Bits of Bytes

Newsletter of the Pikes Peak Computer Application Society, Colorado Springs, CO

Volume XLI | November 2021 | Issue 11

Next P*PCompAS meeting: Saturday, 6 November 2021
Cary Quinn will describe old vs new media and the changing of social networks.

The Prez Sez

by John Pearce, President, P*PCompAS

The next membership meeting is at 9 AM MT, Saturday, November 6th, at Springs Community Church. The meeting will also be available via Zoom. VP Cary Quinn is planning a presentation on the crossover from old to new media and navigating the changing landscape of social networks. Remember the change to Standard Time (fall back one hour) is on Sunday, November 7th.

Dues for 2022 may be paid to Membership Chairperson Ann Titus at any of the next three meetings or may be mailed to her. Ann's address is in the membership list. Dues remain $1 per year. The non-renewals are removed from the mailing list at the end of January 2022.

In case you missed it, Stanley Rapaport died on October 4th. His wife, Mary Alice Neal, said he had been in poor health for some time.

I have moved the Volunteers' Luncheon to February 12, 2022. Also, we need to consider whether to move, cancel, or hold the January 2022 meeting because the first Saturday is also January 1.

I was pleasantly surprised to see most of the digerati present at Perkins when I arrived about 8:15 AM. It seems like most people arrived about 8 AM so let's move the breakfast back to the original 8 AM time. That might resolve our seating issue with Perkins. Thanks to Joe Nuvolini for making the arrangements. ☺

Meeting Minutes

by Greg Lenihan, P*PCompAS Secretary

President John Pearce began the 2 October 2021 hybrid membership meeting at 9:00 am. David George provided coffee and John Pearce brought doughnuts. A $1 donation is requested for coffee from members. A motion was made to approve the minutes from September and they were unanimously approved.

OFFICER REPORTS

Vice-President Cary Quinn said next month he may give the presentation, or else it will be an APCUG presentation.

Secretary/Newsletter Editor Greg Lenihan announced the next newsletter deadline as 23 October. One person reported being unable to print the newsletter. Greg sent another copy and that seems to have worked.

Treasurer Toni Logan stated we received 12 cents in interest last month. We have $137.29 in checking, $2931.57 in savings, for a total of $3068.86.

Membership Chair Ann Titus is taking dues ($1) for next year. She sent an e-mail out to the membership and requests you notify her of any changes to the roster.

BOD Chair/Nominating Chair/ Librarian Paul Godfrey had nothing to report for the library or BOD. Paul has been asking members about running for office. Cary Quinn will be on the slate for president, Jeff Towne possibly will run for VP, Toni Logan can stay on as treasurer, and for now, Greg Lenihan is on the slate for secretary, waiting to see how his job is affected by the vaccine mandate. John Pearce is willing to serve on the Board. We will need someone for hospitality.

OLD BUSINESS: None

NEW BUSINESS

Harvey McMinn has been looking into a sound system that works with the sound board in the room and will connect to the club computer, mostly to help with Zoom calls. Paul Godfrey offered to check with his church to see their setup. Harvey believes the equipment will cost less than $120. A motion was approved to allow Harvey and Paul to work on acquiring a sound system for not more than $200.

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In This Issue

Articles

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Nominating: Paul Godfrey, Ann Titus, & Harvey McMinn

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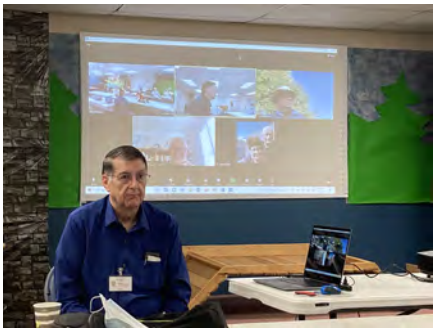

John Pearce leading the 2 October membership meeting with Zoom attendees in the background.

Those physically present at the 2 October "hybrid" membership meeting

Digerati attending the breakfast at Perkins on 16 Oct. Thanks to Cary for taking the picture.

