

Bits of Bytes

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

Volume XLII

September 2022

Issue 9



The Prez Sez

by Cary Quinn,
President,
P*PCompAS

I have invited our speaker, Rob Truman, to attend earlier than the usual presentation time as our guest. So we may have to send a virtual coffee and donut his way.

The 150th year of the Colorado State Fair (<https://coloradostatefair.com>) will be August 26th to September 5th.

Until the end of August, veterans should be able to get free passes to all Colorado state parks. If you do get outside, take lots of pictures that we can use for a future presentation on managing and storing digital images. ☺

Meeting Minutes

by Greg Lenihan,
P*PCompAS Secretary

President Cary Quinn opened the 6 August 2022 membership meeting at 9:00 am with a new layout to the meeting room. Bruce Weaver, a brother-in-law of AJ Whelan, was a guest. David George made the coffee and Cary Quinn brought doughnuts. A \$1 donation is requested from members for doughnuts and coffee.

OFFICER REPORTS

Cary reminded us the presentation today was some videos on scams. Next month, he hopes to have a presentation previously postponed on shopping for a new PC. After that, we may have some holiday-themed presentations.

Next P*PCompAS meeting: Saturday, 3 September 2022

Rob Truman will talk about his computer buying guide.

Secretary/Newsletter Editor Greg Lenihan announced the next newsletter deadline is 20 August.

Treasurer Toni Logan stated our savings account grew by another 12 cents and currently is at \$2832.76. Checking stands at \$34.74 after a \$10 payment to Joe Nuvolini, for a combined total of \$2867.50.

Membership Chair Ann Titus had nothing to report.

Librarian Paul Godfrey had nothing to report.

APCUG Rep/Webmaster Joe Nuvolini said the newsletter is available from our website.

Ann Titus had nothing to report from the Board of Directors.

OLD BUSINESS

Cary Quinn said he is still looking into a microphone solution for our meetings.

NEW BUSINESS

We need to form a committee to look for officers for next year and Cary asked for volunteers.

It was brought up that our Board of Directors is short one person due to Jeff Towne leaving. Joe Nuvolini volunteered to serve the remainder of Jeff's term. We will elect two board members at the end of the year.

The church is not finished with their remodeling of our meeting room, and Joe Nuvolini offered to call and find out the final plans.

ANNOUNCEMENTS

Joe Nuvolini said that Jim Geil, who was present, turned 89 the day before.

Joe Nuvolini said we now need to put the tables away after our meeting.

The next social breakfast meeting will be Saturday, 20 August, at Perkins, starting at 8:00 am.

Our next membership meeting is Saturday, 3 September.

AROUND THE ROOM

Ann Titus asked for the best way to contact Cary Quinn during the month. Cary will get with her. He normally does not reply to numbers he does not recognize.

Toni Logan said there was an interesting article in the 30 July *Gazette* about saving photos in the high-tech age. A lady lost her photos and had some suggestions on how to not let this happen. Toni mentioned she was missing a video that she wanted for family. It wasn't on her external drive, but she found it on a CD. However, it was copied across multiple discs. Fortunately,

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Barista: David George
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Librarian: Paul Godfrey
Membership: Ann Titus

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Programs: Vacant
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Ann Titus
Harvey McMinn
Joe Nuvolini (for Jeff Towne)
A.J. Whelan
John Pearce



President Cary Quinn at the August meeting.



Experiencing a new table orientation at the August meeting.



Digerati at the August breakfast.

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Should You Upgrade to the Professional Version of Windows 11?

by Nick Lewis, reprinted with permission from [HowToGeek.com](https://www.howtogeek.com)

Original article at: <https://www.howtogeek.com/822714/should-you-upgrade-to-the-professional-version-of-windows-11/>



The Professional (Pro) edition of Windows 11 offers a variety of features that aren't included in the Home version. If you're already running [Windows 10 Pro](#), then you don't have to worry about anything — you'll automatically get Windows 11 Pro. But is the \$99 upgrade worth it for anyone else?

