

Lake County Area Computer Enthusiasts

News Journal

"Seniors Helping Seniors Learn Technology"

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Are Free Public Phone Charging Stations Safe?

'Juice Jacking' Might Load Malware on Your Phone or Tablet as It's Charging



by Kurt Jefferson

Kurt Jefferson, Editor, Central Kentucky Computer Society

https://ckcs.org/

lextown2 (at) gmail.com

You're on a layover at a major airport when you realize your iPhone or Android smartphone's battery is draining fast, and the battery power is down to single digits.

The battery icon has just turned from green to red, meaning your phone is

nearly drained. Soon it will be as useless as an electric kettle in a cave.

There's a convenient public charging station nearby. You're in a bind. Your jet leaves in half hour. And yet you've read about the dangers of charging your phone or tablet at a public charging station. So what's a person to do?

How can you be sure the public charging station is safe? Reviewed.com reports, "As the latest security alerts prove, USB cables and chargers are like chewing gum—if you find it lying around in public, don't use it. It's not free candy. The Los Angeles District Attorney recently warned that charging your phone via those public USB ports can lead to "juice jacking." That's when

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J. J. Johnson
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historian@lcace.org



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News Journal

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Membership

LCACE membership is open to all individuals and families interested in personal computing. Annual dues are \$20.00 per individual/family. Applications for membership may be obtained at the monthly meeting, by request on the club hotline, and are now available on our web site at http://www.lcace.org.

Meetings

LCACE meetings are usually held on Saturdays at the Grayslake Area Public Library, 100 Library Lane, Grayslake, Illinois. The meeting room opens at noon and the formal meeting begins at 12:30 p.m. All meetings are open to the public. Bring a friend!

Newsletter Submissions

Club members are welcome to submit classified ads, reviews, tips and other articles for publication, to our newsletter editor in Microsoft Word format (.doc). **Publication deadline is the 21th of the month for all ads and articles.** Please do not use tabs or special formatting.

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Holiday Party

I'm really looking forward to our annual get-together! It will be our last in-person gathering until March, or possibly April.

Future presentations

I'm hoping that we can get some input from our members so that the presentations will be usefull to most of us. I sent out a form and links to two reference rescources, but we have other rescources besides those two. Actually the 2 I mentioned are only one rescource: The one on my website is only an enhanced copy of the APCUG list.

My best to all,

Les Larkin



Our Presidents 1983-2022

\$32.99.

hackers use the connection to transmit dangerous malware onto your device and steal your personal information or data.

"Reviewed.com's executive editor, T.J. Donegan, recommends an alternative. He recommends you buy a USB portable battery pack, "many of which can even charge laptops on the go—so you don't have to crowd around the one outlet with 15 other people."

Reviewed.com recommends what's called the Jackery Bolt portable battery pack. It says the portable battery pack "has an incredibly high capacity that can charge your phone three times over (!!) before the charger needs to be recharged. Plus, it's slim and compact, so it's easy to tote around and has multiple ports so you can charge more than one device at a time." Amazon currently sells the Jackery Bolt for

The Wirecutter, a website that reviews and tests nearly everything (and purchased by The New York Times), gives high marks to the Zendure SuperMini 20w Power Bank. Amazon currently sells this model for \$45 (using the Amazon onpage clipped coupon.) The Wirecutter writes in its Zendure review, "about as small and lightweight as a power bank can be while still offering enough capacity to juice up most smartphones up to three times. Its USB-C Power Delivery (PD) port can charge most handheld devices (and recharge the power bank itself) at top speed with the included USB-C cable and a compatible wall charger (the one that came with your phone will work). The USB-A port can handle any older, non-USB-C devices you might have kicking around, too."

The HyperJuice 18W USB-C+ Lightning Battery Pack also gets a good Wirecutter review. It contains built-in cables, so you don't have to mess with cables that can easily get lost, tangled, or misplaced. It's currently

\$60 from the Hyper website.

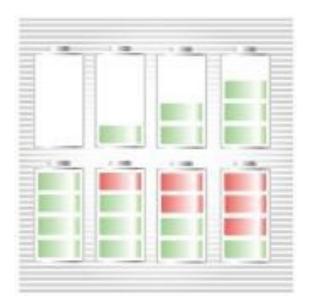
The Wirecutter also gives thumbs up to the TravelCard Charger, which sells for \$30 from TravelCard. "It has the lowest capacity of any power bank we've tested," writes The Wirecutter, but the review claims it's the best portable charger "for someone who wants to have an emergency boost of power always on hand."

