PLATEAU PC USERS GROUP, INC GAZETTE

March 2023

This Month's General Meeting
Tuesday, March 14, 2023
will start at 3:00 P.M. @
FFG Christ Lutheran Church
Social Distancing is recommended.
Face Mask coverings are optional

March 14th Presentation @ 3:00 P.M.

Scanning & Archiving old photos & Videos

George Sengstock will present his experiences scanning and archiving old photographs and videos.

This ongoing effort has (slowly but surely) reduced stacks of boxes into gigabytes of files. Along the way, this effort has resulted in numerous memorial and anniversary presentations that have been prepared for dear family and friends.

If you have been procrastinating your archiving efforts and want to do it yourself, let's get you started this year!

Friday, March 17, 2023

Please Note: All Meetings will now be on the second Tuesday of each month. Starting at **3:00 P.M.**
Location: Christ Lutheran Church
481 Snead Drive, Fairfield Glade TN

Join the Club!

Anyone interested to attend the general meeting or any of the SIG meetings as a guest will be charged $3.00 per person for any or all meetings in that month. Afterwards, you are encouraged to become a member of the Plateau PC Users Group. Our Club cannot exist without you, the members.

Membership Dues

Our annual dues are now payable July 1st. of each year.
Annual dues are $24 per single person / $30 per family.
Persons/families joining during the fiscal year have dues payable as follows:

Join In	July - Sept	Oct - Dec	Jan - Mar	Apr - June
Single	**$24**	$18	$12	$6
Family	**$30**	$22	$15	$7

BOARD OF DIRECTORS DISCLAIMER

All members of the Plateau PC Users Group are willing to help one another in the area of advice and tutorial instruction over the phone. If you should require more involved services or instruction, we have a few members who are very knowledgeable in several areas. As a responsible
consumer, it is up to you to discuss, before retaining a member, any and ALL charges for repair services and time consuming tutorial activities.

It is not the desire of this Board of Directors to set fees for individuals for services rendered, nor the responsibility to intervene between members who enter into a contract among themselves.

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All images used in the newsletter, website, blogs, class materials or handouts ("media") are obtained from a "free use" source, preferably images that have been released as "CCO Public Domain".

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The New Outlook for Windows Is Opening Up to More People

CORBIN DAVENPORT

@CORBINDAVENPORT

HOW-TO GREEK

Microsoft has been publicly testing a completely new Outlook email app for Windows for almost a year now, but it was limited to people already in the Office Insider program. Microsoft is now ready for more people to try it.

The official Microsoft 365 Roadmap has been updated to explain that the new Outlook for Windows will be available to everyone who switches the "New Outlook" toggle at the top-right corner of the application, starting in April 2023. Right now, the toggle is only visible to Office Insiders, allowing people to switch between the current legacy Outlook app and the version that will eventually replace it. It's a sign that Microsoft wants feedback from a wider audience, in preparation for a full rollout.

The new Outlook Windows app is based on the web app (Outlook.com) and was missing many crucial features at first — offline support, IMAP, and POP, to name a few. The app also feels like a hybrid of the Outlook web app and desktop Outlook, with a more modern design and a few new features.
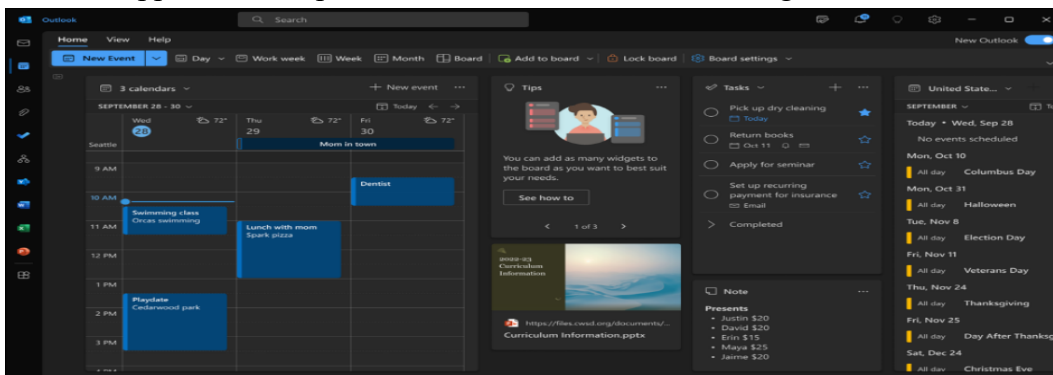
There's still no word on when Microsoft will start to fully replace the old Outlook with the new app, or if the new Outlook will eventually arrive on Mac. Microsoft overhauled the Mac app in 2019, and going from a well-made native application to a web-based UI could be a downgrade.