Forget Windows 11: Windows 10's 21H2 Update Arrives in November

by Dave Leclair, reprinted with permission from HowToGeek.com

Original article at: https://www.howtogeek.com/763675/forget-windows-11-windows-10s-21h2-update-arrives-in-november/

If you're not ready to give up on Windows 10, you can rest easy knowing that Microsoft isn't, either. The company just announced that the 21H2 Update is coming in November 2021. It doesn't bring much in terms of new features, but at least it's keeping Windows 10 alive and kicking.

What's New in November's 21H2 Update?

We know the Update is coming in November because the latest Windows Insider release called it the "November Update" instead of just using the 21H2 name.

To say this is an underwhelming update would be an understatement. It's not going to change the way you use your computer completely. In fact, you'll barely notice that the Update was even installed.

21H2 is using the Vibranium platform release that Microsoft used for several recent updates. That means it'll be super tiny and only take a couple of minutes to download and install.

With the Update, the first exhilarating feature you'll get is WPA3 H2E standards support. That'll help you lock down that Wi-Fi security, which is always a nice change.

Windows Hello for Business was supposed to get a new deployment method called cloud trust to support simplified passwordless deployments. That means that businesses who want to use Windows Hello would be able to get it up running more quickly. However, the feature has been delayed. Microsoft broke it down in its blog post:

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Meeting Minutes (Cont. from page 1)

John Pearce looked at our expenses over three years (up to 2020) and they totaled $3603. These included luncheons, gifts to the church, fees, equipment, and miscellaneous withdrawals. This indicates that we can keep our dues low because we have enough in our treasury for now.

John Pearce ran the Windows 11 compatibility program on the club computer and it passed. That means we don't have to upgrade the computer when Windows 11 comes out. John will be taking the club computer home to install Windows 21H1.

Joe Nuvolini said it is getting harder for him to set up the equipment for our monthly meetings, and asked people to think about taking over that responsibility.

ANNOUNCEMENTS

The next social breakfast meeting will be Saturday, 16 October. We will be meeting at Perkins at 8:30 am, and Cary Quinn volunteered to get there around 8:00 am to ensure we have tables set up in the room. Future breakfasts may be held at the IHOP on Stetson Hills and Powers.

Our next membership meeting is on 6 November.

There will be no Volunteers Luncheon for the one postponed last year. Our luncheon to cover this year is tentatively scheduled for 5 February 2022 (*see Prez Sez for update*). John Pearce will check with Old Chicago's on Austin Bluffs & Academy.

AROUND THE ROOM

Joe Nuvolini suggested we have a presentation on weather reporting like we had in the past.

Toni Logan said that thanks to Nuvo's article on car cell phone holders, she got one ($10). She mentioned seeing Epson EcoTank ads on TV for printers that hold a lot of ink, and remembers the day when we inked our own ribbons. Paul said JetEx was still in business and Cartridge World has locations at Garden of the Gods and another on Briargate Blvd.

Bob Kotz asked about the perpetual license for Microsoft Word arriving next week as part of Office 2021. Does it work on any version? It probably works on Win 8 and 10 and the upgrade should be available with Microsoft Office 365. Some features may be missing from the various programs.

Cary Quinn asked about some of the issues people had last month. He asked Paul Godfrey if he still had a power supply problem, and Paul said he is using a different computer. Cary asked if he'd like to bring in his computer next month to look at.

Chuck Harris said he obtained a 2012 Acer and wondered if it would still work. Others said they had old equipment that old that still worked, so Chuck might try it.

PRESENTATION

Susan Meuller (Genealogy SIG coordinator, Computer Users of Erie), gave us a genealogy presentation via Zoom. She had many good sites, resources, and tips for those interested in the research. If you'd like a copy of her presentation, contact Cary Quinn. ☺

How to Upgrade an Old, Slow Computer (and When You Shouldn't)

By Bob Rankin, http://askbobrankin.com, published through the APCUG

Is your not-so-new computer struggling to keep up with the latest apps and modern operating systems? Maybe it's bogged down with the weight of cosmic computer crud that's built up over the years. Should you junk it and buy a new one, or upgrade its hardware? The answer is highly dependent upon your specific circumstances, but here are my guidelines for making that decision, and some Windows 11 considerations too...

