



Midland Michigan

# BITS AND BYTES

AUGUST 2020

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## **ARTICLE INDEX**

### **PC Organization — Page 2**

Author: Dick Maybach, Member, Brookdale Computer User Group, NJ

### **The Samsung SmartSwitch app — Page 5**

A utility for copying apps and data from one Android smartphone to another when you upgrade  
Author: John Krout, Member, Potomac Area Technology and Computer Society (PATACS)

### **System Monitoring Tools — Page 7**

Author: Frank Fota, Newsletter Editor, Fredericksburg PCUG, MD

### **Open Source Lab—Linux Mint 19.3 — Page 9**

Author: Cal Esneault, Former President and leader of many Open Source Workshops & SIGs, Cajun Clickers Computer Club

### **Genealogy Research Online — Page 10**

By Frank Fota, Secretary & APCUG Rep, Fredericksburg PCUG, MD

### **Interesting Internet Finds March 2020 — Page 11**

By Steve Costello

### **Freshly Squeezed Review—It's all in the mind, y'know — Page 12**

By Frank Petrie

### **Recover Your Wi-Fi Password — Page 14**

By David Kretchmar, Computer Technician, Sun City Summerlin Computer Club

### **Modern Television Technology — Page 15**

By Jeff Wilkinson, President, Sun City Summerlin Computer Club, NV

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## **GENERAL CLUB MEETING**

via ZOOM

**Wednesday, August 26, 2020**

**6:00 P.M.**

## PC Organization

Author: Dick Maybach, Member, Brookdale Computer User Group, NJ  
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We are cursed by the low cost of modern disks, on which we can store several terabytes for under 100 Dollars. As a result, our PCs often hold thousands of files, hundreds of e-mail messages, and dozens of applications, often making it difficult to find what we want. Organizing the information on a PC after several years of use is such a daunting task that it's easy to put off. Instead, treat getting organized as a goal, realizing that you'll probably never reach, but as you make progress, you'll find you're getting more efficient.

**Application Menu Bar** — Space here is precious, so I reserve it for my most-used programs, about a dozen. To access the others I use the Windows key (  ), then type a character or two to see a short list, one of which is almost always the one I want. Often, even this isn't needed, as a double-click on a filename will launch the appropriate application, or a right-click will give you a choice of alternative ones. This is usually faster than searching a cluttered menu bar or desktop.

**Desktop** — I prefer to keep mine clean, and it now holds just two icons, the trashcan and one folder (my equivalent of a to-do list). I often have several windows open and would have to move or minimize these to access icons on the desktop. Keeping them elsewhere speeds up my work; see Figure 1.

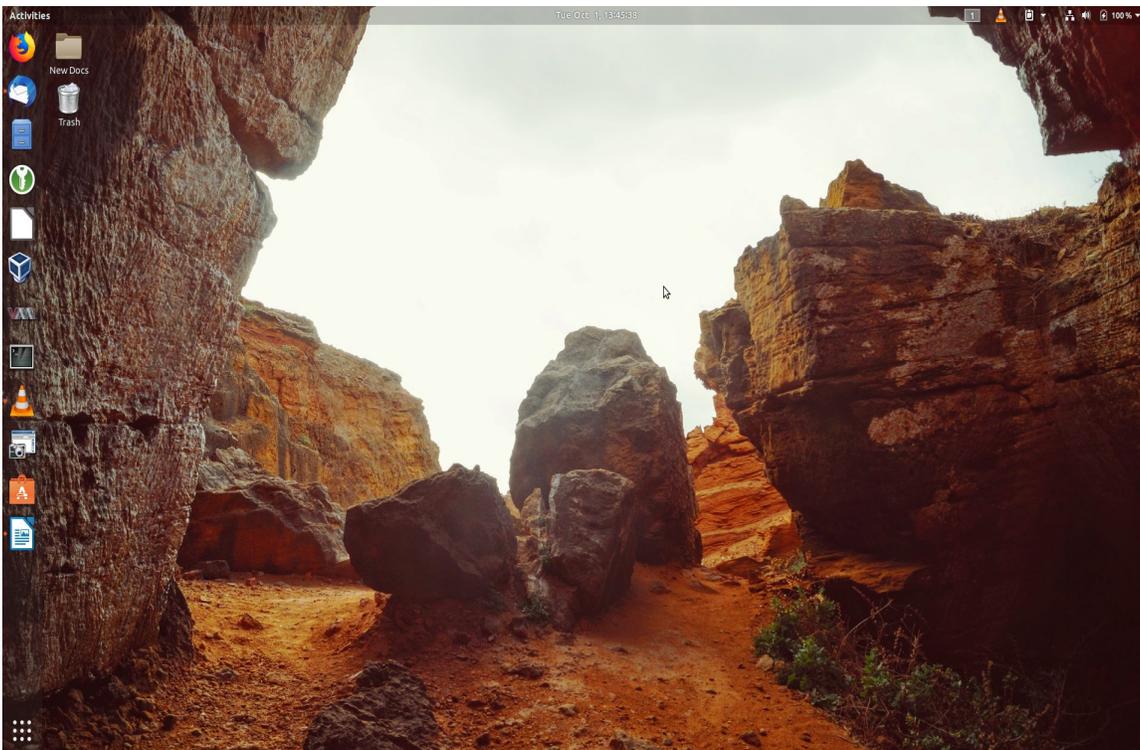


Figure 1. A Barren Desktop.

**File System** — We all use a hierarchical structure of directories in which we store our files. Storing is the easy part; it's the retrieval that's difficult. Using descriptive directory and file names will help greatly, although this may take some adjustment if you began using PCs in the DOS days, where you were limited to maximums of eight characters for filenames and three for extensions. I find it useful to have an archive directory where I move files and directories that I seldom need but haven't worked up the courage to discard. Your file browser can help you identify candidates for trashing. Configure it to sort the files by their creation date, with the oldest shown first, and to display them as a list so you can see their creation dates, which will help you find old files that are no longer useful. My approach here is much like that for my desktop and menu bar; almost every file is in a directory with very few loose ones in my home directory; see Figure 2.

