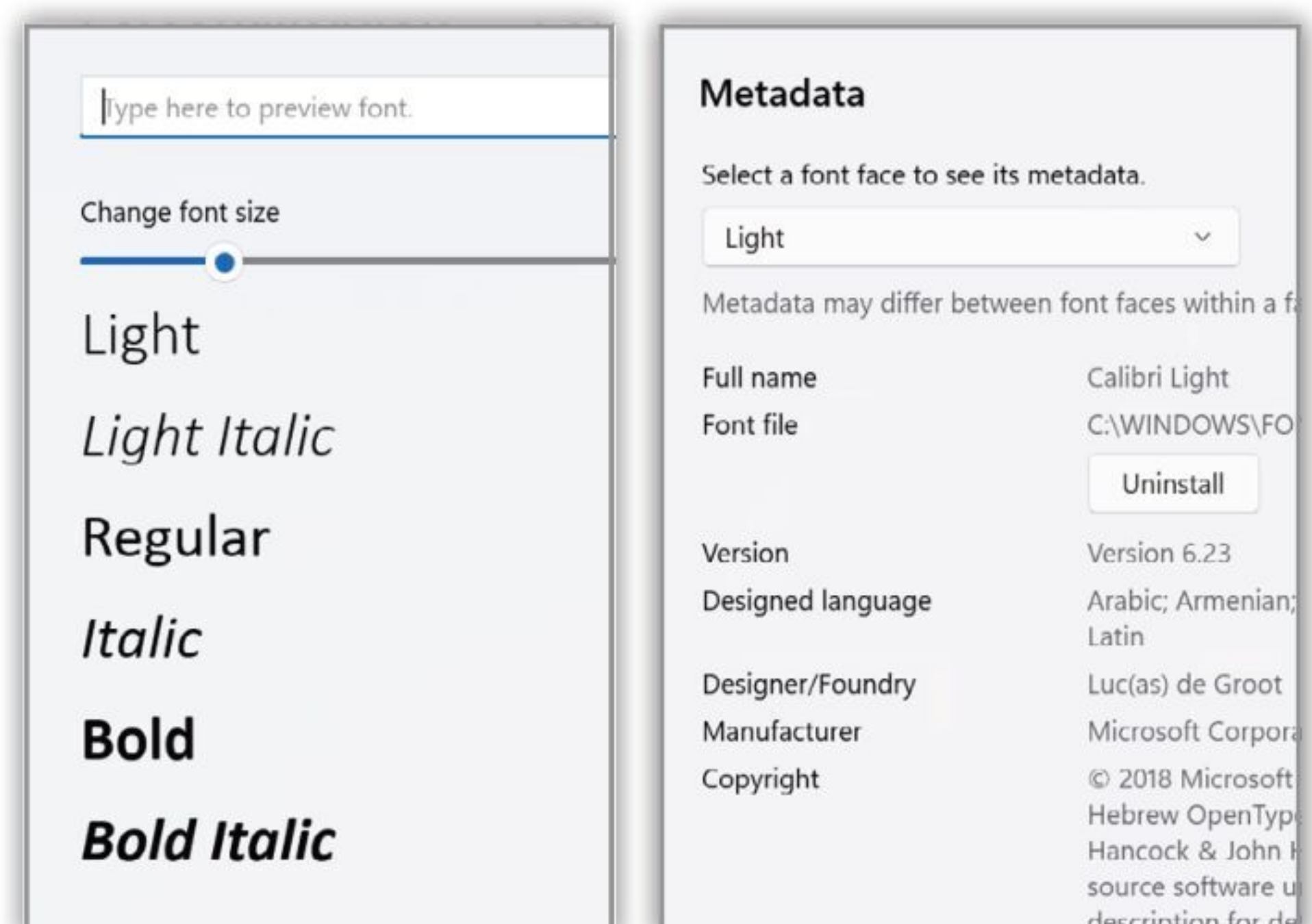
Step 1

You can now find the fonts controls in Settings > Personalisation > Fonts. Here you will see a scrollable list of your current fonts, each with a visual example of how they look. This is a much more user-friendly way of viewing your fonts, letting you see exactly what each will look like when used.



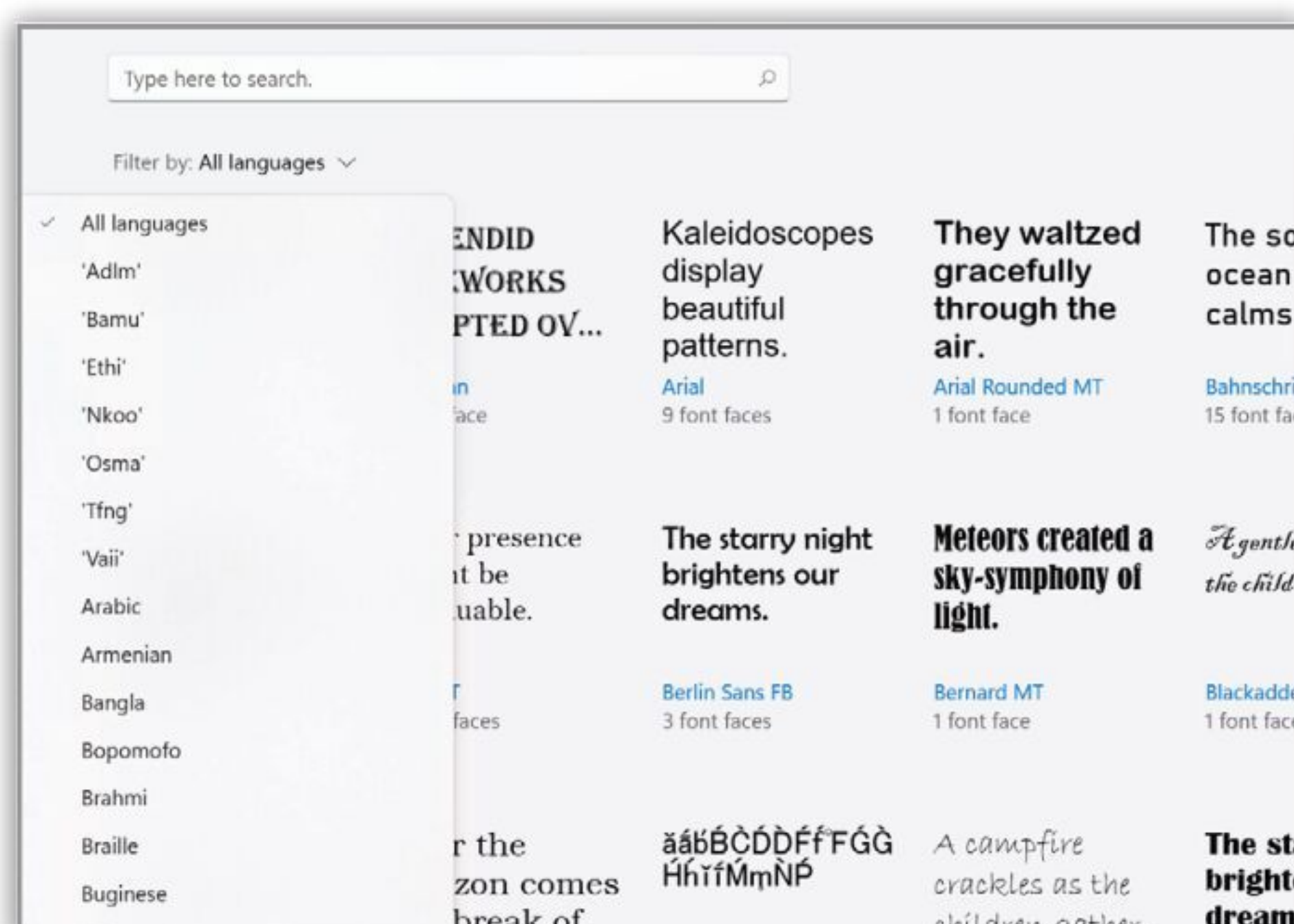
Step 3

Click on any font in the list to view the available font faces and to see the font as it will display at different sizes, using the slider. You can type a word or sentence into the box at the top to see how it will look in that font. To uninstall a font, simply click the Uninstall button on the font preview screen.



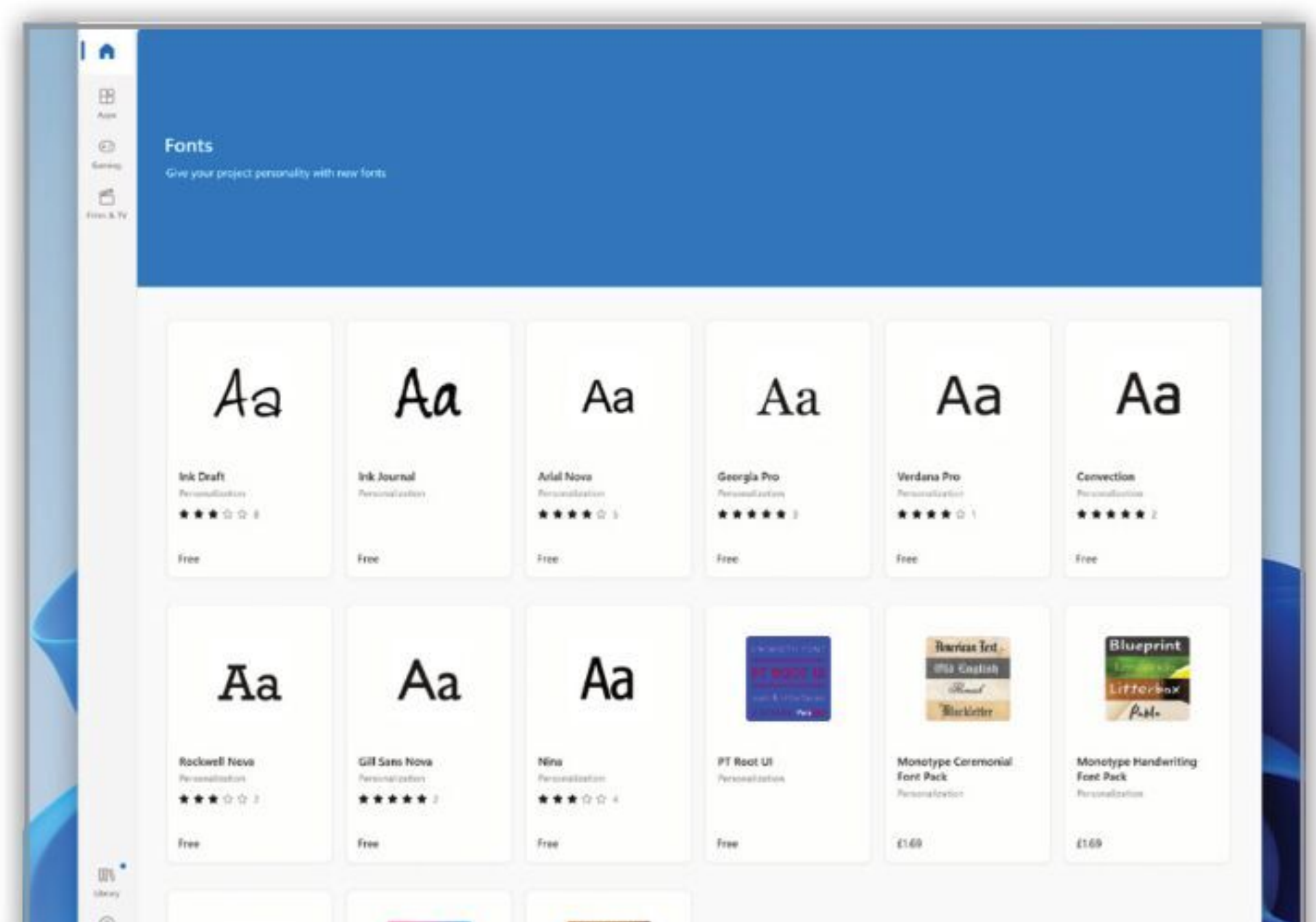
Step 2

You can search for fonts using the search field at the top or just look through the alphabetical list. You can also filter the list by language. Each font is shown with the number of font faces it includes. A font face is a different version of the same font, i.e. regular, bold, italic, italic bold, etc.



Step 4

To find new fonts, click the Store link at the top of the main fonts page in the settings. The Store will open with all available fonts displayed. To install one, click on it in the Store and then click the Get button, or the Buy button if the font is not a free one. Installation is automatic, and now complete.





Manage Disk Partitions in Windows 11

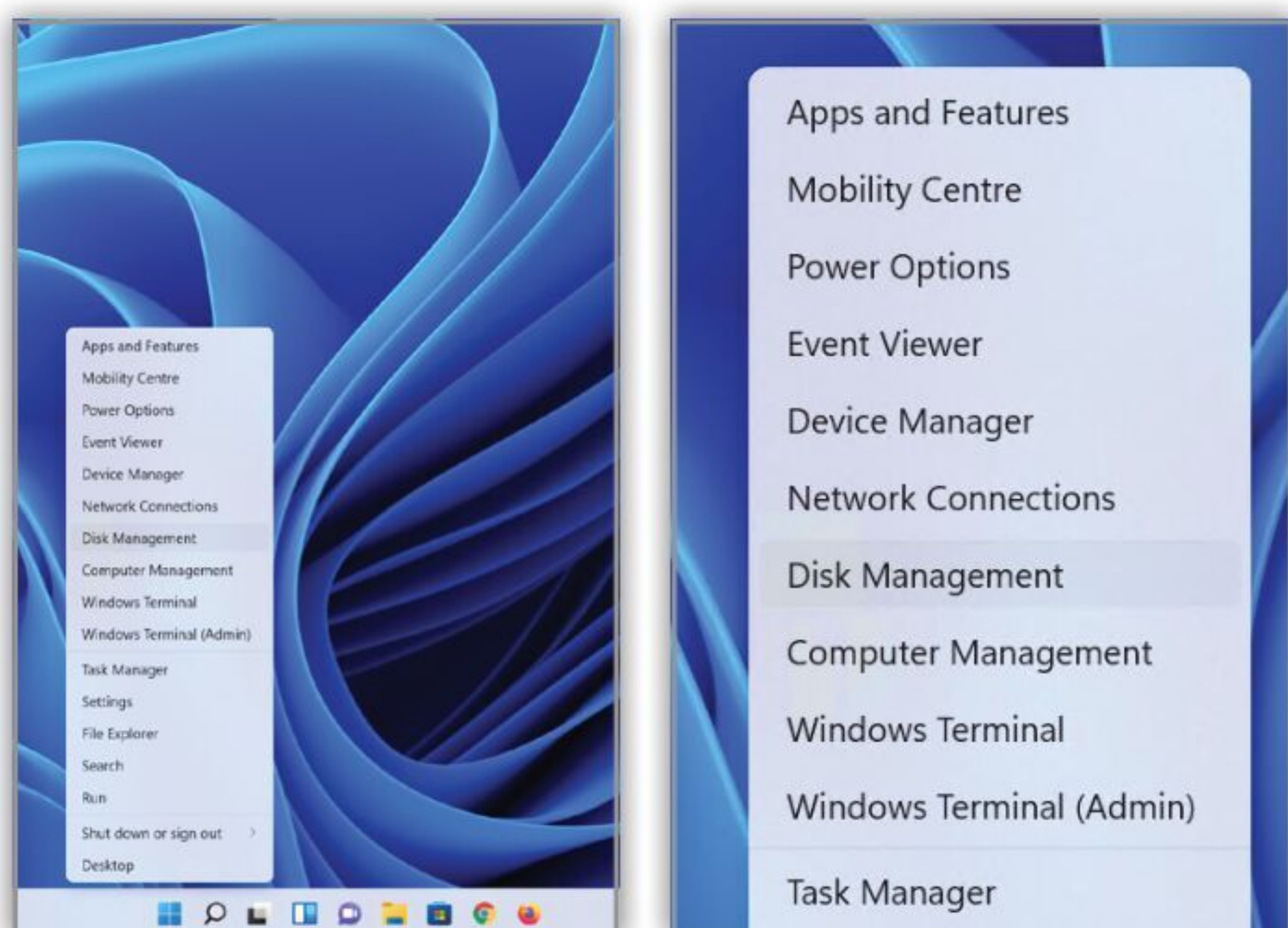
Disk partitioning is the creation of one or more separate regions on a PC hard disk (hard drive) and all modern drives need at least one partition to begin storing files. A partition could be the size of the whole drive or just a tiny part of it.

The Disk Management Tool

There are several free programs available for creating partitions but the Disk Management tool is just as good and built right in to Windows 11.

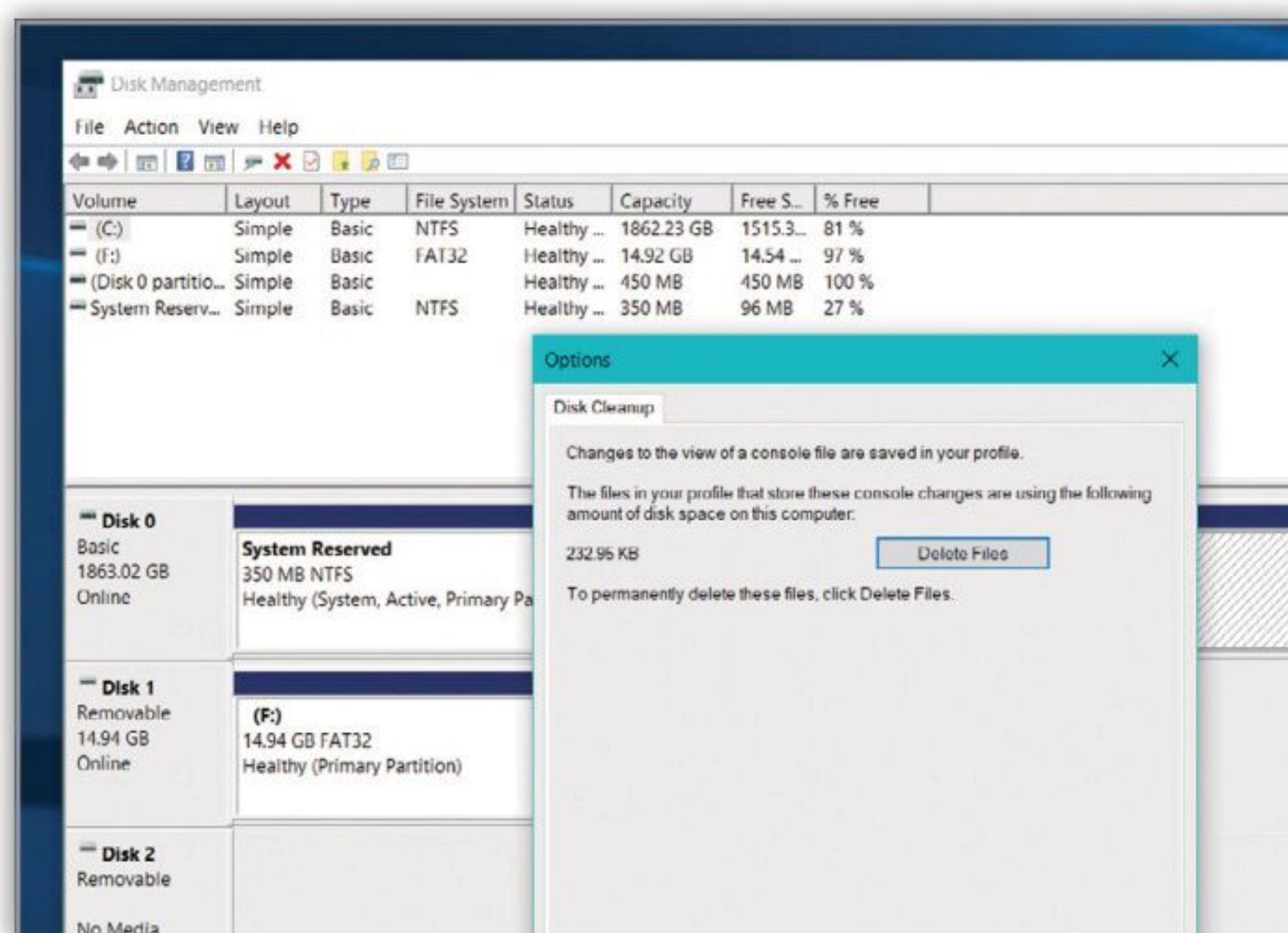
Step 1

The first thing you need to do is find the Disk Management tool. The easiest way to open the tool is to use the hidden Start button menu. Right-click on the Start menu button and select Disk Management from the menu that appears. There are several system tools here, so it is a useful trick to know.



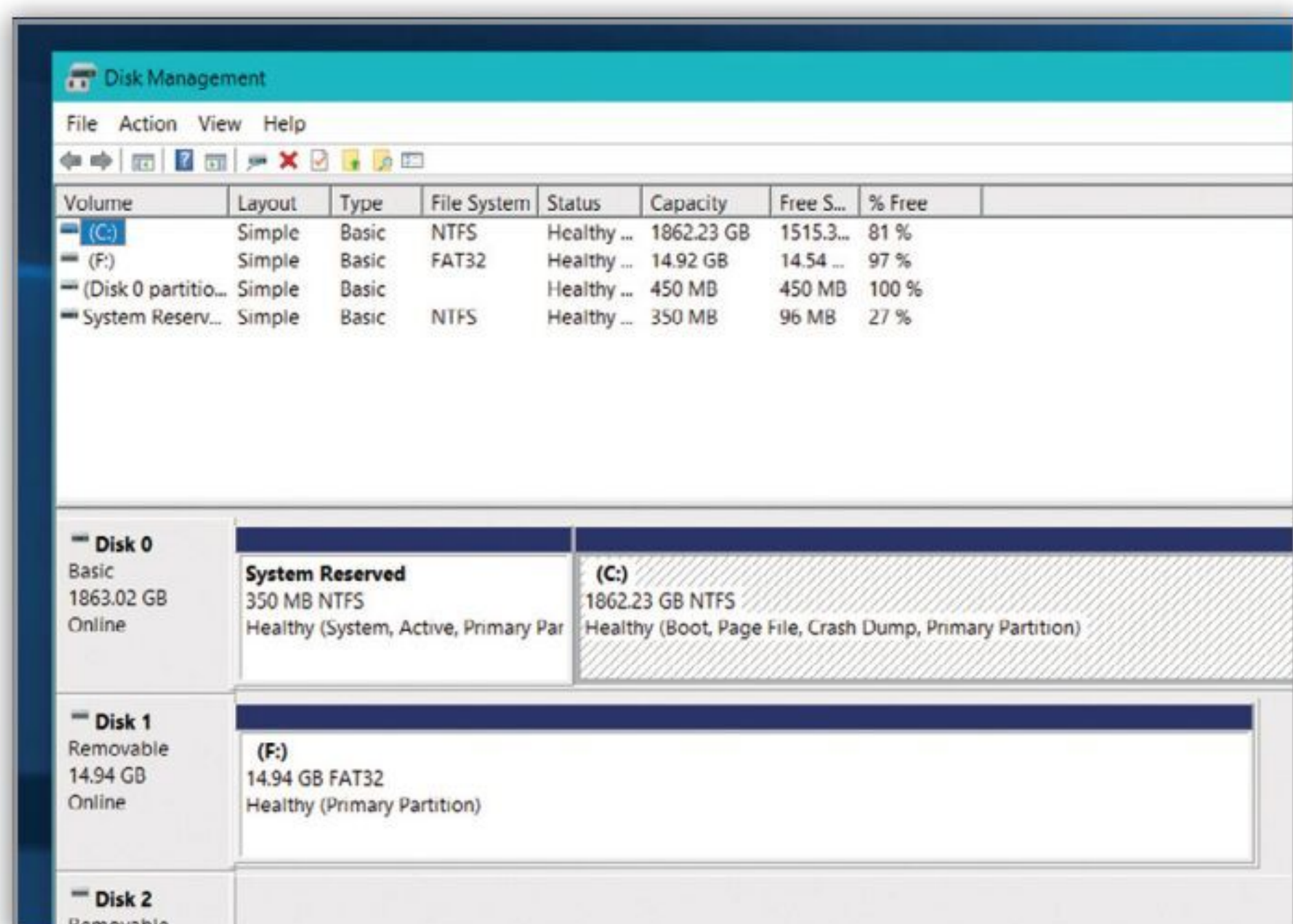
Step 3

You can use the seemingly simple Disk Management tool to resize, create, delete and format partitions and volumes, as well as change their drive letters and all without downloading or paying for any other software. You can also simply use it to check the health of your disks.



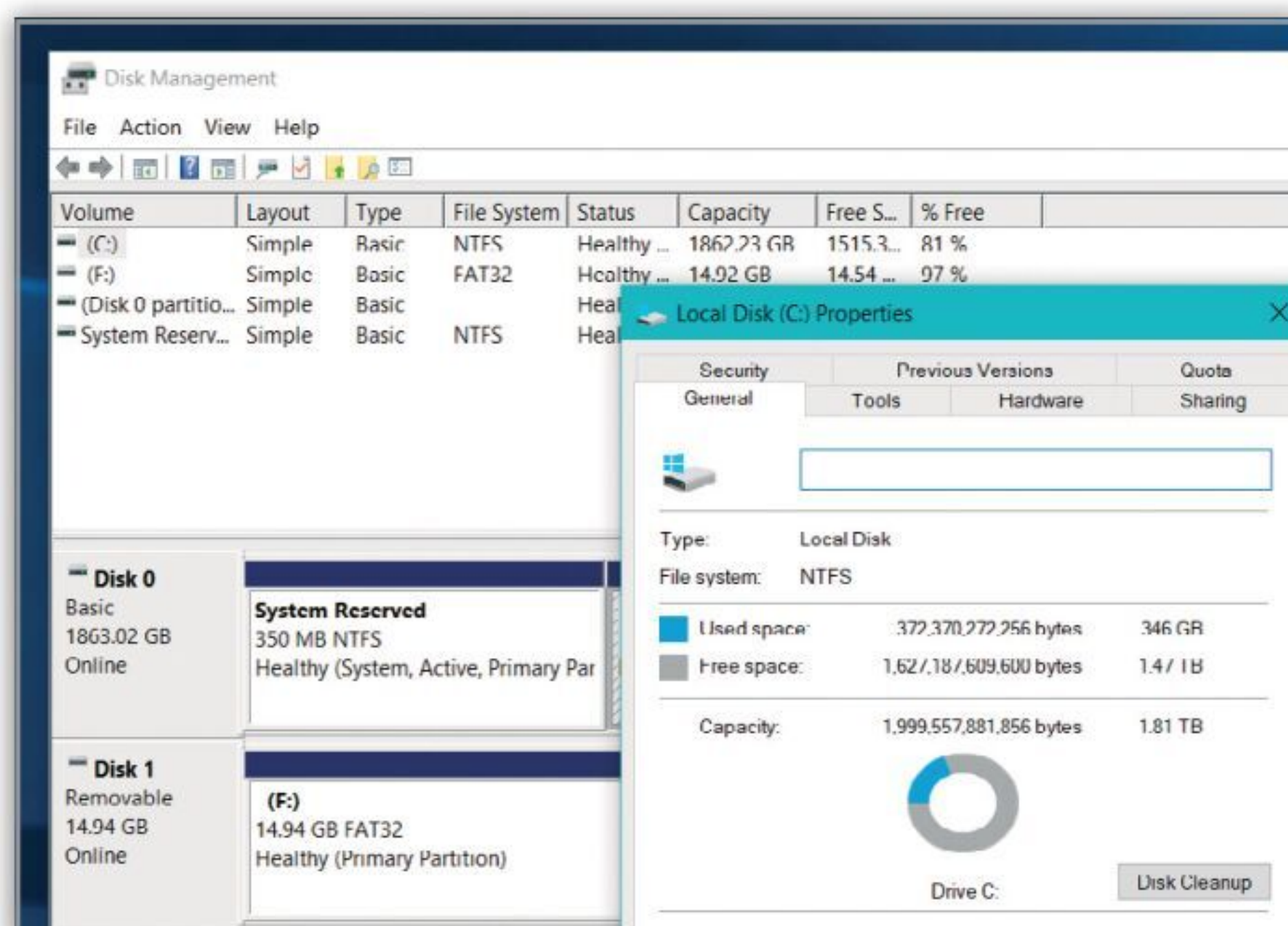
Step 2

The Disk Management tool shows all of your internal and removable drives (even USB flash drives, etc.) along with details of the capacity and current amount of space being used. Depending how your hard drive was initially configured, you will see one or more partitions in place.



Step 4

The tool shows partitions and volumes, which are similar but different. A partition is space that's set aside on a disk separate from the other space on that disk. A volume is a partition that's been formatted with a file system. We will mainly be talking about volumes in this guide.



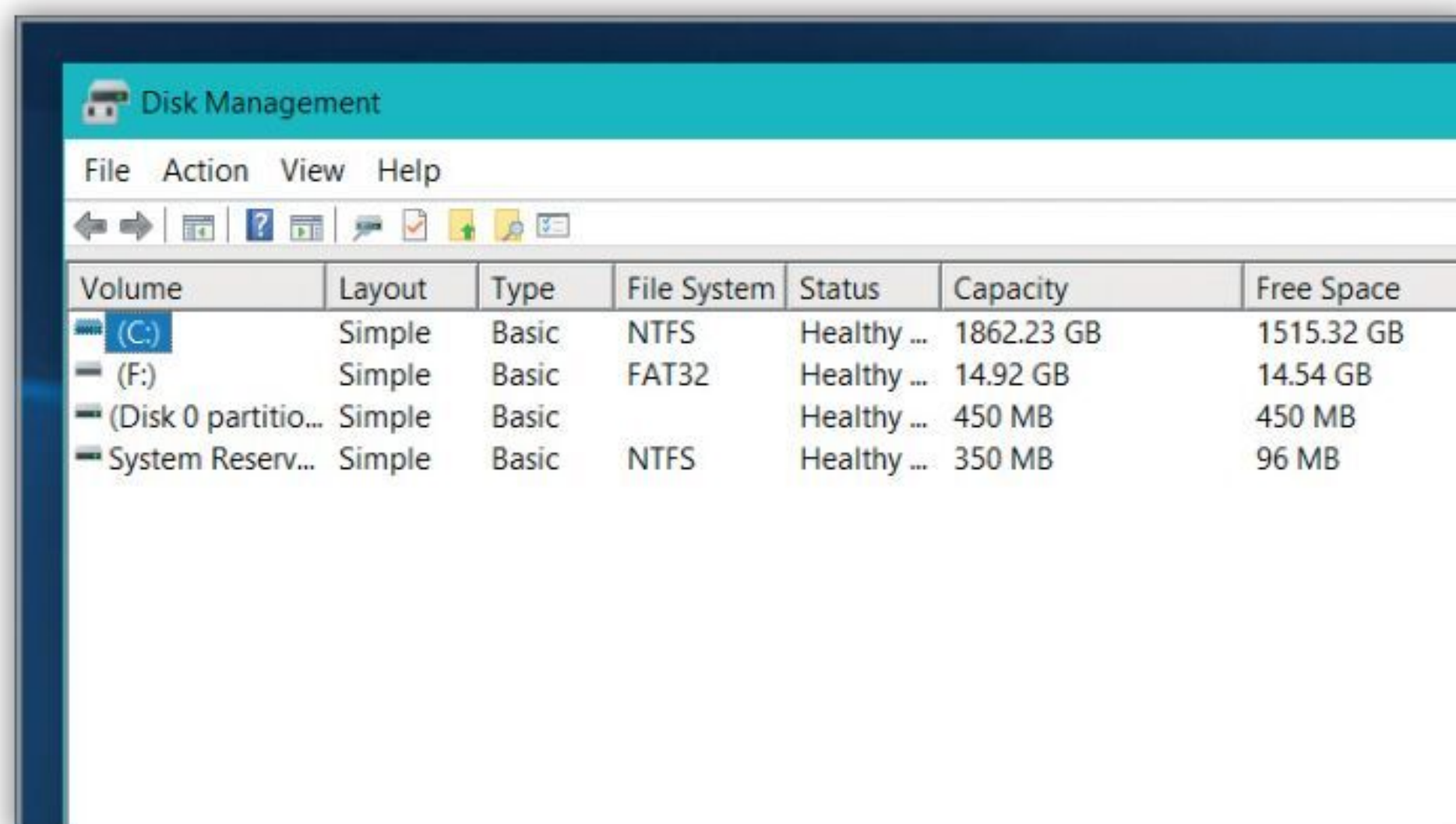
Resizing a Volume

If your disk is set up as one big volume and you want to create an extra partition for a second volume, you will need to know how to resize the existing one.

Step 1

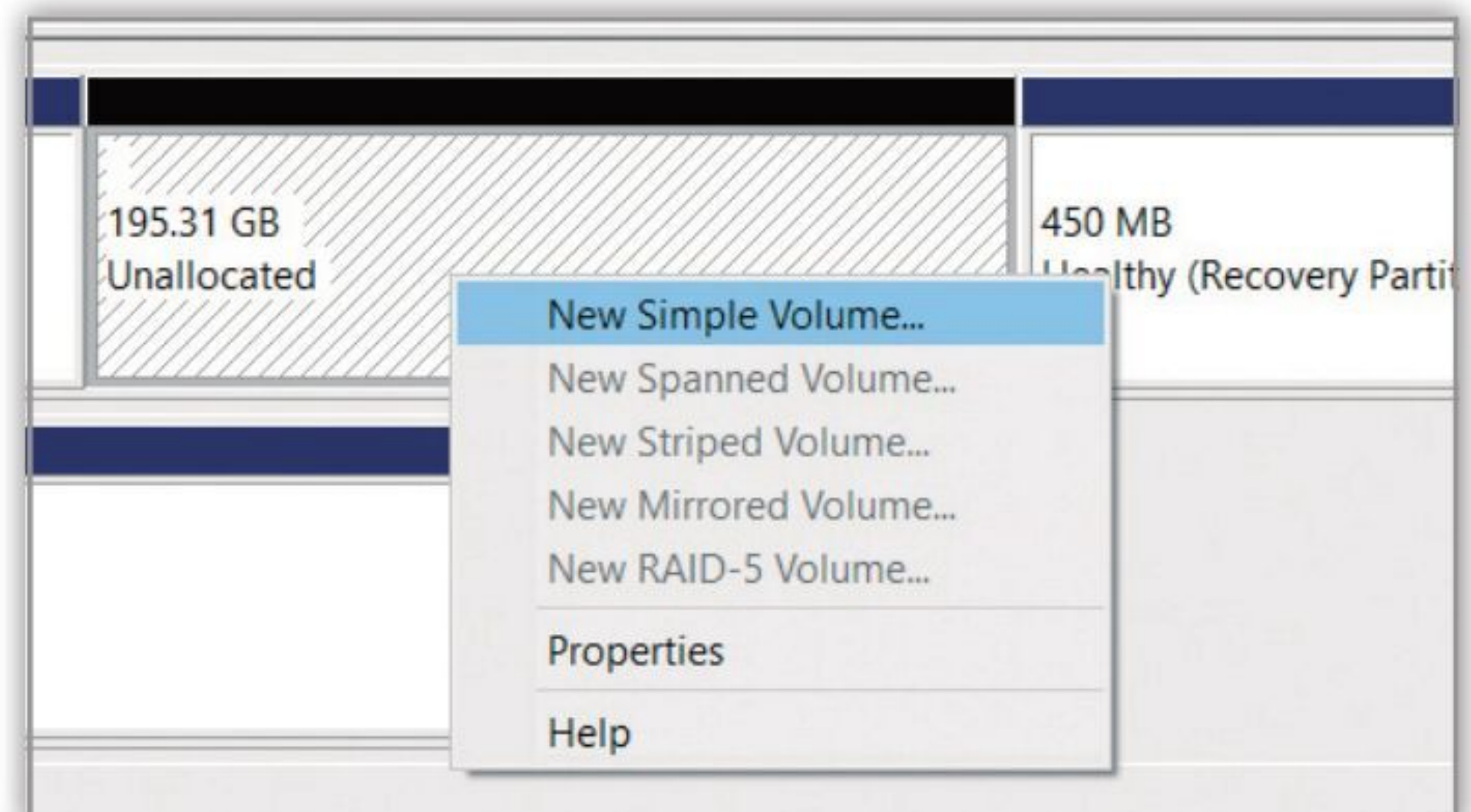
You will need to make sure that there is enough free space on the drive before you can shrink a volume.

For example, if you have a 500GB volume which has 200GB of data already stored on it, you will only be able to shrink it by a maximum of 300GB, the amount of remaining space.



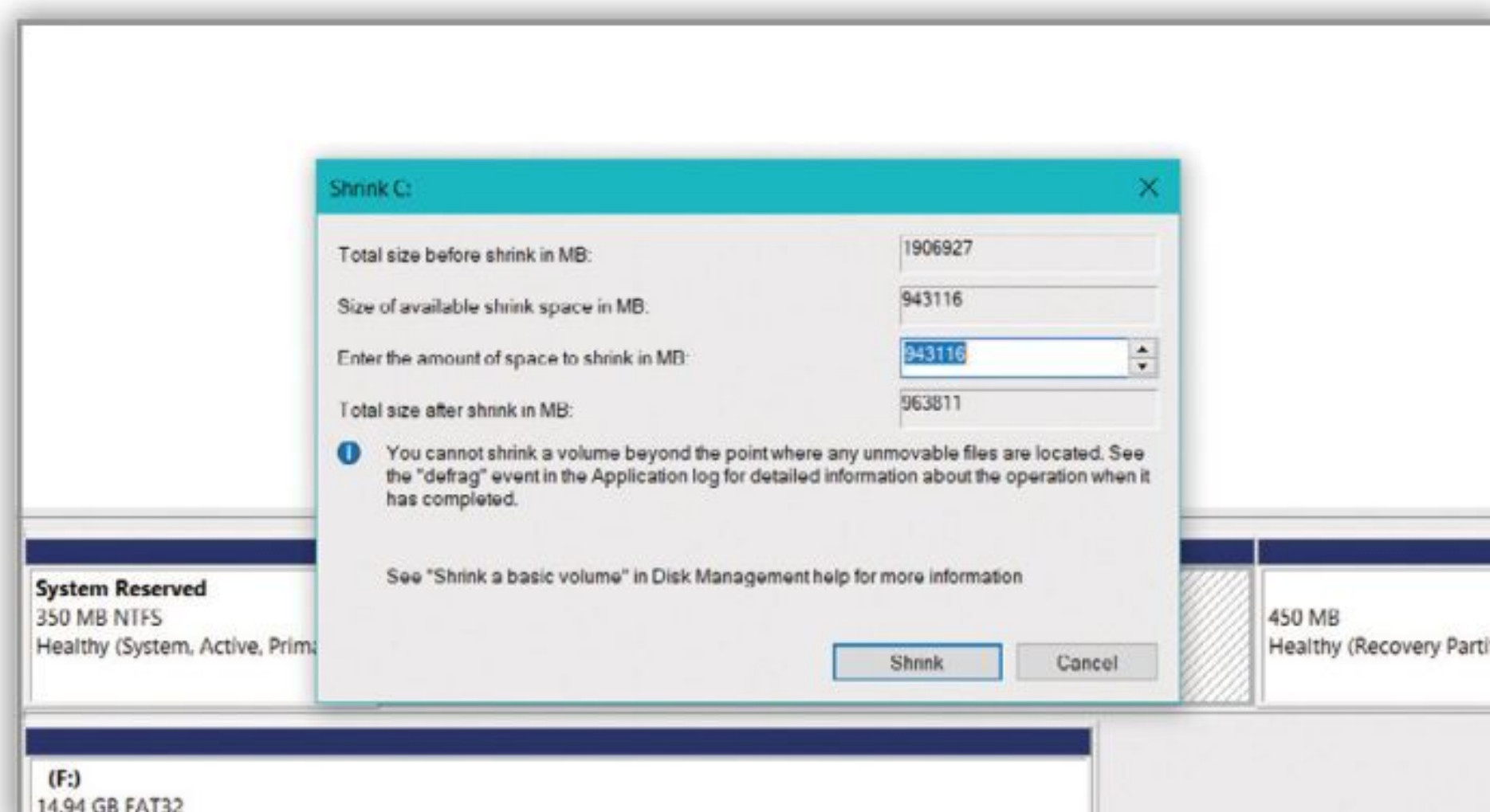
Step 4

To create a new volume in that unallocated space, right-click on it and select New Simple Volume from the Action menu. In the New Simple Volume Wizard window, click Next to get started. Specify the volume size you want to create and then assign it a drive letter on the next screen.



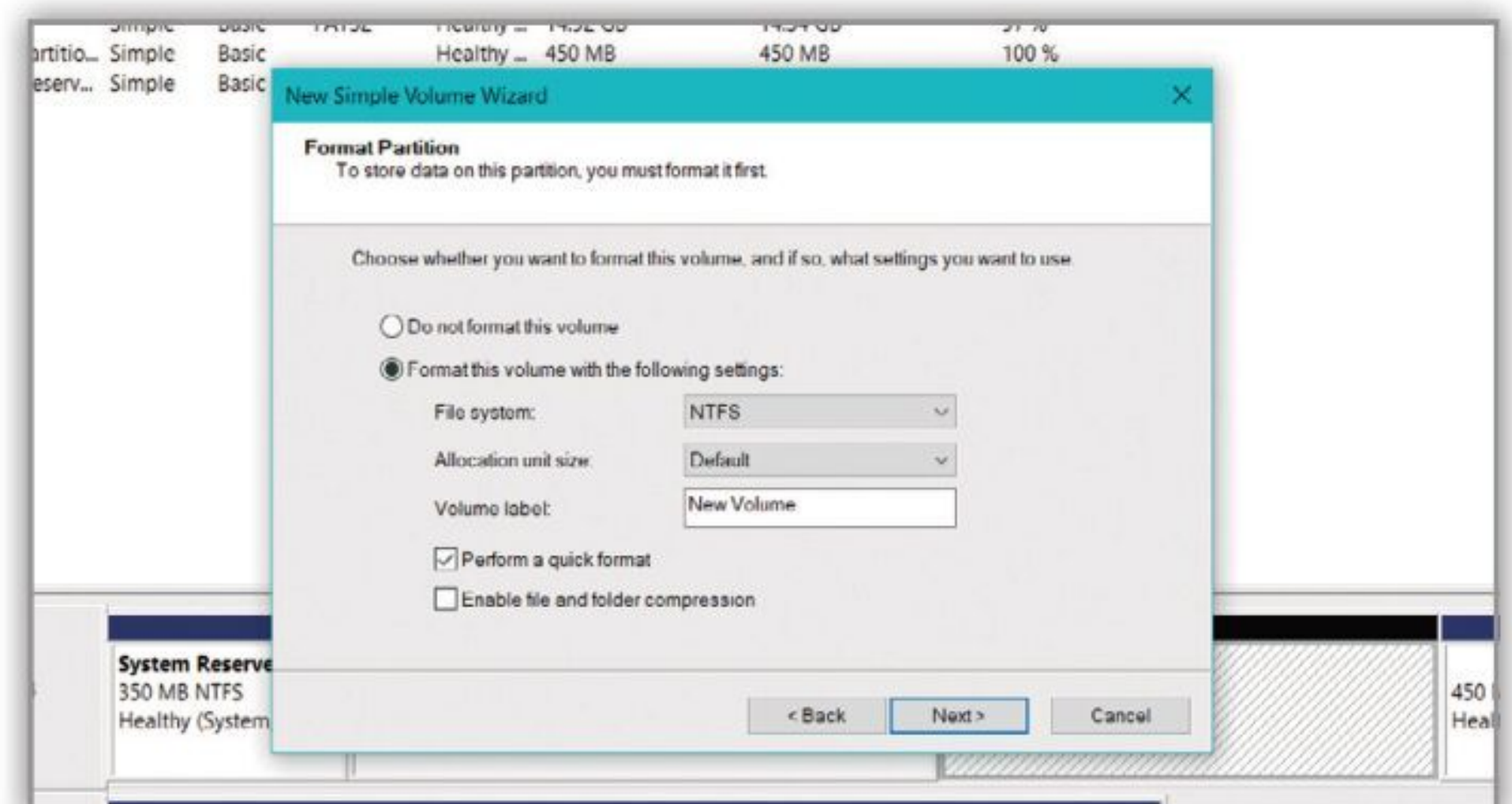
Step 2

Right click on the volume you want to shrink in either the top panel or the bottom one and click 'Shrink volume' from the Action menu. You will then need to enter the amount you want to shrink the volume by in MB. So if you wanted to shrink it by approximately 500GB, you enter '500000MB'.



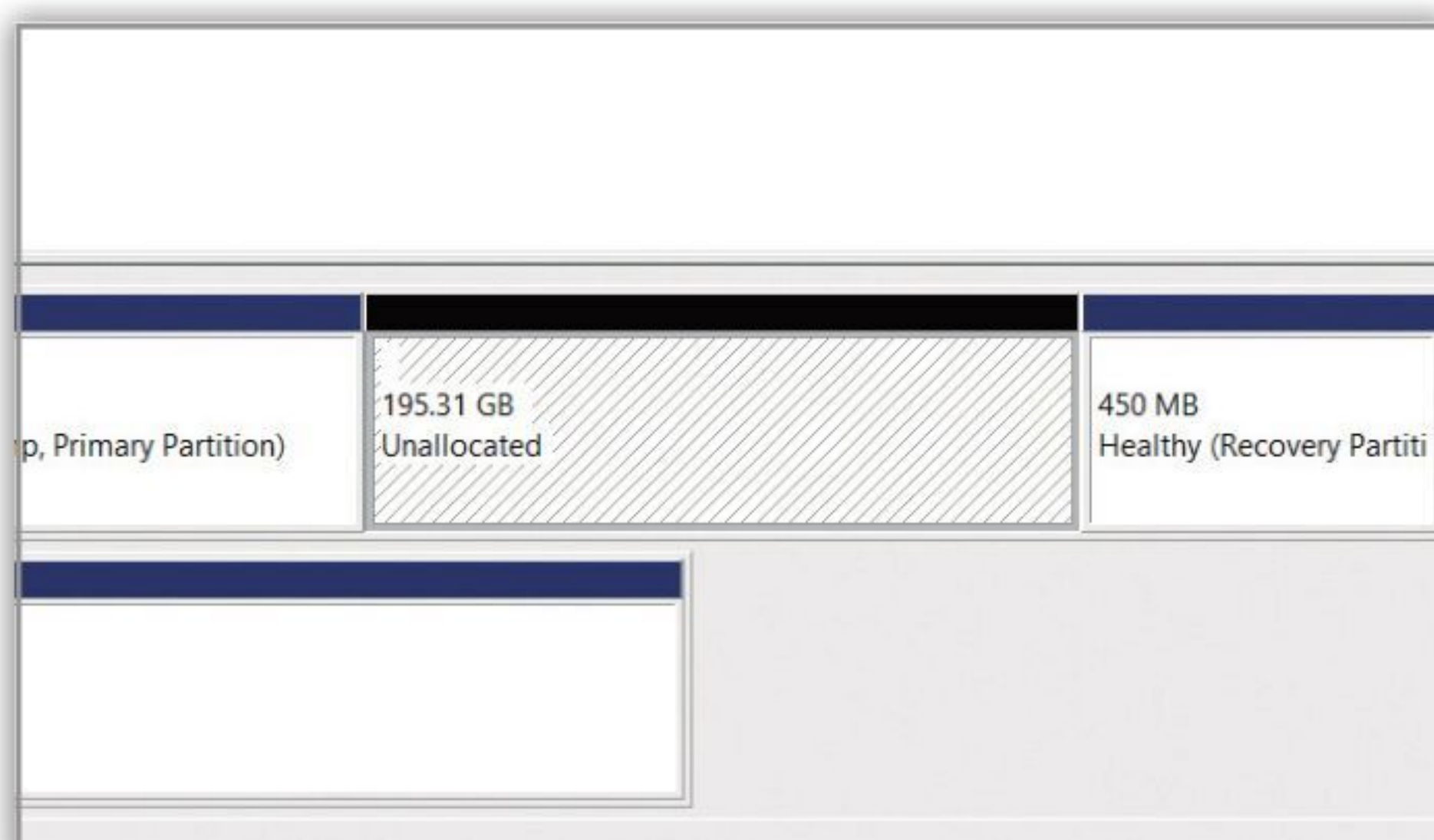
Step 5

You will then need to decide whether to format the partition. You will need to format it before you can begin using it but if you are planning on installing a second operating system, in order to dual-boot, you will need to let the new OS format the partition during its installation.



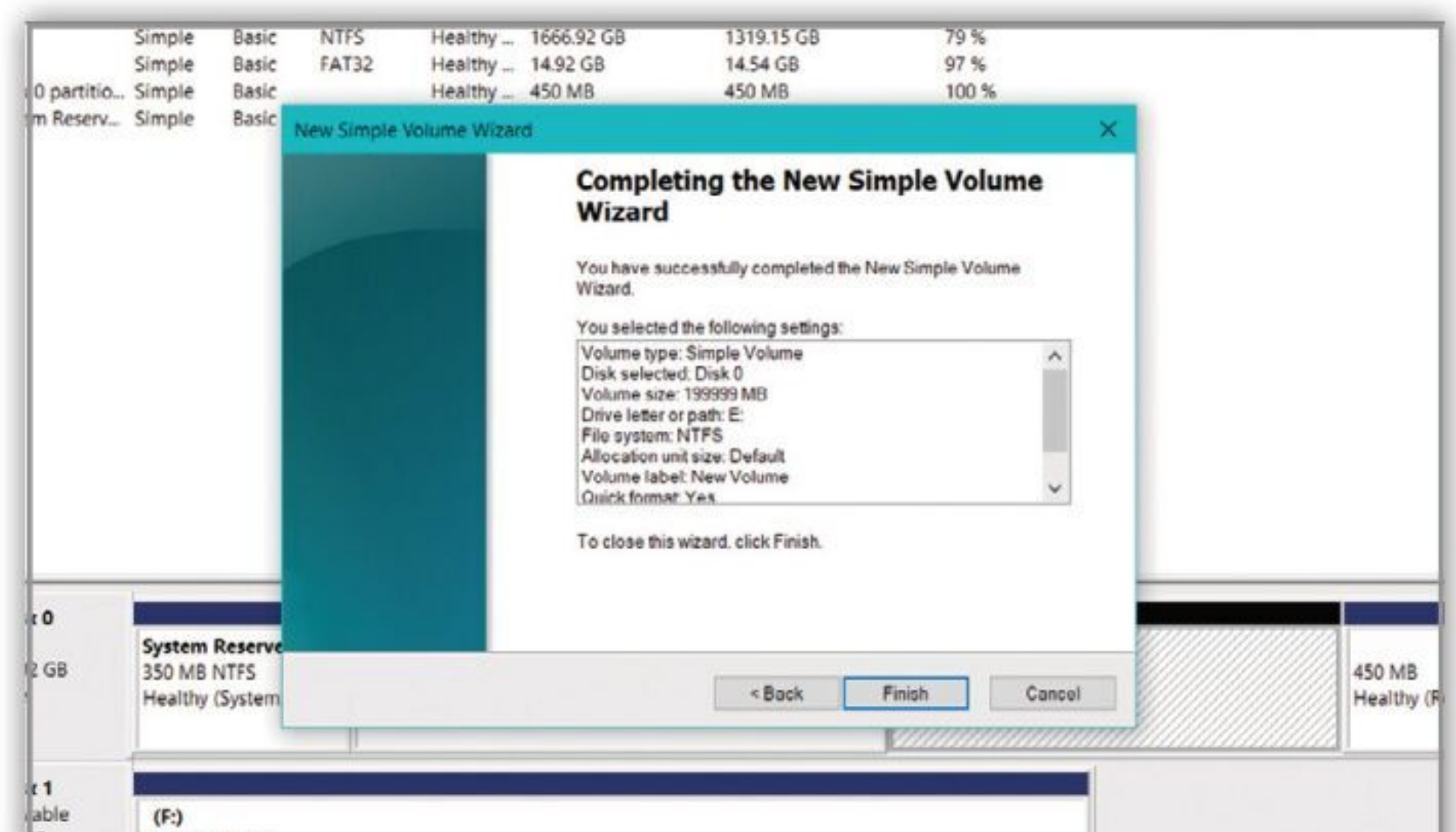
Step 3

When you have clicked the Shrink button, you should see that the disk now contains the shrunk volume and some new, unallocated space. If desired, you could now extend the volume back into that space, by right-clicking and selecting 'Extend volume' from the Action menu.



Step 6

Otherwise, go ahead and format the disk; pick a file system to use and assign a volume label. Click Next when you're ready and then click the Finish button; Windows will now start to create the volume and, if you chose to, format it. When finished, you will see your new volume listed.





Check and Optimise RAM Usage

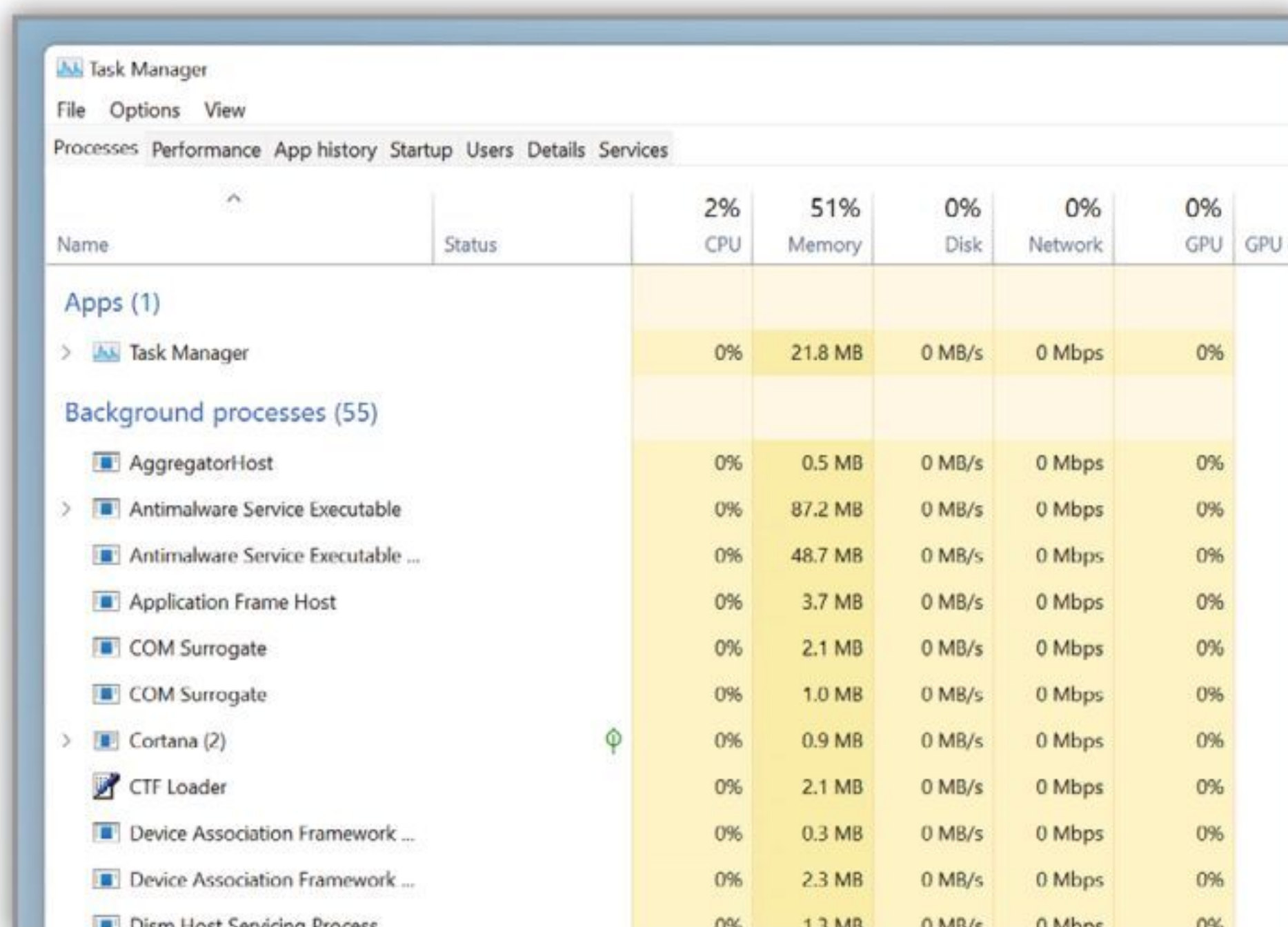
Adding RAM, or Random Access Memory, is a good way to give your PC an instant boost but before you go to the expense and trouble of installing new RAM modules, it is worth checking what is using your existing RAM and whether it can be optimised.

Checking Memory and Memory Usage

The first thing you need to do, when trying to optimise RAM usage and performance, is check how much you have and how it is used.

Step 1

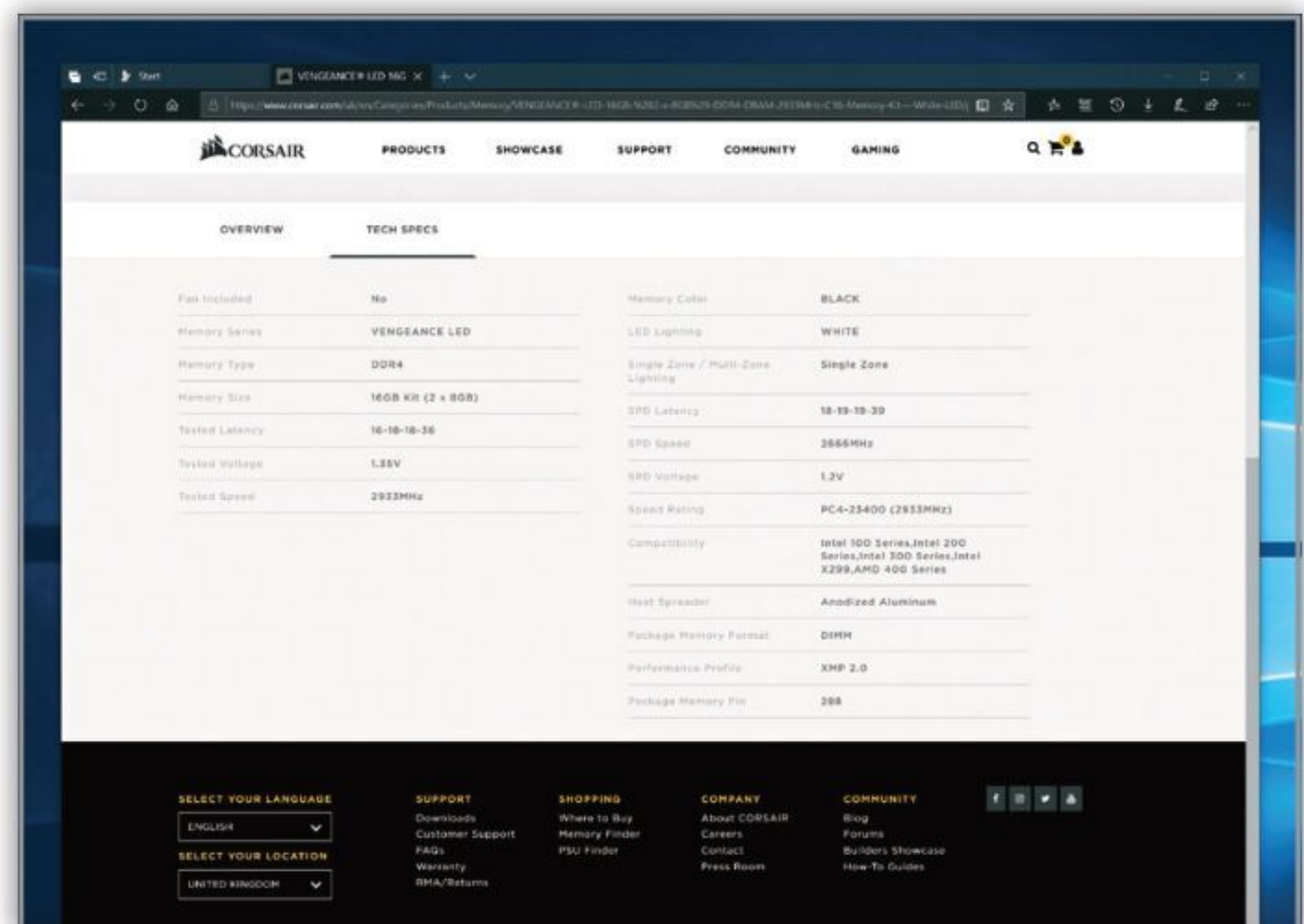
To check up on your RAM, you need to open the Task Manager. Press Ctrl + Alt + Delete on the keyboard and then select Task Manager from the list that appears. If Task Manager opens showing just a simple list of tasks, click the More details button to see a more advanced view.



Name	Status	2% CPU	51% Memory	0% Disk	0% Network	0% GPU
Apps (1)						
Task Manager		0%	21.8 MB	0 MB/s	0 Mbps	0%
Background processes (55)						
AggregatortHost		0%	0.5 MB	0 MB/s	0 Mbps	0%
Antimalware Service Executable		0%	87.2 MB	0 MB/s	0 Mbps	0%
Antimalware Service Executable ...		0%	48.7 MB	0 MB/s	0 Mbps	0%
Application Frame Host		0%	3.7 MB	0 MB/s	0 Mbps	0%
COM Surrogate		0%	2.1 MB	0 MB/s	0 Mbps	0%
COM Surrogate		0%	1.0 MB	0 MB/s	0 Mbps	0%
Cortana (2)		0%	0.9 MB	0 MB/s	0 Mbps	0%
CTF Loader		0%	2.1 MB	0 MB/s	0 Mbps	0%
Device Association Framework ...		0%	0.3 MB	0 MB/s	0 Mbps	0%
Device Association Framework ...		0%	2.3 MB	0 MB/s	0 Mbps	0%
Disc Host Sending Process		0%	1.3 MB	0 MB/s	0 Mbps	0%

Step 3

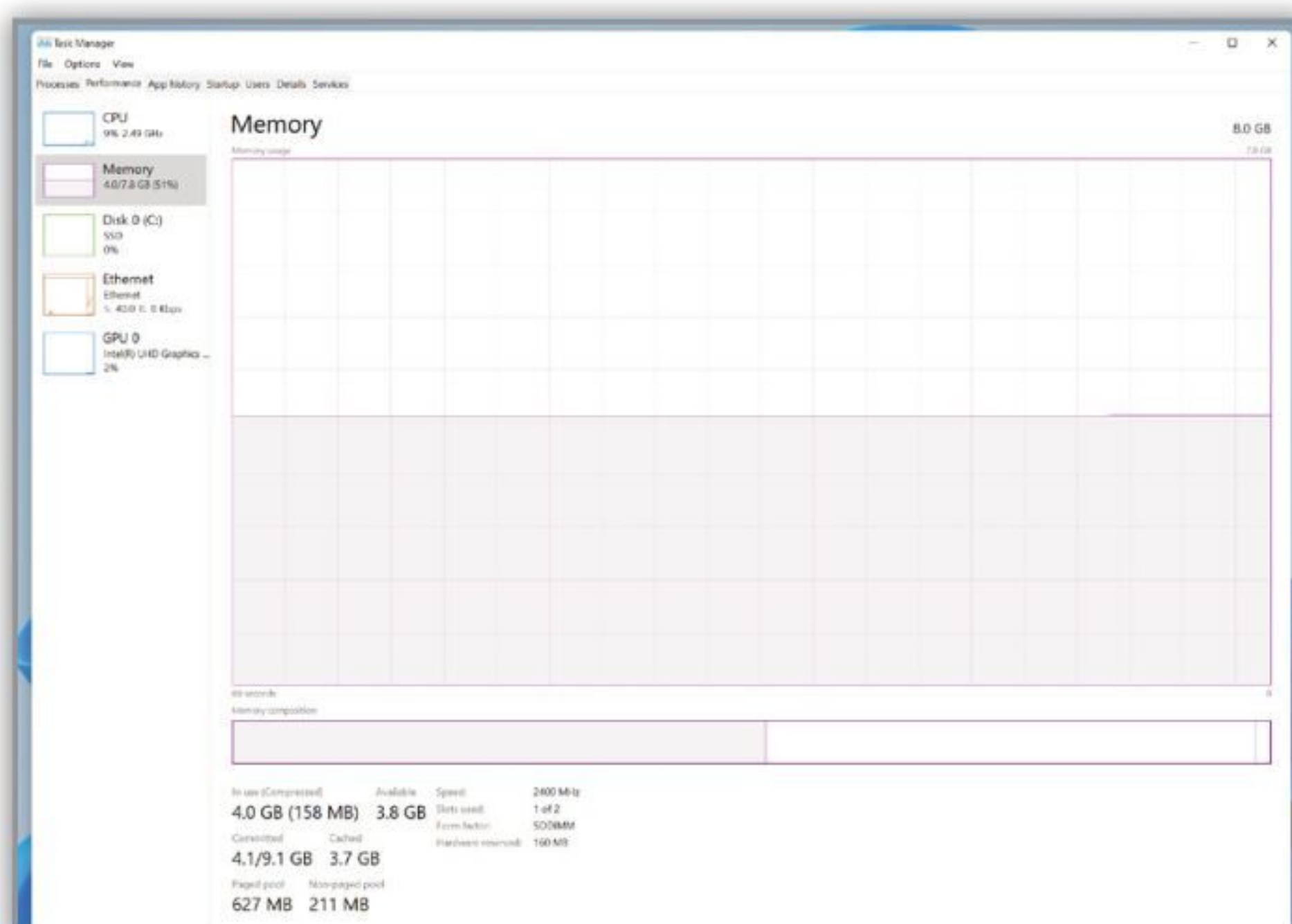
If it seems like most of your available RAM is regularly being used, and if less than 4GB is installed, consider adding more RAM. You can find out what kind of RAM your PC model uses by looking at the memory info in Task Manager. Then visit the PC manufacturer's website for more specific info.