What Does the Professional Version Offer?

The vast majority of exclusive features in Windows 11 Pro are related to remote management and setup, as well as other business-specific needs.

Those are compelling—and often necessary—for businesses. That's why most [PCs that come with Windows 11](#) include Windows 11 Home.

If you're wondering if you should upgrade your home PC for *those* features, the answer is almost definitely no. Those features aren't particularly useful outside of a business or educational setting anyway.

There are a few features that Window enthusiasts might find compelling, however.

Windows Sandbox

[Windows Sandbox](#) lets you run applications in a virtual environment that is completely isolated from the rest of your system. It isn't a substitute for good security practices and a healthy dose of caution, but it does allow you to open suspect files or programs without nearly as much risk to your system.

RELATED: [How to Make Sure a File Is Safe Before Downloading It](#)

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Meeting Minutes (Cont. from page 1)

there was a utility that let her retrieve the video.

Harvey McMinn was in Costco and bought a security camera for \$129 (\$50 off). You can control it with a smart device and it has a memory card. You can set it to record motion-only or record all the time, and you don't need a monthly subscription.

John Pearce mentioned last month that he was scanning financial records and wanted to index them. His multifunction scanner is 10-years old and won't let him do this. He found free software that he is waiting on that could do this after connecting his scanner directly to his PC via USB.

Ilene Steinkruger made it to our live meeting today and wanted to thank those keeping the club together.

Ann Titus said there is a program accessible from your computer called "Get Human" and you can get phone numbers for real

people at businesses. She also said that surge protectors should be changed out every few years because they can start fires. John Pearce said the surge protectors, as he recalls, were built around Metal Oxide Varistors, and can degrade from minor surges to the point of developing a short circuit. Look for surge protectors with a red light when plugged in. When the light goes out, then get rid of the surge protector.

Warren Hill had a speaker icon problem on his PC and it may have fixed itself, but he thanked Joe Nuvolini for the information he sent. Warren mentioned our discussion about CDs going bad, and he has one from 2013 with photos that he cannot open. He tried looking at it on his wife's computer without luck, and may try another computer. Cary suggested trying recovery software. Nuvo said to try and get a CD cleaner.

Donna Armitage uses Google Calendar and shares it with her

husband. She is not sure how to integrate it with her Apple devices. Cary thought it might work better with a web browser for both operating systems. Apple has its own calendar software and Cary suggested she might try to import the calendar into it.

Cary Quinn has been going to fairs with his girlfriend because she is interested in raising certain animals. There weren't birds at the El Paso County Fair because of the Avian Flu. Cary said the 4H kids were giving presentations using dioramas and some were quite impressive.

PRESENTATION

Cary Quinn showed a video called "It's a Scam," with 11 reasons you may identify a scam. He also played videos of someone that engaged with scammers and kept them involved for a long time before leaving the scam.

Win 11 Pro (Continued from page 3)

Consider the case where you download an executable that is supposed to let you customize your Windows PC's user interface. Normally, you'd be forced to run it through a service like [VirusTotal.com](https://www.virustotal.com), then actually try installing it on your PC. If it is a new or particularly clever kind of malware, it is entirely possible the virus scanners on [VirusTotal](https://www.virustotal.com) (and on your PC) would miss it. Then you're stuck with an infected computer. Windows Sandbox would let you load the executable into a safe environment, run it, and then actually see if it is malicious or not, with very little risk to your computer.

Windows Sandbox is definitely one of the most useful features in Windows 11 Pro, and most users could benefit from it.

Hyper-V Manager

Hyper-V Manager is a graphical user interface (GUI) for Hyper-V. Hyper-V is a [hypervisor](#) that creates and manages [virtual machines](#).

RELATED: [What Is a Virtual Machine Hypervisor?](#)

That sounds complex, but it really isn't that bad — virtual machines are just 'fake' computers that run on your real, physical computer. You can do all sorts of things with them, like run other operating systems, tune their RAM, CPU cores, video memory, and basically any other attribute you want. There are a million and one uses for virtual machines, and they're really only limited by your imagination, creativity, and needs.

