

(membership includes
monthly subscription)

The Digital Viking



Twin Cities

PC USER GROUP

NEWSLETTER

Minneapolis & St. Paul, Minnesota USA • Vol. 44 No.7 • February 2024

*TC/PC Exists to
Facilitate and Encourage
the Cooperative Exchange of
PC Knowledge and
Information Across
All Levels of Experience*

February 2024

Membership Info2

Taking Notes with

Xournal 3

Windows 11—Virtual

Memory Paging

Configuration 7

Windows 10 & 11:

Differences in

Security, Features

And Looks10

SIG Information13

TC/PC Calendar14

Membership Application 15

Maps to Events 16

4

General Meeting

Tuesday, February 13, 2024
7:00 PM

Best of CES 2024

Via Zoom Only

This month we'll take a tour of the CES show in Las Vegas via videos provided by people that visited the show and chose their best picks.

There are some new car concepts, some advances in the size and quality of OLED TVs, medical devices that can help you accurately track your vital signs or glucose levels or identify cardiac afib, home cooking products that allow you to use an electric smoker inside with no smoke escaping, space-age toilets, lots of concept cars and more. And, of course, lots of AI. 🖥️

Note: All TC/PC Meetings and SIG Groups will be virtual until further notice. Visit tcpc.com for info.

Tech Topics with Jack Ungerleider via Zoom at 6pm before the General Meeting.

TC/PC is a
Member of



24-Hour Information • www.tcpc.com

Application form inside back cover

The Digital Viking

The Digital Viking is the official monthly publication of the Twin Cities PC User Group, a 501(c)(3) organization and an all-volunteer organization dedicated to users of IBM-compatible computers. Subscriptions are included in membership. We welcome articles and reviews from members. The Digital Viking is a copyrighted publication and reproduction of any material is expressly prohibited without permission. Exception: other User Groups may use material if unaltered and credited.

Disclaimer: All opinions are those of the authors and do not necessarily represent the opinions of the TC/PC, its Board of Directors, Officers, or newsletter staff. TC/PC does not endorse, rate, or otherwise officially comment on products available; therefore, readers are cautioned to rely on the opinions presented herein exclusively at their own risk. The Digital Viking, its contributors, and staff assume no liability for damages arising out of the publication or non-publication of any advertisement, article, or other item. All refunds in full or in partial, for advertising, membership or any other item shall be at the sole discretion of the Twin Cities PC User Group Board of Directors.

Advertising

Full page (7½ x 9½)	\$100.00
Two-thirds page (7½ x 6)	80.00
Half page (7½ x 4¾)	65.00
One-third page (7½ x 3)	50.00
Quarter page (3½ x 4¾)	40.00
Member Bus. Card (2 x 3½)	10.00

Multiple insertion discounts available.

Contact Sharon Walbran at: SQWalbran@yahoo.com

Deadline for ad placement is the 1st of the month prior to publication. All rates are per issue and for digital or camera-ready ads. Typesetting and other services are extra and must be requested in advance of submission deadlines.

Payment must accompany order unless other arrangements are made in advance. Place make checks payable to: Twin Cities PC User Group

TC/PC 2023-2024 Board of Directors

Meets once or twice per year. All members welcome to attend.

Visit www.tpc.com for meeting details.

President —Lee Kaphingst	leekap@comcast.net
Vice President —Curtiss Trout	ctrout@troutreach.com
Secretary - Sharon Walbran	sharon.walbran@gmail.com
Treasurer - Sharon Trout	strout@troutreach.com
Newsletter Publisher Sharon Walbran	952-925-2726 sharon.walbran@gmail.com
Web Master Curt Trout	ctrout@troutreach.com
Board Members:	
Steve Kuhlmeiy	skuhlmeiy@hotmail.com
Lon Ortner	612-824-4946 lon@csacomp.com
Lee Kaphingst	leekap@comcast.net
Jeannine Sloan	Ambassador for Friendship Village
Curtiss Trout	ctrout@troutreach.com
Sharon Trout	strout@troutreach.com
Jack Ungerleider	jack@jacku.com
Sharon Walbran	sharon.walbran@gmail.com

TC/PC Member Benefits

Product previews
and demonstrations

Special Interest Groups
Monthly Newsletter

Discounts on products
and services

Contests and prizes

Business Member Benefits

All of the above PLUS:

FREE ½ page ad on
payment of each renewal

20% discount on all ads
Placed in the *Digital
Viking* Newsletter

Up to 5 newsletters mailed to
your site
(only a nominal cost for each
additional 5 mailed)

Newsletter Staff Editor Sharon Walbran

Taking Notes with Xournal

By Dick Maybach, Brookdale Computer User Group
www.bcug.com
n2nd (at) att.net

We all have our preferences for taking informal notes. If you prefer handwritten text and sketching graphics, you might like an application that supports this, such as Xournal. It was developed for Linux, <https://sourceforge.net/projects/xournal/>, but it's also available for Windows, <https://xournal.en.softonic.com/>, and Android, although the last is a beta version. A manual is available at <http://xournal.sourceforge.net/manual.html>; it has about 24 pages, but only the first third is really useful. If you like the concept but don't care for the Xournal implementation, there are alternatives, such as MS Windows Journal, Jamal, <http://www.dklevine.com/general/software/tc1000/jarnal.htm>, and Gournal, <https://www.adebenham.com/old-stuff/gournal/>.

The best interface for sketches and handwriting is a touch screen, preferably with a stylus, although a standard screen plus a graphics pad, such as Wacom, is also usable. Trying to use a mouse with a normal display will result in little but frustration. Figure 1 shows the program's default opening screen. Although the default page style is ruled, you can change it to plain or graph.