OVERVIEW		TECH SPECS	
Part Number	CM8GX58M1A8000C16	Memory Color	BLACK
Memory Series	VENGEANCE LPX	LED Lighting	WHITE
Memory Type	DDR4	Single Zone / Multi-Zone Lighting	Single Zone
Memory Size	16GB Kit (2 x 8GB)	SPD Latency	18-19-19-39
Tested Latency	16-18-18-36	SPD Speed	3600MHz
Tested Voltage	1.35V	SPD Voltage	1.35V
Tested Speed	3600MHz	Speed Rating	PC4-28800 (3600MHz)
Compatibility		Intel 100 Series/Intel Z490	Intel 500 Series/Intel Z690
Heat Spreader		Aluminum	Aluminum
Package Memory Format		DDR4	DDR4
Performance Profile		XMP 2.0	XMP 2.0
Package Memory Pin		288	288

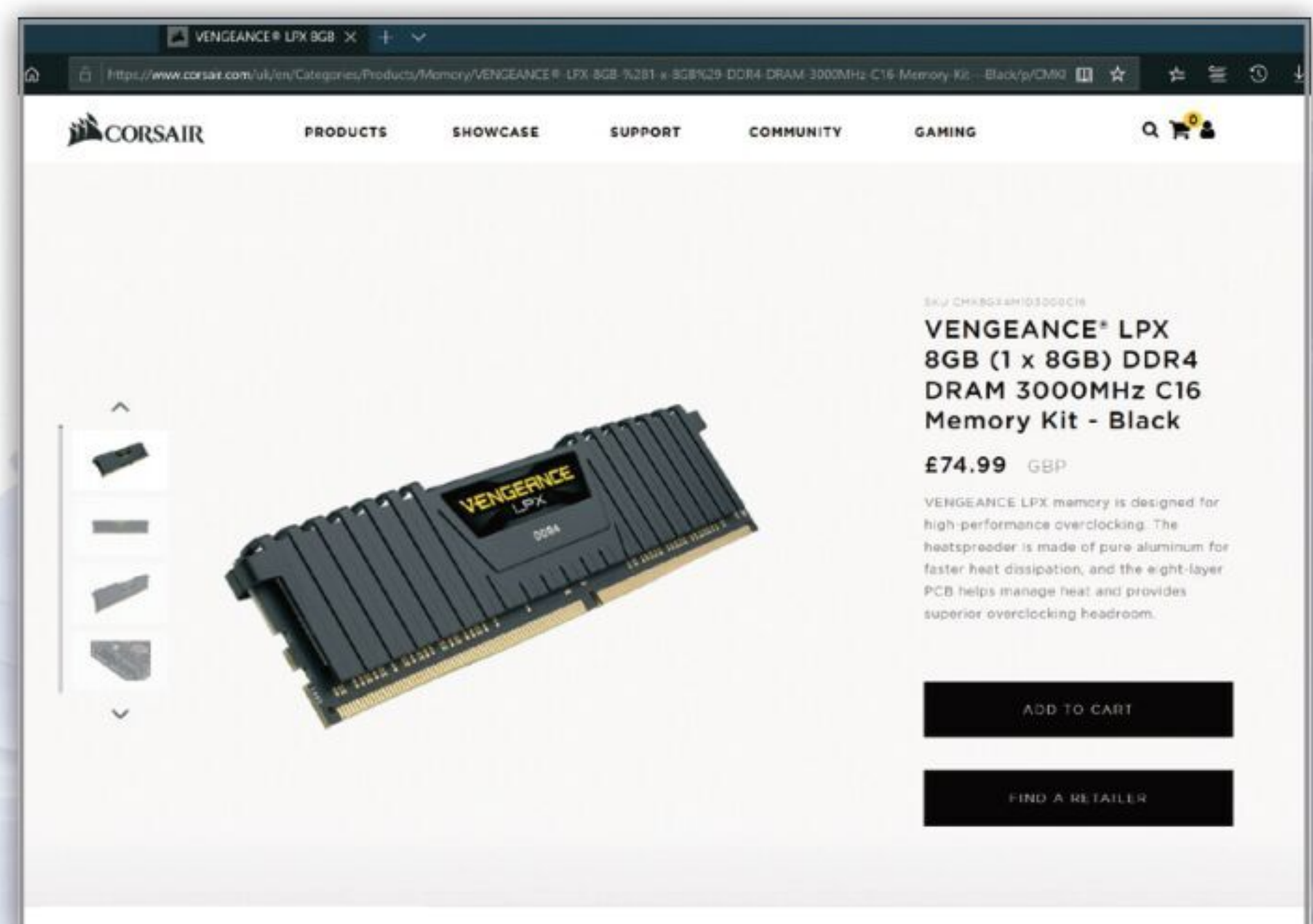
Step 2

Click the Performance tab at the top and then the Memory tab on the left side. You can now see how much you have in total and then check the graph to see how much RAM is being used. Try opening a few different apps while Task Manager is open, to see RAM usage increase or change.



Step 4

In theory, Windows 11 (64-bit) can run on a PC with just 2 GB of RAM but in reality you will want at least 4 GB if you plan regular use. If you can afford to double this to 8 GB, you will not only instantly improve performance but also add some time to the long term lifespan of your computer.



Using Windows ReadyBoost

If you don't want to spend out on more RAM right now, there are ways you can attempt to optimise your existing memory performance. One way is to use ReadyBoost.

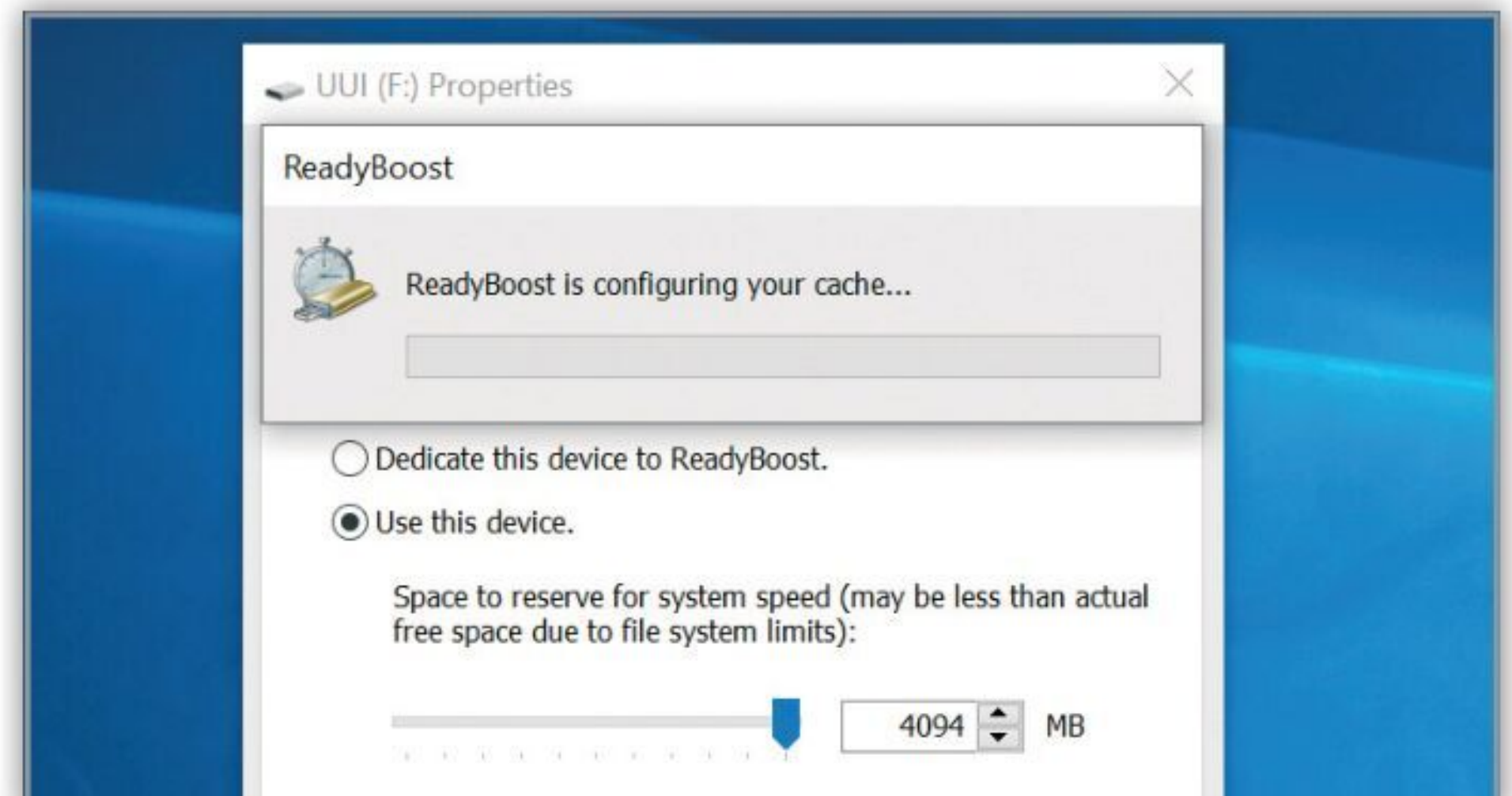
Step 1

ReadyBoost is a way to boost memory performance by creating an extra memory cache on an external USB-connected drive, such as a flash drive. You will need a USB drive with at least 500MB of free space and a high data transfer rate. A USB 3.0 drive can peak at a data rate of 600MB/s.



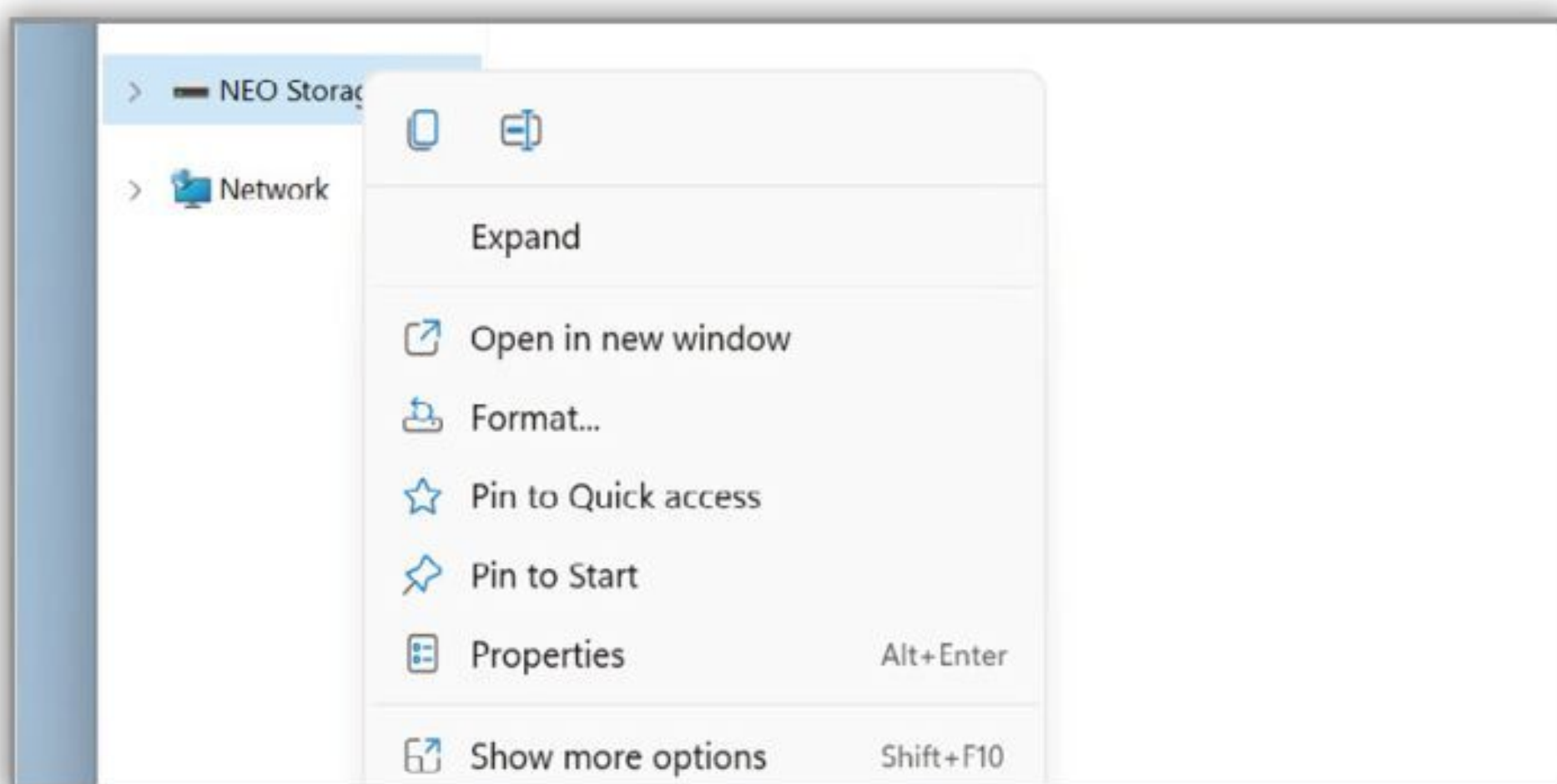
Step 3

Select the ReadyBoost tab, then select 'Use this device'. Windows 11 determines if the device can use ReadyBoost. If it is not able to use the feature, it will let you know. Windows will then determine how much free space to assign to memory. Click Ok to reserve this space on the connected drive.



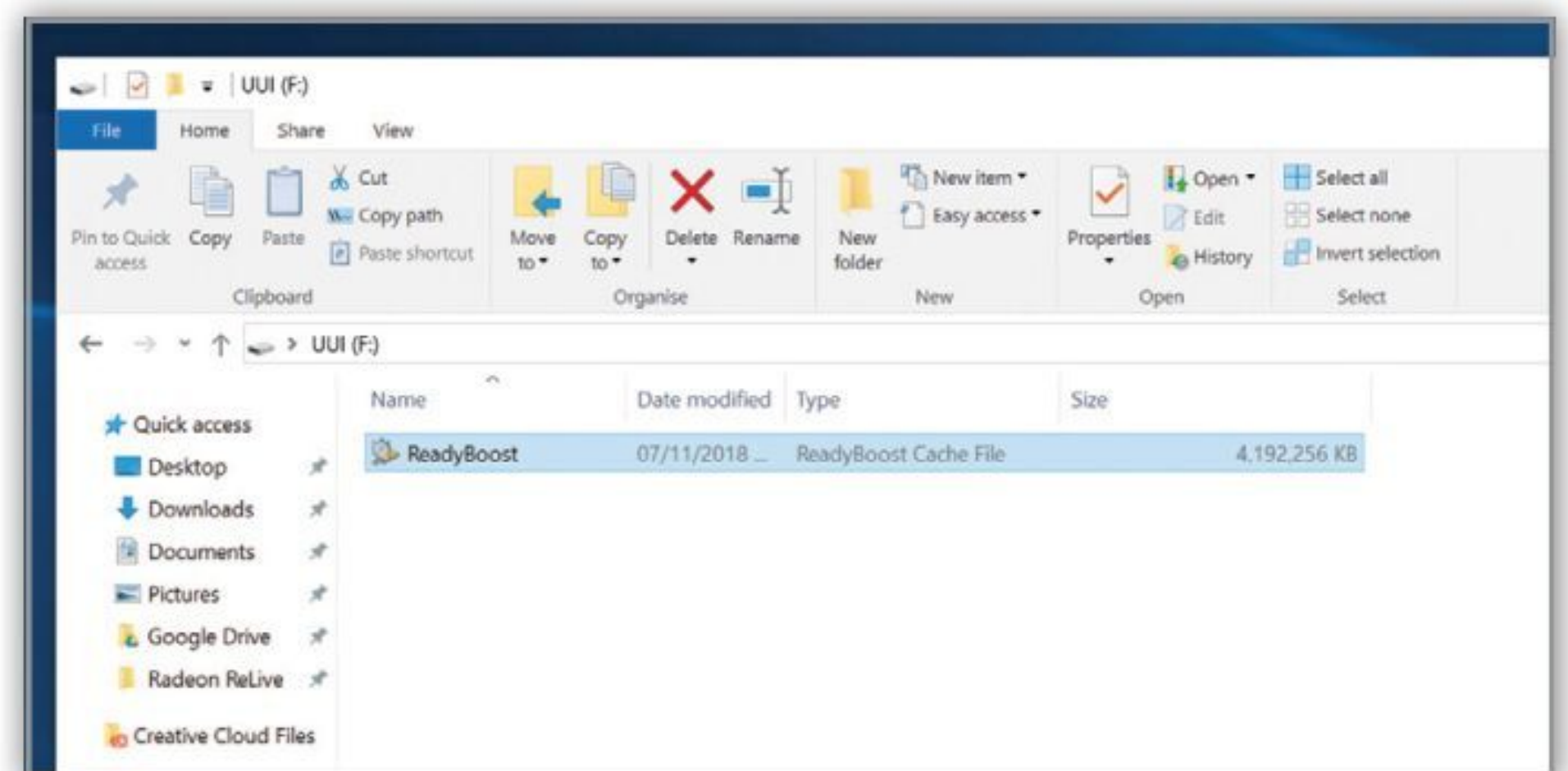
Step 2

Insert the drive into a free USB port on your PC and then open the File Explorer. Right-click on the name of the drive in the left-hand sidebar and select Properties from the action menu. Be aware that computers with a solid-state drive (SSD) installed, will not be able to take advantage of ReadyBoost.



Step 4

If you look at the contents of the drive in File Explorer, you will see a file called ReadyBoost.sfcache. This file shows how much space is reserved for ReadyBoost. If you don't have a USB flash drive handy, you can sometimes use a smartphone, connected via USB, as a temporary ReadyBoost drive

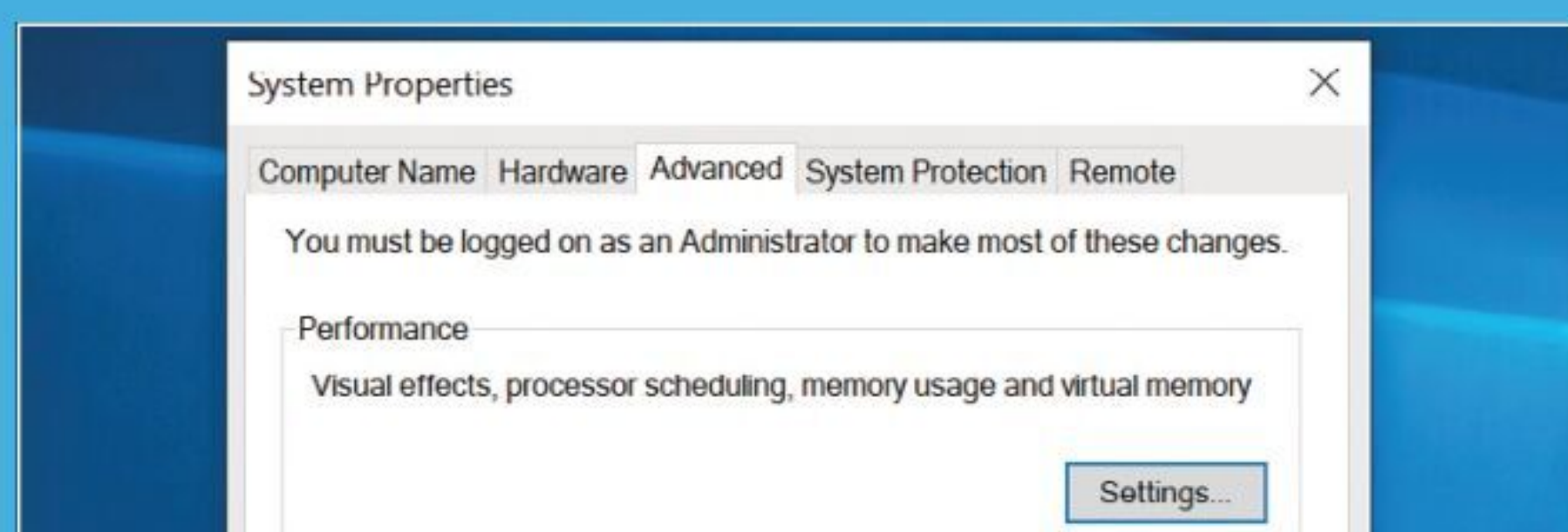


Changing Paging File Size

The paging file is an area on your hard disk that Windows uses like memory. Increasing the paging file size can help improve your PC's performance.

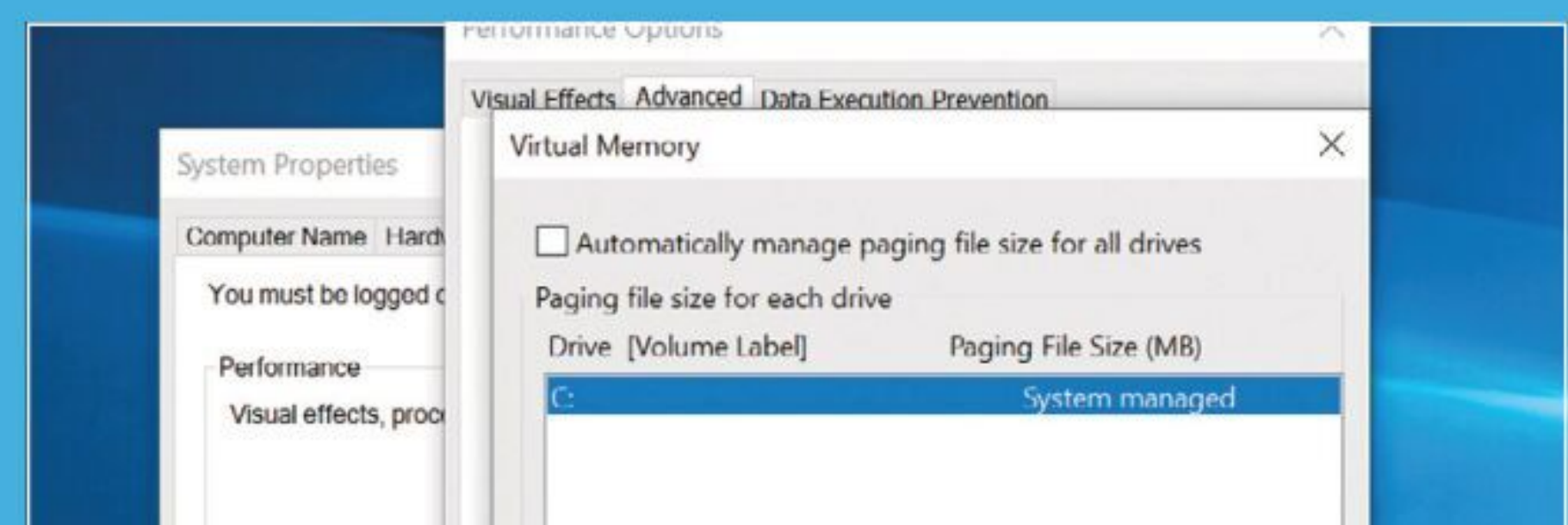
Step 1

In the search box on the taskbar, type 'advanced system' and then select 'View advanced system settings'. In System Properties, on the Advanced tab, select Settings in the Performance area, and then select the Advanced tab > Change in the Virtual memory area.



Step 2

In Performance Options, Clear the 'Automatically manage paging file size for all drives' check box. Select Custom size, then enter an initial size (in MB) and maximum size in the corresponding boxes. Select Set > OK and then restart your PC by selecting the Start button > Power > Restart.





Create a Windows 11 System Image

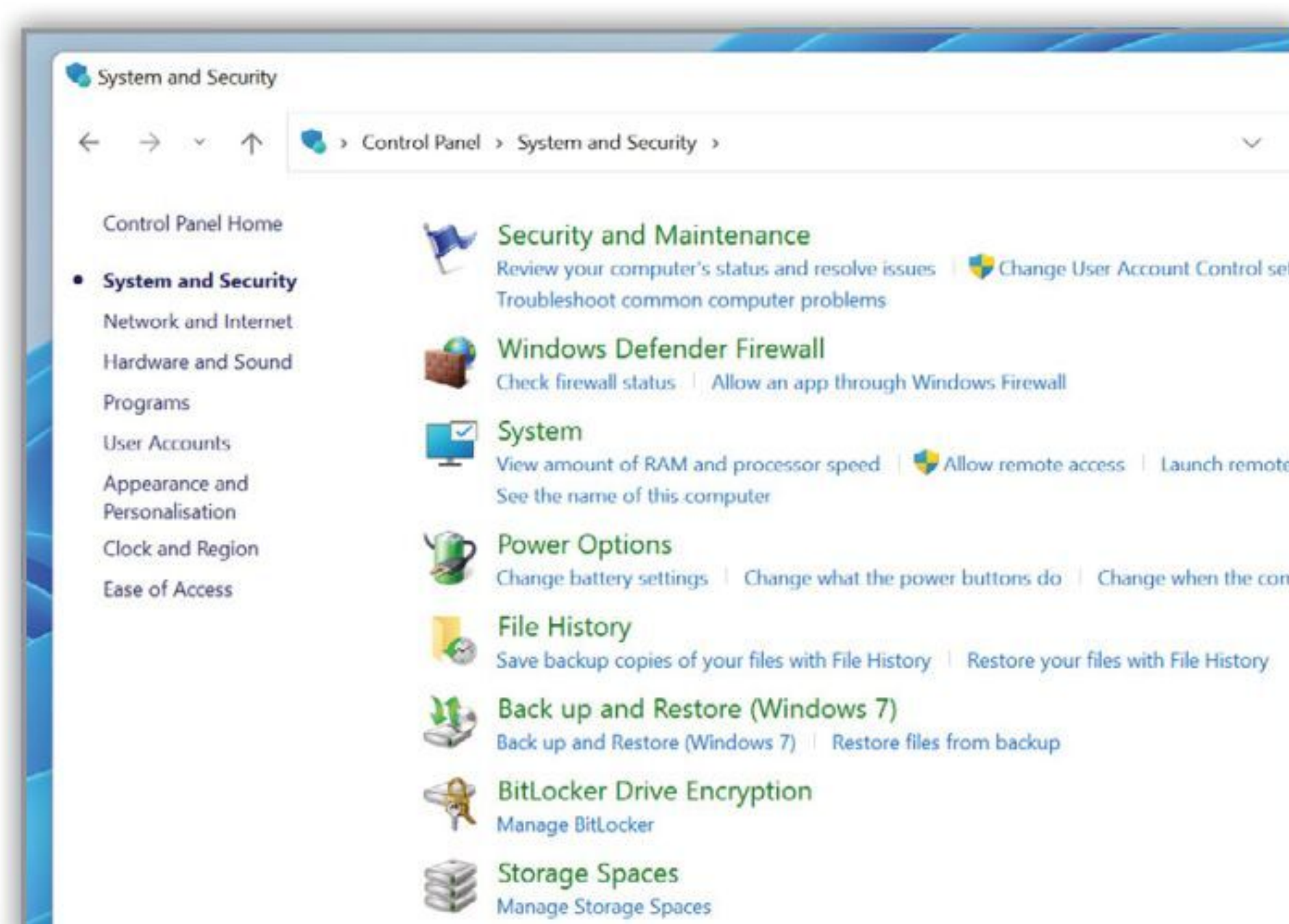
Backing up your files is perfectly fine, but in the event of having to wipe your hard drive and start again, getting everything back in order can be time-consuming. However, creating a system image means you can almost instantly restore the entire system.

System Imaging

A system image is essentially a snapshot of your entire system. This can then be quickly restored and conveniently saves you from having to reinstall Windows 11, all your programs and your data.

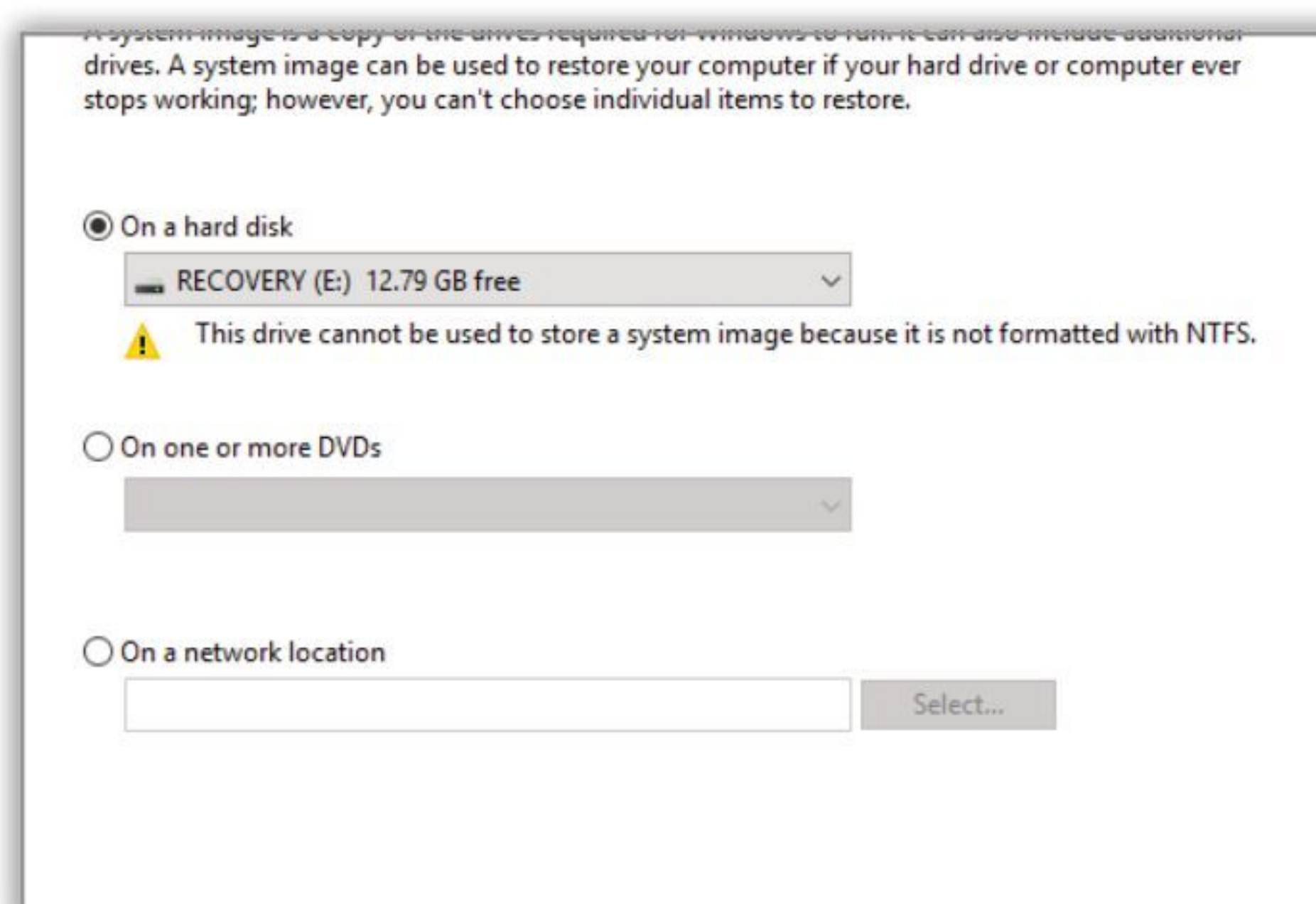
Step 1

To begin, click on the Windows Start button and start typing 'control panel', then click on the Control Panel app. From there, go to System and Security > Backup and Restore (Windows 7). Odd as it sounds, it still uses the old Windows 7 backup technology here.



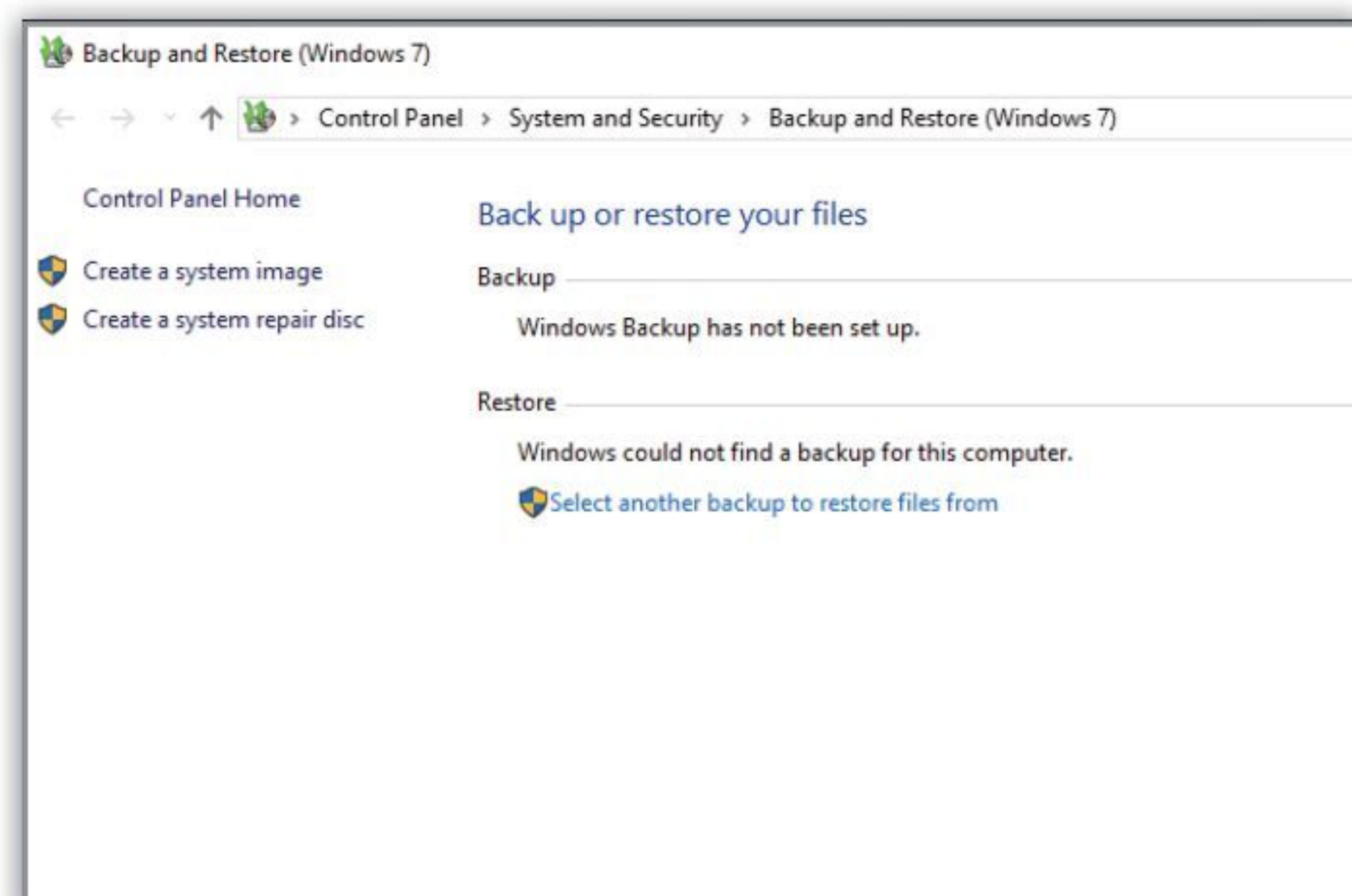
Step 3

Windows now scans your system for a drive capable of housing the system image files. You may need to make some changes to any drives according to what messages you get back from the scan. In this example, the drive we're using needs to be formatted as NTFS before Windows 11 can use it.



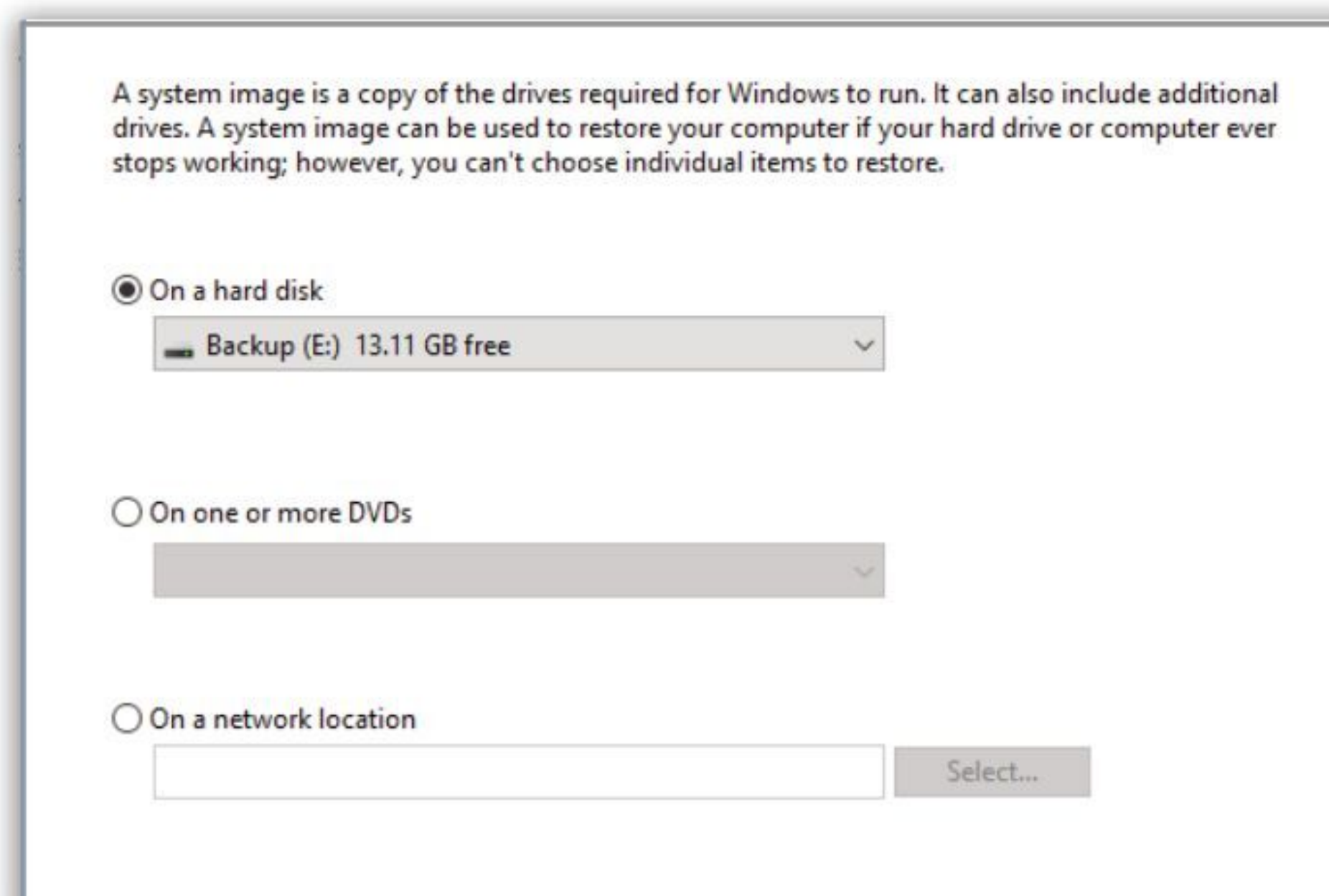
Step 2

This launches a new window, the Backup and Restore (Windows 7) console. Microsoft has kept this feature intact through Windows 8.1, 10 and 11, purely due to compatibility support for backups created under older versions of the OS. To the left, there are two links, click on the Create a system image link to proceed.



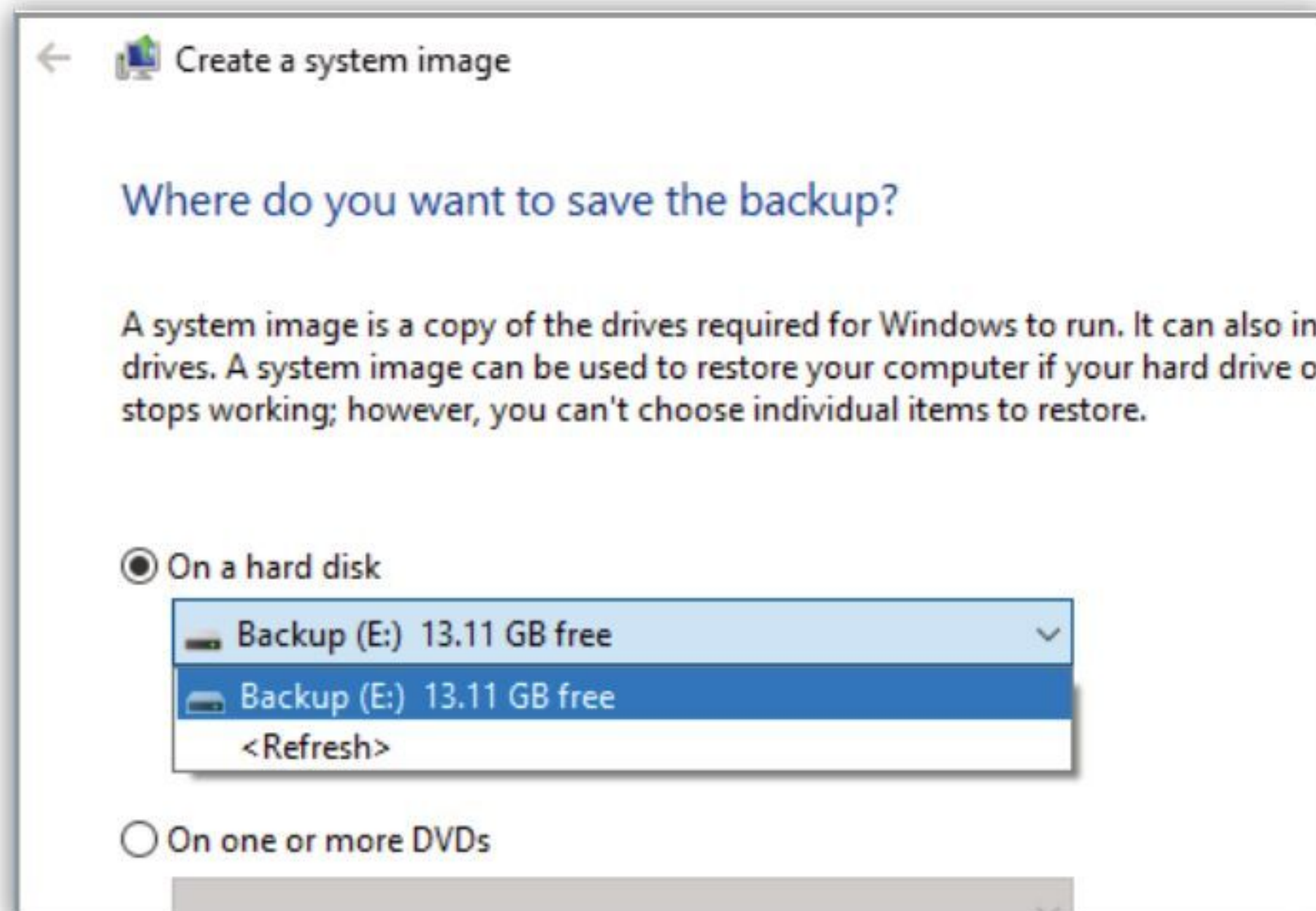
Step 4

Providing you've met the requirements, you're offered a choice of to where the system image can be written. A drive is the quickest solution when it comes to restoring the image, but you can opt for DVDs; it depends on the size of the image as to how many DVDs you need. You can even select a network location if required.



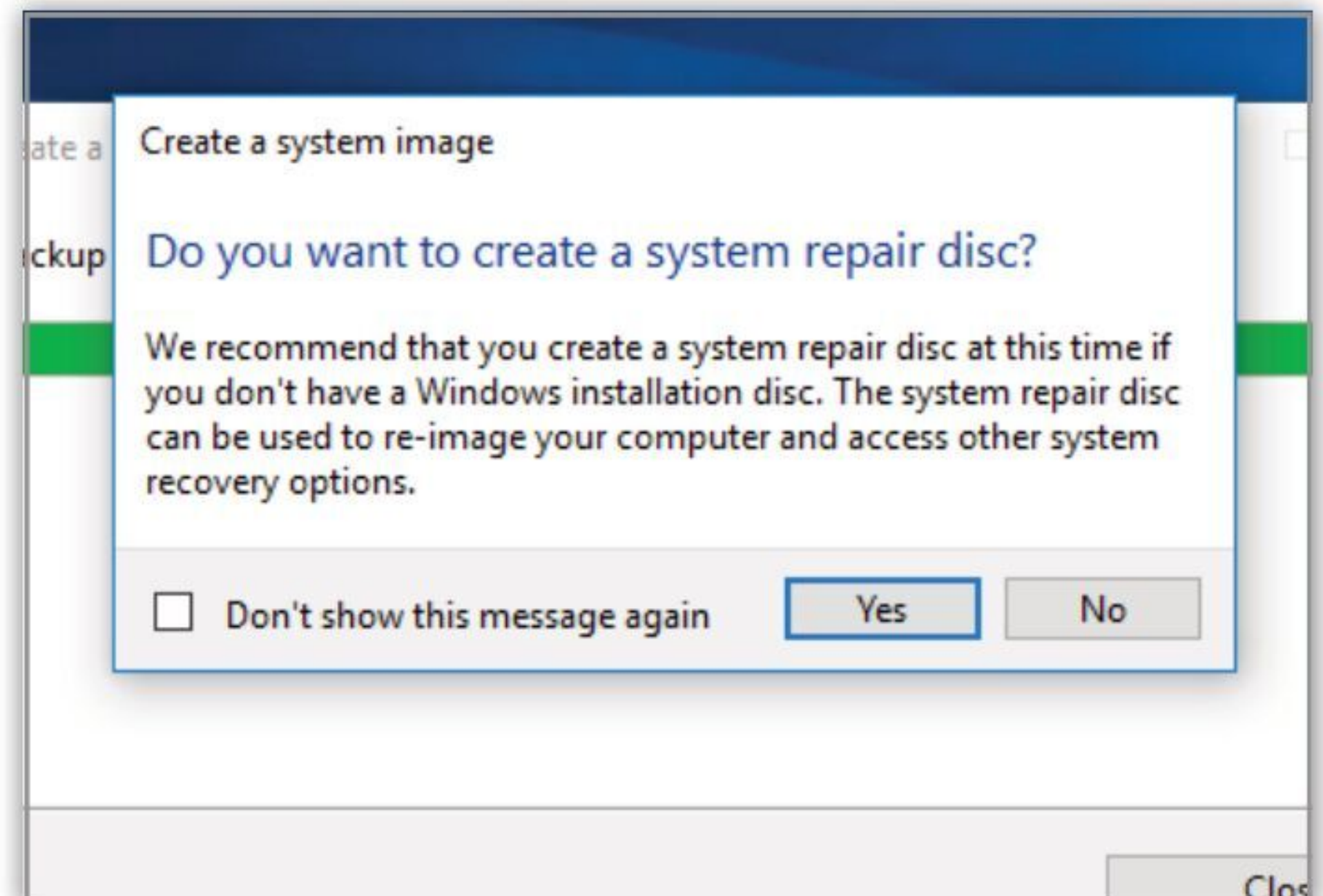
Step 5

For this example, let's use an internal second hard drive. Make sure that the correct drive (it could be a high capacity USB stick or even a portable USB hard drive) is selected, and then click the Next button to continue.



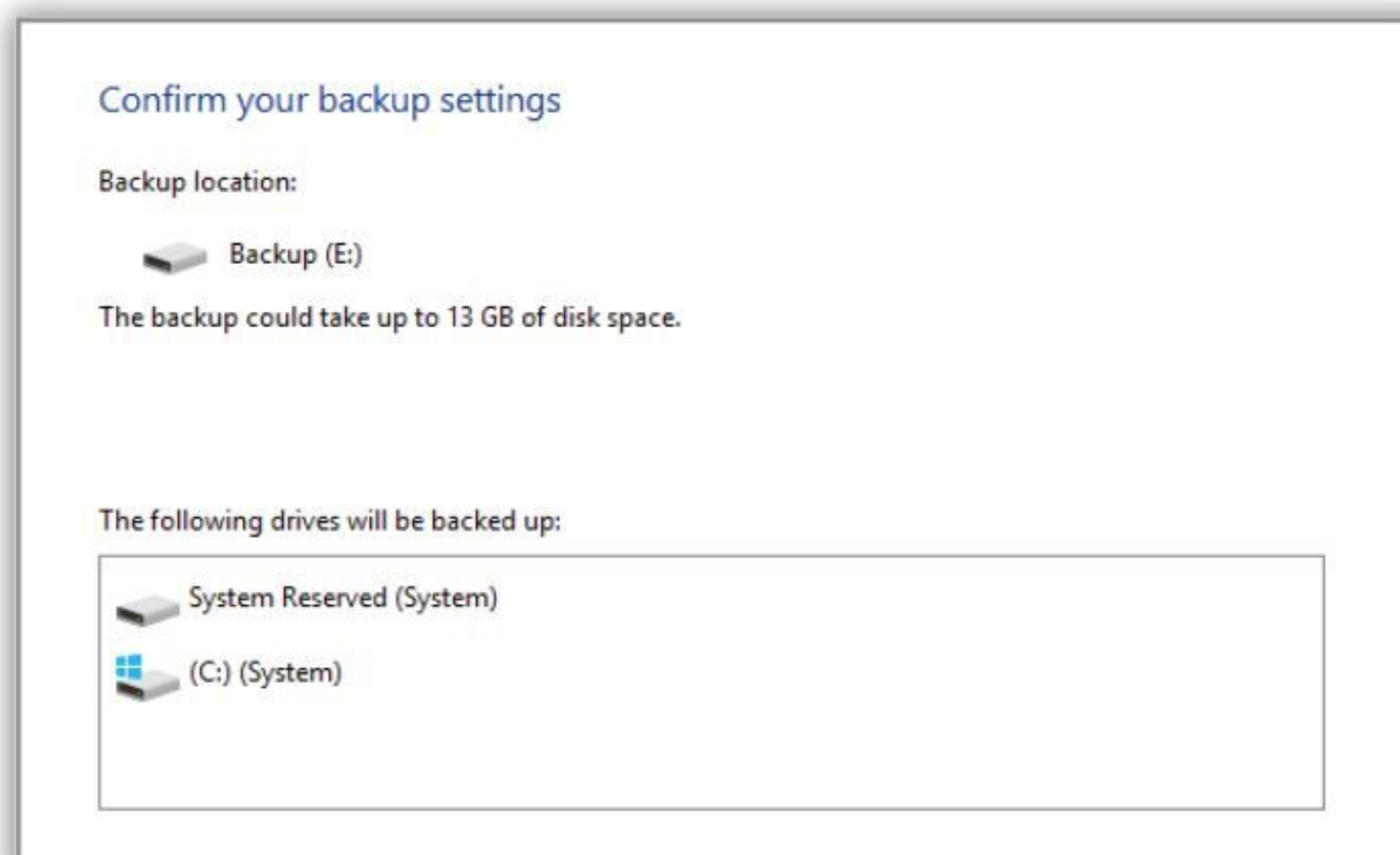
Step 8

Once the process is complete, Windows will ask you to create a System Repair Disc. This disc allows you to boot into the environment where you are able to launch the system image restore.



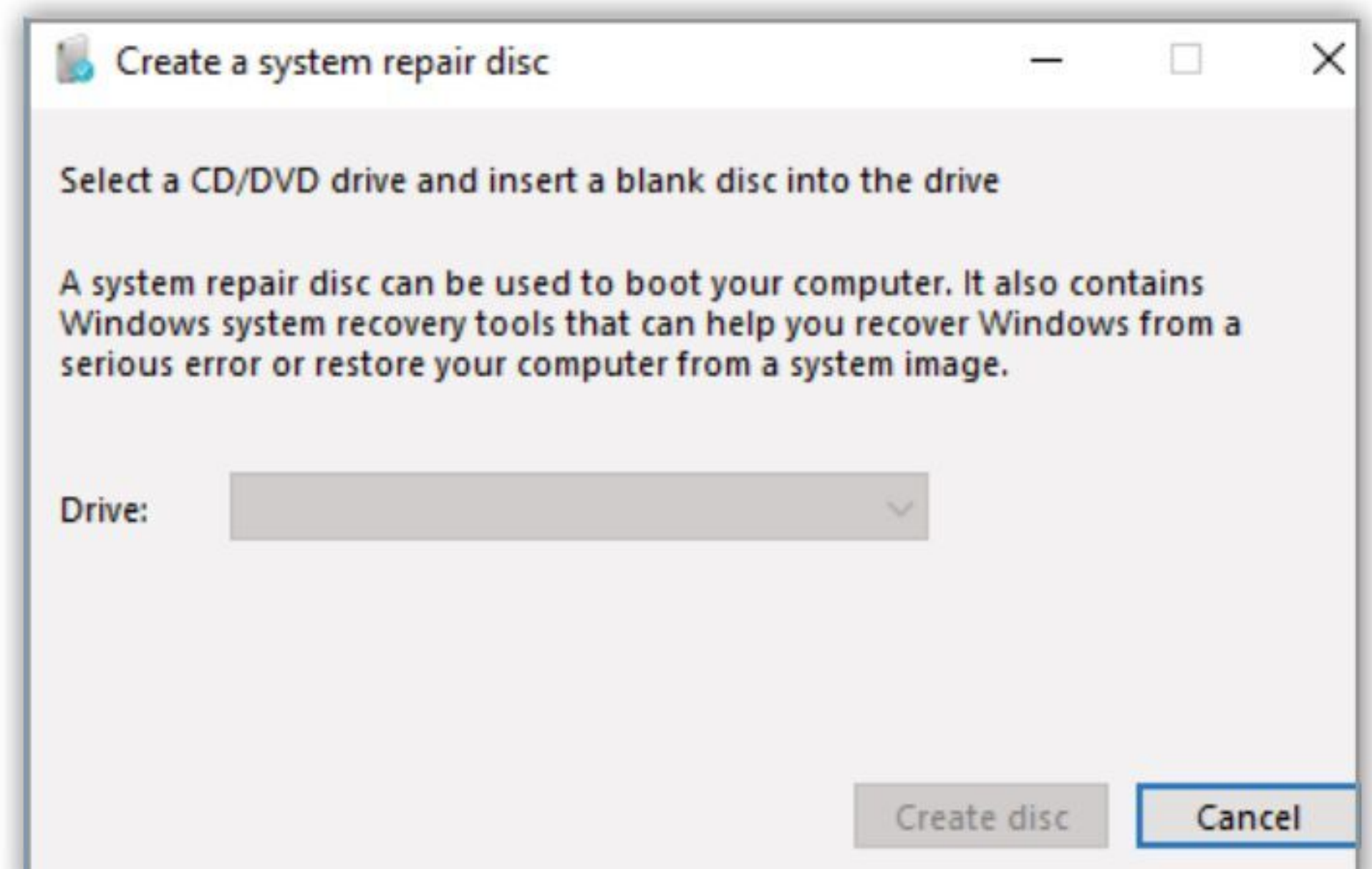
Step 6

The next window displays the drives included in the system imaging process. In this example, the C:\ drive, the System drive and the System Reserved partition are all to be backed up. When it comes to restoring the system, you'll need both partitions for Windows 11 to be able to boot up correctly.



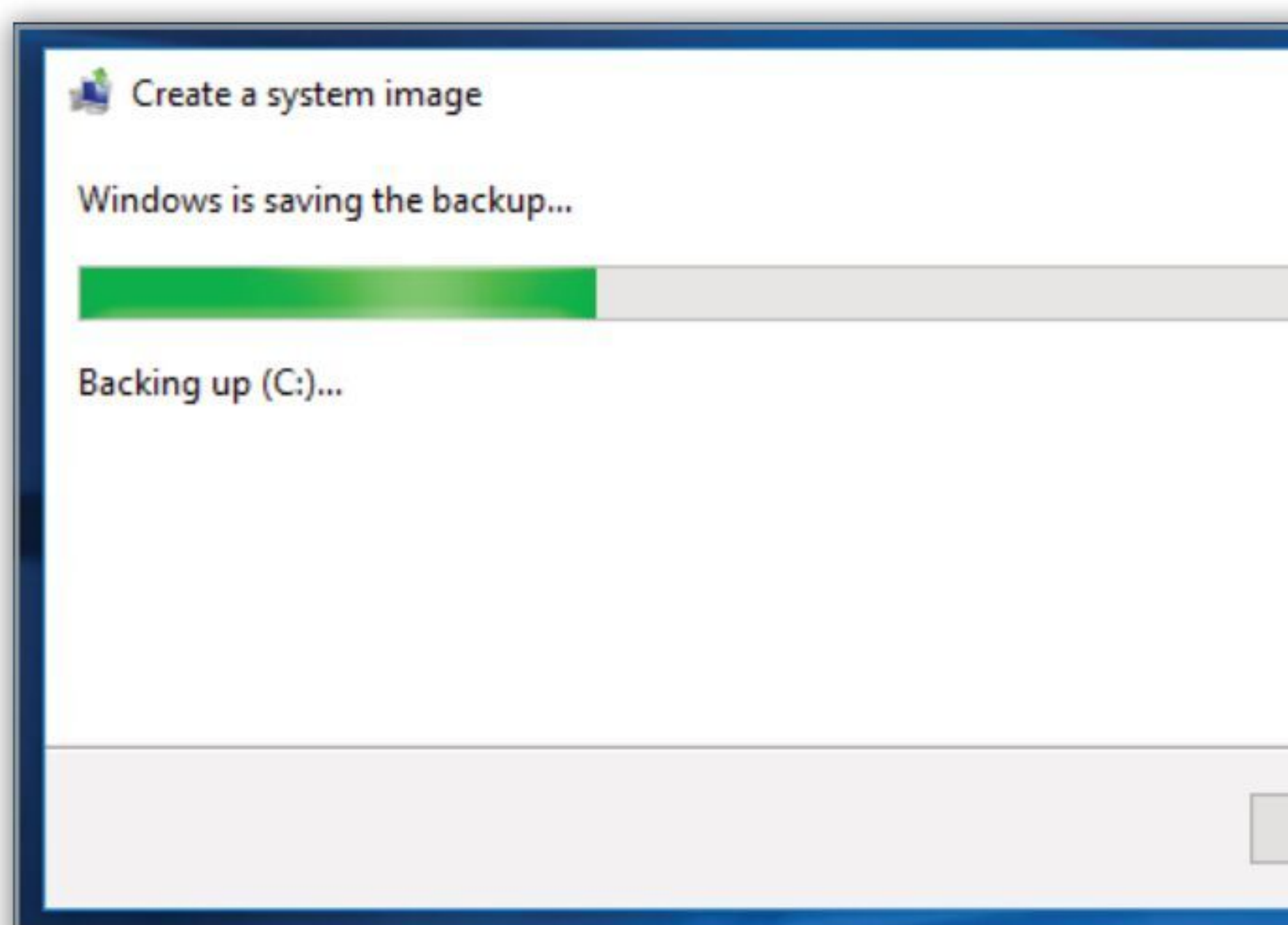
Step 9

If you click Yes to creating the System Repair Disc, you need to make sure you have a blank DVD to hand. Follow the on-screen instructions and click on the Create Disc button to burn the repair files to the disc.



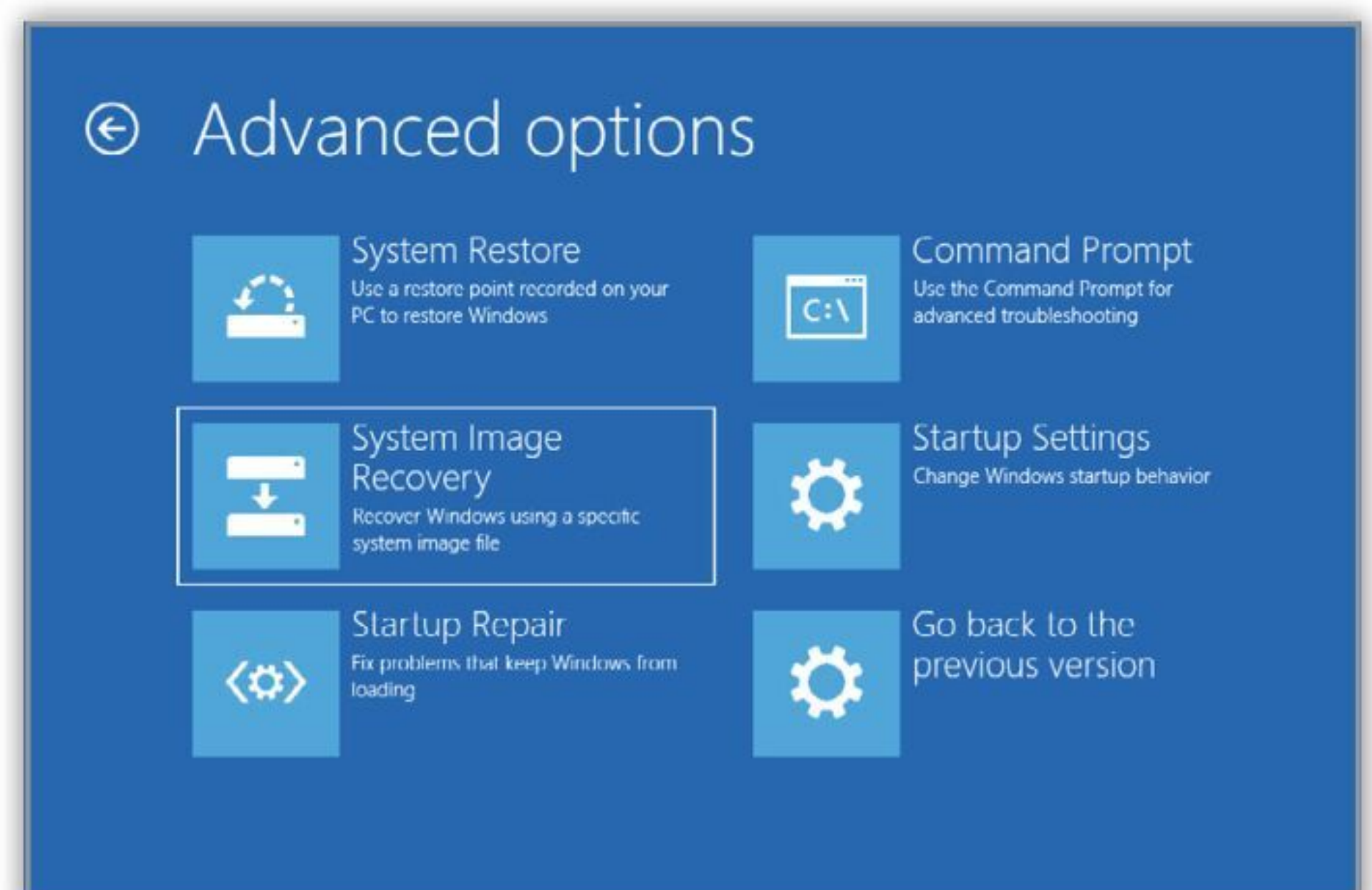
Step 7

When you're ready to continue, click the Start Backup button. This begins the imaging process, which can take some time depending on the amount of space used on the C:\ drive and the speed of the drive to which you're writing. Allocate ample time if you're writing to DVDs.



Step 10

Should you need to restore Windows 11 from the system image, you can boot into the System Repair Disc and select the System Image Recovery option from within the Advanced Options of the Troubleshoot menu. Follow the instructions, and within minutes, Windows 11 is back as it was when the system image was taken.





Setting Up Dual Monitors

With a second monitor and the required connectors on your PC, setting up Windows 11 to display over two screens is easy. Having a second monitor can really help to increase productivity, and allow you to stay more organised when you're at your computer.

Setting Up a Dual Display

Matching up the resolution and size of your two chosen monitors will give the best results but even mismatched monitors can work really well in dual format.

Step 1

You will obviously need to ensure that your PC has the requisite connections for two monitors (two HDMI, VGA or DVI ports, or a combination of these). Check the back of your PC tower or the side of your laptop to find out. With your PC turned off, connect both monitors to the available ports.



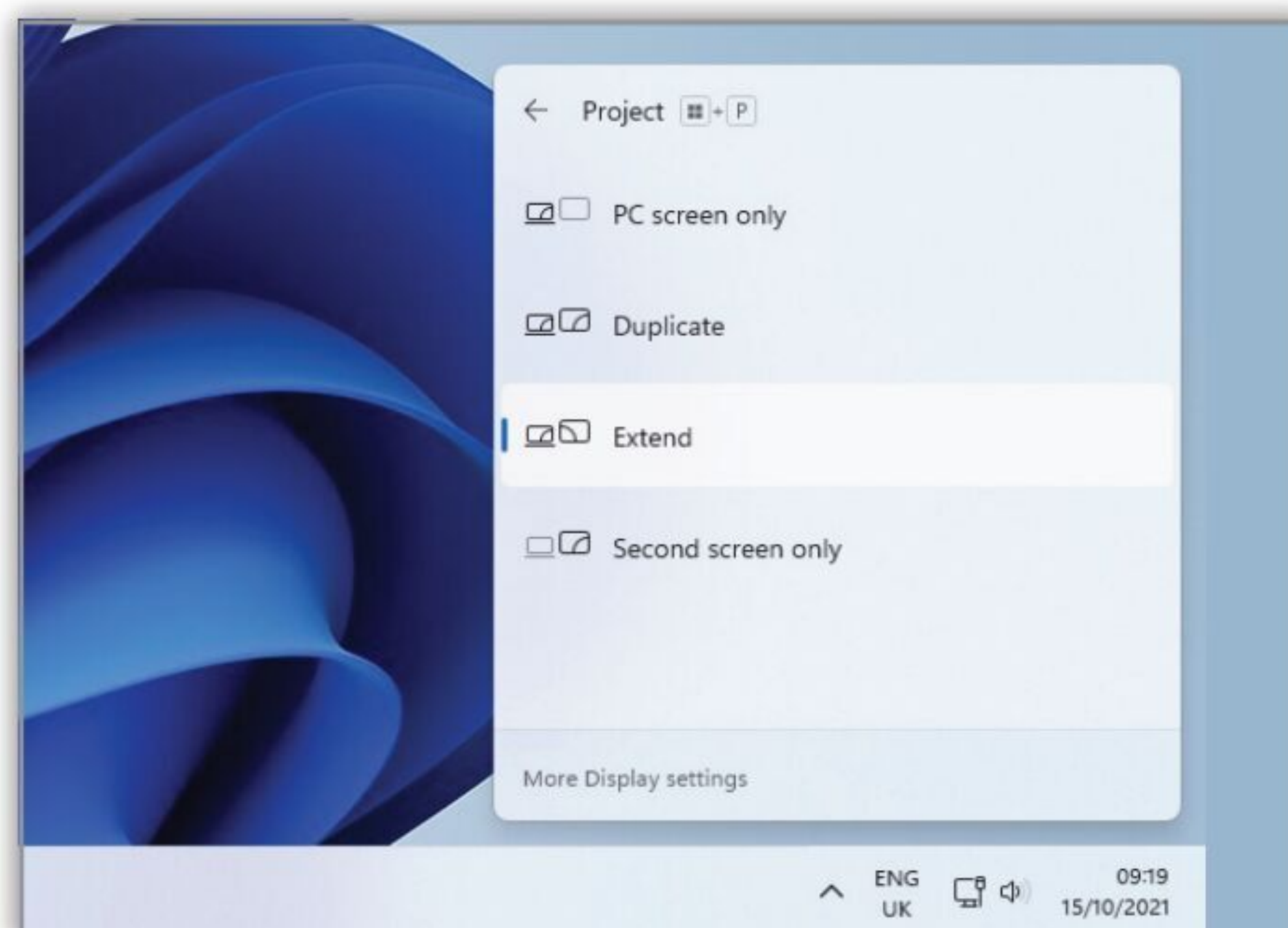
Step 2

Boot up the computer and log in. Windows should automatically detect that two displays are connected and you should see both of them displaying a desktop. Your main display will have all of your icons on it, whilst the new second display will be blank apart from the taskbar along the bottom.