As virtualization programs go, Hyper-V is pretty good — the second iteration of the [Windows Subsystem for Linux \(WSL\)](#) relies on it, and WSL's performance is snappy and responsive. Hyper-V Manager just lets you monitor and control the virtual machines that use Hyper-V with a graphical user interface.

RELATED: [Beginner Geek: How to Create and Use Virtual Machines](#)

However, Hyper-V Manager isn't really necessary. There are plenty of virtualization applications available for Windows, like [VirtualBox](#) or [VMWare Workstation Player](#), that are excellent and free. [Proxmox](#) and [EXSi](#) are both good choices if you're looking for something more sophisticated to run "bare metal" on a server. Between the two, Proxmox is probably more friendly towards new users.

Hyper-V Manager is definitely a great tool if you need to work within the Windows ecosystem for some reason, but it doesn't offer much for regular

home users — even enthusiast home users — if they're willing to use third-party tools or a Linux-based hypervisor.

Group Policy and the Group Policy Editor

Group Policy, and the [Local Group Policy Editor](#), is the Swiss Army Knife of administration tools on the professional versions of Windows. It gives you direct control over a ton of different behaviors, including automatic Windows updates. The other potential uses are too numerous to list explicitly, but it is a fantastic utility if you want to be able to make Windows act exactly the way you want.

RELATED: [How to Open the Group Policy Editor on Windows 10](#)

At the end of the day, the Group Policy Editor is an incredible convenience, but it isn't strictly necessary. Almost anything you can do with the Group Policy Editor can be accomplished in other ways—like by editing the [Windows Registry](#)—though they typically require significantly more work. Whether or not the convenience is worth the extra cost is ultimately up to personal preference.

BitLocker Encryption

Windows 11 Home editions include regular device encryption, which encrypts the drives on a computer if it [has TPM 2.0](#) and you sign in with a Microsoft account.

BitLocker Device Encryption is a bit more complex — it gives you more granular control over how your device's encryption works. You can encrypt specific drives or [removable media devices](#) with Bitlocker To Go. You can also control whether the entire drive is encrypted or just the used space on the drive—among other settings.

Encrypting your hard drive is critical in today's world — we store enormous amounts of sensitive information on our computers without a second thought. If your computer is stolen and someone starts rifling through your unencrypted hard drive, they might very well find enough information to cause a lot of trouble. If you store copies of your taxes on your computer, it'd probably be enough to [steal your identity](#).

Is the extra control worth the premium Windows 11 Pro demands? Probably not. The regular device encryption offered by Windows 11 Home is enough to keep your information safe from thieves, and the extra control offered by Bitlocker Device Encryption doesn't improve your protection, it just allows you to customize it.

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Win 11 Pro (Continued from page 3)

There are also compelling BitLocker alternatives out there that are completely free, like [VeraCrypt](#). [VeraCrypt can secure sensitive files on your PC](#), just like BitLocker.

RELATED: [How to Encrypt Your Windows System Drive With VeraCrypt](#)

Remote Desktop

Warning: By its very nature, any kind of Remote Access program or protocol increases the vulnerability of your system. If you don't need to enable internet remote access on a PC, **don't do it**.

If you frequently travel or have multiple PCs in your home, you might find yourself wishing you could access one Windows PC from another PC instead of physically interacting with it. Remote Desktop allows for exactly that — just enable Remote Desktop on one PC, install the [Remote Access App](#) on the controlling device, make a connection, and you're good to go.

Remote Desktop is only available on Windows 11 Pro, though you can use the application on any version of Windows.

It is nice to have a remote desktop protocol and application built right into Windows, but it is extremely difficult to say “home users should pay for this feature” when there are plenty of [free remote access tools for connecting to a PC or Mac](#).

RELATED: [5 Free Remote Access Tools for Connecting to a PC or Mac](#)

**Is the Upgrade to Windows 11 Pro Worthwhile?**

Is it worth the extra hundred dollars to upgrade to Windows 11 Pro from Windows 11 Home? As always, the mostly depends on your specific circumstances. As it stands, the overwhelming majority of users will not miss most of the features present in Windows 11 Pro.