Reviewed.com:

Here's Why You Should Never Use A Public Phone Charger

The Wirecutter:

The Best Portable Chargers and Power Banks for Phones and Tablets



FBI Issues Warning Over Public Charging Stations

The FBI says don't do it even if you're tempted to use a public charging station so your phone or tablet won't die on you.

It's a risky business, according to the team at the FBI, watching malware spread on mobile devices throughout the

U.S. and abroad:

(Continued on page 5)

"Cybersecurity experts have warned that criminals can load malware onto public USB charging stations to maliciously access electronic devices while being charged.

Malware installed through a dirty USB port can lock a device or export personal data and passwords directly to the perpetrator. Criminals can use that information to access online accounts or sell it to other bad actors."

FBI tech experts add, "Don't let a free USB charge wind up draining your bank account." Here are some tips to help you avoid becoming a juice-jacking victim:

- Avoid using a USB charging station. Use an AC power outlet instead.
- Bring AC, car chargers, and USB cables with you when traveling.
- Carry a portable charger or external battery.
- Consider carrying a charging-only cable from a trusted supplier, which prevents data from sending or receiving while charging.

Be always at war with your vices, at peace with your neighbors, and let each New Year find you a better man."

Benjamin Franklin

Bluetooth Adapters Do I need one?

Sun City Center Computer Club

https://scccomputerclub.org/

philsorr (at) yahoo.com

The short answer is no if all your devices have Bluetooth incorporated in them, but yes, if you have a non-Bluetooth device that you would like to use with other Bluetooth devices. A Bluetooth adapter allows a non-Bluetooth device to work with a Bluetooth device. The adapter does this by providing Bluetooth electronics for the non-Bluetooth device. Bluetooth is a wireless communications standard for interconnecting electronic devices. It allows devices to connect wirelessly over a range of about 100 ft. This wireless connection can be beneficial if devices are in separate rooms in a house. But that's the technical side of Bluetooth. Most of us know Bluetooth as how our smartphones connect to the radio system in our cars to provide "hands-free" phone conversations. This is probably one of the most extensive uses of Bluetooth today, but there are other uses. Two other uses of Bluetooth that come to mind involve listening to music; wireless headphones or earbuds and wireless (Bluetooth) speakers.

As implied above, Bluetooth is included in Apple and Android smartphones. Bluetooth is a convenient way to connect a smartphone to a listening device like headphones or a speaker. (In fact, some smartphones like the Apple iPhone XS, the Google Pixel 3, and the Motorola Moto Z3 don't even have a 3.5 mm wired headphone jack, making Bluetooth the only way to connect these devices to headphones.) Headphones are a convenient way to take advantage of a smartphone being used as a music player. Start the phone's music app, put on the headphones, and enjoy the music. Apple wireless headphones are very noticeable. Apple AirPods, as they are called, are typically white and look like someone cut the wires going to each individual headphone. Besides Apple, many other wireless headphones are available from Sony, Bose, LG, Jaybird, Optoma, Beats, and others. Using Bluetooth

(Continued on page 8)



HOLIDAY PARTY!

UGLY SWEATER CONTEST-DOOR PRIZES - GAMES - MUSIC

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10, 2022





Ugly Sweater Contest



W

e want to see your ugliest holiday sweater you can create at the Hol-

iday Party.

Decorate a sweatshirt or sweater with you material of choice—felt, yarn, LEDs, plastic clock gear, buttons, etc. As long as it's over-the-top and ugly, you're good to go.

We've be giving two prizes to the - one for the Ugliest Holiday Sweater and one for the Most Creative Use of Material

Judging will be done by the selective members attending the party.



headphones, you replace the wires needed with standard headphones with the wireless Bluetooth connection. That way, no wires are going from your head to your phone, which might be in your hand or in your pocket, which might get in your way. (With some of these wireless headphones, there is still a wire going from one headphone to the other that usually goes behind the head.)