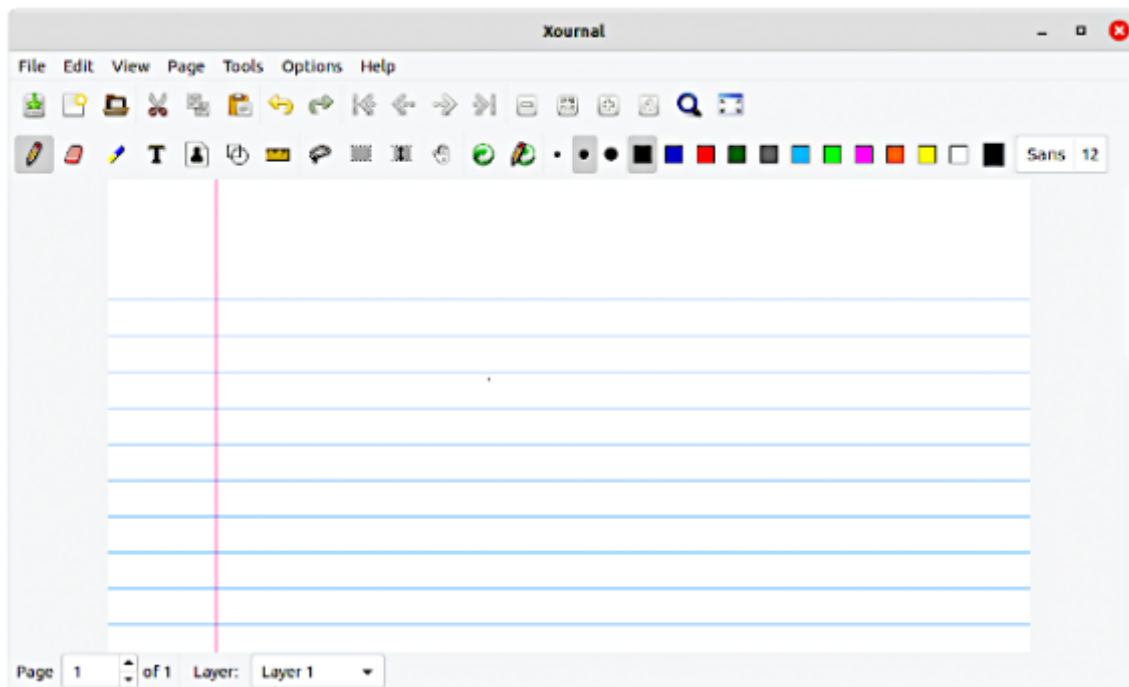


Figure 1. Xournal Opening Screen.

The menu bar (at the top) has file tools and settings. It duplicates many tools in the toolbars but with text labels instead of icons. The toolbars let you select the operation (line drawing, highlighting, erasing, inserting, and deleting objects), choose the colors, and designate areas for other functions. You have similar tools in your word processor and graphics software, making the tool easy to use.

Figure 2 shows the results of importing a logo, adding a line drawing and handwriting, importing text, and highlighting a portion of it.