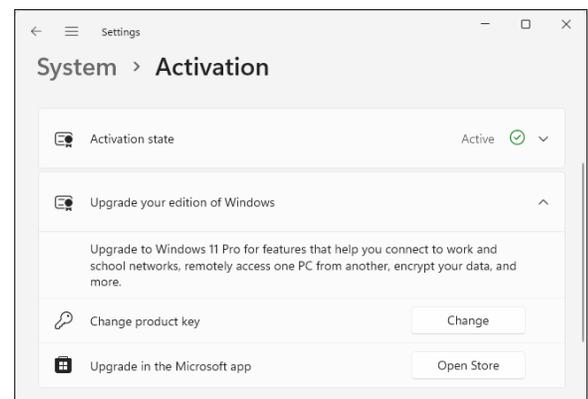
Power users and enthusiasts might want a few of the features, especially the Sandbox, the Hyper-V Manager, and access to Group Policy. However, nearly all of those features have free third-party alternatives or other workarounds that can accomplish the same things.

Given the cost of the upgrade and how few features are even usable in a home setting, the upgrade to Windows 11 Pro is not worth it for most people.

How to Upgrade to Windows 11 Pro

If you do want to upgrade, you can do it from within Windows 11 Home. Head to Settings > System > Activation and use the options under “Upgrade your edition of Windows.”

The “Open Store” button will open the Microsoft Store app, where you can buy the upgrade from Microsoft. It costs \$99 in the US.



You can also use the “Change” button to change your system’s product key if you have a Windows 11 Pro or Windows 10 Pro key you acquired from elsewhere. (However, [we caution you against buying those cheap gray-market third-party keys you find online](#).)

RELATED: [Cheap Windows 10 Keys: Do They Work?](#)

Saving Photos

*by Ann Titus, P*PCompAS*

To save your valuable photo collection:

1. Assess the mess.
 - a. List places you have photos kept.
 - b. Pull them together eliminating duplicates.
2. Scan your snapshots (non-digital photos in particular). Use a professional service like Scanmyphotos or rent a high-quality scanner.
3. Create a photo hub. Consolidate all the digital photo files into one place (external hard drive) and transfer photos to the new drive from one device at a time.

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Time to Replace Your Computer?

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

An AskBob reader asks: 'Our computer is just three years old, but my teenager says it is obsolete. He wants us to buy a new computer with more speed, more memory, bigger hard drive, and a larger monitor. Can you give me some pointers on how to determine if I really need to buy a new computer?' Sure, here's my advice...

Is Your Computer Obsolete?

Many years ago (this was back in the late 1980s) I saw a cartoon of a guy proudly driving home with his brand new state-of-the-art IBM 386 computer in the back seat of his convertible. In the background was a huge billboard advertising the 486. The message: his computer was



obsolete before he even got it home.

Technology is always changing... it's hard to be sure if the system you have will support the newest software, operating system and peripherals. So how do you know when it is indeed time to buy a new computer, or when it is

best to ignore the commercials that tout the latest "gotta-have" technology?"

You May Need To Buy A New Computer If...

- ...your processor speed is less than 3.0 gigahertz (GHz). Most operating systems and application software these days demand a lot from your system. A speedy processor will help you browse the Internet, run your word processor and play games with ease. On a Windows PC, click the Start button, type **system information**, and press Enter. If the speed is listed in megahertz instead of gigahertz, see if any friends need a new anchor for their fishing boat.

- ...your computer has less than 4 gigabytes (GB) of RAM memory. Again, the System Properties window will show how much RAM is installed. I recommend a minimum of 4 gigabytes (GB) of RAM for smooth performance. Go for 8GB of RAM if you use more than one program at once, or have multiple browser tabs open.

