

P.O. Box 95
Pine Grove Mills, PA 16868
814-206-0000
814-207-4323
mas@tekresults.com
www.tekresults.com



TekResults Newsletter (August 2023)

To unsubscribe send an email to UnsubscribeNewsletter@tekresults.com with unsubscribe to Newsletter in the subject line or click here UnsubscribeNewsletter@tekresults.com

Dear Clients and Friends

We hope this newsletter finds you happy and healthy and enjoying the summer weather. Maybe you could print this missive out and carry it with you to the beach and enjoy some light reading under a big umbrella? The lake is also a great option. Whatever your summer pleasure, we'll be happy to tag along.

We have some great stuff for you in this edition of the newsletter. Let's get started.

In this newsletter

- Syncing bookmarks in your favorite Web browser
- What is a CMOS battery and why do I care
- Using your computer's S.M.A.R.T. tool to predict problems
- How to create an image of your hard drive
- How to revive windows with a recovery drive

Computer sale!

With Windows 10 quickly approaching the end of its supported life, now is an excellent time to replace those aging computers. We have many desktops and laptops in stock to help make your holidays bright! We specialize in refurbished Dell systems that look great and come nicely appointed with a solid state drive, at least 16GB memory and an Intel Core i5 or i7 processor. We bench test each of our systems to ensure they are working in top-notch order before presenting them for sale, and each one comes with our 30-day warranty. Most of our systems feature Windows 11 Pro, but we still have a few Windows 10 systems in stock – priced to sell. Drop us a line and we can help you find just the right system to put under your tree.

Referrals

TekResults owes much of its success to our loyal and enthusiastic clients. It's those of you who tell your friends about us that keep our company growing, and we'd like to say thanks. Just telling someone about us is all it takes. Just let us know you dropped our name, and we'll drop a gift card in the mail. See, who said talk is cheap!

Businesses Who Need Our Referrals

Any business who has slow computer systems

Any business who has slow network

Any business needing a better disaster recovery strategy including backups for mission-critical devices (servers, essential PCs, etc.), equipment redundancy,

Any business requiring help upgrading existing IT infrastructure due to obsolescence

Any business that needs better email services

Any business that needs to migrate to a new software platform

Any business that needs help with its industry vertical market software

Any business that has employees and compliance questions

Any business that needs help with employees working from home

Any business that needs reliable IT service

Any business that is purchasing another business and needs IT help

Any business that is being sold or is being dissolved

Any business with human resource issues as they pertain to IT

Any business that wants to save money and improve functionality by utilizing a VoIP Business phone systems

Any business needing a better security infrastructure

Any business needing remote desktop applications

Any business needing help migrating to Microsoft 365

Any business that would benefit from monitoring of performance, security, etc. of their IT infrastructure

Any business that would like an IT department that will visit and report on each device on a scheduled basis

Any business that would like to read our newsletter or other mail tips and blasts

How to sync your Web bookmarks across all your devices

Both Chrome and Edge have a sync feature that will make the following items available on all your devices. Add a bookmark or change a setting on one device and your other devices will also get the change as well.

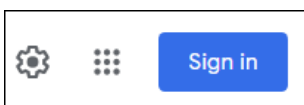
- Bookmarks
- History and open tabs
- Passwords
- Payment info
- Addresses, phone numbers and more
- Settings and preferences

Enable Sync in Chrome on your desktop/laptop

To turn on sync, you must have a Google Account.

On your computer, open Chrome.

If necessary, sign into your Google account.



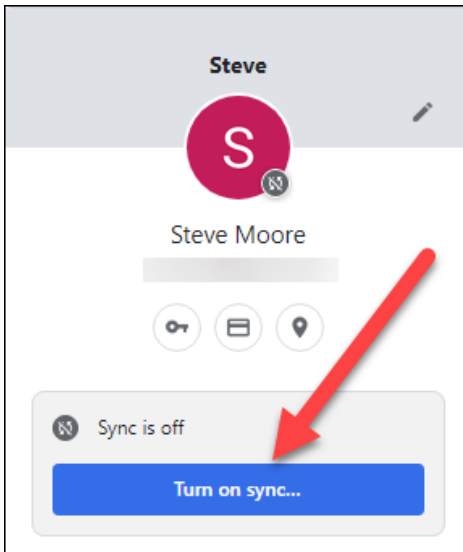
Navigate to any webpage other than google.com. This next option may not be available if you are on the Google home page.

Click on your profile button in the top right of the window.



Click **Turn on sync...**


Repeat these steps on each device you wish to sync.




Enable Sync in Chrome on your mobile device

1. Install the Chrome app on your mobile device. You can download it from the Apple App Store or from Google Play.
2. Open the app.
3. Tap **More Settings > Turn on Sync**.
4. Choose the account that you want to use.
5. Tap **Yes, I'm In**.

Enable Sync in Edge on your desktop/laptop

1. In Microsoft Edge, select the profile image  in the browser taskbar.
2. From the list of options, choose the account you want to sign in to or choose **Add new account**.
If you see **Manage profile settings**, you're already signed in.
3. Note: If you're in the Microsoft Edge settings page, select **Profiles > Sign in to sync data**, select the account you want to sign in to and select **Continue**.
4. Select **Sign in to sync data**.

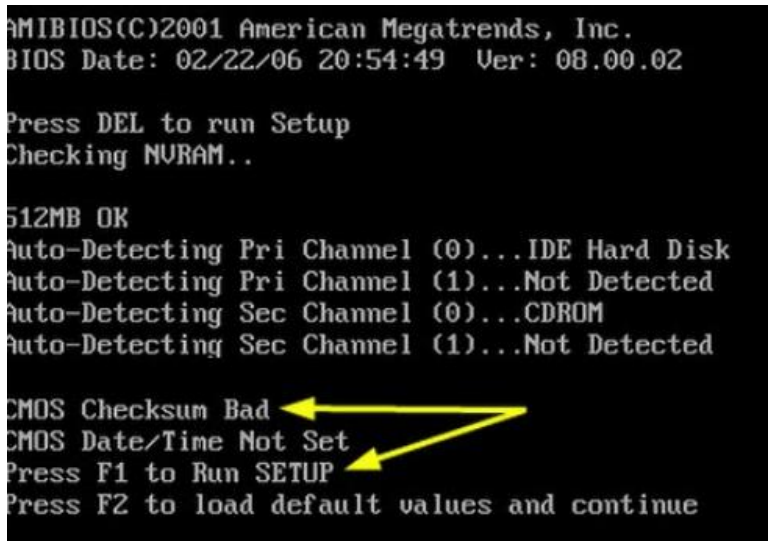
Enable Sync in Edge on your mobile device

1. Download the Microsoft Edge app for iOS and/or Android.
2. Open the Microsoft Edge app, select the profile image , and then select **Accounts**.
3. Select your account and then select **Sign in to sync**.
4. To enter a new account, select **Add Account** and follow the prompts.

What is a CMOS battery and why do I care?

The CMOS battery is a small battery – about the size of a watch battery – attached to the motherboard of your computer. It plays a significant role in the life of your computer or laptop. The CMOS battery is responsible for keeping the CMOS and BIOS powered on even when the computer is unplugged. This is because the CMOS keeps track of the date and time in real-time. Additionally, when your computer boots, the hardware configuration and system settings need to be accessed right away. If the CMOS battery runs out, your computer loses all this information and the BIOS reverts to its default settings.

When this happens, you may see a message like this one when you restart your computer.



```
AMIBIOS(C)2001 American Megatrends, Inc.  
BIOS Date: 02/22/06 20:54:49 Ver: 08.00.02  
  
Press DEL to run Setup  
Checking NVRAM..  
  
512MB OK  
Auto-Detecting Pri Channel (0)...IDE Hard Disk  
Auto-Detecting Pri Channel (1)...Not Detected  
Auto-Detecting Sec Channel (0)...CDROM  
Auto-Detecting Sec Channel (1)...Not Detected  
  
CMOS Checksum Bad  
CMOS Date/Time Not Set  
Press F1 to Run SETUP  
Press F2 to load default values and continue
```

Most CMOS batteries last for about 2-10 years. That is a wide range because there are some factors that influence this. The CMOS battery is never used whenever your computer is plugged in. In laptops, the CMOS battery may also charge itself whenever it is plugged in.

This doesn't mean that your CMOS battery will discharge in a few weeks if you don't plug in your computer. Most CMOS batteries will have a shelf life of at least a couple of years, even if you don't plug in your computer at all.

When to Replace the CMOS Battery

Your computer will start acting abnormally when the CMOS battery is discharged. Here are a few of the tell-tale signs:

Incorrect date or time

The most common sign of a discharged CMOS battery is incorrect date and time on your computer. Usually, the date and time will be reset to a time way back in the past.

Input devices begin malfunctioning:

Since the BIOS is responsible for managing devices such as the keyboard and mouse while booting, they may malfunction if the CMOS battery has been discharged. The mouse cursor could become inaccurate, or there could be a delay in the movement. The keyboard and mouse could also stop working altogether, since the BIOS acts as an intermediary.

Missing driver

It's also possible that recently installed drivers may disappear on account of a failing CMOS battery. These drivers will most likely be related to the input/output devices connected to your computer.

Power on/off issues

While there could be plenty of reasons why your computer isn't booting at all, one of them could be a failing CMOS battery. Alternatively, your computer can also stop responding to the power off button.

A beeping sound/error messages

A constant beeping sound and error messages associated with the CMOS could also indicate a failing CMOS battery. The error messages include a CMOS checksum error, CMOS read error, CMOS battery failure, and system battery voltage is low.

The fix

Although a discharged CMOS battery can cause big headaches for a user, replacing the battery is a small, inexpensive procedure. If you think your battery may be dead or dying, give us a call. We can diagnose any problems you're having and replace the battery, if necessary.

S.M.A.R.T – Your hard drive's failure early-warning feature

S.M.A.R.T. (or simply SMART) is a monitoring system built into most modern hard drives. S.M.A.R.T. stands for Self-Monitoring, Analysis and Reporting Technology. The technology helps detect various reliability problems at an early stage, giving warning signs well in advance before the hard drive fails. Prior to the introduction of SMART, users had little warning that a drive was getting ready to "crash." A SMART-enabled computer, however, can indicate some types of imminent failure, allowing time to back up and replace the drive before it becomes unusable.

TekResults sells Dell computers more than any other brand and most of our clients have Dells, which are configured to use SMART, however on Dell systems SMART is not enabled by default. If you have a different kind of computer, this might not be the case. Please check your owner's manual for specific instructions.

On a Dell system, turning SMART on is simple, and we highly recommend everyone do so.

Instructions

These instructions DO NOT Apply to you if your system is not a Dell and some older models of Dell computers do not have SMART available.

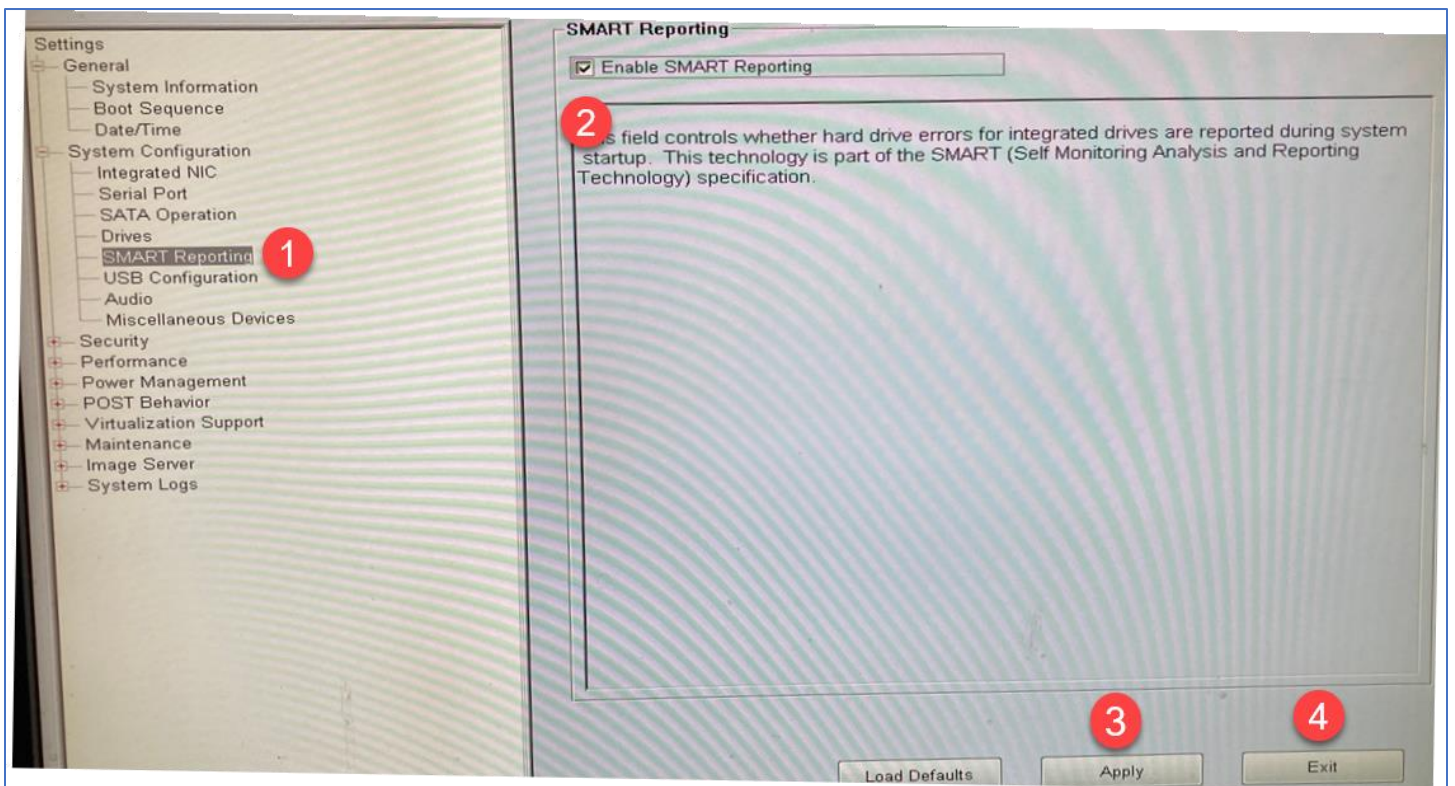
1. Restart your computer
If you are unsure how to do this, [refer to this article](#).
2. As soon as the Dell splash screen appears, begin to tap the F2 button on your keyboard (once a second) until the settings menu (shown below) appears. If you get to the Windows logon screen, you have missed the option to enter Setup. Restart and try again.