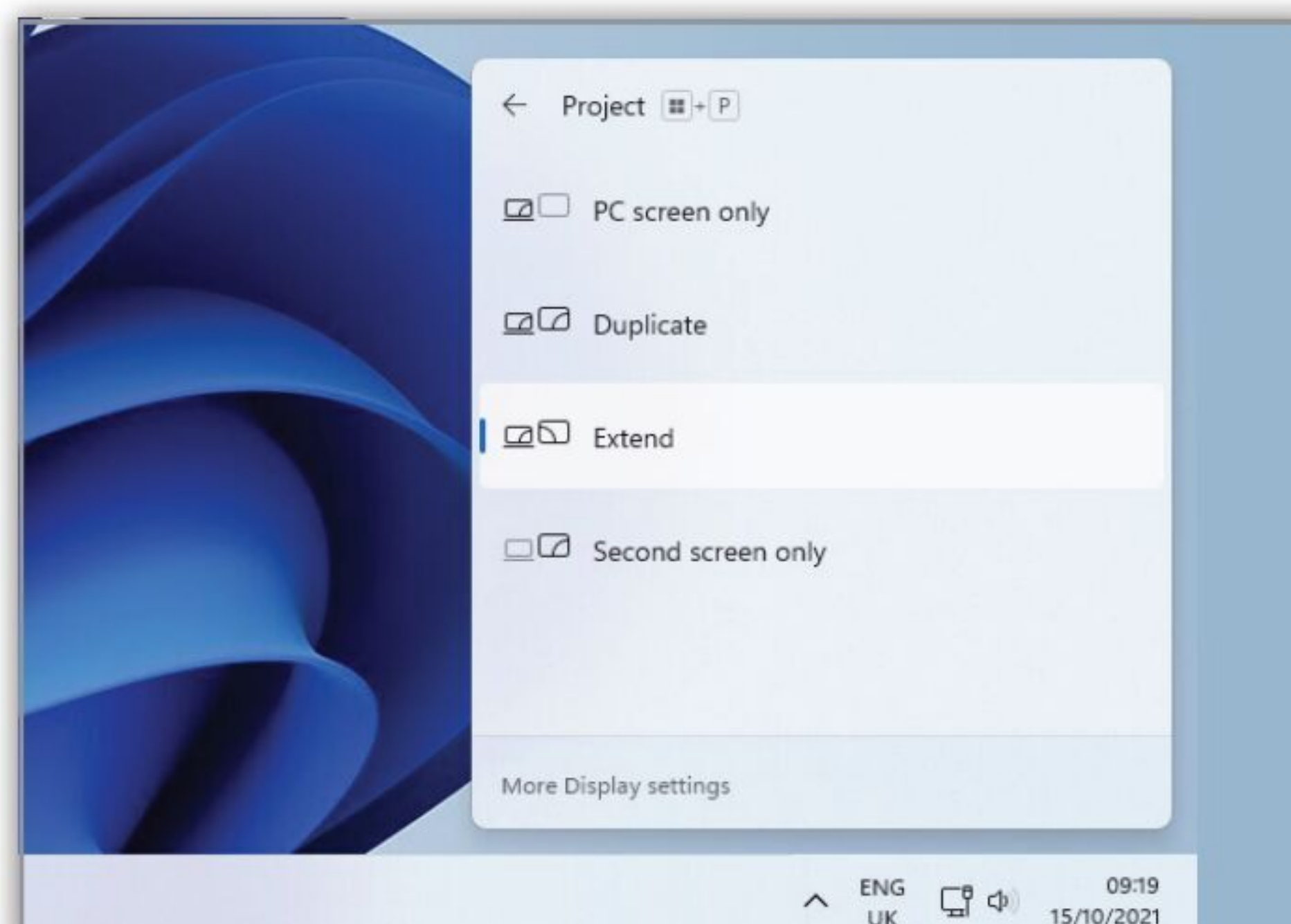
Step 3

You will now need to configure the dual monitor setup to your liking. Windows 11 allows you to easily choose how the dual monitors display. Press Windows Key + P to see the Project side panel. Here you can choose from PC Screen Only, Duplicate, Extend or Second screen Only options.



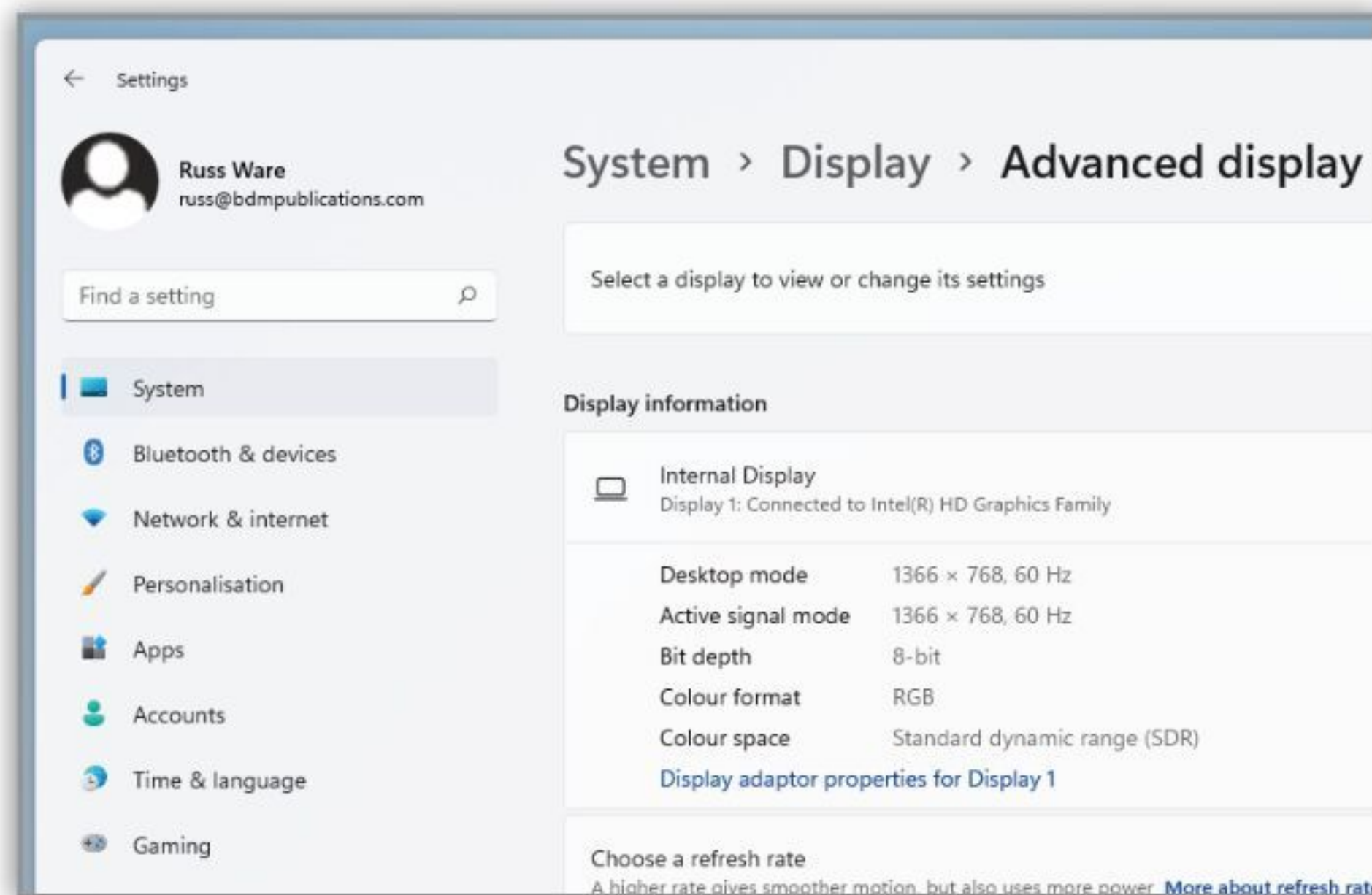
Step 4

PC screen Only and Second Screen only are fairly self-explanatory, displaying an image on one or the other screens. Duplicate is also fairly easy to understand, showing exactly the same display on both screens. Extend turns the two monitors to one long screen that you can spread out across.



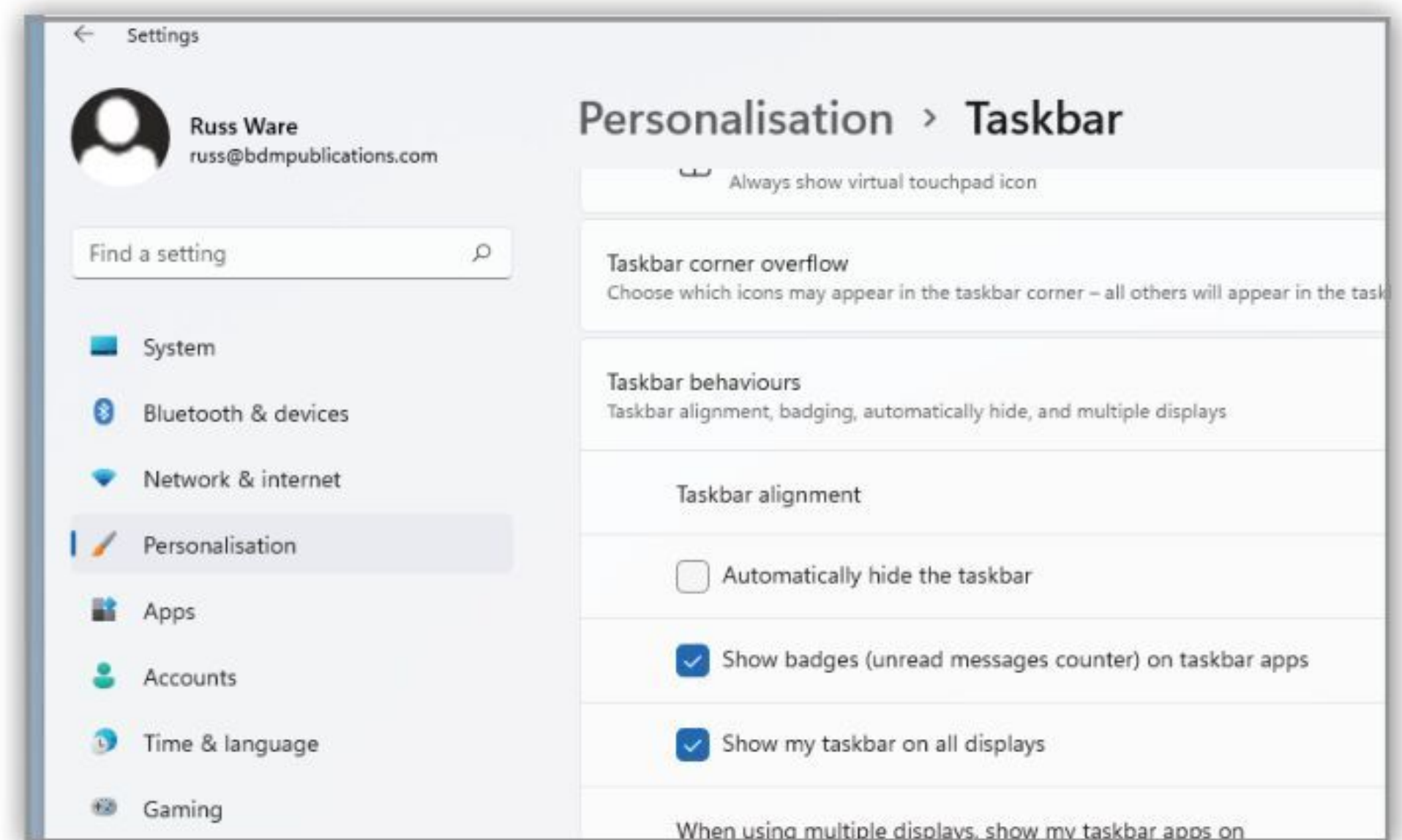
Step 5

The Extend option is the one which needs the most setting up. On the main display, right-click anywhere on the desktop and choose Display settings from the Action menu. Scrolling to the bottom of the display settings gives you another way to choose the display mode.



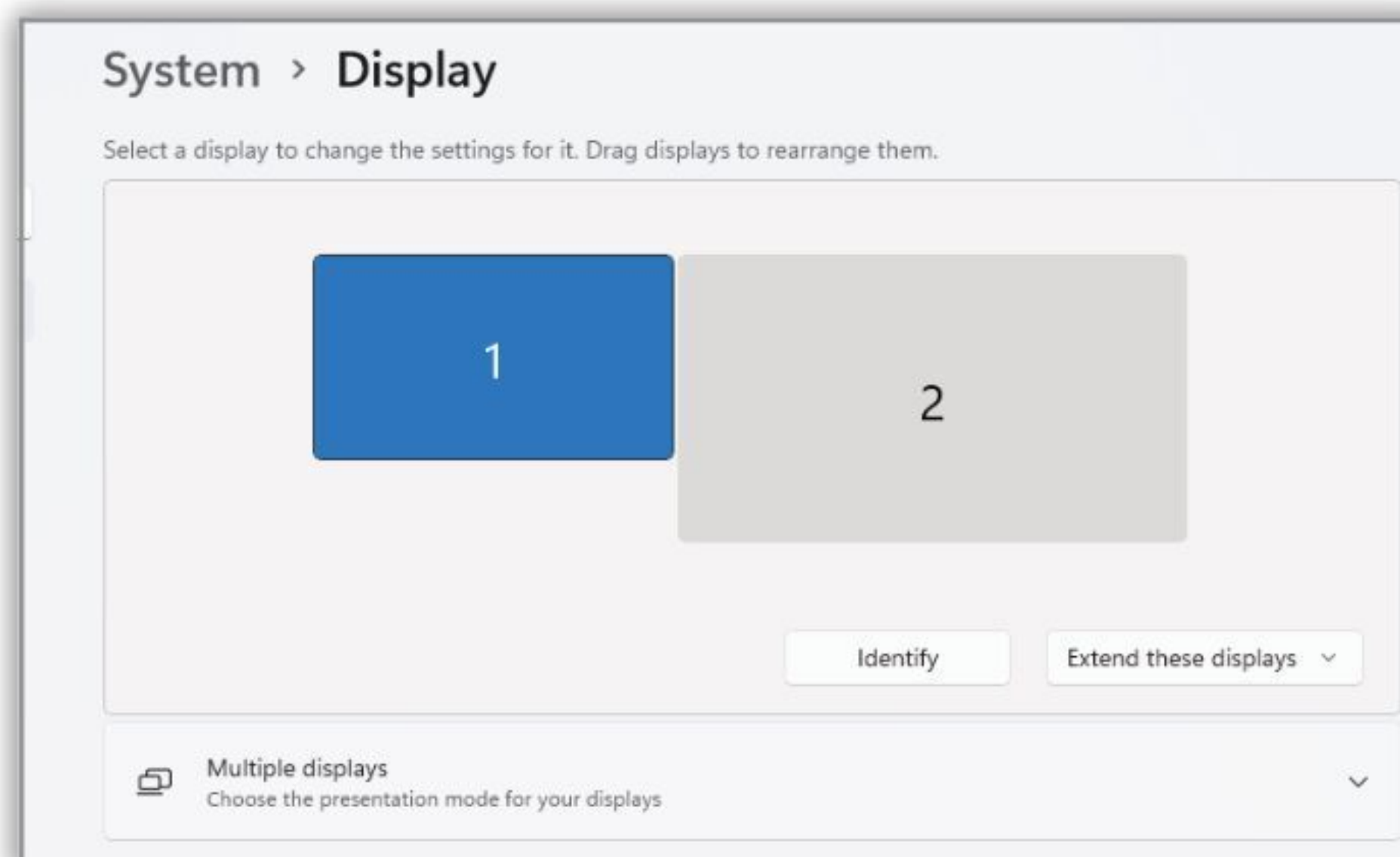
Step 8

If you don't want to see the taskbar on both displays, go to Settings > Personalisation > Taskbar, and scroll down to Multiple displays. You can then choose to turn off the taskbar on the second display. You can also spread a single wallpaper across both screen by selecting Span in Background settings.



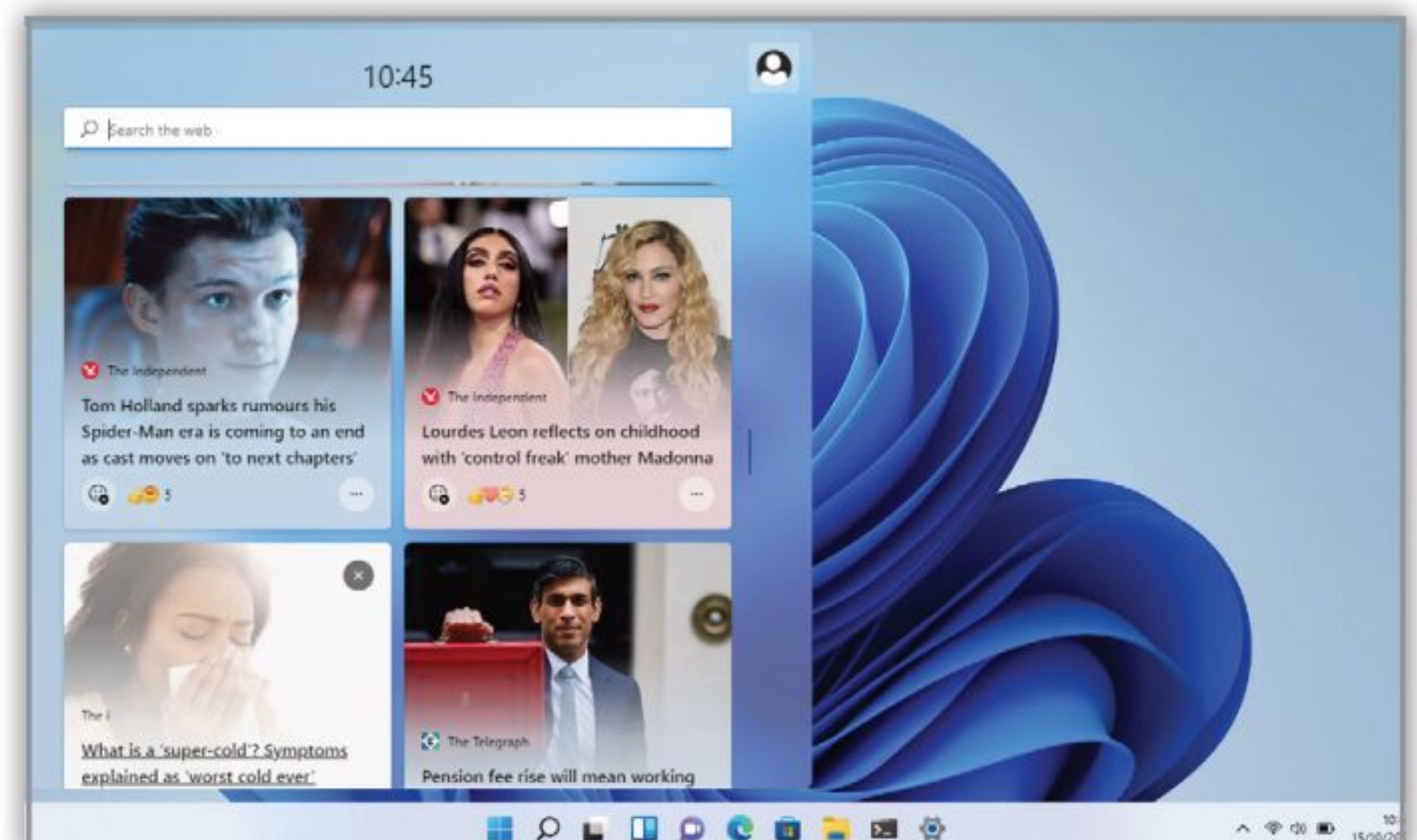
Step 6

At the top of the display settings are the two displays side-by-side. 1 is your main display and 2 is the secondary display. Which side of the screen the two monitors "join" at (which side allows you to move on to the second monitor) is controlled by dragging the display boxes here to the left or right.



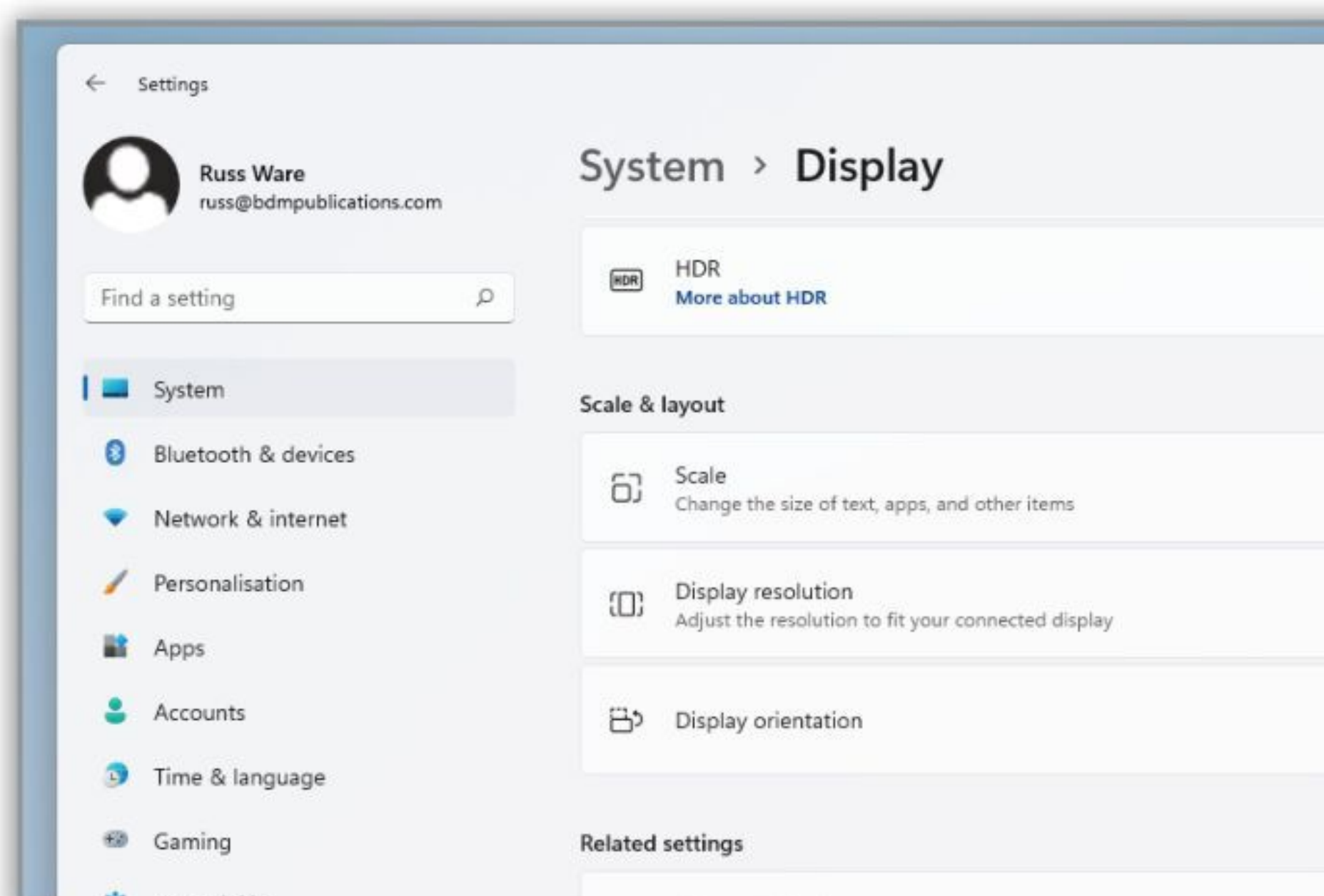
Step 9

Spreading out across the two monitors in Extend mode is as easy as clicking and dragging a window, be that a browser window, app or anything else, to the "joined" side of the main screen. Just keep the mouse pointer moving and it will continue on to the second screen seamlessly.



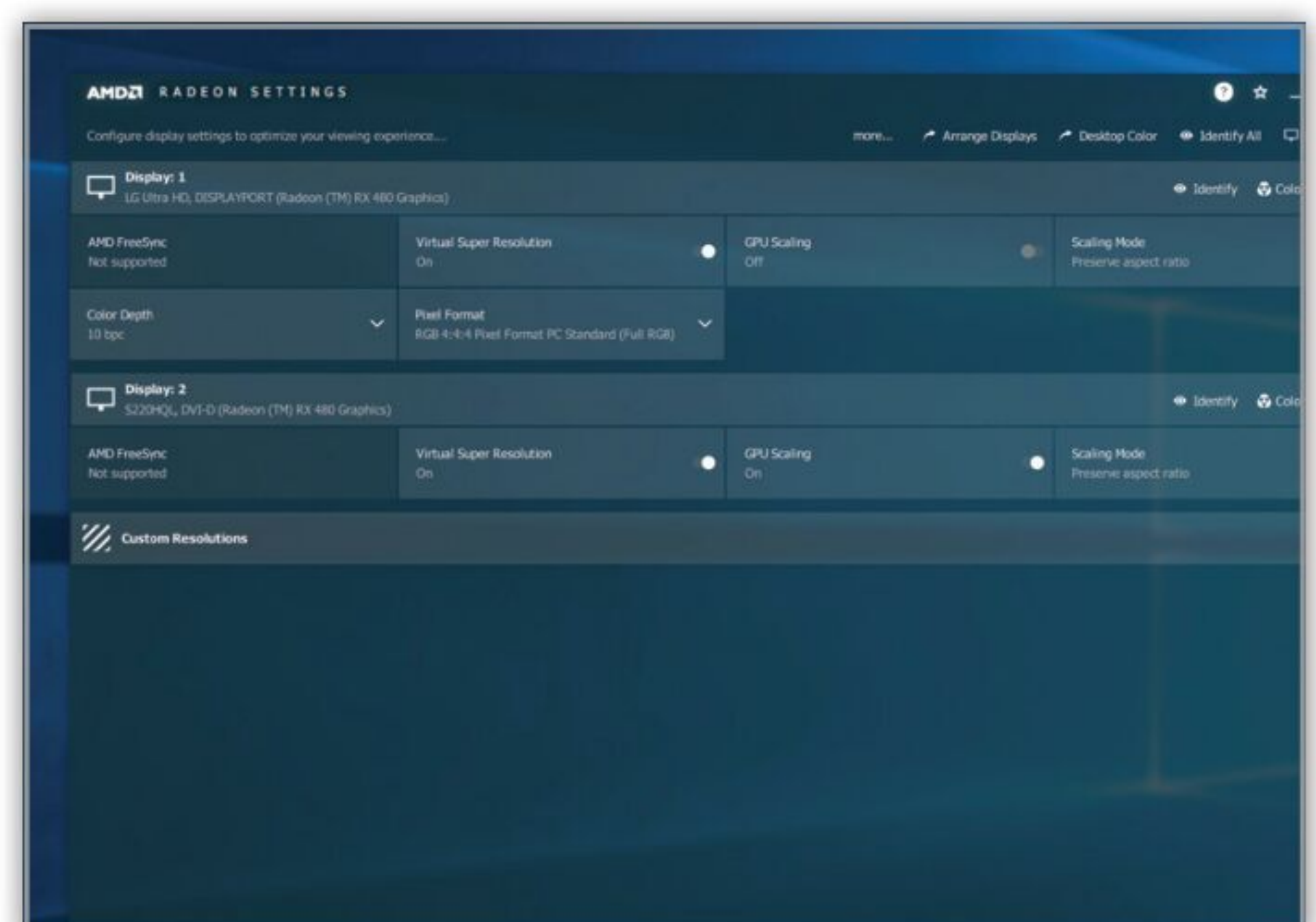
Step 7

You can view settings for each display independently, by clicking on one you want to see, and then scrolling down. You can change the scaling, orientation and resolution of each display to best suit the specification of the monitor, if it is the case that the two monitors have different maximum resolutions.



Step 10

Depending on the graphics card software you have installed (Radeon for example), you will usually have further display options for the second monitor in the graphics adapter settings. This might include Virtual Super Resolution and GPU scaling, helping you match up resolution settings.





How to Create a Recovery Drive

A recovery drive is a useful way to ensure that you don't lose data in the event of a critical malfunction. It can help you both troubleshoot and fix problems, even if the PC won't start as it normally would. All you need is a blank, formatted USB flash drive.

Protecting Your PC and Files

Creating a recovery drive is a relatively simple process. It does however take a bit of time to create but it's worth the effort as it could save you a lot of frustration in the future.

Step 1

The first thing you need to do is find a USB drive that is large enough and then make sure it is ready to be used. The USB drive you decide to use won't be able to be used for anything else like storing other files, etc. so make sure it is a spare, or bought specifically for the task.



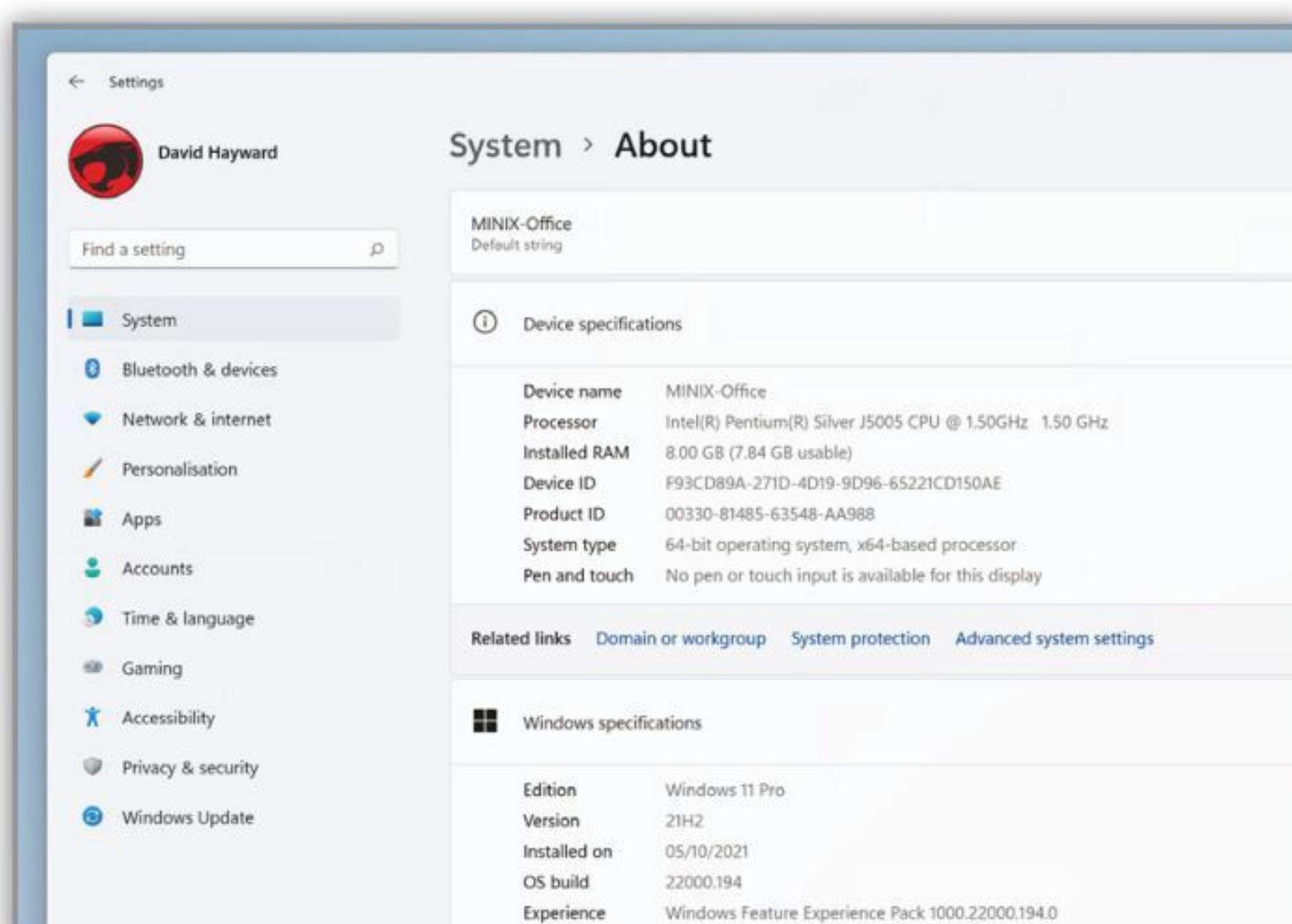
Step 3

Your USB drive needs to be wiped of everything currently on it before the recovery drive is created. You can do this during the set up process later or you can format it yourself right now: a useful thing to know how to do. Insert your USB drive into a free USB slot on in your computer.



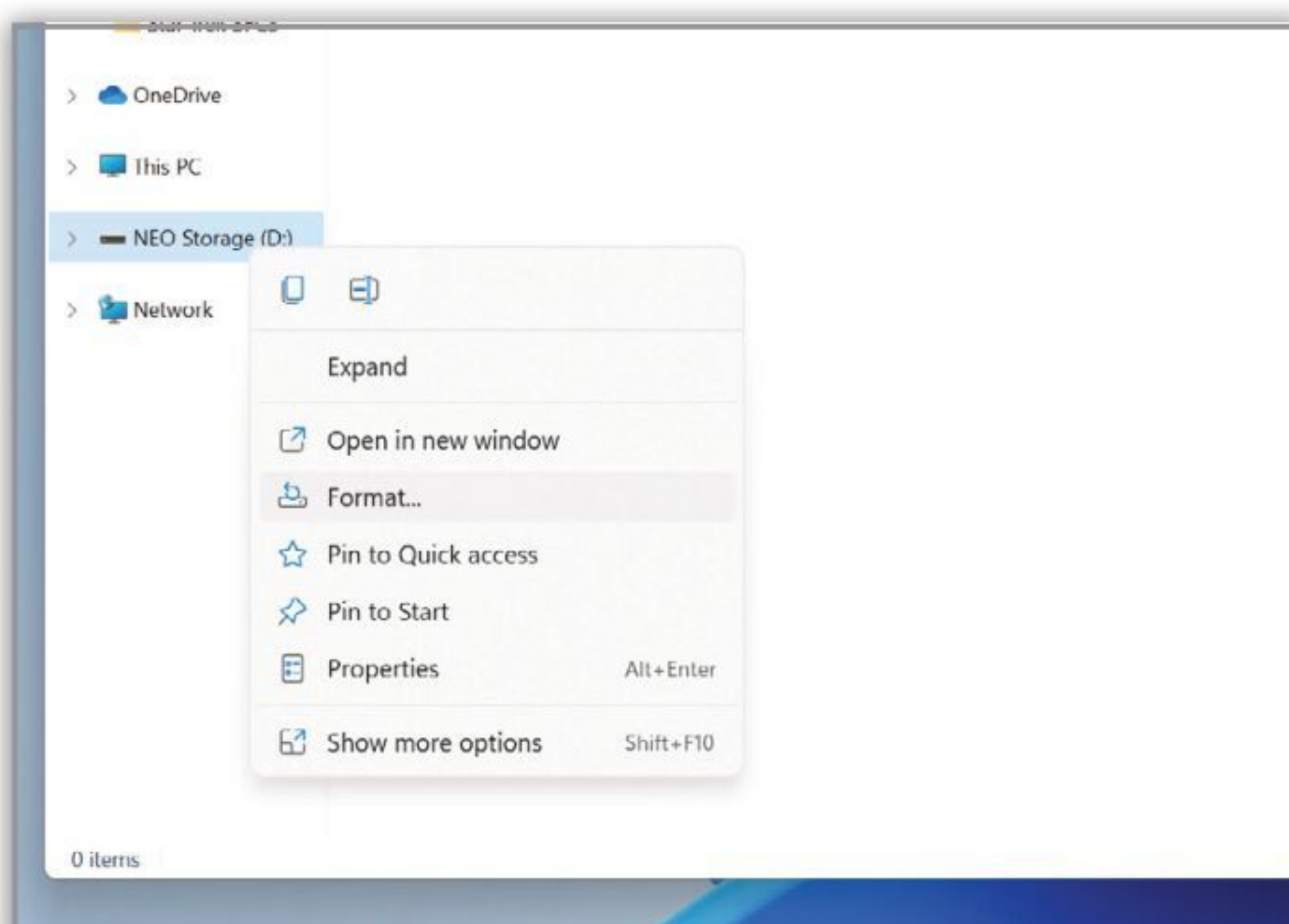
Step 2

A basic Windows 11 recovery file will be less than 500MB but if you choose to include system files in the backup (recommended), so you can use it to reinstall Windows, you will need much more space. A basic recovery drive can be as small as 1GB but a full recovery drive needs to be at least 8GB.



Step 4

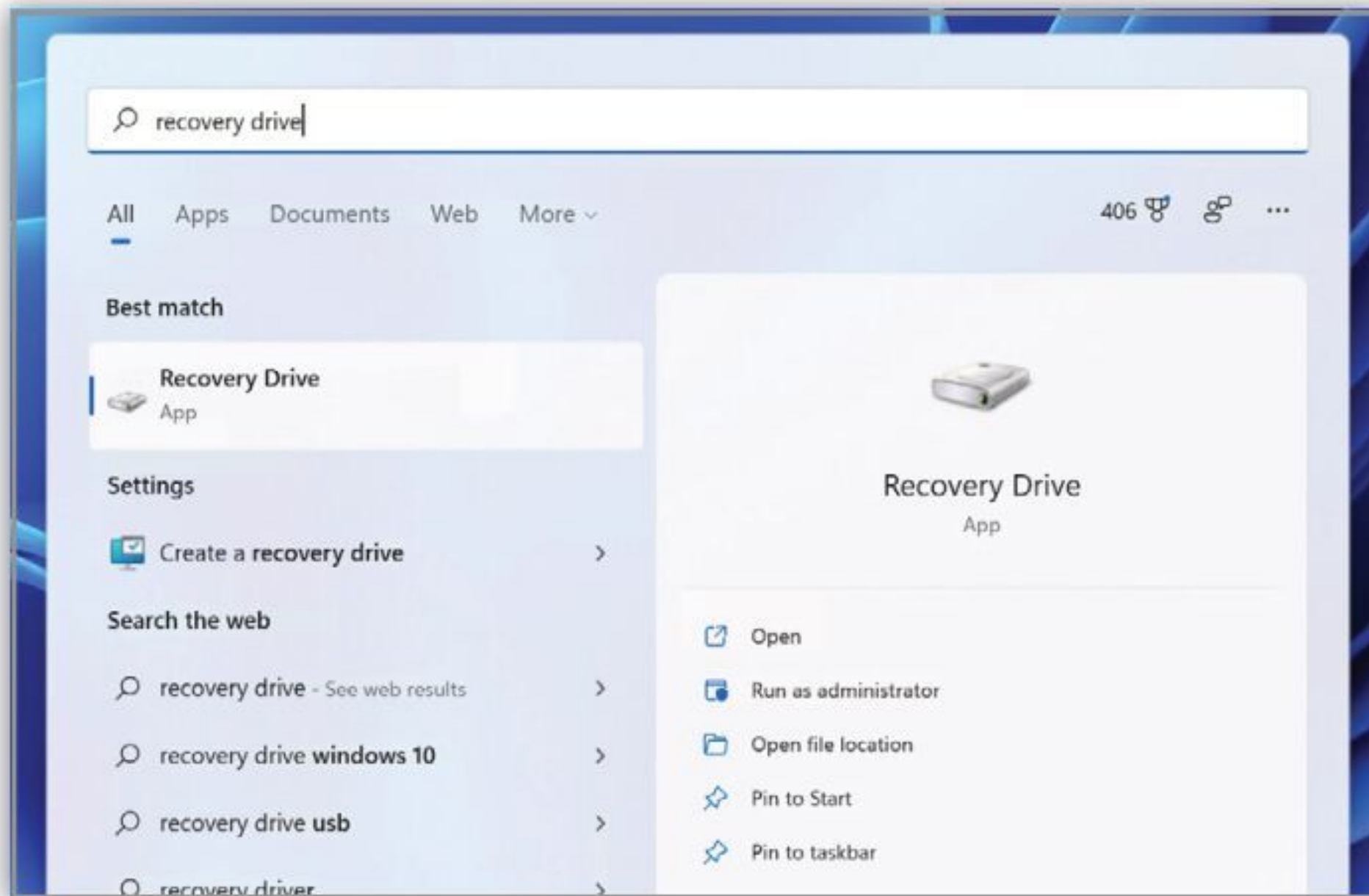
Open the File Explorer on your computer and you should see the USB flash drive listed in the sidebar. It will probably be labelled as the (E:) or (F:) drive. Right-click on the drive label and select Format from the action menu. Leave the settings as default (should be FAT32) and then click Start.



How to Create a Recovery Drive

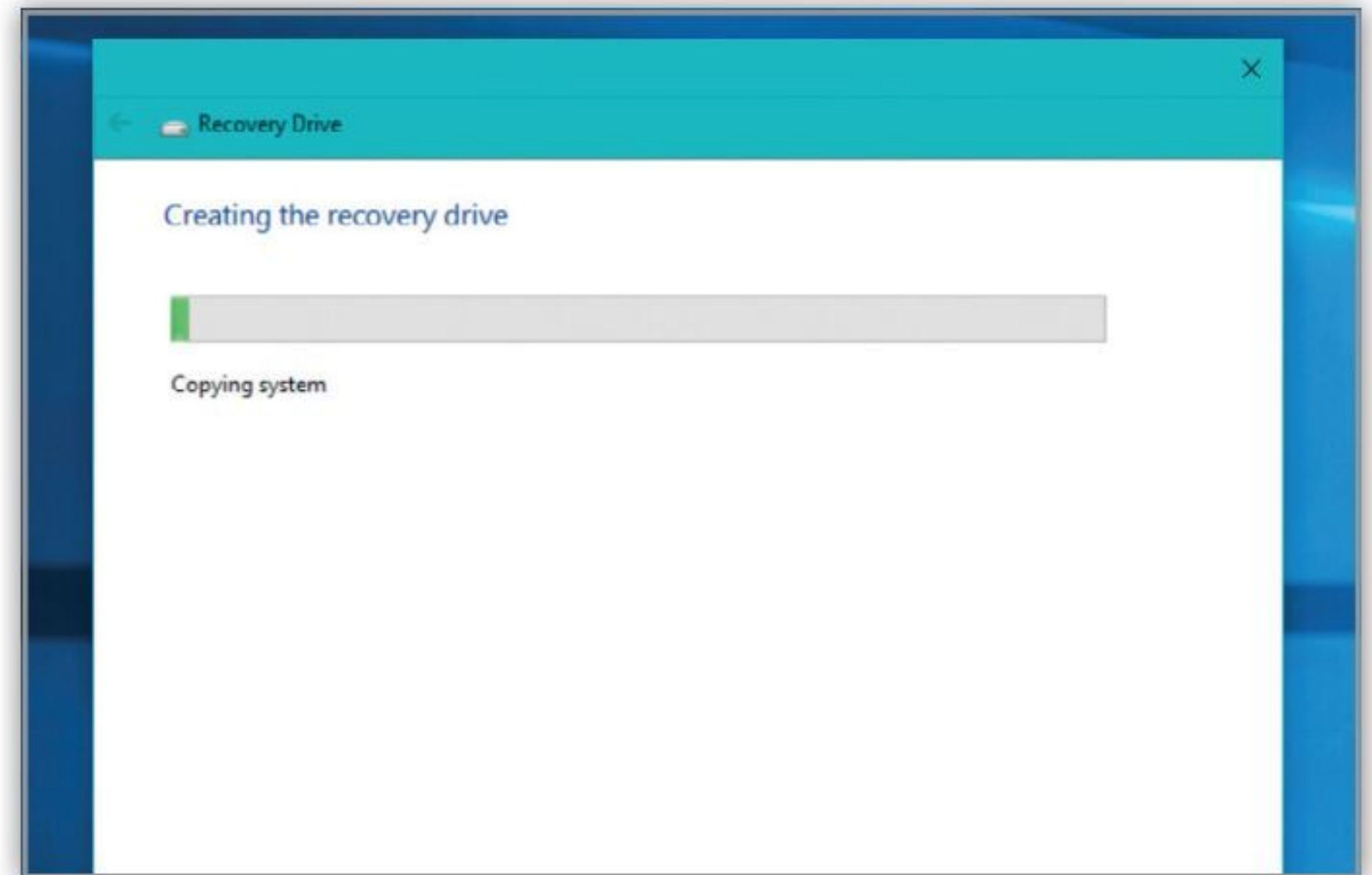
Step 5

You should now be ready to create your recovery drive. In the search field, type “Recovery Drive” and select the Recovery Drive app result. In newer versions of Windows 11, you might also be able to find the Recovery Drive in the main apps list, opened by clicking the Start menu button.



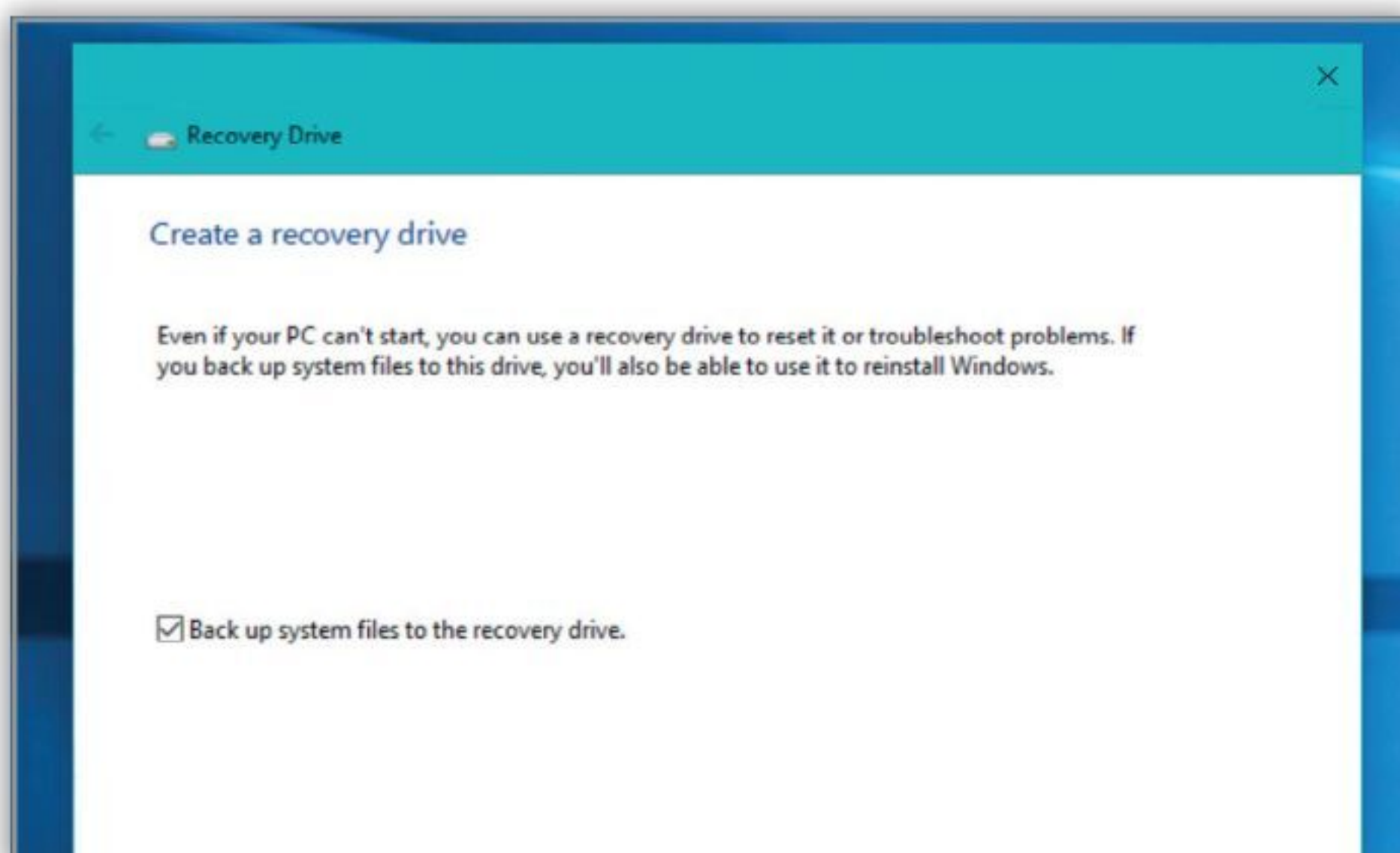
Step 8

Click Create on the next screen and the process will begin. This may take a while to complete, so go make a coffee and leave it to run. A progress bar shows how far along it is, should you need to check. Do not remove the USB drive, or turn off your computer, before the process finishes.



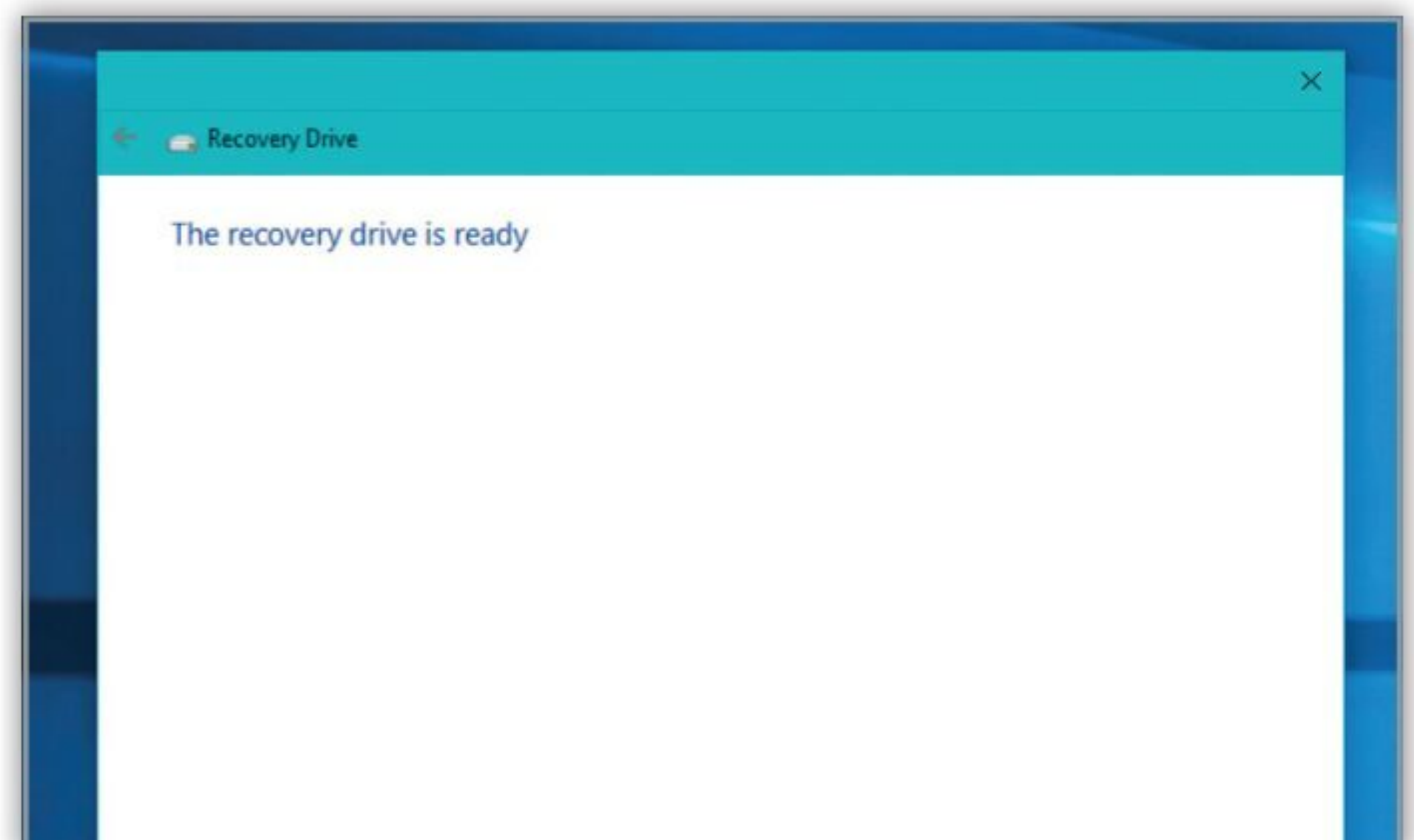
Step 6

Allow the software to “make changes to this PC” and the setup wizard will open. This first screen is where you choose whether you want to back up system files with the recovery drive, so you can use it to reinstall Windows 11. If you do, tick the checkbox and then click Next.



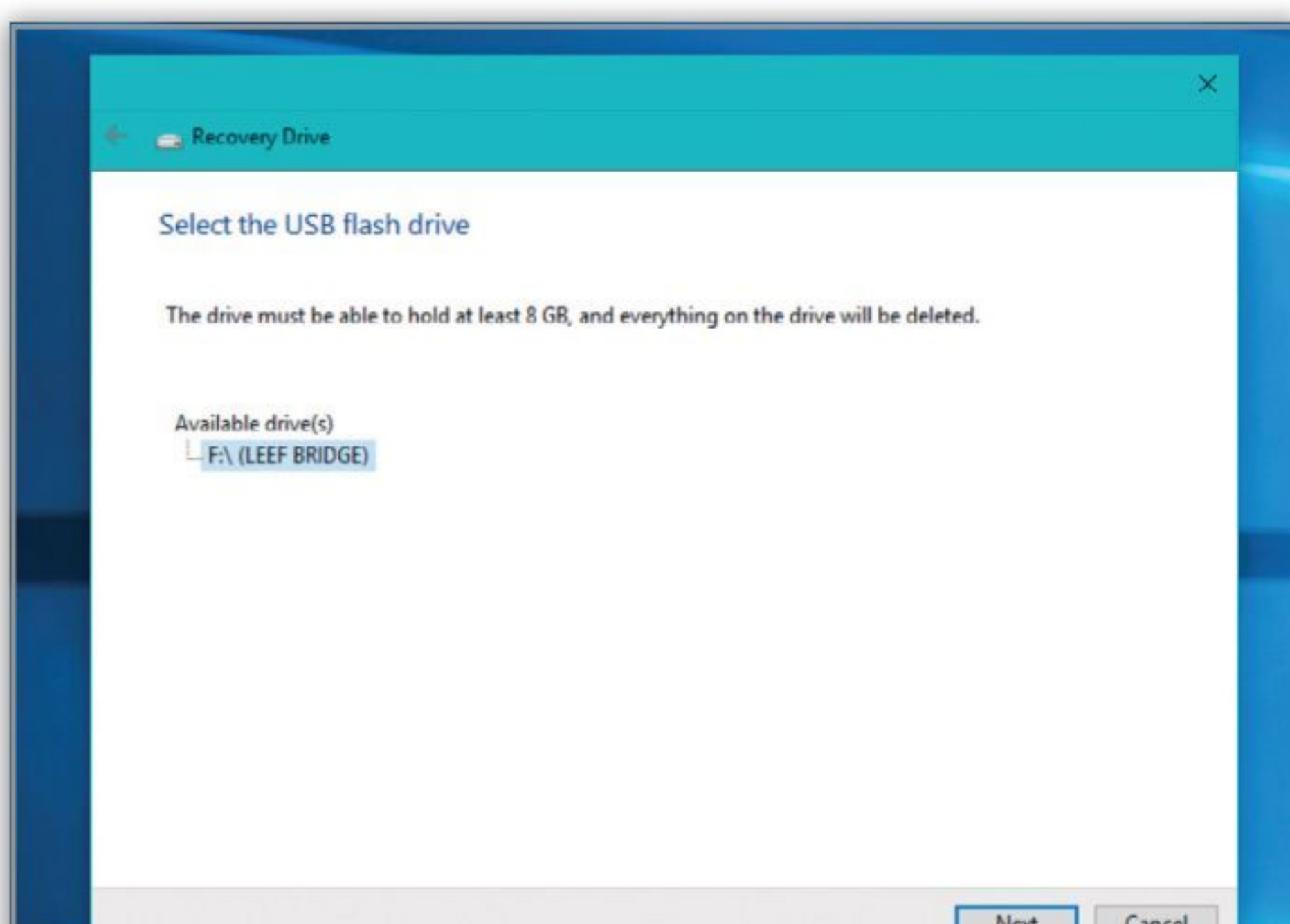
Step 9

When the process is complete, you should be prompted to delete the recovery partition on your PC, to save some space; as long as you plan to keep your recovery drive, this is safe to do. If you are not sure, you can leave the recovery partition in place; it can be deleted at a later date if you wish.



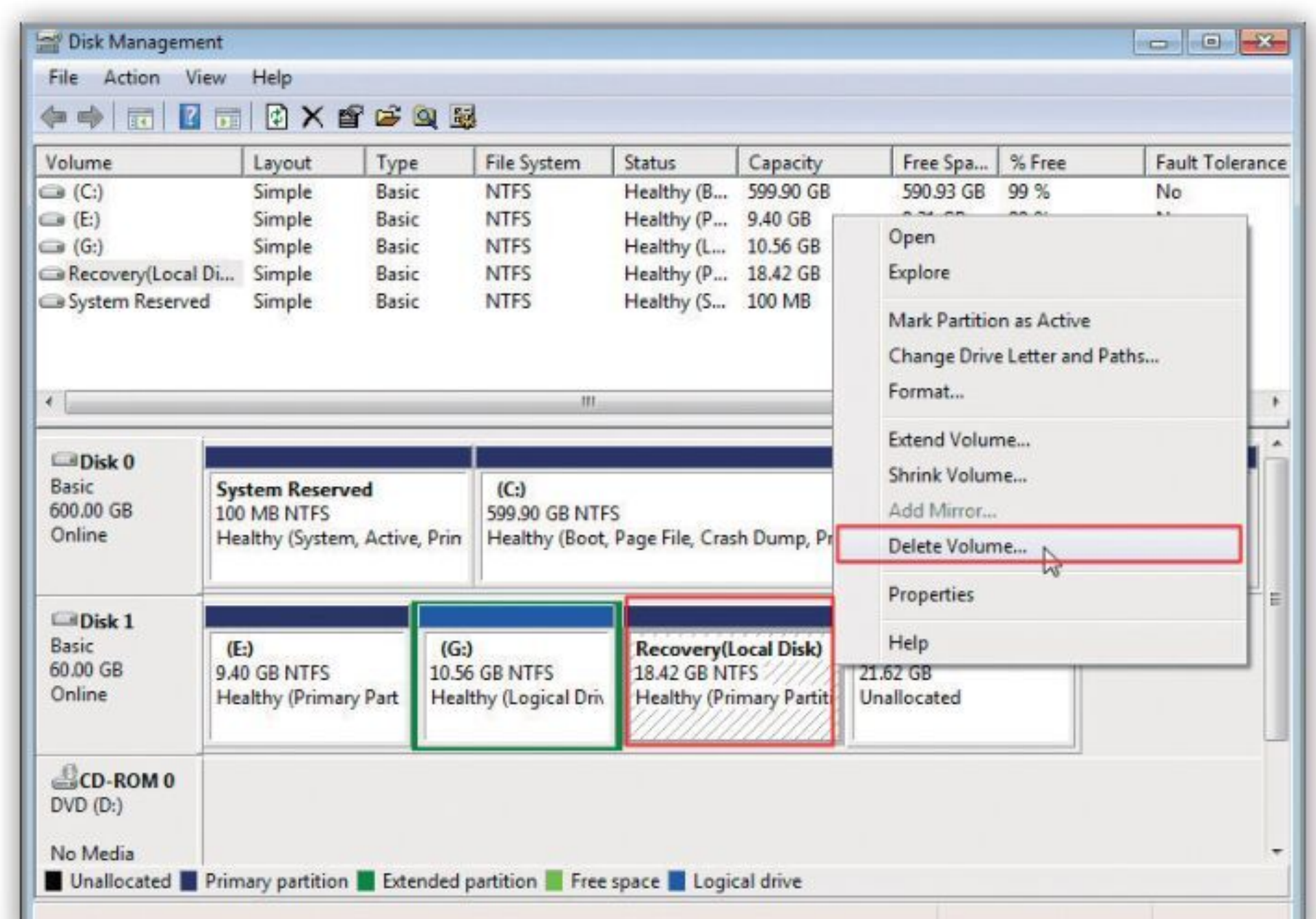
Step 7

After a few moments, you will be asked to select the USB flash drive you wish to use. If you only have one USB drive inserted, it will be the only one shown and will be automatically selected. You are reminded again how much storage space the drive needs, and that all existing data will be wiped.



Step 10

If you did not already have a recovery partition on your computer, you won't see this step. You will simply be informed that the recovery drive is ready, and to click Finish. Remove the USB drive from your computer and put it somewhere safe. It is a good idea to label the drive so it is not reused.





Fix Wireless Network Connection Problems

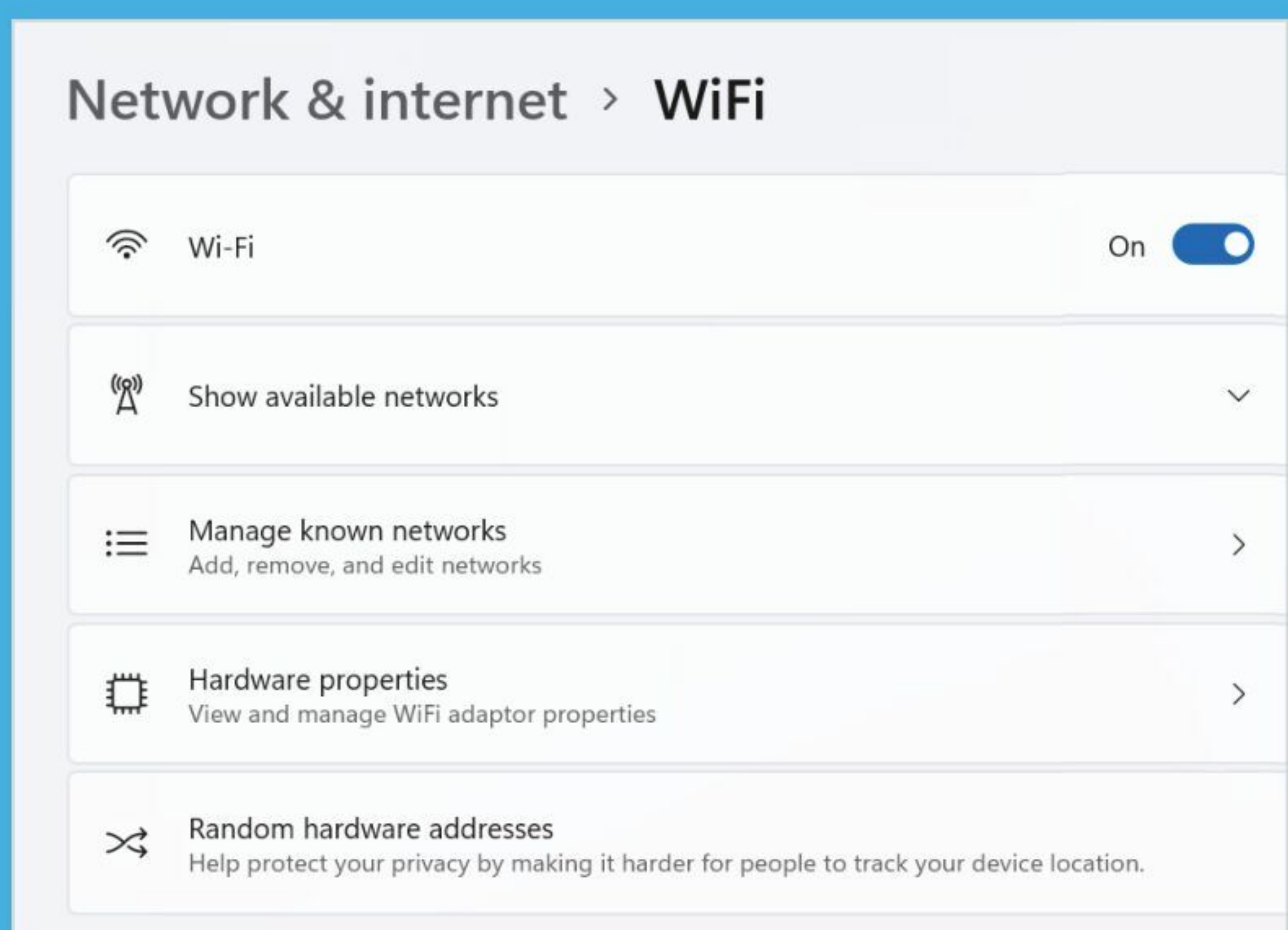
It's certainly frustrating when you've just sat down at your computer to browse YouTube videos or play some online games, only to find that you have no Internet connection. If the same problem occurs when you need to start work or finish that important essay, it can cause a ripple of panic to spread through your body. Try to stay calm by focusing on fixing it and initially try these solutions.

1 Make Sure Wi-Fi is On

If you are trying to connect wirelessly, check that Wi-Fi hasn't somehow been switched off: click the Start button, select Settings > Network & Internet > Wi-Fi. Next, select "Show available networks" and if your network appears in the list, select it, then select Connect.

If using a laptop, make sure the physical Wi-Fi switch (if there is one), is turned on. An indicator light usually shows when it's on or off.

Again, if using a laptop (or Windows 11 tablet), check to see that Flight mode is turned off: select the Start button, then select Settings > Network & Internet > Flight mode and if it's on, turn it off.



2 Restart Your Modem and/or Wireless Router

If you've never experienced network problems before, you may never have touched your modem or wireless router, however, occasionally problems arise with its configuration and it needs to be reset to establish a new connection to your Internet service provider (ISP). When you do this, take into consideration that everyone connected to your Wi-Fi network will be temporarily disconnected.



Step 1

Unplug the power cable for the router and/or wireless modem from the power source.

Step 2

Some modems have a backup battery, if so, remove this and wait around 30 seconds.

Step 3

Replace the battery and plug the modem/router back into the power socket. The lights on the modem will blink for a few minutes as it reconnects.

Step 4

Wait until the status lights on the box stop blinking (if any fail to come on or light up red, there is another problem) and then try again to connect your PC to the network.

3 Create a Wireless Network Report

With the simplest attempts at a fix out of the way, it is time to dig a little deeper by generating a Wireless Network Report. This takes a bit of work with the Command Prompt, but is actually nothing to be scared of and quite simple if you follow these steps. Generating the report creates a HTML file that you can

open in your web browser (even with no Internet connection). The report will contain a lot of information that will most likely be hard to decipher, but the main thing you need to look out for are the Connection Successes/Failures, where information about network connection attempts will be shown.

```

Select Administrator: Command Prompt
Microsoft Windows [Version 10.0.17763.194]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\WINDOWS\system32>netsh wlan show wlanreport
Generating report ...
Querying WLAN Events ...
Running ipconfig ...
Running netsh wlan show all ...
Querying Wireless Profiles ...
The Wireless AutoConfig Service (wlansvc) is not running. Querying System and User Certificates ...
Querying User Info ...
Querying Network Devices ...

Report written to: C:\ProgramData\Microsoft\Windows\WlanReport\wlan-report-latest.html
done.

C:\WINDOWS\system32>

```

Step 1

Click in the Search box on the taskbar and type “Command Prompt”, right-click on the Command Prompt listing in the search results and then select “Run as administrator” from the action menu.