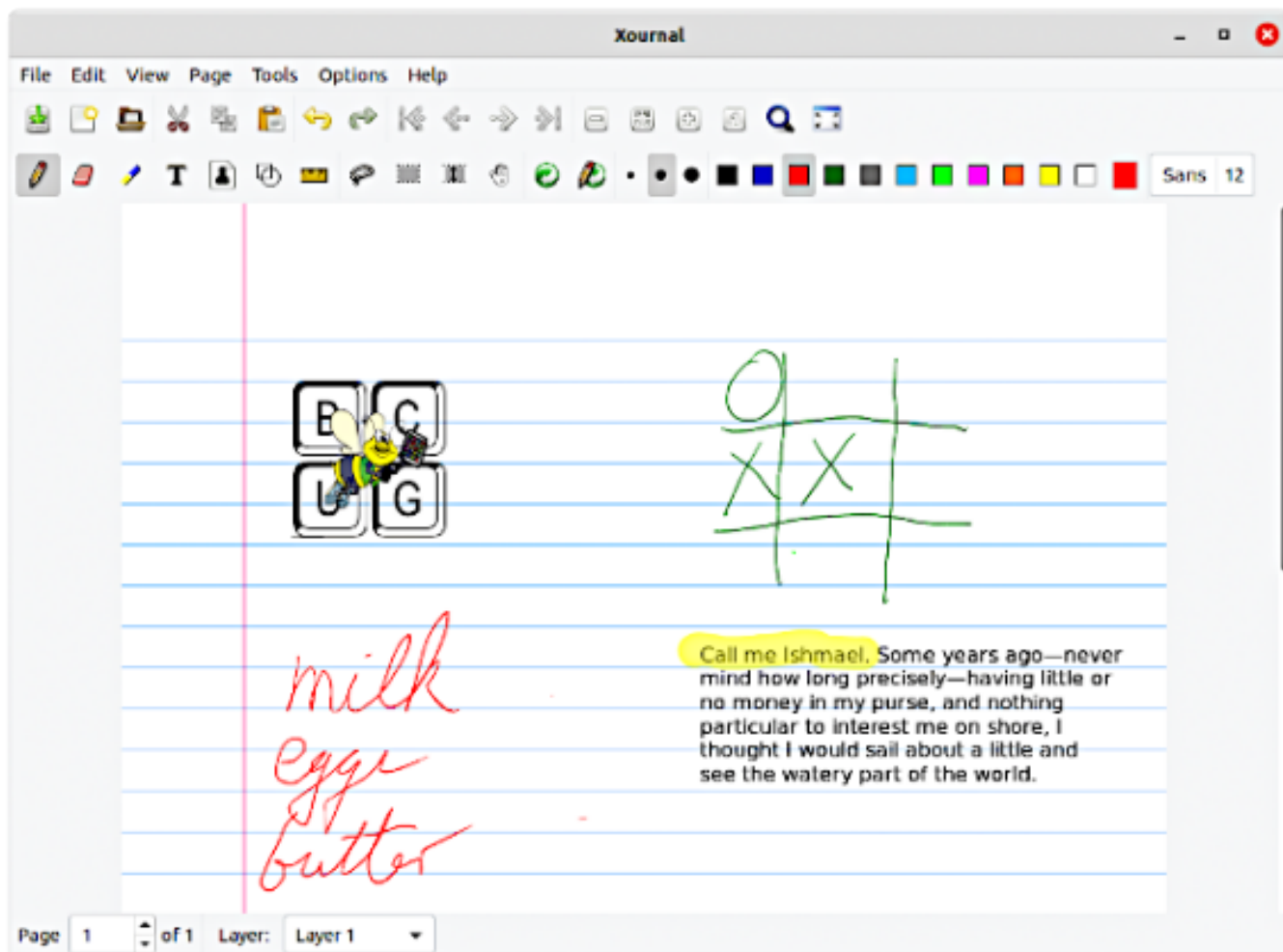


Figure 2. Example.

Xournal saves each note in a separate file, and keeping them organized requires effort. You should use descriptive filenames, place them in logical directories, and delete them when no longer needed. It would be easy to scatter dozens of notes throughout the hundreds of directories on most PCs. If you can't find a note, it's the same as if you'd deleted it.

I frequently use PDF files, often as articles I download or documents I receive. While these are convenient, they are difficult to modify. For example, when I download an article, I like to add the URL where I found it. Also, some PDF documents are questionnaires or require a signature. Xournal can use a PDF as a background, over which you can add text or sketches. Figure 3 shows an example.

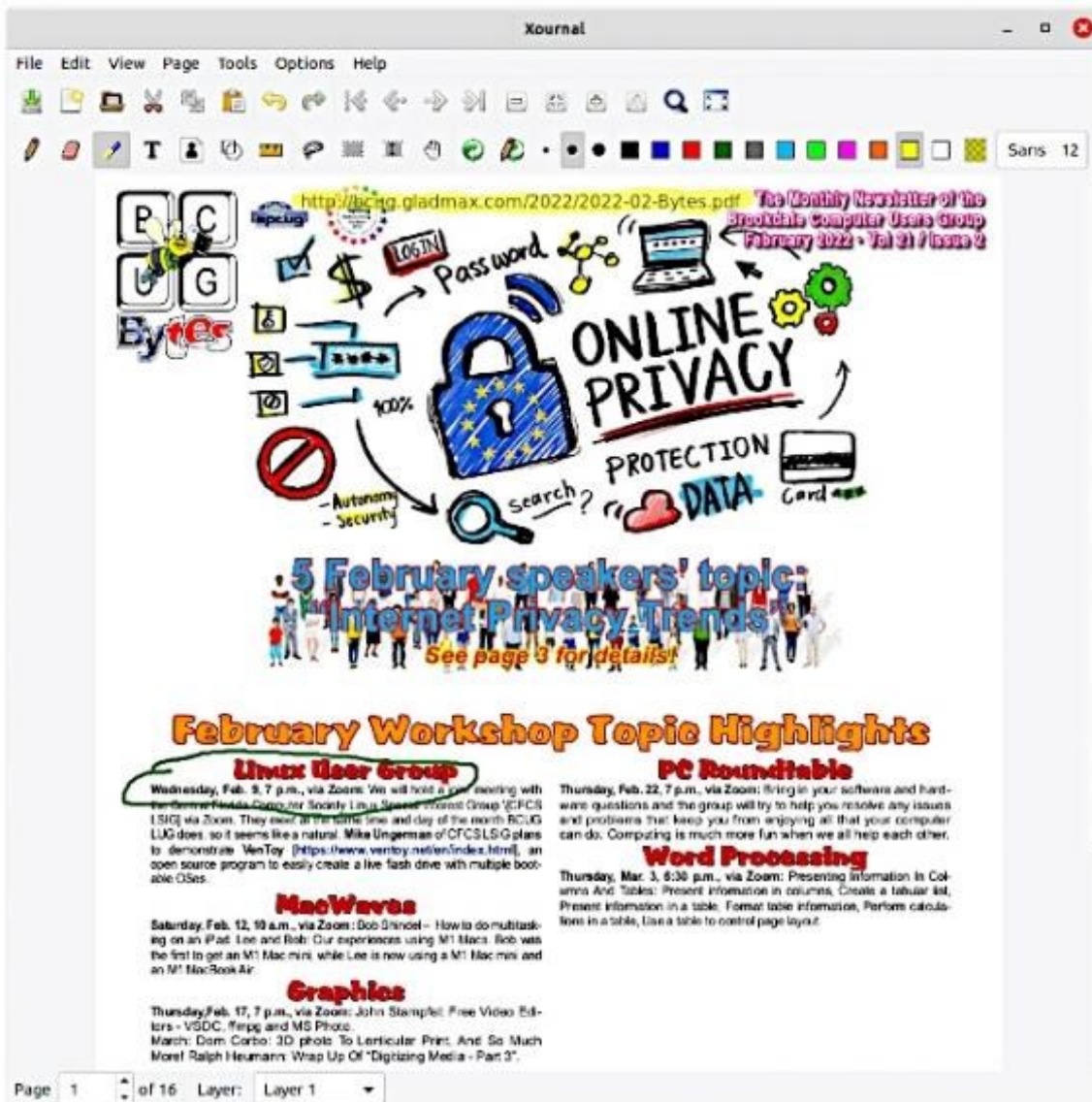


Figure 3. Modified PDF Document.