Dell splash screen (note, your splash screen may look slightly different. Just look for the Dell logo)



You are trying to get to the Settings menu shown below. Once you are in the Settings menu, follow these steps:

1. Expand **System Configuration** and click on **SMART Reporting**
If you don't see **SMART Reporting**, it is not available on your system. Skip to step 4.
2. Place a check next to **Enable SMART Reporting**.
If there is already a check there, skip to step 4.
3. Click the **Apply** button.
4. Click the **Exit** button. Your computer will continue to boot normally. You're finished.

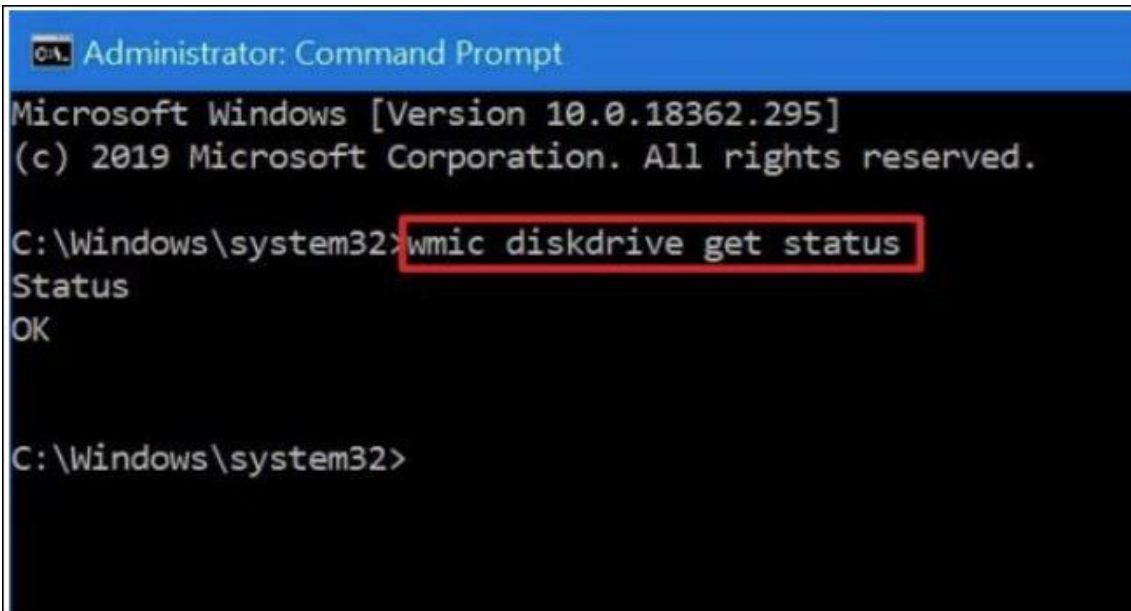


How to check the SMART status of your computer

To quickly check the SMART status with the Windows Management Instrumentation Command-line (WMIC) utility, use these steps:

1. Open **Start**.
2. Search for **Command Prompt**, right-click the top result, and select the **Run as administrator** option.

3. Type the following command to determine if the hard drive is failing and press Enter :**wmic diskdrive get status**
4. Press **Enter**.



```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.18362.295]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Windows\system32>wmic diskdrive get status
Status
OK

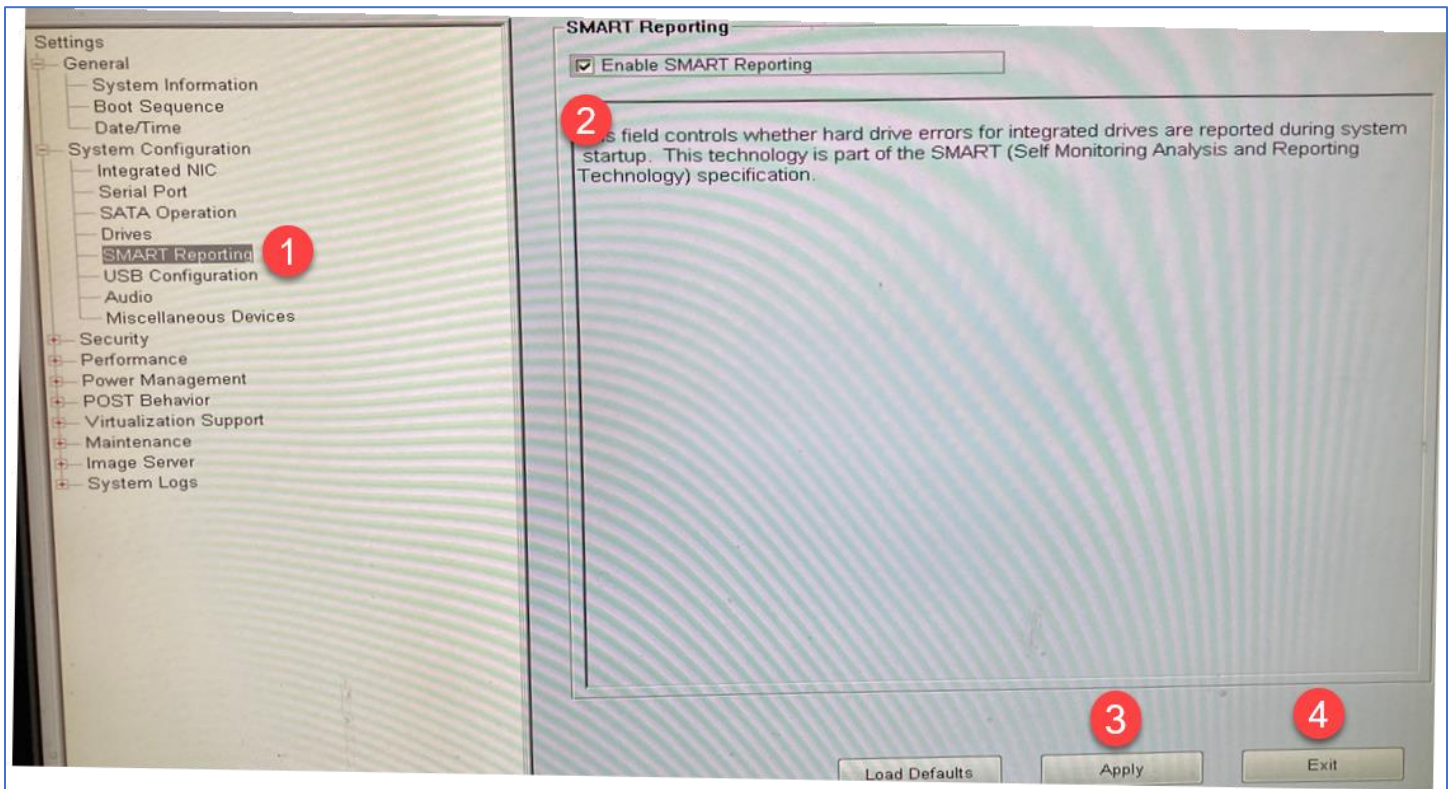
C:\Windows\system32>
```

5. Under the "Status" column, confirm that the result is **OK**.
Quick note: You'll see an **OK** status for each internal drive installed on your device. Once you complete the steps, if the status reads **OK**, everything is working as expected. If the status reads "bad," "unknown," or "caution," it's likely that the hard drive has an imminent hardware failure, or the command is having problems querying the status from the firmware of the drive.



You are trying to get to the Settings menu shown below. Once you are in the Settings menu, follow these steps:

5. Expand **System Configuration** and click on **SMART Reporting**
If you don't see **SMART Reporting**, it is not available on your system. Skip to step 4.
6. Place a check next to **Enable SMART Reporting**.
If there is already a check there, skip to step 4.
7. Click the **Apply** button.
8. Click the **Exit** button. Your computer will continue to boot normally. You're finished.



How to check the SMART status of your computer

To quickly check the SMART status with the Windows Management Instrumentation Command-line (WMIC) utility, use these steps:

6. Open **Start**.
7. Search for **Command Prompt**, right-click the top result, and select the **Run as administrator** option.
8. Type the following command to determine if the hard drive is failing and press Enter : **wmic diskdrive get status**
9. Press **Enter**.

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.18362.295]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Windows\system32> wmic diskdrive get status
Status
OK