Should You Upgrade Your Old, Slow Computer?

First, ask yourself if your computer is too slow for you, or for someone else. Did you think, "Gee, my computer is slow" before your friend with the brand new computer said, "Gee, your computer is slow!"? If you're getting done all you want to get done, and fast enough for you, you may not need to upgrade. But if you're not satisfied, read on!

Some upgrades do get more work done faster, while others just make work more pleasant for you. A bigger monitor may be just what your tired, watery eyes need. A more ergonomic keyboard or mouse is another comfort upgrade; not that comfort doesn't improve performance, but it's mainly the comfort that counts. Twenty years ago, I was diagnosed with carpal tunnel syndrome. My doctor suggested both drugs and surgery, but switching to an ergonomic keyboard with the split/curved key layout completely eliminated my pain. When I type on a "regular" keyboard (the cheap, rectangular ones that usually come with new computers) I feel that familiar wrist pain again.

Upgrading a monitor is a significant investment. But if you're often using two programs at once, or find your limited screen real estate is slowing you down (switching from one app to another, or always scrolling), a larger, higher resolution monitor may be a good investment. But you should also consider ADDING a monitor. Check out my article Dual Monitors: Good Reasons to Upgrade and consider the potential benefits of adding a second screen to your desktop setup.

Amazon has a selection of 24-inch computer

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Forget Win 11 (Cont. from page 3)

The new Windows Hello for Business deployment method known as 'cloud trust' is still under development and will be delivered in a future monthly update to the November 2021 Update. We will provide more information in the future as this feature becomes available.

Microsoft describes the final new thing coming to Windows 10 through 21H2: "GPU compute support in the Windows Subsystem for Linux (WSL) and Azure IoT Edge for Linux on Windows (EFLOW) deployments for machine learning, and other compute intensive workflows."

Are You Sticking with Windows 10?

Microsoft plans to support Windows 10 for a long time, but these are the kind of updates you should expect going forward, as the company has clearly shifted its focus to Windows 11 and exciting new features will continue to come to the latest version of the operating system while Windows 10 will get security fixes and minor tweaks.

RELATED: ***You Can Finally Try Android Apps on Windows 11***

In Memoriam

Long time member Stanley Rapaport, 91, passed away on October 4th. He was humble and generous, often bringing crates of pineapples to a meeting to hand out. He was an expert on filling inkjet cartridges and knowing the best deals on buying ink. Stan requested no service for himself. To honor him, his request was to do a kind deed for someone in his name.

Slow Computer (Continued from page 4)

monitors (rated 4-stars or higher) starting at $139. This Sceptre 24-inch IPS Monitor has both HDMI and VGA Ports, full HD resolution, built-in speakers, and tiltable stand. If you want something larger, this ViewSonic 32-Inch 32 Inch 1080p Frameless Widescreen IPS Monitor is available for $279 with free shipping. Two of those would make an awesome dual-monitor setup!

Keep in mind that you may need a better graphics card to match the ports and capabilities of a modern monitor, or a dual-monitor setup. A dedicated graphics card can take some computing burden off your CPU, making actual computation faster; but the increase in CPU performance won't be very large.

Upgrading Memory and Hard Drive

More RAM memory provides significant performance boosts at reasonable cost, up to a point. If you have too little RAM for the types of applications and the size of data files that you use, a lot of time and CPU power is wasted swapping data from RAM to disk and back again in "pages." On the other hand, excess RAM just sits there idle, a waste of money that makes no discernible difference in performance.

A rule of thumb is that general home users need a minimum of 4 GB of RAM; business and power users, 8 GB or more; and only the busiest video editors, database administrators, or gamers need 16+ GB of RAM. But modern versions of Windows can work with up to 2 TB (terabytes) of RAM memory. The operating system you have is very important when considering buying RAM. 4GB of RAM memory can cost as little as $30. See my article Will More Memory Speed Up Your Computer? for more tips on upgrading your system's RAM memory.