- ...you are running a version of Windows that begins with a "3", "7", "9", "V", or "X" (Windows 3.1, Windows 95, Windows 98, Windows Vista, Windows XP, or Windows 7). These obsolete versions lack the security features and technological advances required for safe computing and protection from identity theft. Windows 10 is still serviceable, and official support will continue through October 2025. If you have a Mac that's NOT running some version of OS X, the same applies.

Windows 11 was released in October 2021, but unlike previous editions, it won't work on many PCs happily running Windows 10. If your computer is more than three years old, it probably won't meet the stringent hardware requirements that Microsoft has in place for installing Windows 11. I personally don't think it's a must-have upgrade, so if you want to keep your Windows 10 PC for another three years, that's fine. If you decide you need to upgrade before then, you'll be looking at a Windows 11 system.

- ...you have a monitor that's 14-inch or smaller. Most websites will not display properly on an old 14-inch monitor, and larger 20+ inch models are now standard. (I have dual 22-inch widescreen monitors on my desk!)

- ...you try to install a program and you get the error "Operating System not supported."

- ...you try to upgrade the Operating System and get an error message that the hardware is not supported. (See note above about Windows 11)

- ...your computer has no USB ports. Most peripheral devices such as the mouse, keyboard, printer, scanner and external hard drives now use USB connections.

- ...your computer has a 5.25 inch disk drive! Actually if you have even a 3.5-inch floppy disk drive, you may qualify. Software has outgrown the floppy disk, and the mere presence of a floppy drive on your machine may indicate that it's time to take it out back and shoot it. Even CD-ROM drives are not found on many newer computers, since software installations are accomplished by downloads, and music/video is streamed online.

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Replace Computer (Continued from page 6)

• ... your computer says Radio Shack anywhere on the packaging. I had lots of fun on the TRS-80 we had in high school, but that was almost 40 years ago. I actually owned an HP Model 33 Teletype (pictured above), which was the first computer terminal I used. It could go online with a 300-baud modem (about 10,000 times slower than broadband today) and saved programs on paper punch tapes.

All of the above scenarios warrant shelling out the dough for a new computer. There are cases however, where you might have a relatively new computer, (less than 3 years old) and it is acting up enough to make you want to replace it with a new one. Before you do that, let's look at a few ways you can "soup up" a fairly new machine.

Your Computer Is Running S-l-o-o-o-w-w

This is probably the number one complaint heard by Help Desk techs worldwide. If your computer is less than 3 years old, there are a myriad of reasons for the slowdown in performance. For instance, you may not have all the latest security software installed. Operating Systems, device drivers, anti-virus programs and other applications have frequent update releases to their original product. Keeping up with the latest releases or patches of any software you are running, is a good way to keep your computer free from viruses and spyware that can slow it to a crawl.

Hardware also has updates, called firmware updates. Check with your hardware vendors to make sure that your computer, wireless router, cable modem, printer, etc... all have the latest firmware updates. A cable or DSL modem that's overheating can throttle your Internet speed. If you find that turning off the modem and then waiting an hour or

so boosts your surfing speed, you may need to replace it.

Sometimes a slow running computer is one that is lacking memory. As applications get more feature rich, more memory (RAM, not hard drive space) is required to run them. A lot of times, computers will be sold without the maximum capacity of RAM that they can actually run. Again, check with your computer's manufacturer. Find out if the memory is expandable, and how much RAM you currently have installed. Upgrading RAM is a fairly easy and inexpensive way to speed up your computer. See my companion article for help with understanding and adding RAM: [Does Your Computer Need More Memory?](#)

Your Computer Is Running Out of Space

You are noticing degradation in your computer's performance, and you are also noticing "Running low on disk space" messages. Low disk space can slow a machine down, and also cause problems running applications. Hard drive space is getting cheaper and cheaper these days; the newest computers often come with 500 GB or 1 terabyte (1000 GB) hard drives as a standard. You don't have to buy one of these new computers though; you can replace a smaller hard disk drive with a larger one, or [upgrade to an SSD drive](#). But before you do any of those things, see my article [Clean Hard Drive](#) for tips on getting rid of the junk and clutter on your hard drive.