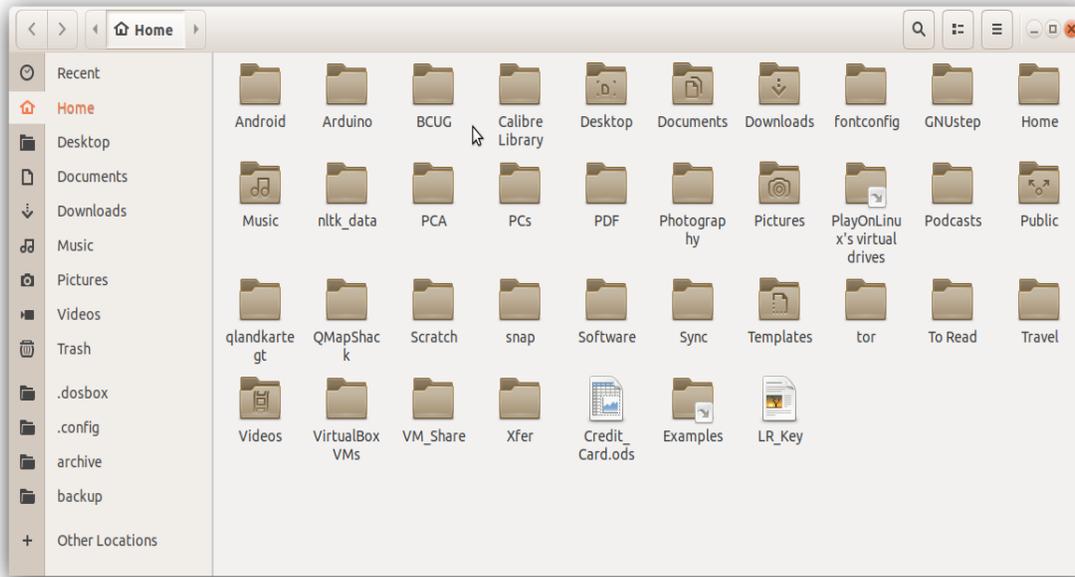


Figure 2. Home Directory.

**Mail** — Most of us also keep our messages far too long, with the result that our inboxes are overflowing. You can create folders and even sub-folders within your in-box with descriptive names, such as Orders, Travel, Finance, and Medical. Review your messages and discard those that are no longer useful, reservations for completed trips for example. The great majority of messages are worthless and should be deleted immediately. Many others are valuable for only a short time; I periodically delete all that are over a year old (and yet my inbox contains hundreds).

**Favorites** — I keep only my most-used few on my browser menu bar. The rest are organized in folders, so I can quickly find what I need. Here too, you should perform house cleaning and delete those that are obsolete or unused. Our interests change over time, and some sites that we used to check every day now just clutter our list. Many browsers provide a cloud service that synchronizes the favorites on all your devices, which greatly eases the job, assuming you use the same browser everywhere, of course.

**Media** — You may use specialized applications to store and retrieve photos, songs, and the like. Often, these can create playlists that access the files in the order you prefer, without having to duplicate or move the files. I prefer to keep my media files on my disk rather than in the cloud, although this means that I have to back them up. I also prefer to organize my media files using the file manager, although this means I have to rename them to make them appear in the correct order. Some years ago I used a photo organizing application for this, and when its vendor discontinued it, I lost several slide shows. I still had the photos, but they weren't in a logical order and were no longer associated with the title slides.

**Passwords** — I consider a password manager application essential. This organizes them into folders and stores them in an encrypted database. Some also can store associated information, such as PINs, security questions and answers, and URLs. They also can generate strong passwords, which removes the temptation to use the same one on different accounts. I have no idea what most of my passwords are, but I don't need to as they are available on my PC and cell phone, once I enter the database password (about the only one I do know). I use KeePassXC, <https://keepassxc.org/>, which is available for all operating systems, and there is a compatible variant for Android. As a result, my passwords are always available, but still secure. Figure 3 shows the application. I have some work to do here; there are far too many items in the Internet category, and I should split it up to make them easier to find.

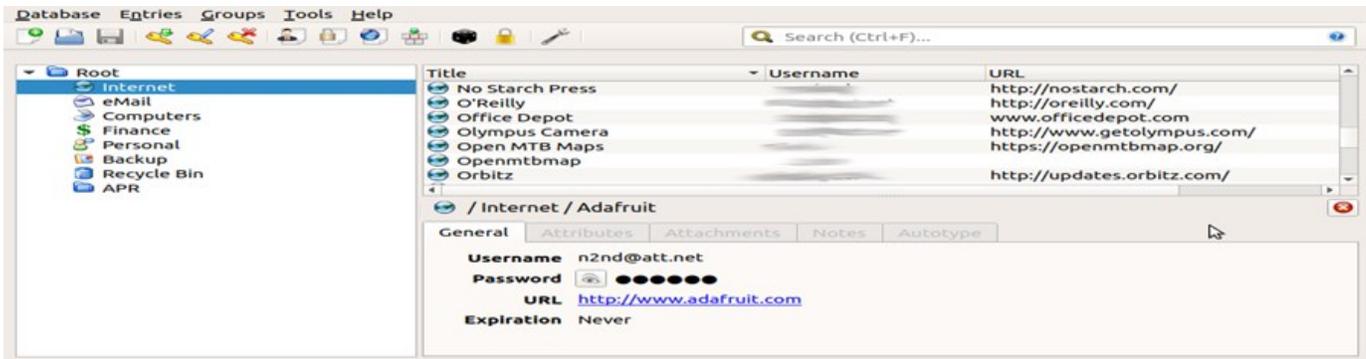


Figure 3. KeePassXC.

**Notes** — We all make notes, as the success of Post-it shows, and keeping track of them can be difficult. Fortunately, there are applications to help. I use CherryTree, <https://www.giuspen.com/cherrytree/>, which stores both formatted text and images and is available for Windows and Linux. I keep some only a short while, for example, while I gather information for an article, but some I retain and modify for years, for example, those on photography and PC operation. Each major topic is a separate file, and each is organized like a directory tree. Unfortunately, it has no cell-phone equivalent, but I can export the notes as a PDF for display on my cell phone. Figure 4 shows my notes file for this article.