I've inserted (and highlighted) the document's URL at the top and circled a meeting here. The original PDF hasn't changed, but you can export the annotated result as a new PDF. This technique makes adding a signature far more convenient than my old PDF printing method, signing the paper copy, and scanning the result. You can use other graphics, and screenshots, for example, and annotate them. Do read the manual before doing this, as there are some subtleties.

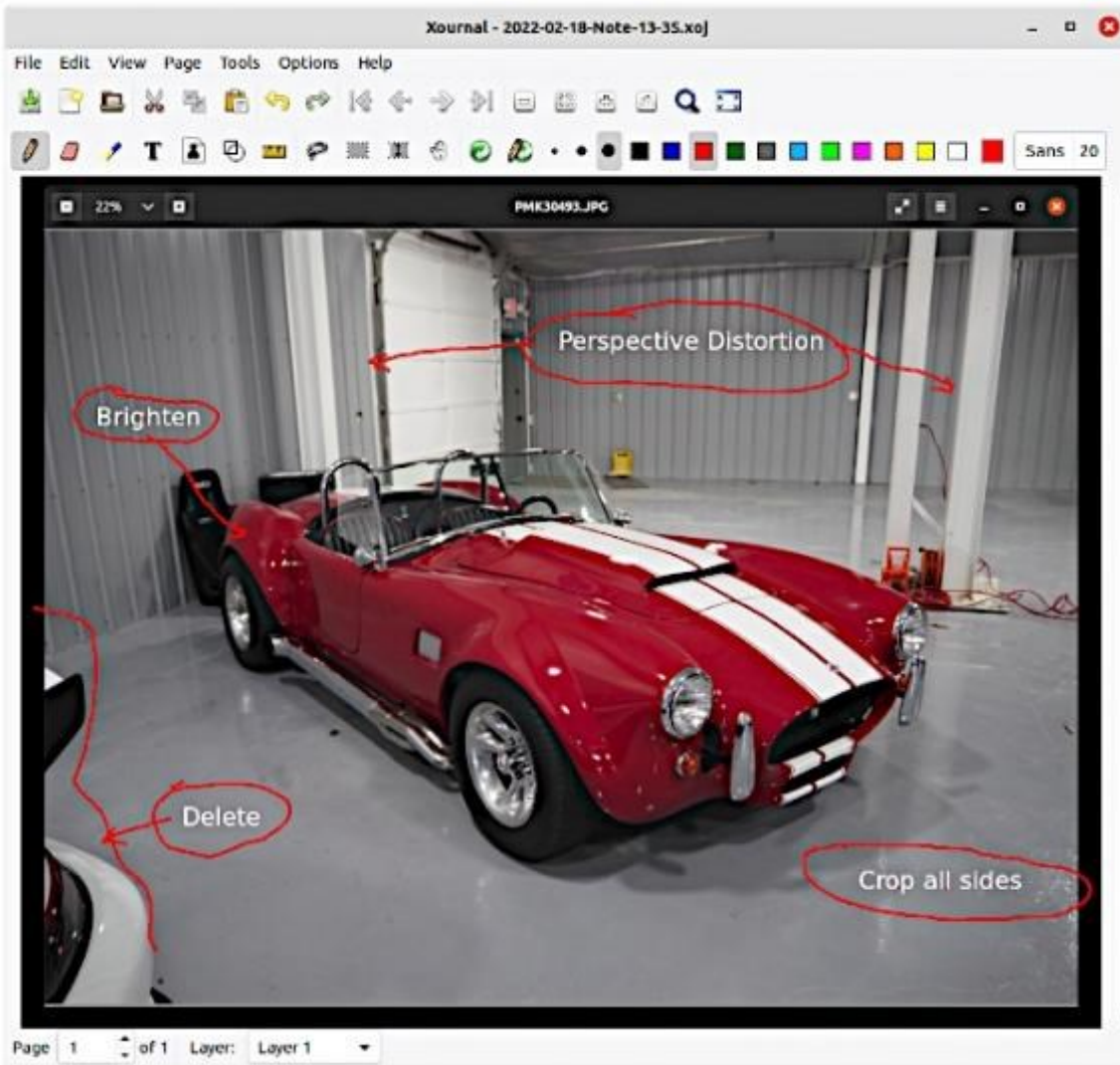


Figure 4. Annotated Photo.

Figure 4 shows another annotation example, this time of a photograph. It takes only a few minutes for an editor to show a photographer what changes are needed clearly. Here, the background image is a screenshot of the image viewer displaying the photo. Xournal can save files only as PDFs or in Xournal format. For this example, the editor would probably send his comments to the photographer as a PDF.

Choosing a notes tool for collaboration means considering what file formats it can use. PDF is the standard for documents, as are JPEG and PNG for images. If the tool can't import the file directly, it may have a convenient workaround. For example, Xournal can import the contents of any window, so you can open an image file with your image viewer and allow Xournal to import it as a screenshot. Then, after annotating it, you can export it as a PDF.