Step 2

In the Command Prompt window, type **netsh wlan show wlanreport**.

Step 3

At the bottom of the Command Prompt it shows where you can find the generated report on your PC (e.g. C:\programdata\Microsoft\Windows\WlanReport.html).

4 Perform a Ping Trace

To check if the problem is with your ISP or router, rather than your PC or software, you can perform a ping test. This tests to see if data can be sent and received over the network. If the ping test is successful, but you cannot connect to the Internet on your PC, it means there is more likely a problem at the ISP end and you will need to contact them for help.

Step 1

In the Search box on the taskbar, type “Command Prompt”, select it in the results and then select “Run as administrator”.

Step 2

At the Command Prompt, type **ipconfig** and look for the IP address listed next to Default Gateway (something like 192.168.1.2).

Step 3

Now type: “ping <Default Gateway IP>” and press Enter. It should look something like “ping 192.168.1.2”.

A successful result should be something like this:

```

Reply from 192.168.1.1: bytes=32 time=5ms TTL=64
Reply from 192.168.1.1: bytes=32 time=5ms TTL=64
Reply from 192.168.1.1: bytes=32 time=5ms TTL=64
Reply from 192.168.1.1: bytes=32 time=5ms TTL=64

```

```

Ping statistics for 192.168.1.1: Packets: Sent = 4, Received = 4,
Lost = 0 (0% loss), Approximate round trip times in milli-
seconds: Minimum = 4ms, Maximum = 5ms,
Average = 4ms

```

```

Administrator: Command Prompt
Microsoft Windows [Version 10.0.17763.194]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\WINDOWS\system32>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

    Connection-specific DNS Suffix  . : lan
    Link-local IPv6 Address . . . . . : fe80::48c5:a41c:2b70:fb5%3
    IPv4 Address. . . . . : 192.168.1.127
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.1

C:\WINDOWS\system32>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\WINDOWS\system32>

```




What is Encryption?

To better understand encryption, it's worth taking a moment to learn about its origins, how it has developed over the years and how it applies to our modern communications.



Encryption is the act of protecting your data from prying eyes

The word encryption comes from the ancient Greek word *Kryptos*, which means hidden or secret. Interestingly, the practise of hiding messages from others can be traced back to early Egyptian scribes who inserted non-standard hieroglyphs within other communications in order to hide the message from casual viewers. According to historians, the Spartans used strips of leather engraved with messages. When the strips were read, they were meaningless, but when wrapped around a staff of a certain diameter, the characters would be decipherable.

Of course, the modern forms of encryption are far more advanced, but the overall core concept has remained the same: to be able to send a message to others without anyone else being able to decipher it. However, modern encryption now requires more than merely sending coded messages. Not only is confidentiality required, encryption must perform a level of authentication, so the origin of the communication can be verified; integrity of the communications, where both the sender and those who receive the communication can be sure that the message hasn't been altered in between; and some form of nonrepudiation, where the sender cannot deny having sent the communication in the first place.

During the early digital age, the only users of encryption were the government and military. As such, between them they created a

set of algorithms and standards to protect the communication on the battlefield and from one government agency to the next. These algorithms grew in complexity as technology advanced and it wasn't long before the military-based forms of encryption were being used in commercial modes of communications. Within a few short years, bank transfers, cash withdrawals and data sent to and from modems began utilising these new protocols to protect sensitive information.

Today we're regularly seeing and using devices that boast 'military-grade 256-bit AES' forms of encryption, a standard that is regarded as nearly impossible to break without spending billions on specialist hardware and software. In plain English, the modern form of encryption takes data and passes it through an algorithm

Forms of encryption can be traced as far back as ancient Egypt, using non-standard hieroglyphs

together with a key. This creates a garbled file of characters that can only be read if the correct key is applied to decrypt the data. Algorithms today are divided into two categories: symmetric and asymmetric.

Symmetric key cyphers use the same key to both encrypt and decrypt data. The most popular symmetric cypher is AES (Advanced Encryption Standard), developed by the military and government to protect communications and data. This is a quick form of decryption that requires the sender to exchange the key used to encrypt the data with the recipient before they're able to read it.

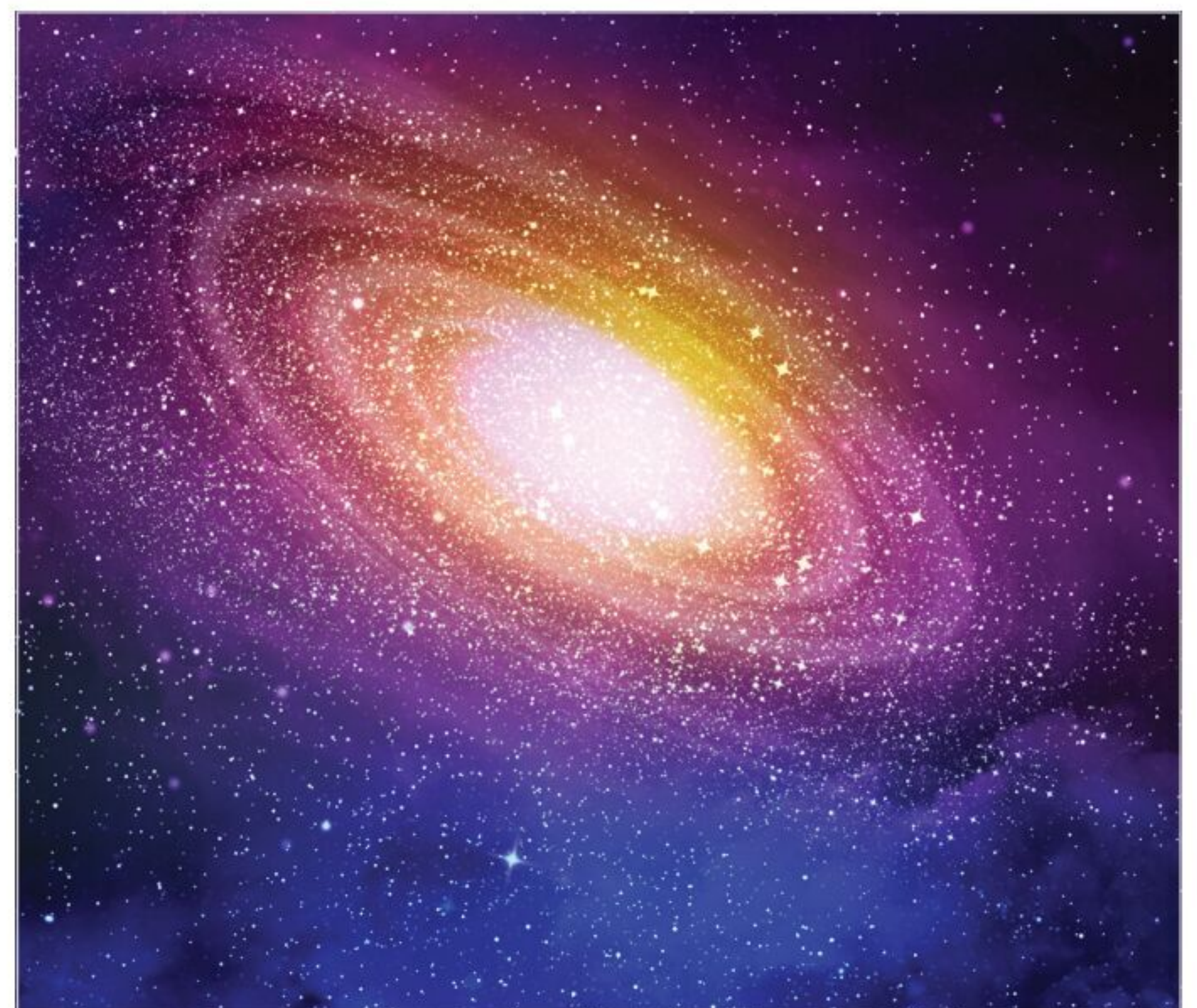


Making data impossible to read is just one step; you also need the key to decrypt that data

Asymmetric key cyphers are also known as public-key cryptography and utilise two mathematically linked keys, public and private. The public key can be shared with everyone and is usually generated by software or provided by a designated authority. The private key is something that's usually only known by the individual user. Interestingly both types of keys can be applied, where one user has a public key and another a private key, which can be combined to form a shared encryption level. These keys are many characters in length, making it nigh impossible for someone to Brute Force hack them. The Brute Force method involves using a program on a computer to try every possible combination of a key until the correct one is found. In the case of the 256-bit encryption, it would take 2^{256} different combinations to

break the key. If you were able to force one trillion keys per second, it would still take you somewhere in the region of 10^{57} years in order to crack 256-bit encryption. However, a powerful computer can probably manage around two billion calculations per second, so in theory, it would take 9.2^{50} years for your standard desktop to crack it. Keep in mind that the universe has theoretically only been in existence for 1.4^{10} years.

Numbers this big are generally far too mind-boggling to comprehend. Suffice to say that if you're able to use 256-bit encryption for your communications or to protect your data, then you're going to be protected for at least seven times the current age of the universe.





Encrypting Your Windows 11 Laptop

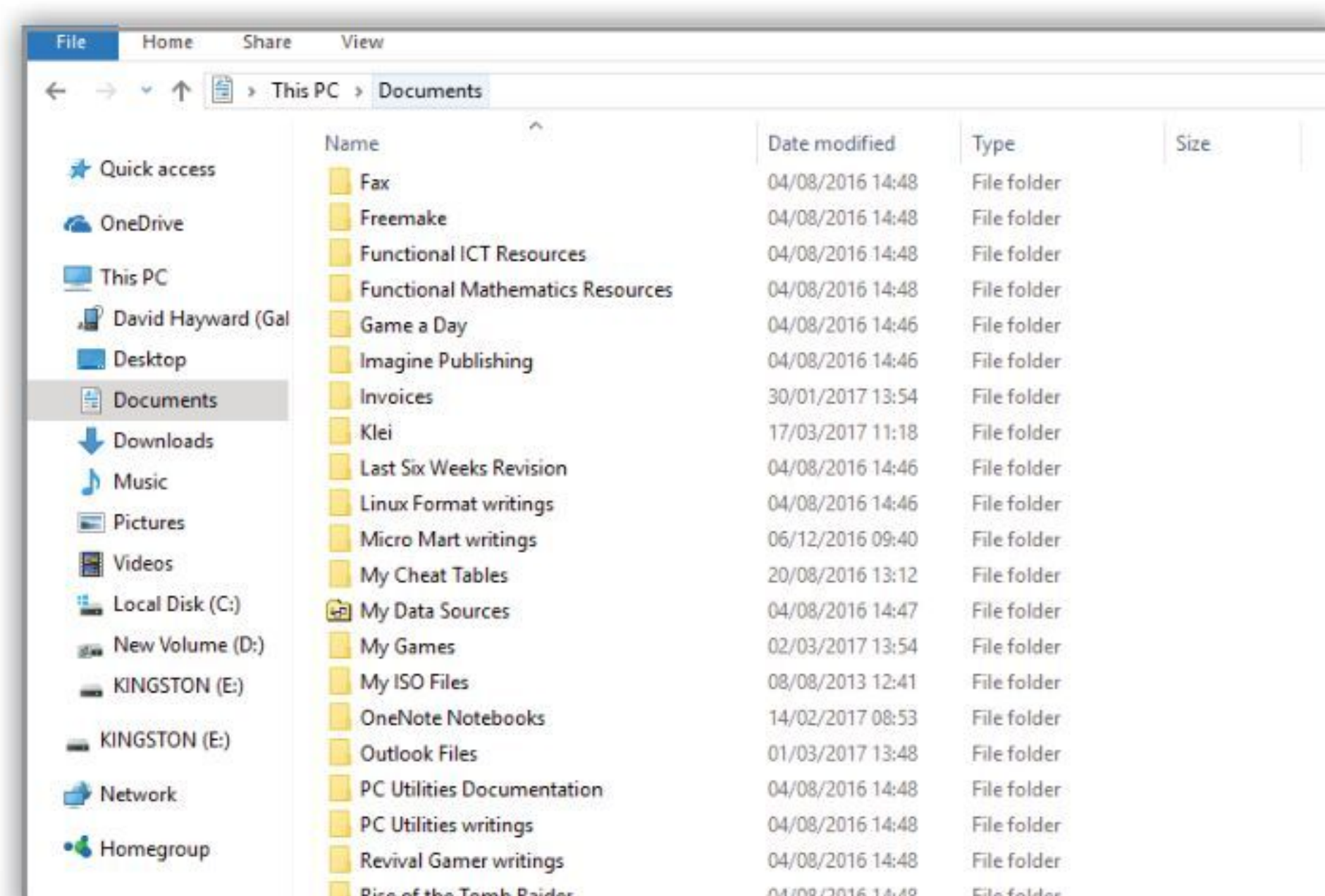
Windows 11 Pro comes with Microsoft's BitLocker program to encrypt the file system; however, Windows 11 Home versions do not have this feature. Luckily, there are many other encryption programs available for download.

Protecting Your PC and Files

We're going to encrypt a 2GB USB flash in this example, purely for ease of use and to demonstrate how you can encrypt your entire laptop hard drive(s).

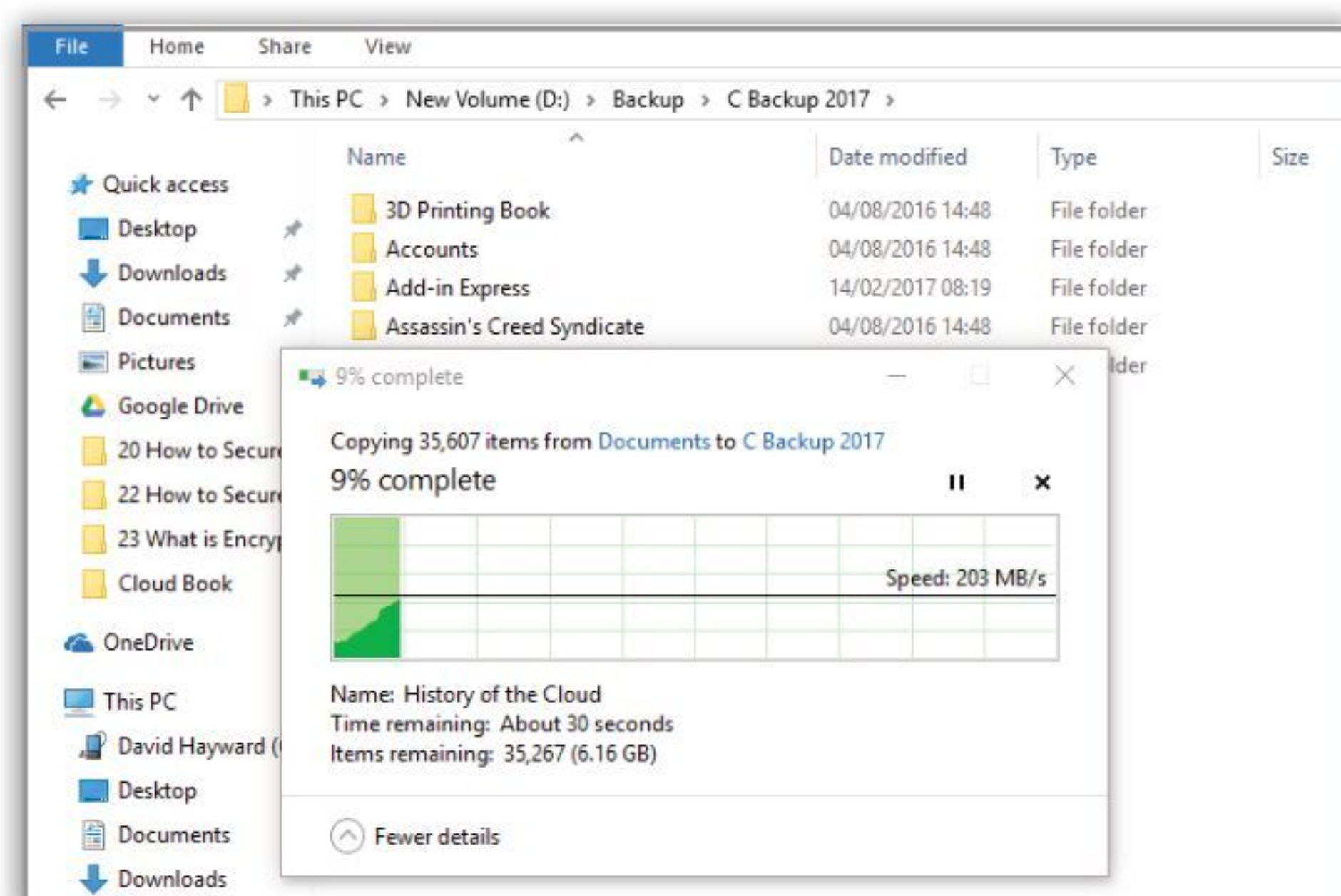
Step 1

Encryption doesn't affect the core data, other than making it impossible to read without the decryption key. Still, it's always worth making sure you have a backup of all your data prior to any system related changes. If you store your work or data in the Documents folder, then start by opening it in Windows Explorer.



Step 2

Press Ctrl+A to highlight all the files, then press Ctrl+C to copy them to the clipboard. Next, choose a suitable backup location – such as an external or network drive – and when ready, press Ctrl+V to paste the copied data into the new location. Then, should something go wrong, you have a recent backup of your most used data.



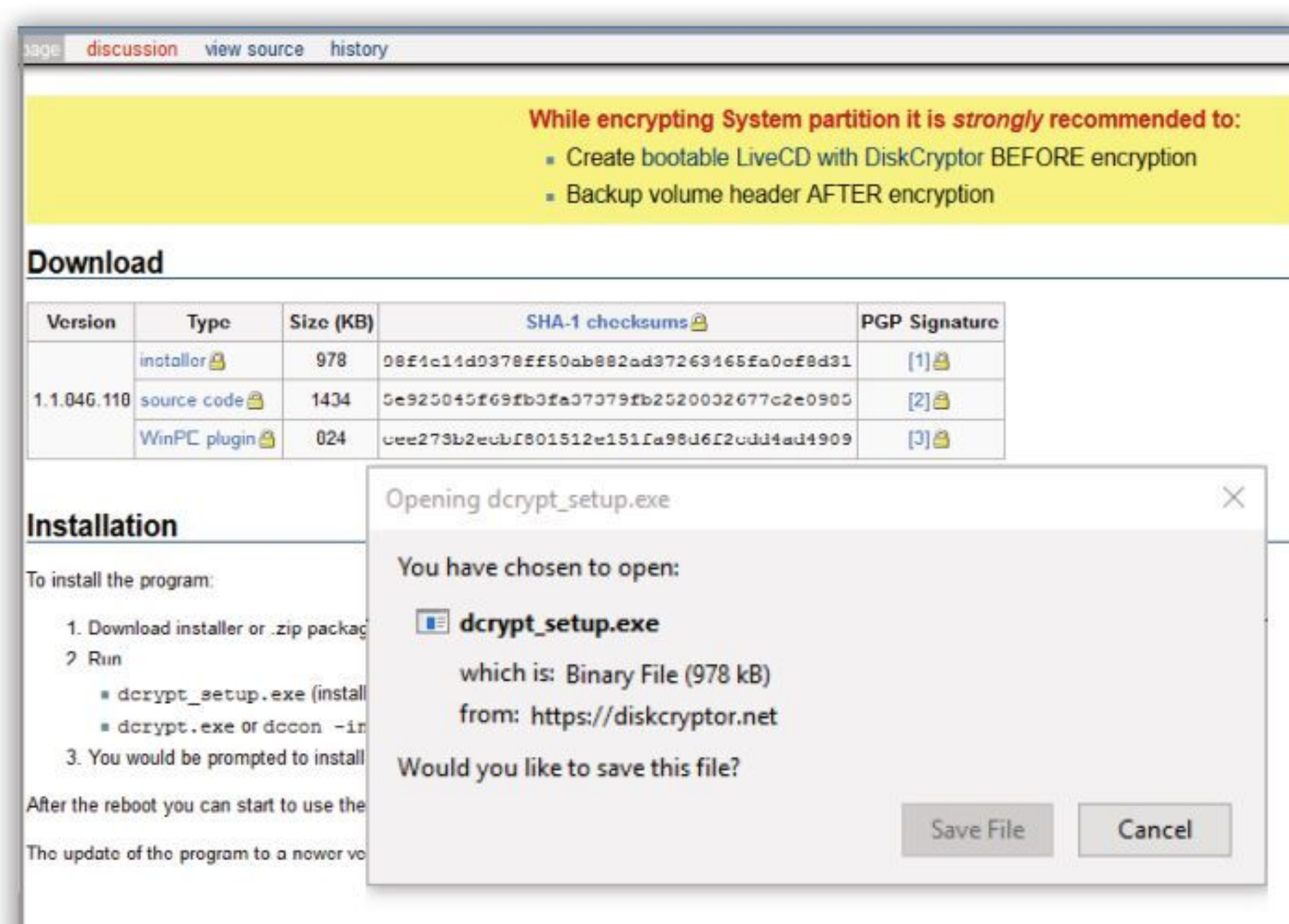
Step 3

It's always best to save data before commencing with anything like this. It's also always worth doing (as we are) a test of the software first, on a disk that you don't mind messing up should you get the process wrong. Let's start by navigating to the DiskCryptor homepage, at www.diskcryptor.net/wiki/Main_Page.



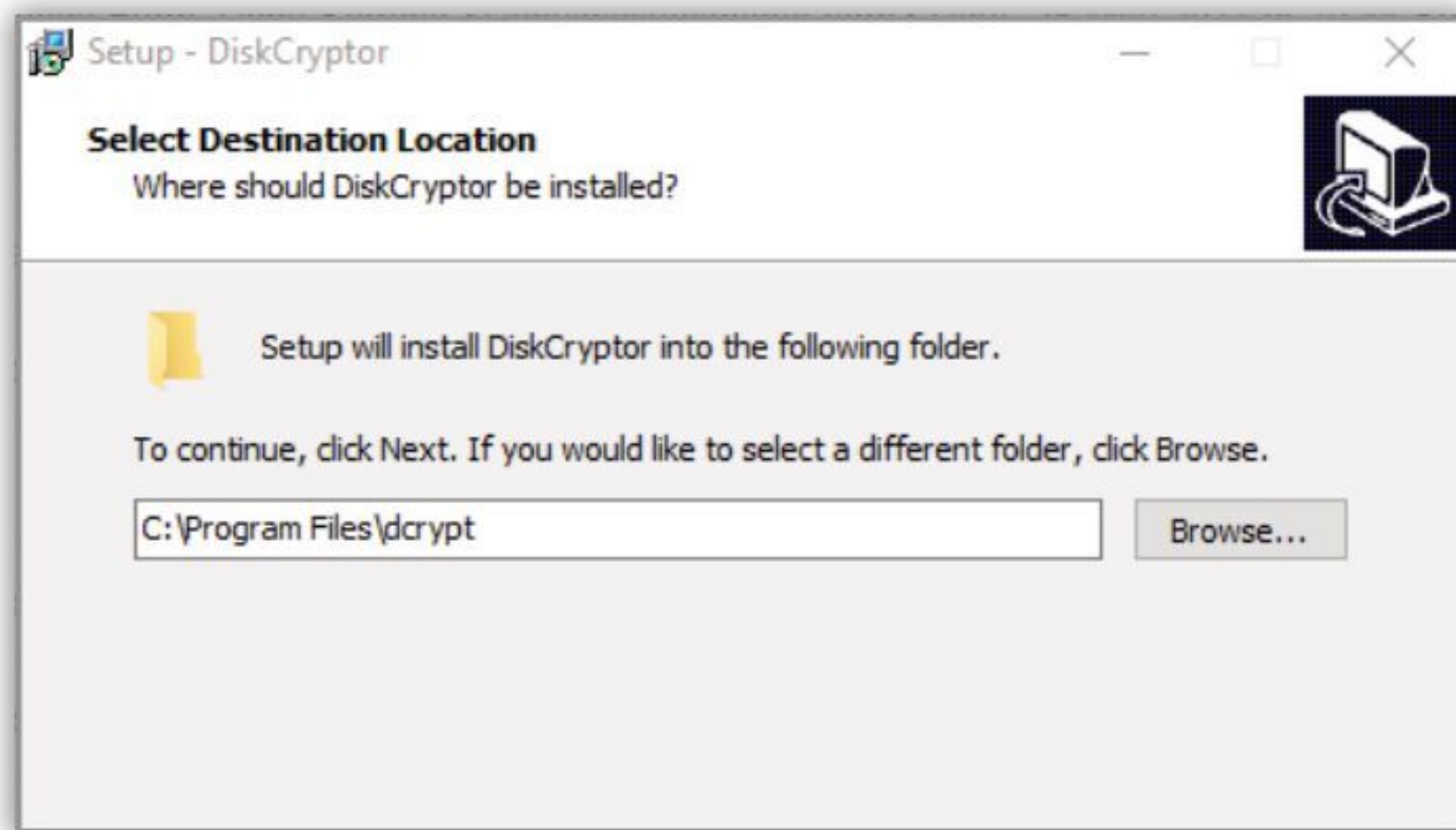
Step 4

Using the menu to the top left, click on the Downloads link. Look for the latest version in the Download section and click the link for the Installer. This opens a confirmation box; click the Save File button to download the DiskCryptor executable file.



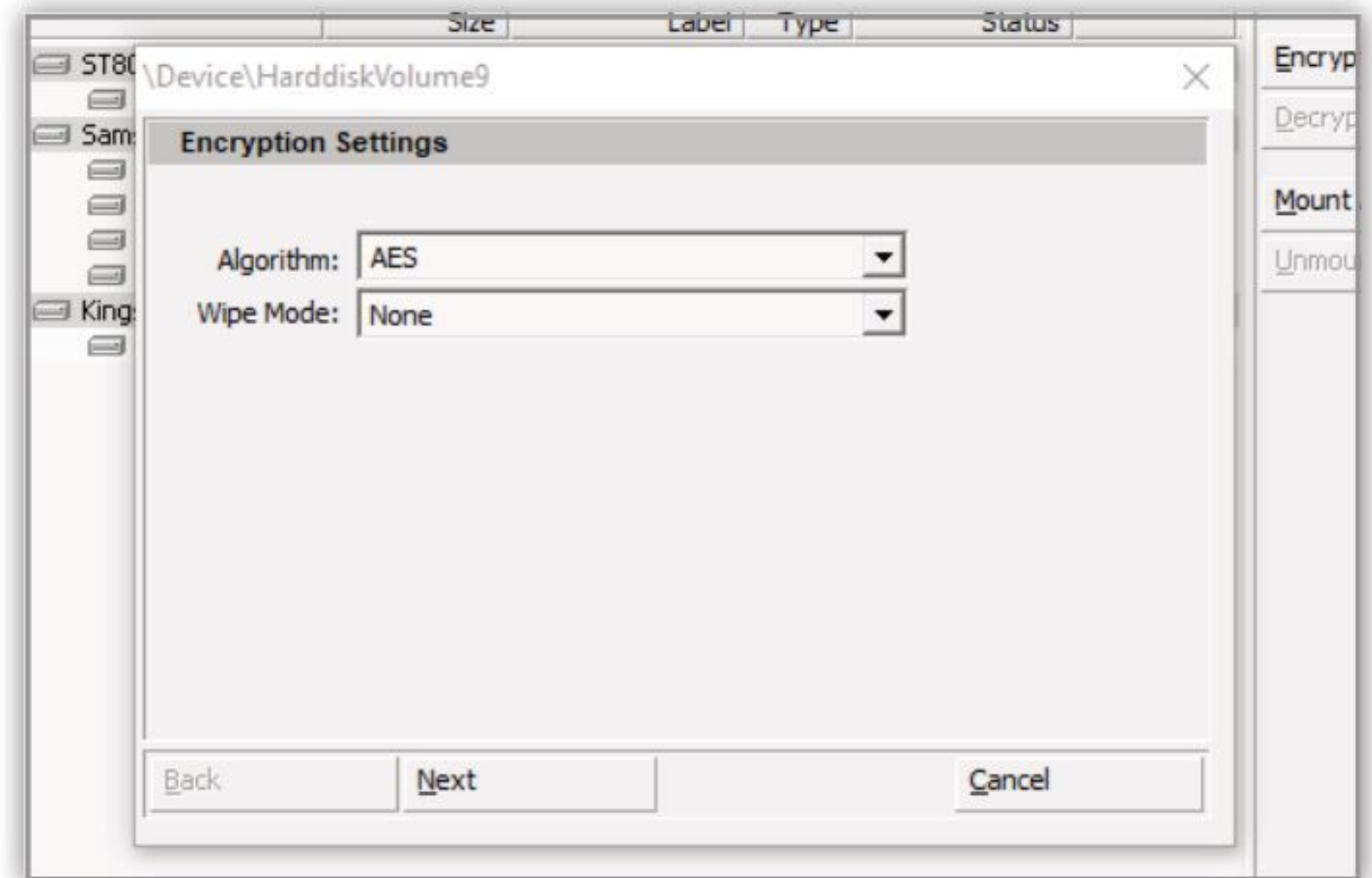
Step 5

The dcrypt_setup.exe file should now be in your Downloads folder. Double-click it and select Yes to accept the Windows confirmation. With the DiskCryptor setup window open, click the Next button and accept the license agreement on the following page. For the remainder of the options, choose the defaults by clicking Next. When done, click the Install button and reboot the computer.



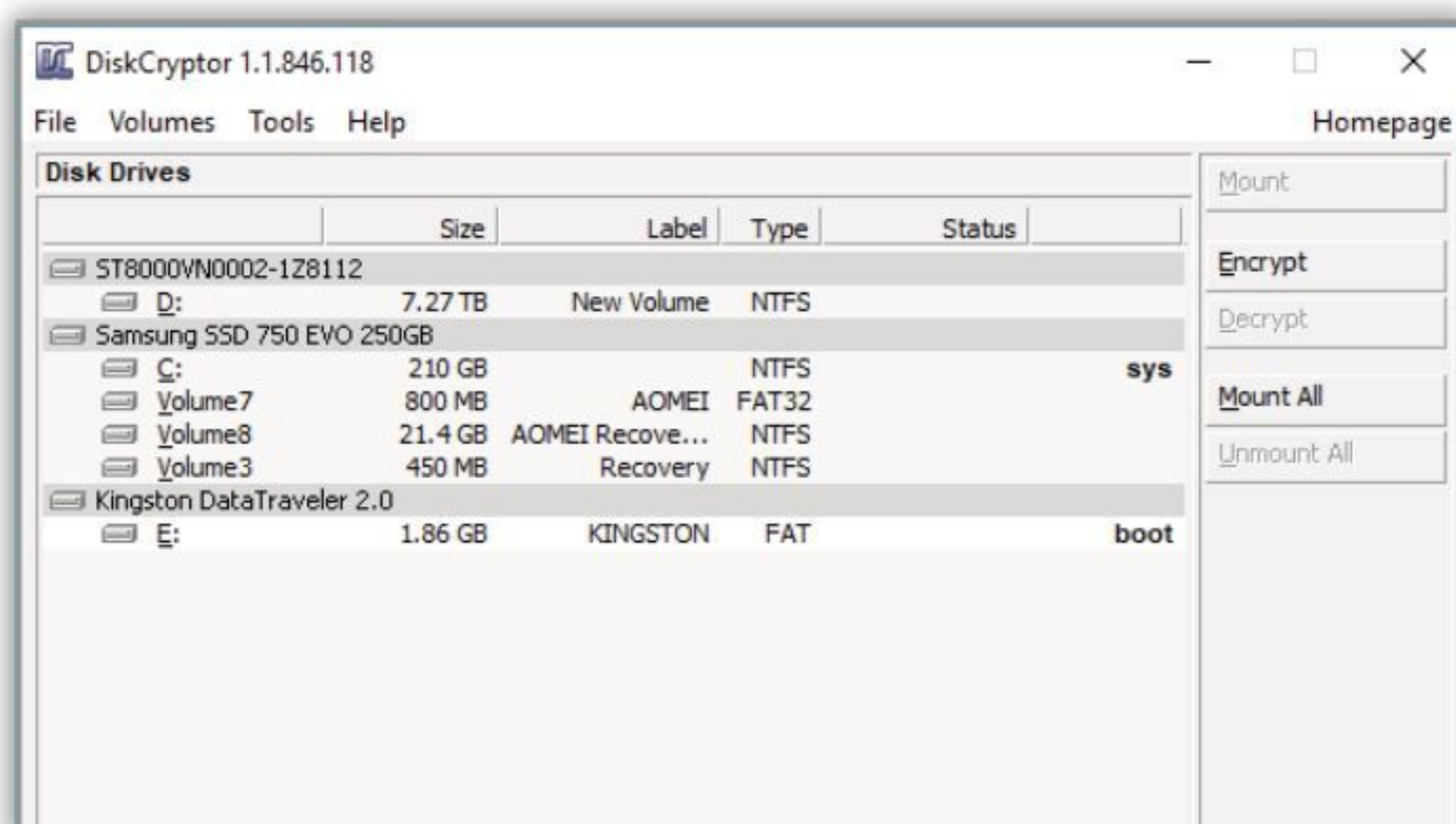
Step 8

You're now offered a selection of available algorithms from which to choose. Click the drop-down box to view them all, however, we recommend staying with the default AES algorithm for the time being. Leave the Wipe Mode box as None and when you're ready, click the Next button.



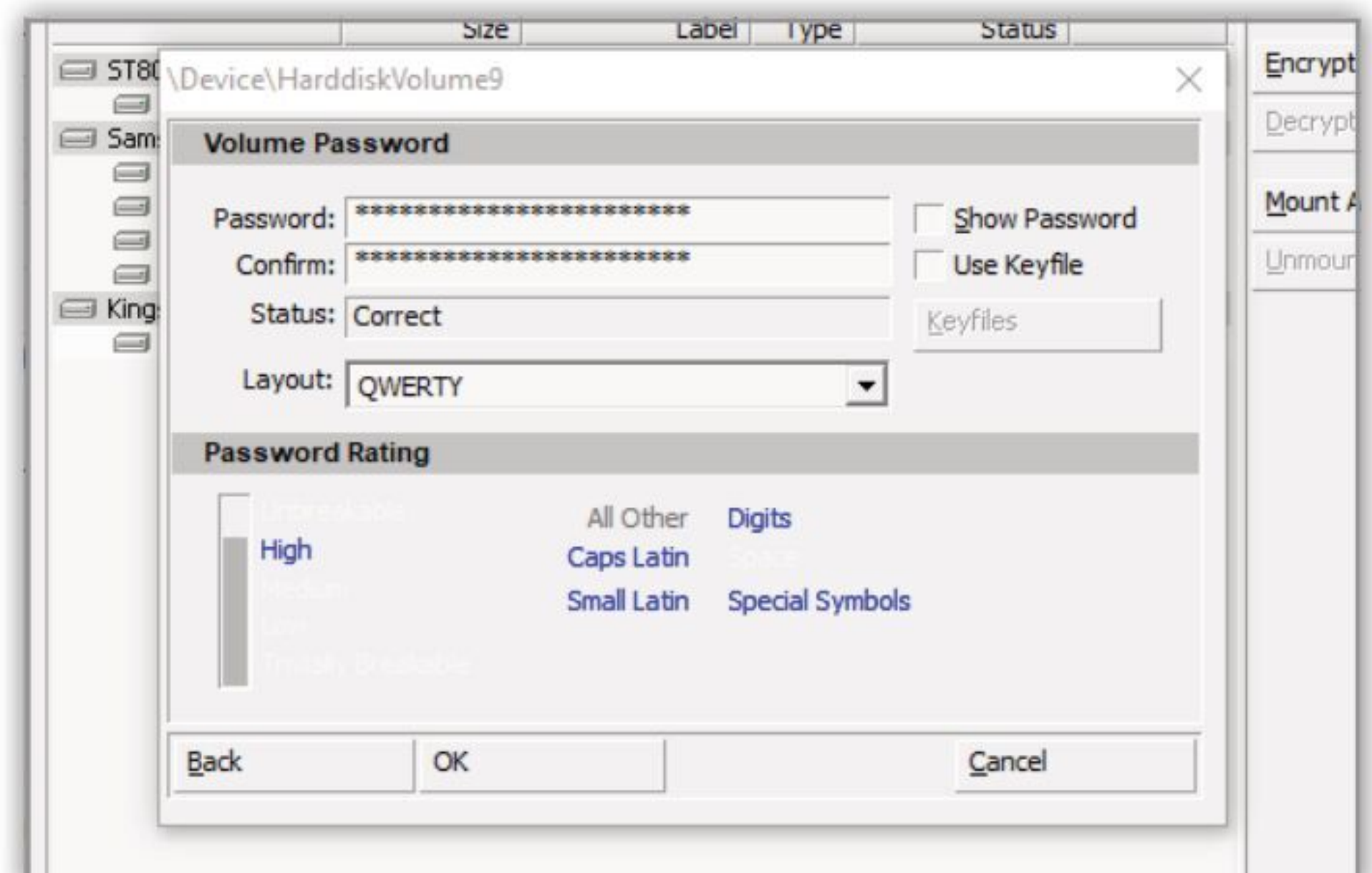
Step 6

After a reboot, click the Windows Start button and locate the newly installed DiskCryptor program. You need to click Yes to authorise its administrative access. With DiskCryptor open you can see the list of currently installed hard drives in your system. You can click each in turn and view its information at the bottom of the DiskCryptor window.



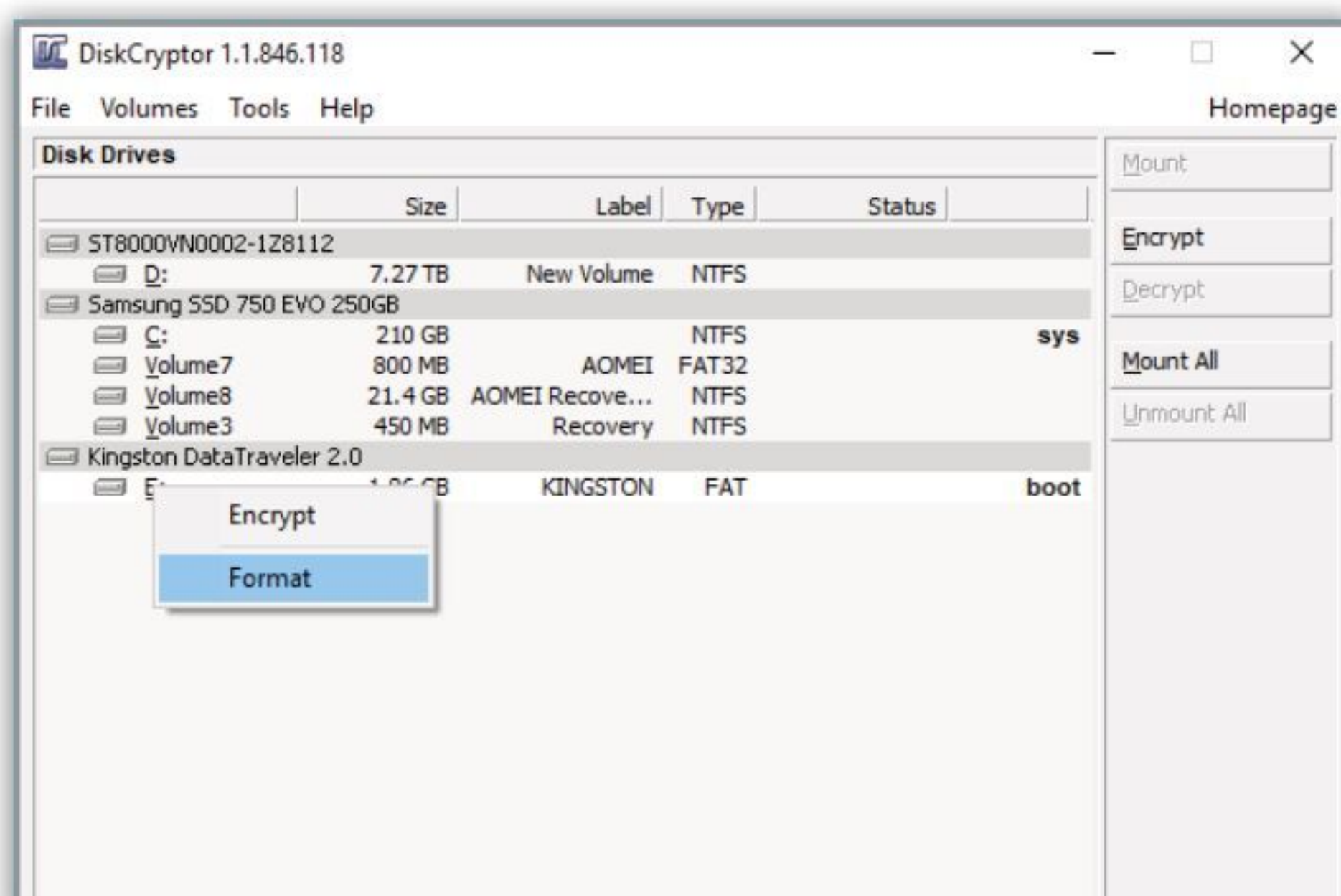
Step 9

In the next section, choose a unique password for accessing the encrypted disk; you're notified how strong the password is. When you're ready, enter it again in the Confirm box. Click the OK box to start the encryption process.



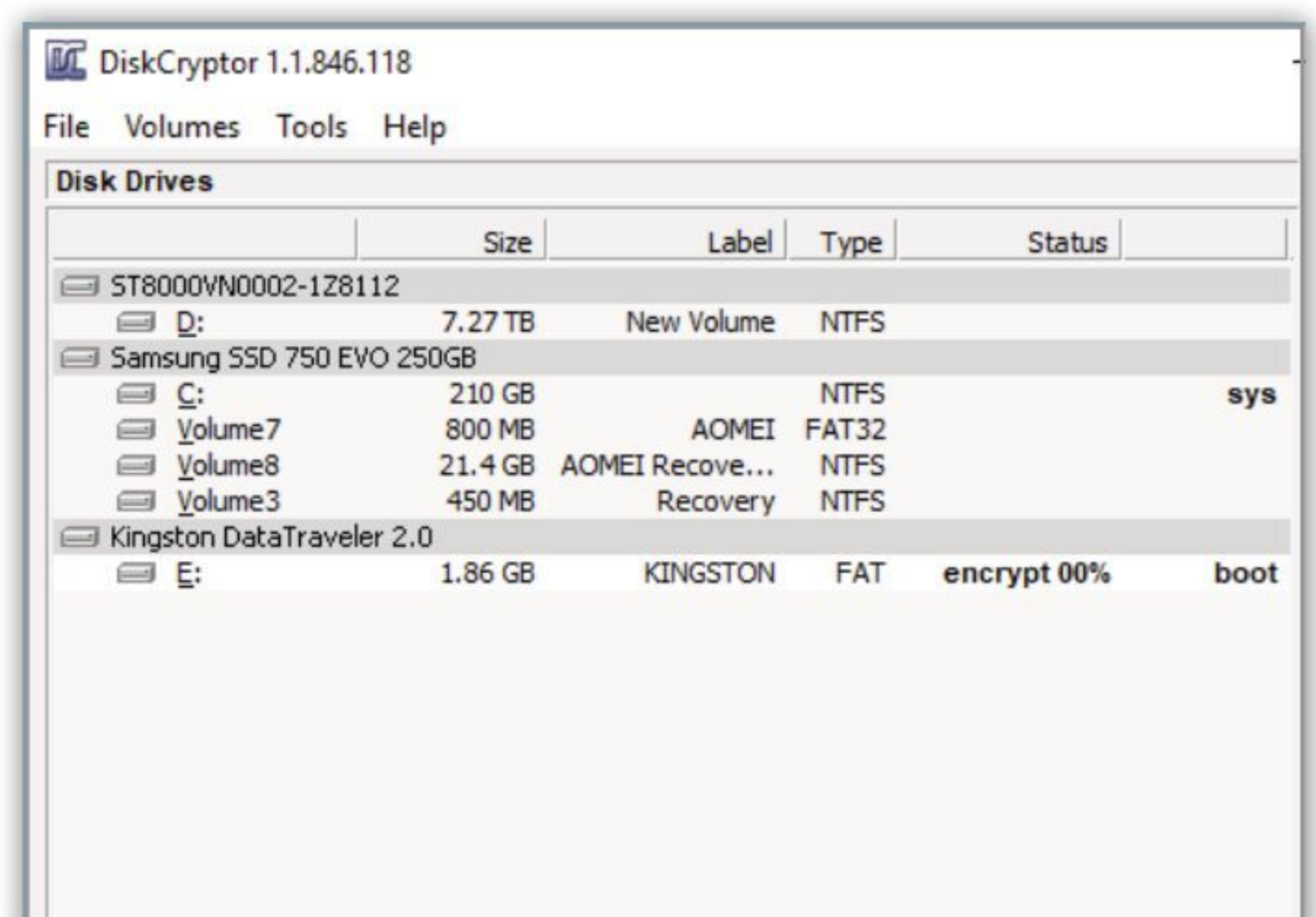
Step 7

Start by selecting the disk you want to encrypt. As mentioned before, in our example we're going to test this out on a USB stick. We recommend you also do this until you're comfortable with the process. With the correct drive selected, either click the Encrypt button to the right or right-click and choose Encrypt from the menu.



Step 10

Depending on the size of the drive, and how much data is on it, the encryption process could take some time. When it's complete, you're notified and the selected drive will be fully encrypted, with you able to access and decrypt it using the password you set up in the previous step.





Windows 11 Power Options

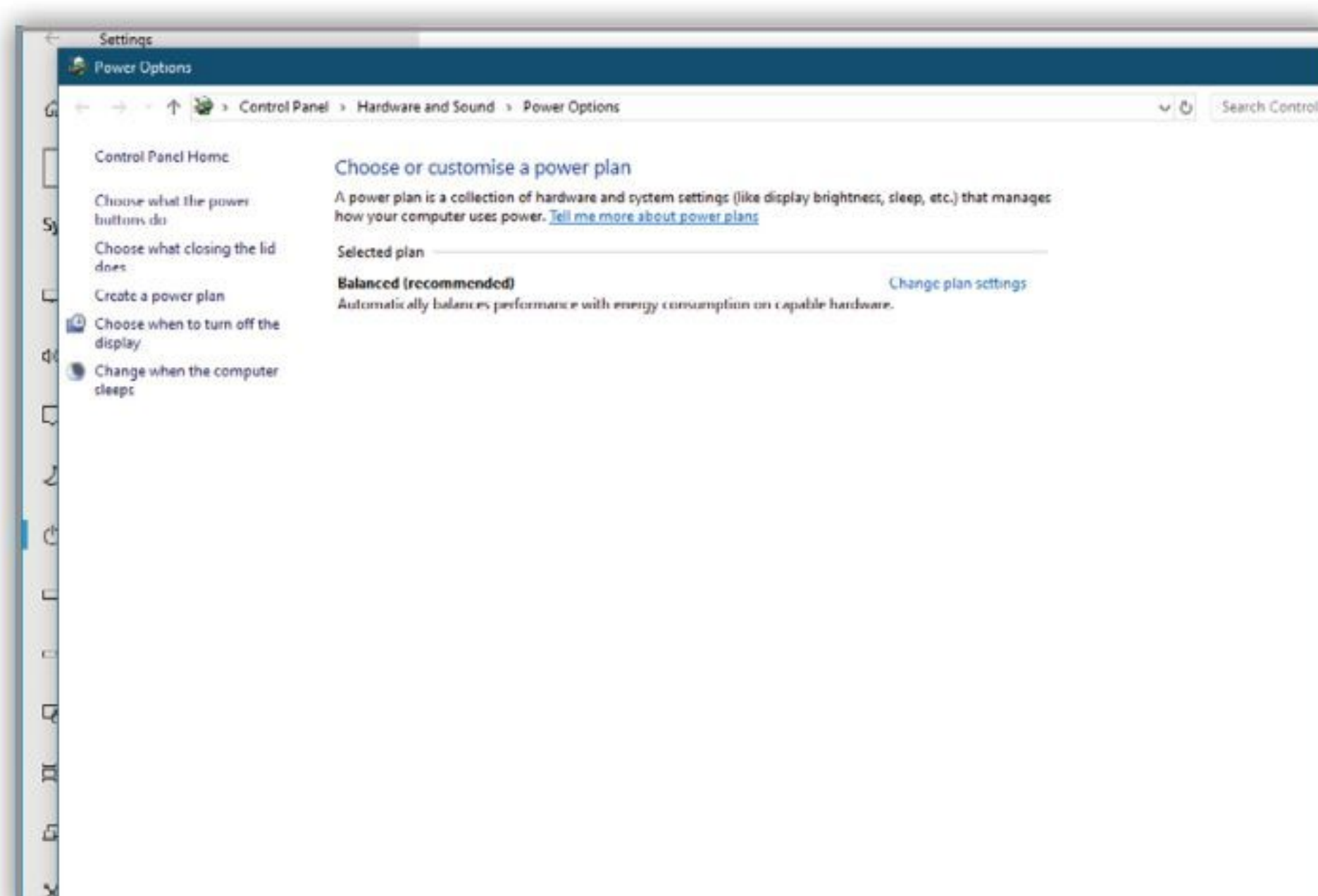
If you use Windows 11 on a desktop PC, you might adjust the power options for how long the PC sleeps or when the display turns off when inactive. With a laptop, the Windows 11 power options should definitely be something with which you are more familiar with.

View, Switch and Create Power Plans

Within the Power Options panel you can choose from preset Windows 11 power plans, or you can create your own based on your computers' power requirements.

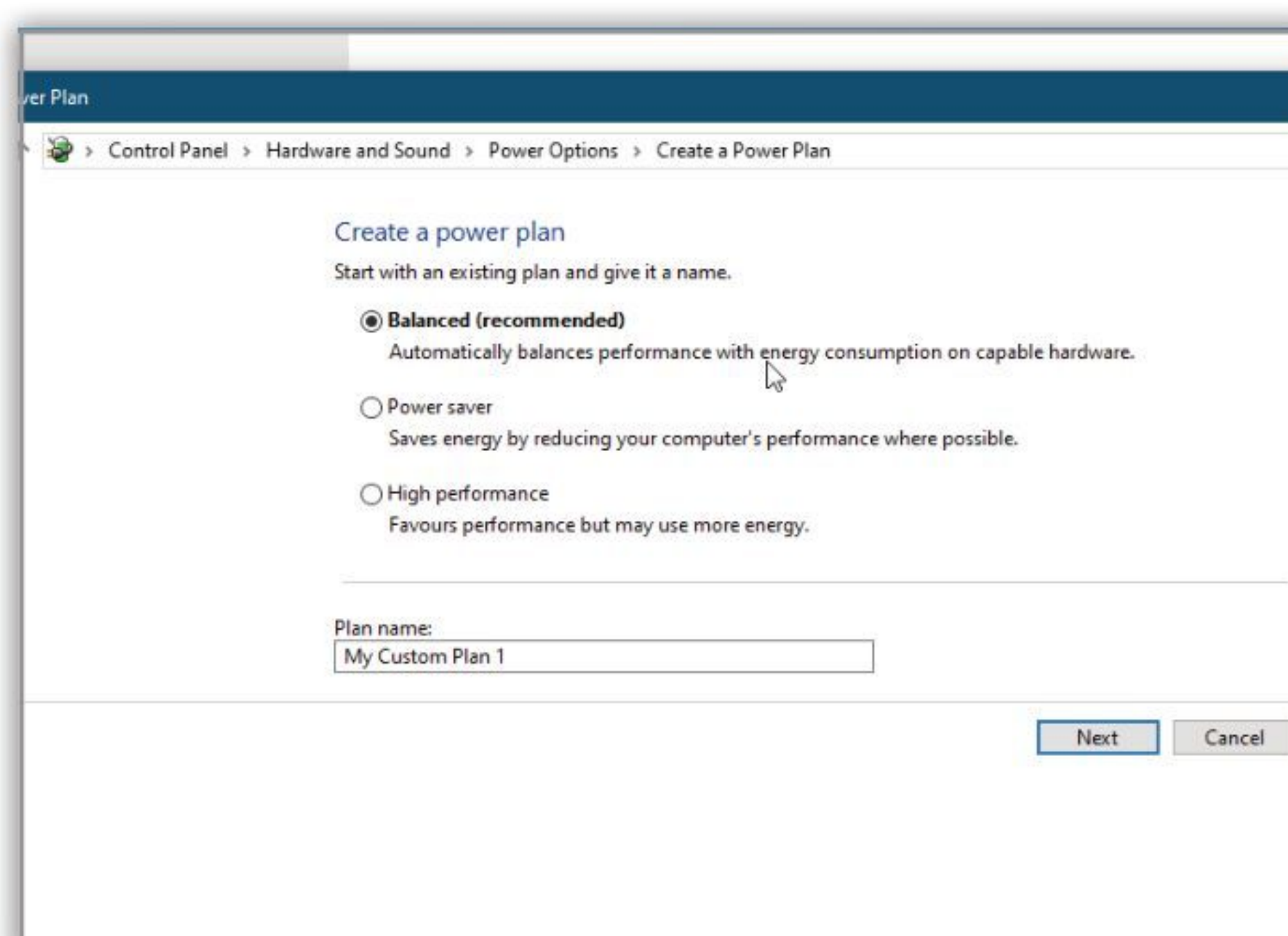
Step 1

Click on the Windows 11 Start button and enter: Control, then click the first result, Control Panel App. From there, select System and Security > Power Options. Windows 11 will, by default, have selected the Balanced power plan. This is designed to balance performance and energy consumption, and is best for PC's that are connected to the mains.



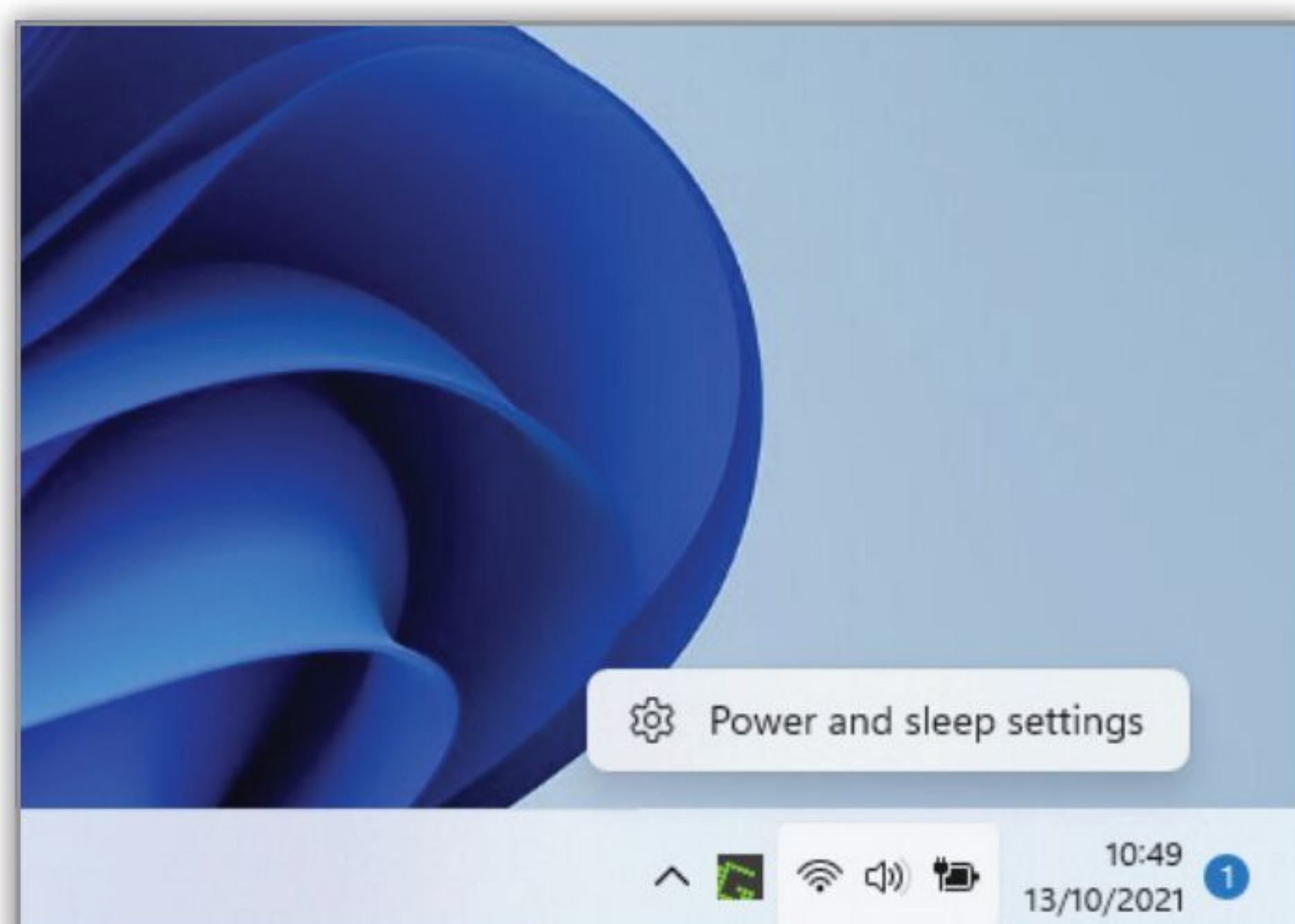
Step 3

The High Performance power plan is, as the name suggests, best for overall performance, but will use more power and is unsuitable for use on a laptop using battery power. To switch between power plans, simply select the one you want to use. For many users, this is all you will need to do.



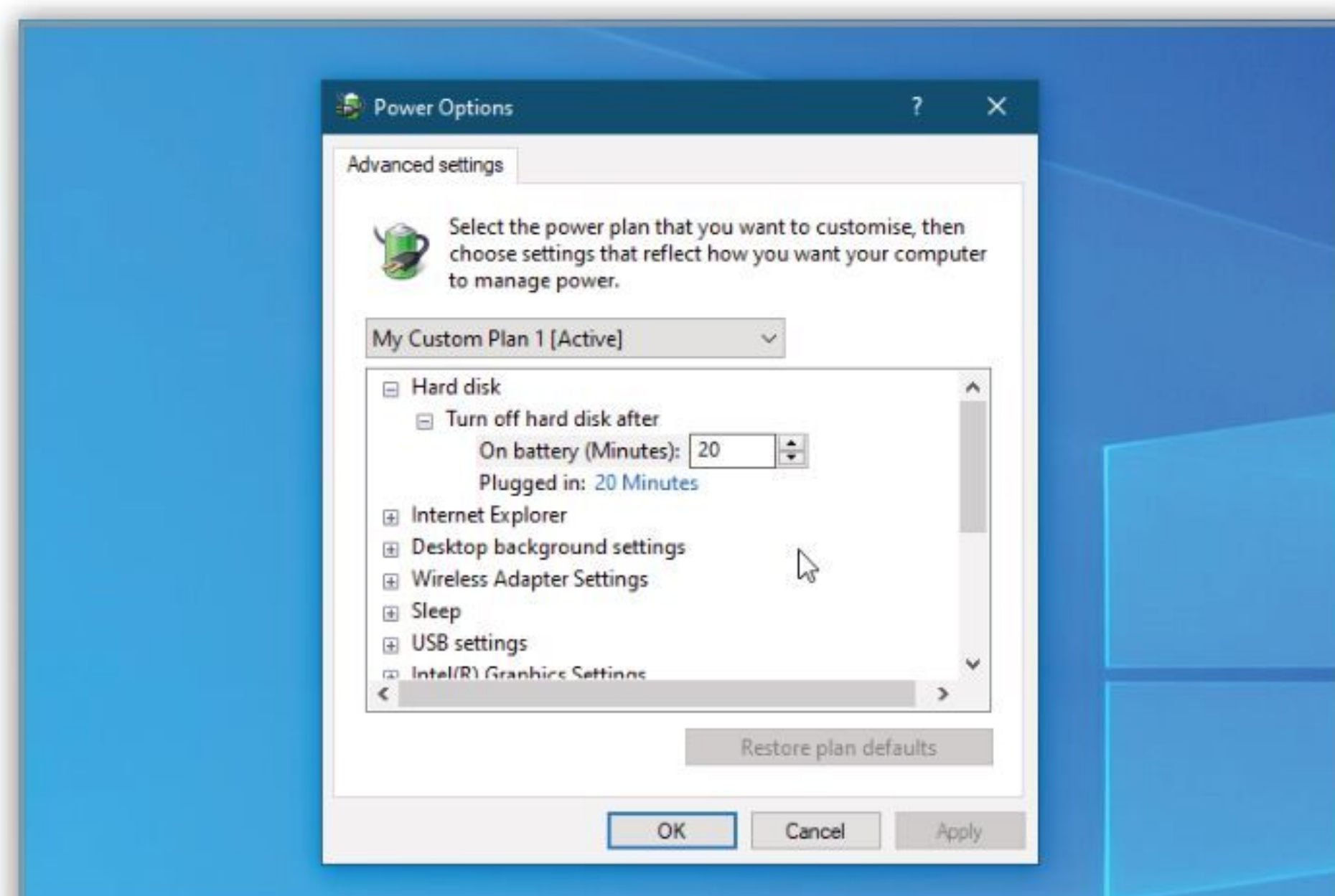
Step 2

On a laptop, you can access the power options by right-clicking on battery indicator in the taskbar tools. There are two other, default power plans alongside Balanced; Power Saver is designed to reduce energy use by scaling back performance when possible. Good for laptops using battery power.



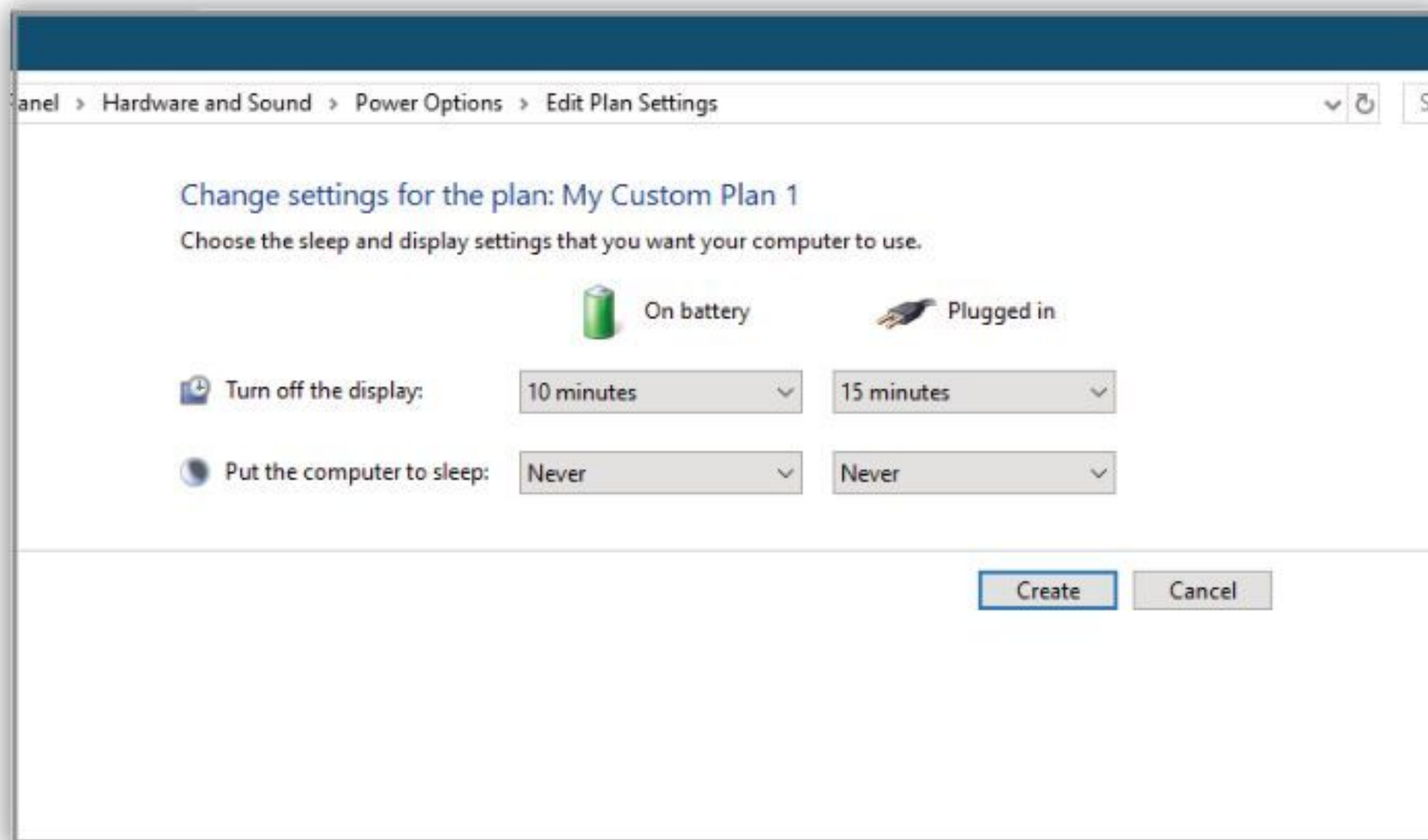
Step 4

To customise any of the power plans, click the link next to the relevant one. The next screen will let you set when the display turns off and when the computer sleeps after inactivity. You can also click "Change Advanced Power Settings" to see settings for the hard disk, desktop, USB and processor and more.



Step 5

You should be fairly careful when changing these advanced settings, especially for things like the processor (although Windows should prevent you from making a damaging change). It is best to make small changes, and then test to see if the change has had the desired effect, before making more.



Step 6

Your laptop might have software installed that automatically switches power plans, depending on whether it is working on battery power or plugged into the mains. The settings for this can usually be found in the taskbar tools panel at the bottom right of the screen.