C:\Windows\system32>
```


10. Under the "Status" column, confirm that the result is **OK**.

Quick note: You'll see an **OK** status for each internal drive installed on your device. Once you complete the steps, if the status reads **OK**, everything is working as expected. If the status reads "bad," "unknown," or "caution," it's likely that the hard drive has an imminent hardware failure, or the command is having problems querying the status from the firmware of the drive.

How to back up an image of your hard drive

System Image Backups come in handy if your current Windows 10 or Windows 11 system ever fails. If your Windows environment becomes unstable or corrupted, a special backup utility from Microsoft could come to the rescue.

System Image Backups create an image (copy) of your entire hard drive rather than just select files and folders, the way Carbonite and some other backup solutions do. With an image backup, if Windows ever gets corrupted, crashes, or simply stops working, you can get it back on its feet by restoring the entire image to a repaired or replaced system.

Before we continue, we should do a brief review of the two basic types of backups. For more information on the differences between these two types, see our previous [newsletter article here](#).

File-level backups

File-level backups back up anything in your Desktop, Documents and Pictures folders. You can also specify additional folders if you are storing files somewhere else. Daily, or backup-as-you-work backups, are not designed to back up your programs (apps) or the state of your computer. If your hard drive dies, a typical backup will not help you restore the computer to health, but your documents can be safely restored to a repaired or replaced computer. Unfortunately, you will have to reinstall your apps – unless you have an image backup.

Many people use a third party app such as [Carbonite](#) or [CrashPlan](#) to continually backup documents they have saved or modified to the cloud. If you have Microsoft OneDrive, you can also backup your Desktop, Documents and Pictures folders to OneDrive, which has the advantage of making those folders available on any device you chose to use. We highly recommend OneDrive.

Image backups

In addition to the files, photos, movies, and videos you store on your computer, you also have other important information stored there. This includes your operating system, applications, browser history, preferences, settings, bookmarks, device drivers, etc. These apps and settings are not backed up by file-level backup solutions which means if you have to replace your system, you will not have access to all the necessary “behind the scenes” files and programs that make your computer work as you are accustomed. Your printer and other devices will have to be reinstalled. Do you have bookmarks to help you quickly visit a website? Do you have your website passwords stored in Chrome or Edge? Those bookmarks and passwords will be gone without an image backup (see our article on syncing bookmarks elsewhere in this newsletter).

Many people use a third party app such as [Macrium Workstation](#) to back up an image of their computer to an external hard drive. We recommend and use Macrium products, but you have to pay for them. If you're looking for a free image backup solution, Windows has one for you. This article is about how to create an image backup using Windows' free built-in backup utility.

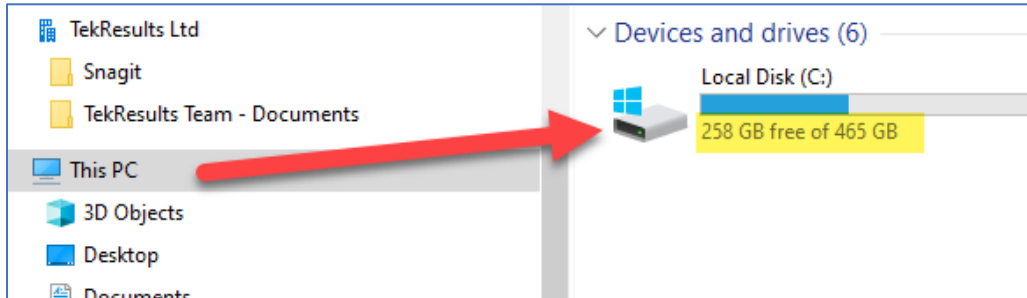
Before you get started, you'll need to set up an external storage device on which to save your image file. We recommend using an external hard drive. We do not recommend using a thumb drive. The drive you choose should be large enough to hold the entire contents of your computer. In most cases, a 250GB drive will do the trick, but you should check size of your current hard drive to make sure.

How?

Open File Explorer  from the taskbar.

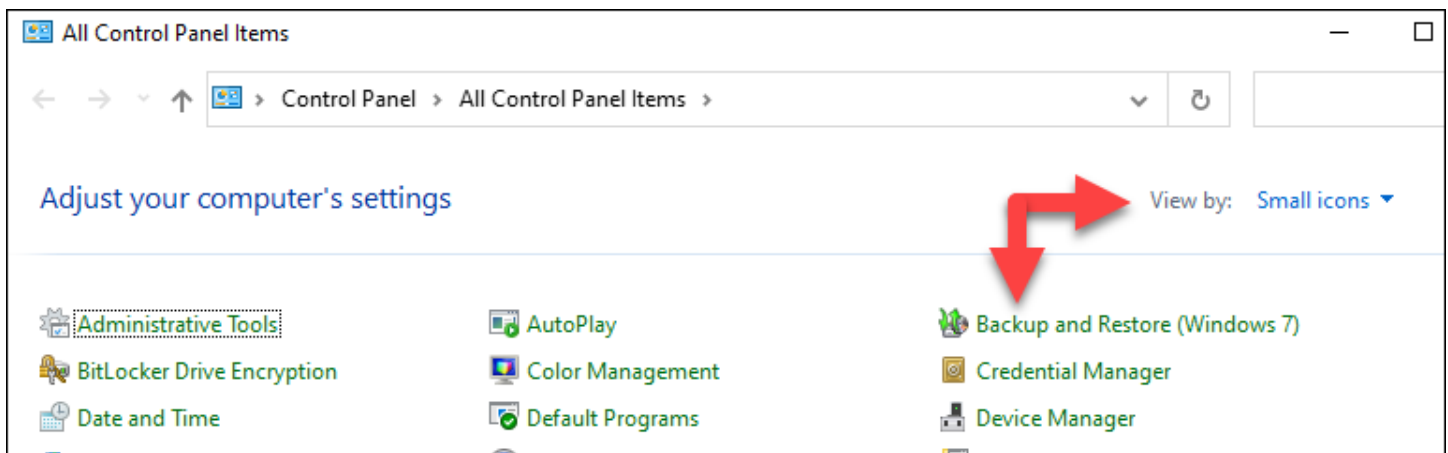
Click on **This PC** in the left panel.

In the right panel, you will see the current disk size. In the screenshot it's 465GB. Note your primary hard drive will usually be labeled with the letter **C**.