For me, Xournal is most useful for annotation, particularly as an aid to collaboration. Team members frequently exchange documents or graphics; annotating them is far clearer than sending back printed comments. Of course, I prefer a text notes program when developing articles like this, but if you long for the Post-It days, you might like the Xournal approach. 🖨️

[Go to Page 1](#)

WINDOWS 11 VIRTUAL MEMORY PAGING CONFIGURATION

If you use Windows 11 to edit digital sounds, photos, or videos, consider changing this setting to reflect the amount of RAM on your computer.

By John Krout, Potomac Area Technology and Computer Society

www.patacs.org

Introduction

Virtual Memory is the operating system (OS) behavior that supports multitasking, the ability to run multiple software applications concurrently by efficiently using finite Random Access Memory (RAM). Virtual Memory behavior has become more important because the software has grown larger, and digital data types like audio, photos, and video have grown. As a result, both have grown even faster than RAM.

I purchased a new Windows 11 personal computer in June 2022. Aside from a long list of applications to be installed, I learned how to adjust the size of Virtual Memory space on disk using the Windows 11 Settings application. I did this because Windows inevitably sets a size limit in storage that is far too small to be practical for bulky digital data. This article explains how to see and adjust that Virtual Memory storage limit.

Virtual Memory in a Nutshell

For decades, personal computer operating systems have supported the ability to run multiple applications concurrently, known as multitasking. Often, those applications require a total amount of RAM that exceeds the available RAM in your computer.

RAM is a critical and finite resource in any computer. The central processing unit (CPU) can execute an application to create and update data only when the application and the data are in RAM.

Virtual Memory (VM) is an OS technique that allows the computer to share its RAM among multiple applications. From the viewpoint of any user, VM makes it *seem* as though the computer has all the RAM your applications and data need, even though your computer might not.

Here is how VM works. First, idle applications and data are copied from RAM onto storage, such as a hard drive or solid-state drive (SSD), making RAM space available for busy applications. Then, when a stored application becomes busy again, such as when you click on its window, the same technique is applied: something idle in RAM is copied out onto storage. Finally, the newly busy application is copied back into RAM, so its execution can resume. Both activities, freeing up RAM and reloading a recently busy application and its data, take noticeably more time because storage is hundreds of times slower than RAM.

One of the industry verbs for this activity is Paging. Windows 11 calls the storage space used for paging a Paging File.

Windows also sets a configurable limit on how much storage space is used for Virtual Memory behavior. That limit is typically much less than the computer's RAM. For any Windows 11 user who opens multiple web browser tabs or works with bulky data such as digital sound files, photo files, or video files, increasing the Virtual Memory space available on disk to at least the size of RAM often makes it possible to do those things without frequent delays or application crashes.

How to check and set Windows 11 Virtual Memory storage space

Open the Windows 11 Settings application. You can see the top portion of that window in **Illustration 1**

In the left-hand pane of that window, tap the **System heading**, which is circled in the illustration.

Windows 11 includes a lot of info about me and my computer on these screens.

I have inserted blue boxes atop the personal information that is not relevant.

In the right-hand System pane, scroll to the bottom. Find and click the **About heading**, shown and circled in **illustration 2**. That click opens another right-hand pane.

You can see the top of that next pane in **illustration 3**.

Click the **Advanced System Settings link**, which is circled in the illustration.

That click opens the **System Properties dialog box**, as illustrated in **illustration 4**.

Next, click the **Advanced tab** in that box, which is circled at the top of the illustration. Then, in that tab, in the Performance section at the top, click the **Settings button** circled in the illustration.