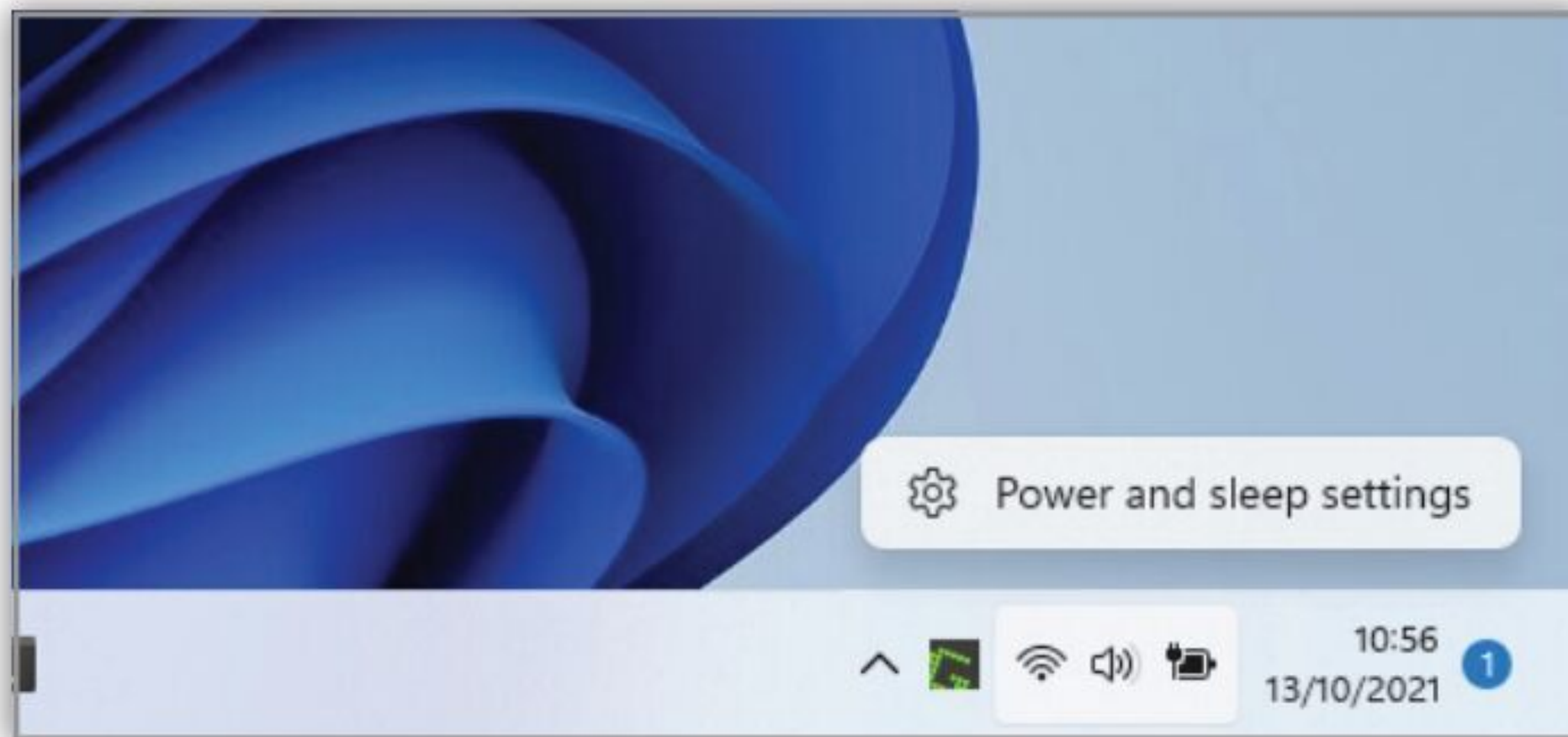


Use Your Laptop with the Lid Closed

If you want to be able to use your laptop with an external keyboard, mouse and monitor, without having to keep it on your desk and switched on, you need to change some power settings.

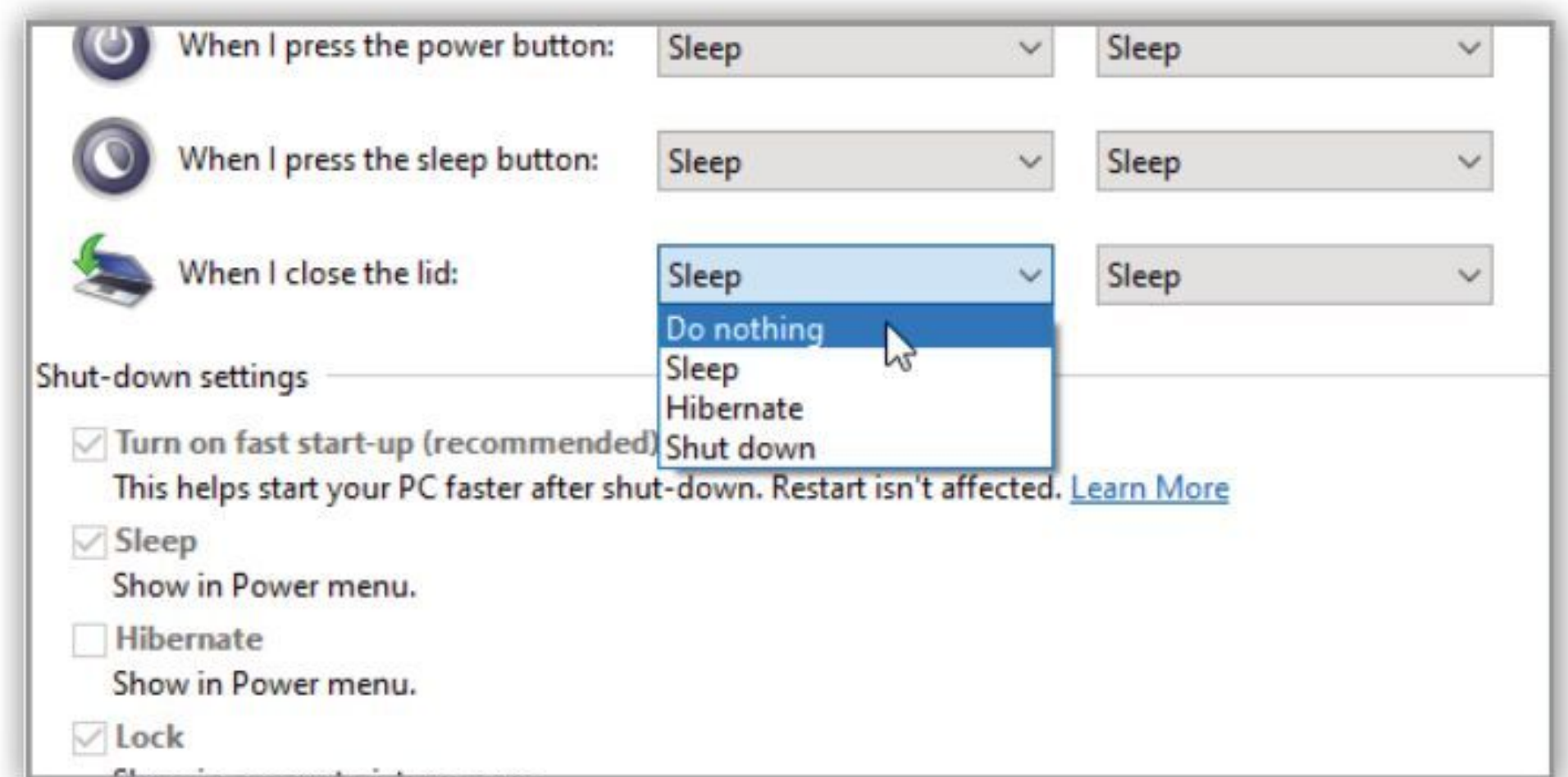
Step 1

When you close your laptop lid, the default setting will be for Windows 11 to go into low power sleep mode. This is obviously no good if you are using your laptop with an external monitor, as it will make the laptop unusable. To solve this problem, click on the Battery icon > power and sleep settings in the taskbar.



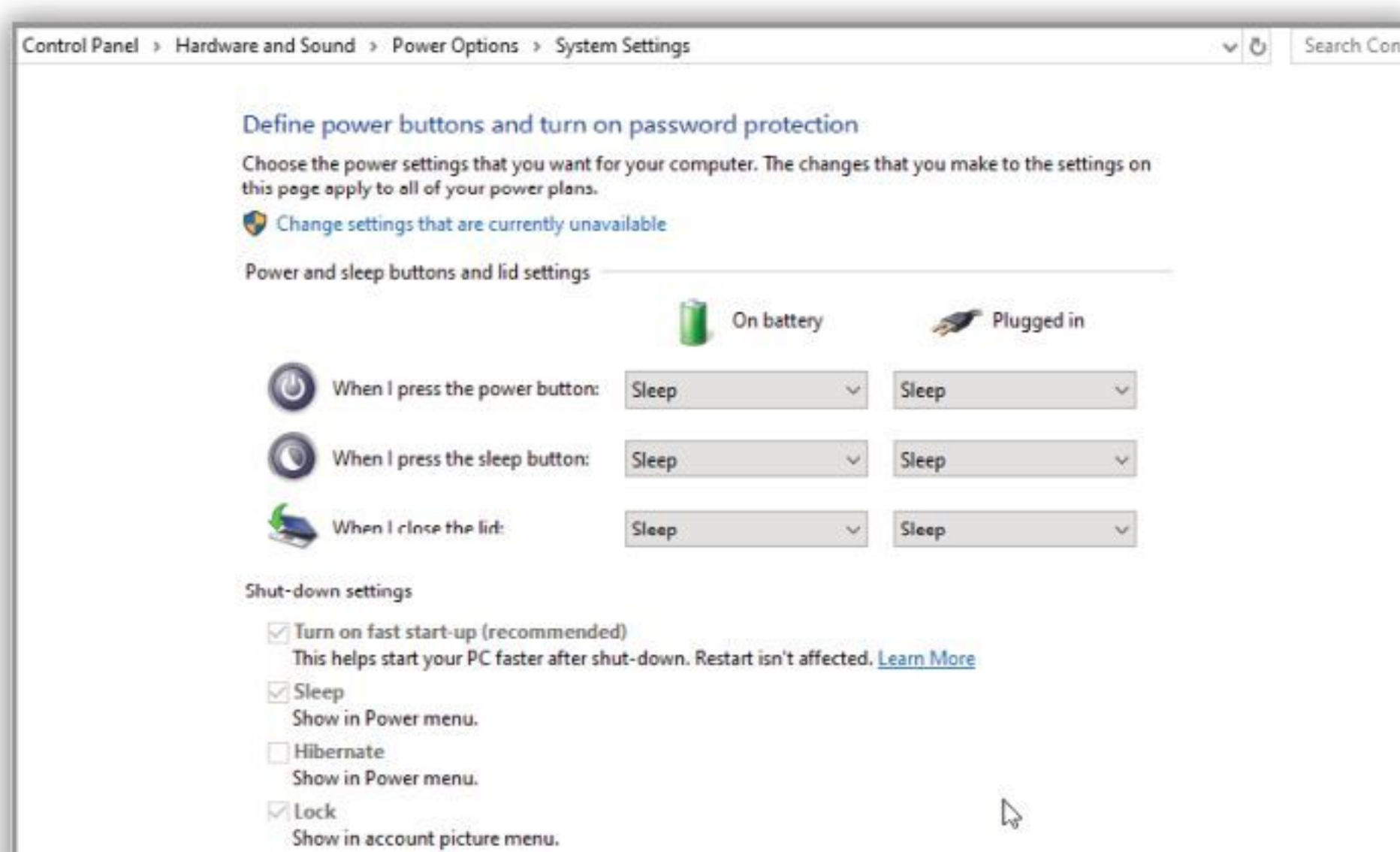
Step 3

Use the drop-down menus to select what happens when you close the lid, both when on battery and when the laptop is plugged into the mains. When you are happy with your settings, click the Save the changes button and you will be able to use the laptop as a desktop replacement with the lid closed.



Step 2

In the Power Options panel, look in the left sidebar for the option to "Choose what closing the lid does". Click this and you will see the Power button, Sleep button, and lid closing settings. You can change the settings for each individually. Settings include: Do Nothing, Sleep, Hibernate and Shut Down.



Step 4

If you also take your laptop to different locations out of the house, it is a good idea to revert these changes. If you don't, you run the risk of having the laptop continue to run while in a bag, etc., which, if the cooling vents are covered, can be damaging to the hardware.





Manage Your Privacy in Windows 11

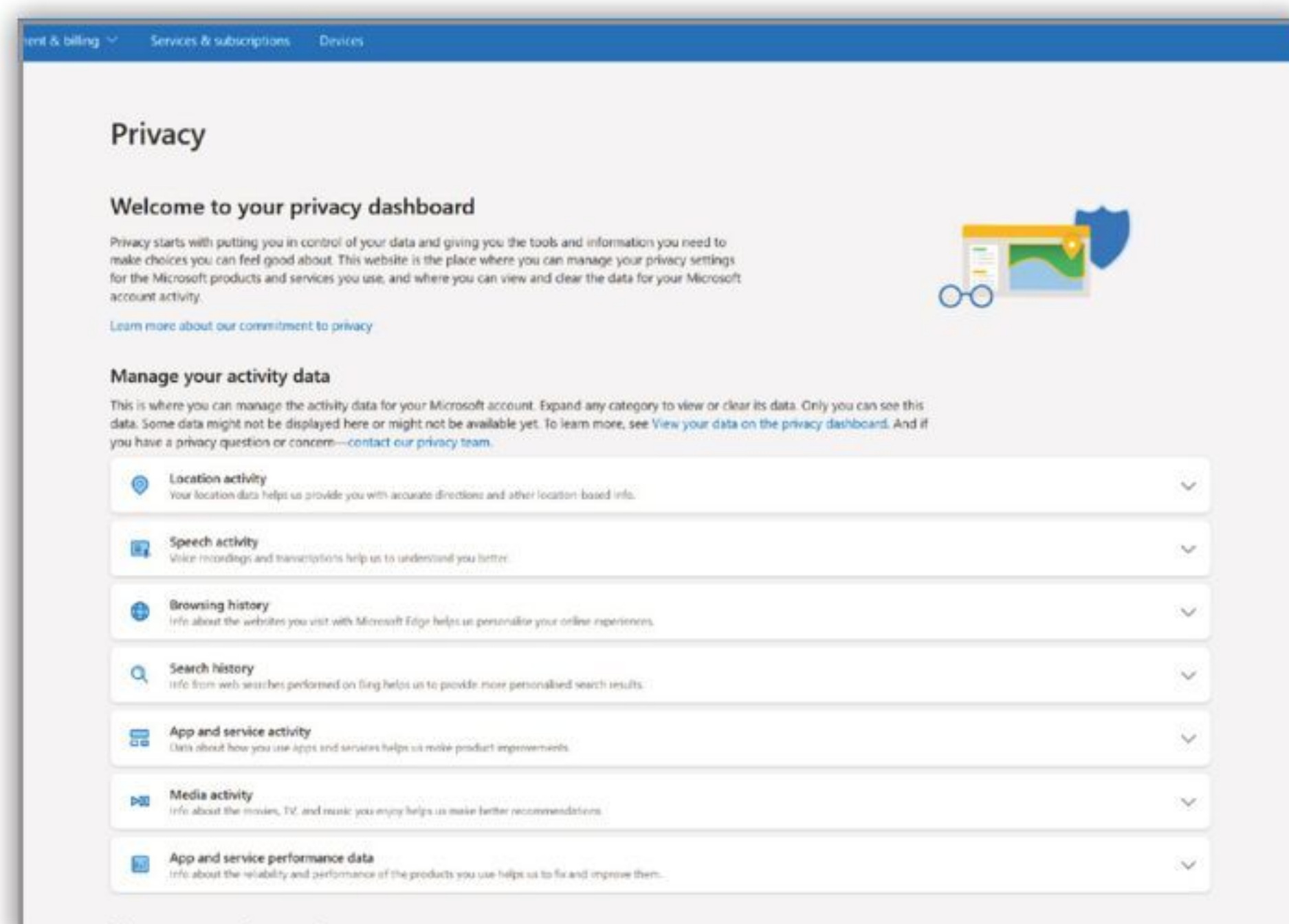
Controlling security on your computer is important but almost as important is being able to control your privacy settings. Microsoft recently launched a web-based privacy dashboard tool and this has now become available to everyone in the Creators update.

The Privacy Dashboard

The privacy dashboard is web-based rather than in the settings and it allows you to manage multiple devices from a single interface, as long as you are logged in to a single account.

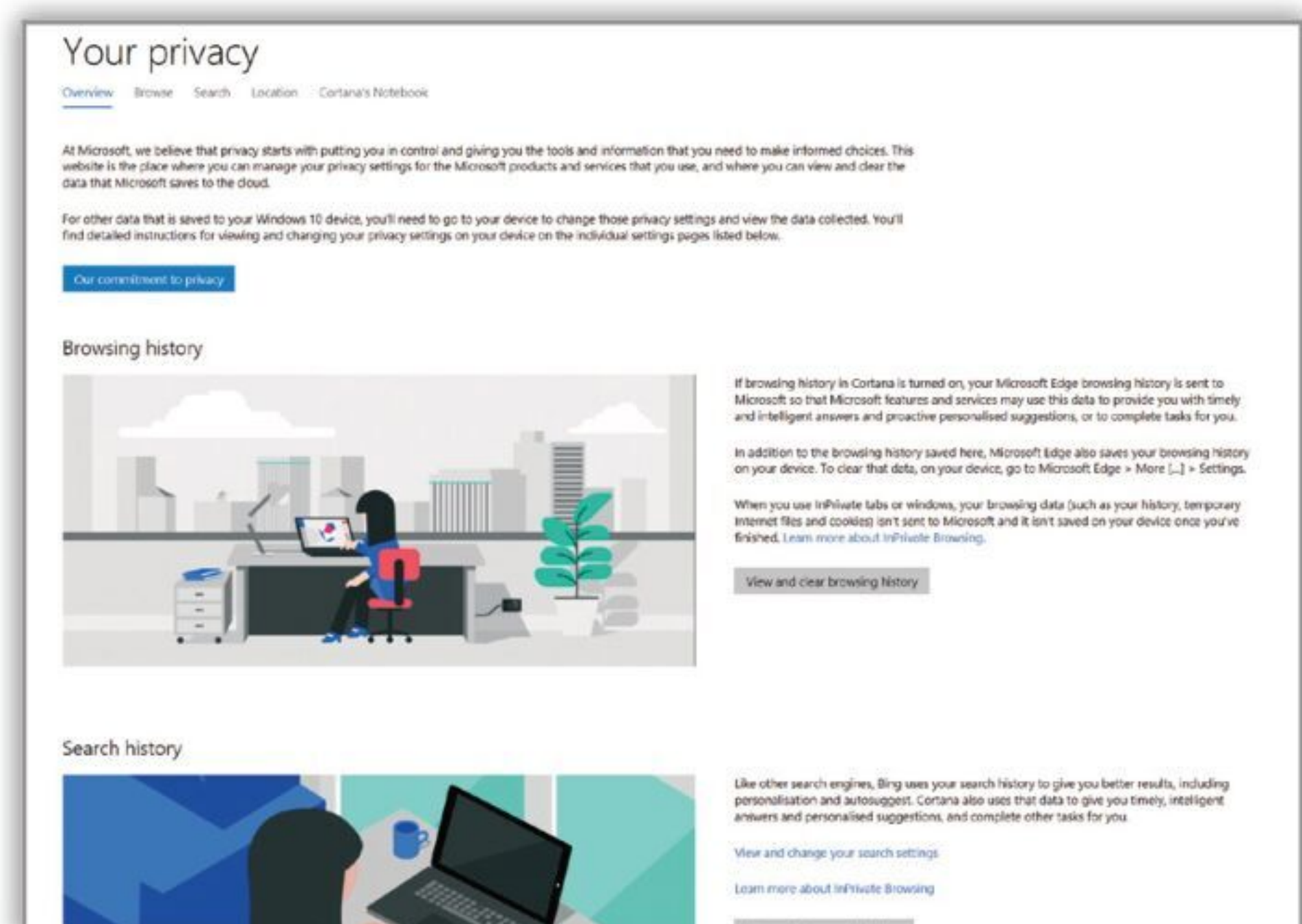
Step 1

Open your browser and navigate to www.account.microsoft.com/privacy. If prompted, use your Microsoft account details to log in. You will be logged in to the privacy overview page that lets you quickly see what privacy settings the dashboard contains and controls.



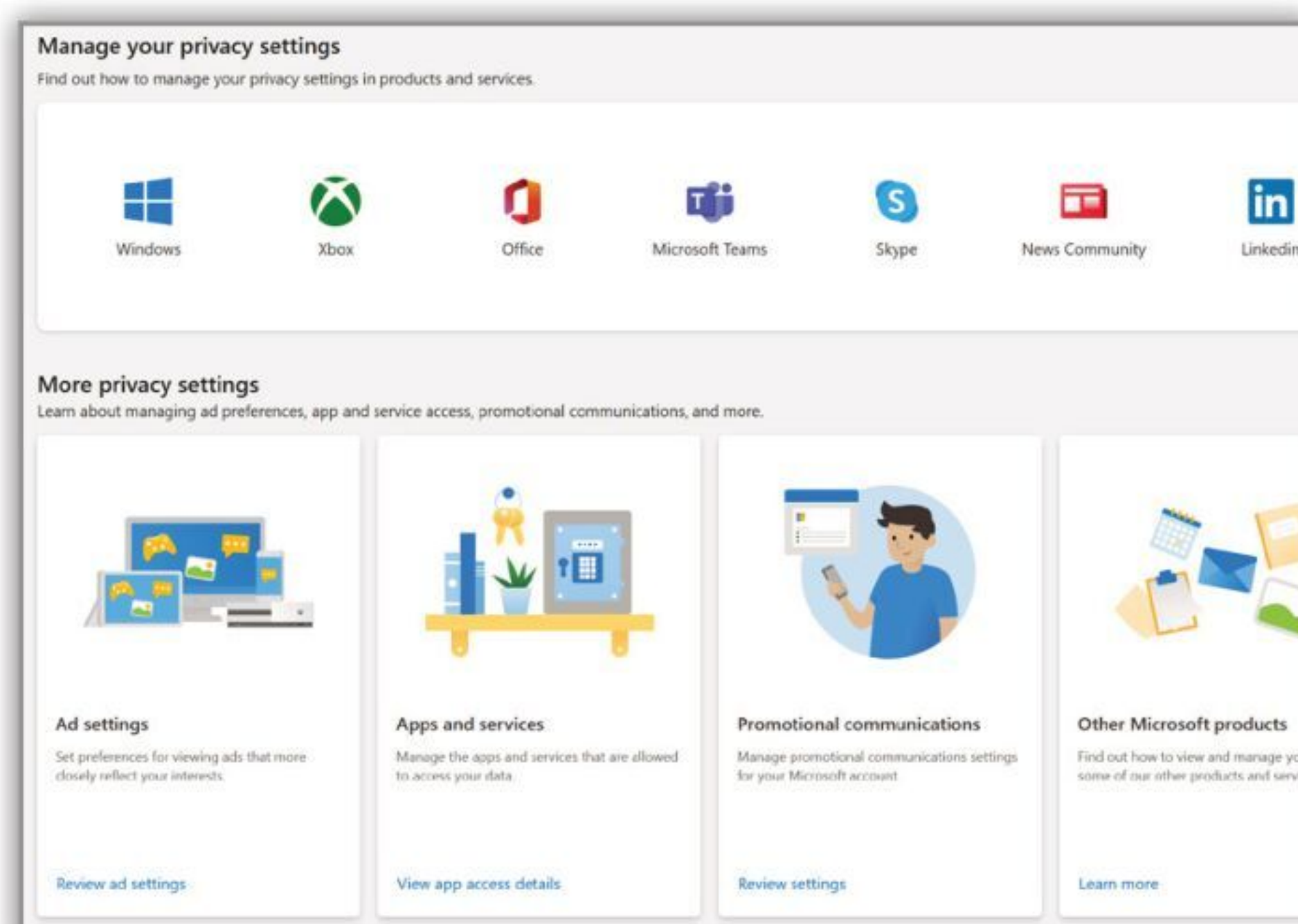
Step 3

Click on one of the main categories, Search, Browsing, Location or Cortana, and you will see more information. This could include a list of searches you have made or websites visited (in Edge only, not other browsers), interests Cortana has saved for you or locations you have been.



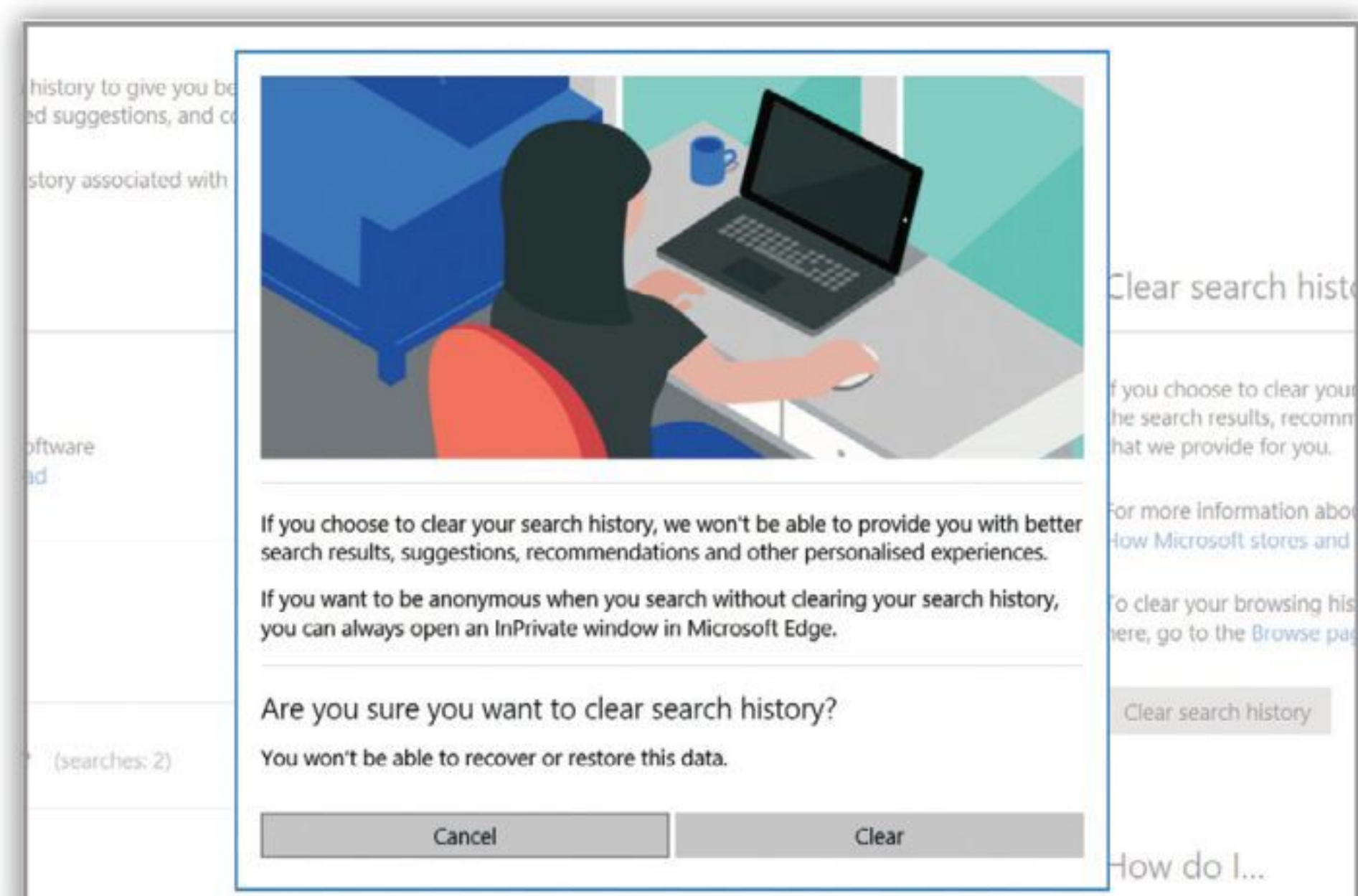
Step 2

Along with the main Search, Browsing and Location privacy categories, if you scroll down to the bottom of the page you will see entries for everything from Apps to Xbox, with simple links to take you to the settings and options for those privacy areas.



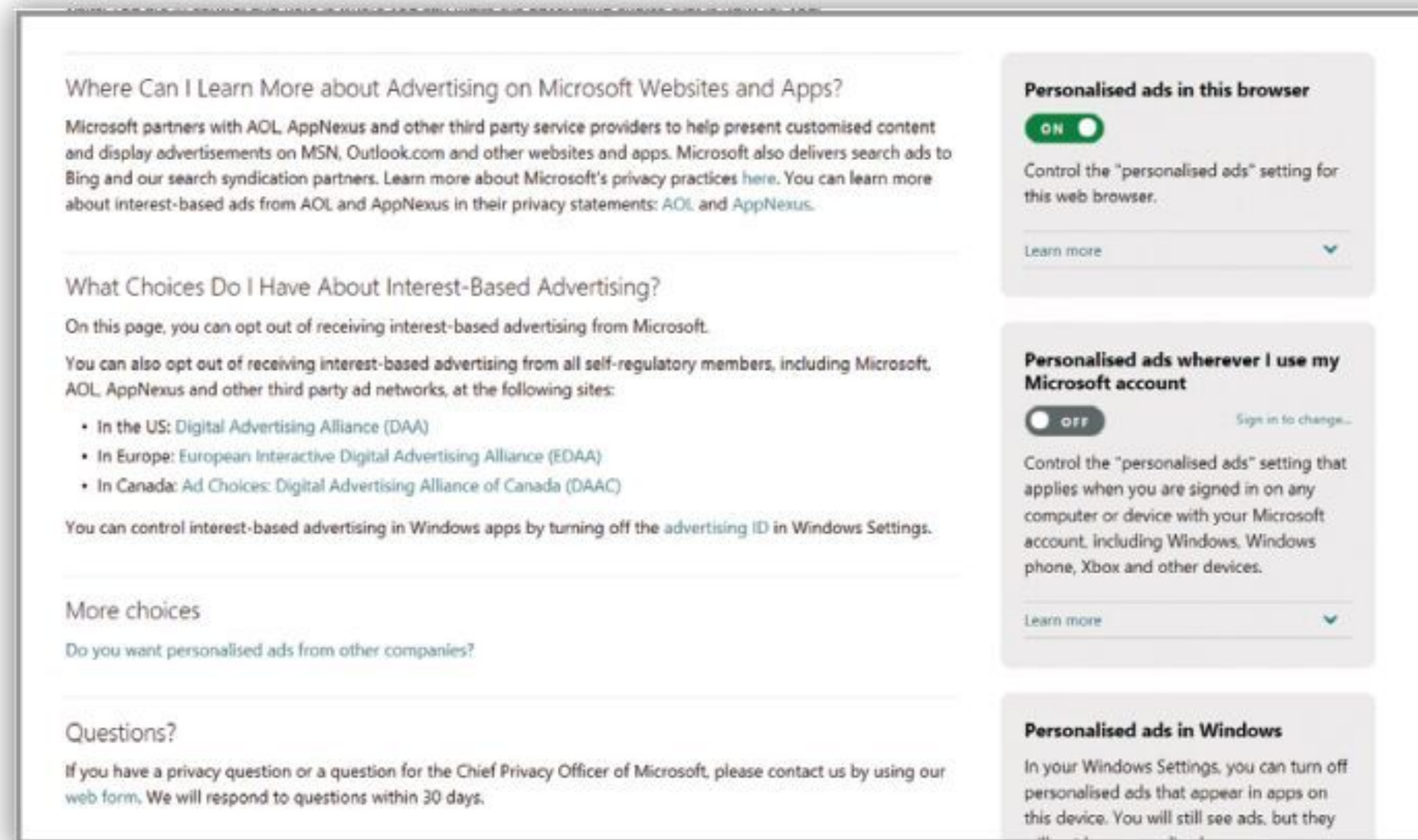
Step 4

Each section has a Clear button, whether that is clearing browsing history, search history and so on. It is next to a warning that states clearing data will stop Windows being able to provide you with accurate and relevant information. You need to decide what is more important, privacy or recommendations.



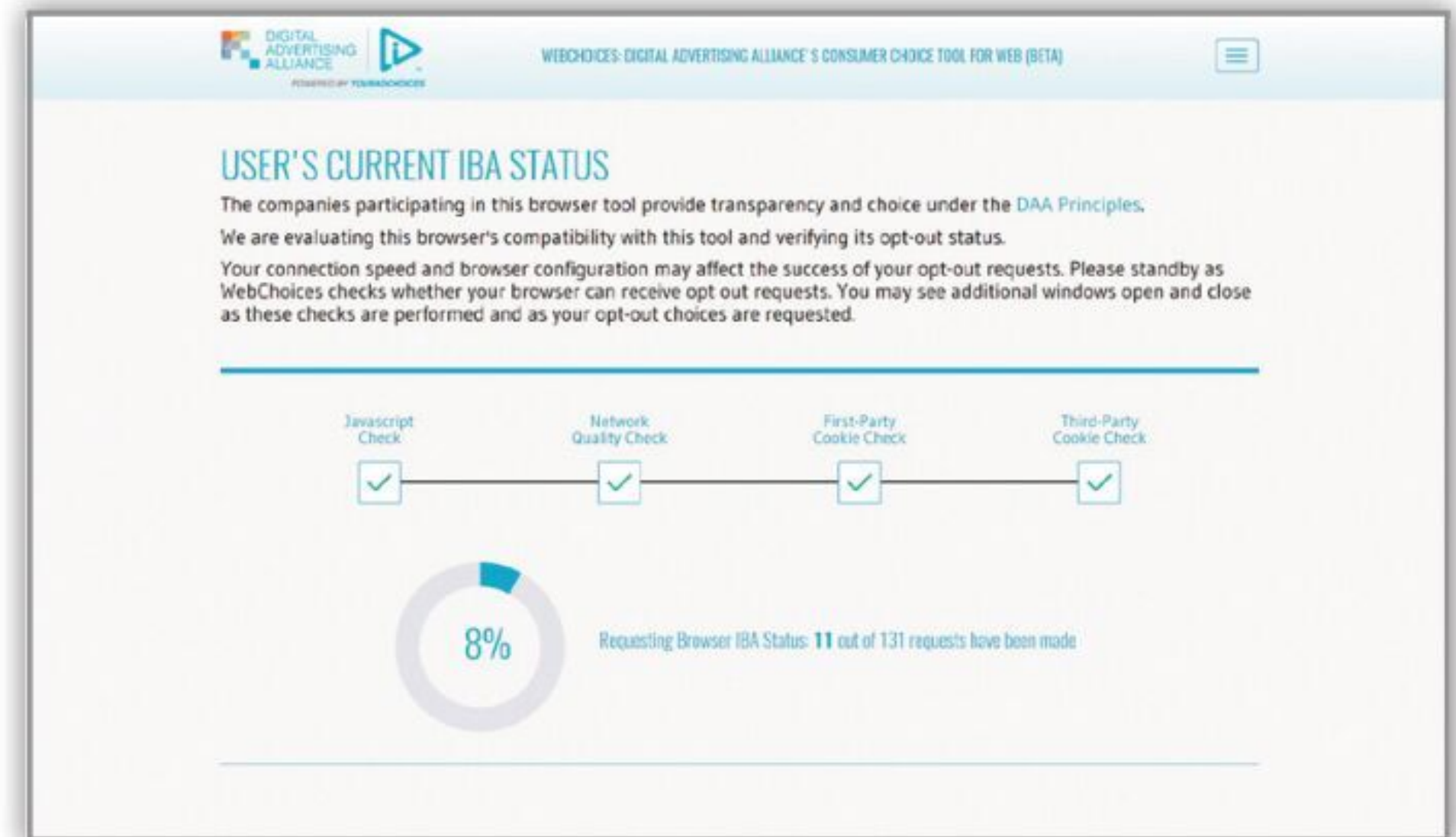
Step 5

Another useful privacy section in the dashboard is the Advertising Preferences. This lets you control whether personalised adverts are shown to you in the Edge browser. Some of the ads you may receive on Microsoft websites and apps are tailored to your previous activities and searches.



Step 6

There is also a browser tool that lets you choose if the adverts you see come from companies other than Microsoft. Click the option under More Choices and wait for the Digital Advertising Alliance scan to finish. You can then choose from the list to see adverts from different advert providers.



Privacy Settings

There are, of course, still privacy options in the main Settings app in Windows 11. This is generally added to and improved with each OS update.

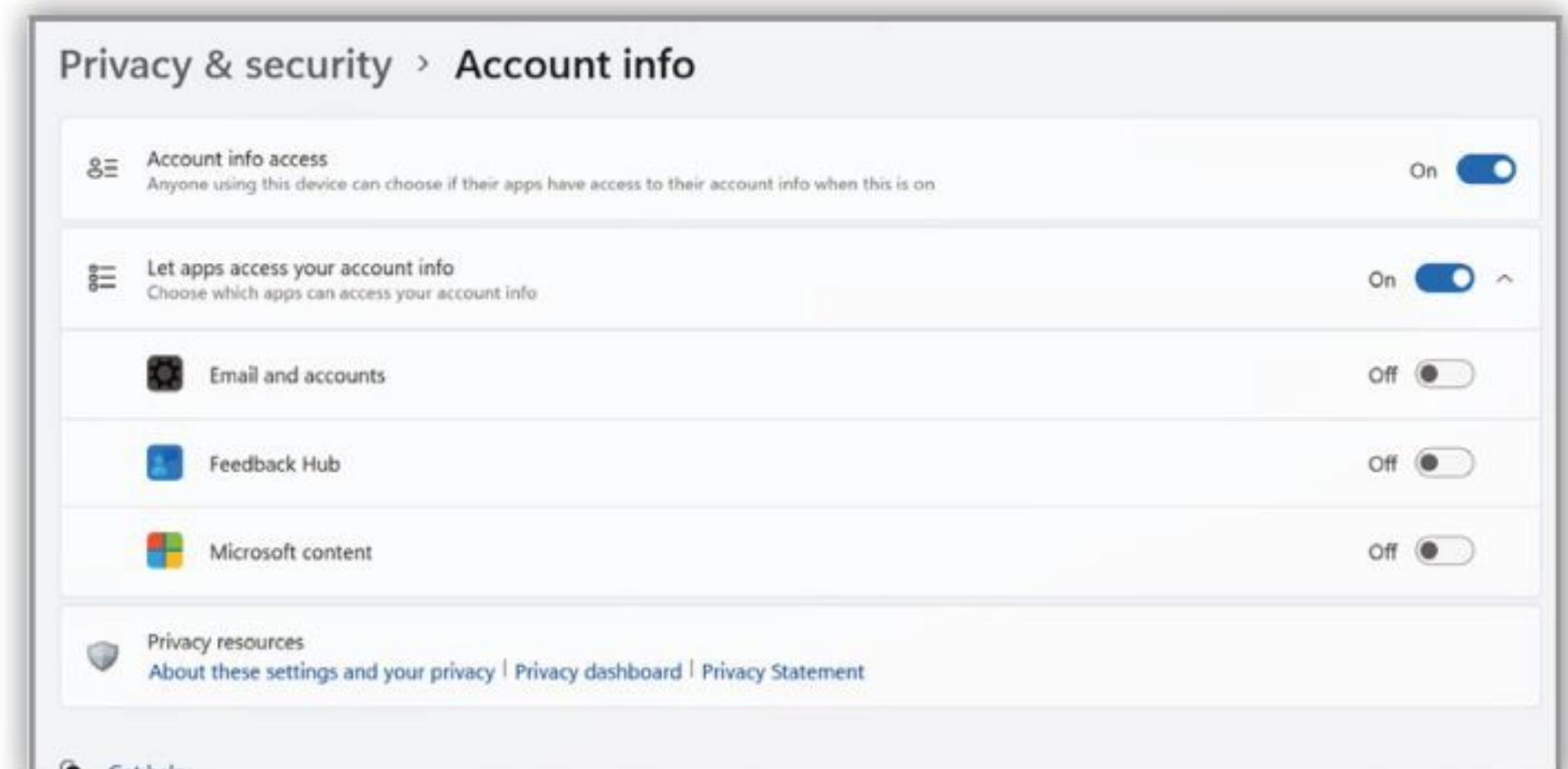
General Privacy

Privacy has its own section within the settings; here there are many different categories covering everything from Location to Background Apps. Click on each of the privacy categories to see the options within that category. Use the slider switches to allow or block privacy actions.



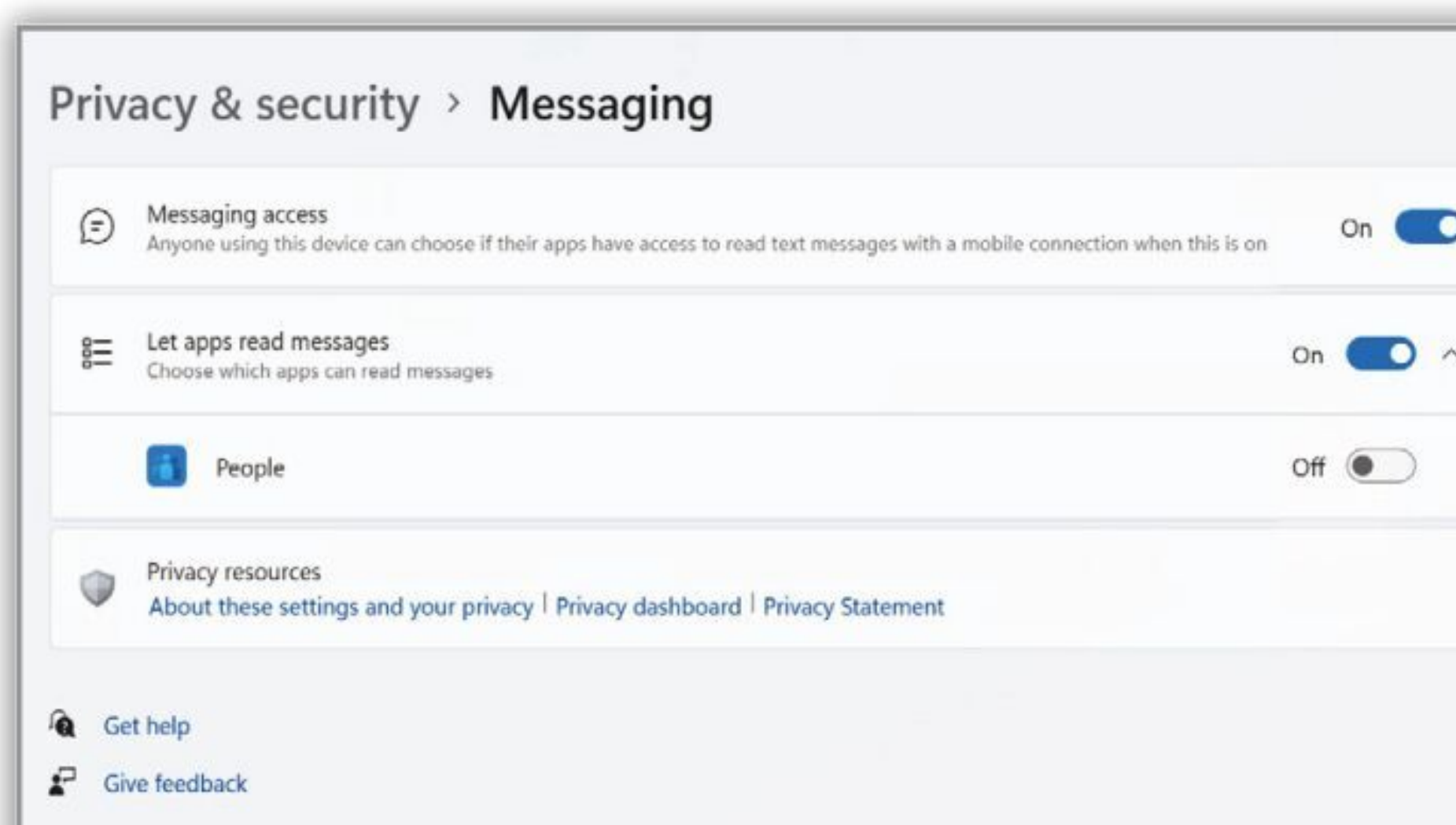
Account Info

Apps are able to access very basic personal settings such as your name and account information. This is so they can sign you in automatically to your Windows account for things like Xbox Live or the Windows Store. You can turn this off wholesale or on an app by app basis.



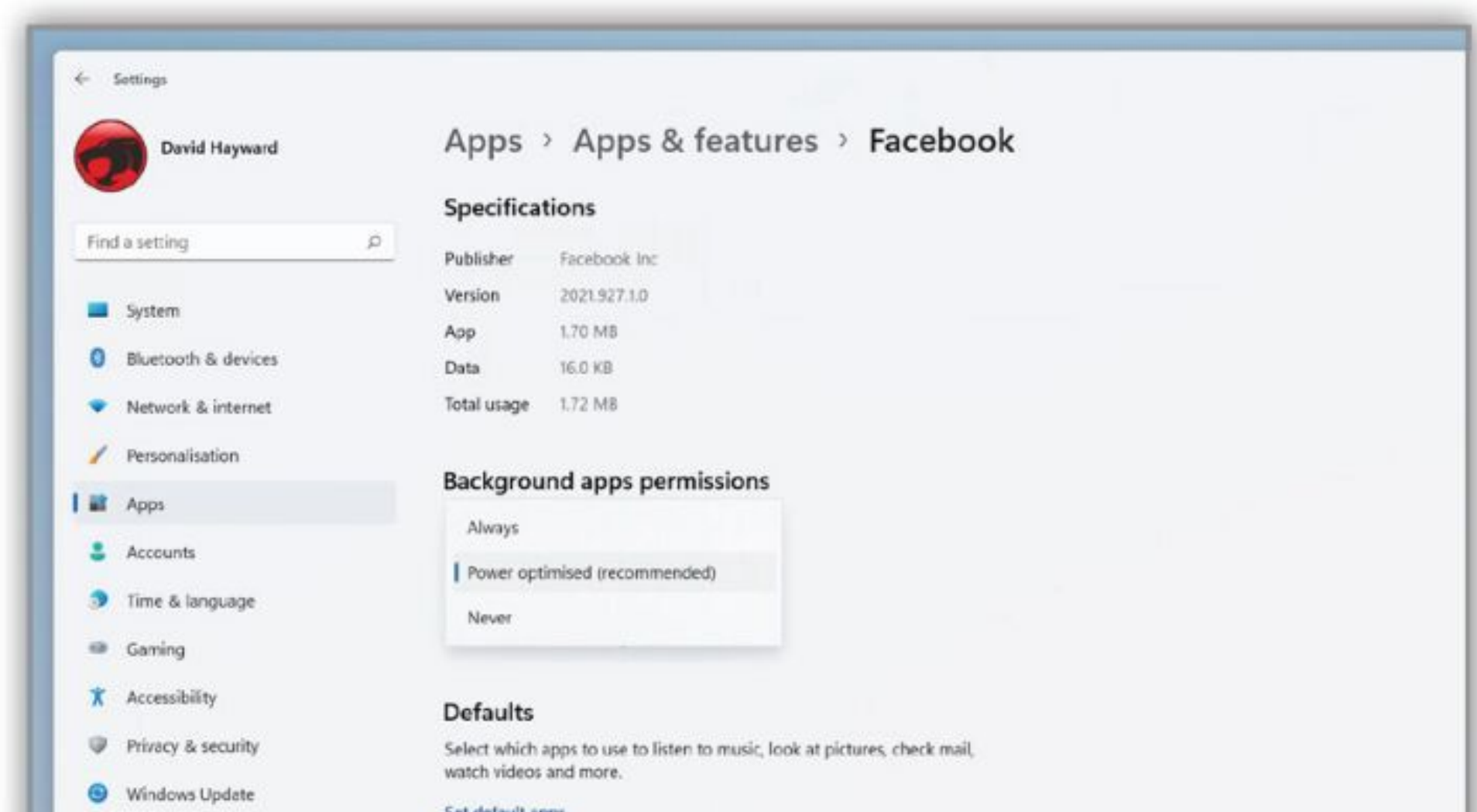
Messaging Apps

We're using Windows 11 on a laptop here but if we had a tablet with a SIM card we would be able to get control over which apps were able to send messages over SMS and MMS. You probably want this to be restricted to just your Messaging app; most apps really shouldn't have access to your texts.



Background Apps

You can control which apps you allow to run in the background. Go to the Apps section, then Apps & Features, and locate an app you don't want running in the background. Click the three dots to the right of the app, select Advanced Options and change the Background Apps Permissions via the drop-down box.





Windows 11 Maintenance Tools

Before you start to add software to help with maintenance, it is worth checking out the numerous tools included with the OS. These are spread out over several menus but once you find them you will see that they can really help with security and performance.

Maintaining Windows 11

Windows 11 is a lot better at keeping you informed of problems than previous versions were. It is, however, up to you to keep on top of maintaining the OS if you want the best experience.

Storage Sense

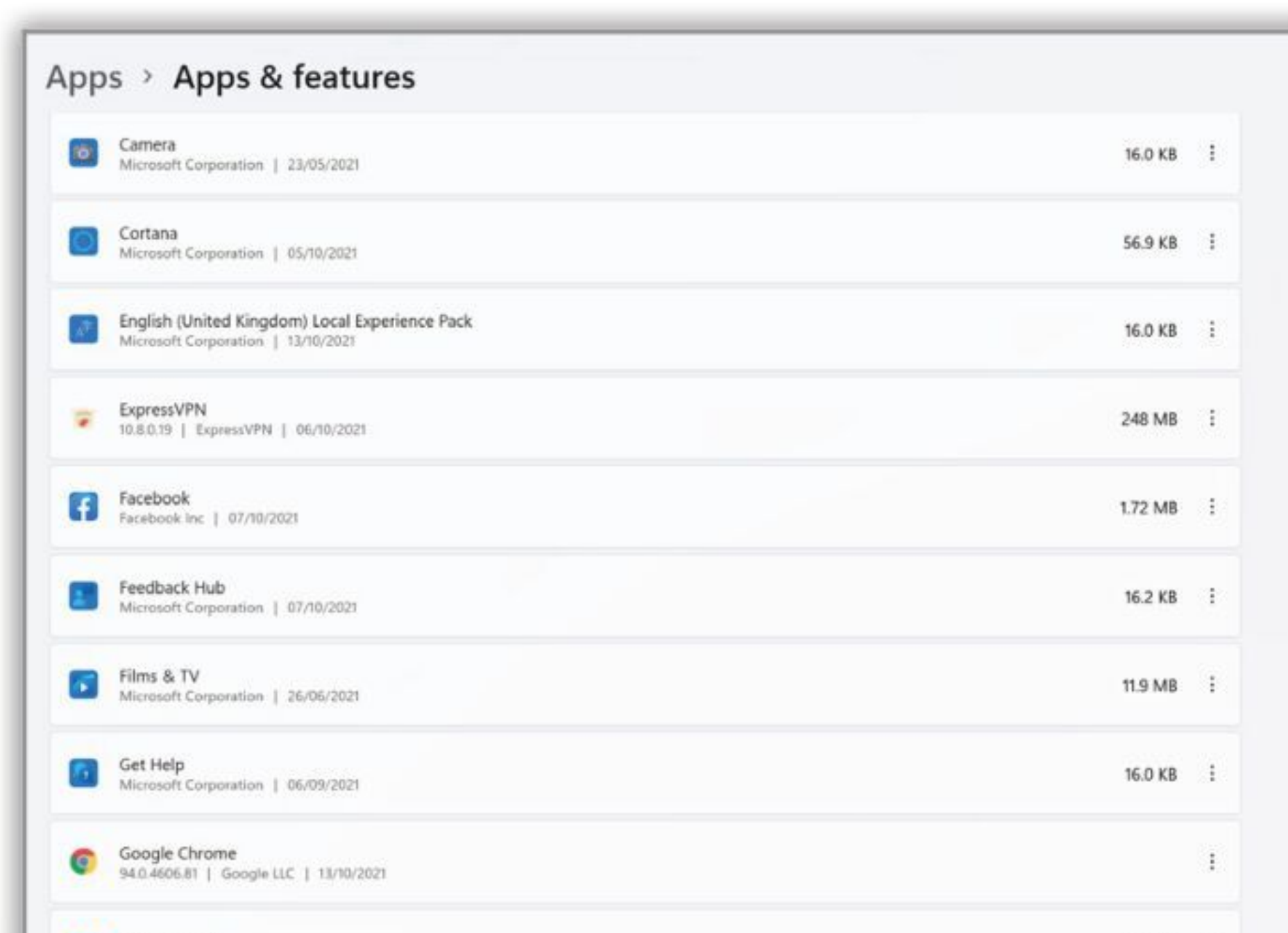
Activating Storage Sense lets the system software automatically free up storage space by getting rid of files you no longer need. These can include temporary files such as cookies and the contents of your Recycle Bin.



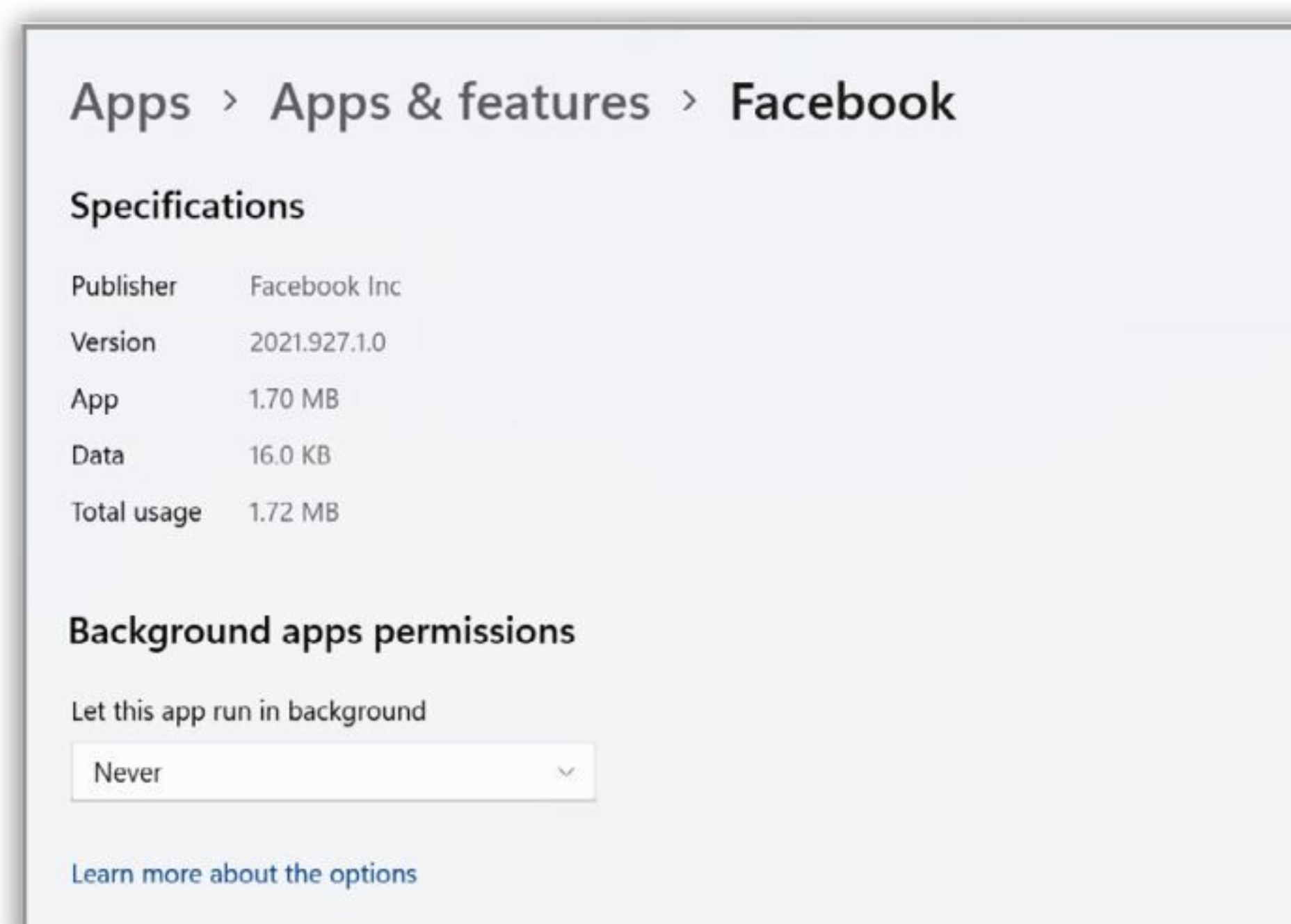
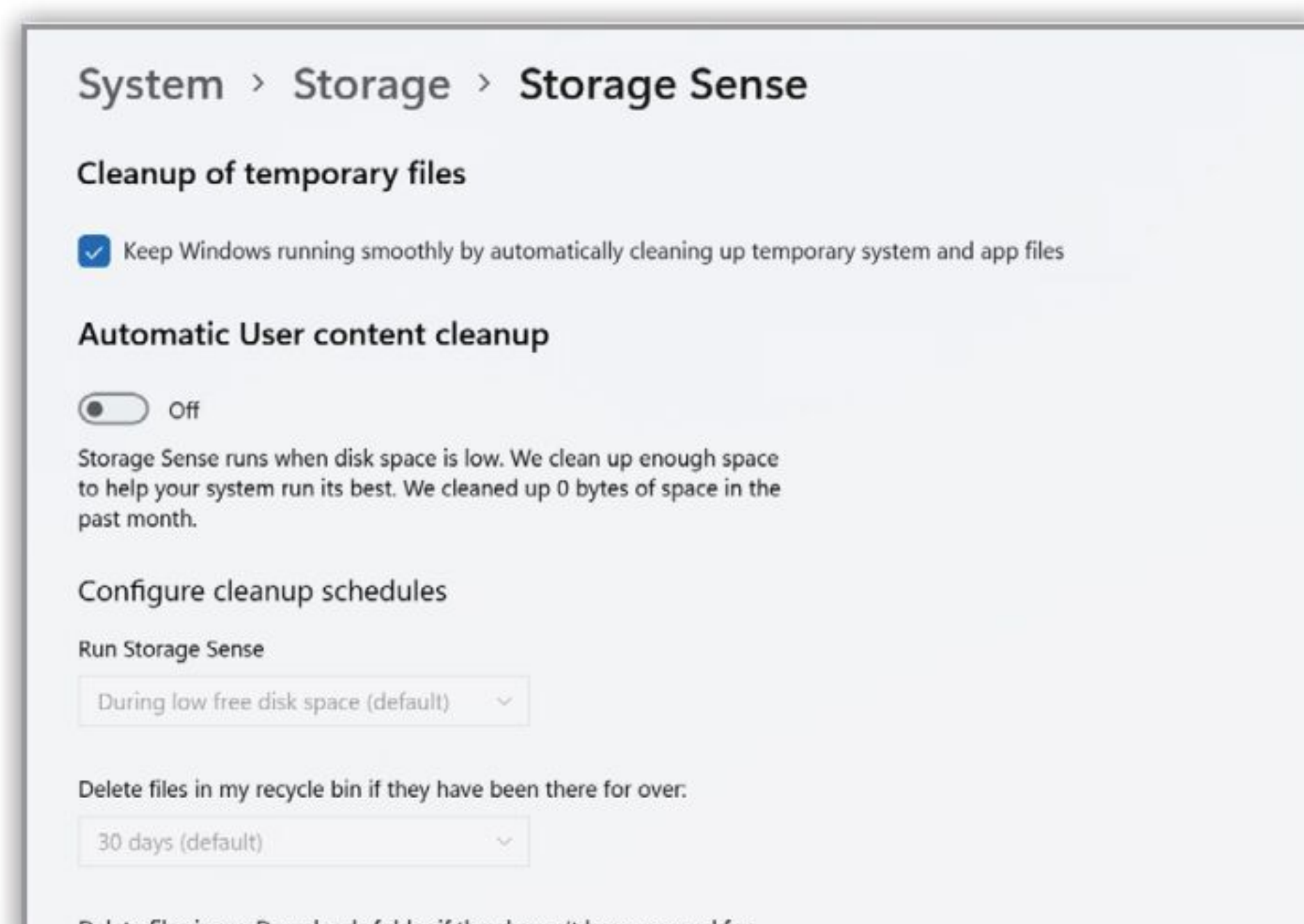
You can choose when files are deleted, e.g. after 30 days in the Recycle Bin or if apps don't use them for a certain amount of time. Alternatively you can simply click a button to Clean Now rather than setting automatic cleaning. You can find the Storage Sense option in Settings > System > Storage.

Background Apps

One of the easiest ways to conserve power (for laptop users) and reduce processor strain, is to take control of Background Apps. These are apps that are, by default, allowed to receive info, send notifications and update in the background.

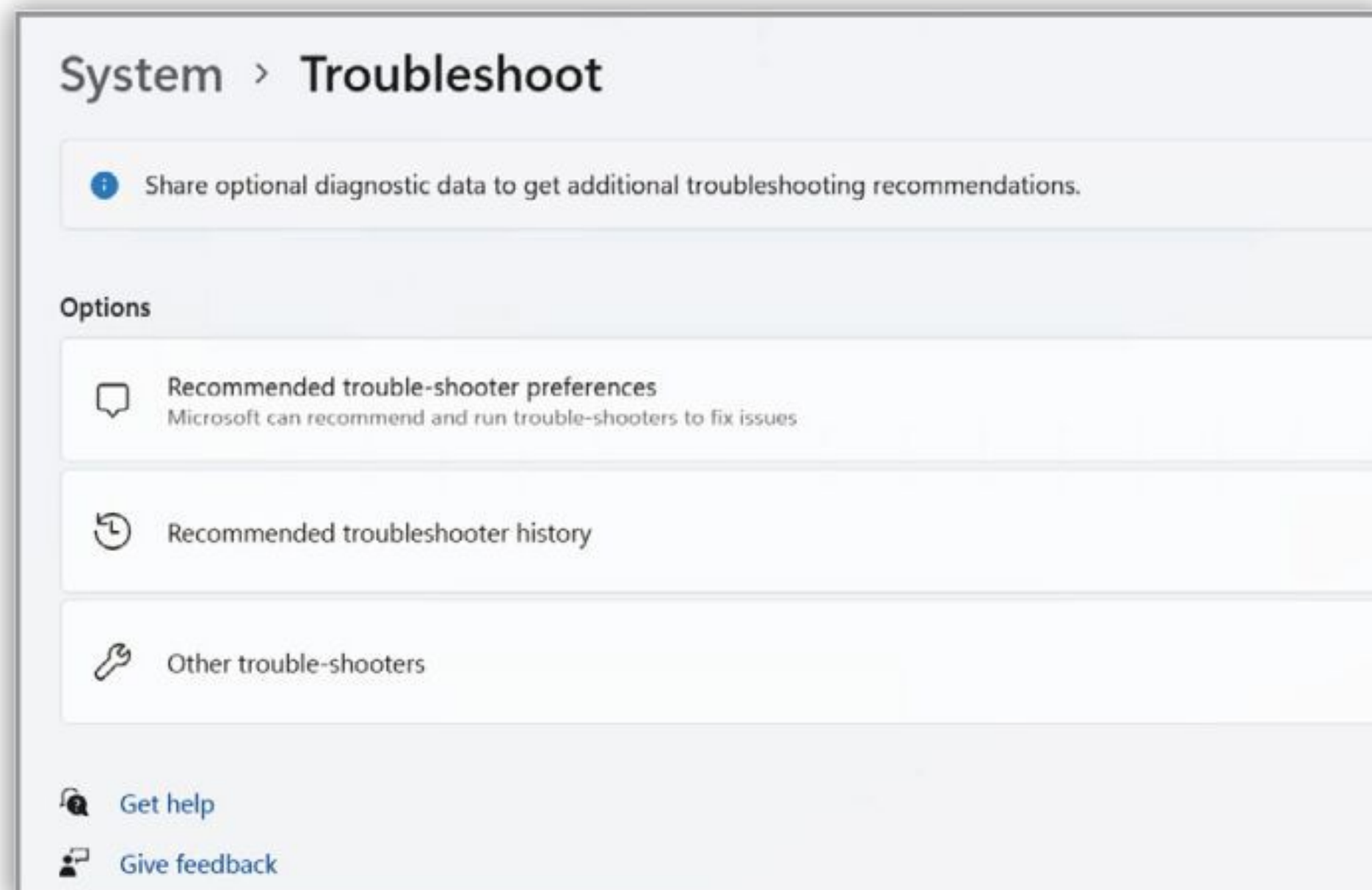


You can either stop all background apps with a single slider click or you can prevent individual apps from running in the background. Go to Settings > Privacy > Background Apps and look through the apps listed. If you see apps that you don't need notifications or updates from, click the slider to disable its background activity.

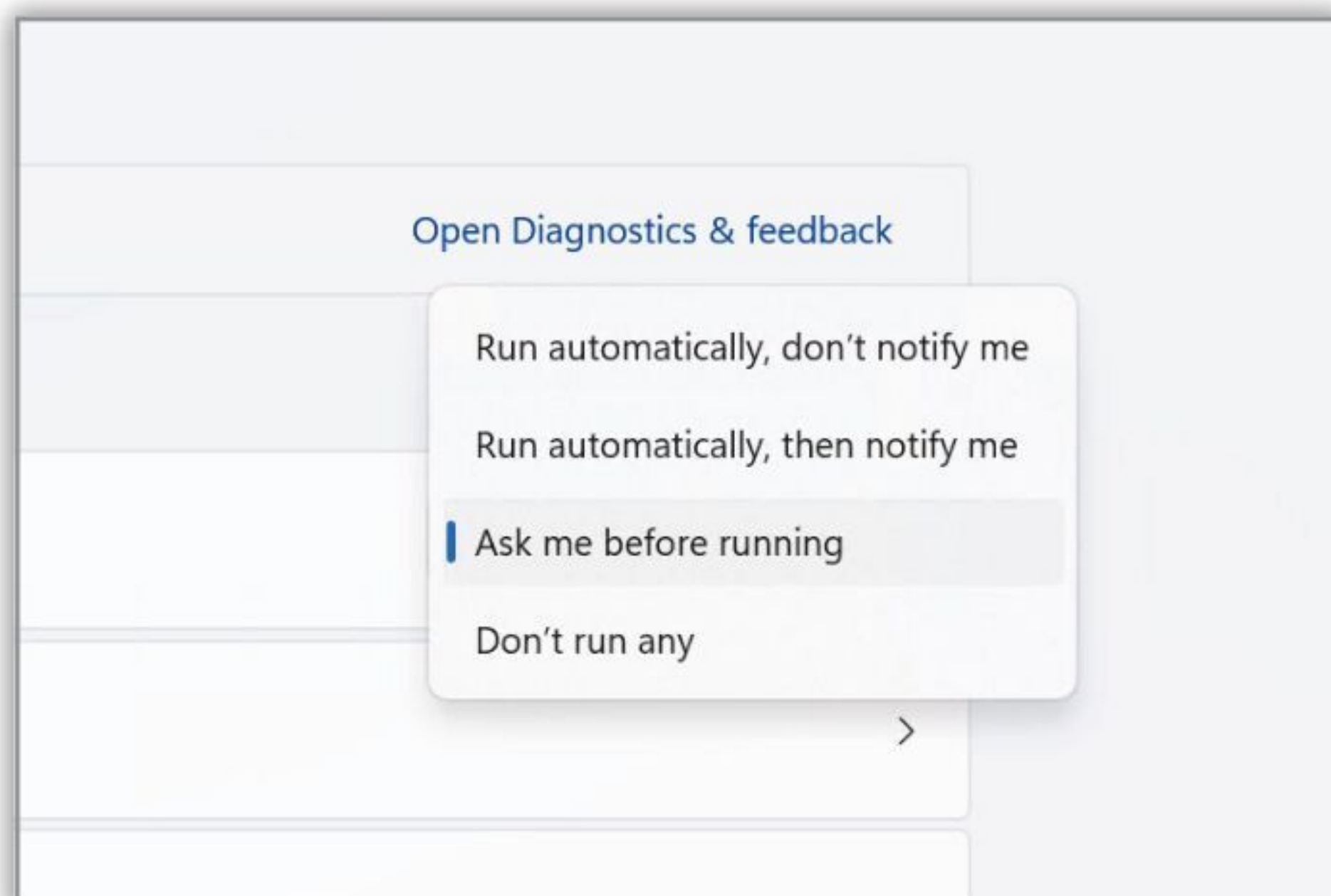


Troubleshooters

Windows 11 includes a number of troubleshooting tools, aimed specifically at certain problems such as audio loss or patchy Internet connection. This is often the best place to start when trying to solve problems with your PC and Windows 11, as the OS contains many drivers for common devices and may just need a small software update.