Increasing the size, thoughput and access speed of hard drive storage is a tempting upgrade option. A traditional magnetic hard drive that spins at 7200 rpm is much better than one spinning at 5400 rpm. Solid-State Drives (SSDs) are faster, but they are more expensive compared to magnetic hard drives. But here's something to consider… right now, a 1 terabyte (1000 gigabytes) magnetic hard drive costs about the same as a 256 GB SSD drive -- roughly US$40. But if you've only got 100 GB of data, the SSD is obviously a better buy, even though it holds about one fourth as much data.

If you're thinking about a new hard drive because you're running out of space to stash your stuff, **first try a little spring cleaning, and see how many gigabytes of garbage you can get rid of**. Unwanted software, temp files, an old operating system, and duplicate files can chew up a lot of space. A careful pruning of music, photos, and video files may yield big gains as well. See Free Tools to Tune and Optimize Your Hard Drive for more tips and free software you can use to get the job done.

A word about Windows 11 seems appropriate here. You're probably aware by now that Microsoft has released Windows 11, but there has been much confusion about the hardware specs required to run the newest version of the Windows operating system. The short answer is if your computer is more than three years old, it probably won't make the cut. To run Windows 11, your PC must have the Secure Boot feature, a TPM 2.0 chip, and an 8th-generation or newer Intel CPU (or certain AMD Ryzen processors). That's geeky, I know, but you can run the Microsoft PC Health Check App to find out if your PC is compatible.

So here's my advice for Windows 10 users: If you're thinking about a new computer, it will come with Windows 11, so on the hardware front you're covered. If your computer doesn't have all the bells and whistles required to run Windows 11, you're really not missing much. Windows 10 will continue to run just fine on your current PC, and is supported through October 2025.

Deciding whether to upgrade or buy a new machine can be difficult. But doing the actual upgrades requires only a screwdriver and a little gumption. If you are comfortable installing upgrades yourself, just add up the costs of planned upgrades and compare it to the price of new machines. But that simple cost analysis ignores half the cost/benefit ratio. You really don't know how well an upgraded computer will perform until after you buy and install the upgrade(s), so it's impossible to compare it to a new machine.

Generally, I would buy new rather than spend more than a third of new's cost on upgrades.

Here's one zero-cost option for speeding up an older computer. Consider moving away from

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What is a TPM? And Why Do I Need One?

You may already have one

By Leo A. Notenboom, https://newsletter.askleo.com; published under the Creative Commons License

Windows 11 hardware requirements brought the TPM, or Trusted Platform Module, into the spotlight. I'll touch on what it is, why your machine might not appear to have one, and what to do if it doesn't.

Applies to Windows: 11

OK, Windows 11 says I need a TPM 2.0. What is that, how do I get it, and what's it all about, anyway?

Microsoft created a fair amount of chaos and generated a fair amount of flak for requiring a version 2.0 TPM in order to run the soon-to-be-released Windows 11. It didn't help that they changed their minds, changed their minds, and changed their minds yet again.

Especially over a feature that most people know nothing about.

Let's dive in to the what and why.

What's a TPM?

The Trusted Platform Module is a hardware device that implements several security and cryptographic functions in ways that are more secure and resilient than performing those functions on the PC itself. Most computers manufactured in the last five or so years will have support for TPM 2.0, though it may need to be enabled in the UEFI/BIOS. Running "tpm.msc" is a quick way to determine the status of your machine's support for TPM.

TPM: Trusted Platform Module

A TPM is a hardware component of your computer. Per Wikipedia, it's "a secure cryptoprocessor, a dedicated microcontroller designed to secure hardware through integrated cryptographic keys."

The key words in that description are *secure* and *cryptographic*. The overarching goal of a TPM is to enable greater security for the computer, as well as for any security-related applications that choose to use TPM.

The TPM can be used for a myriad of security-related functions. Without going into terribly geeky depth, the kind of things the TPM is used for include:

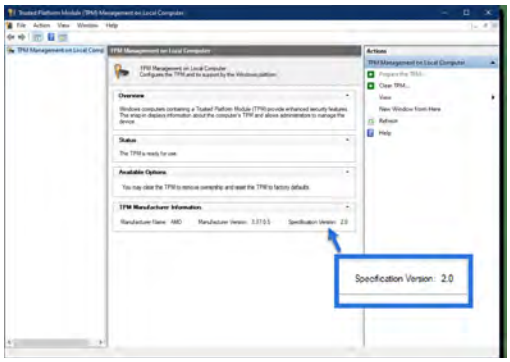
- Securely storing a BitLocker whole-disk encryption key.
- Ensuring that the boot process or system software hasn't been tampered with.
- Generating random numbers (critical in encryption).
- Generating and storing encryption keys.