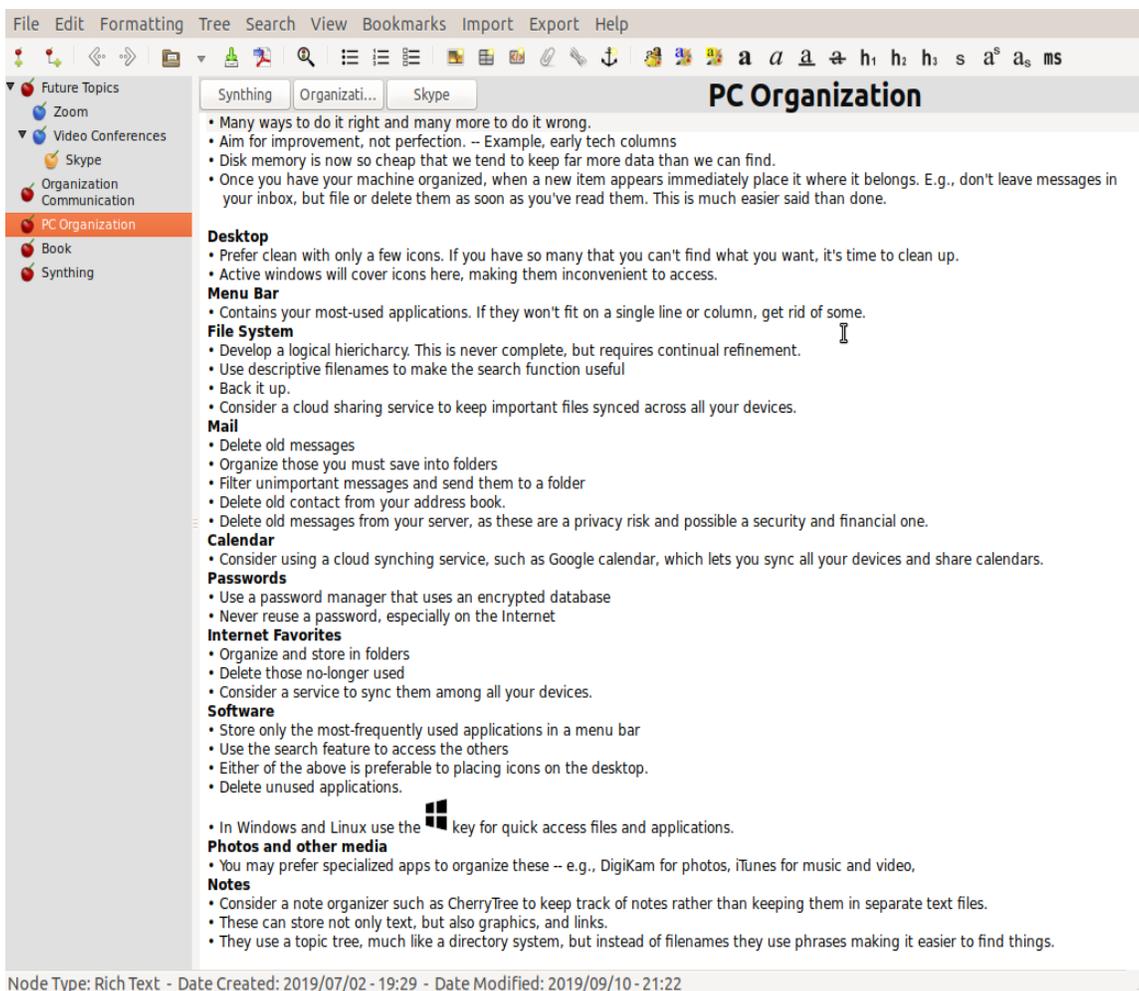


Figure 4. CherryTree Notes.

Organization is personal, and what I find efficient may frustrate you. Pay attention to how you spend your time, and if you find yourself repeating the same routines, look for ways to streamline them. Perhaps you can change how you store things, or there may be an application to make retrieval faster. Pay attention to the ten percent rule, “We spend 90 percent of our time on 10 percent of the tasks.”

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## The Samsung SmartSwitch app

A utility for copying apps and data from one Android smartphone to another when you upgrade

Author: John Krout, Member, Potomac Area Technology and Computer Society (PATACS)

www.patacs.org — jkrout75 (at) yahoo.com

In December 2019, I upgraded from a Samsung Galaxy S7 phone to a Samsung Galaxy S10 phone.

As with any upgrade, I was eager to install my contacts, my apps, and my data on the new phone.

About two years ago, I upgraded from an S5 to S7. At that time, I used the Verizon Wireless app called Content Transfer to copy items from the S5 onto the S7. That app left a lot out of the transfer, most notably my Memos but also a large number of apps.

This time around, hoping for a more complete transfer, there is a new kid on the block, a competitor: the Samsung data transfer app called **SmartSwitch**. The app, like ContentTransfer, provides a capability to transfer data wirelessly between two phones running the app. In this case, to use the wireless method, both phones must be Samsung smartphones.

SmartSwitch will also work even if your *old phone is not a Samsung phone*. The Samsung Galaxy S10 includes an On The Go (OTG) adapter, which gives the S10 a USB-A socket, just like the USB sockets on your computer. You can connect the old phone's USB cable to the Samsung Galaxy S10 via that OTG adapter. Then start up SmartSwitch on the S10, and it will treat the old phone as a USB peripheral and reads its contents for transfer onto the S10.