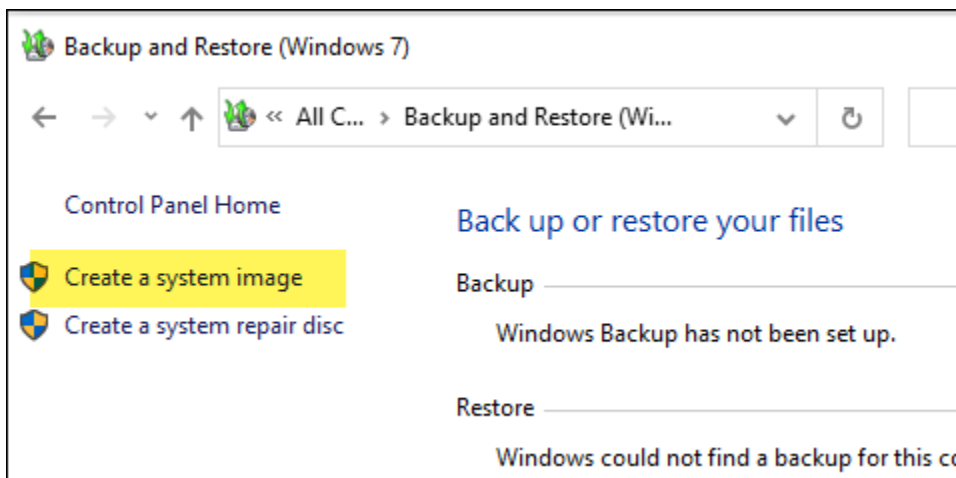


Perform the image backup

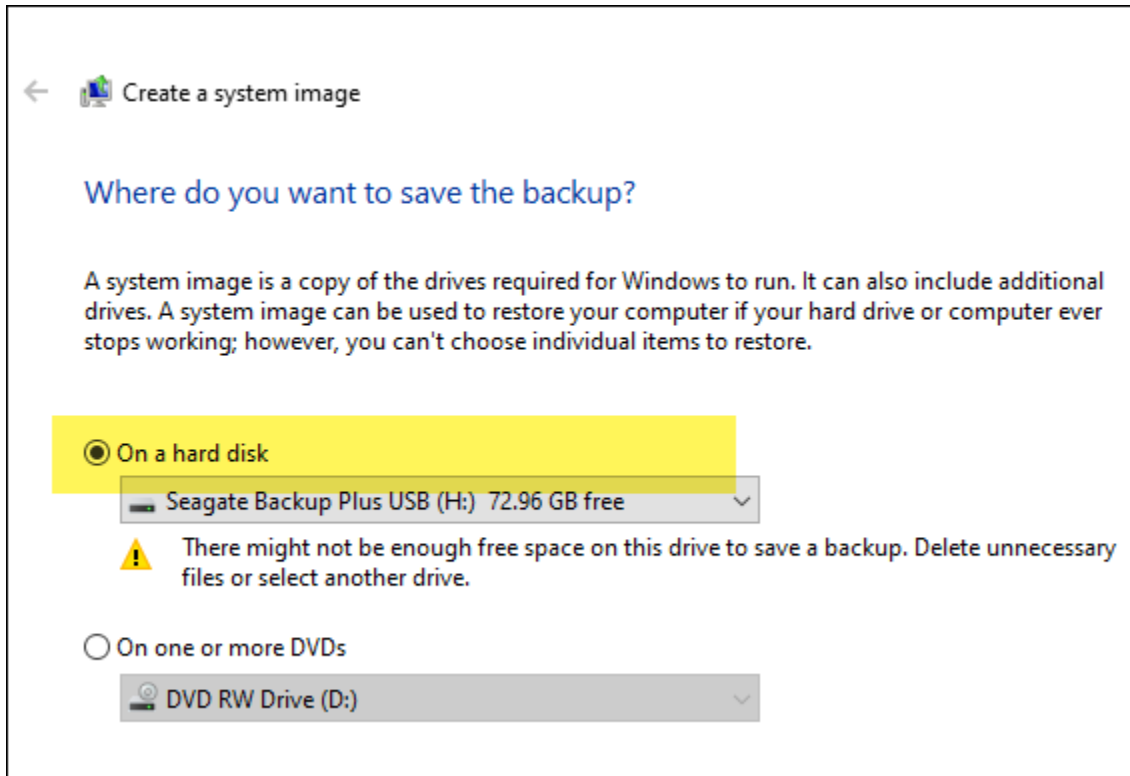
1. Open Control Panel and change the **View by** option to **Small icons**.
2. Click on **Backup and Restore (Windows7)**.



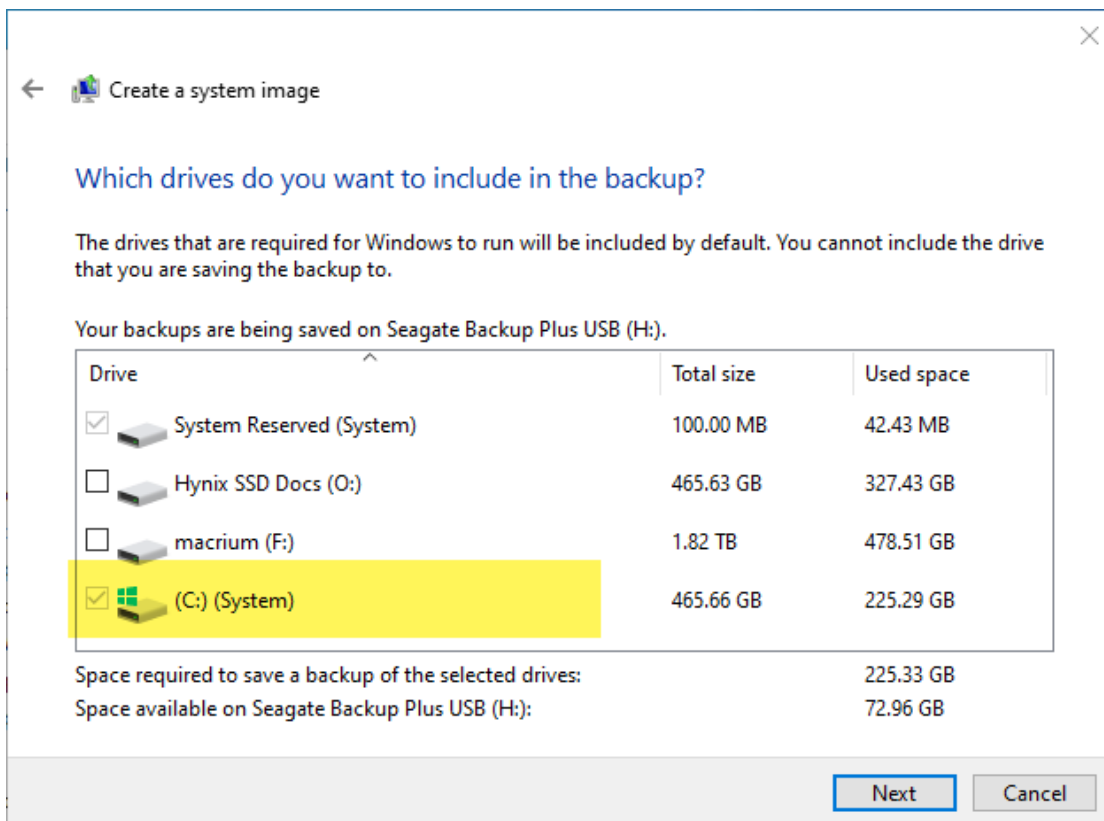
3. Click **Create a system image**.



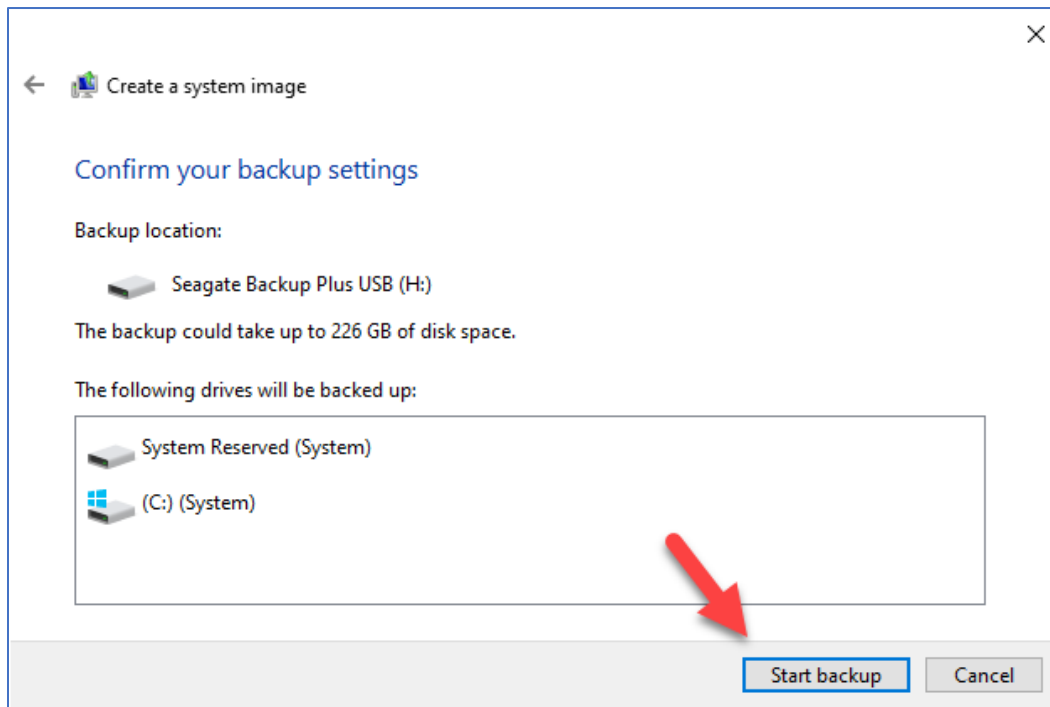
4. Chose **On a hard disk** and use the drop-down list to select your backup drive – If it isn't automatically entered for you. Then click **Next**.



5. Put a check next to your C (system) drive. C is normally the name of your computer's hard drive. If yours is named something else, select that instead. If there are external drives, including the one you are going to back up to, uncheck them. You only want to back up your system drive. Click **Next**.



6. Confirm your backup settings and click **Start backup**. Windows now creates the image file.



[If I have an image backup, do I also need a file-level backup?](#)

An image backup is just a snapshot of the way your hard drive looks on the day you make the image. Unless you routinely update that image (run the backup again and again), the files you have backed up don't change. If you create an image in January and your computer dies in August, all the documents you have created or modified from January to August will be lost. Yes, you can still restore your image to a repaired or replaced computer, but the files will still be January's files. Yes, you still need a file-level backup.

[Should I use both types of backups?](#)

That depends on how much trouble it will be to replace your computer if it becomes necessary. If you're okay with the idea of buying a replacement, reinstalling Microsoft Office and all the other apps you regularly use, then restoring your documents and pictures from a file-level backup. You don't need an image backup. You could just go with a file-level backup like OneDrive or Carbonite. For many people, this is an acceptable solution. However, if you have older apps installed on your current computer and don't still have the means to reinstall them on a replacement (link to the download site, password to access the download site, product key to activate the app, etc.) and these apps are important to you, you should employ both types of backups. If your system is critical to your business, then you need both kinds of backups.

Many of our clients use a server to store their users' documents and then they back up the server every night, thus ensuring the safety of the users' documents. It's been our experience though that many users still save documents to their own hard drives (desktop, Documents folder, etc.), thus circumventing the company's ability to back up their documents. Anyone who saves their documents to their own hard drive is in danger of losing those documents if the hard drive fails. If you are one of those users, saving everything to your hard drive, you need a file-level backup.

If your computer is mission-critical to your business (meaning the business falters without your computer), you should create an image of your system and either save your documents to your company's server or use one of the file-level backups we've been talking about.

Need help with all or any of these backup solutions? Give us a call. We're here to help.

How to revive windows with a recovery drive

In a previous article in this newsletter, we discussed two kinds of backups: File-level backups and image backups. What we will discuss here is not really a backup, but rather a way to get your computer up and running again after a fatal crash. The *recovery drive* presented here is only used to make a copy of your system settings, just the bare components necessary to get your computer back on its feet. It does not backup files nor programs.

A recovery drive stores a copy of your Windows 10 or Windows 11 environment on an external source, like a DVD or USB drive. Here's how to create one before your PC fails.

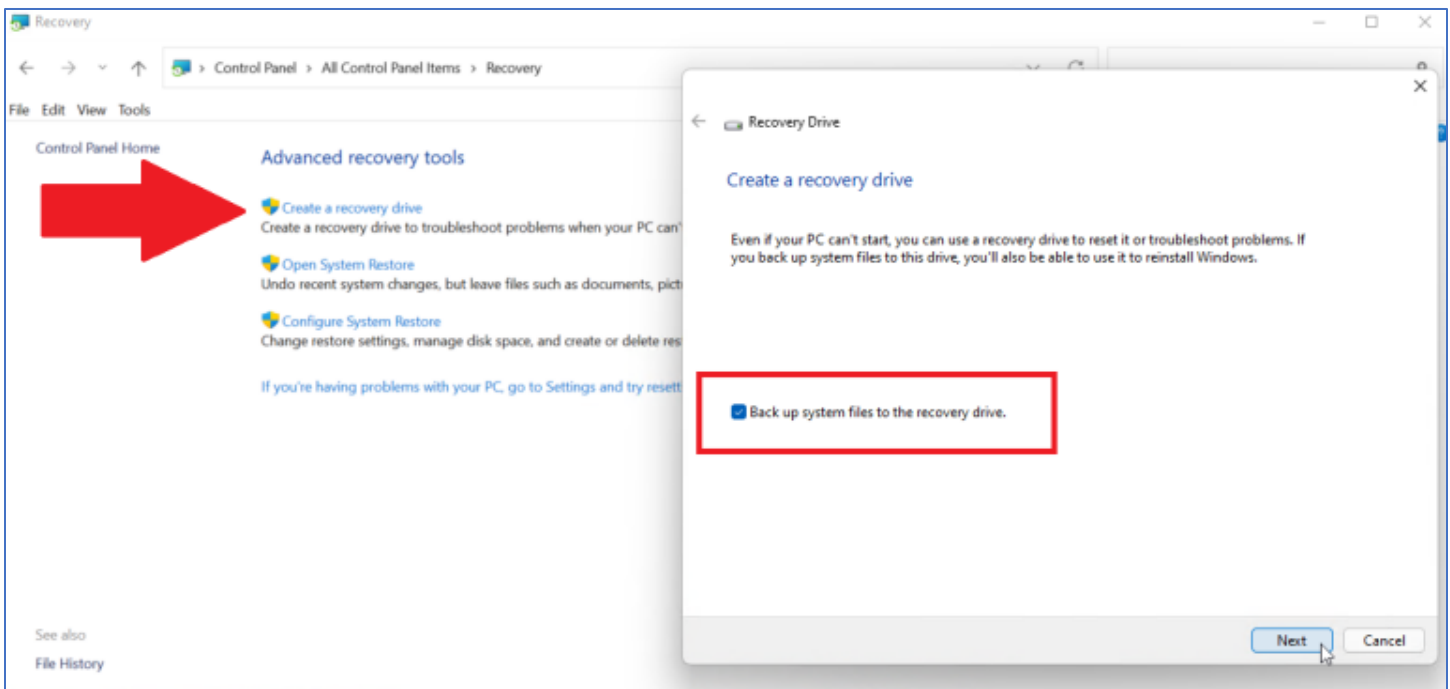