That's just the tip of the iceberg.

One of the important aspects of the TPM is that it's a separate device — meaning that whatever it does internally is not visible to software running on the PC itself — and no third-party software runs on the TPM itself. This isolates its activity and internal data (which may include stored cryptographic keys) from any malware on the PC.

Determining if your computer has a TPM

Start by running "tpm.msc". (Use **Windows Key + R** to open the run dialog, type in **tpm.msc,** and click **OK**.)



Continued on page 7

Slow Computer (Cont. from page 5)

Windows, and switching to the Linux operating system. Linux tends to require less in the way of hardware resources, so it can be a good option for older computers that bog down with newer versions of Windows. Check out Linux Mint and Zorin OS as Linux versions that have a familiar Windows-like interface. Zorin lets you configure the desktop to resemble Windows or Mac OS X. ☺

What is a TPM? (Cont. from page 6)

If the report is similar to the one above, then your machine has a TPM, and Windows is aware of it. In the above image, the TPM reports as version 2.0, meaning it meets the Windows 11 requirements.

If tpm.msc reports that no TPM is found, you might still have one. It may just take an additional step or two.

Enabling your TPM

On some machines (my own, for example), Windows reports no TPM is present, even though the computer is equipped with one. If your computer's motherboard was manufactured within the last five years or so, then it almost certainly includes a 2.0 TPM, whether or not Windows reports it as available. You may simply need to enable it.

In my case, that involved two UEFI/BIOS settings:

- Settings, Miscellaneous, AMD CPU fTPM: enable.
- Trusted Computing submenu, Security Device Support: enable.

I have to stress that this was on my machine. Your machine will almost certainly be different. Specifically, different UEFI/BIOS vendors place the options in different places, and the exact type of option exposed may also vary based on whether your CPU is AMD or Intel.

Check with your computer manufacturer for instructions. Given all the confusion and frustration surrounding the Windows 11 announcements, I would hope most will have instructions readily available.

On my two Dell laptops — the oldest purchased in 2016 — TPM 2.0 was present and enabled without my needing to do a thing.

Why TPM?

There are several answers to why Windows 11 will require a version 2.0 TPM:

- Because Microsoft said so.
- Because several large PC customers, such as government or enterprise purchasers, require it.
- Because it enables better security.

It's the last one that matters the most (and is likely the reason for the preceding two). The TPM adds an additional layer of security and enables better security in applications that choose to make use of it. Windows 11 happens to be one of those applications.

Related Questions

Do I have TPM on my computer?

If your computer's motherboard was manufactured after 2009, there's a good possibility you have a TPM. If the motherboard was manufactured after 2015, there is also a good possibility it meets the TPM 2.0 specification. Run "tpm.msc" in Windows, or run the Windows 11 compatibility checker, to find out what you have. If it reports "none found", check with your manufacturer, as you may need to enable the TPM in your BIOS.

Can I get a TPM 2.0 download?

The TPM is a hardware device, so it is not something you can download to a computer. After ascertaining that your motherboard does not have one, you may be able to purchase a TPM hardware add-on. Check with your computer's manufacturer. ☺

What is Bluetooth?

by Ben J Edwards, reprinted with permission from HowToGeek.com
Original article at: https://www.howtogeek.com/748634/what-is-bluetooth/

Bluetooth: You've probably seen it on your smartphone, tablet, Mac, or PC laptop, and you might know it has something to do with wireless communications or peripherals. But what is Bluetooth—and is it similar to Wi-Fi? We'll explain.

What Is Bluetooth?

Bluetooth is a short-range wireless communications standard designed specifically for replacing wired connections in nearby peripheral devices like headsets, speakers, game controllers, mice, and keyboards. It can also be used to transfer files between devices in the same room.