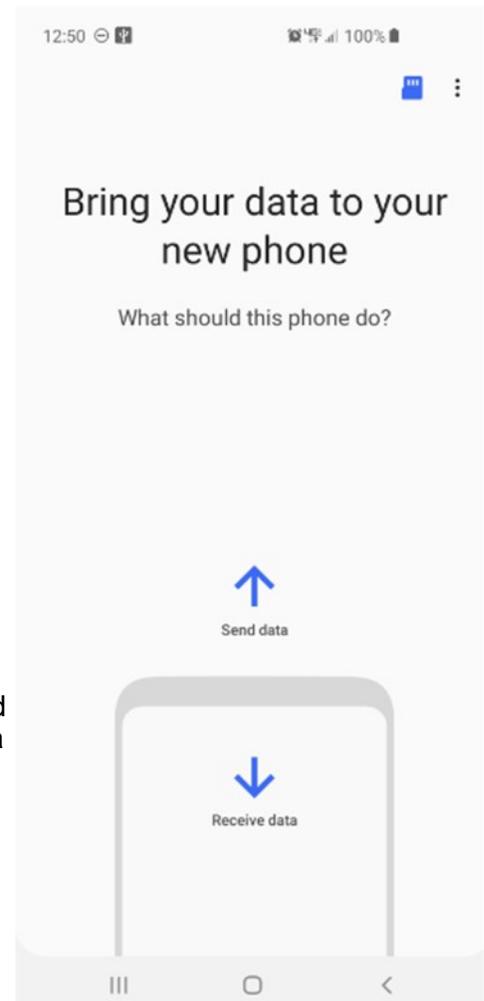
I do not think that the OTG cable transfer method will work at all if the old phone is an iPhone. But it should work on most Android phones.

In my case, since both were Samsung phones, I ran the SmartSwitch app on both. I told the old one to send data, and I told the new one to receive data. Each phone recognized the other quickly using a wireless technique, possibly Wi-Fi or Near Field Communication (NFC).

I decided to write this article because I realized that the apps do not provide useful guidance about what they can and cannot accomplish. I can report what SmartSwitch did and did not accomplish it for me at the end of 2019.

**Illustration 1** depicts the SmartSwitch app's main screen that I used the wireless transfer method. Note the two arrows. For wireless data transfer, the app must be running on both phones, the two phones must be close together (no more than 4 inches apart), and the appropriate arrow of each app must be tapped at roughly the same time. Tap the Up arrow on the old phone to send data. Tap the down arrow on the new phone to receive data.

The SmartSwitch app said about 7 gigabytes would be copied from the S7 to the S10. The transfer took about 18 minutes. That is a data transfer rate a bit less than 0.4 gigabytes per minute.



What got transferred into the S10?

### APP TRANSFER

**Most of the S5 apps** got transferred. The **app layouts on the Home screens** were almost identical to the layouts on those screens on my own phone. This made it very easy to compare screens to confirm that S10 apps were in place.

A few apps were *not* transferred, perhaps because they were stored on my microSD card. The **Firefox browser** and **Keeper Security** showed up as ghosted gray icons on the S10. When I tapped each gray icon, SmartSwitch installed those apps using the Google Play store.

One app, **Amazon Kindle**, did not show up at all. I re-installed it from the Google Play Store.

Another exception was **Yahoo Finance**, which was installed but was not present in my Money folder. So I put Yahoo Finance into the folder.

And the **Memos app** was missing, or so I thought. Read on.

### DATA TRANSFER

My **contacts** got transferred to the S10. That was my primary goal. My 200+ **custom ringtones** got transferred also.

Most of my **data** in the phone's internal storage got transferred, including the photo for the Lock Screen and the photo for the Home screen. I was pleasantly surprised about that since the photos themselves were originally on the microSD card. Android must have copied the two photos to internal memory when I assigned the photos to screens.

My **text message conversations** got transferred.

I was especially concerned about the **400+ saved geocache files** that I stored using the c:geo app; those are stored in internal memory, but I had backed up the files onto my S7 microSD card just in case those were not transferred. As it happens, those geocache files were indeed transferred by SmartSwitch and usable by the c:geo app on the S10.

The Memos app itself did not get transferred. When I realized the Memos app did not get transferred, I guessed that perhaps another app with a different name and icon might do the same thing. I came across the **Samsung Notes app** by accident while browsing to identify bloatware on the phone, opened that app out of curiosity, and realized I could see it was loading all my Memos. So my Memos were transferred successfully but to a different app.

### SOME CONFIGS TO BE DONE

Some types of configuration data did not get copied onto the S10.

I had to supply the password for the S10 to log onto my home router Wi-Fi.

I had to re-initialize **TypeApp**, my primary email app, with the email account ID and password. I had to re-initialize the **Yahoo Mail app** with my ID and password. I had to re-initialize the **Keeper Security app** with my ID and password. Like email services, Keeper Security has an encrypted backup of my data on its servers, and copies that to my phone when I enter the ID and password I established years ago for that app.

Luckily, Keeper Security on the old phone kept working after the phone was no longer on the phone network, so I could look up those ID and password combos.

In the Google Pay app, I had to re-enter the CVC numbers for the two credit cards I use via that app. One, American Express, also required me to enter a confirmation code sent as a text by American

Express to me. These are reasonable config matters considering that neither Google's servers nor the credit card issuers were familiar with my new S10 phone.

Another config issue: on the old phone, I had configured the **WeatherBug app** to include many cities I have visited in the past two years: Richmond, Boston, Cincinnati, El Paso Dallas, Atlanta, Omaha, Minneapolis, Salt Lake City, Jackson, Bozeman, and Twin Falls. That config did *not* get transferred. I had to re-enter those cities. The effort did not take long.

### THE BOTTOM LINE

Overall, I think the Samsung Smartswitch app did a reasonably complete job. The exceptions I noted above are, in my opinion, few and minor, easily resolved.

I will admit I suspect Verizon's ContentTransfer app probably has been improved quite a bit since I last used it. That app may remain the most widely applicable solution for anyone upgrading from one phone brand to another on the Verizon Wireless network, especially if neither one is a Samsung phone.

I also had about 60 gigabytes of data on a microSD card on the old phone, primarily music and photos. I physically moved the microSD card to the new S10 phone.