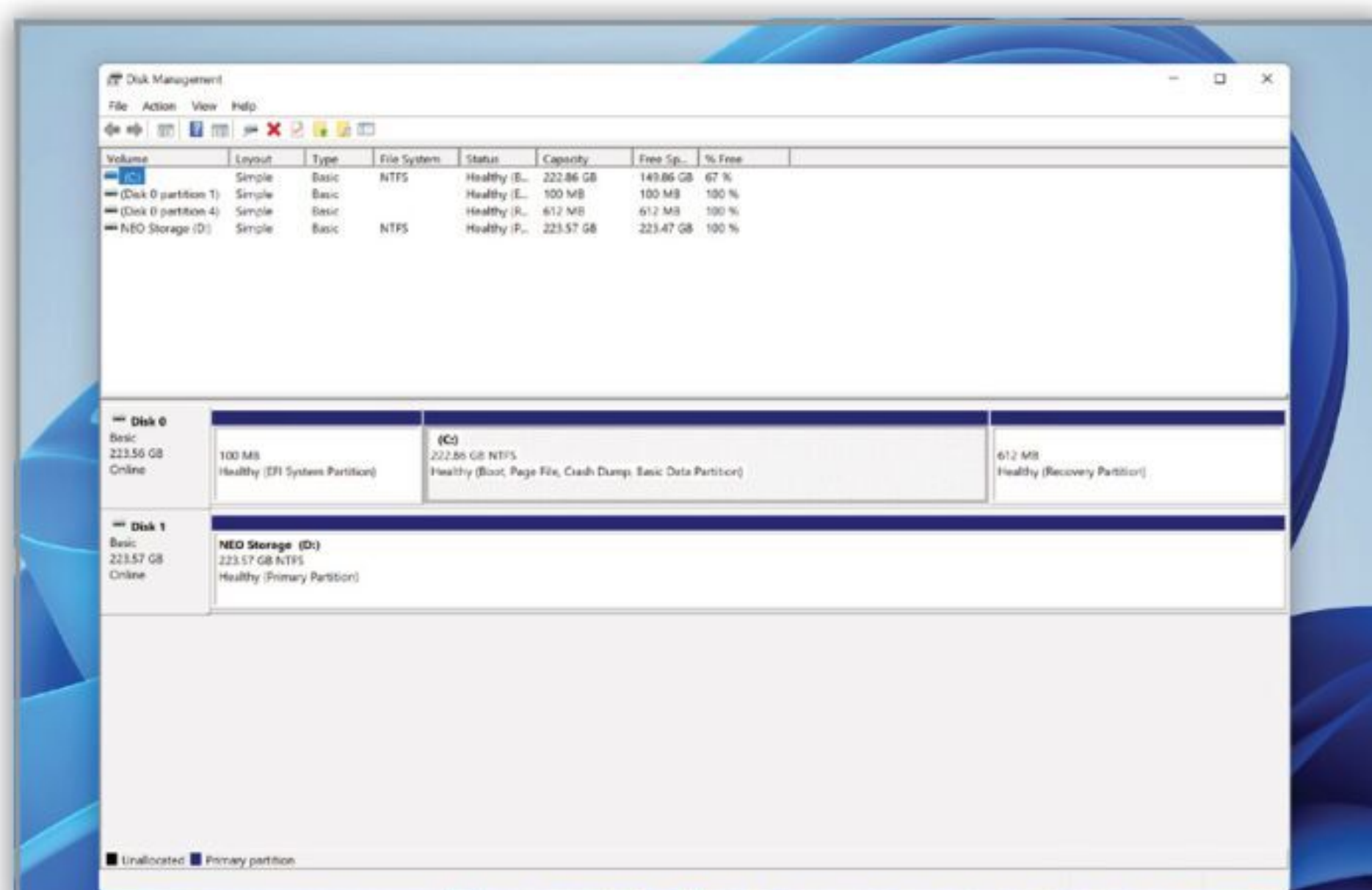


You simply look through the list of troubleshooters and click on the one which applies. Choose Run the Troubleshooter and then follow the instructions to try and solve the problem. You can find the troubleshooters in Settings > System > Troubleshoot.



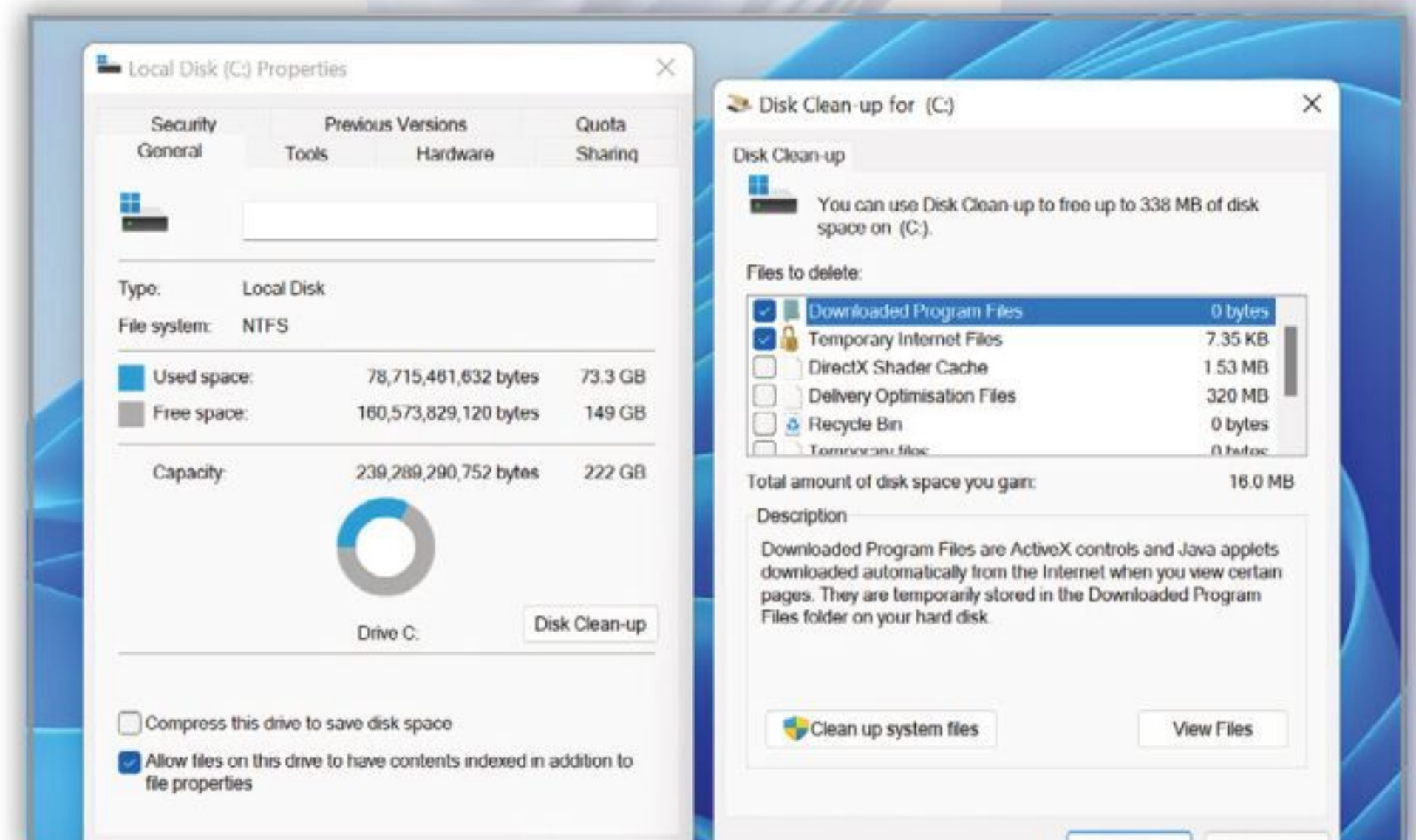
Disk Management

The Disk Management tool is more about diagnostics than actual maintenance but it is a useful way of checking whether your hard disk has space available and is healthy. The panel will show all of your disks, as well as all of the partitions.

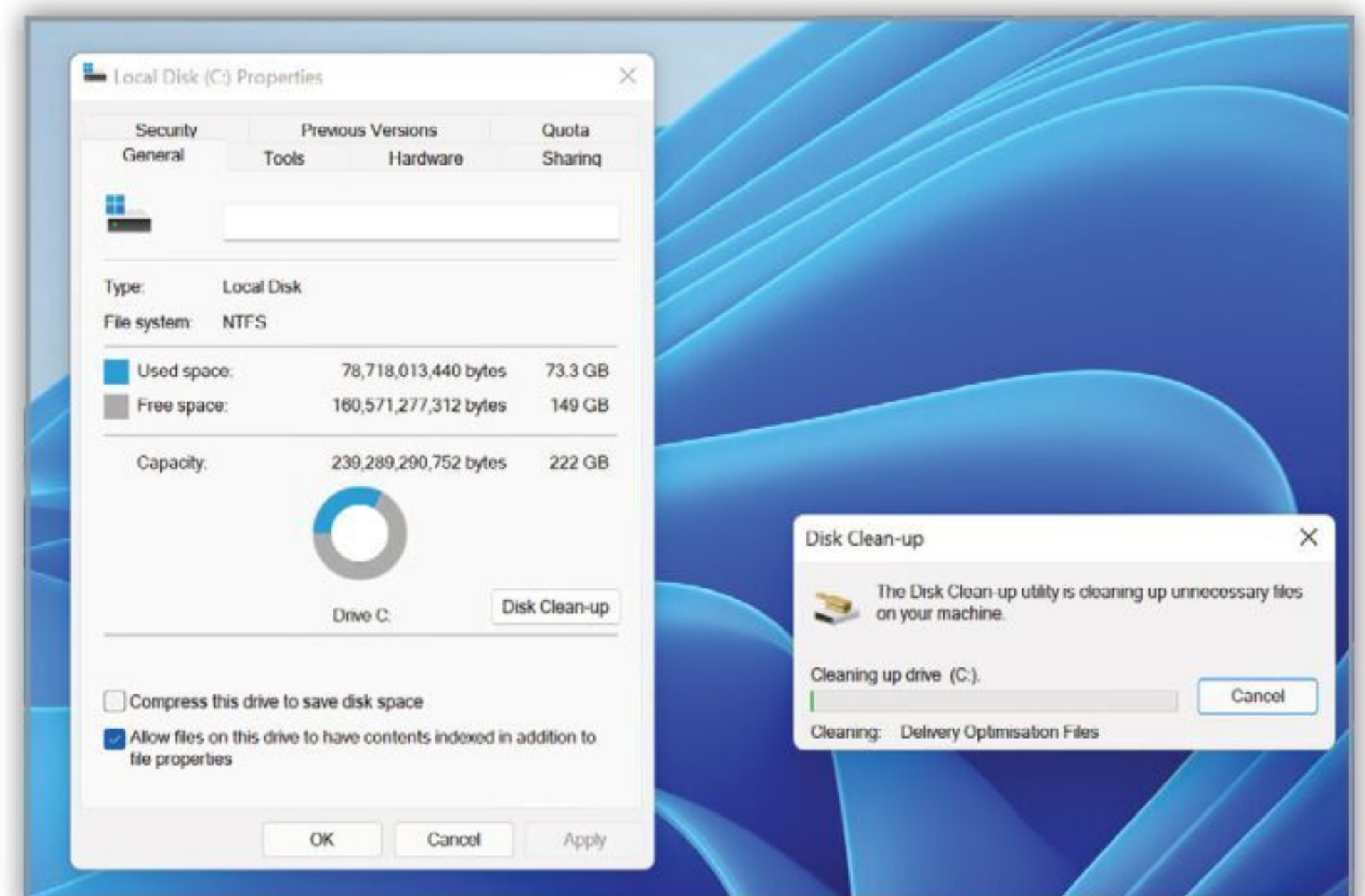


Disk Tools

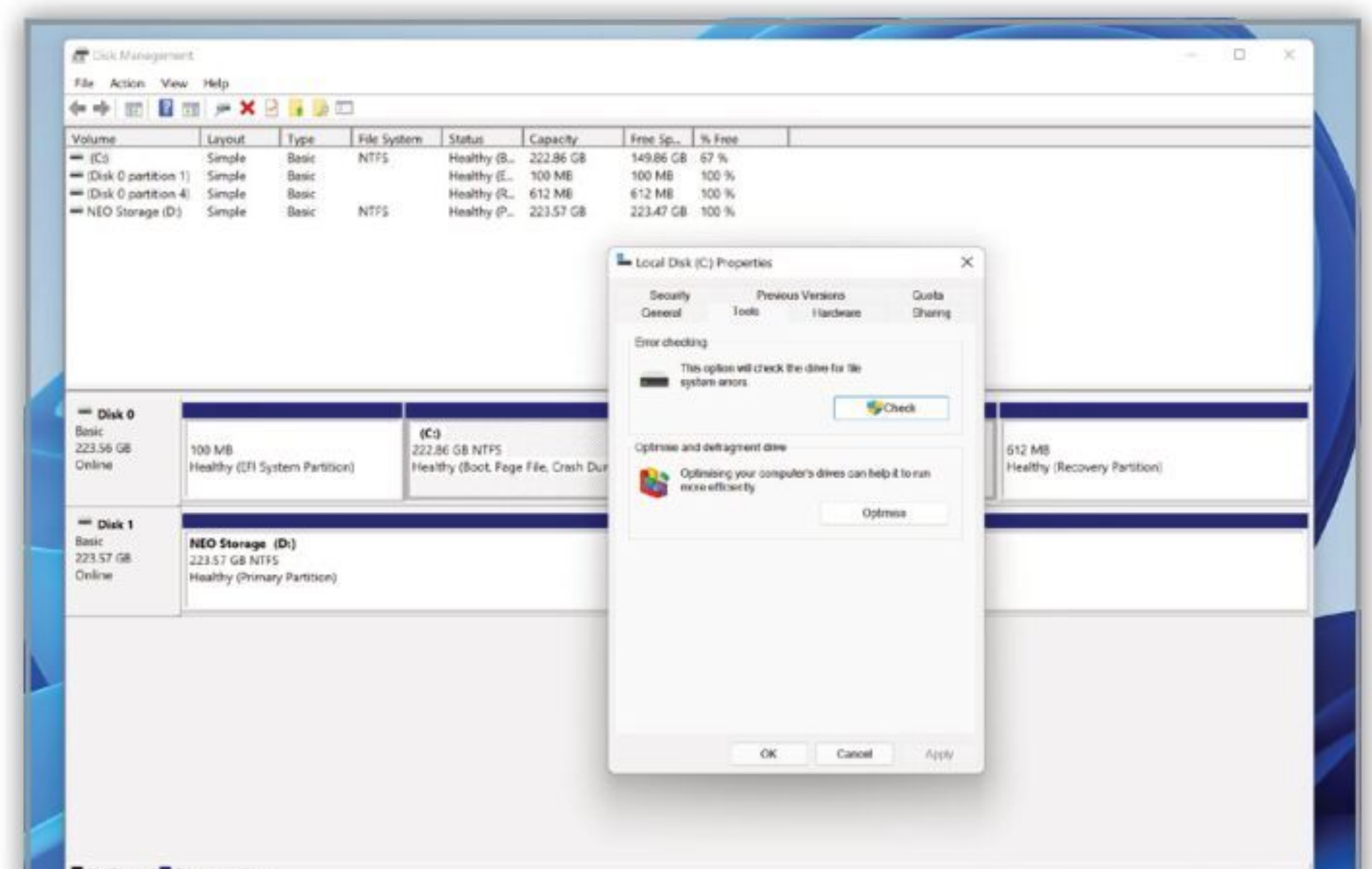
There are several tools built in to Windows 11 (and also in older versions of the OS) that allow you to clean, fix and manage your hard disk. Open the File Explorer and look in the left-hand column for 'This PC'. Select it and then right-click on Local Disk (C:). In the General tab, you will see a button for Disk Clean-up that lets you get rid of temporary Internet files, old program files and so on.



If you click the Tools tab, you can use the Error Checking tool and the Disk Defragment tool. Both of these tools can help your hard disk run more efficiently. Click on either button and follow the instructions for each tool chosen.



Each column contains information about capacity, free space in MB, percentage of free space and health status. There are some further options, such as the ability to change drive letters and mark partitions as active but they are probably not worth playing around with unless you know what you are doing.





Removing Malware from Windows 11

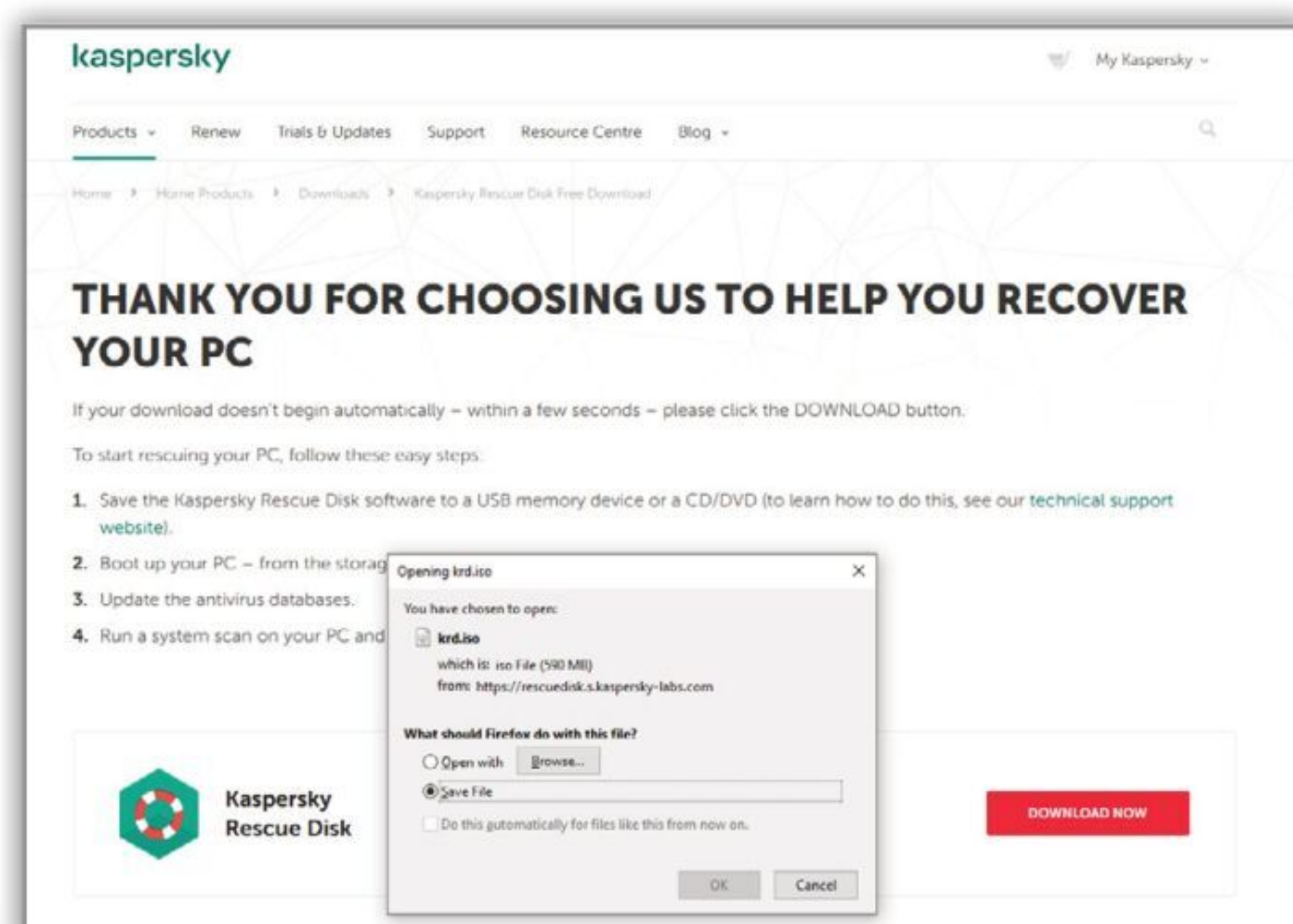
The Windows 11 Defender and Security suite is very good, but what if you're unlucky enough to already have some form of digital infection? Thankfully, there's a way to remove malware and viruses from your computer.

Malware Busters

For this tutorial we'll use a pre-configured rescue disk from Kaspersky. We'll need to transfer, or burn, the disk contents to a CD or a USB stick and boot into the safe environment through one of those mediums.

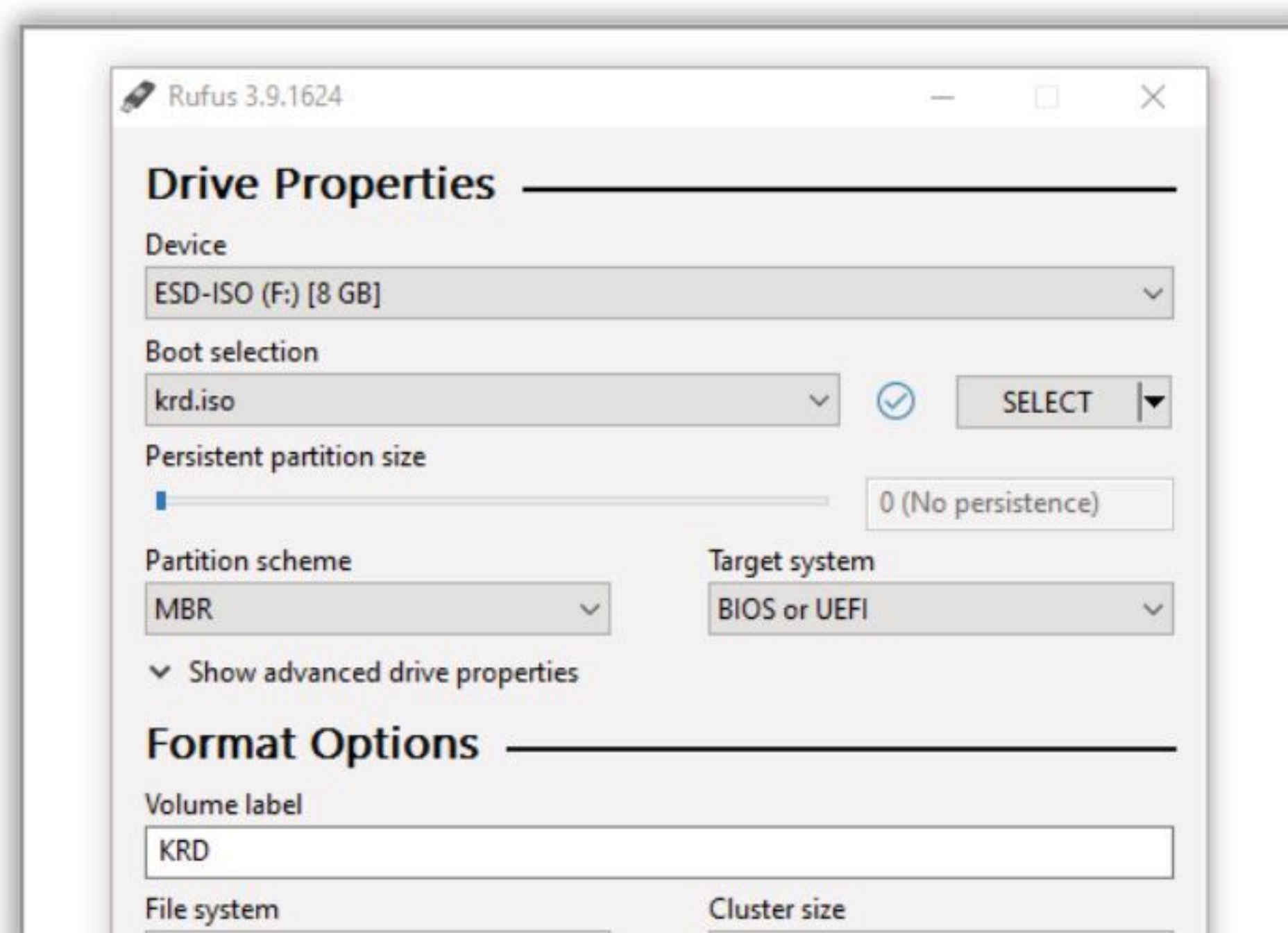
Step 1

Make sure you have a blank CD or a USB stick that's at least 1GB in size. The Kaspersky Rescue Disk is downloaded as an ISO (which is an image file containing all the disk information), and can be downloaded from <https://www.kaspersky.com.au/downloads/thank-you/free-rescue-disk>.



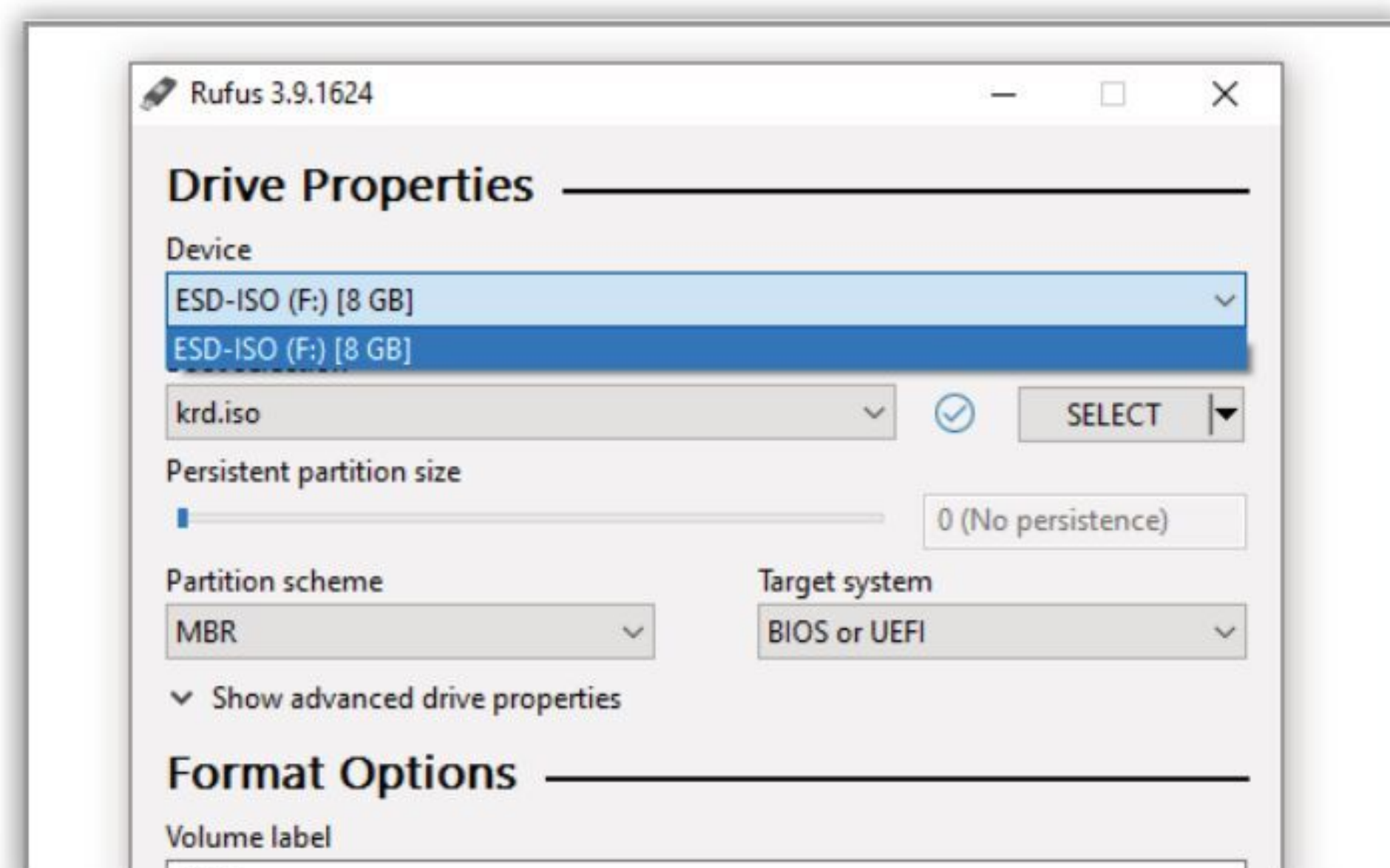
Step 3

Click the Select option, and using Windows Explorer, locate the downloaded Kaspersky Rescue ISO – it'll be called krd.iso. Click the Start button to select the image and continue with the process. This will copy the contents of the ISO to the USB while also making the USB a bootable device.



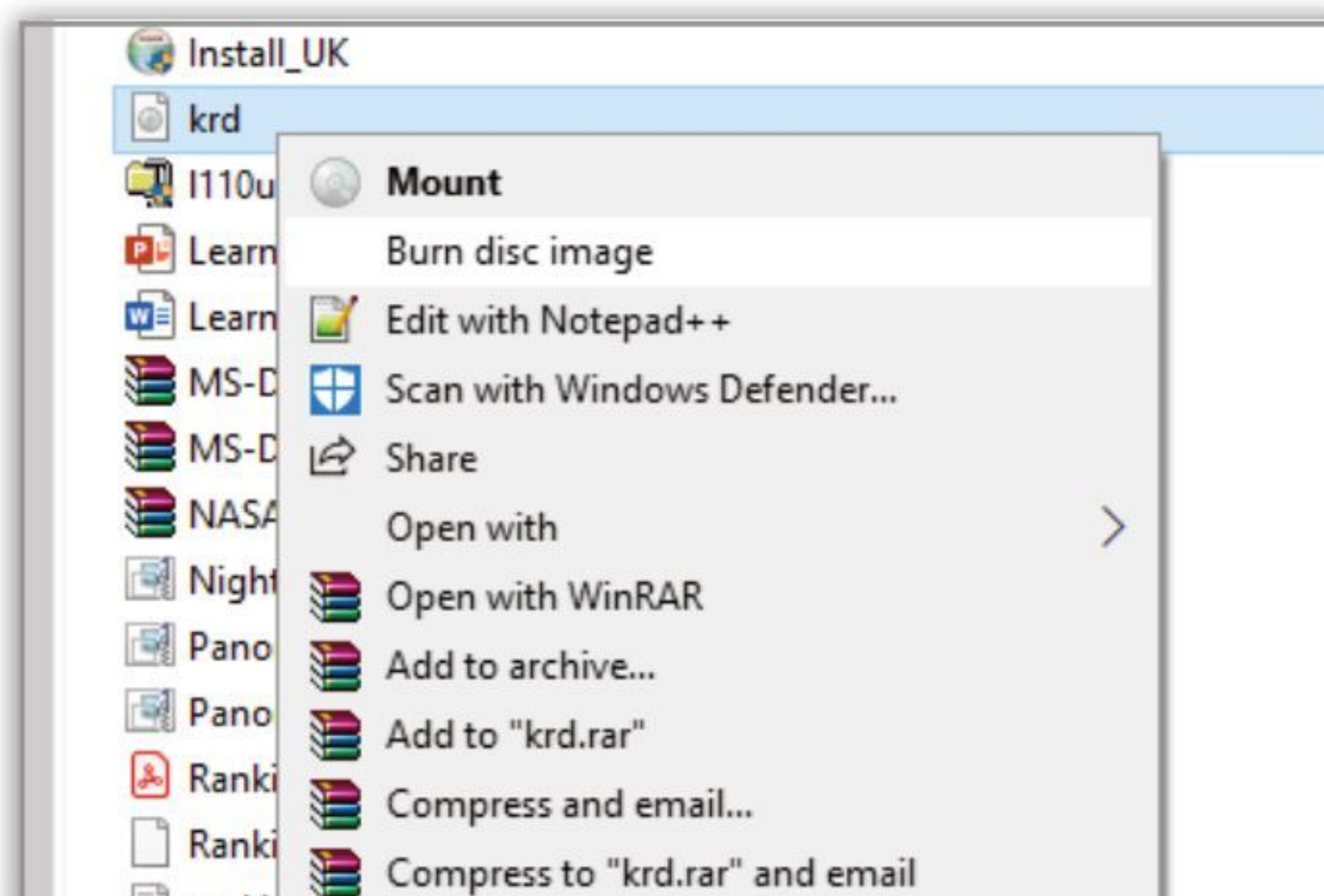
Step 2

To transfer the ISO to a USB, download Rufus; which is an executable that doesn't require any installation, from: <https://rufus.ie/>. Insert your USB stick and double-click Rufus. Check that the Device label is pointing to your inserted USB stick, if not then you may need to close Rufus, remove the USB, then re-insert the USB and re-start Rufus. The remaining options can be left as their defaults.



Step 4

If you're using a CD, start by inserting the CD into the drive. Locate the downloaded Kaspersky Rescue ISO, right-click it and choose Burn Disc Image from the context menu. Tick the 'Verify disc after burning' option, and click the Burn button to start the process. Once the ISO is burnt to the disc, you can power off your computer.



Step 5

You'll now need to allow your PC to boot up into the Kaspersky Rescue CD environment. Power up your PC and open the Boot Option Menu. This could be accessed by pressing F12 (depending on the make and manufacturer of your PC motherboard). With the boot options available, select either the CD or USB stick and press Enter.



Step 6

The PC will now boot into the Kaspersky Rescue Disc environment. This is a custom Linux operating system with all the necessary security tools pre-installed. First, you'll need to choose which language to load the environment. Use the arrow keys, and press Enter for your language choice. After that, choose the Graphic Mode.



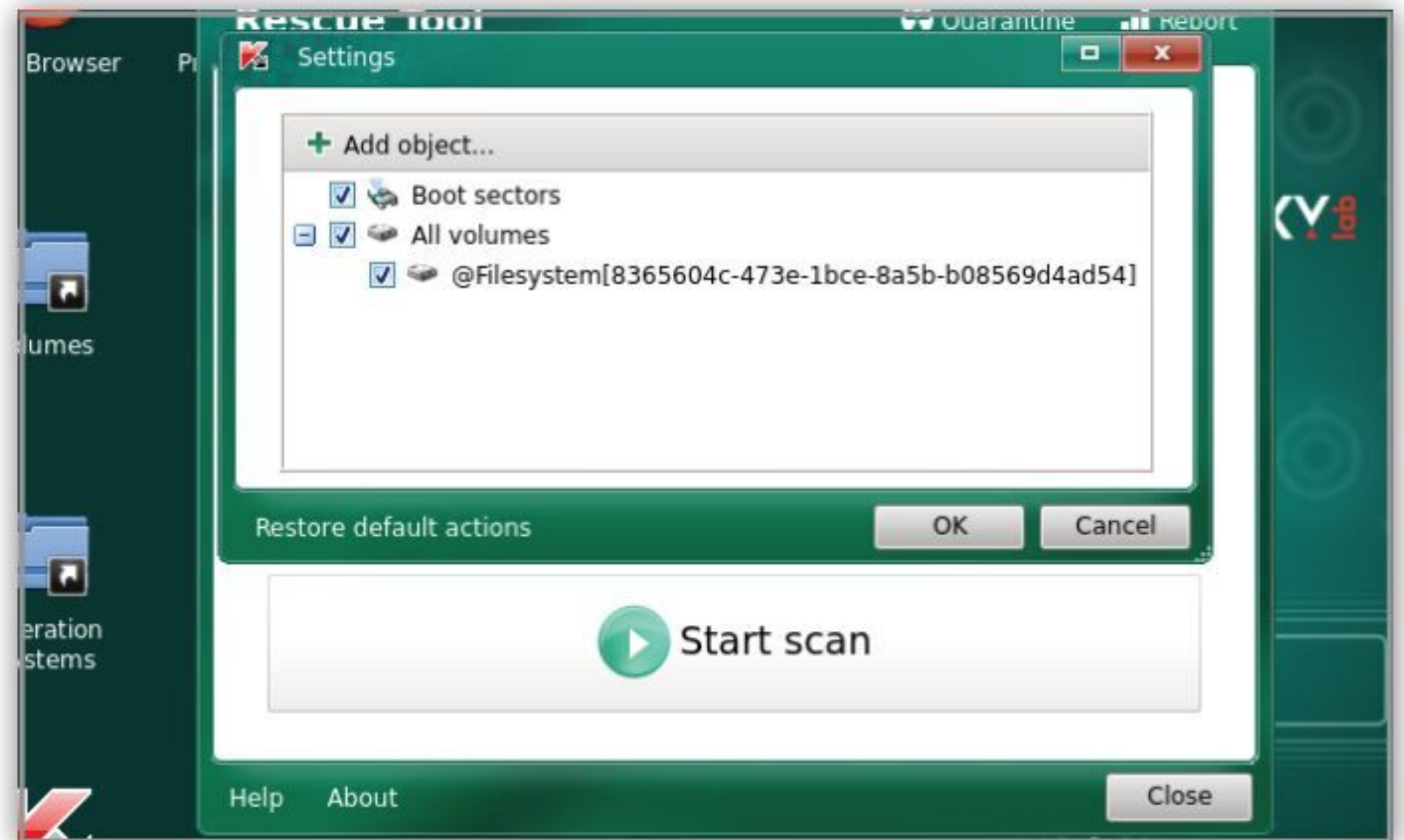
Step 7

Begin by accepting the license agreement. After that, the rescue disc will check its status and open a window asking for you to start scanning the system. However, it's best to check you've got access to the Internet in order for it to update first. Close down the Rescue Tool window, and click on the Network box in the bottom-right. Connect to Wi-Fi, or Wired as required.



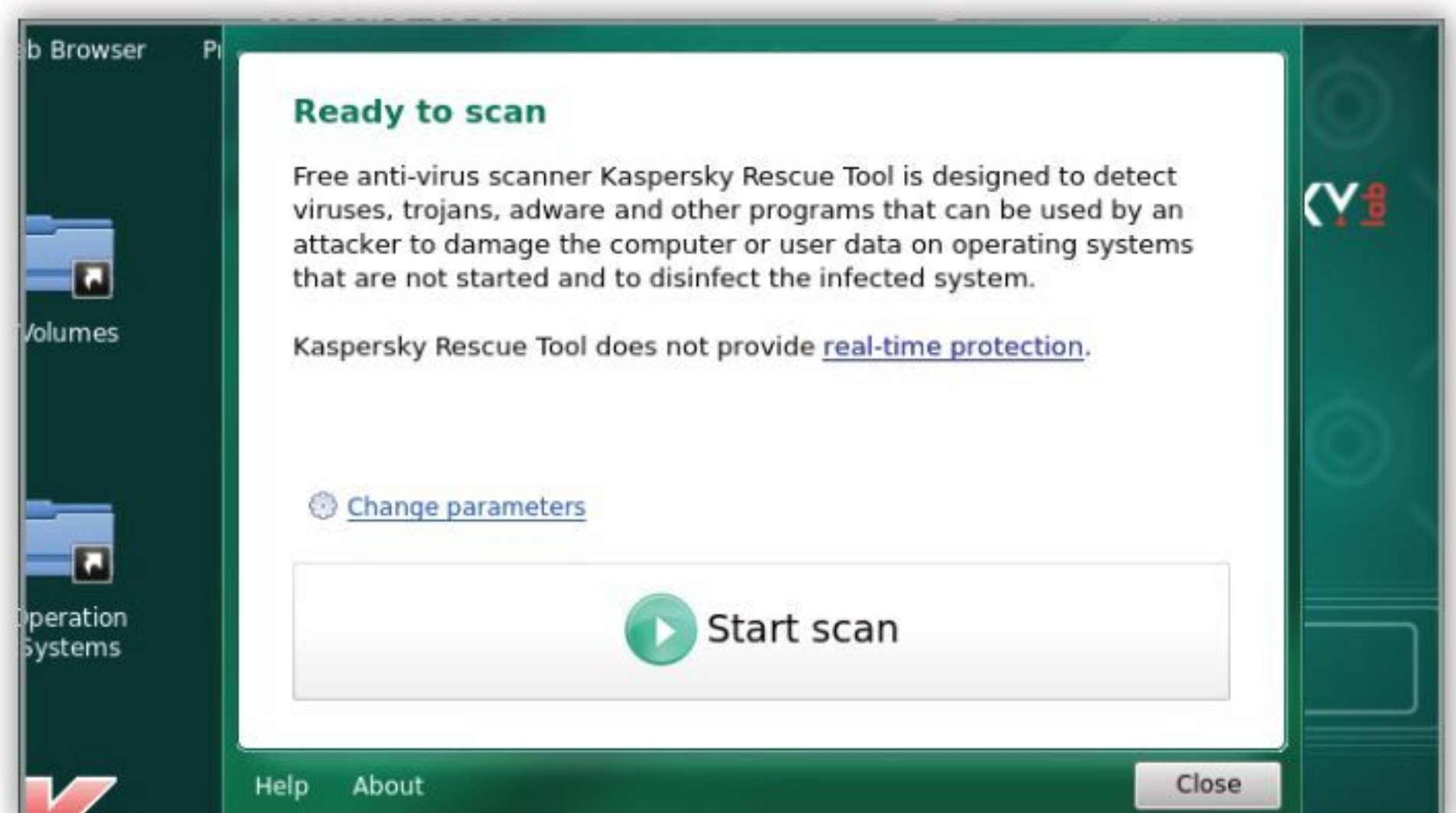
Step 8

Once connected, relaunch the Kaspersky Rescue Tool from the desktop icon, agree to the license once more. Before you begin, click on the Change Parameters link in the Kaspersky Rescue Tool window. This will enable you to choose which drives the tool can scan for infections and malware. Tick all the drives in your system. Tick all the drives in your system.



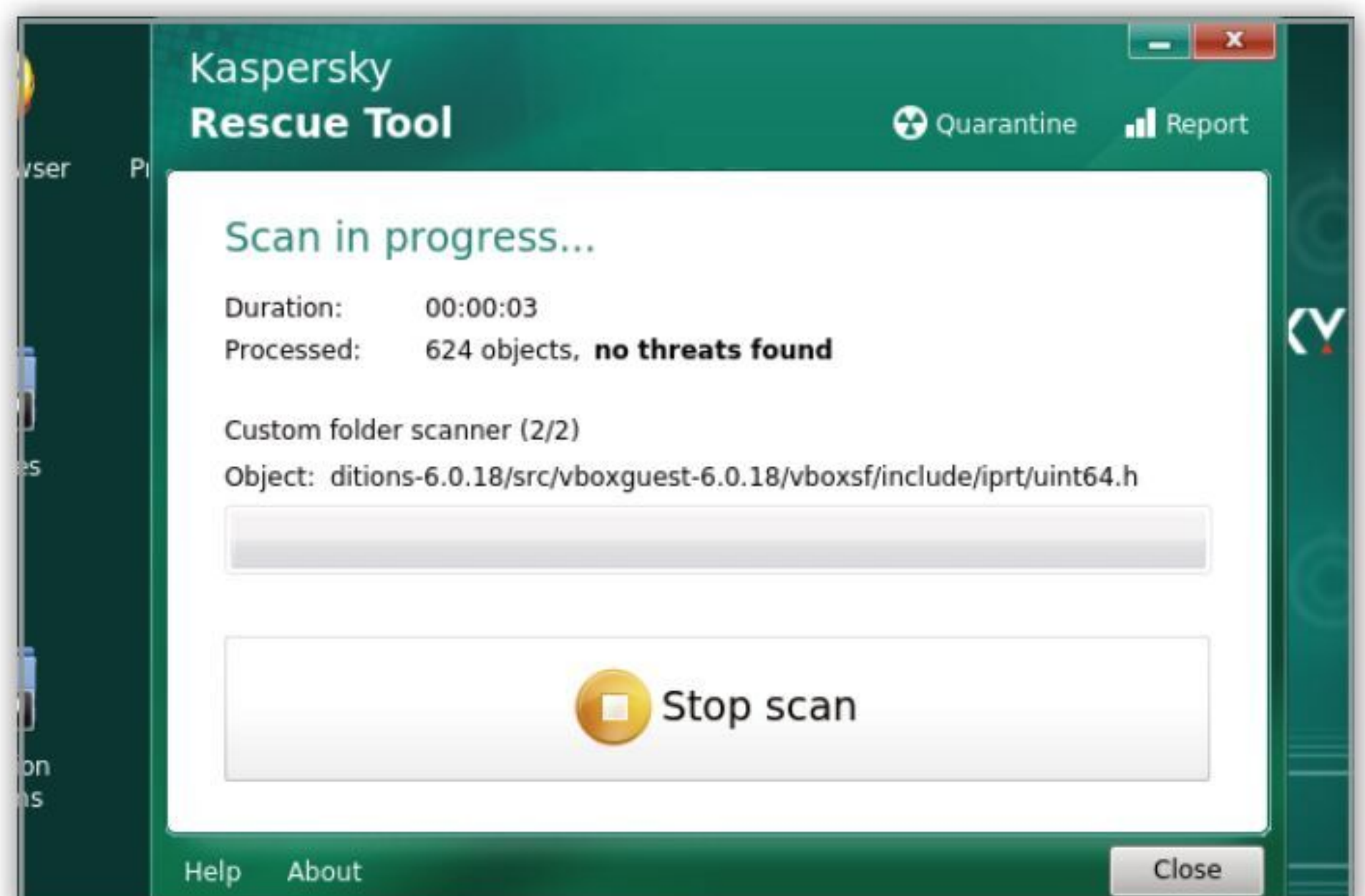
Step 9

When you're ready to continue, click on the Start Scan button in the Kaspersky Rescue Tool window. This will begin the process of scanning all the drives selected in the previous step. Be aware, that, depending on the size of your drives and the amount of data on them, this could take quite some time.



Step 10

While the scan is working, you'll see the area that the tool is currently processing. You'll also get a brief run-down of any threats currently found, time taken, and number of files scanned. Once complete, you can view a report by clicking on Details. Hopefully, you're malware free, and you can remove the USB/disc and reboot the system.





Six Steps to a Faster PC

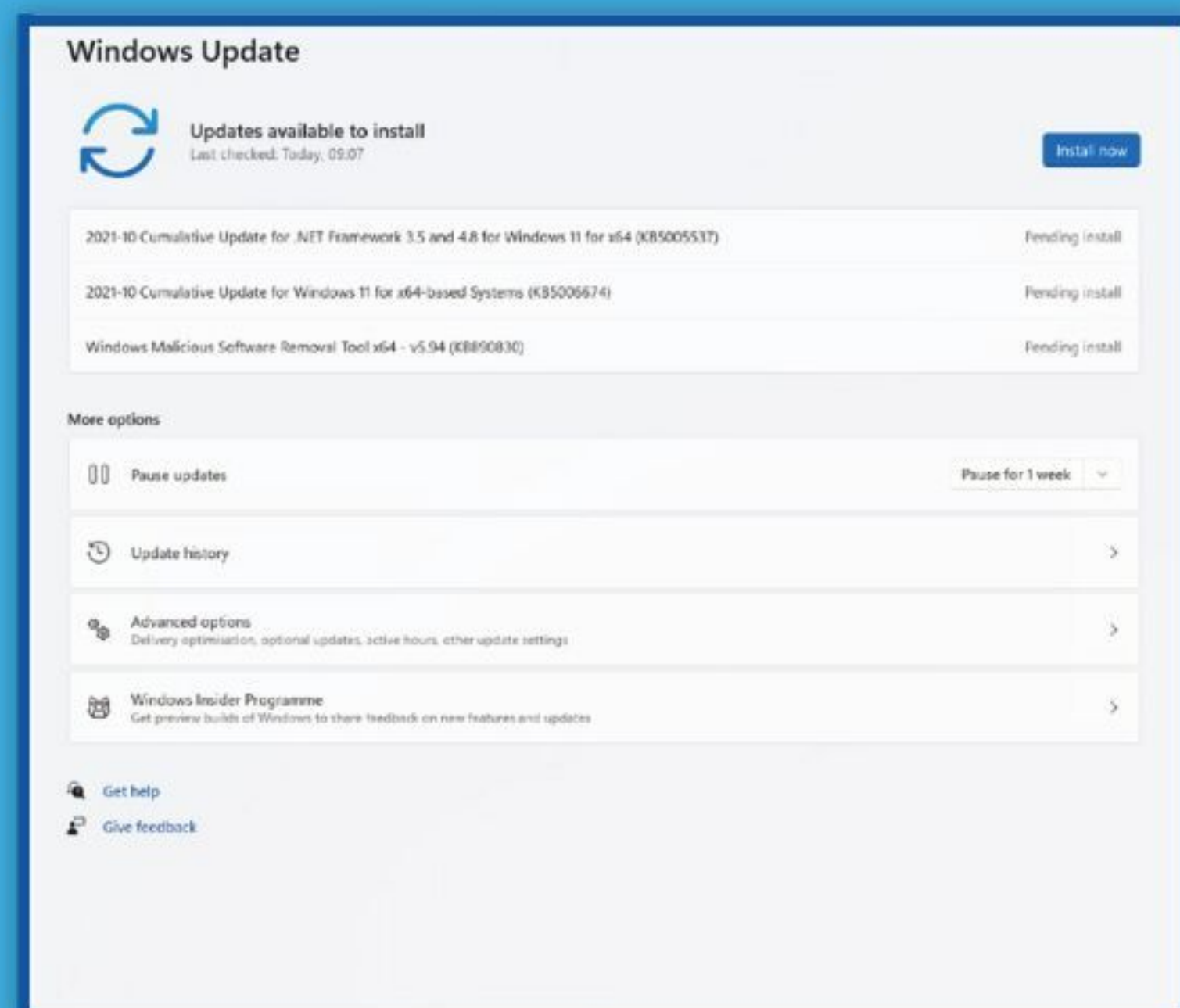
A slow computer is both inconvenient and frustrating. When everything you try to do takes twice as long as it should, you might be tempted to think about buying a new PC; before you do, there are several things you can try to make your Windows 11 PC run faster and smoother.

1 Update Windows 11 and Drivers

The first step along your path to a faster computer is making sure that the Windows OS and all of the various drivers installed are up to date. Simply updating drivers to the latest versions can have a noticeable effect on the overall loading speed of any PC and fortunately, this is very easy to do.

Open Settings > Update & Security > Windows Update and click “Check for updates”. Windows 11 will scan for available updates (to both the OS and drivers), before displaying all those available as a list.

If no updates are available, it will say “Your device is up to date” and you can move on to the next tip. If updates are available, select those you want to download and install, then click “Install”. When installation is complete, restart your PC.

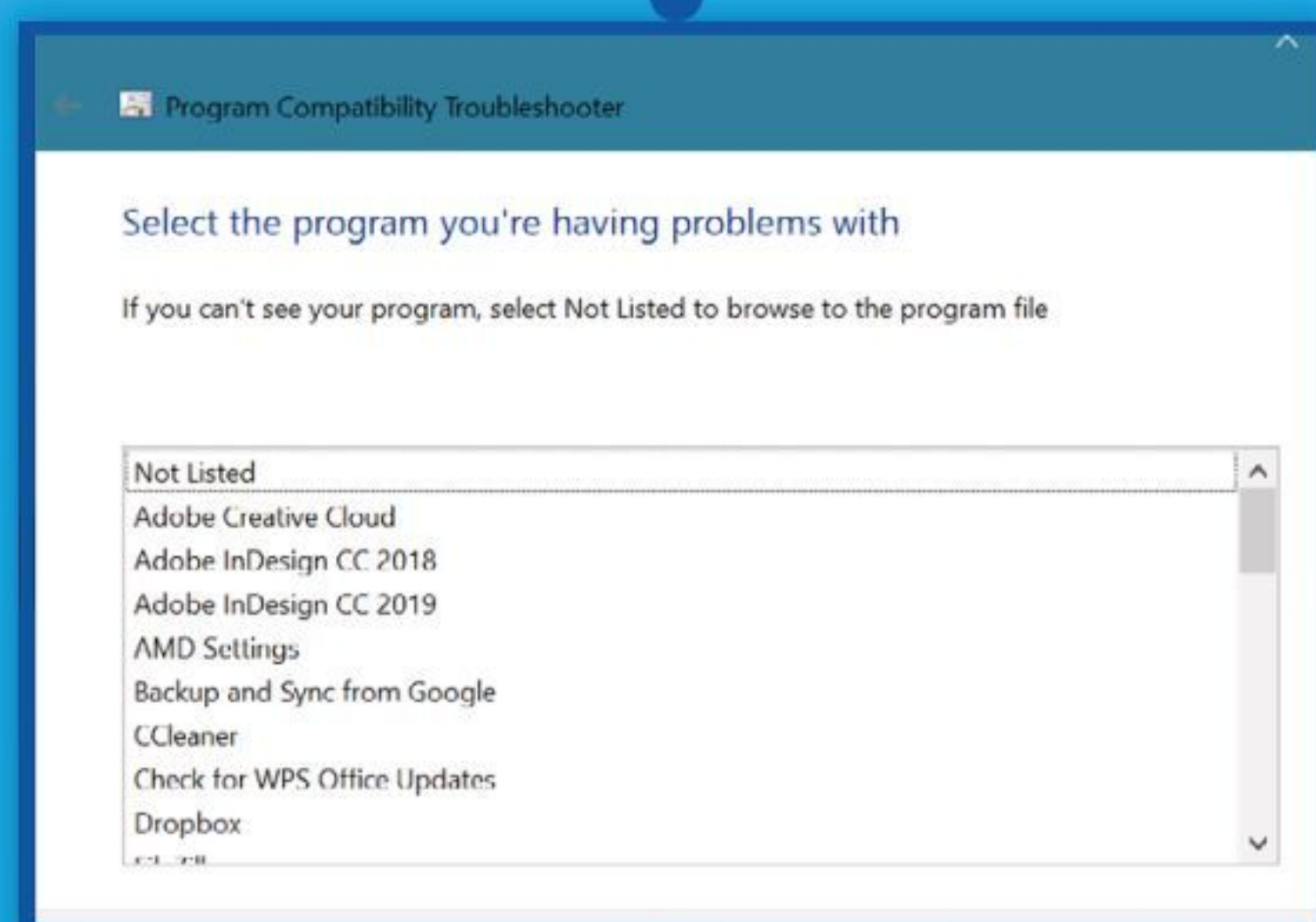


2 Check Program Compatibility

Software that is designed to run on older versions of Windows can sometimes cause Windows 11 to slow down as it struggles to manage this incompatibility issue. To find out if this is a potential problem, run the Program Compatibility Troubleshooter.

In the taskbar search field, type “program compatibility troubleshooter” and click the first result in the search panel. Run the troubleshooter; testing any software you think is causing problems.

The troubleshooter will offer you various ways to test and fix software compatibility issues.



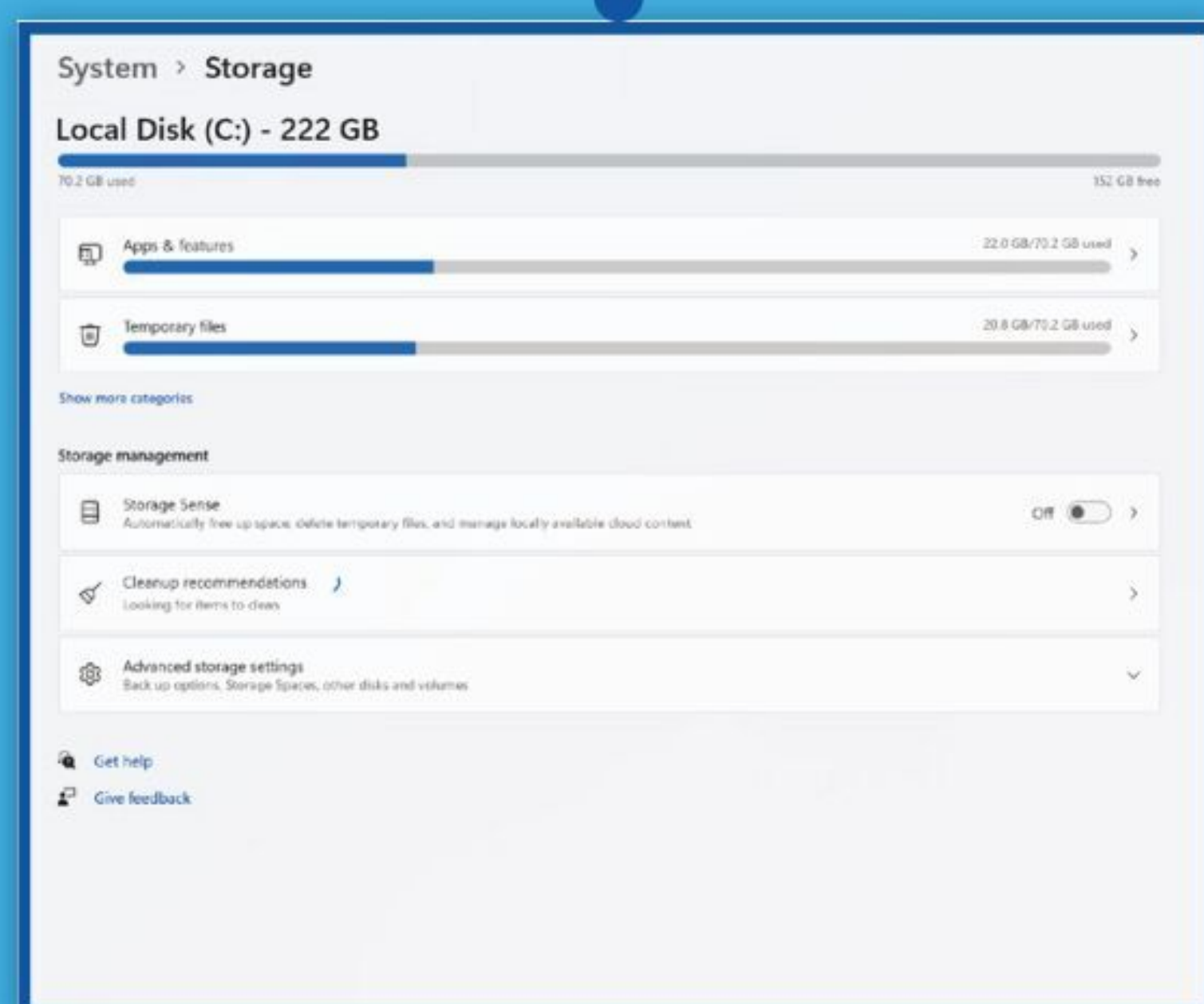
3 Check and Clear Disk Space

If your hard drive is very full, it can affect performance. To check: open Settings > System > Storage and see how much space you have left. If your storage is looking full, try the following options to make some space:

Delete Temporary Files – Click the “This PC” bar and then click the “Temporary files” bar. Select everything you want to delete, click the “Remove Files” button and then restart your PC.

Remove Unwanted Apps – Open Settings > Apps > Apps & Features, click on any app you want to remove and then click “uninstall”. Repeat this for all unwanted or unused apps before restarting.

Move Files to an External Drive – Connect a removable hard drive to your PC (a small USB flash drive for example) and open the File Explorer. Select the files you want to move, click “Move to” in the Home tab at the top and select the external drive. Files will still be accessible as long as the drive is still connected.



4 Disable Unneeded Startup Programs

Now that you have removed any unwanted apps and software, it is time to check if any remaining apps are running unnecessarily at startup. Many software manufacturers will set their programs to start-up in the background when Windows 11 starts up. This helps the programs to open more quickly and makes sense for software you frequently use, but not for software you only use occasionally.

A quick way to see what software is running in the background is to look at the icons on the right side of the taskbar and open the hidden icons panel by clicking the small arrow. You can hover the mouse over icons to see what they are.





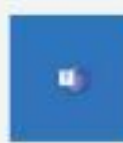
If you want to have a deeper look at which software initiates during startup, open Settings > Apps > Start-up. Here you will see a list of all startup apps, along with an estimation of their performance/speed impact and a slider to prevent each one from starting automatically.

Apps > Startup

Startup apps

Apps can be configured to start when you log in. In most cases, apps will start minimised or may only start a background task.

Sort by: Name ▾

	Cortana Microsoft Corporation	<input checked="" type="checkbox"/> On	Not measured
	ExpressVPN.NotificationServiceStarter ExpressVPN	<input type="checkbox"/> Off	No impact
	Intel Driver & Support Assistant Tray Intel	<input checked="" type="checkbox"/> On	Medium impact
	Intel® Graphics Command Center S... INTEL CORP	<input checked="" type="checkbox"/> On	Not measured
	Microsoft Teams Microsoft	<input type="checkbox"/> Off	No impact

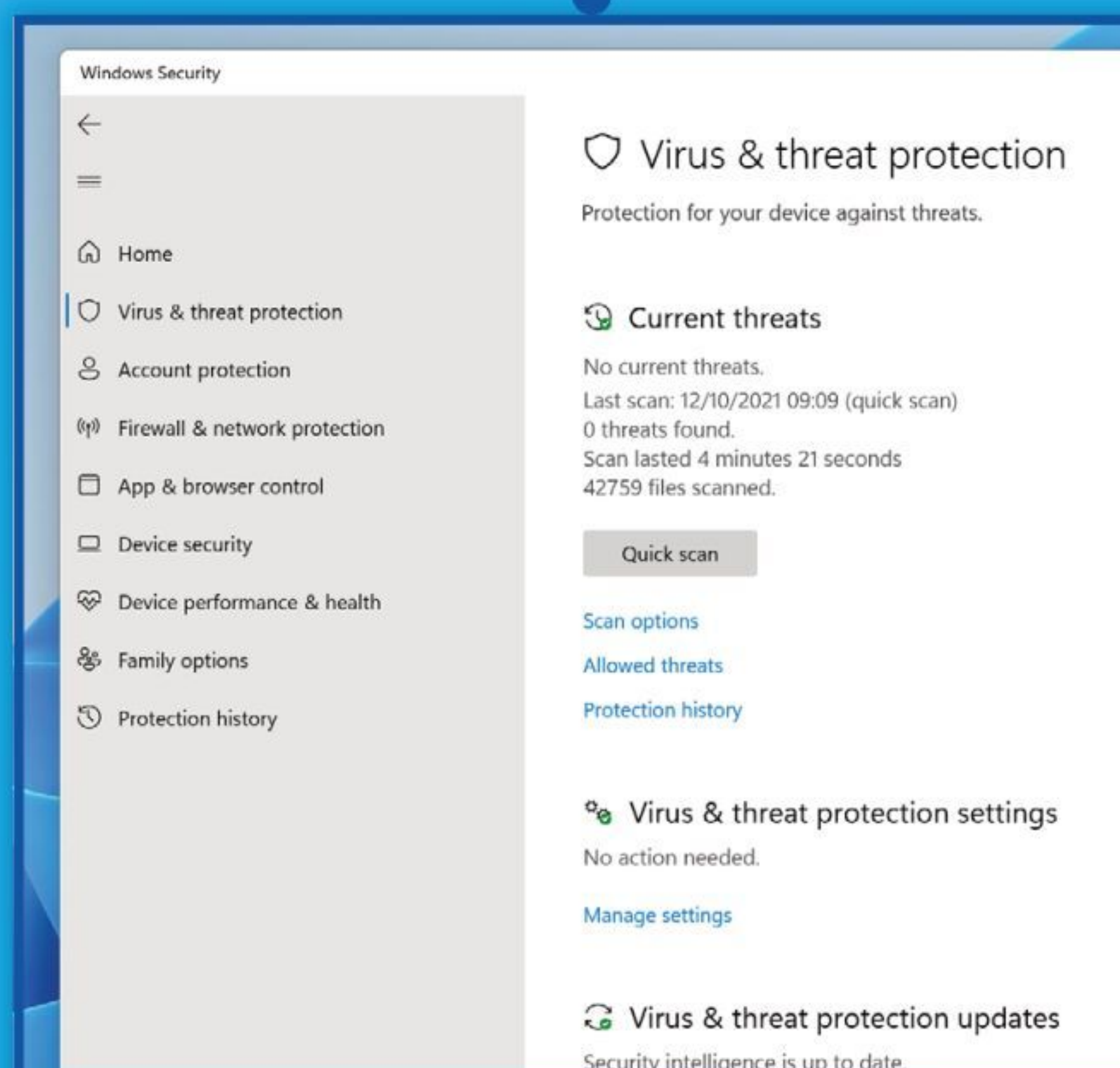
5 Scan for Viruses & Malware

Viruses, malware and other malicious software could cause your computer to run slowly or behave strangely. Things to look out for include: unexpected pop-up messages, programs that suddenly start or stop, or the sound of your hard disk constantly working.

To scan for and remove viruses, open Settings > Update & Security > Windows Security (previously Windows Defender) > Open Windows Security, click on "Virus Threats & Protection" and then click the "Quick Scan" button.



You can do a more advanced scan by clicking "Scan options" and choosing which you want to perform. If viruses or malware are found, you will be given options to quarantine and remove them.