Bluetooth originated as a project to link cell phones to laptop computers in the mid-1990s. With several low-power radio communications protocols in development at Intel, Ericsson, and Nokia, someone proposed that they merge into an industry standard. The standard solidified in 1998 as "Bluetooth" and has been managed by the Bluetooth Special Interest Group, a not-for-profit corporation, ever since.

Why Is It Called Bluetooth?

Jim Kardach of Intel named the Bluetooth standard after Harald "Bluetooth" Gormsson, a king of Denmark and Norway in the 10th century AD. Some historians guess that Gormsson may have acquired his "Bluetooth" nickname from a bad, discolored tooth. In a 2008 editorial for EETimes, Kardach states that he chose the Bluetooth name because the king was "famous for uniting Scandinavia just as we intended to unite the PC and cellular industries with a short-range wireless link." Kardach originally intended the name to just be the code name for the project, but it stuck.

The name choice extended to the logo for Bluetooth, still in use today, which is a combination of two runic letters ("H" and "B") that initialize Harald Bluetooth's name.

Why Is Bluetooth Needed?

The key reason for all wireless technologies is baked into their name: wireless. Wires—or cables—are cumbersome and sometimes expensive. Cables reduce mobility and make devices less portable. Bluetooth uses radio waves to remove the need for cables for peripherals and short-range data transfers, and it does so while sipping power, which makes it great for small, battery-powered peripherals and mobile devices.

RELATED: ***Bluetooth 5.0: What's Different, and Why it Matters***

Wi-Fi vs. Bluetooth: What's the Difference?

Bluetooth is a common feature on modern tablets, PCs, and smartphones. But there's another wireless feature that some may confuse with Bluetooth: Wi-Fi. Why are there two different wireless standards—why not just one?

In general, Bluetooth is designed for ad hoc, direct device-to-device connections. It supports lower data transfer speeds, but uses far less power than other wireless technologies (like Wi-Fi) as a result, so it's great for mobile devices. As a result of the low power usage, it also has a far shorter communications range—usually around 30 feet.

In contrast, Wi-Fi uses a hub-based network designed especially for networking. It supports much higher data transfer speeds but uses more power than Bluetooth as a result. It also supports a much longer range—typically hundreds of feet.

So if you compare the two, the properties of Bluetooth make it great for small gadgets you want to wirelessly link together within the same room, but poor for high-speed network access. And Wi-Fi is great for high-speed wireless networking, but is too power-hungry (and not ideally architected) for ad-hoc connections between devices, although there are exceptions like Wi-Fi Direct.

Ultimately, standards live and die by how widely they get adopted. Bluetooth has wide device support for short-range connections so it will likely be the default method for wireless peripherals for some time to come. Happy linking!

RELATED: ***What Is Wi-Fi Direct, and How Does It Work?*** ☺

How to Access the Windows 10 Startup Folder

by Joe Fedewa, reprinted with permission from HowToGeek.com

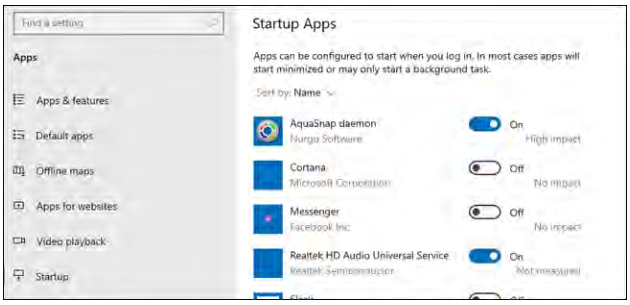
Original article at: https://www.howtogeek.com/754239/how-to-access-the-windows-10-startup-folder/

Windows 10 moved the "Startup" folder out of the spotlight, but it can still be found if you know where to look. It contains apps that run when you sign in to your computer.

Startup Folder vs. Settings App

To stop apps from starting when you sign in, you should probably use the Startup Apps screen in Windows 10's Settings app. This is where you can toggle on or off apps that want to run at startup. It works well and shows some apps that won't appear in the Startup folders, but you can still access them.

For example, if you want to make an application start every time you sign into your computer, you can add a shortcut to it to the Startup folder.