However, if instead I had a blank microSD card big enough to contain the data and I put that blank card in the new S10 phone, SmartSwitch can also be told to copy the microSD card data. Give the data transfer rate of fewer than 0.4 GB per minute, a 60 GB transfer would take more than 2 hours and might exhaust the batteries on both phones. So I am glad I did not try that. It might transfer at a much higher rate via the USB method.

The alternative solution is to use a computer to load the data onto the blank microSD card. That will take a few minutes rather than 2 hours.

ABOUT THE AUTHOR: John Krout is a past president of the Washington Area Computer User Group (WAC). After his tenure, the group merged with another to form the Potomac Area Technology and Computer Society (PATACS). He has been taking photos since the early 1960s and writing about the uses of personal computers since the early 1980s. His digital photos won a first and second prize in the 2018 Association of PC User Groups (APCUG) digital photo contest. After many years working as a software engineer using C and C++, now John is a tech writer for the Thales Group, supporting the use of that company's advanced automatic fingerprint matching technology in the computer system of a major federal government agency.

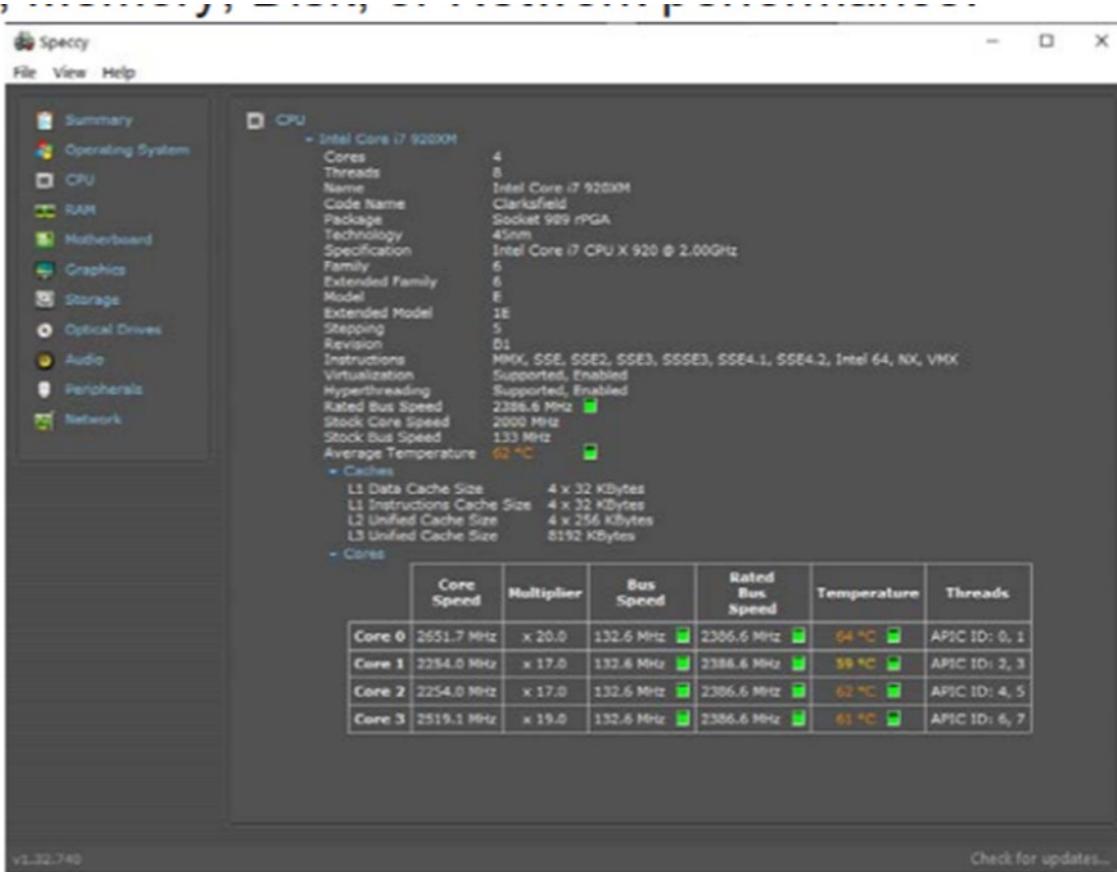
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## System Monitoring Tools

Author: Frank Fota, Newsletter Editor, Fredericksburg PCUG, MD  
November 2019 issue, FPCUG Notes — [www.fpcug.org](http://www.fpcug.org) — [Fotafm \(at\) gmail.com](mailto:Fotafm@gmail.com)

Have you ever wanted to view the impact a program has on your computer's performance? A quick internet search reveals that there are many monitoring tools available. Some are freeware and others require payment. Resource monitoring tools are also bundled with system utilities (e.g., Norton Utilities®). Microsoft Windows has a "Resource Monitor" that can be run from a Command Prompt or via the search box by typing, "perfmon.exe." Windows Resource Monitor is extensive but, difficult to configure. A quick look at resources can be found, however, by opening the Windows Task Manager (i.e., Ctrl-Alt-Del then click on Task Manager). Click on the Performance tab in Windows Task Manager and it's easy to see the effect that a program has on CPU, Memory, Disk, or Network performance.

If you need more details about the hardware on your PC (e.g., the effect a program has on CPU or GPU core temperatures), I recommend Speccy®. Speccy® is written and published by Piriform (now owned by Avast); the same company that developed CCleaner®. According to Jeffrey Wilson, Lead Analyst for PC Magazine, "This utility serves up a wealth of data about your PC's operating system, attached peripherals, memory, storage, and much more."



If you are looking for a program that will overlay hardware statistics on top of a running game, you can install MSI's Afterburner program. It's compatible with both Nvidia and AMD's Radeon graphics cards.