Bluetooth Speakers - the other use for Bluetooth. Speakers that have Bluetooth included are sold as Bluetooth or Smart Speakers. There are many of these available from Sony, JBL, Sonos, Bose, and others. Most of these speakers are powered by batteries, so they are portable, and you can use them anywhere. Many are waterproof, encouraging their use at the beach or around the pool. These speakers contain Bluetooth electronics, which allow them to connect to a device such as a smartphone or a computer and be used in place of the speaker(s) on the device to provide the sound. So, if a Bluetooth speaker is connected to a smartphone and a music player app on the smartphone is started, the music will be heard on the Bluetooth speaker. A Bluetooth speaker is usually much more powerful than the small speaker on the smartphone, and the quality of the Bluetooth speaker is typically much better than that of the smartphone speaker, so the listening experience may be more enjoyable. And if the Bluetooth speaker is powerful enough, it may even be used to fill a large room and entertain many people.

Wireless headphones and Bluetooth speakers are quite helpful when used with a smartphone or a computer with Bluetooth electronics embedded, but what about those devices that don't have Bluetooth electronics included, like an older stereo receiver or a radio? Well, this is where Bluetooth adapters come into play. Bluetooth adapters allow you to listen to your non-bluetooth stereo or radio using your wireless headphones or Bluetooth speakers. The adapter provides the Bluetooth electronics needed to connect to other Bluetooth devices. Bluetooth adapters from Logitech, Taotronics, Trond, 1Mii, and others should cost less than \$50. Except for the inexpensive items, most adapters can be used as a Bluetooth Transmitter or a Bluetooth Receiver. When the adapter is used with a non-Bluetooth source of audio (like a stereo), it is being used as a Transmitter. When the adapter is used with a non-Bluetooth device that receives the audio (like a powered speaker), it is being used as a Receiver. Adapters are powered by wall power or battery, or both. If your stereo is not portable, you probably don't need a portable adapter. (Be aware that some less expensive portable Bluetooth adapters cannot charge their battery and operate as a transmitter at the same time.)

Setting up the adapter to function as a transmitter is pretty straightforward. First, the audio output from your non-Bluetooth stereo gets connected to the adapter's input, typically with a 3.5 mm stereo cable. (Some more expensive adapters even support optical audio.) Then when you go through the pairing and connecting process, the audio from the non-Bluetooth stereo will be audible in the wireless Bluetooth headphones. (In the diagram, a Bluetooth speaker can be substituted for the headphones, and you would have audio as loud as the particular speaker could provide.) Bluetooth Adapter used as a Transmitter







Non-Bluetooth Stereo Bluetooth Headphones

Bluetooth Adapter

Many adapters can also allow a non-Bluetooth device to operate with a Bluetooth audio device as the audio source. In this arrangement, the adapter is used as a Receiver. The non-Bluetooth device receives the audio from a Bluetooth device via the Bluetooth Adapter used in the Receive mode, as shown in the following.





Bluetooth Device Bluetooth Stereo
So now, do you need a E

Bluetooth Adapter

Non-

So now, do you need a Bluetooth Adapter?

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Membership Chairperson Report

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In-person— 18 Zoom— 4

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THANKS FOR VISITING

Donna Knepper Bill James (Presenter)

LCACE HISTORY



Who wrote the **President's** Notes of the December Newsletter in 2005?



Man is not an end but a beginning. We are at the beginning of the second week. We are children of the eight day.

-THORNTON WILDER

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Buying a New Computer

By David Kretchmar, Hardware Technician Sun City Summerlin Computer Club https://www.scscc.club

From time to time, every computer specialist is asked, "What computer should I buy?" The answer is usually, "What do you intend to do with it, and how much can you afford?" This article addresses the major decisions required if you are buying a new computer.

Apple or PC?

They will both do what you want, which is probably doing things on the internet.

Both systems run popular software, such as Office or Photoshop.



It can simplify life if you stick to one device operating system. For instance, an iPhone might be good if you have a Mac computer or an iPad with iOS. On the other hand, if you have a PC running a Windows operating system, then an Android phone will be the most compatible.

I use an iPhone and a PC together and have not had issues. I mostly transfer photos between my devices, usually using email, which allows me to transfer 8 – 10 pictures at a time. For mass transfers of photos, I use the Apple USB charger to connect my iPhone to my PC.

If you plan to do any action gaming, most games are at least initially written for a PC running Windows.

It's likely any PC you buy today will come with Windows 11, the latest manifestation of the Windows long-running operating system. A few vendors might still be selling old stock of Windows 10 computers, but it is a free and easy upgrade to Windows 11. Windows 11 is very similar to Windows 10; most users will notice that it now appears more like an Apple interface, and Windows 11 is more closely integrated with Microsoft's OneDrive.