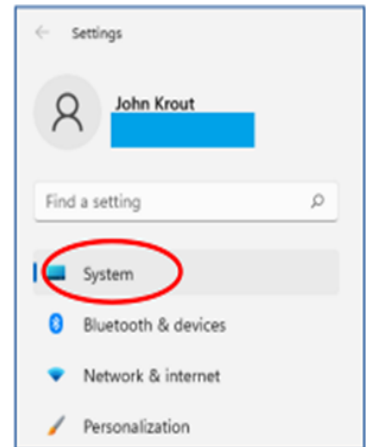


Illustration 1

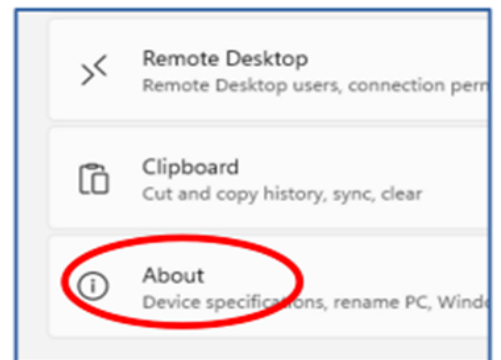


Illustration 2

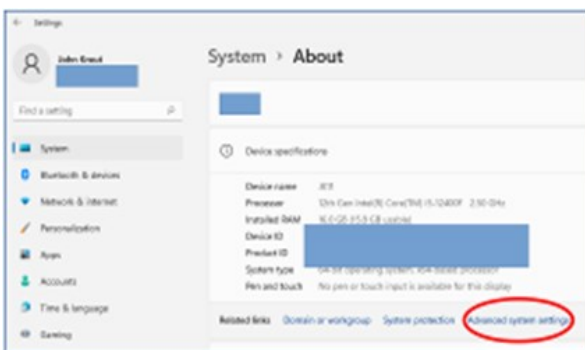


Illustration 3

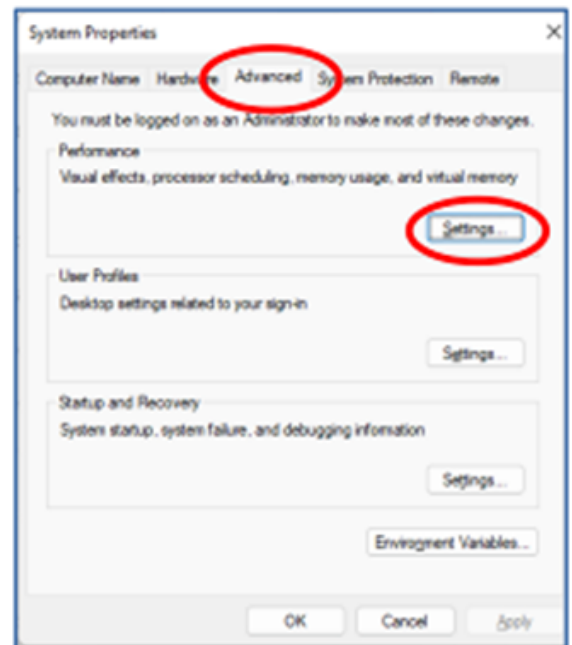


Illustration 4

That click opens the **Performance Options dialog box**, as illustrated in **illustration 5**. In that dialog box, click the Advanced tab circled in the illustration.

When I captured that illustration, I had already adjusted my computer's space for virtual memory to be 32000 megabytes, or almost 32 gigabytes, roughly twice the RAM in my computer. You can see that updated value in the Virtual Memory section at the bottom of the Advanced tab in the illustration. Initially, the default value shown there was a bit less than 3000MB, **far less** than the RAM in my computer, which in my opinion, is an unreasonably small paging file size for editing bulky digital data.

In that Advanced tab Virtual Memory section, click the **Change** button at the bottom, circled in the illustration.

A Virtual Memory dialog box appears, which is shown in **illustration 6**. To adjust the default value for drive C, in the list box identifying drives, click **Drive C**, then click the **Custom Size** button. The button is circled in the illustration and the data entry fields for initial and maximum Paging File sizes. The settings include an Initial Paging Size value, which I set to 32000 MB, and a Maximum Size value, which I set to 65000 MB. Neither size is a challenge for my new computer's 1 terabyte SSD drive C.

I do not store my data in any of the Drive C user folders. Instead, I keep the data on a separate drive, a habit formed in the days when sometimes a hard drive C died. Of course, that is less likely today with a far more energy-efficient SSD drive C. Nonetheless, my habit continues, partly because it is far easier to move my data to a new computer when stored in an external hard drive. And my external drives in modern USB3 SATA docks provide acceptable performance. 🖥️

ABOUT THE AUTHOR: John Krout is a retired software engineer who helped create requirements, design, and improve computer systems for federal government agencies in the Washington DC region for over three decades. He has been writing about the creative uses of personal computers since the early 1980s. Now he also writes about smartphones, tablets, and digital cameras. He is a member of the APCUG Speakers Bureau.

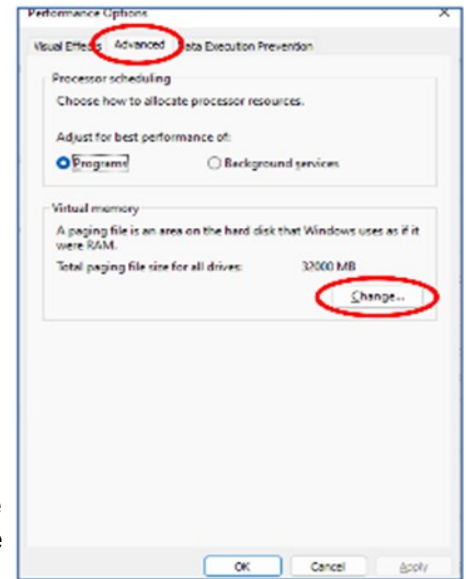


Illustration 5

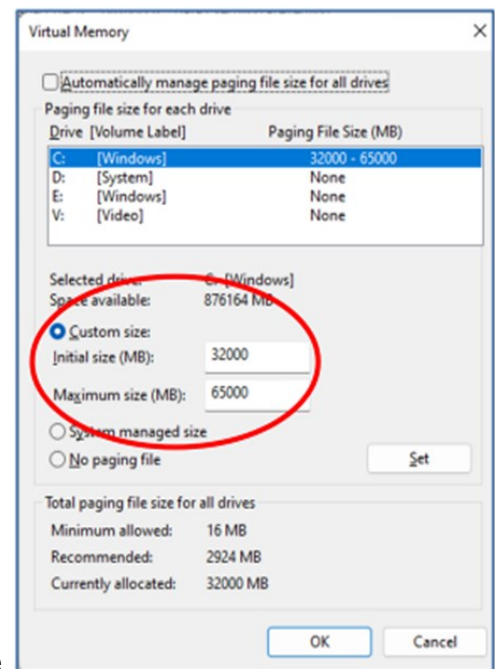


Illustration 6

[Go to Page 1](#)

Windows 10 & 11 - Differences in Security, Features, and Looks

By Phil Sorrentino, Secretary, and APCUG Rep, Sun City Center Computer Club

<https://sccccomputerclub.org/>

philsorr (at) yahoo.com

We know Windows 10 is not the last version; maybe Windows 11 will be, but I'm not taking any bets. Technology is constantly changing and usually improving. To say that this is the last of some technology would seem to say that this will be the end of that technology. But Desktop Operating Systems don't seem to be ending, at least not in the foreseeable future. So desktop/laptop computers need Software to provide control of, and organization, to the underlying computer hardware. Of course, that doesn't mean it has to be Windows; it could be MacOS, ChromeOS, Linux, Android, or even some yet-to-be-released Operating System that no one has ever heard of. But for my money and my lifetime, I think it will still be Windows. So it probably pays to review and possibly embrace the changes leading to the differences between Windows 10 and 11.