## Open Source Lab

### Linux Mint 19.3

Author: Cal Esneault, Former President and leader of many Open Source Workshops & SIGs, Cajun Clickers Computer Club

January 2020 issue, Cajun Clickers Computer News — [www.clickers.org](http://www.clickers.org) — [tsa70785 \(at\) gmail.com](mailto:tsa70785@gmail.com)

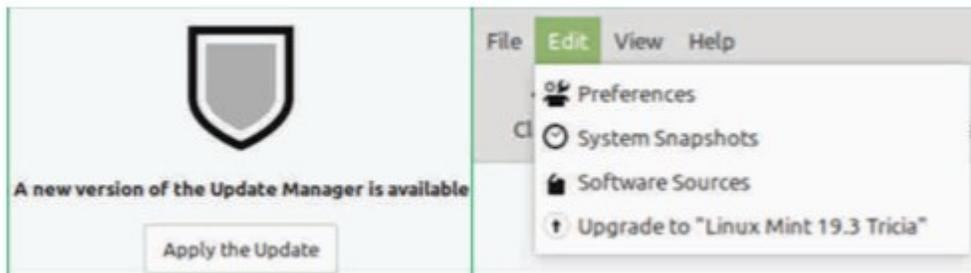


Linux Mint is a distribution based on Ubuntu LTS versions. The latest series is the Mint 19.x family (based on Ubuntu 18.04 LTS). There are three desktop choices: Cinnamon, Mate, and XFCE. Recently, Mint 19.3 was released. Below is a list of the 19.x series.

Mint Version	Code Name	Released
Mint 19	Tara	June 2018
Mint 19.1	Tessa	Dec 2018
Mint 19.2	Tina	Aug 2019
Mint 19.3	Tricia	Dec 2019

It is possible to upgrade directly to Mint 19.3 from any previous 19.x versions. These "in-place" upgrades do not affect personal files or bookmarks. As usual, only software maintained by Mint itself is changed for a "point release."

I was running Mint 19.2 (Cinnamon). As part of the normal updates, I received notice to refresh the update manager itself. It also has a good system description and record of any system crashes see below).



Linux Mint has focused on making recovery from any regressions during the upgrade as easy as possible. It is recommended that users precede upgrade with a "*Timeshift*" session for back-up and to read the installation notes. In this release, they go a step further by introducing the "*System Reports*" tool. It alerts users if they are missing a language package, a multimedia codec, etc. It also has a good system description and record of any system crashes (see below).



*Celluloid*, *gnote*, *drawing*, and *neofetch* were added to Linux Mint 19.3 as future defaults. For in-place upgrades, you have to do this manually (note: they are present in the iso download if you do a fresh install). *Celluloid* is a replacement for *Xplayer* (*Celluloid* is more efficient for playing movies on your system).

*Gnote* is a replacement for *Tomboy* (not much difference here). *Drawing* is *Gnome-Paint* renamed (a simple bit-map editing program).

*Neofetch* is a command line tool that can “fetch” all sorts of information about your system, from the Linux kernel version number to how long it’s been running (“uptime”). See a short screenshot of *neofetch* below.

```
OS: Linux Mint 19.3 Tricia x86_64
Host: Latitude E6430 01
Kernel: 4.15.0-72-generic
Uptime: 10 mins
Packages: 2603
Shell: bash 4.4.20
Resolution: 1366x768
DE: Cinnamon 4.4.5
```

Mint appears to be backing-off from having so many in-house “Xapps.” Mint 19.2 is a refined version of Linux Mint and is recommended for current users. Upgrade here is a minor event but look for major changes when shifting to Mint 20 next year.



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## Genealogy Research Online

By Frank Fota, Secretary & APCUG Rep, Fredericksburg PCUG, MD  
FPCUG Notes for April 2020 — [www.fpcug.org](http://www.fpcug.org) — [fotafm \(at\) gmail.com](mailto:fotafm@gmail.com)

Well, the Coronavirus has us isolated at home instead of at work. Some people, so I’ve heard, are tackling tasks they’ve deferred for the proverbial “rainy day.” I’ve often said to myself that I would scan that box of photos I rescued from my departed uncle’s home before its contents were sold at an estate sale. I intend to distribute the images to my relatives. The issue is ...identifying the people in the photos. Genealogical research can be a tedious task. Just such a task for a time like this. If you are interested in creating a family tree, or simply learning more about your ancestors, there are many websites where you can conduct genealogical research. Some of these websites are interactive and allow you to share photos and communicate with distant relatives. Bob Rankin at [AskBobRankin.com](http://AskBobRankin.com) provides a list of useful sites for Genealogical research:

1. Ancestry.com – perhaps the best-known website for genealogical research. It is a subscription-based service that costs \$199/year or \$99 for six months. A 14-day trial will allow you to evaluate the service. For an additional fee, the “World Explorer” package adds the ability to search internationally.
2. Cyndi's List – is a free, “...categorized & cross-referenced index to genealogical resources on the Internet. Over 335,000 genealogical sites are linked from this website.
3. Family Search – is run by the LDS Church. It provides access to over a billion records worldwide at no cost. The LDS Church also provides personal assistance and access to some of the paid sites via local family history centers. A local family history center is located at 20 Boscobel Rd Fredericksburg, VA 22405 (540) 361-7494.
4. Roots Web – is the oldest and perhaps the largest genealogy site on the internet. The Roots Web site has genealogy search engines and message boards where you can obtain help from budding but more experienced genealogists.
5. USGenWeb – provides lists of genealogy resources by state and county.
6. WorldGenWeb – is similar to USGenWeb. Bob Rankin says, “WorldGenWeb is a nonprofit volunteer organization that is dedicated to the free use and access of public domain genealogical information.”

Mr. Rankin notes several other websites and the resources that are provided in the article linked above (i.e., at AskBobRankin.com). He also provides links to genealogy software.

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## Interesting Internet Finds March 2020

By Steve Costello — scostello AT sefcug.com

In the course of going through the more than 300 RSS feeds, I often run across things that I think might be of interest to other user group members. The following are some items I found interesting during February 2020.

*Understanding Your Google Account Online Space Allocations (For Gmail, Google Drive And Google Photos)*

<https://whatsonmypc.wordpress.com/2020/02/08/understanding-your-google-account-online-space-allocations-for-gmail-google-drive-and-google-photos/>

This post explains what takes up space and why in your Google account. I have more than one Google account but have never really understood why I have so much unused space until reading this post.