Uh, oh. Your Windows 10 or Windows 11 computer won't boot up and can't fix itself. In most cases you would be out of luck, unless you created a recovery drive, which stores a copy of your Windows environment on another source, such as a DVD or USB drive. Then, if Windows ever fails, you can then restore it from that drive.

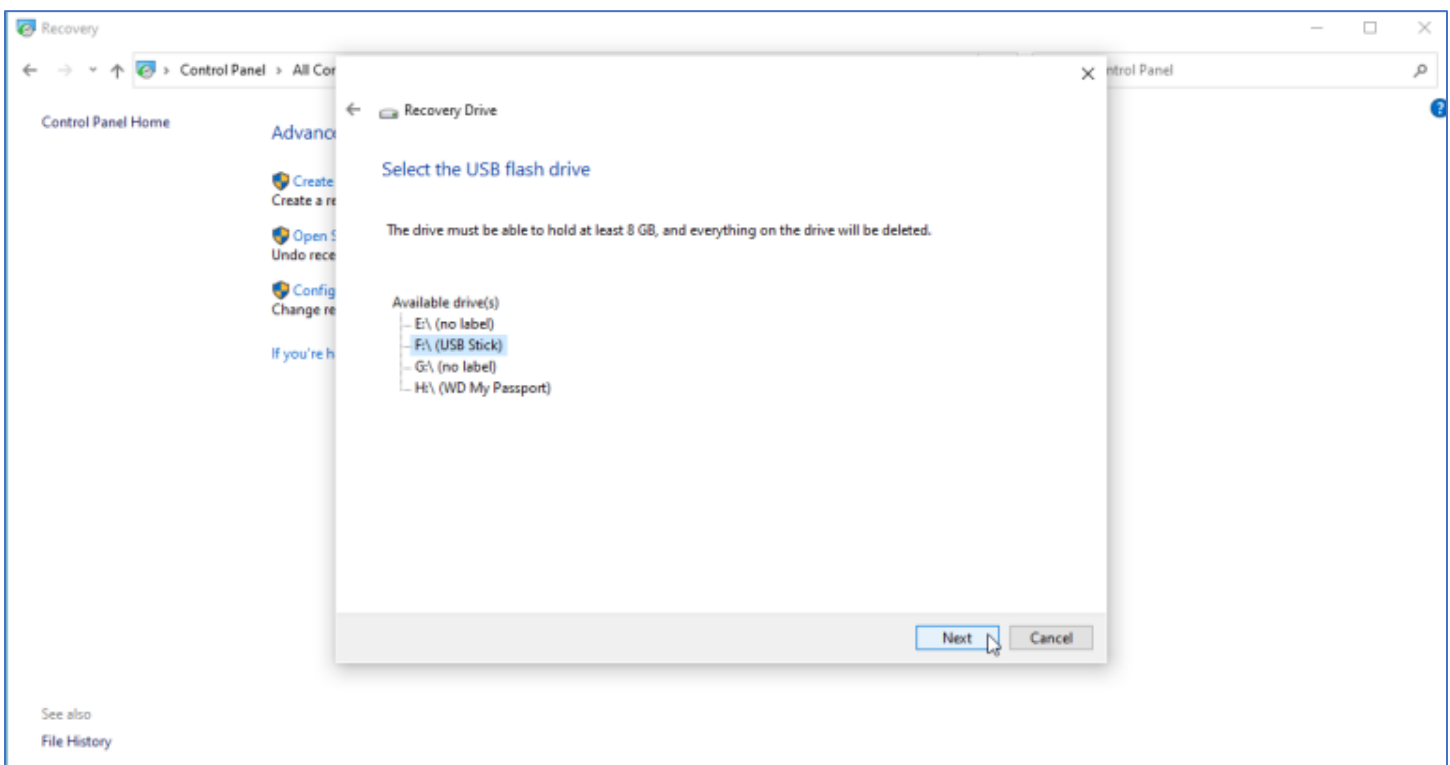
The downside is that **personal files and desktop apps won't come along for the ride**, but you should already be backing up your personal files separately. At the very least, a recovery drive will bring Windows 10 or 11 back to a bootable and working state. Here's how to get started.

Set Up a Recovery Drive

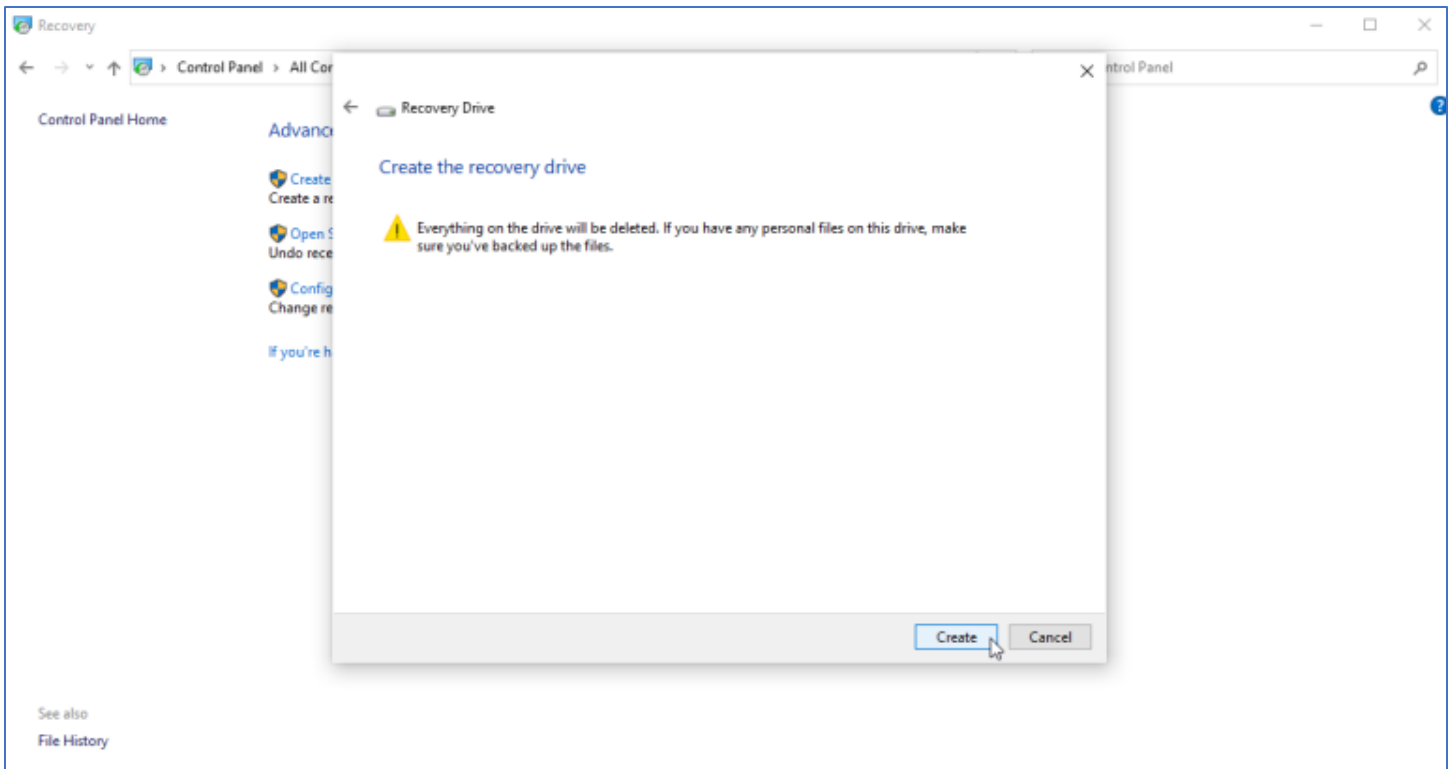
First, you'll want to set up the recovery drive while Windows is still alive and working so you capture it at its best. Connect a USB drive or insert a DVD into your computer. Type **Recovery Drive** into the Windows search field and click **Recovery Drive**. Alternatively, open Control Panel in icon view, and click **Recovery > Create a recovery drive**.



Answer **Yes** if Windows asks if you want to allow this app to make changes to your device. When the *Create a recovery drive* window appears, check the box next to *Back up system files to the recovery drive*, then click **Next**.

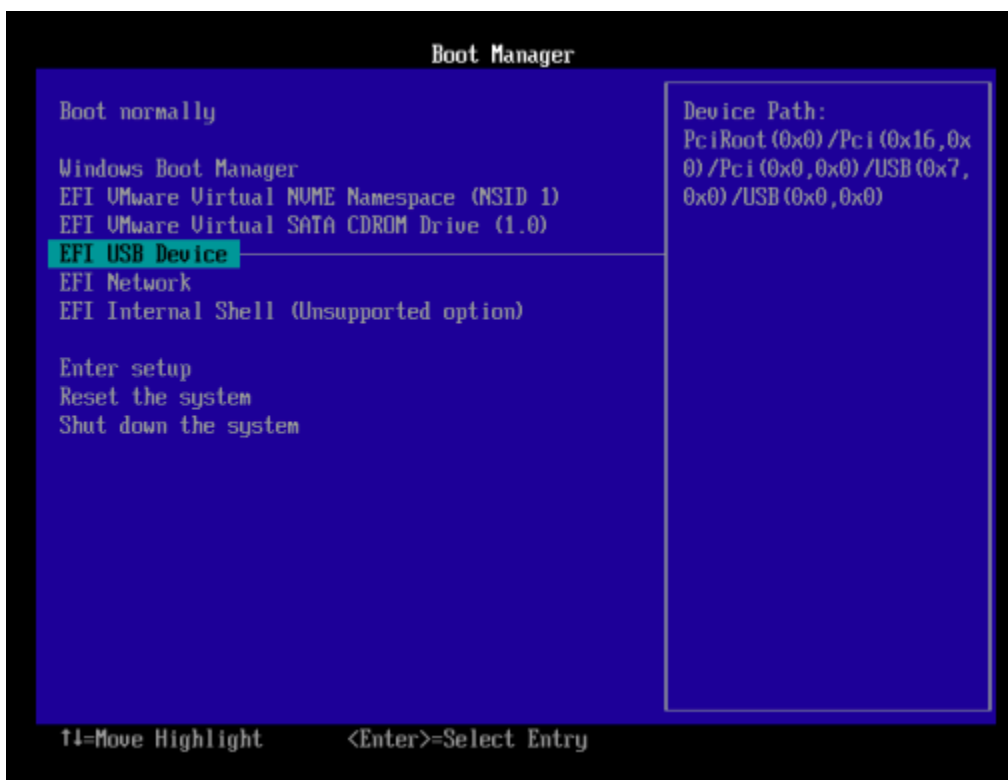


Wait for Windows to pick up the USB drive or DVD. If multiple drives appear, select the one you want to use. Click **Next**. Everything on the recovery drive will be deleted, so make sure no needed files are on the USB drive or DVD.



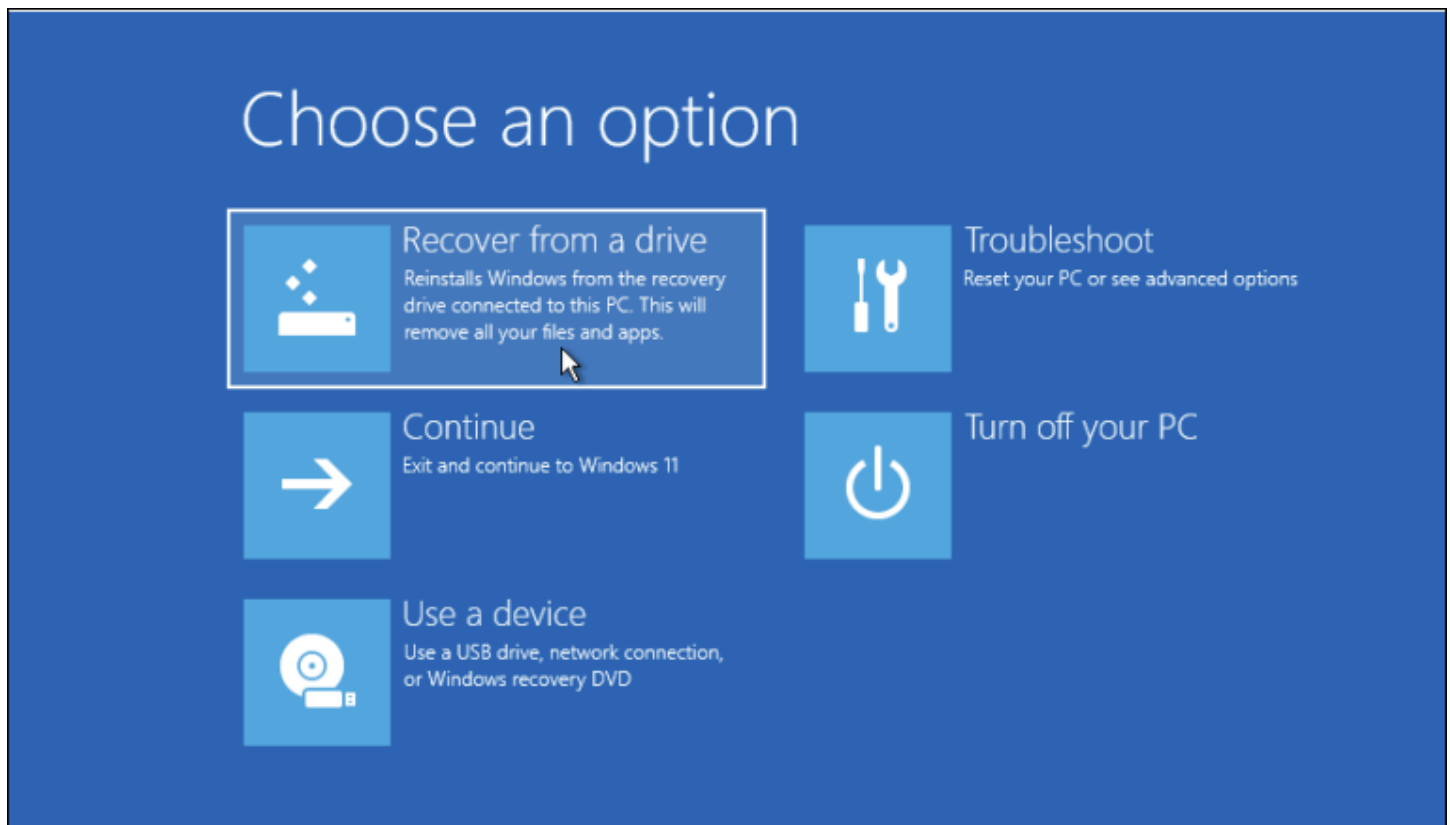
Click **Create**, and the recovery drive will be made. This process may take a long time, so be patient. After the drive has been created, click **Finish**.

How to Use the Recovery Drive

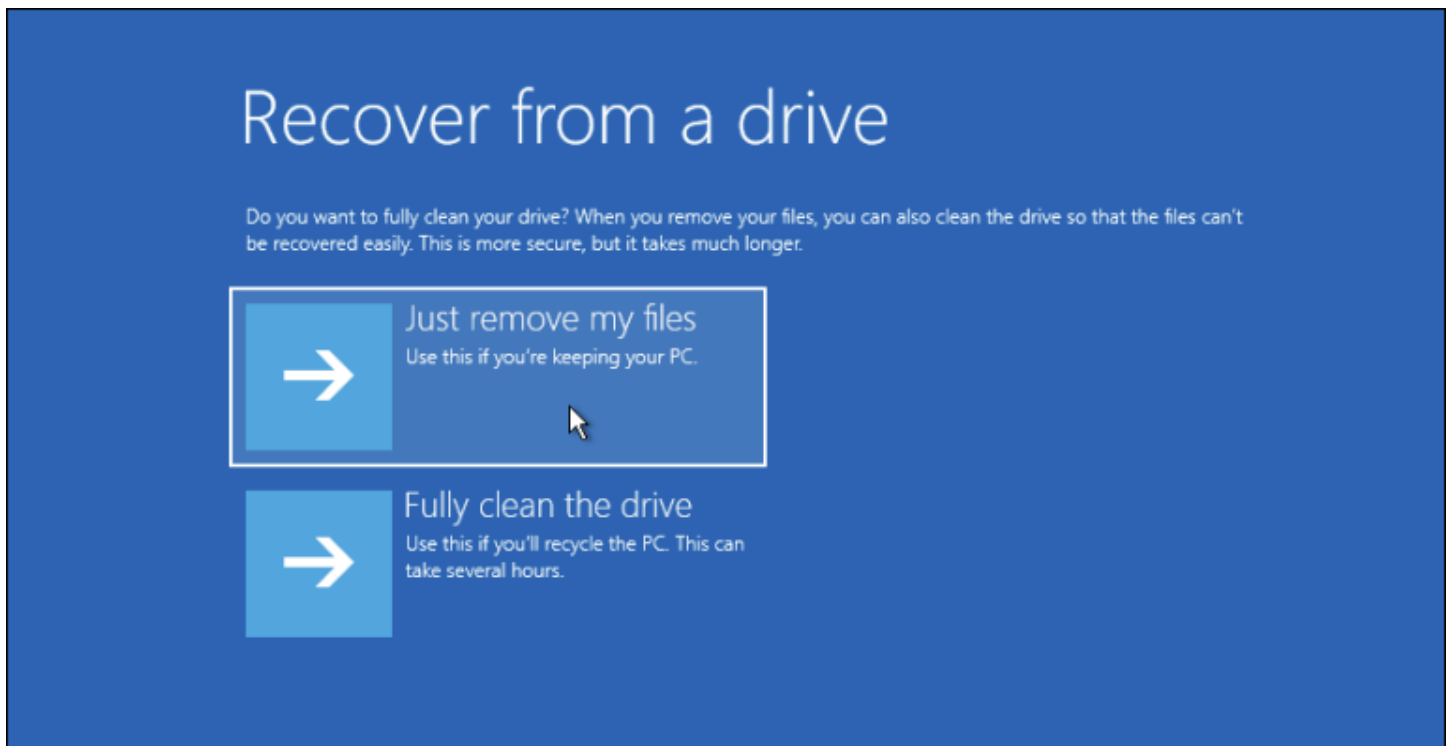


Now, let's fast forward to a time when Windows is so damaged that it's unable to load or repair itself. Insert your recovery USB drive or DVD into your computer. Upon bootup, press the appropriate key to boot from the USB drive or DVD instead of your hard drive. On a Dell computer repeatedly tap the **F12** key as soon as you start the computer and see the Dell logo appear. One of the presented options will be to boot from a USB device.

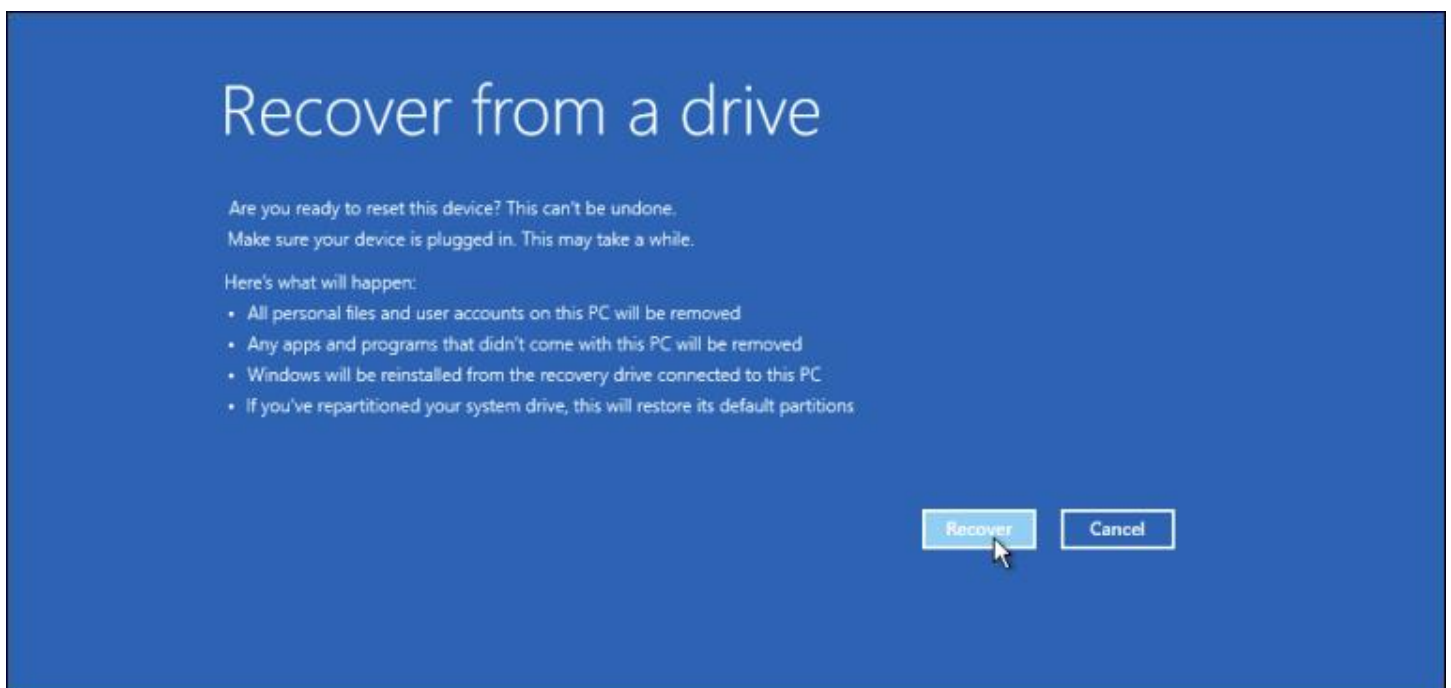
Select the keyboard for your language or country and press Enter. Select **Recover from a drive** to tell the computer to use the version of Windows on your USB drive or DVD. Once again, this means all your files and apps will be removed after the operating system is reinstalled.



You have the option to just remove your files or fully clean the drive to wipe the operating system. You might choose **Fully clean the drive** if you were planning to discard or recycle the computer. Since you're planning to keep this machine and want to recover it, select **Just remove my files**.



The final step is to click **Recover**. The computer will warn you one more time that all personal files will be deleted and any apps that did not come with the OS will be removed. Furthermore, if you partitioned your drive, this will restore it to its original state, which means you'll have to set up the partition again.



Windows will then tell you that it's recovering your PC. When finished, the OS is officially reinstalled. You are then taken through the setup process and any updates are applied. After the setup is finished, you can sign into Windows.

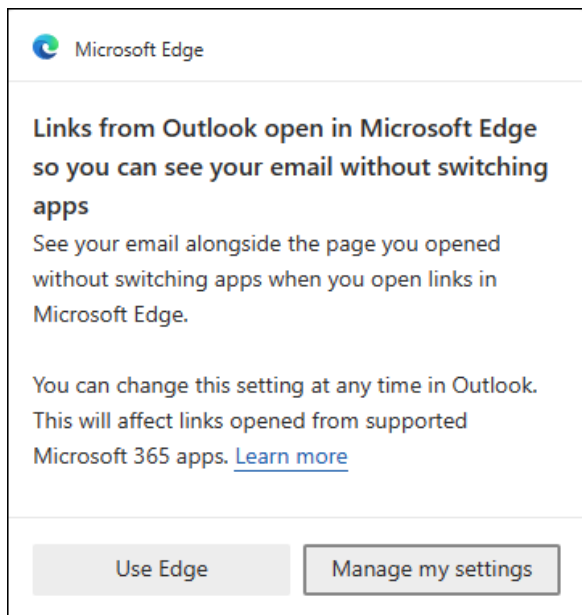
Again, your personal files won't be here, but hopefully you've backed those up elsewhere so you can now restore them. You'll also need to reinstall your desktop applications.

Outlook links open in Edge

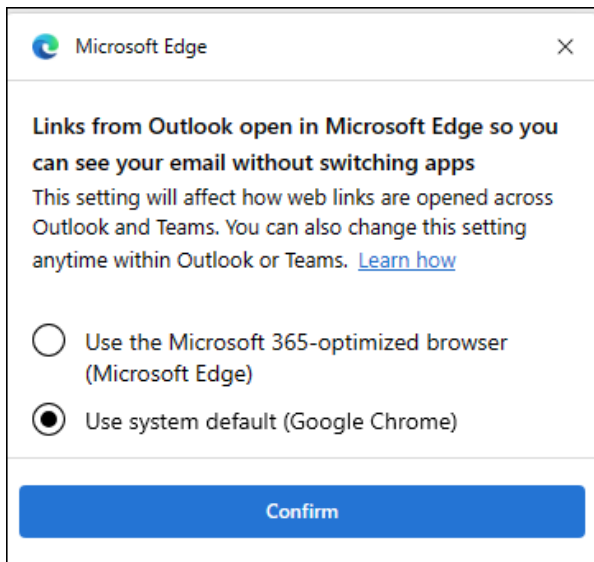
If you're an Outlook user, you may have noticed a new, unexpected behavior when clicking on a Web link in an email – or anything else in Outlook, for that matter. Outlook links now open in Microsoft Edge, even if you have some other browser configured as your default browser in Windows. Microsoft says the change was made to make working with Outlook more seamless when accessing Web content. That may be great for some users, but if you aren't among them and would prefer to have links open in the browser you've chosen to be your default, read on.