Apple Macs are generally a little to a lot more expensive than comparable PCs. Still, they're less susceptible to viruses and other malware, mainly because 75% of all computers run Windows, making them a potentially more profitable target for hackers. The latest macOS version is 12.3 (Monterey), released in March 2022.

Desktop Computer or Laptop?

Desktops, aka tower computers, generally offer more performance for the same money as laptop or note-book computers and are easier and cheaper to repair or upgrade. However, desktop computers' price/performance advantage is not nearly as dramatic today as in the past, as computer designers and manufacturers devote more resources to miniaturizing components. In addition, desktops provide a more ergonomically correct working position, let you use a larger screen, and usually have better sound.

All-in-One Desktop

All-in-one desktop computers, also known as AlO systems, combine a computer and monitor into one slick-looking package. These AlO systems have become increasingly popular as people want to eliminate as many parts and wires as possible. However, the major downside of AlOs is that their components are tightly packed in the display, making them difficult to upgrade or repair.

Laptops

Naturally, laptop computers are infinitely more mobile than desktops since they are smaller and utilize a battery for power rather than requiring a wall socket. A laptop is a way to go if you plan on using your computer while traveling. Some users combine the best of both worlds by using a desktop system at home and taking a tablet-style computer, such as an iPad or Kindle Fire, on the road. Another laptop option is using a "docking station" in your home. You

(Continued on page 12)

can easily attach a full-sized monitor, keyboard, mouse, and even speakers to a laptop to gain the ergonomic advantages of a desktop.

No matter what PC format you choose, some component options exist.

The Processor



Apple now manufactures

its processors, and its weakest offering is the equivalent of an Intel core i5 processor. Multiple cores can process more data simultaneously, and most computers today come with multiple-core CPUs.

In a PC, you have multiple processors from which to choose. For a system that will perform well today and into the foreseeable future, I recommend Intel's 11th generation Core i5 CPU, an actual six-core processor alternately known as the Rocket Lake series. You will still see manufacturers selling 10th-generation Intel chips, but without your budget, the 11th generation is 20% faster, making it a better value. In recent years the other major manufacturer of CPUs, AMD, has provided an excellent cost-effective alternative to Intel. Still, it appears that Intel has decided to compete in the personal PC space. The AMD Ryzen 5 series, at least 2600 speed, should be comparable to Intel's i5.

Any processor available today will be sufficient if you're shopping for a budget computer to browse the web, email, and maybe just work on documents.

Memory

Generally, the more memory a computer has, the faster it is, at least when you have multiple windows open. In 2022 8GB has become the standard, with 16GB or more found on more high-performance and future-proof devices.

Hard Drive

Go with an SSD (solid-state) drive. SSDs are a relatively new technology using flash memory that's 4 – 10 times faster than mechanical hard drives; there are no moving parts. As a result, an SSD is the sin-

gle largest performance boost you can give a computer compared to one with a mechanical hard drive.

Optical Drives (CDs and DVDs)

Optical drives are going away from the ancient 3½-inch floppy disk. Virtually any software support needed is available online, and most users are now streaming music and other entertainment. If you need one, for instance, to install an old program or watch a DVD, you can buy an external USB optical drive that plugs into a USB port for around \$25.

Graphics Card



The graphics pro-

cessing unit (GPU), or graphics card, is the hardware responsible for producing what appears on the screen. The GPUs can be integrated into the CPU or run on a separate, discrete piece of equipment.

Most computers sold today have integrated graphics, the cheaper, lower-performance option. Integrated graphics are OK for most of what you will be doing but not for things such as action gaming and video editing. On the other hand, photo editing and playing games such as Microsoft Solitaire work fine with integrated graphics.

Conclusions

If you talk to 5 different computer geeks, you can get ten or more opinions on any computer issue, such as those discussed above. I have provided my opinions on things you should consider when buying a new computer system, hopefully to make this less confusing. Buying a computer will ultimately be based on your needs and your budget.



Experts:

DON'T Charge Your Smartphone or Tablet Overnight – Your Battery Will Thank You

Kurt Jefferson, Editor, Central Kentucky Computer Society

https://ckcs.org/

lextown2 (at) gmail.com

Many of us who own iPhones, iPads, Android phones, or similar devices charge them while we sleep. So, as we're napping, our phones and tablets slowly charge their batteries. Then, when we awake, we're ready to take on the day, and so are the devices on which we depend—ready with a 100% charge.