*How To Change The Windows 10 Theme*

<https://www.digitalcitizen.life/change-theme-windows-10>

For those that have moved from Windows 7 to Windows 10, and used themes in Windows 7, this post is for you. If you are like me personalization is not something to worry about immediately, but now that I have been using Windows 10 for a while it is getting to be something I will be doing. Check out this post to learn about changing themes in Windows 10.

*OTT Explains: Is It Worth Buying Extended Warranties for Tech?*

<https://www.online-tech-tips.com/computer-tips/ott-explains-is-it-worth-buying-extended-warranties-for-tech/>

Are you like me in thinking about extended warranties before just declining? If so, check out this post. After reading this, I don't think about it much anymore. (Remember most credit cards will extend your warranty.)

*How To Wrap Text Around Images In Google Docs*

<https://www.thewindowsclub.com/how-to-wrap-text-around-pictures-in-google-docs>

If you use Google Docs, this is a useful tip.

### *Ditching Passwords: FIDO & SQRL*

<https://firewallsdontstopdragons.com/ditching-passwords-fido-sqrl/>

I wish this was something we could do right now however, this post explains two promising alternatives to passwords. Check it out.

### *Focus Better With Multiple Desktops*

<https://askleo.com/focus-better-with-multiple-desktops/>

The use of multiple desktops is something I sure could have used when I was editing two user group newsletters. Since reading this post, I have started using two desktops to separate my writing and day to day activities. So far it has helped me focus more when writing. If you work on different things and think this might help you, check out this post for yourself and set up however many desktops works for you.

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## **Freshly Squeezed Review—It's all in the mind, y'know**

By Frank Petrie — <https://ympnow.com> — [Phranky \(at\) mac.com](mailto:Phranky(at)mac.com)

You pay close attention to what and how much you eat and drink. You work out religiously several times per week. How often do you exercise your grey matter?

Three years ago, I found there's an app for that. I've have been dutifully using it ever since and the app keeps getting better and better. I thought it well worth a revisit.

> Elevate is a new type of cognitive training tool designed to build communication and analytical skills. Elevate has been selected by Apple as the App of the Year. Since launching in May 2014, Elevate has been downloaded more than 25 million times on the App Store and Google Play.

Elevate (<https://www.elevateapp.com>) runs your brain through a range of exercises from grammar to math and all variations in between. There are dozens of exercises with a game-like quality that will keep on challenging you, raising the bar as you improve your skillset.

You can customize your daily training focus, choosing between 3 to 5 games from a stable of 35+ games. If you'd like, you can measure your performance against yourself and others. Immediately, it doesn't take long to separate your weaknesses from your strengths.

Elevate collaborated with an independent research company and an independent analyst in four key skill groups.

Elevate users trained using our app during a four-week period, after which the Elevate users and the control group took identical post-tests.

- Our analyst found that Elevate users improved 69% more than non-users, and the more they played Elevate, the better their results.
- Over time, I have found that my strength lies in grammar but (although not terrible) I need to work on my mathematical aptitude.

The first thing that you'll notice is that the exercises are challenges yet simultaneously feel like games. Not in a Mario Bros. sense but sophisticated. This owes in great part to the different and inventive UIs for each exercise. And they challenge you more as you grow more proficient in any particular category.

Example: One of the math challenges has you calculate the average of two numbers, at first. As you become more proficient, the app ups you to three numbers, and then four. Then they toss you a curve. Instead of just whole numbers, they figure decimals into your calculations.

The one math exercise that I felt had the most interesting twist was Subtraction. I struggled at first but the app points out the easiest method to obtain the correct answer after it has detected a pattern to what you're doing wrong. What was fascinating was that for the first several months, the equations were laid out vertically, like this:

```
1945
-732
```

It was easy to concoct methodologies to arrive at your answer speedily. But then came the twist. Once you became proficient with this arrangement, they then presented the equations horizontally:

```
1945 - 732 = ?
```

Surprisingly, it tossed me for a loop. I had to ditch all of my previous visual cues and start anew. You wouldn't think it would be that hard but it was returning to square one.

I have recently discovered another category: punctuation. The first exercise dealing with commas, when they should be removed and where they should be added.

The same can be said for their grammar exercises. They'll provide you with two sentences with a word or two missing. You're presented with the choice of two options to complete the sentences. But once you've become competent at spotting the correct or incorrect phrase competence at that level, the options are upped to three.

Another grammar exercise requires you to decide whether a phrase is correct or not. In the beginning, they highlight the phrase to make it easier to focus on. Once you have proven agile at recognizing a phrase is proper or improper, they then remove the highlighting and you have to focus on the entire paragraph.

At the end of each exercise, Elevate tells you how your performance ranked overall of all the times you trained with that exercise.

After a session of five games, you will receive a brief overview of how you are progressing in those categories, how you compare to all Elevate users in a specific topic such as grammar, and how many consecutive days you have completed.

All-in-all, Elevate is a challenging collection of exercises that will help you achieve your top form mentally. And the developers keep on introducing new ones.

Elevate is available for free on the iOS store. There are in-app [various subscriptions] (<https://apps.apple.com/US/app/id875063456/?platform=ipad>) you can purchase. Unfortunately, you're told the fees but not which apply to which devices or their duration (one month, one year, lifetime, etc.).

Still, if you are as serious about staying in shape mentally as physically, I still encourage you to give Elevate a bash. You'll bash it at least twice if you're smart or want to be.

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## Recover Your Wi-Fi Password

By David Kretchmar, Computer Technician, Sun City Summerlin Computer Club  
Gigabyte Gazette Newsletter — [www.scsccl.com](http://www.scsccl.com) — [dkretch \(at\) gmail.com](mailto:dkretch@gmail.com)

Computer users often seek technical support when they are unable to access the Internet via their home wireless system.