The first sign that something has changed

The first time you click on a link in an Outlook email (or contact or calendar event) you will be presented with a dialog box informing you of the change. If you're happy with links opening in Edge, click the **Use Edge** button.



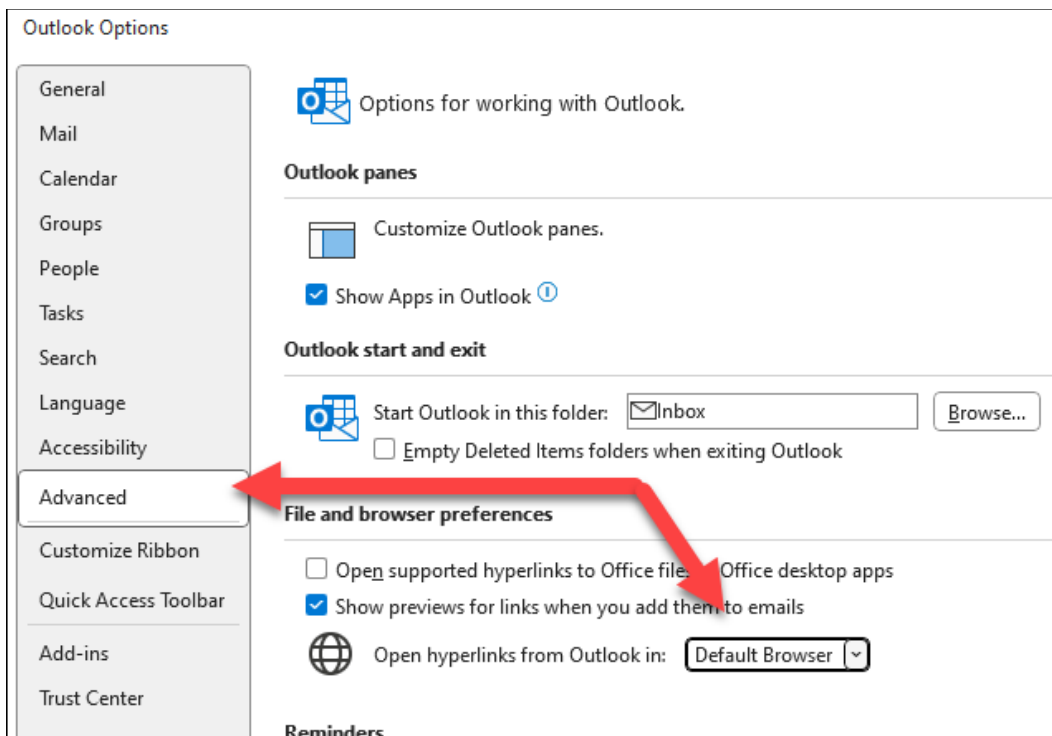
If you click the **Manage my settings** button instead, you will be presented with another dialog box, where you can opt to use your system's default browser – in the screen shot below the default browser is Google Chrome. Click the **Confirm** button to make the change.



Another way to make Outlook respect your default browser

If you didn't see the dialogs shown above, and you still want to have links open in your default browser, you can make the change on Outlook.

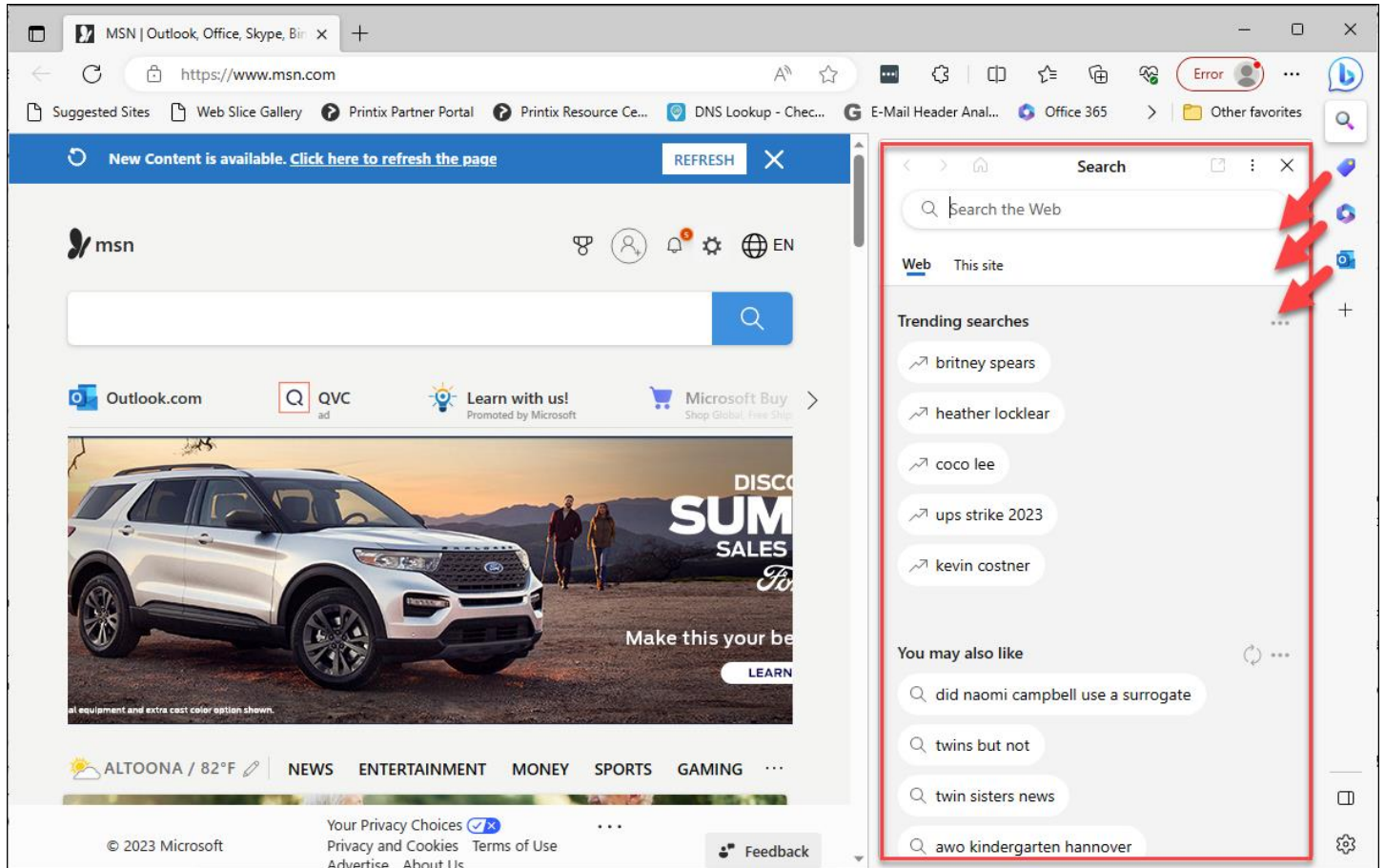
1. In Outlook, click File > Options > Advanced
2. In the **File and browser preferences** section, select **Default Browser** from the drop-down list.



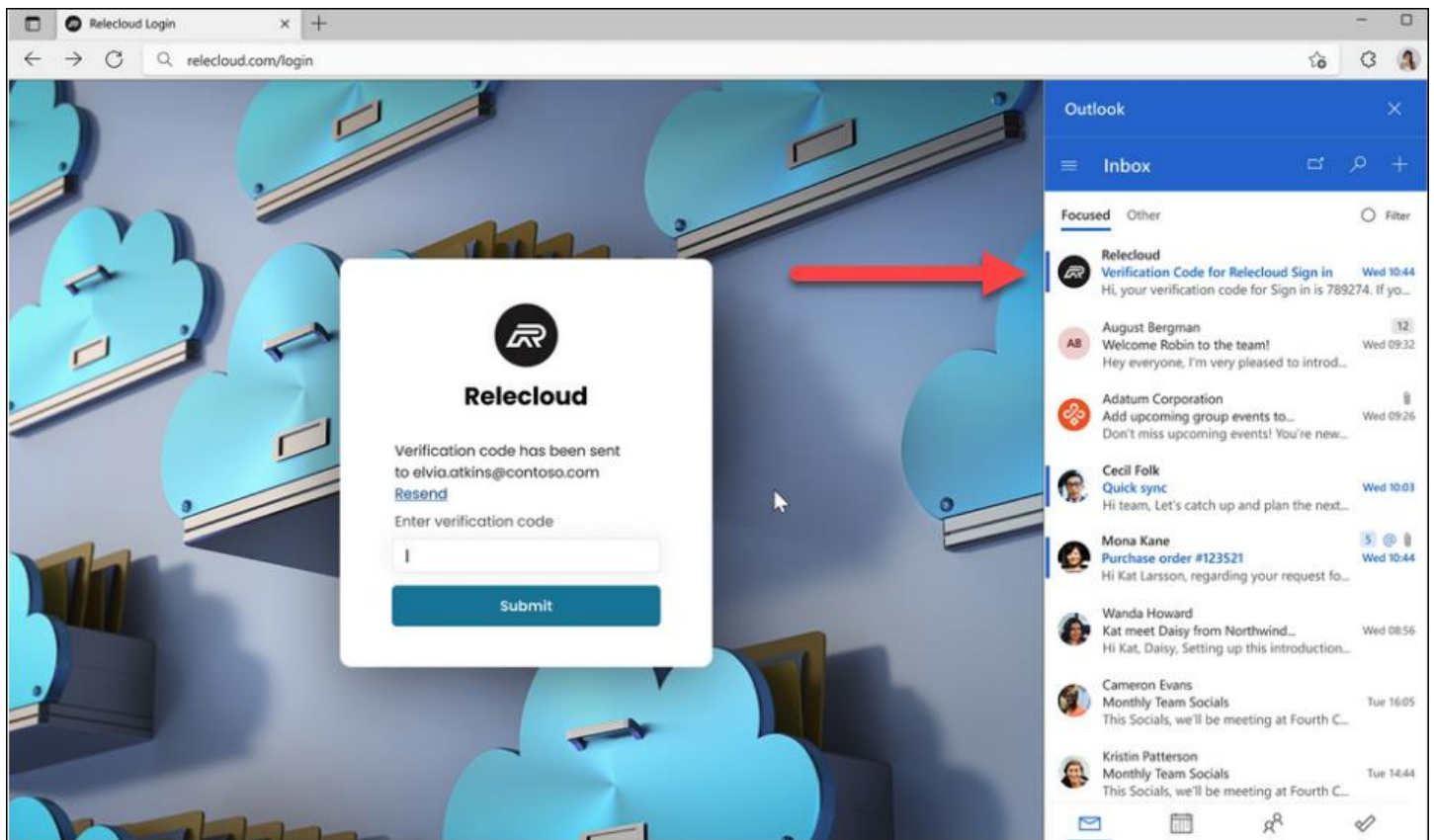
The way it's supposed to work

Edge features a component called **the sidebar**. It appears on the right side of the Edge browser. If you don't see it, you can use a keyboard shortcut to open it – **Ctrl+Shift+I**

When the sidebar is open, you will see icons along the right side that allow you to open various functions of the sidebar, such as Search, Shopping, Microsoft 365 and Outlook. Clicking on any of these buttons expands the sidebar and reveals options for working with the choice you've made.

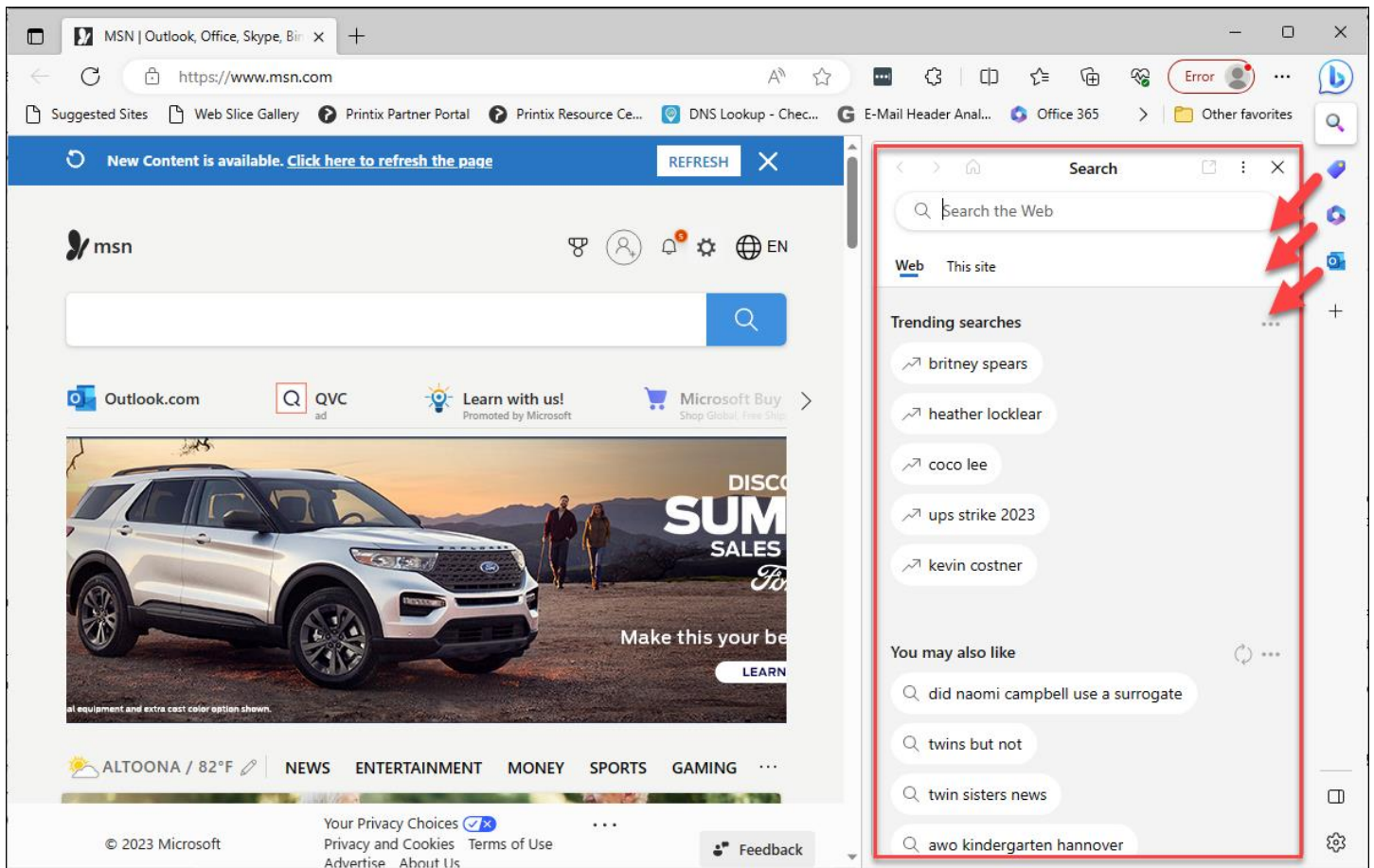


In Microsoft's design, Outlook links are supposed to open this sidebar and display the email from which the link was clicked, however we did not find this to be the case. Without making any changes, and just allowing Edge to be Edge, we found when we clicked a link in Outlook, Edge opened to the correct page, but the sidebar did not open to reveal the Email that contained the link.



After some tinkering we found that by clicking the Outlook button on the sidebar (The third red arrow down in the screenshot, 2 above), we could sign into Outlook with our 365 business account and then the sidebar would display our inbox; cool, to be sure, but still not what Microsoft advertised with this feature.

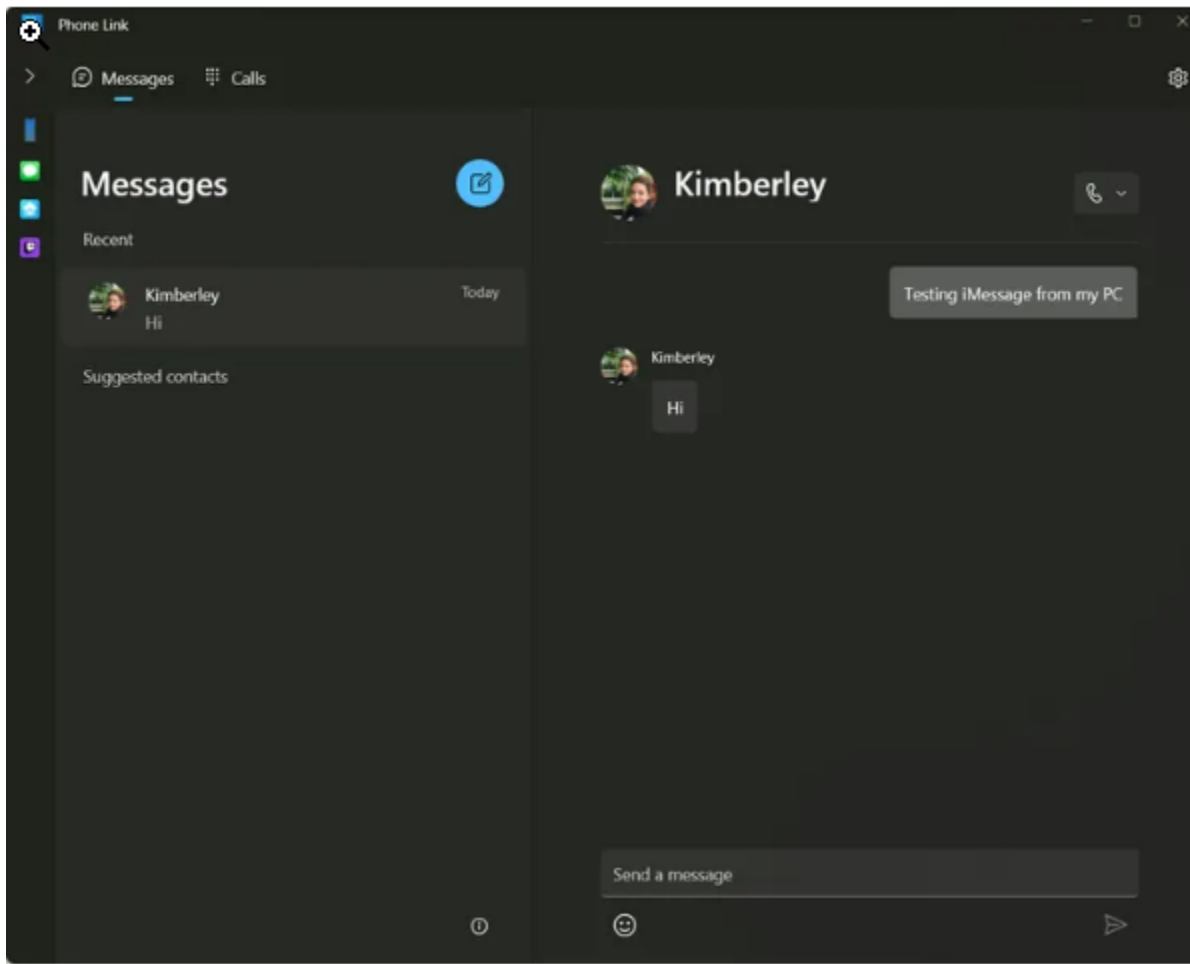
To be fair, this whole idea was introduced late in 2022 and has been under development ever since. When first introduced, Microsoft limited its use to 365 Personal or Family plans, which may still be the case. We are using 365 business plans, which may explain why our results didn't match our expectations. You may find that clicking a link in Outlook does, for sure, open that email in Edge's side bar, but if you don't, and Edge simply opens and displays the page associated with the link, you can decide then if you want to turn the feature off and go back to opening Outlook links in your default browser, as described earlier.



Text from your computer – Introducing Phone Link for IOS

If you are a Windows 11 user, you'll be pleased to know that you can now link your IOS mobile device directly to your PC, meaning you can now make and receive calls, text, and mirror your phone's notifications to your Windows PC.

Android users have been able to do all of this this and much more with Phone Link for years, but iPhone users have had to sit by and watch on with envy. The new Phone Link update for iOS is very basic though and literally only supports making and receiving calls, sending and receiving messages to single contacts and not groups (via iMessage), and viewing and dismissing notifications. You can't do any fancy stuff like running phone apps on your PC or mirroring your phone's display.

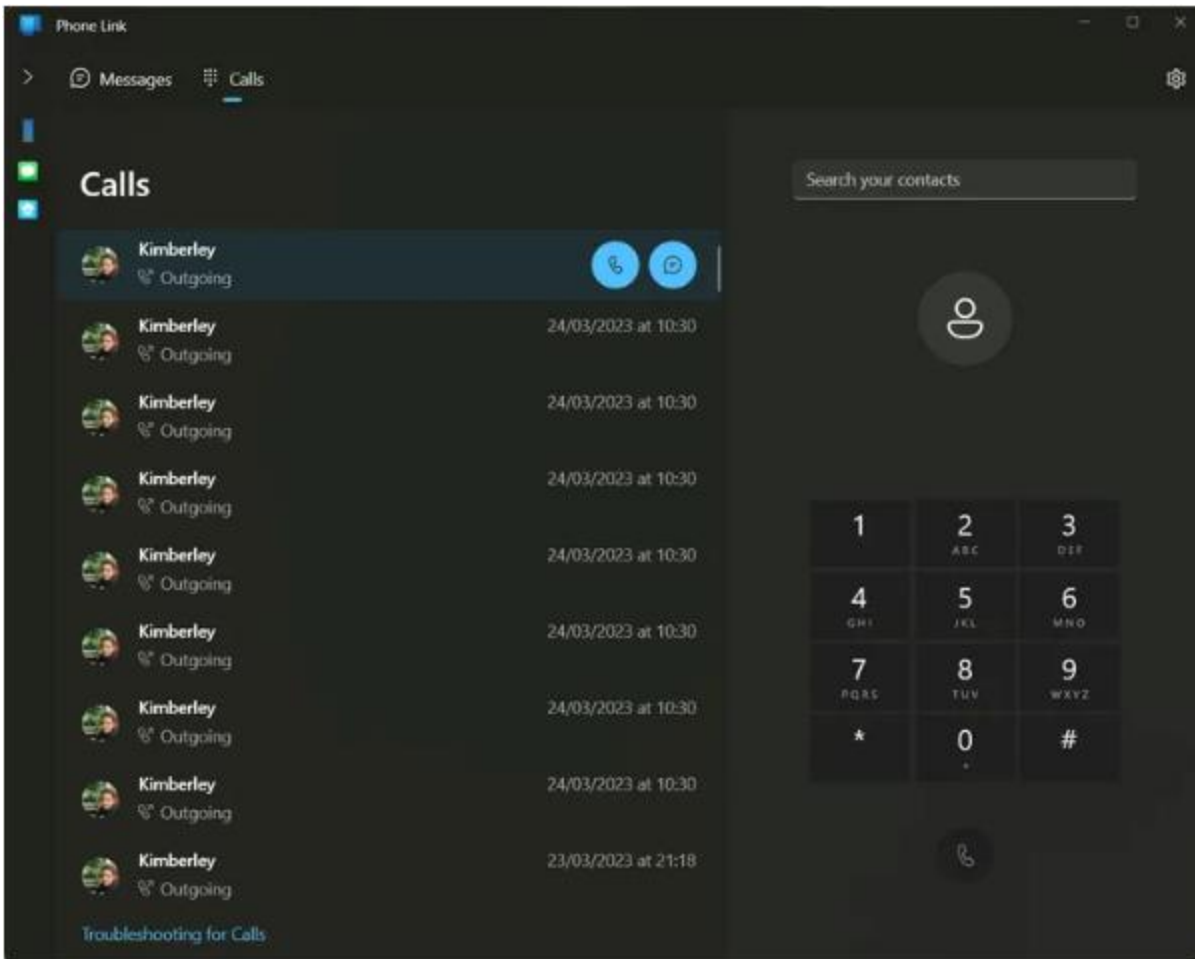


Sending and receiving messages via iMessage on a Windows PC with Phone Link.