In a nutshell, the differences are in a few specific areas like Minimum hardware requirements, taskbar placement, the shape of the corners of windows, the looks and sounds of activities, the included Apps, and the CPUs it can run on. (A table showing many differences is included at the end of the article.) The performance differences in Windows 11 are pretty much under the hood and come down to how Windows 11 handles system processes that you usually only see when you open Task Manager. According to Microsoft, Windows 11 does a lot of work in memory management to favor the App windows you have open and running in the foreground. Initially, Windows 11 required you to log in to a Microsoft account. Microsoft indicated that that offered benefits such as improved security, better integration with Microsoft's cloud services, and synchronization between one's computers. Early adopters provided negative feedback to Microsoft on this requirement, and they removed the need to log in to a Microsoft account, so now you can just set up a local account.

Many things in Windows 11 look different, but many perceived differences are not in the functionality provided but where to go to find the functionality. Once you get there, you find that it works just the way it did in Windows 10. You'll probably notice one minor difference, "Command Prompt" is now "Windows Terminal." Features in Windows 11 now look more like Apps, though they have not really changed what they do or how they do it. There is a button on the Start screen, right above the "Pinned Apps" called "All apps," a term from the mobile device world. Some things are very much the same; right-click the start button in either OS, and you'll find a similar list of features (though Mobility Center is now added to the Windows 11 list). If you use the Action Center, you will notice it is not on the taskbar. The Winkey+A keyboard shortcut will provide similar information without notifications. Notifications can be found in Settings-System. Control Panel is still around; search for it using the "Search" icon on the taskbar, which leads you to the "Quick Assist" window. When you open the Control Panel App, you will see just what you remember from Windows 10, minus Administrative Tools, but plus Windows Mobility Center and Windows Tools. And oh, if you feel that you will be happier with the start button on the left, go to Settings-Personalization-Taskbar and click on "Taskbar behaviors" and finally pull down the arrow next to "Center" and choose "Left" as the Taskbar alignment.

Possibly, the main difference between Windows 10 and Windows 11 is security. Windows 11 requires a PC that's capable of Secure Boot, which prevents malware from attacking the boot process. (You don't have to enable Secure Boot, but the PC must support it. It seems inevitable that it will soon have to be enabled.) And your PC must have a Trusted Platform Module (TPM) version 2.0 hardware chip to manage cryptographic keys and protect your PC's OS and firmware. TPM is usually a dedicated chip on a motherboard that provides hardware encryption for features like BitLocker and Windows Hello. Without these two security components, Secure Boot and TPM, you will probably have to stay with Windows 10. The concept of a Trusted Platform Module goes back around 20 years, and PCs have had them since 2005. (Microsoft's BitLocker, a whole-drive encryption system, relies on the TPM hardware to manage and protect its cryptographic keys. Windows Hello face recognition also makes use of TPM support. (Microsoft's documentation advises that any modern PC probably has a TPM and that any PC less than five years old most likely has the latest version of the TPM hardware, 2.0.) TPM is critical to security. It validates hardware and software components, so no one can tamper with your PC. It stores important cryptographic keys and supplies ultra-secure cryptographic functions to Windows and many applications. All this considered, it looks like a major difference is that Windows 11 provides improved computer security.

As an aside, Apple's OSs have had security baked into them from the start. The mobile OS, iOS, is even more locked down than the desktop OS, MacOS. Windows, on the other hand, is still in the process of locking down many system vulnerabilities. By requiring Secure Boot and a TPM 2.0 chip, Windows 11 will eliminate a whole class of malware attacks that gain control over the computer by subverting the Windows boot process or getting into the system before bootup. Unfortunately, some older PCs will be left behind in making the jump to a more secure Windows 11, but Microsoft has said that it will maintain Windows 10 for at least the next two years. Hopefully, the increased security will be worth the inconvenience and cost of upgrading to Windows 11.

<u>Feature</u>	<u>Windows 10</u>	<u>Windows 11</u>
Release date	2015	2021
Minimum hardware	2GB Ram, 32GB Storage	4GB Ram, 64GB Storage
Trusted Platform Module	1.2	2.0
Can run Android Apps	No	Yes
Start Menu	On the Left	In the Center (Can be moved)
End of Life	Oct. 2025	???
Snap Layouts	Minimal	Improved and easy to use
Virtual Desktops	Taskview	Improved –Similar to Mac
Taskbar -Location	Top, bottom, side	Bottom, center (or left)
Taskbar –Open Apps	All the same	Wide bar –App with focus
Windows	Sharp corners	Rounded corners –Softer look
Sounds	Yes	Muted –Light/Dark mode differ
Action Center	Yes	Changed
File Explorer	Yes	Improved
Browser Included	Internet Explorer, Edge	Edge
Snipping Tool	And Snip & Sketch	Only Updated Snipping Tool
Tablet mode	A Choice	Automatic when keyboard removed
Tablet Gestures	Yes	Multi-finger gestures added
Touch, Pen, Voice Input	Yes	Improved
Widgets	Yes	Improved –Slideout screen
32-bit version of OS	Yes	Not available
Feature Updates	Twice a year	Once a year
Startup Menu	Large Live Tiles	Grid of App Icons
On-Line Communications	Skype	Teams
Cortana Setup	Included	Eliminated



[Go to Page 1](#)

Special Interest Groups (SIGs)

w Work phone h Home phone c Cell phone
* Meets at an alternate location

Most SIGs will meet at Edina Executive Plaza, Conference Room #102, 5200 Willson Road, Edina, MN

Confirm with a SIG group if they meet elsewhere.
For more info contact the SIG Leader(s) listed here.