First, the technician will usually walk the user through the reset procedure for the router or router/modem (turn them off and on). If that does not fix the problem and it is determined the router is putting out a good signal the subsequent conversation often goes something like this:

**Technician:** What is your password for your router?

**User:** I don't have a password.

**Technician:** If your router is not secured (i.e. password protected) you should be able to connect to it.

**User:** I don't have a password. I just click on the Google (or another browser) icon and get online.

At this point, the Technician explains to User that the Wi-Fi password is stored on User's computer and that a few steps are required to access that password. The technician might guide the user through a process to recover the password using the following procedure.

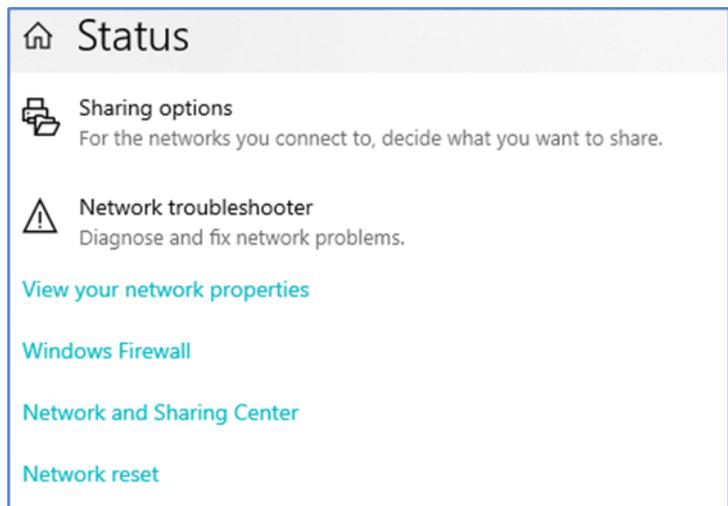
### If the computer connects to the Wi-Fi automatically

With the latest version of Windows 10, Microsoft has buried the Wi-Fi password on a computer more deeply than with prior versions of Windows. You can still find your Wi-Fi password using the following procedure:

#### Find your way to the "Wireless Properties"

Right-click on the Internet access icon on the right side of your Taskbar then click on "Open Network and Internet Settings." Click on "Status" then click on "Network and Sharing Center."

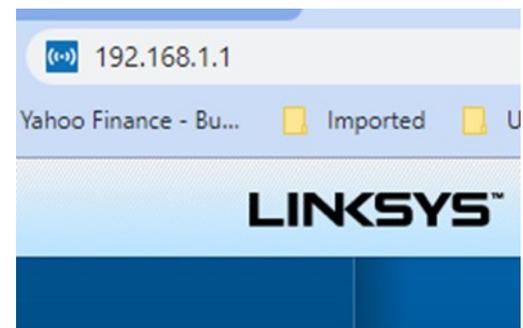
Under "Internet" click on your network name (in blue) then click on "Wireless Properties." Under "security" you can see the hidden password after you click on "show characters."



### If you only own a smartphone/tablet or have a PC which has not stored the Wi-Fi password

Log in to your router as an administrator. You can access your router by entering its IP address into your browser, such as Google Chrome or Microsoft Edge. You can research the default IP address of your router by Googling "IP address [brand name of your router]. Every router I've dealt with had an address of "192.168.X.Y." The most common value for both X and Y is the number 1. If that does not work, try substituting the numbers 0 or 2 for X.

After you've logged in, you should be able to find the Wi-Fi settings on the Administrative pages of your router. There you can look up your Wi-Fi password.



### If you are like many people

The Wi-Fi password is written on a sticker on the back of your router. This is how I usually set up home routers and it might be a good thing to do after you have recovered your Wi-Fi password.

This is a simple but effective strategy since it is so easy to find.

A burglar would have to break into your home to steal your password, and they probably would focus on more tangible items.

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## Modern Television Technology

By Jeff Wilkinson, President, Sun City Summerlin Computer Club, NV

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After a recent class on “Getting the Most From Your Roku” and in preparation for a March General Meeting update on “Cutting the Cord” I reflected on how different television viewing is today. Growing up in San Francisco my family had just a few choices for television viewing, all over the air, and received with an antenna either mounted on the roof or rabbit ears that sat on top of the huge console. I’m sure we all remember the gyrations we went through when using rabbit ears in an attempt to receive a stable snow and ghost-free picture! And, of course, the drudgery of walking over to the TV to manually change the channel.

How times have changed, now we change channels from our favorite viewing spot and control source, volume, channel, and even record our favorite shows!

Today, we watch TV on smartphones, tablets, computers, and television sets in various resolutions. We stream to TVs using different devices like Roku, Fire TV Stick, and Android boxes and we do it in a multitude of formats.

Many years and millions of dollars have been spent to build a streaming infrastructure capable of on-demand and live streaming to a myriad of different devices and configurations. The internet wasn’t set up to do this – top quality video in such a large scale according to said streaming media consultant and expert [Dan Rayburn](#). Streaming isn’t a static medium like TV, and our on-demand consumption pattern requires video to travel through lots of steps as it’s formatted for the final destination device.

If you look at some of the parts of the required process of streaming a live event, it is a complicated and involved process. First, you must capture the event, then convert the file format and maybe add a content protection scheme or ad insertion for on-demand revenue models and, finally, formatting for delivery through the internet to a multitude of devices.

According to Mr. Rayburn, it's a lot more complicated. There's no standard for encoding, so video files need to be "wrapped" differently for every platform they're delivered to; files are wrapped differently for Roku than they are for a desktop browser, a smart TV, or an Android or iOS device. A single video file could be wrapped 20 times or more depending on the devices to which it's being delivered. Enjoying video on a powerful computational device such as an Xbox or PlayStation is different than streaming to a device with less memory and computational power such as a Fire Stick. The size of the video file segments must be adjusted as well as the metadata payload. And we have begun to take for granted that the video we desire will be available in 720, 1080p, or even 4K quickly and reliably when and where we want it.

Video streaming is a whole new frontier to be developed and as the deployment of streaming options continually expands, so must the technology and computing power needed to reliably deliver it.

Just a little background as to what is involved in streaming content as we all anxiously look for ways to improve our television viewing experience.