The setup process between iPhone and PC is simple. Phone Link prompts you to scan a QR code from your iPhone to link it to Windows, which automatically opens a lightweight App Clip version of Phone Link on iOS to complete the Bluetooth pairing. Once paired, you have to take some important steps to enable contact sharing over Bluetooth, enable “show notifications,” and allow system notifications to be shared to your PC over Bluetooth. These settings are all available in the Bluetooth options for the device you paired to your iPhone.

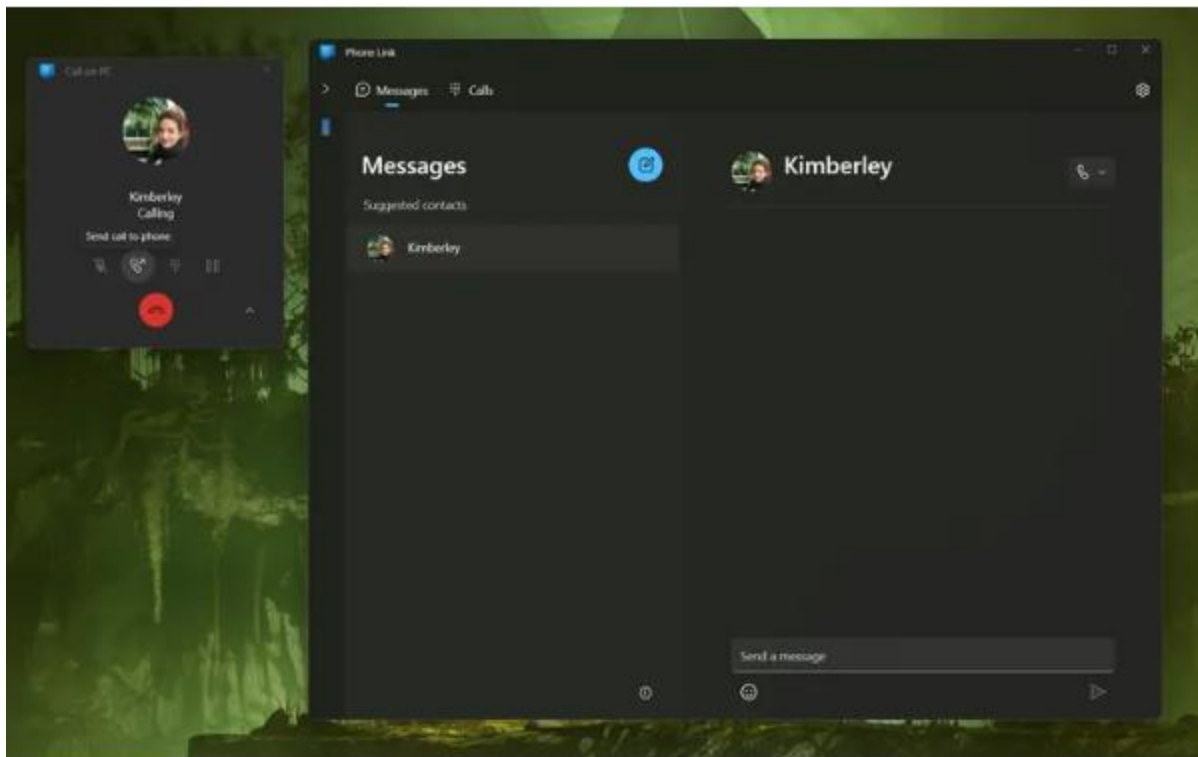
When you receive a message that was sent via iMessage it will appear in Phone Link and you can reply, and it will also be sent via iMessage so those all-important blue bubbles don’t get broken. But the experience isn’t ideal. You don’t get a full message history here, which means you’ll only see messages from when your PC was on and paired to your iPhone. Notifications for messages also still appear on your phone, so you might get done messaging someone and still see a notification for a message you’ve already read on your PC.

Microsoft’s Phone Link works by sending messages over Bluetooth to contacts. Apple’s iOS then intercepts these messages and forces them to be sent over iMessage, much like how it will always automatically detect when you’re sending a message to an iPhone and immediately switch it to blue bubbles and not the green ones sent via regular SMS. Phone Link intercepts the messages you receive through Bluetooth notifications and then shows these in the client on Windows.



You get a full call history with Phone Link

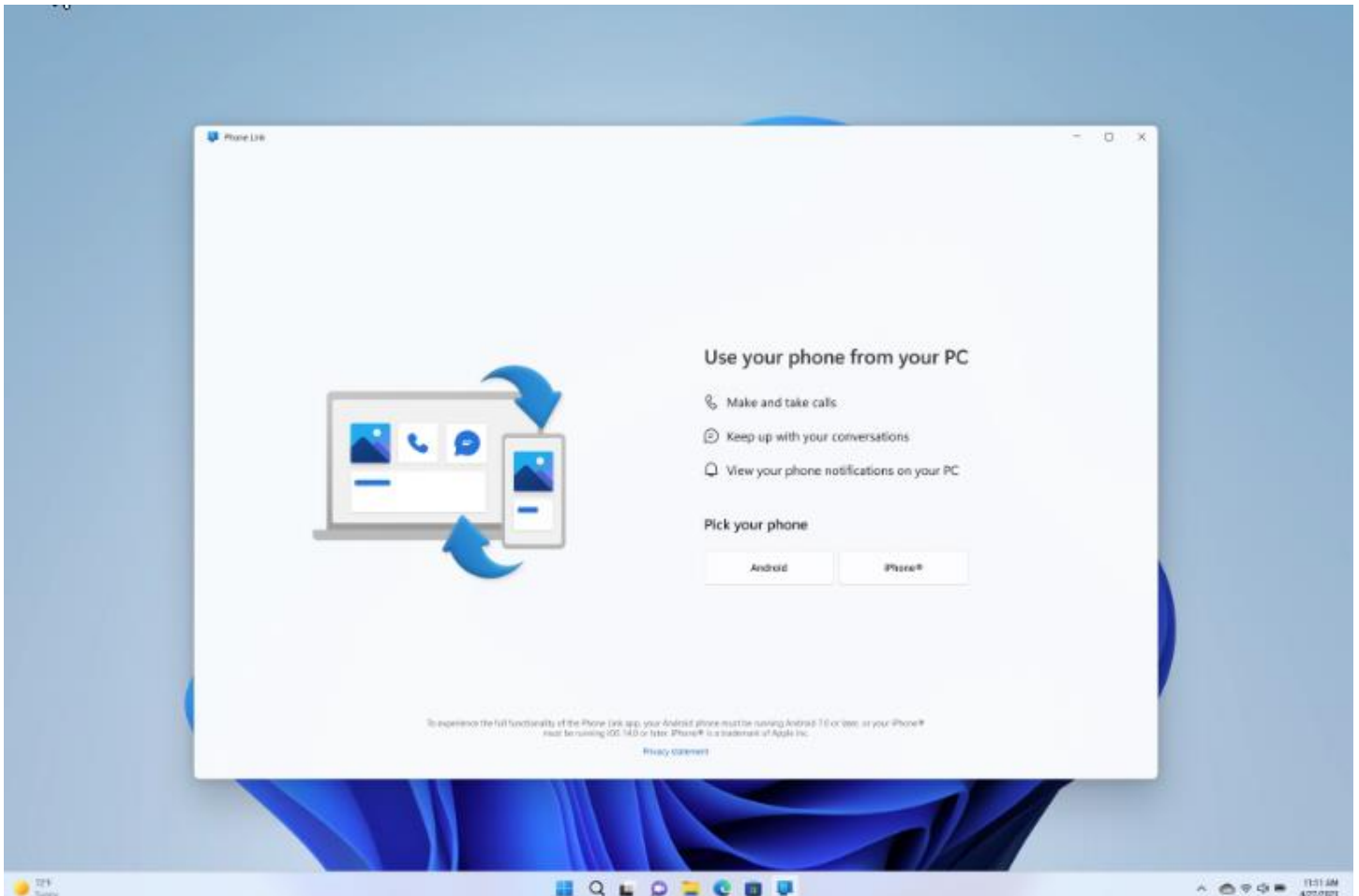
Elsewhere, calling works just as you'd expect. You can now use your XLR microphone to speak to people, and answer calls on you PC without touching you iPhone. That's a neat upgrade, even if Bluetooth does add a tiny bit of latency to calls. You can also choose to transfer a call back to your iPhone if you want to leave your PC, or simply pick up your phone and switch the call options there.



You can easily transfer calls between an iPhone and a Windows PC.

How to get started using Phone Link on Windows 11 PCs

To begin using Phone Link or to check if it's enabled, simply start with the Search box on your Windows taskbar to find "Phone Link." A [guided step-by-step installation](#) will walk you through setting it up.



Note: Phone Link for iOS requires iPhone with iOS 14 or higher, Windows 11 device, Bluetooth connection and the latest version of the Phone Link app. Not available for iPad® (iPadOS®) or macOS. Device compatibility may vary. Regional restrictions may apply.

UPS is not just for delivering packages!

We're all familiar with the brown trucks that pull up in front of our homes and disgorge goodies to our doorsteps. This article is not about *that* UPS. For the purpose of this article, we'll be talking about *this* UPS.



UPS stands for Uninterruptible Power Supply and it is used to provide backup power, protecting equipment from damage in the event of grid power failure.

An uninterruptible power supply (UPS) is a type of device that powers equipment, nearly instantaneously, in the event of grid power failure, protecting the equipment from damage. UPS systems vary significantly in their design and functionality, affecting the amount of time they can power equipment, their ability to improve power quality, and their cost.

Data servers, computer systems, industrial settings, and laboratories commonly use UPS systems. Because a UPS protects equipment, it is appropriate for any situation where electrical loads may be sensitive to power loss or other power quality issues. For example, UPS systems are commonly used for computers and servers because power loss to these loads may result in loss of data or component damage.

UPS systems serve two main purposes. They provide backup power as quickly as possible in the event of power loss, and they offer some degree of protection from power quality issues that may damage equipment. UPS systems fulfill these goals to varying degrees depending on their design and features, which ultimately affect their costs.

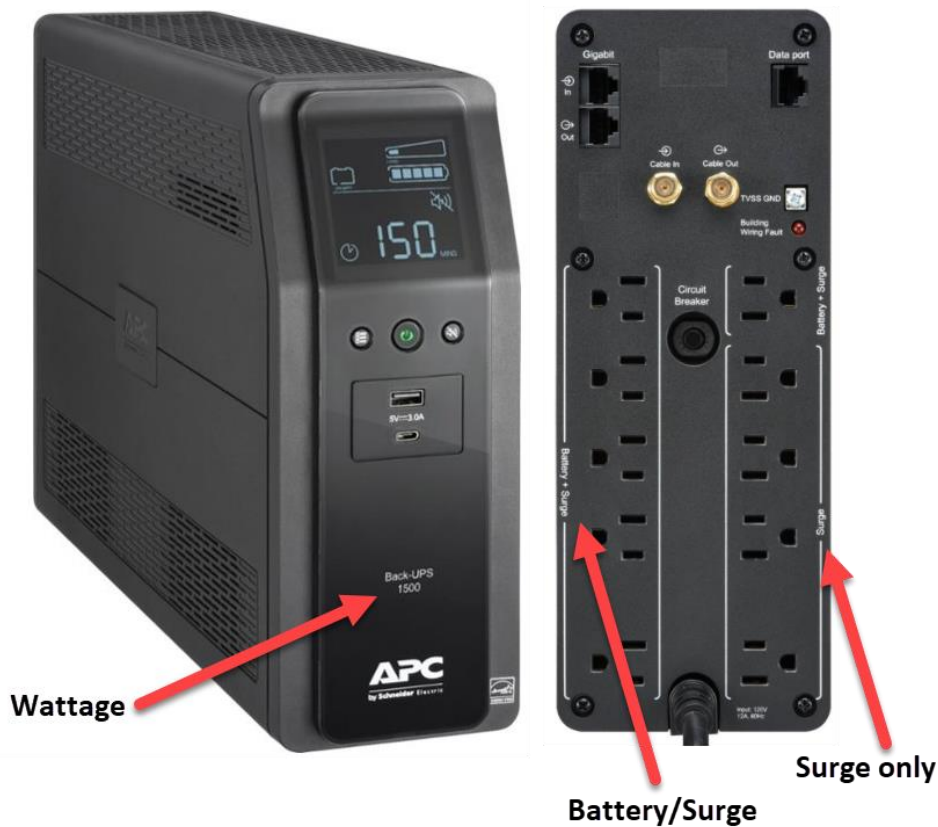