Get SIG announcements!
Link from www.tcpc.com

Board of Directors*

All members are welcome! Check www.tcpc.com for location.

Selected Saturday mornings

Linux on Saturday

This is for the Linux newbie and those trying to come over from Microsoft to a different operating system.

Second Saturday @ 9 AM-Noon

Note: No Meetings June-August

Jack Ungerleider 612/418-3494 c
jack@jacku.com

Tech Topics

Technical presentation/discussion on various technical topics from the following areas:

- Web/Internet
- Mobile Devices and Apps
- Playing with Programming
- DIY (3D Printing, R-Pi, other hobby electronics, etc.)

Second Tuesday @ 6:00-7:00 PM

Every month

Right before the general meeting.

Jack Ungerleider 612/418-3494 c
jack@jacku.com

Microsoft Access

All levels. Presentations by expert developers within the group and by MS reps.

Third Saturday 9:00 AM—Noon

Note: No Meetings June-August

Steve Kuhlmeier 952/934-8492
skuhlmeier@hotmail.com

Microsoft Office

Addresses the use, integration, and nuances of the Microsoft Office applications.

Combined with Systems on Saturday

Third Saturday of the Month

9:00 AM—Noon

Note: No Meetings June-August

Steve Kuhlmeier 952/934-8492
skuhlmeier@hotmail.com

Directions to Accord, 1515 Energy Park Drive for General Meetings:

From I-94 in St. Paul, take the Snelling Avenue exit, then go north on Snelling Avenue about one mile to Energy Park Drive. Take Energy Park Drive and take the first left into the driveway to 1515 Energy Park Drive.

From I-694 or Hwy 36 in St. Paul, take the Snelling Avenue exit, then go south on Snelling Avenue past Como Avenue to Energy Park Drive. Take Energy Park Drive and take the first left into the driveway to 1515 Energy Park Drive.

Directions to Edina Executive Plaza for Systems on Saturday, Access, Word and Picture Perfect SIGs: Take Highway 100 to the 50th Street/Vernon exit. [If you have come from the north, cross back over Highway 100 to the east side.] Take the first right and go past Perkins [The golf course will be on your left.] and continue on the east frontage road (Willson Road) to the next building—5200 . There is ample parking in the building's lot. Conference Room #102 is on 1st floor.

Help yourself by helping others!

Join the team & share your knowledge with others.

Contact TC/PC at www.tcpc.com

Meetings start at 7:00 PM (9:00 AM on Saturday) unless otherwise noted. *Virtual Meetings during Covid pandemic.

February

March

SUN	MON	TUES	WED	THU	FRI	SAT
				1	2	3
4	5	6	7	8	9	10 Linux on Saturday SIG 9am—Noon
11	12	13 7pm General Mtg Best of CES 2024 6pm Tech Topics	14	15	16	17 MS Office SIG (includes Access) 9am—Noon
18	19	20	21	22	23	24
25	26	27	28	29	1	2
3	4	5	6	7	8	9 Linux on Saturday SIG 9am—Noon
10	11	12 7pm General Mtg TBA 6pm Tech Topics	13	14	15	16 MS Office SIG (includes Access) 9am—Noon
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

[Go to Page 1](#)



You have just read an issue of The Digital Viking.

Would you like to receive this delivered directly to your email or business each month?

As a member of TC/PC, the Twin Cities Personal Computer Group, one of the benefits is reading this monthly publication at www.tcpc.com.

As a member of TC/PC, you may attend any or all of the monthly Special Interest Group (SIG) meetings and be eligible for software drawings. The small membership fee also includes access to real-live people with answers via our helplines, discounts, and various other perks.

Does membership in this group sound like a good way to increase your computer knowledge?

It's easy to do! Simply fill in the form below and mail it to the address shown.
(If you use the form in this issue, you will receive an extra month for joining now.)



Here's the info for my TC/PC Membership:	2/24
Full name _____	I'm signing up for:4
Company name _____	<input type="radio"/> Individual/Family Membership (\$18)
Address _____	<input type="radio"/> Business Membership (\$100)
City _____ State _____ Zip _____	If an existing member your # _____
<input type="radio"/> Home <input type="radio"/> Business <input type="radio"/> Change address: <input type="radio"/> Perm. <input type="radio"/> Temp. 'til _____	Make checks payable to:
Home phone _____ Work phone _____	Twin Cities PC User Group 341 County Rd C2 W Roseville, MN 55113
Online address(es) _____	Or sign up on our website:
Where did you hear about TC/PC? _____	http://www.tcpc.com
<input type="radio"/> I DO NOT want any of my information disclosed.	<input type="radio"/> Check # _____ <input type="radio"/> Bill me
<input type="radio"/> I DO NOT want to receive any mailings	<input type="radio"/> New member <input type="radio"/> Renewal <input type="radio"/> Prior member
Administrative Use Only Rec'd _____ Chk# _____	I'm interested in:
	<input type="radio"/> Training classes <input type="radio"/> Volunteering <input type="radio"/> Special Interest Groups: New User, Access, etc.
	List here:

February 13, 2024
7:00 pm
General Meeting

Best of CES 2024

Via Zoom Only



341 County Rd C2 W
Roseville, MN 55113

FIRST CLASS MAIL