Now, experts are spreading a new message: By charging our devices overnight, we might slowly be killing the battery. Techjury.net writes, "I know it's great to wake up and have 100% juice to carry you through the day. However, your cell phone battery needs only about two hours to recharge itself completely."

Techjury adds, "Experts' opinions on Li-lon batteries are unanimous — you should keep your iPhone charged at 40%-80%. This is the optimal charge level of your iPhone (or any other smartphone, for that matter) to prolong its battery life. Sometimes this 20% could mean the difference between your iPhone lasting through the day or not. Still, charging your iPhone overnight to 100% often will decrease its battery capacity faster."

If you need more proof, ladbible writes, "Before going to sleep, most of us will put our phone on charge to make sure it's ready for the day ahead. But doing this could be causing damage to our iPhones, according to tech expert Adrian Kingsley-Hughes, writing for ZDNet."

"An iPhone can go from zero to 50% charge in about 30 minutes using a 20W charger, and then go to being fully charged in under two hours," writes Kingsley-Hughes.

He adds, "Given that an iPhone can charge up so rapidly, it doesn't make sense that we hook it up to a charger for eight hours a day.

That works out to a third of its lifetime."

Plenty of iPhone owners are unaware of this, but Apple introduced Optimized Battery Charging in iOS 13 for iPhone. So, if you're running that version of iOS or later, your device stops charging when it's 80% charged.

Optimized Battery Charging is switched on by default. (It's available only on the iPhone-not the iPad.)

Optimized Battery Charging



To reduce battery aging, iPhone learns from your daily charging routine so it can wait to finish charging past 80% until you need to use it.

lf,

for some reason, you want to turn off Optimized Battery Charging, visit Settings > Battery > Battery Health > Optimized Battery Charging.

Apple writes, "When the feature is enabled, your iPhone will delay charging past 80% in certain situations. Your iPhone uses on-device machine learning to learn your daily charging routine so that Optimized Battery Charging activates only when your iPhone predicts it will be connected to a charger for an extended period of time. The algorithm aims to ensure that your iPhone is still fully charged when unplugged."

Returning to the original question—why shouldn't you charge your device overnight.

The simple one-word answer is—heat.

Here's how Kingsley–Hughes explains it: "Heat is a killer of batteries. While there's nothing you can do about the normal wear and tear that a battery expe-



riences from being charged and discharged, heat is something you can do something about. When your iPhone is connected to a charger, it gets warmer -- warmer than if it isn't connected, and even though that increase might only be a few degrees above room temperature, doing this overnight every night doesn't seem smart to me."

He writes that he has radically changed how he charges his iPhone.

Instead of charging it overnight as he sleeps, he now gives it one or two daily charges.

Under his new schedule, he charges his iPhone for 30 to 45 minutes directly after he awakes. (During this same period, he charges his Apple Watch.)

Then during mid-afternoon, he charges his phone for another 30 minutes so that the battery icon shows it's 80% charged. Kingsley-Hughes says that's usually enough of a charge to last until the next morning.

If he knows he'll be on a trip that keeps him inside his car, he takes a car charger or a power bank and recharges his phone using either of those measures.

In summary, he believes the new charging regimen stresses his iPhone's battery and charger less. And he uses a cable rather than a wireless charging system.

So, there you have it.

If you're still charging your iPhone, iPad, or Android device while you sleep overnight-stop it. Instead, find an alternative charging schedule.

Experts say your battery will live longer.

Android Apps on indows 11

Well, I'll be!

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

https://scccomputerclub.org/

philsorr (at) yahoo.com

Many apps that run on Android smartphones and tablets may soon be running on Windows 11 machines. As of February 2022, only in the US are Android apps available for Windows. A new addition to Windows 11, "Windows Subsystem for Android," will enable your Windows 11 device to run Android applications that are available in the Amazon App store. That may sound a bit confusing since Apps for Windows usually come from the Microsoft store. Be that as it may, this feature may eventually prove useful.





On

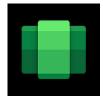
If your computer meets the requirements for Windows 11, it meets the requirements for Android Apps. (Make sure to check for any Windows 11 updates, and install them before proceeding with Android Apps.) Additionally, Windows 11 musthave hardware virtualization enabled. Windows 11 essentially runs Android in a virtual machine, which is why this is necessary. (A Virtual Machine is a computer image-based software that can run programs and Apps.)