In a common scenario a thunderstorm interrupts power to an office and all the computers and the server simply flick off when the power is gone. This can cause issues with the operating systems in these sensitive machines, and this is especially critical when it comes to the server. In most businesses the server is the backbone of the company's data storage and a sudden power loss could seriously damage that stored data and even cause the server to fail to restart. Workstations are also at risk, and depending on mission-critical nature of the workstation, a power failure can be no less damaging.

A UPS is not designed to keep your systems running long-term after a power failure. Some UPS units will keep a computer/server running for several hours before the battery in the UPS dies. If the battery dies before someone can gracefully shut down the connected computer, the result is nearly the same as if the power had suddenly gone out, making the UPS ineffective. During a power failure, the best course of action is to have someone do a normal shutdown of the system and then wait for power to be restored.

There are many types of UPS units, all are rated by wattage. The larger the wattage, the more power consumption the unit can handle. Wattage is usually printed on the front of the UPS. A 1500w power supply (pictured below) can easily handle a server and all the other main network gear (firewall, switch, modem, etc.) required to keep your network running. A 500w UPS is sufficient to power a workstation. TekResults recommends that each mission-critical workstation have its own UPS and certainly all servers as well.

Connecting your device to a UPS

The UPS plugs into a normal 110 electrical outlet. Your computer/server and other devices plug into the back of the UPS. The front of the UPS normally has a display that will tell you how big a load the UPS is drawing and how much charge is left in the battery. There's really only one thing to be careful of and that is to make sure you connect your devices to the battery side of the UPS. Most UPS units come with a strip of inputs that employ the unit's battery, while a second strip of inputs only provides surge protection and no battery support. These will be clearly marked on the UPS. Although it's a little difficult to make out in the picture below, one side is labeled **Battery * Surge**. The other side is labeled **Surge**. If you want to keep your computer/server running after the lights go out, make sure you connect it to the battery side of the UPS.



UPS battery replacement

UPSs can easily be forgotten as they have long lifespans and generally sit at the bottom of the tech rack. However, if neglected, these devices can be the Achilles Heel in your disaster prevention systems and redundancy planning. A UPS battery needs to be replaced from time to time to ensure continued service. This replacement is not difficult, and the UPS itself will come with instructions on how to change the battery, but if in doubt (or in case of lost directions) it would be advisable to take it somewhere a technician can do the work for you. If you live in the State College/Bellefonte area, we can recommend [Battery Outlet](#).

So how do you know when it's time to change the battery? Here are 3 tips.

It's been 3 to 5 years since the purchase date

While a UPS lifecycle can extend to 10+ years, the life cycle of many batteries is 3 to 5 years. It is best to consider a battery replacement in the 3-to-5-year range depending on the critical nature of the systems that the UPS is supporting.

The UPS is beeping or displaying caution lights

A tell-tell sign that a UPS battery is about to fail is the existence of a sharp beeping sound coming from the UPS or amber caution lights or symbols displaying on the unit's digital display. If either of these exist, testing should be done immediately and if appropriate, the batteries replaced.

Systems go offline during a power outage

Obviously, if the power goes out and the UPS system fails to keep your systems online, the battery should be inspected and replaced. This assumes the devices that went offline were plugged into using the battery side of the UPS.

If you are unsure about the status of your UPS (or lack thereof), feel free to contact us for an assessment and/or recommendations.