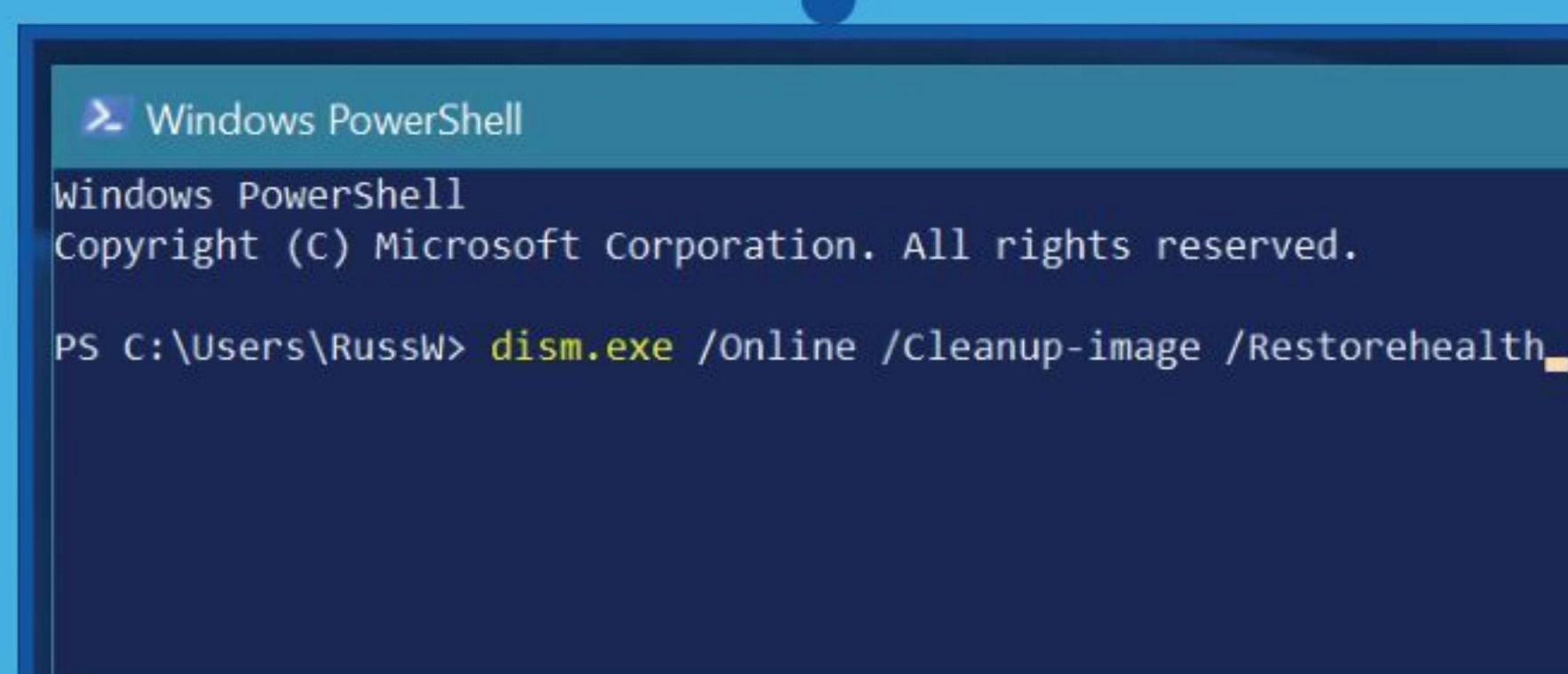


6 Check for Corrupted System Files

Occasionally, the core system files in Windows can become corrupted (for a variety of reasons) and cause performance problems. Windows 11 includes a tool: the Deployment Image Service and Management Tool, that will check for such files and automatically replace them, either with a cached version or by downloading a new version.

Use the DISM Tool – In the Search box in the taskbar, type "powershell". Right-click on "Windows Powershell" in the results and choose "Run as Administrator" from the menu.

At the Command prompt, that opens in the blue Powershell window, type "dism.exe /Online /Cleanup-image /Restorehealth" without the quotation marks (note the space between "dism.exe" and "/" and each switch (/)).



If the tool finds and replaces any corrupted files, restart your computer and check to see if it has helped with your current performance issues.



How to Reset or Fresh Start

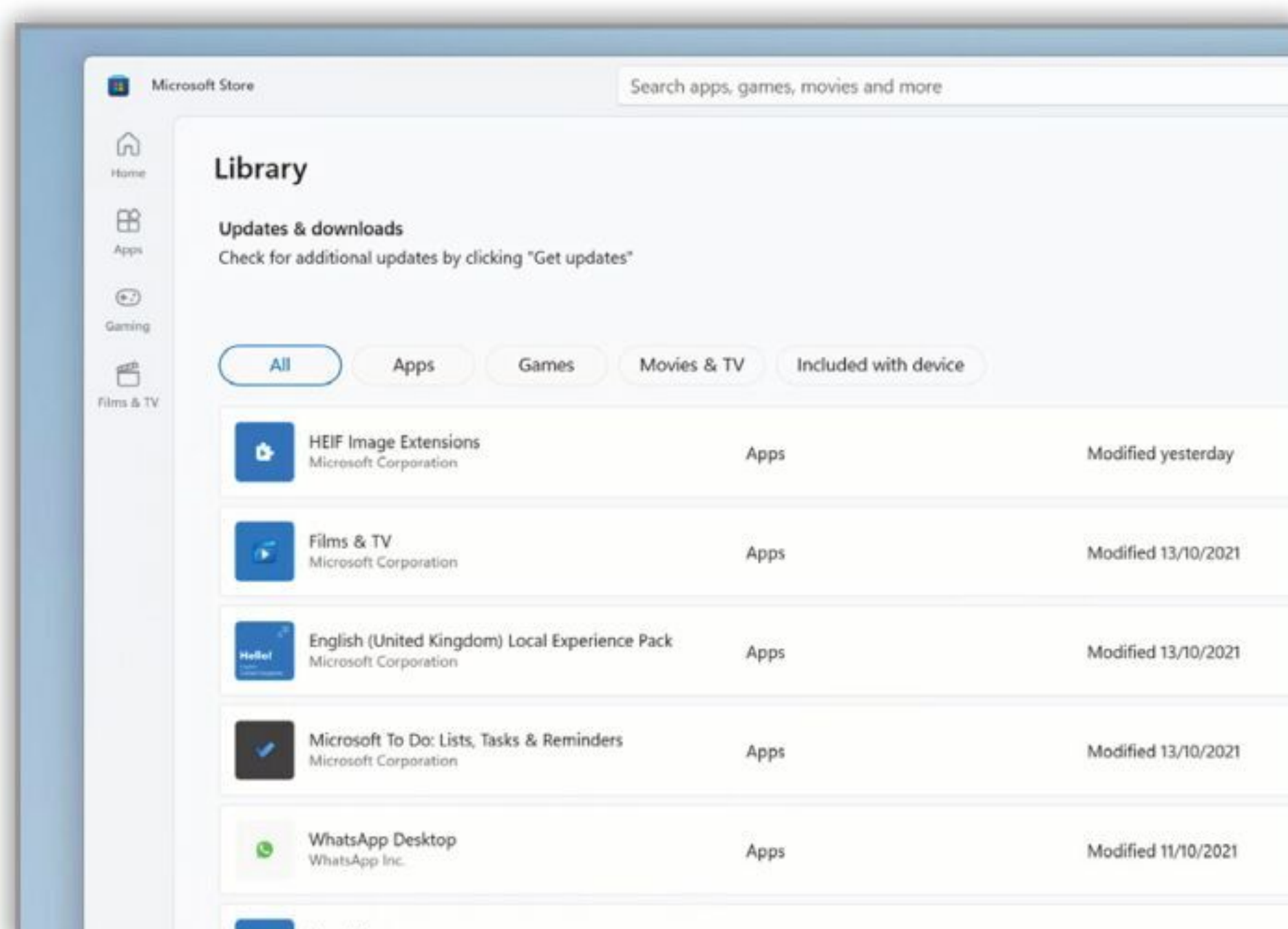
Resetting a PC reinstalls Windows, with a choice to delete your files, settings and apps, and main system files. Restoring will undo recent system changes, without deleting files. A Fresh Start completely removes all apps and reinstalls Windows.

Fresh or Reset?

Refreshing and resetting your Windows 11 PC are two very different things and you should always make sure you know which is the best choice to solve your current problem.

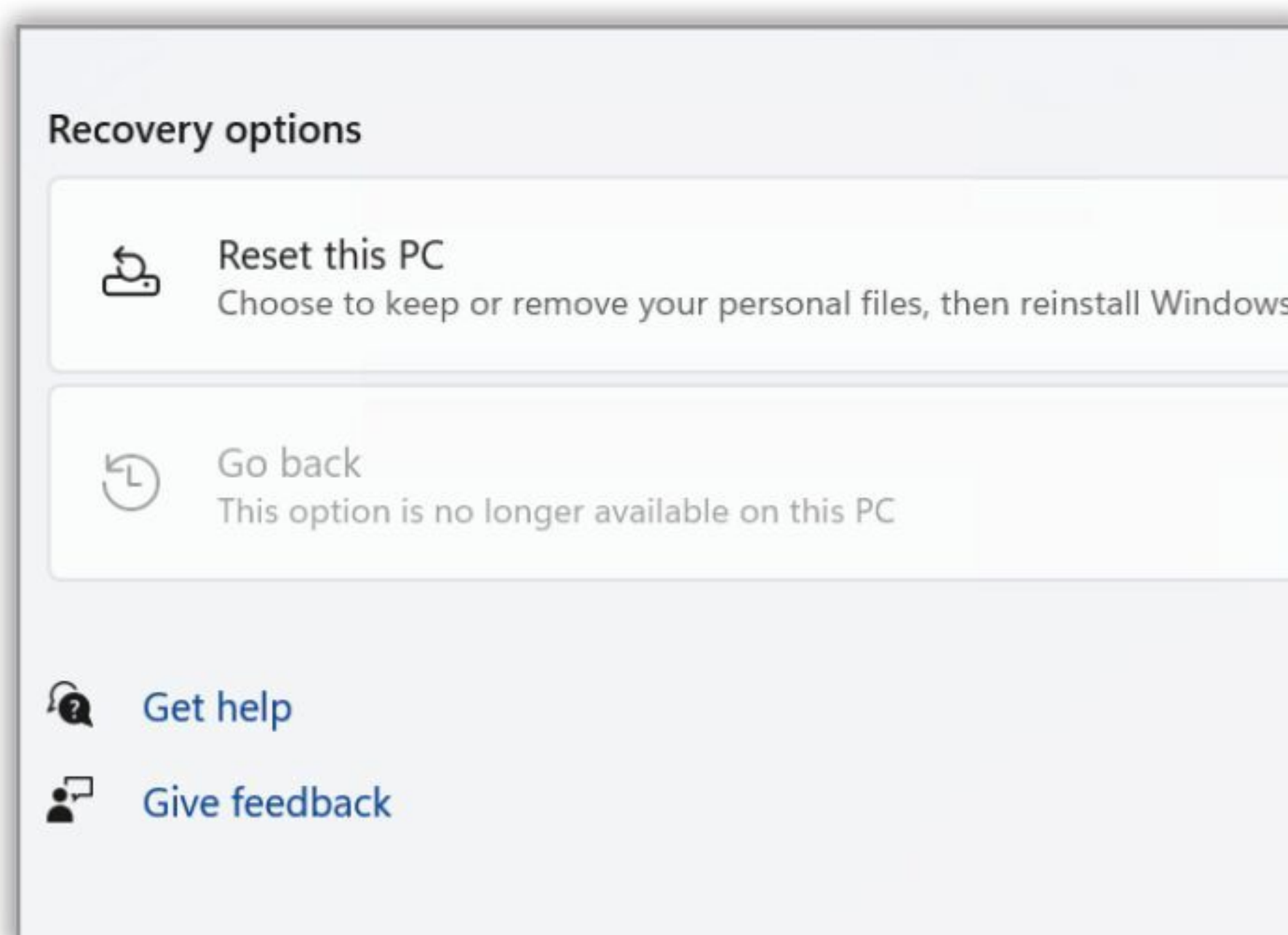
Step 1

If your PC isn't performing as well as it once did, and you don't know why, you can reset your PC without deleting any of your personal files or changing your settings. Apps or software not installed through the Store will be removed but Windows store apps will be reinstalled.



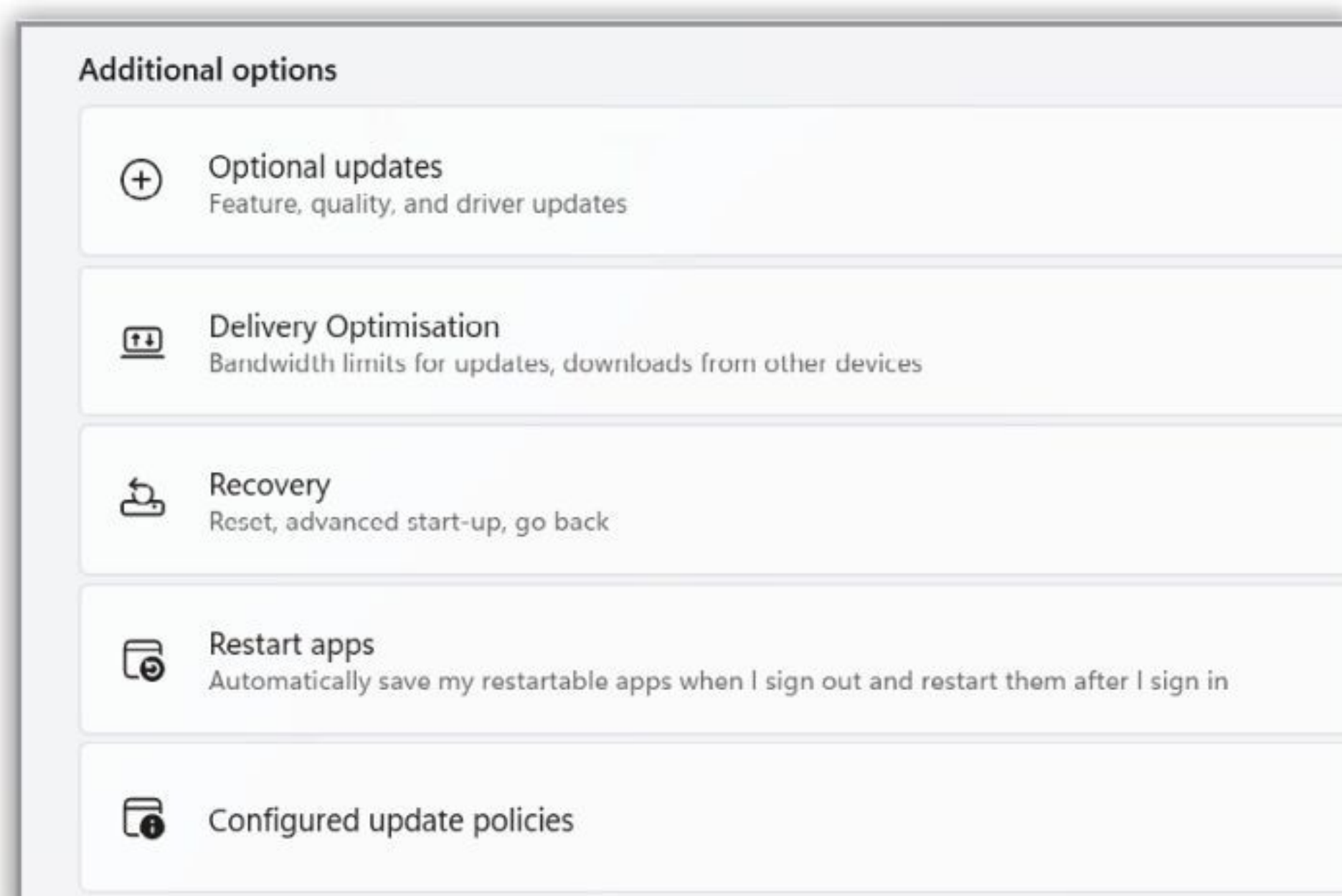
Step 3

In System > Recovery, click on 'Reset PC' button to begin the process. You will now need to choose whether to keep your files (just remove apps and settings), or remove everything. If you choose Remove everything, you will then need to choose whether to 'Remove and clean the drive'.



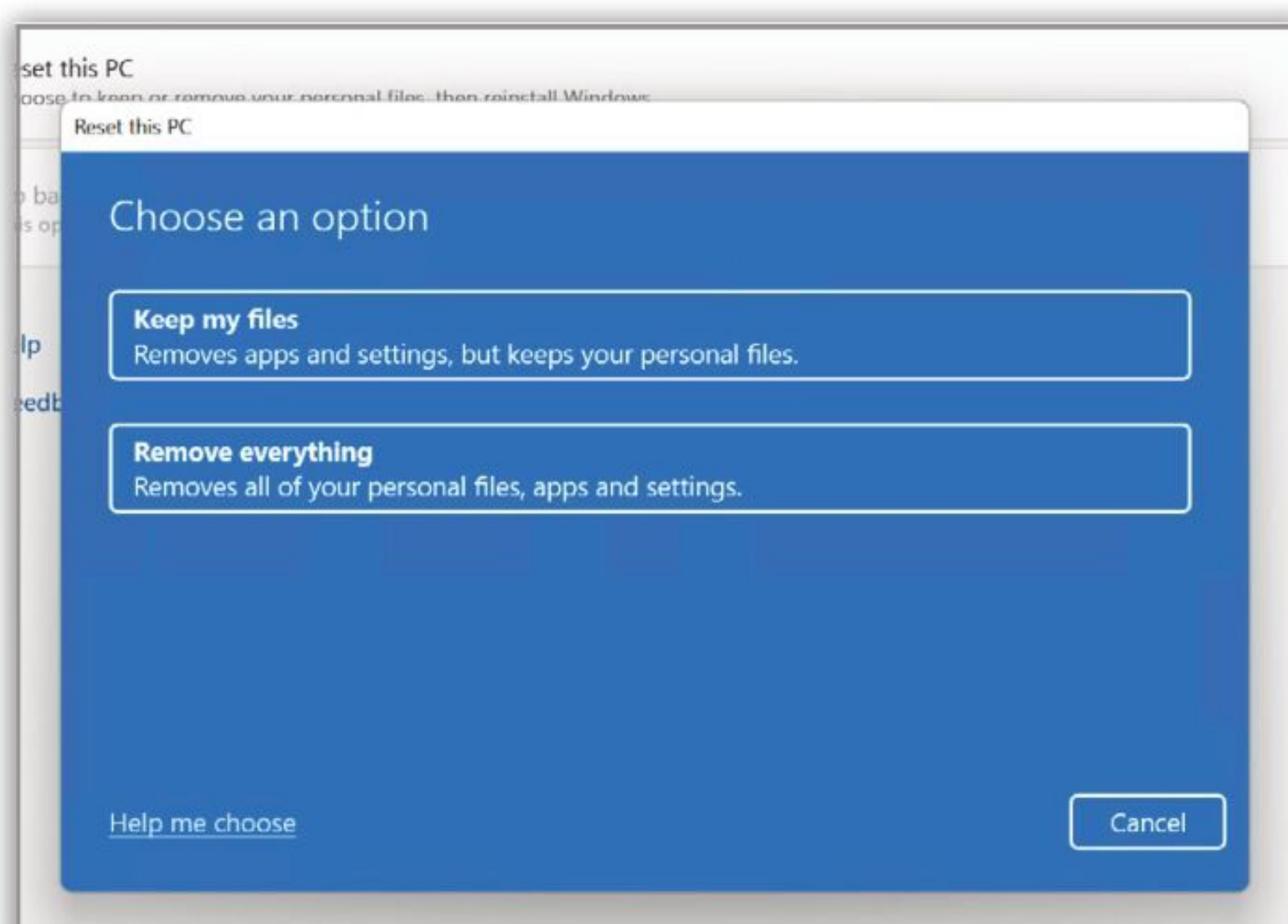
Step 2

Open the main Settings app and head into the Windows Update > Advanced Options section. Click on Recovery and you will see several options, including Reset this PC. If you can't get into Settings, you can access reset by restarting your computer while holding the Shift key; then select Troubleshoot > Reset.



Step 4

You will be warned that you won't be able to roll back to a previous version of Windows after the reset (old Windows files will be deleted). Click Next and then Reset when prompted. Windows will restart and take several minutes to reset itself. Click Continue when prompted.

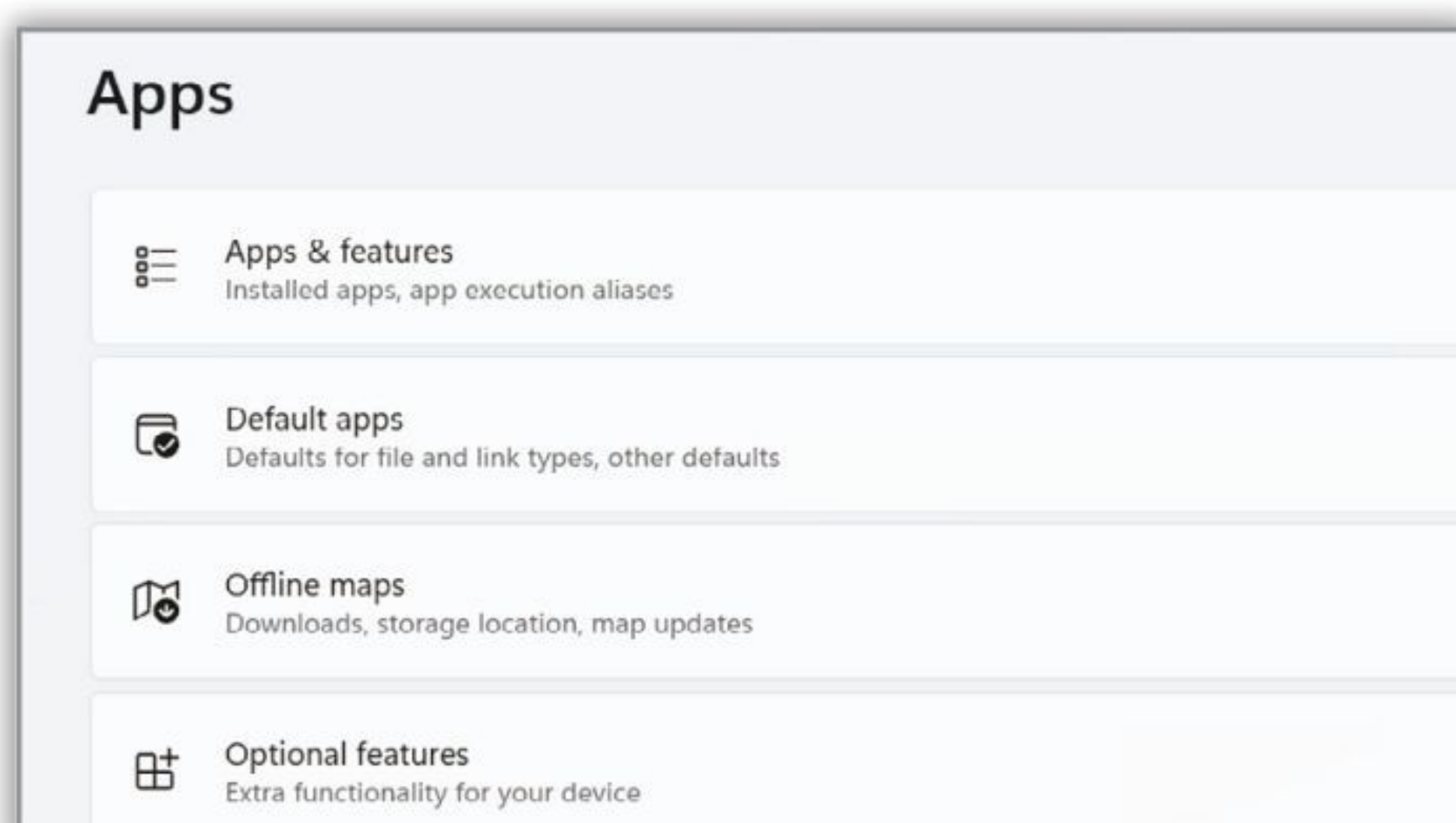


Perform a Fresh Start

Performing a Fresh Start allows you to do a clean reinstallation and update of Windows, while keeping your personal data and most Windows settings intact; an easier option than a full wipe and reinstall.

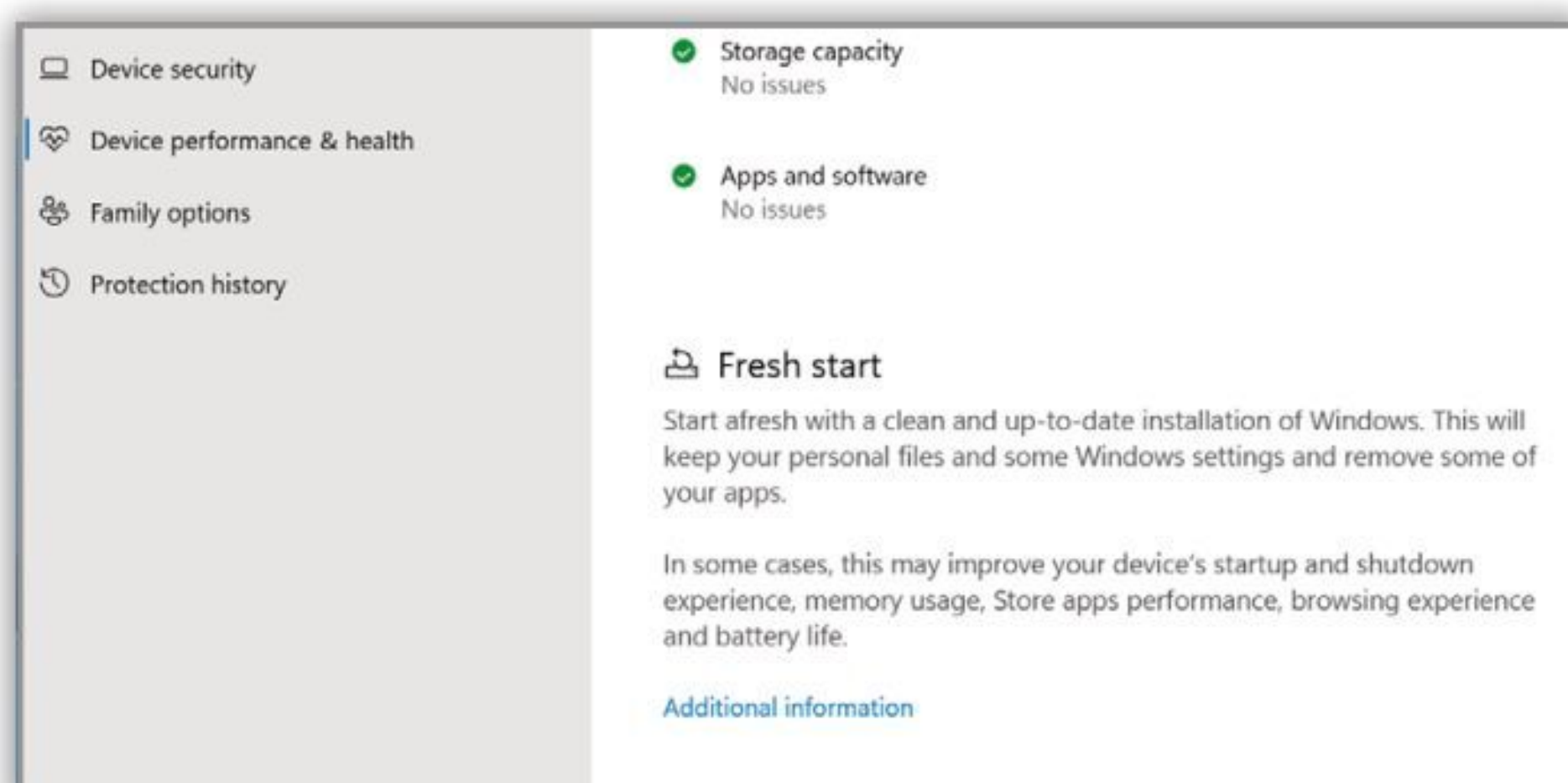
Step 1

Be aware that Fresh Start will remove most of your apps from your device, so you will have some reinstalling to do. In some cases, a clean installation may improve your device's start-up and shutdown experience, memory usage, Microsoft Store apps performance, browsing experience and battery life.



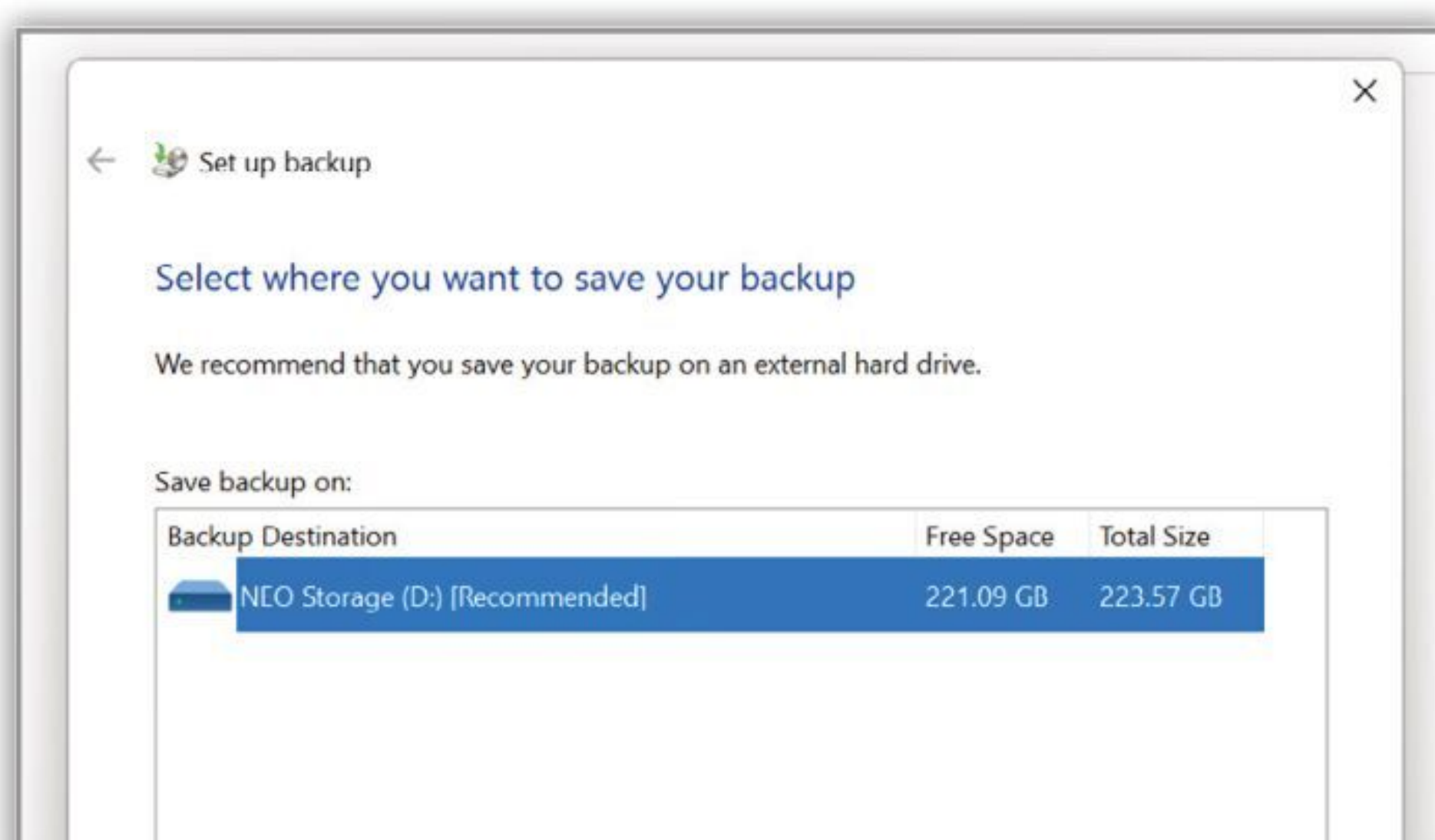
Step 2

To find the Fresh Start tool, open the Windows Defender tool (click on the shield icon in the taskbar), and then click on the Device Performance & Health section. You will need to click on Additional Info and then click Give your PC a Fresh Start. If Fresh Start has previously been performed, the date will be displayed here.



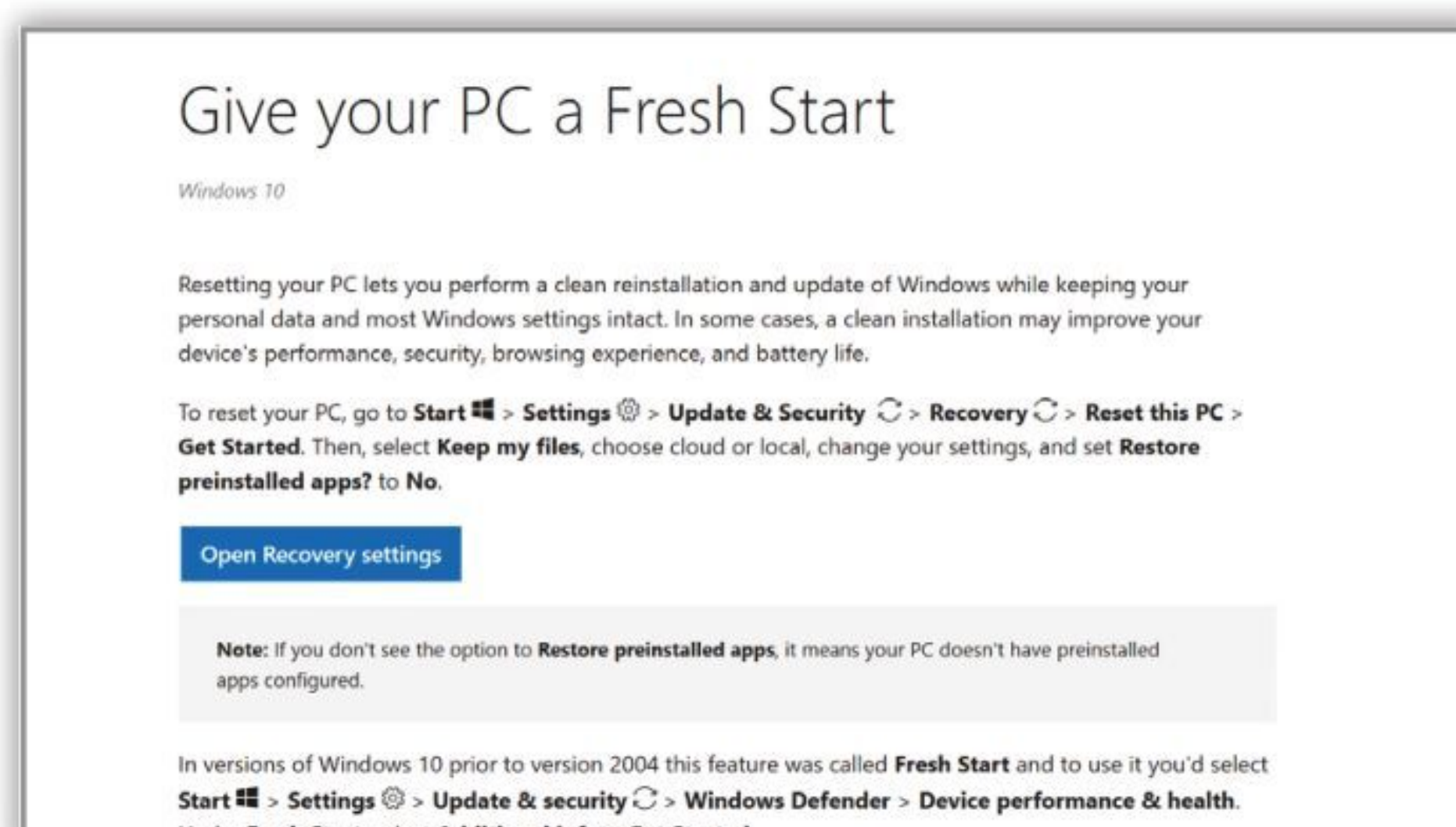
Step 3

Microsoft recommends that you back up your files before making changes like a clean installation of Windows to your device. Make sure that you have access to all reinstallation media (such as CDs), product keys, license or login information and other materials needed to manually reinstall apps.



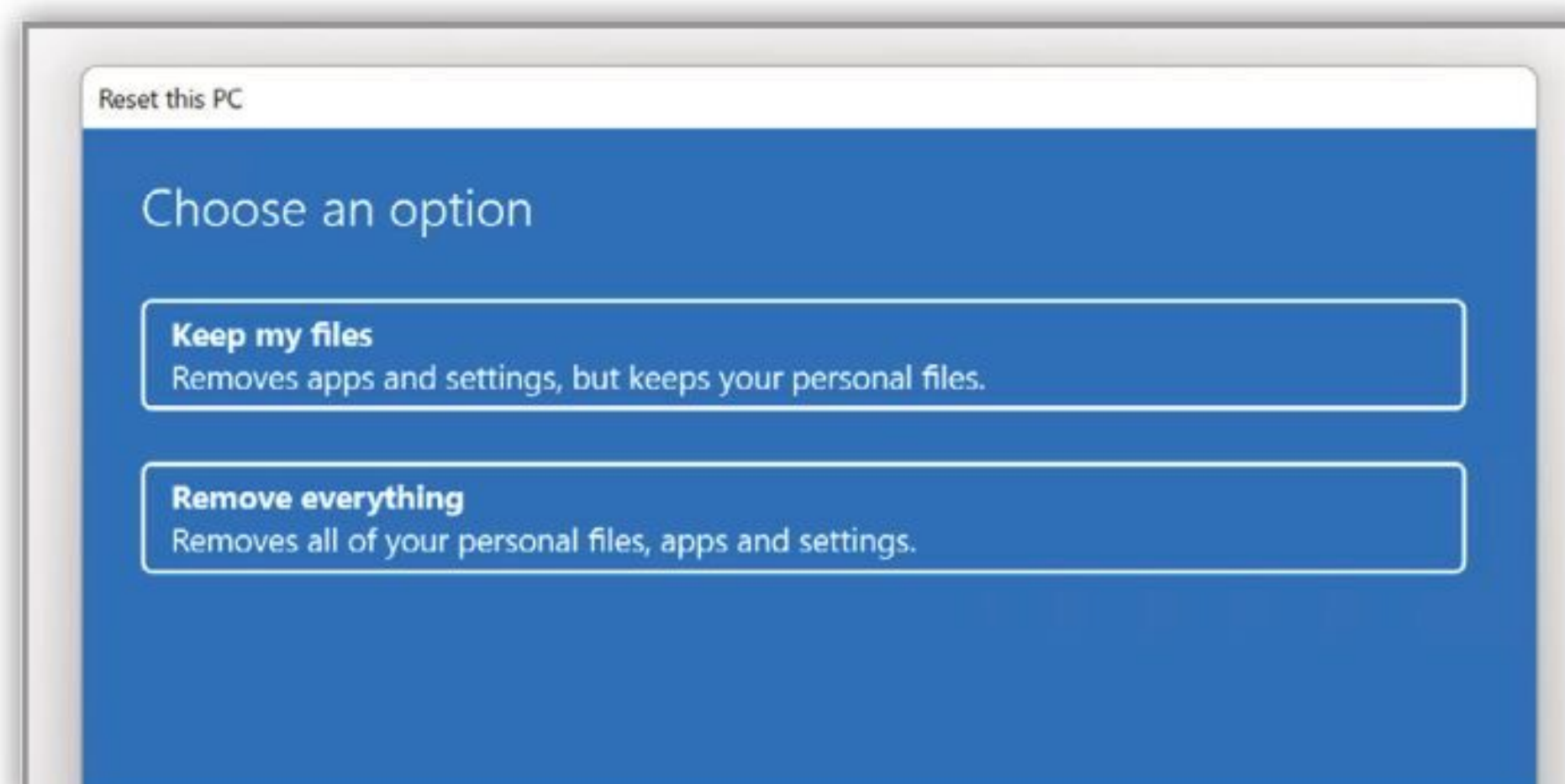
Step 4

Looking at the website that Windows 11 sends you to when you click on the Give your PC a Fresh Start link, there will be a blue Open Recovery Settings box. Click this, and you will automatically open the Recovery Settings section, or you can access it via System > Recovery.



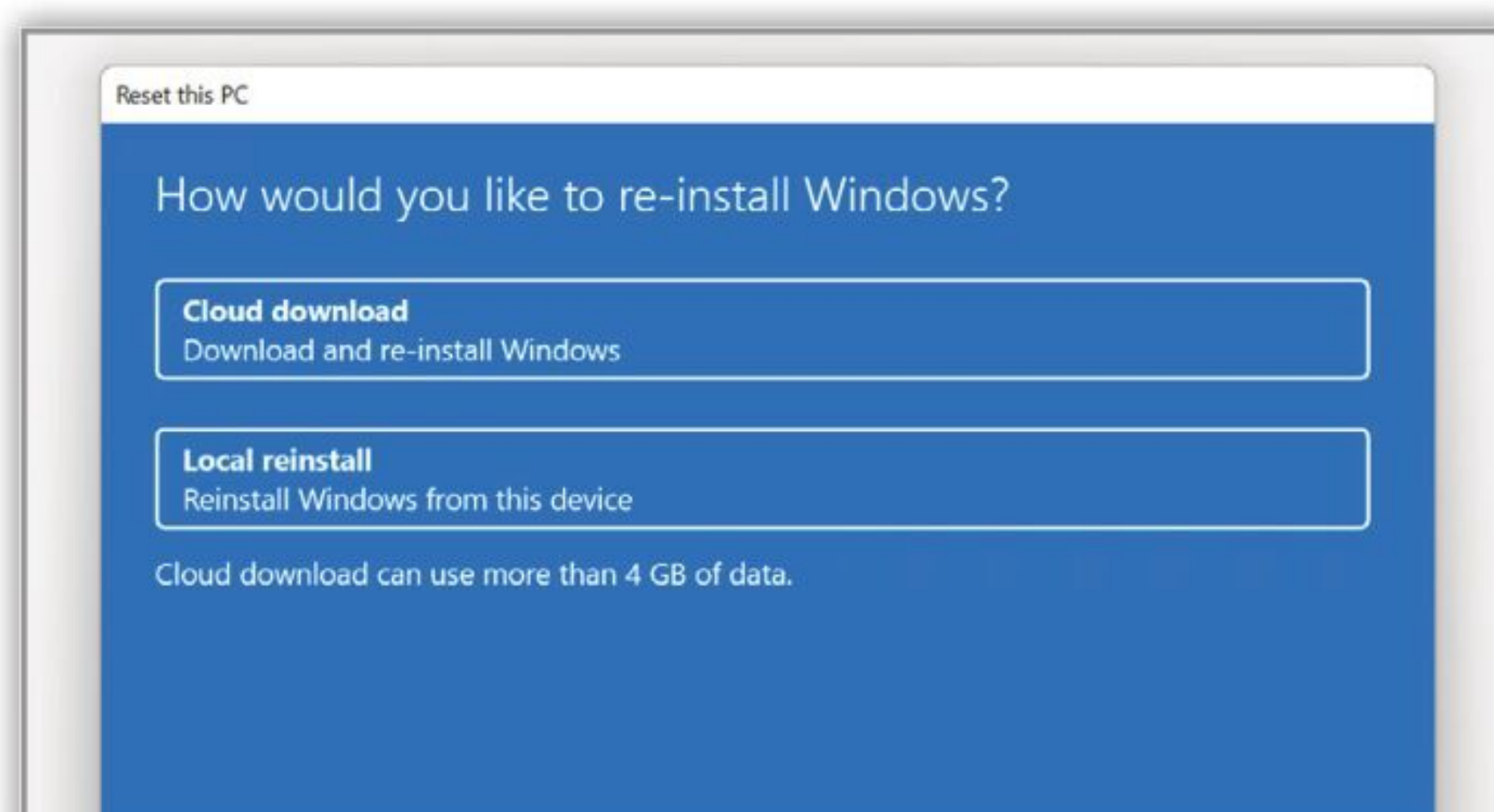
Step 5

As you can see, all roads lead back to the Recovery section in Windows 11. To perform a Fresh Start, you'll need to click the Reset PC button. This again brings up the option pop-up window. For a Fresh Start, you'll need to click the Remove Everything button. It's worth saying again: Ensure your data is backed up before doing this.



Step 6

You'll now have the option to download Windows 11 and re-install it using the Cloud (meaning you'll download it from the Microsoft servers), or as a local reinstallation (which means you'll have a physical copy of Windows 11 either on disk or as a USB). Whichever method you prefer, click the box and the process will begin.





Laptop Care and Maintenance Tips

Laptops are great! They are small, portable and can be easily put away when not in use. They are also increasingly powerful, although they still lag behind a good desktop system unless you pay huge sums of money for them. They are not, however, as robust as a desktop, so good care and maintenance is a must if you want your laptop to last.

Caring for Your Laptop

Some of these tips may seem obvious, and some might not apply to you, but even following a few of these suggestions will help keep your laptop in good shape.

1 Keep Food and Drink Away

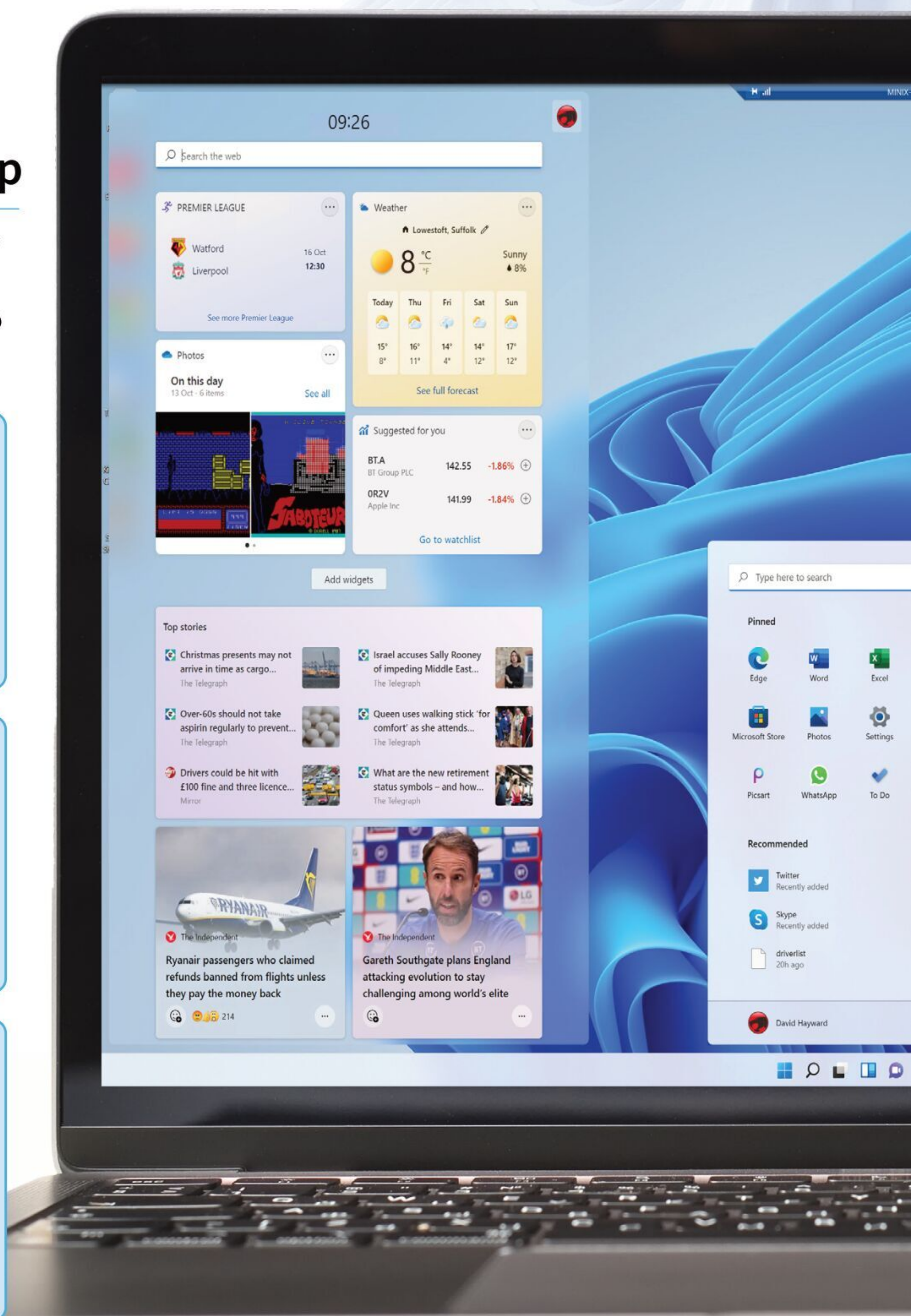
However careful you are when eating and drinking, if you do it while using your laptop it is inevitable that at some point, crumbs and splashes will hit the screen, keyboard, etc. Unlike a desktop, replacing a crumb-filled keyboard on a laptop is not just a case of buying a new one.

2 Wipe the Screen Carefully

Laptop screens are generally not as clear or bright as a desktop monitor screen, so keeping them clean is important. Use a lint-free cloth regularly to gently wipe away dust and dirt. If there are more stubborn marks, buy and use an LCD screen cleaner. These are cheap to buy online.

3 Clean the Keys and Ports Regularly

Laptop keyboards are hard to replace, so keep yours clean and free from dust. You can buy small USB keyboard vacuums fairly cheaply, and these can help keep dust from building up. You can also buy keyboard cleaner putty very cheaply online. The same rule applies to the various ports on your laptop.



4 Back Up

While not so much a hardware maintenance tip, it's always mentioning. No matter how much care you take, accidents happen. Maintaining your laptop will prevent most, but just in case something really bad happens, then it's best to ensure you have a good, working full backup of all your important data and work.

5 Don't Block Vents

Despite the name, few laptops are actually designed to be used on your lap (or on any soft surface). This is because the heat vents of many laptops are on the bottom, and soft surfaces will often block them. If it happens regularly, this can cause lasting heat damage to the laptop.

6 Buy a Laptop Stand

If your laptop sits in one place and is rarely moved around, consider buying a laptop stand. These not only help to give you a better screen viewing angle, but they also give the laptop vents some extra clearance and, therefore, better airflow. You can even buy stands with built-in cooling fans.

7 Don't Overcharge the Battery

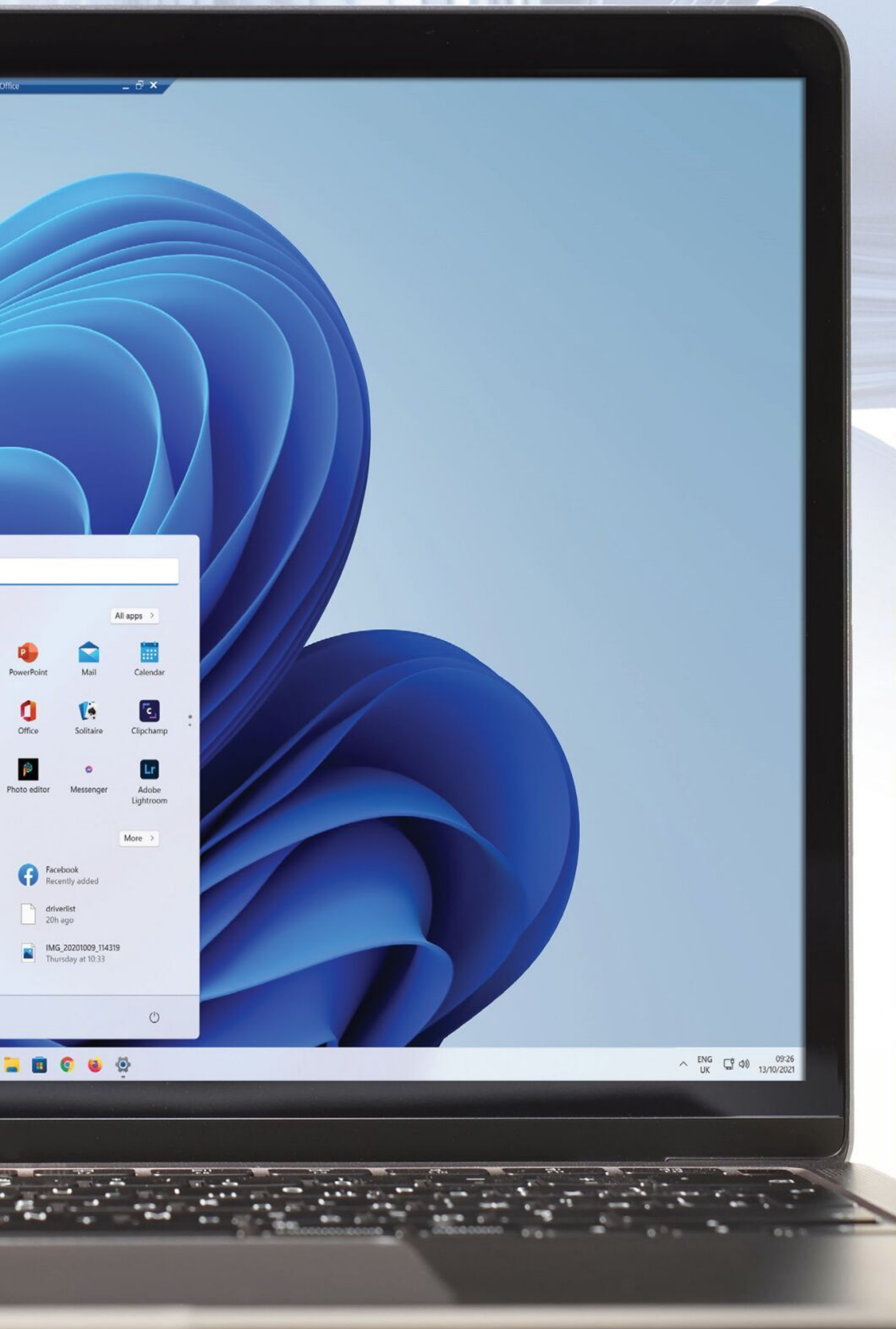
Try not to keep your laptop plugged into the mains all the time. Charge it, and then use the battery power until you need to charge it again. This helps to keep the battery in good condition. If you only ever use your laptop at home on a desk, keep it plugged in, but remove the battery.

8 Close the Lid

When you have finished using your laptop for the day, close the lid. When you are moving your laptop, close the lid. When you leave your laptop for any length of time, close the lid. This not only protects the screen from accidental damage, but it will also help keep your laptop running between charges.

9 Buy a Good Laptop Bag

If you ever take your laptop with you out of the house, make sure buy and use a decent laptop bag. Go for one that is at least water resistant, if not waterproof, to protect your laptop from rain. Try to buy one that is padded, or even better, has a floating laptop "sling" for better impact protection.





Troubleshooting Windows Problems

Windows 10 includes some useful tools for checking on and solving problems but sometimes you need to look a bit further and deeper. Occasionally you just need to go back to basics. These tips will help you solve some common problems encountered in Windows 11.

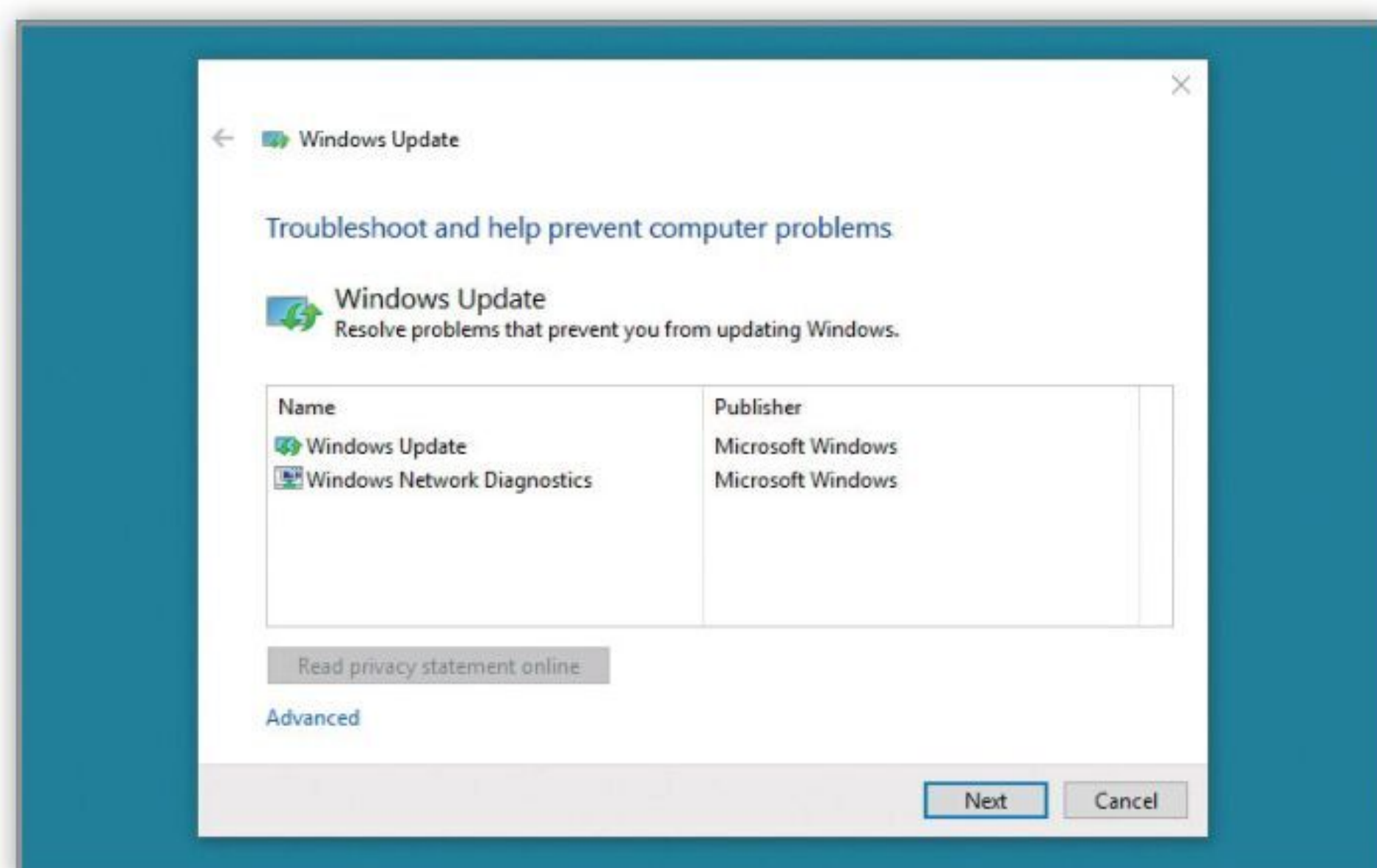
First Things to Check

If you're having problems with Windows Update, the Windows Update Troubleshooter might be able to automatically fix the problem. Go to Microsoft.com and search for Update Troubleshooter.

Windows Update Troubleshooter

Microsoft knows that things don't

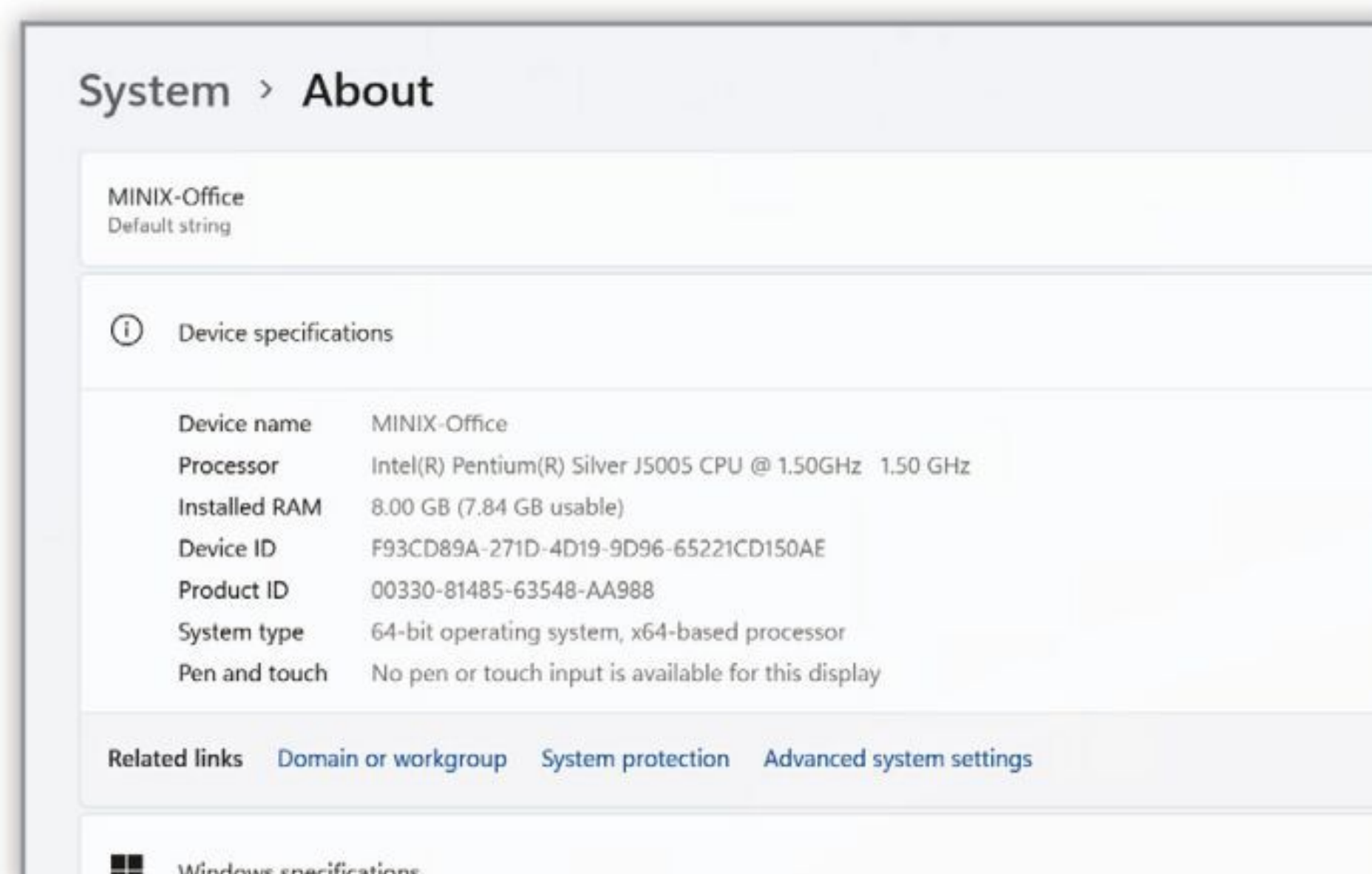
always go smoothly when updating and have provided a dedicated troubleshooting tool for use during this key task. If you're having problems with Windows Update, the Windows Update Troubleshooter might be able to automatically fix the problem. Go to Microsoft.com and search for Update Troubleshooter.



Checking System Spec

If you're having trouble installing or running a

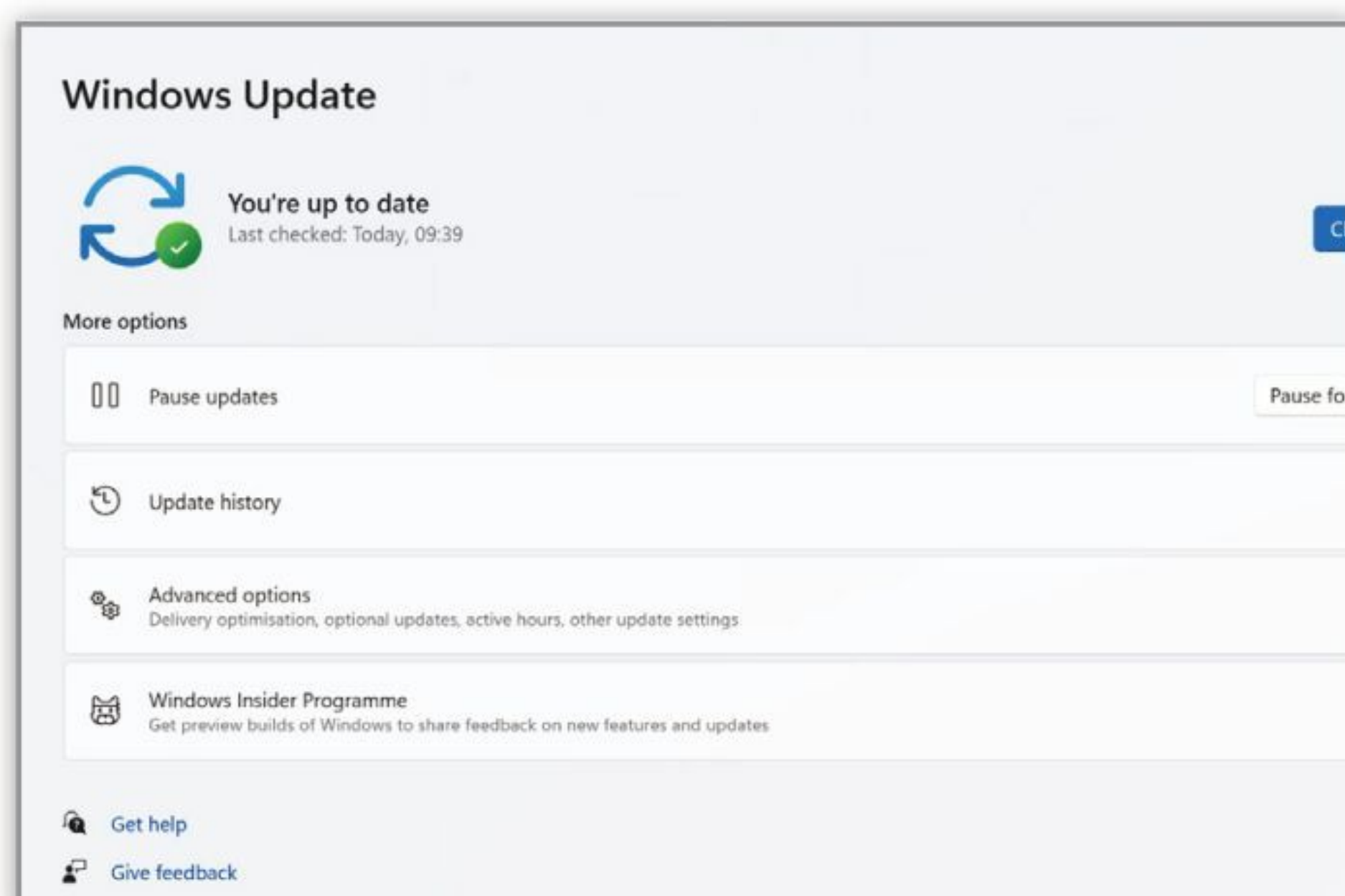
particular app or game, it may be that your PC hardware is not up to scratch. All commercial software will provide details of required and (sometimes) recommended specification needed to run it. You can check system spec at any time, just go to Control Panel and select System and Security, then System.