To check if your computer has virtualization enabled, go to the "Performance" tab in Task Manager (Ctrl+Shift+Esc). Then, open Task Manager, and click "More details" if you don't see the Performance information. If virtualization is not enabled for a computer using an Intel CPU, you can enable Intel VT-X in your computer's UEFI firmware (BIOS). If your system uses an AMD CPU, look for AMD-V in the UEFI firmware settings.) Four of the six computers that I checked had virtualization enabled.

If you are part of the Windows Insider Program, you may have already experienced Android apps for those more technically inclined. So far, the Windows Insider Program has been testing the capability with fifty or so popular Android Apps. Eventually, you will see the "mobile" Apps in the "new" Microsoft store, though currently, the download will come from the Amazon App store. Articles in the literature indicate that once downloaded, you can run these apps side-by-side with the help of the new Snap Layouts feature of Windows 11. And you'll be able to pin them to your Start menu or Taskbar and interact with them via a mouse, a touch screen, or an input pen. Also, you will be able to share your clipboard between Windows and Android Apps, and you will be able to see notifications from Android Apps in the Windows Notification Center, which sounds like a pretty comprehensive integration into the Windows 11 environment. Why would you need a mobile App when you have plenty of Apps on your desktop computer? Well, there may be some mobile Apps that don't have a desktop equivalent. Early results of the Windows Insider Program highlighted a few

areas that may be interesting, such as Games, Reading books with Kindle, and content for kids, such as teaching math, reading, and writing skills. The Windows Insider Program encourages developers and creators to develop Apps for this new Windows 11 environment.

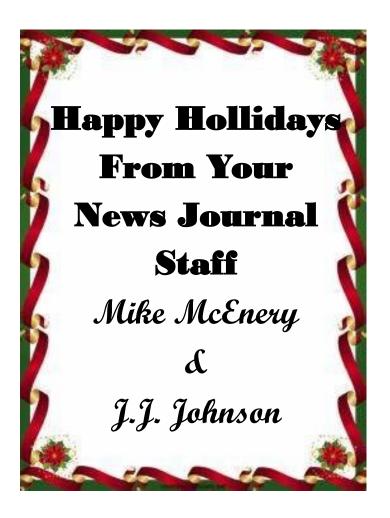
For those of you who would "lean in" to a technical discussion, this paragraph is for you; others might want to skip this paragraph. Just a little "techno-talk," Windows 11 will soon be enhanced by adding a new component. This new component will be a subsystem that will essentially ride on top of Windows 11 and will be called the "Windows Subsystem for Android." The subsystem will include the Linux kernel and an Android OS based on the Android Open Source Project version 11. It will be distributed through the Microsoft Store as part of the Amazon App store installation, allowing users to stay updated over time as the software evolves. The subsystem runs in a Hyper-V Virtual machine, allowing multiple Operating Systems to run simultaneously. End of 'techno-talk," suffice to say it will be a relatively sophisticated and complex software product. For example, one of the icons for Android on Windows looks like this:



So, for those who might be more adventurous, how do you install Android Apps on a Windows 11 computer? As always, there are YouTube videos on the subject which would be an excellent first step. After the videos, the first thing to do is open the Microsoft Store on your computer. Click the start button, find the Microsoft Store in the alphabetical Start Menu list, and click it to open it. In the App Store, search for Amazon App Store". If the Amazon App Store is not installed, you will have to install it. (Note that this could take a while. A pop-up will appear and guide you through the process; click "Set up" and continue through the steps down to the App Store installation. The last thing to ews Jourdo will be a computer restart. After the restart, the Amazon App Store will automatically open. If it doesn't, you should find it in the Start Menu.) When installed, the first thing to do is to sign into your Amazon account if you have one. If you don't have an Amazon account, you can create one at this point. Once you are in the Amazon App Store, you will see that it works like all the other App

stores you have used. (When I first installed the Amazon App store, I didn't find any App that I needed, but that was expected because, at that time, there was a limited number of Apps available, though we are told that many Apps are soon to come.) In the store, you will find free and not-free Apps. The free Apps will have a "Get" button; the not-free apps will have a button with a price. Navigate to an App you want and click the appropriate button. Click Install, and the App will download and then install. You can click "Open" to use the App when the installation is finished.

If you followed the directions and everything worked out, you have just installed your first Android App on a Windows device. The Android apps you downloaded can now be found in the Start Menu, just like Windows Apps. They can even be pinned to the Taskbar like regular Windows apps. But what about Android Apps that are unavailable in the Amazon App Store? Well, you can always "sideload" Apps, but that's a subject for another time.

















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