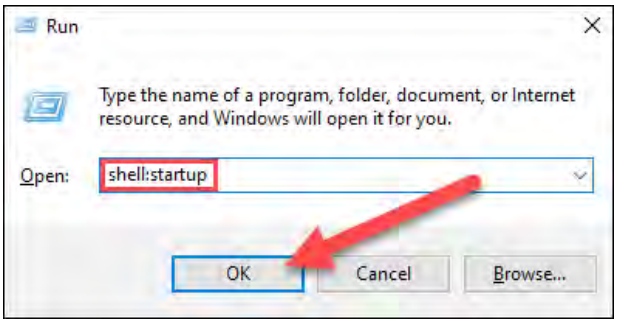
RELATED: ***How to Manage Startup Programs in Windows 10's Settings App***

How to Open the Startup Folder

There are two locations you'll need to know to find the "Startup" folder. One is for determining the apps that start up on your personal account, the other is for all users. Programs that are put in these folders will launch when the PC is started. In general, you'll want to put shortcuts in this folder, not EXE files.

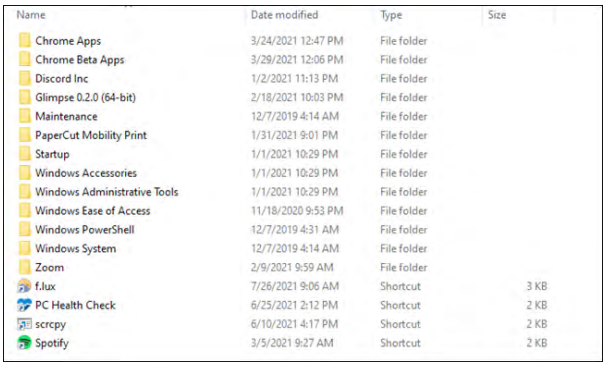
To get started, use the Windows + R keyboard shortcut to open the Run menu. Type one of the following in the box and press Enter or click "OK."

- **Personal User Path:** shell:startup
- **All Users Path:** shell:common startup



The Startup folder will immediately open and you'll likely see a bunch of folders and program shortcuts.

Tip: You can type the above paths into File Explorer's address bar instead of using the Run dialog, if you prefer.



Name	Date modified	Type	Size
Chrome Apps	3/24/2021 12:47 PM	File folder	
Chrome Beta Apps	3/29/2021 12:06 PM	File folder	
Discord Inc	1/2/2021 11:13 PM	File folder	
Glimpse 0.2.0 (64-bit)	2/18/2021 10:03 PM	File folder	
Maintenance	12/7/2019 4:14 AM	File folder	
PaperCut Mobility Print	1/31/2021 9:01 PM	File folder	
Startup	1/1/2021 10:29 PM	File folder	
Windows Accessories	1/1/2021 10:29 PM	File folder	
Windows Administrative Tools	1/1/2021 10:29 PM	File folder	
Windows Ease of Access	11/18/2020 9:53 PM	File folder	
Windows PowerShell	12/7/2019 4:31 AM	File folder	
Windows System	12/7/2019 4:14 AM	File folder	
Zoom	2/9/2021 9:59 AM	File folder	
f.lux	7/26/2021 9:06 AM	Shortcut	3 KB
PC Health Check	6/25/2021 2:12 PM	Shortcut	2 KB
scrcpy	6/10/2021 4:17 PM	Shortcut	2 KB
Spotify	3/5/2021 9:27 AM	Shortcut	2 KB

You can drag and drop the program shortcuts out of this folder to make them launch at startup or prevent them from launching. It's very simple. The new method in Settings works for most cases, but this folder method is more flexible as you can add pretty much any shortcut, which can't be done from the Settings app.

RELATED: ***How to Disable the Windows 10 Startup Delay***

P*PCompAS Newsletter
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Coming Events:
Next Membership Meeting: 6 November beginning at 9 am (see directions below)
Next Breakfast Meeting: 20 November@ 8:30 am, Perkins, 3295 E. Platte Ave.
Newsletter Deadline: 20 November
Check out our Web page at: http://ppcompas.apcug.org