Check for Updates

Keeping your copy of Windows 11 up-to-date with the latest releases

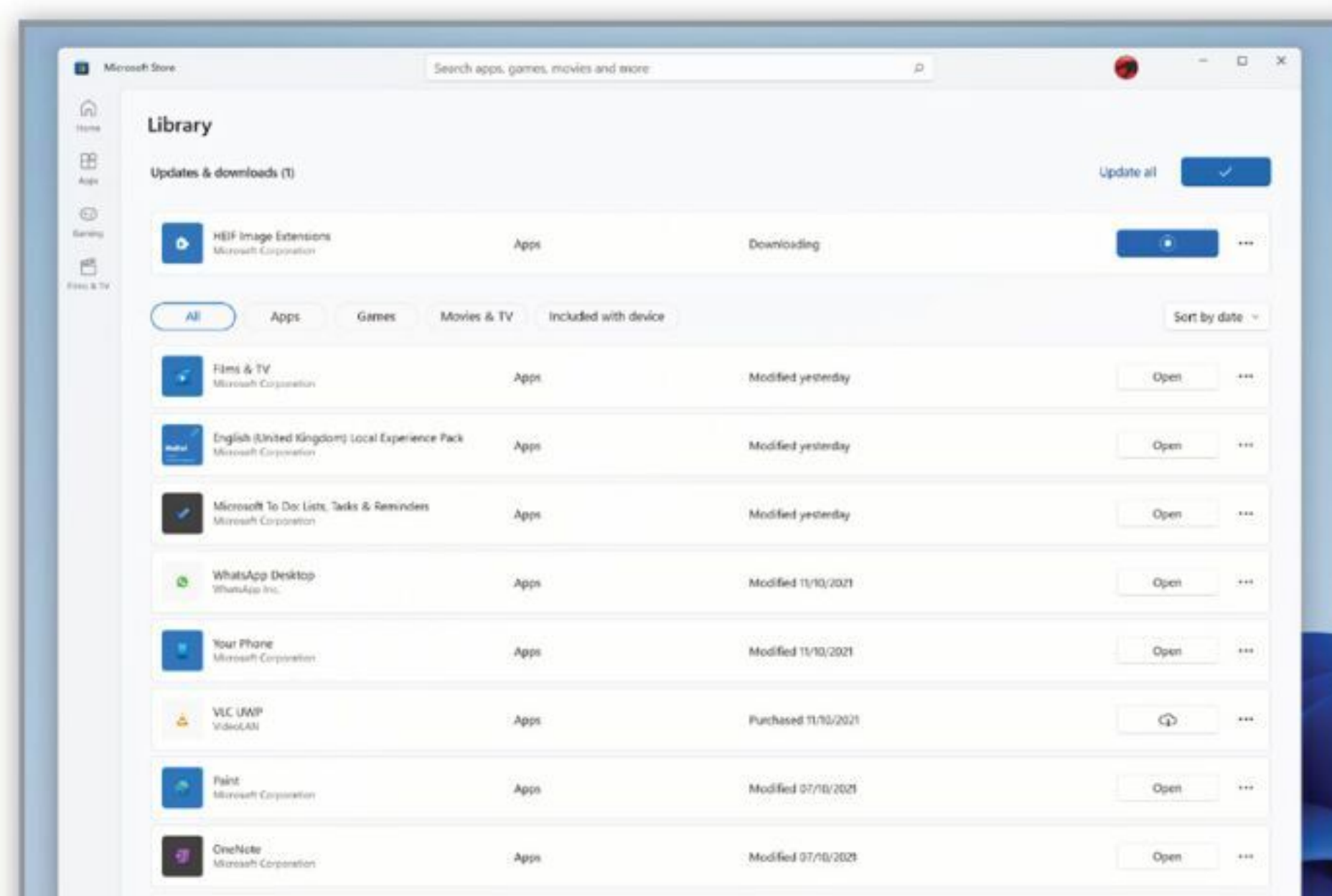
can really help to avoid problems before they happen. Press the Windows logo key and click Settings. Then choose Windows Update and then select Check for updates. Install any available updates and restart your PC if required.



App Updates

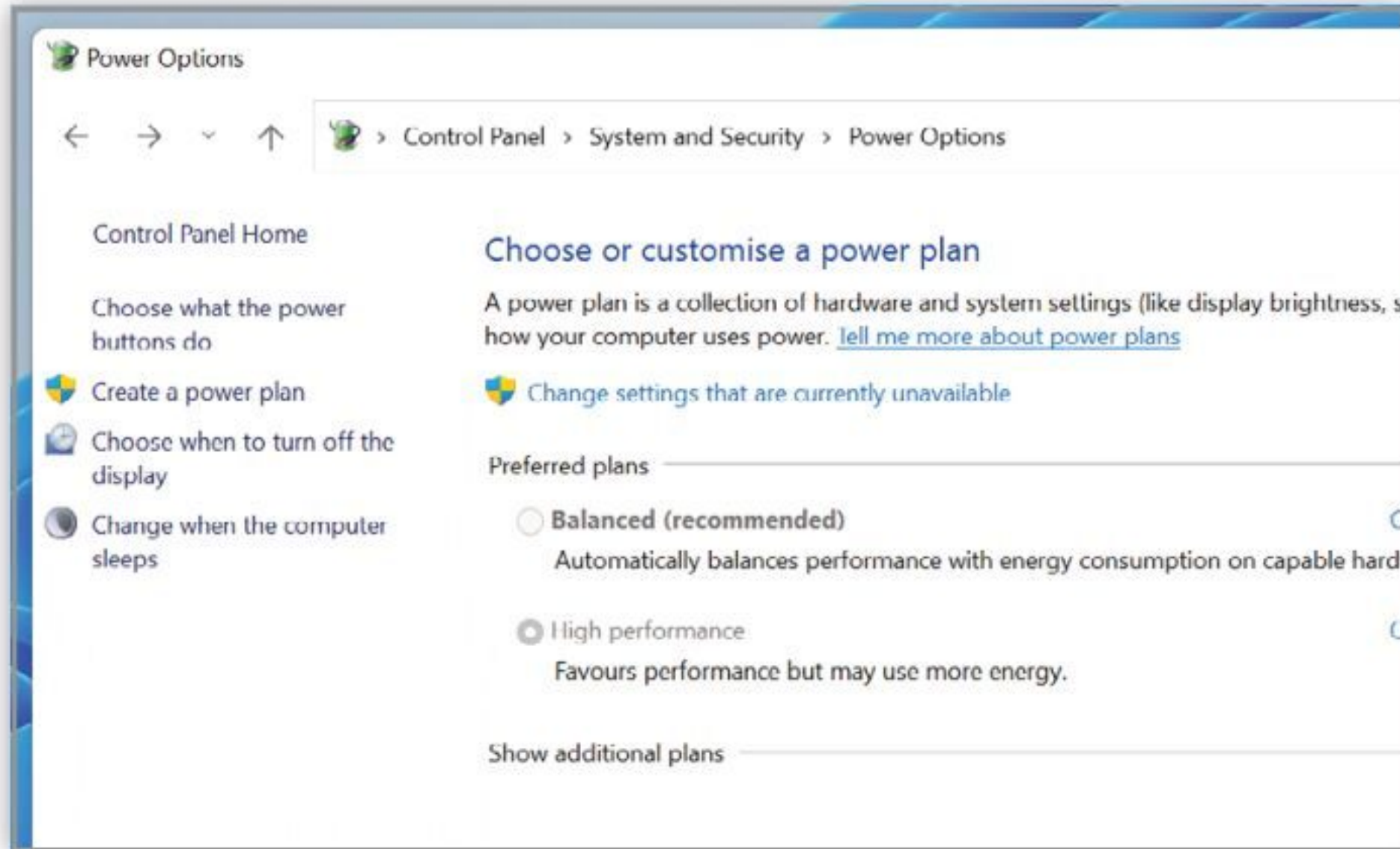
If an app or program isn't working with Windows 11, particularly after the

Anniversary update, try looking in the Windows Store for an update and if that doesn't work, delete and reinstall it. To check for available app updates on the store, click the user icon next to the search bar and select Downloads and Updates.



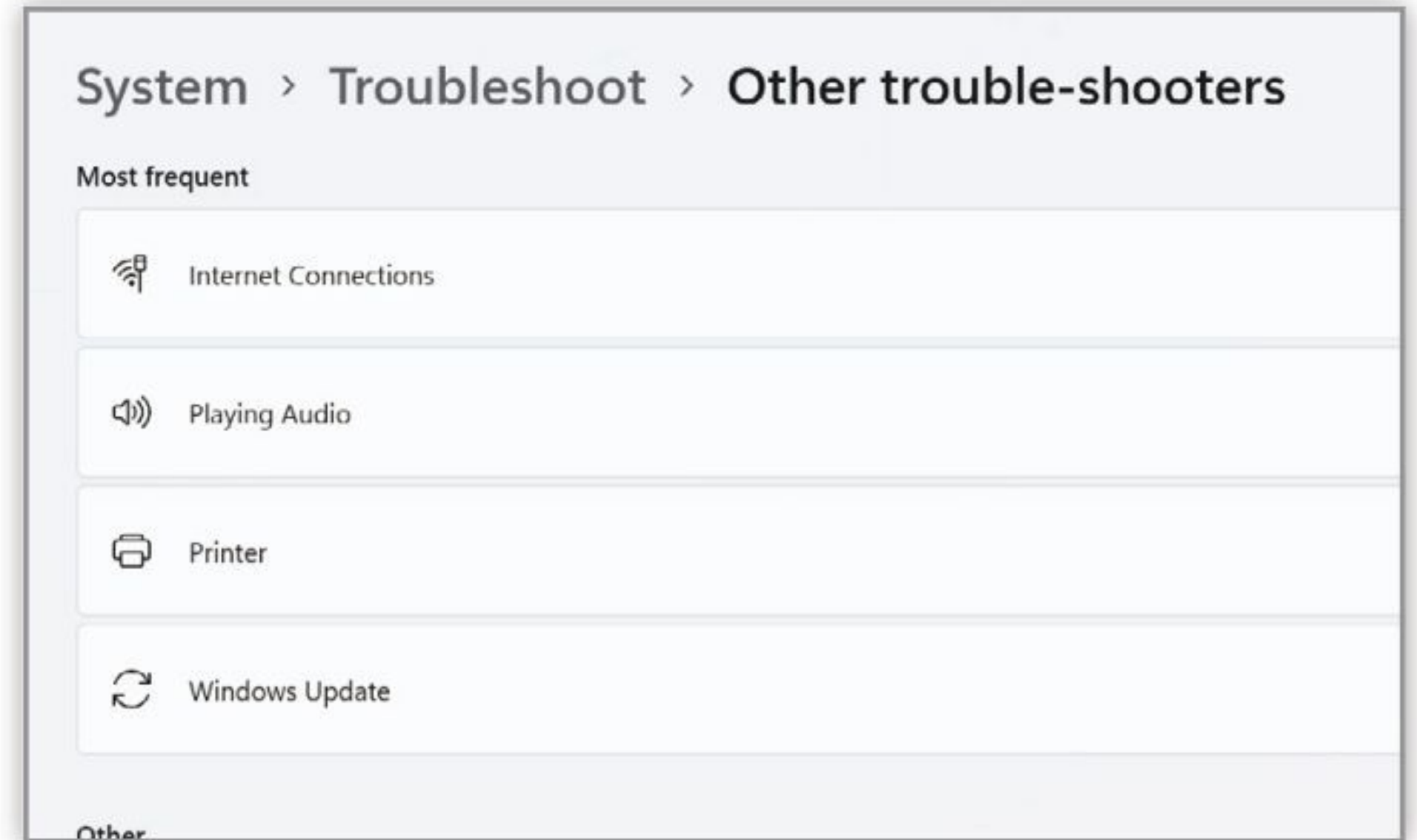
Slow Boot Fix

Like Windows 10 before it, Windows 11 uses a hybrid boot to enable fast boot times. It sounds great but can actually slow down boot for some users. Disable it by searching for Power Options in the Start menu and running the matching Control Panel applet, then in the settings click Choose to decide what the power buttons do.



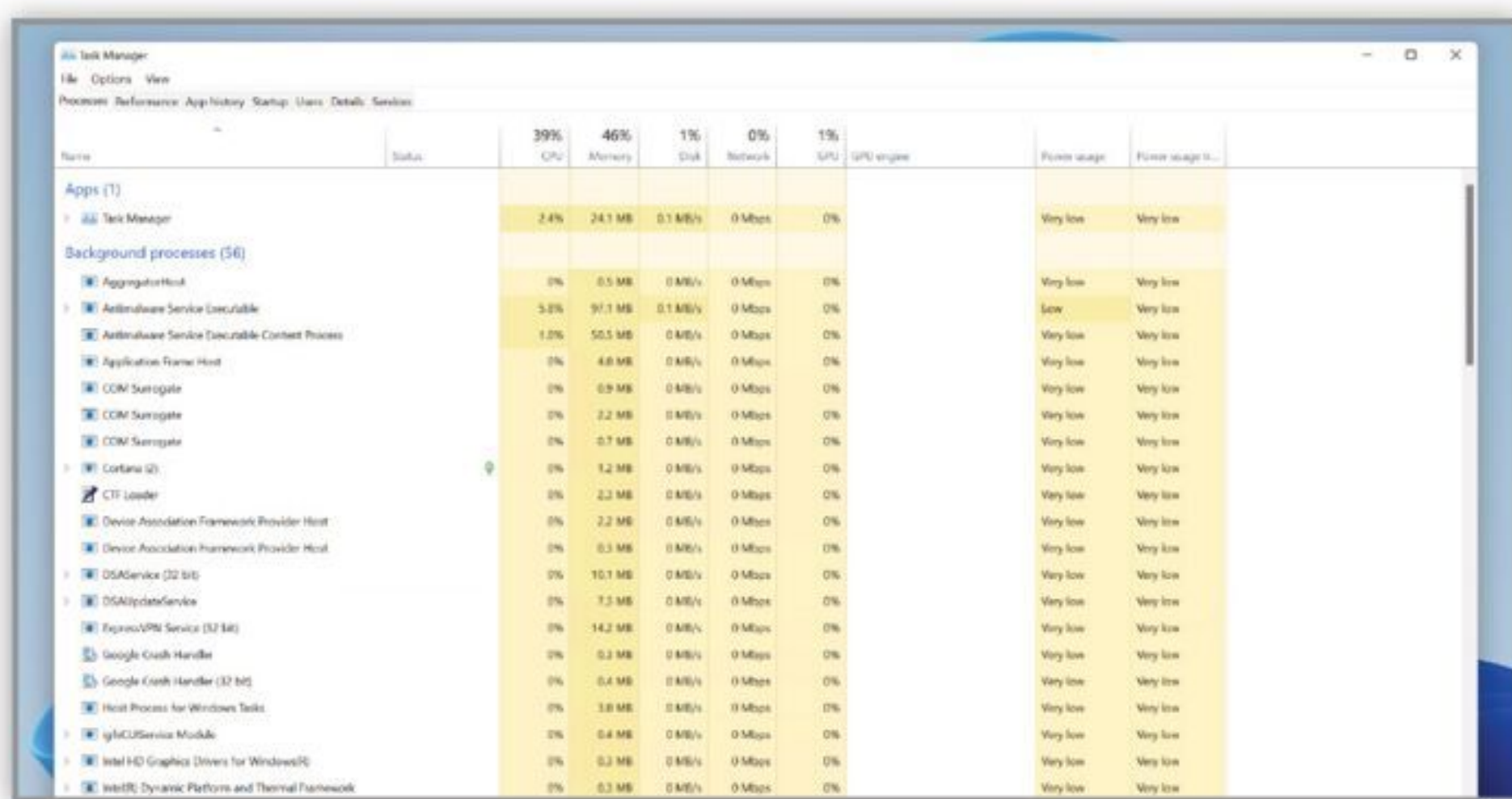
Check the Troubleshooters

Go to System > Troubleshoot > Other Troubleshooters. This is where you'll find troubleshooter tests that can be carried out for a wide range of Windows 11 components and situations. Everything from Internet connectivity to keyboard issues, power and video playback can be run from here.



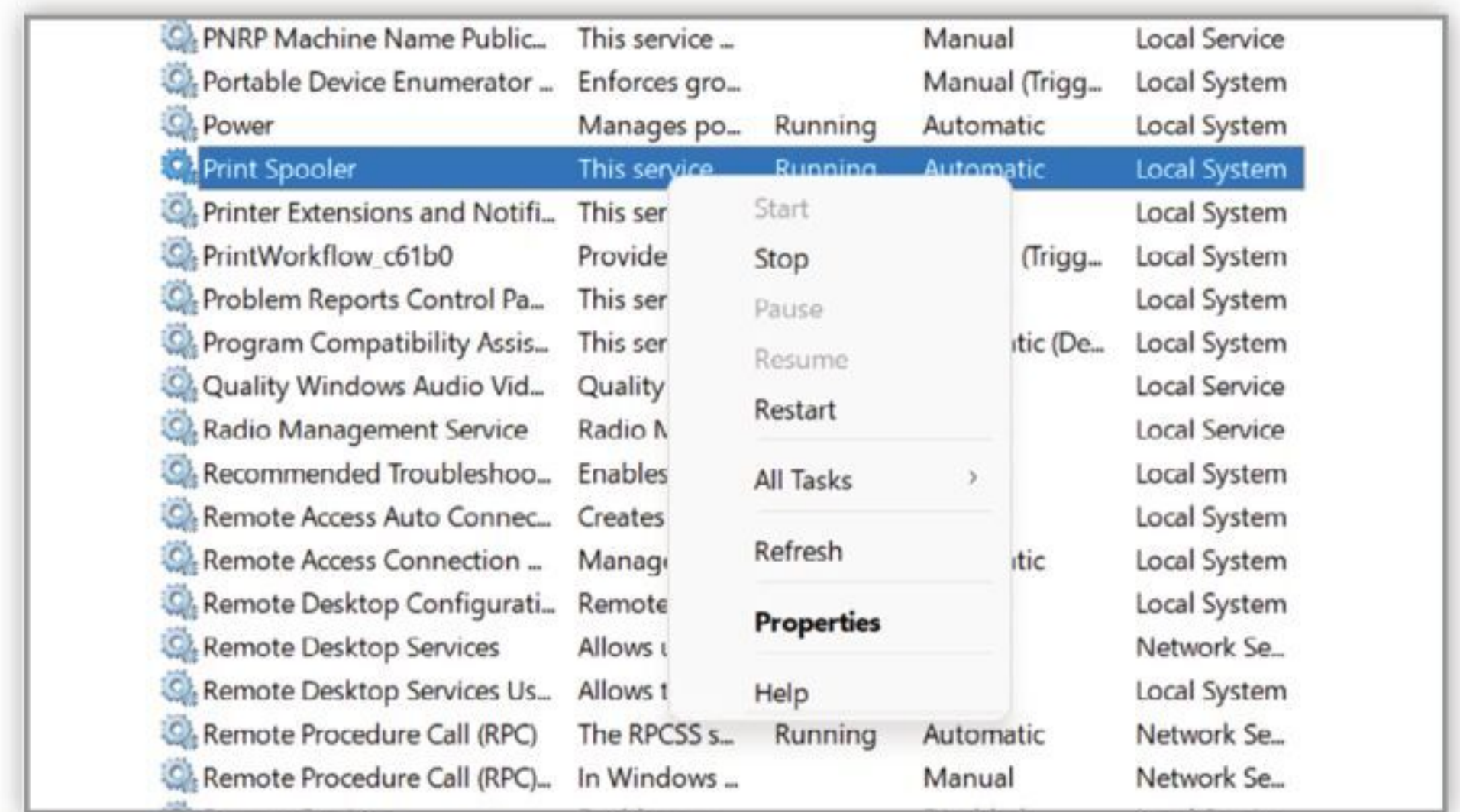
Non-Responsive PC

Windows 11 has a completely different shell than previous versions. The Explorer.exe process is still at its core but there are a few additional components as well. If you click the Start button and nothing happens or if the entire taskbar refuses to respond to an interaction, open Task Manager (press Ctrl+Shift+Esc), find Windows Explorer in the task list and click the Restart button.



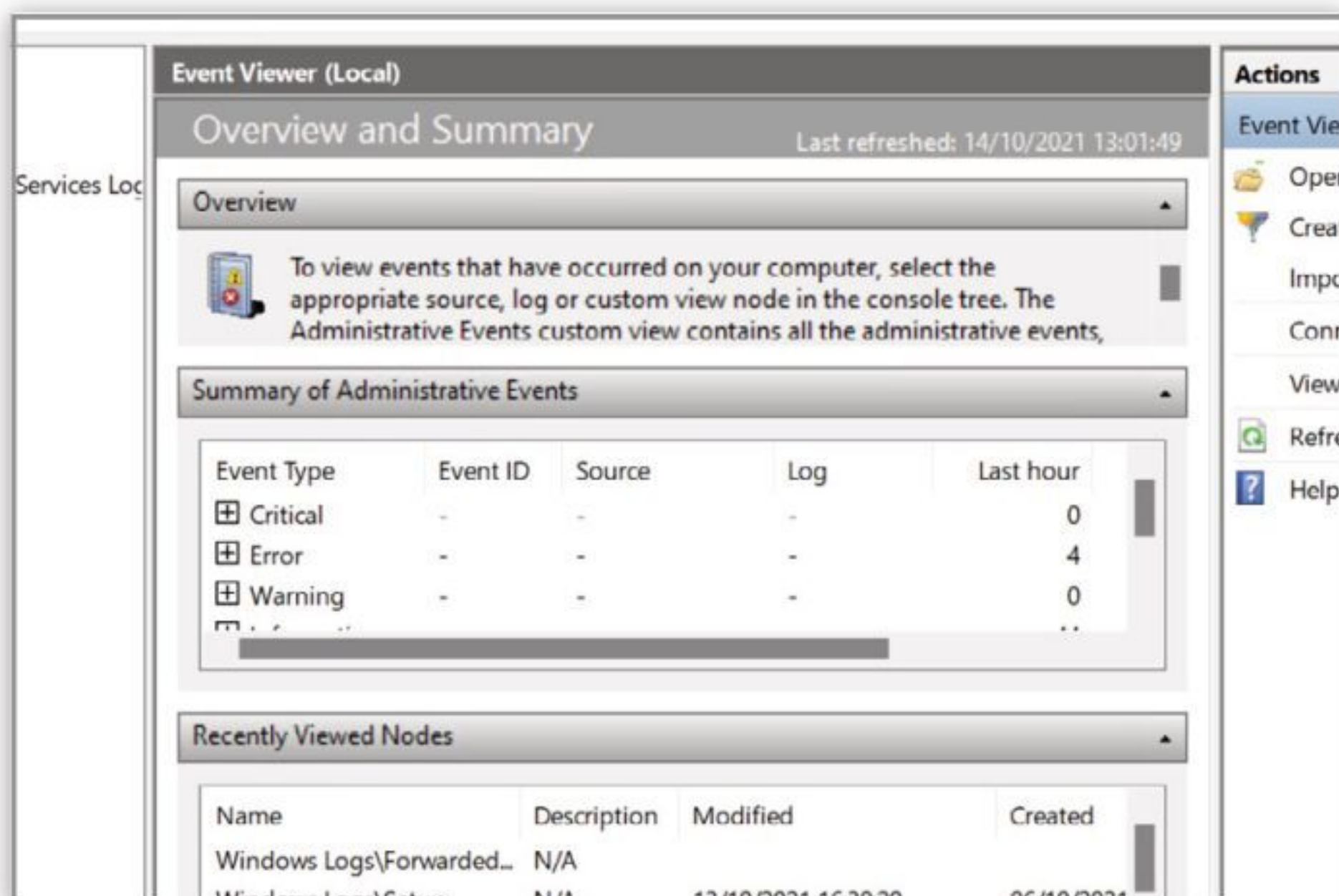
Restart Services

Often, a problem could simply be a Windows 11 service hasn't started, or failed to start. For example, a printer not printing may not be the fault of the printer, but the Print Spooler Service. Click the Start button, type 'services' and click to open the Services App. Find the service, right-click, then click Restart or Start.



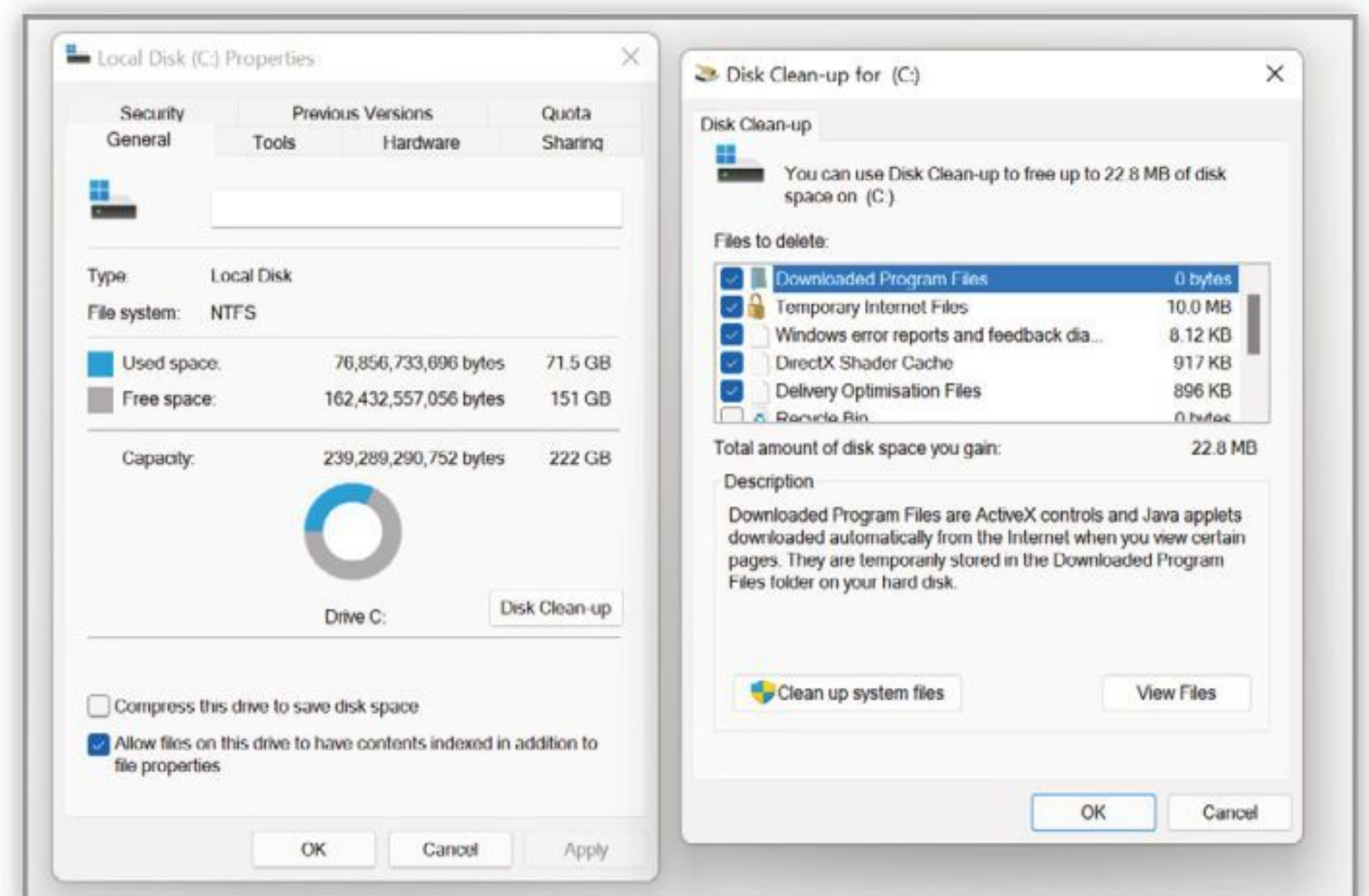
Check Event Logs

You can scrutinise the Windows 11 event logs to see if they reveal any more information regarding the problem you're having. Right-click the Windows Start button, and select Event Viewer from the list. In here you'll find everything that's happened to your system since the day you turned it on.



Free Up Disk Space

There are times when a lack of available disk space can lead to an unresponsive, or slow PC. System > Storage is a good place to start, then follow the Clean-up Recommendations. Also, right-click the C:\ drive in File Explorer, select Properties > Disk Clean-up. Finally, also check Clean up Systems Files in the same window.





Troubleshooting Your Wi-Fi Network

Wi-Fi is like electricity, you only notice it when it's not working. Then panic begins to set in. Thankfully, there's no need to, as most Wi-Fi issues can easily be fixed with a few simple tweaks here and there. Here's our top ten troubleshooting tips for your wireless network.

Slow or No Access in Some Rooms

There's a good chance that the room in question has become a bit of Wi-Fi dead zone. Load up a network analyser and check the signal output in the room in question. If needs be, reboot any network extenders and the router.



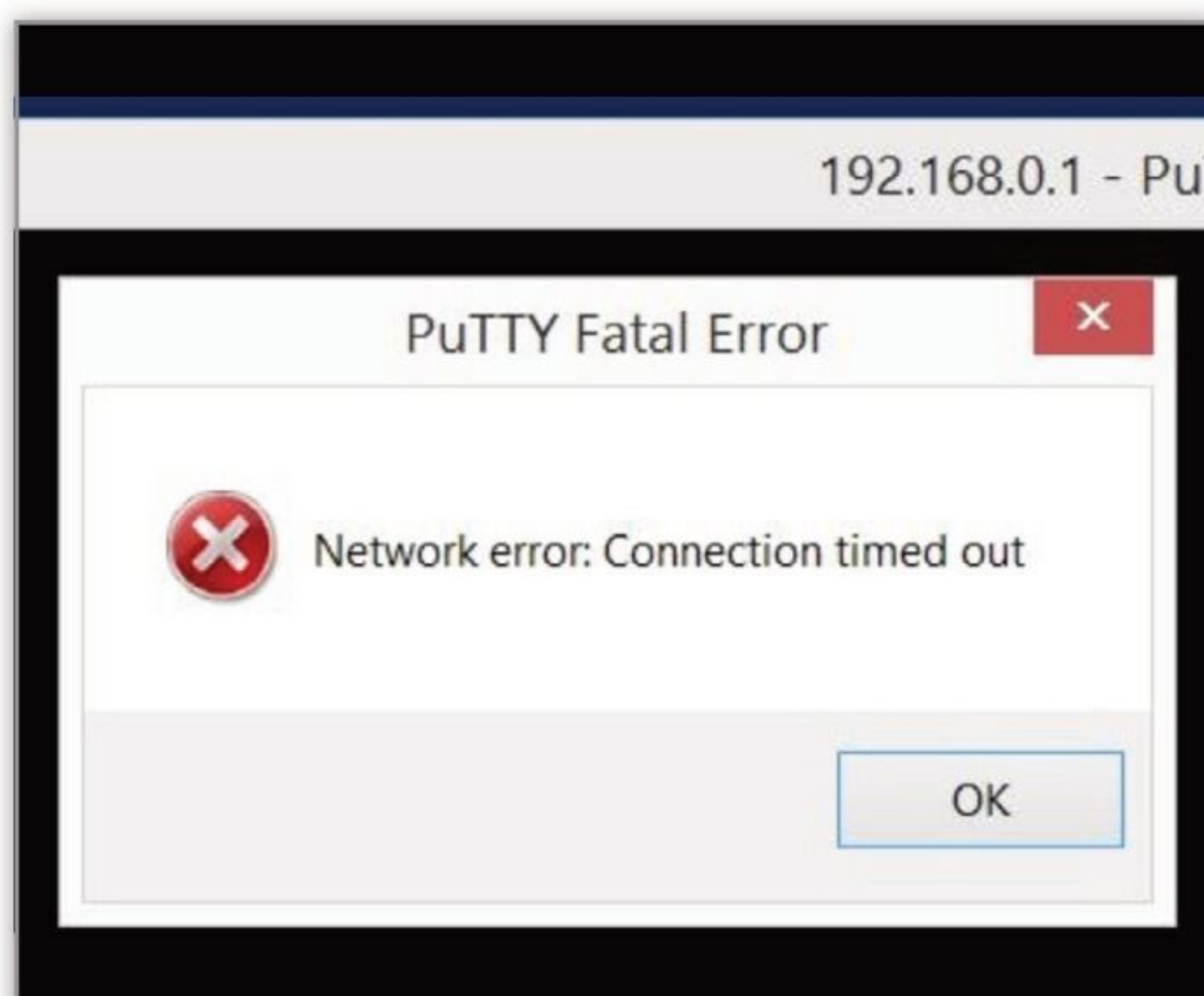
Slow Internet

This could be one of two things: a problem with the router and your network, or a problem with the ISP. Test the connection by directly plugging a device into the router's Ethernet ports. If the problem persists, then call your ISP. If it's okay, then turn off all your networking equipment and one-by-one power them up and keep testing to find the culprit.



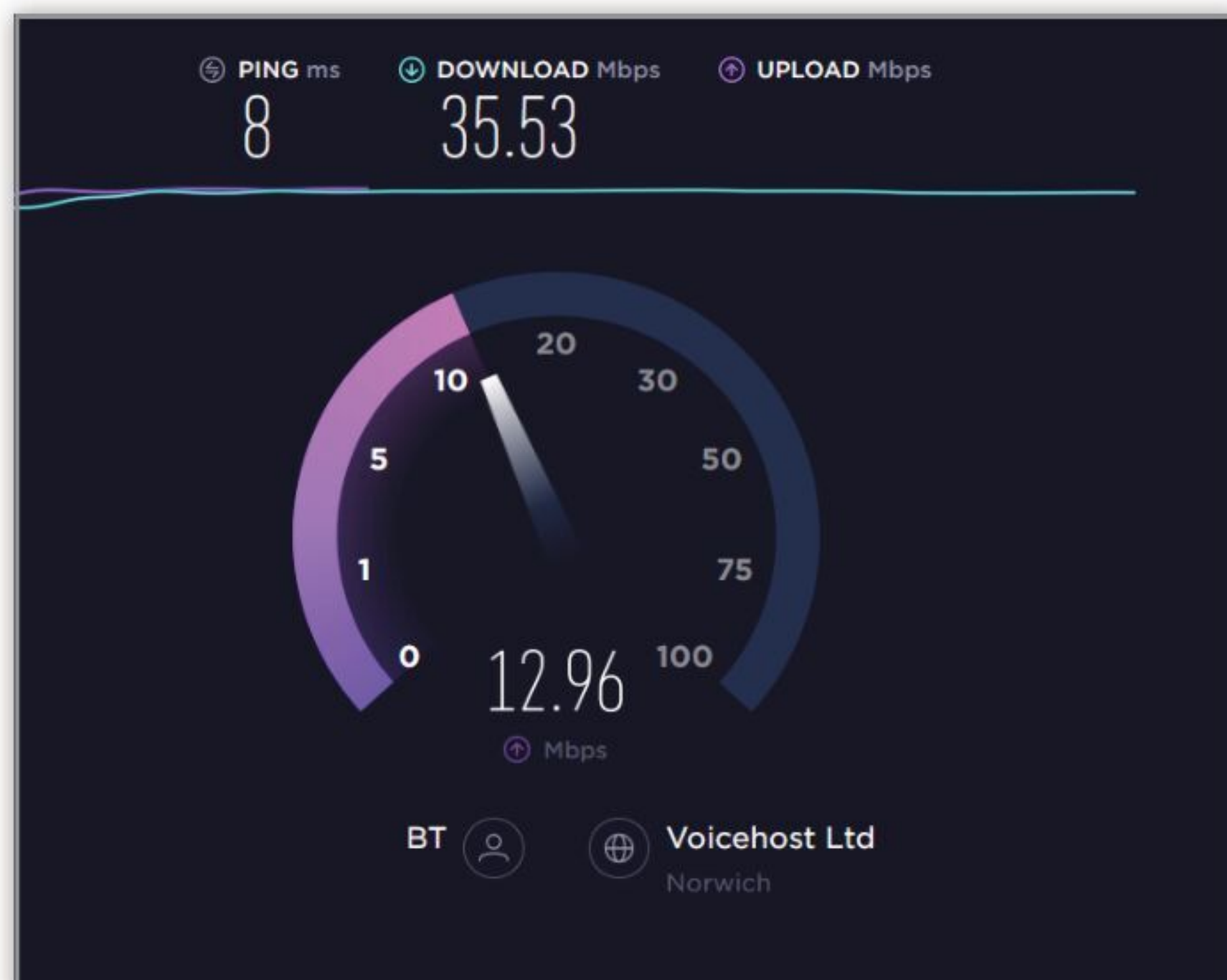
Refusal to Connect

Occasionally, there's a device that will refuse to establish a connection with your wireless network. First thing to try is a physical, Ethernet, connection (if it has one). If it works, try re-installing the Wi-Fi drivers on the device. If that's not possible, try another Wi-Fi network, it could be a problem with the device's Wi-Fi card.



Random Loss of Bandwidth

The first check is to establish a pattern. Does it happen when you power on something else in the house, if so, it could be causing interference with the signal. Does it happen when a certain device is connected? Check the device, as it could be downloading a huge file, or it could have some form of malware.



Unknown Device Discovered

If you maintain good network order, and you've just spotted an unknown device on your network, then you need to act quickly. If possible, drop the connection via the router's web interface, then change your access password. Check all devices for malware, ask other family members if they know who it could be. Worst case, change all passwords.



Forgot the Wi-Fi Password

If you've forgotten your Wi-Fi password, then you may need to factory reset the router. Use a paperclip and locate the tiny pin-hole (usually marked Reset). Poke the paperclip in for 30 seconds. Reboot the router. It should be reset back to its original settings and password.



Wi-Fi Has Completely Gone

If nothing is connecting to your Wi-Fi, then the problem is likely with your router. Check the router and, if you can access its web interface, check the access logs and check for any recent updates (an update from the ISP could have damaged it). If a reboot doesn't fix it, contact your ISP.



Overall Poor Signal

Providing your router is working well, check with a wireless device while standing next to the router. If it's okay, then the problem is likely poor signal spread. Try and reposition the router, don't put it in a cupboard, and see if that helps. If the signal is poor while next to it, there could be a problem. Try rebooting, otherwise contact your ISP.



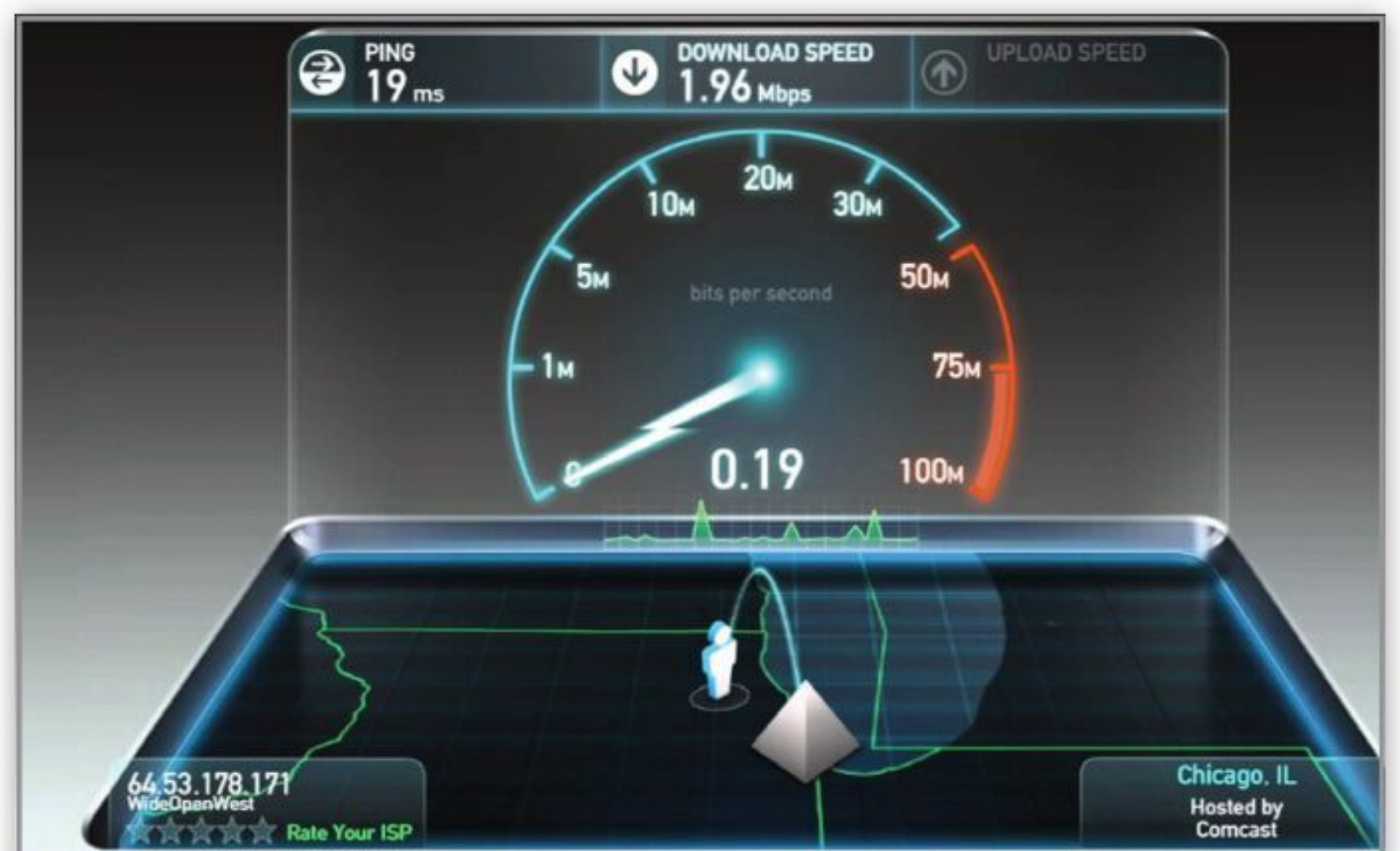
Everything Works, But No Internet

Check the indicator lights on the router, if the Internet LED is off, then reboot the router and wait for a connection. If the LED is on, but still no Internet, try installing a VPN and see if you can connect; it could be an issue with the ISP's DNS entries.



Speeds Aren't as Advertised

If your network extender or router isn't performing at the speeds it was advertised, try the following. Ensure that the router's configuration is setup for maximum signal strength. If it has external antennae, move them around to change the signal spread. Reboot the router and any Wi-Fi extenders. Reposition the router and extenders for better signal through walls etc.



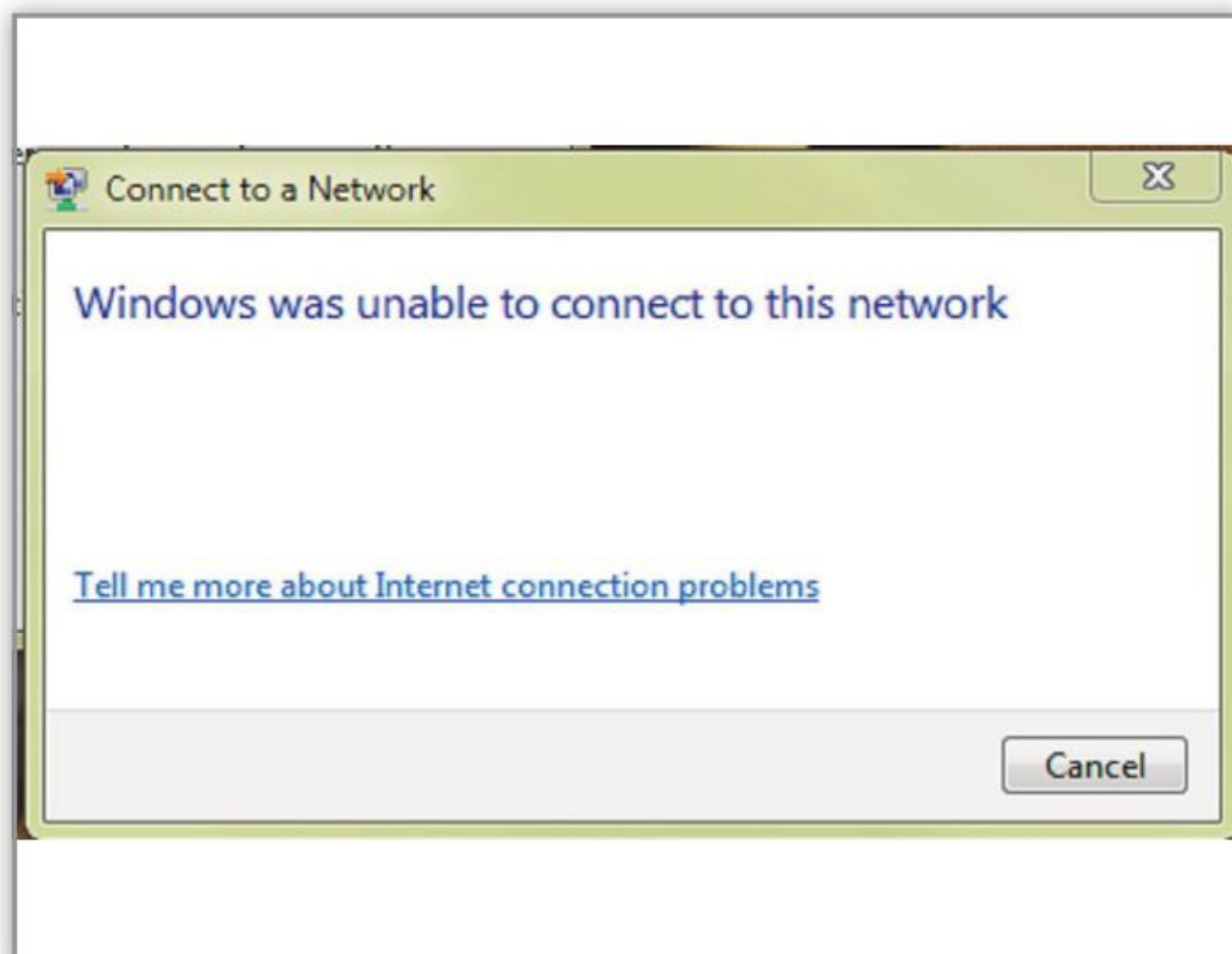


Troubleshooting Your Wired Network

Wired networks are often a lot more sturdy compared to a wireless network, but they're not bulletproof. Thankfully, problems can easily be fixed, so here are our top ten troubleshooting tips for solving wired network issues.

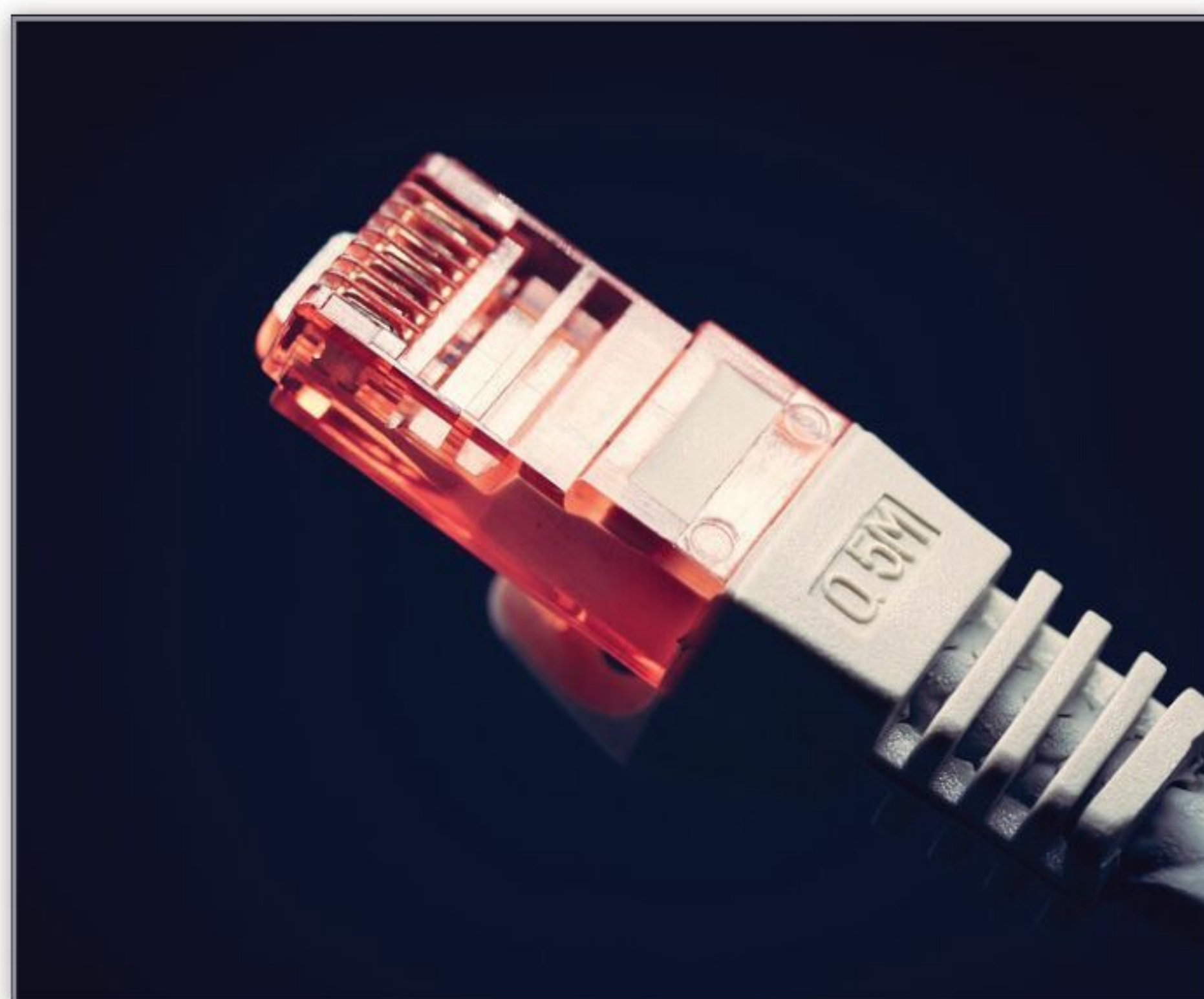
No Connection (one PC)

If your computer is reporting no connection, it's time to get behind the machine and double-check the Ethernet port. Check that the cable is fully inserted, as they can get caught by feet and pulled slightly. Check the cable end isn't damaged. If there's still no connection, check other machines (a router reboot may be needed).



Connection Keeps Dropping

One of the main reasons as to why wired connections keep dropping is a damaged, or poorly created network cable end. Check the cable with a cable tester, check the ends by giving them a pull. If they're loose, or the cable test fails, then replace the ends or the cable itself.



No Connection (all PCs)

If all your computers and other devices aren't connecting, check any switches that they're connected to. Switch plugs, and even powerline adapters, can blow a fuse. Check your router's switch connection LED is lit up, if not try a different port. If all else fails, try direct connection to the router, as it could be faulty.



Poor Speeds

A main culprit of poor wired network speeds is the cable is too long. If the cable is over 100 metres (300 ft), then the signal will begin to drop significantly. If your cable is coiled up behind furniture, or in the loft space, try to shorten its length and check the connection speed.



Poor Connection, or No Connection, Between Powerline Adapters

Often powerline adapters will lose their connection with each other. When this happens, power off both adapters, then power up one and after a few seconds power up the other. Wait for a few more seconds to see if the connection is okay. If it fails, try pin-hole resetting the adapters.



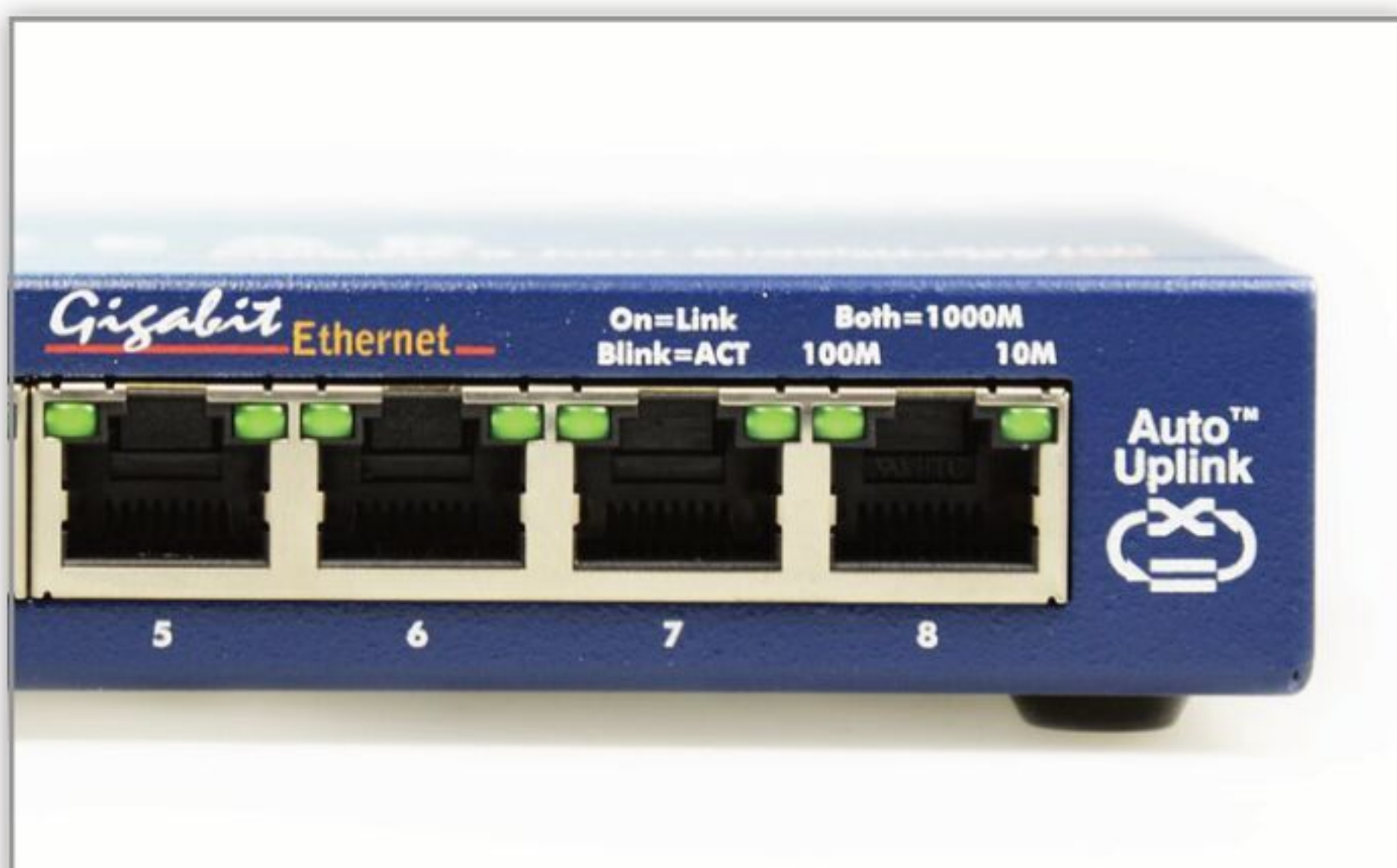
Powerline Adapters Won't Pair

Sometimes powerline adapters won't pair with each other if there are already a set of powerline adapters already on the network. Turn off the existing powerline adapters, then power up the new pair. After a connection has been made, power up the existing pair.



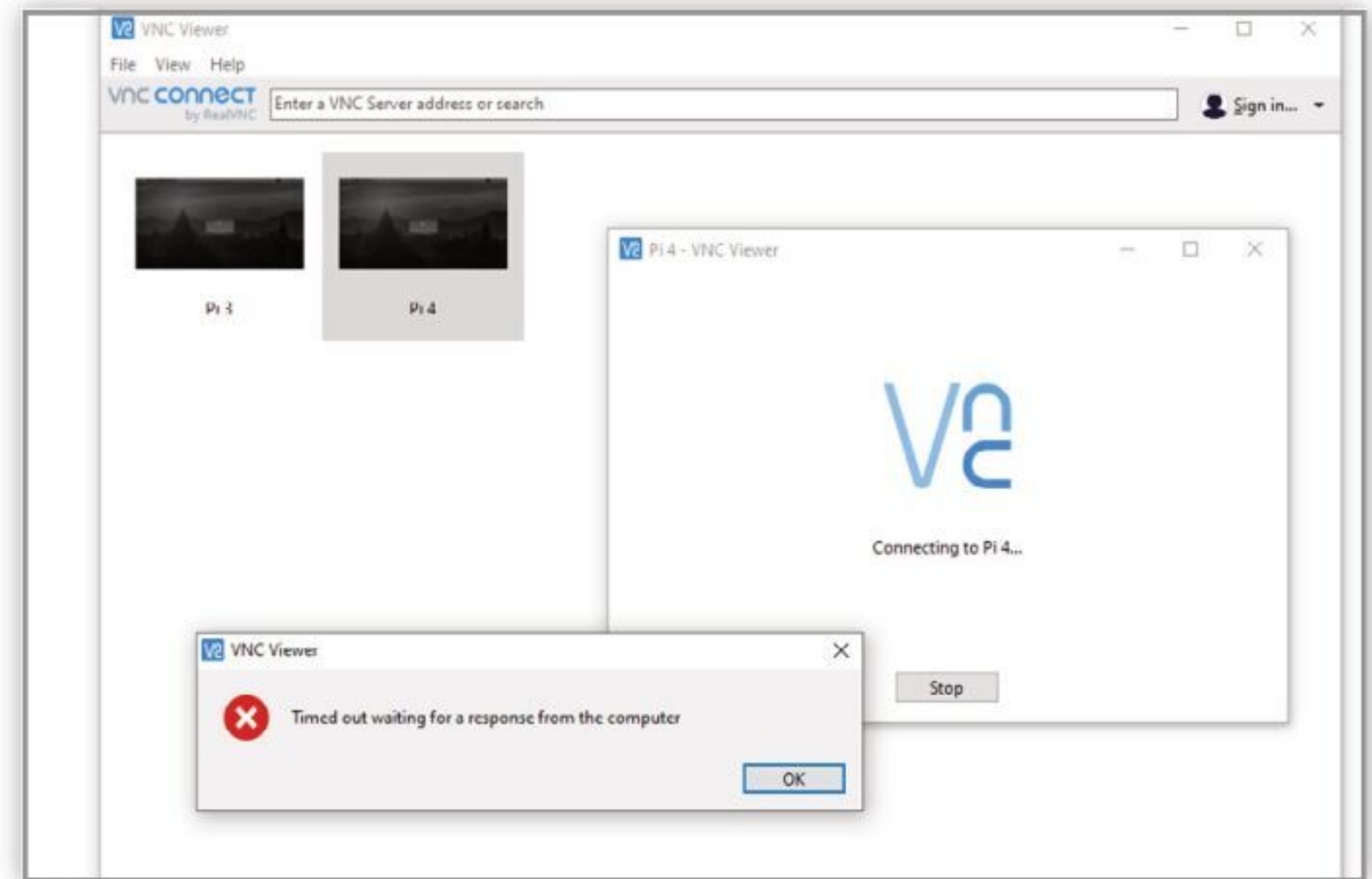
Some Ports on a Switch Connect Slow

If you discover that some of the ports on your switch appear to be operating at 100Mb/s instead of 1Gb/s, then check the following. Ensure that devices connected to the port have a 1Gb/s Ethernet port (some smart TVs don't). Check that the switch has more than one 1Gb/s port – some are 100Mb/s with a 1Gb/s uplink port.



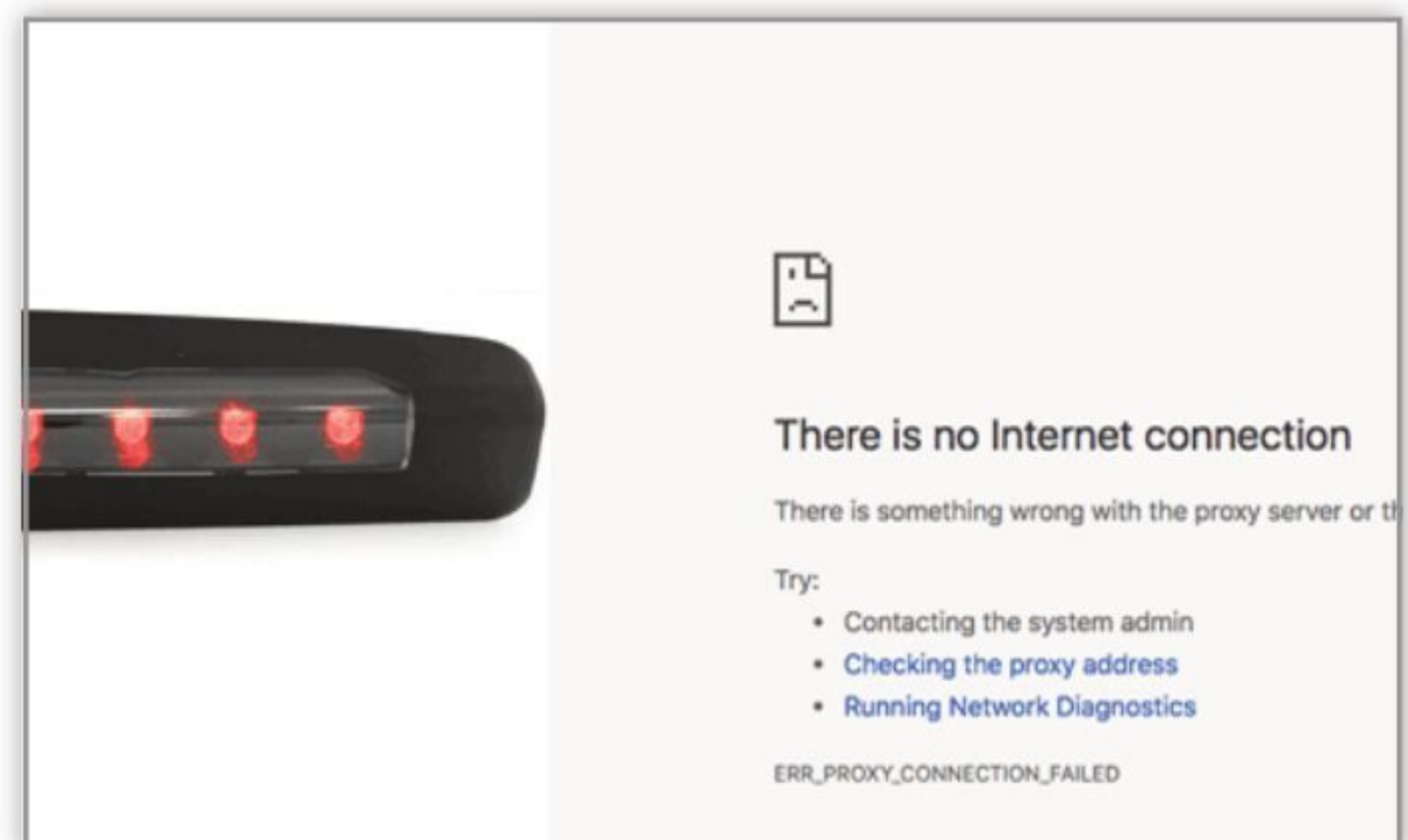
Can't Connect to Another PC

If you're unable to connect to another PC on your network, check the connections to the router, on both PCs. Also, check that the PC you're connecting to isn't blocking your connection via the firewall.



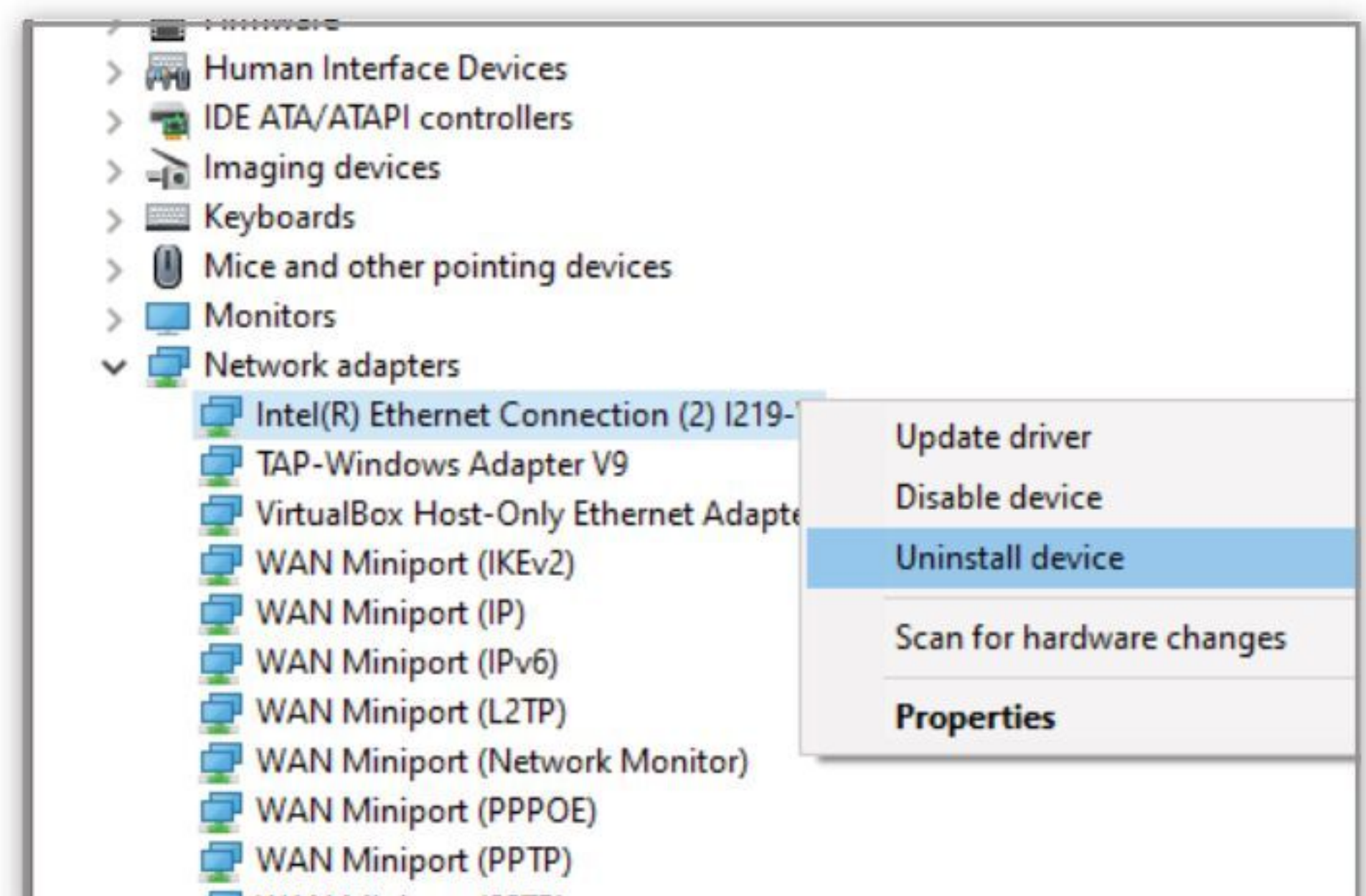
No Internet Connection

No Internet connection usually means there's something going on with the router, so that should be your first port of call. Check the router's LEDs, if the Internet is off, try and reboot, otherwise use a phone to check the status of the ISP's services.



PC Won't Connect via Ethernet

This could be one of several reasons. First check the cable going into the Ethernet port; use a different cable if necessary. Check the drivers by opening Device Manager and locating the network device. Right-click and select Update Driver. Also, try Uninstall Device, then Search for New Devices.





Congratulations, we have reached the end of your latest tech adventure. With help from our team of tech experts, you have been able to answer all your questions, grow in confidence and ultimately master any issues you had. You can now proudly proclaim that you are getting the absolute best from your latest choice from the ever changing world of consumer technology and software.

*So what's next?
Do you want to start a new
hobby? Are you looking to upgrade
to a new device? Or simply looking
to learn a new skill?*

Whatever your plans we are here to help you. Just check our expansive range of **Tricks and Tips & For Beginners** guidebooks and we are positive you will find what you are looking for. This adventure with us may have ended, but that's not to say that your journey is over. Every new hardware or software update brings its new features and challenges, and of course you already know we are here to help. So we will look forward to seeing you again soon.



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