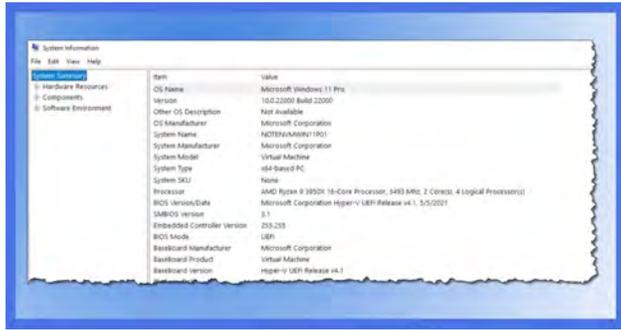
Your Computer Has Less-Than-Great-Graphics and So-So-Sound

The characters in that cool, new game you installed, have herky-jerky movements or maybe there's a tinny sound when you blast the bad guys. Or perhaps the photos you download from your digital camera have a grainy, dull look when opened on your computer. On a relatively new machine, these problems can often be remedied by multimedia upgrades. Upgrading your graphics card or sound card can add a whole new level to your computing experience. A newer monitor will make everything look crisper.

It's important to know when to let go of an old clunker of a computer. It's just as important to realize when your computer needs a "tune-up." The goal is to find a happy medium between being able to experience the latest that technology has to offer, but not being pressured into throwing a perfectly good system away because of slick sales ads, feature envy or industry hype. ☺

Get a Windows System Report with MSINFO32
More details than you'll ever want, but your tech-support help will appreciate it
 By Leo A. Notenboom, <https://newsletter.askleo.com/>; published under the Creative Commons License

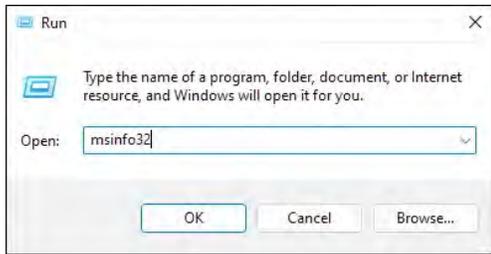
Msinfo32 is a tool to display and save an extensive report of your computer's configuration and state. It can be very helpful for others helping you diagnose issues.



Msinfo32 is a program included with Windows that generates a report *about* Windows. When I say "about," I really mean it. The report is lengthy, detailed, and contains much more info than you probably care about or understand. For a person helping you with your computer problems, on the other hand, it can be a veritable gold mine of information.

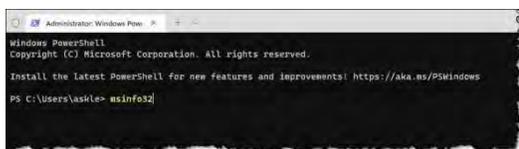
Running msinfo32

You won't find it on the Start menu. The easiest way to run msinfo32 is to type Win+R, enter **msinfo32**, and click **OK**.



The program starts, as shown in the image at the top of the page.

An alternative is to run Command Prompt or PowerShell "as Administrator" (right-click on the Start button and click the appropriate "as administrator" option) and run the command from there.

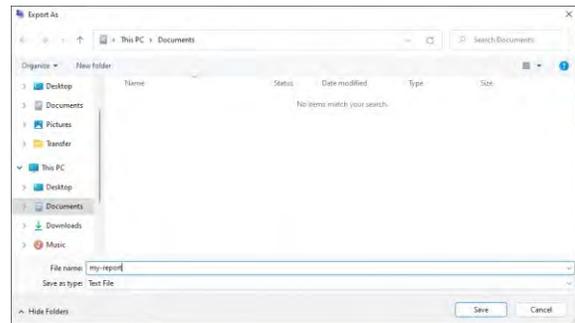


In theory, the resulting report may be slightly more detailed, but I've yet to run into a noticeable difference.

Generating a report for someone else

We'll explore msinfo32 itself in a moment. Your most common use of the tool will probably be to generate a report you can send to someone else, so let's walk through that first.

In msinfo32, click on the **File** menu, then **Export...** This will open an "Export As" dialog.



Enter the name of the file you want the report saved to. I've entered "my-report" above, so the result will be "my-report.txt". Click **Save**. It may take a few seconds for the tool to refresh information and generate the report.

Since the report is a plain text file, you can view what it contains by opening it in Notepad or any other word-processing app.



Scroll through it, and you'll see there's a LOT of information. My example report above has almost 3,000 lines of information.

Continued on page 9

MSINFO32 (Continued from page 8)

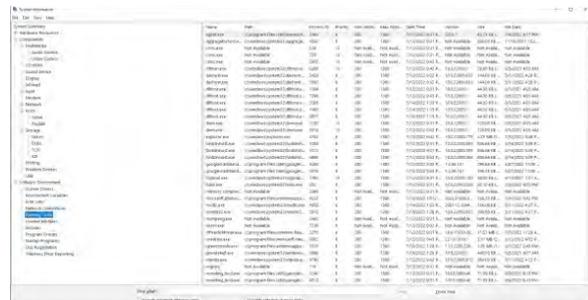
If someone’s helping you with your computer, sending them this text file as an attachment will provide them with all this information about your machine.

Exploring msinfo32

As shown at the top of the article, msinfo32 opens to a summary of your computer’s basic information, like operating system, [CPU](#), [RAM](#), and so on. In the left-hand pane are three subsections. To expand a subsection, click on the boxed plus sign to its left.



In the example above, I’ve expanded Components, and then underneath that, Storage, and then clicked on Drives. The result is information about the disk drives on this machine.



In this example, I’ve expanded Software Environment and then clicked on Running Tasks.

The right-hand pane shows all the processes running on the machine.

Don’t panic!

I feel I have to include a disclaimer or two about Running Tasks.

- It’s common to have *many* running processes. A hundred or many more, depending on how you’re using your machine, is not uncommon.
- An informational item that says something “failed” is not a sign of a problem. All it usually means is that an attempt to see if your machine has a certain thing failed because your machine doesn’t have that thing.
- Empty items are also not uncommon and don’t necessarily mean there’s a problem. In most cases, it simply means that the item is not currently in use or present.

And of course, it’s quite common to see lots and lots and lots of gibberish you don’t understand. This information is really targeted at technicians and other professionals who at least understand the information related to their areas of expertise.

With those concerns out of the way, definitely feel free to poke around in msinfo32. It only shows information and makes no changes. You can’t hurt anything just by looking.

Do this

Run msinfo32 to get a detailed report of your machine’s state and configuration now to become familiar with its contents and how to export the information. Next time you’re looking for help, mention that you can provide this information. It’s not helpful for every situation, but when it is, the person helping you may be quite appreciative. ☺

Saving Photos (Continued from page 5)

4. Store now, organize later (back up the mess now, then edit).
5. Don’t count on social media. Keep originals in your photo hub.
6. Back it up – have 3 complete copies of the master file – one on a laptop, one on an external hard drive or flash drive, and one copy in the cloud or on another external hard drive stored somewhere other than your home (safe deposit box). If using a cloud-based backup service (\$60 a

- year) be sure to migrate them forward as technology changes.
7. Connect with the cloud. Be sure your smartphone is set so all its photos automatically upload to the cloud (might use Google Photos, Dropbox, OneDrive, iCloud or Amazon Photos).
8. Kill the doubles. When all photos are stored and backed up, you can start organizing. You can use de-duplication software to eliminate photos doubles.
9. Unless you are technically savvy, consider hiring a pro. They are available through The Photo Managers (Thephotomanagers.com/). ☺

P*PCompAS Newsletter
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Coming Events:

Next Membership Meeting: 3 September beginning at 9 am (see directions below)

Next Breakfast Meeting: 17 September @ 8:00 am, Perkins, 3295 E. Platte Ave.

Newsletter Deadline: 17 September

Check out our Web page at: <http://ppcompas.apcug.org>