How to Fix a WHEA Uncorrectable Error in Windows 10

JON BITNER

@bitner_jon
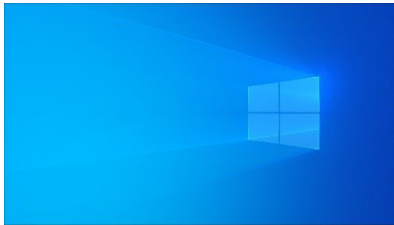
Did you get the infamous blue screen of death with a WHEA Uncorrectable Error message on Windows 10? Here's what you need to know about the issue and how to fix it.

What Is the WHEA Uncorrectable Error?

WHEA stands for Windows Hardware Error Architecture, and when you see the error message it means a hardware failure is preventing your Windows 10 PC or laptop from functioning as intended. A WHEA error normally appears in a blue screen of death (BSOD) where to recover you have to shut down or restart your computer.

What Causes a WHEA Uncorrectable Error?

There are numerous causes of the WHEA Uncorrectable Error, which makes it a bit more challenging to troubleshoot than some other error messages. From faulty hard drives to defective CPUs, just about anything inside your PC could be the culprit. To make matters more confounding, the WHEA Uncorrectable Error in Windows 10 can even spring up due to a driver conflict. If you've been overclocking your PC, there's a possibility that this stop code error is a direct result of the added stress on your hardware.

How to Fix a WHEA Uncorrectable Error

Although WHEA is called an "Uncorrectable Error," it's not exactly the case that the problem can't be corrected. Although solving the root problem takes some trial and error, with these tips, you can fix the WHEA Uncorrectable Error yourself and get your PC running again.
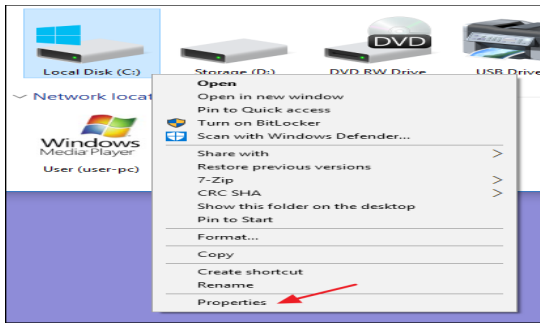
Run Chkdsk

The first thing you should do after encountering the WHEA Uncorrectable Error is run Chkdsk. Chkdsk (short for "Check Disk") runs a filesystem check that will scan your hardware for issues, and it can often pinpoint the exact source of your error.

To perform the operation, right-click on the location you'd like to inspect, then choose "Properties."

From there, navigate to the "Tools" tab and click the "Check" button. This will scan the drive for errors and report back any issues. Chkdsk may even be able to solve the problem for you.

Update All Your Drivers

Beyond repairing a faulty connection or removing new hardware, updating your drivers is the second easiest fix to the WHEA Uncorrectable Error. Device drivers, especially outdated ones, can sometimes cause hardware problems, and updating them could quickly fix your problem.
To update your drivers, search for "Device Manager" in the Start Menu.
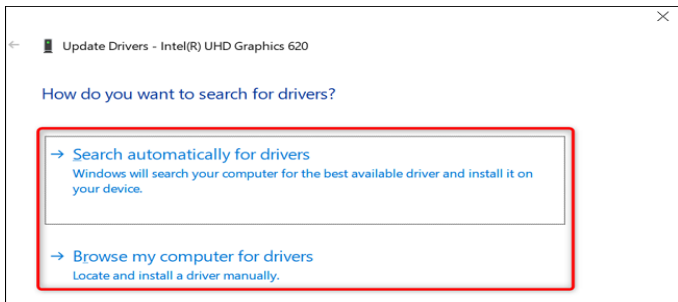
Next, right-click the device you'd like to update and select "Update Driver." You can then have Windows perform the update automatically or browse your PC for drivers.
An automatic update should do the job, but if you suspect Windows isn't finding the right drivers, consider visiting your hardware manufacturer's website and downloading available updates. Then, use the "Browse My Computer for Drivers" option.

Inspect Your PC for Hardware Damage

If ChkDsk and drivers updates didn't solve the WHEA Uncorrectable Error, it's worth looking for physical issues with your hardware—such as components with a crack or cables that aren't fully attached.
If you're unsure about how to open your PC, then it might be in your best interest to consult with a professional. However, if you're willing to tinker with your computer, most devices can be opened by removing a few screws on the side of the chassis. If you're using a laptop, try checking the bottom of the device for these screws. In any case, be sure you're using an antistatic wrist strap to avoid damaging components.

Electric Power Basics

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

Electrical power is remarkably reliable, especially considering that much of the system is exposed to the elements and sometimes wildlife. On the rare occasions when it does fail, it will be helpful if you know a bit about it. Troubleshooting by candlelight is seldom quick, and ignorance won't make it faster.

You may have noticed that electric power enters your home on three wires. Two of these, which we'll call "Phase 1" and "Phase 2," carry 110-V AC, and the third is neutral. Figure 1 shows the waveforms on the "hot" wires; the voltage on the neutral wire is always close to zero.
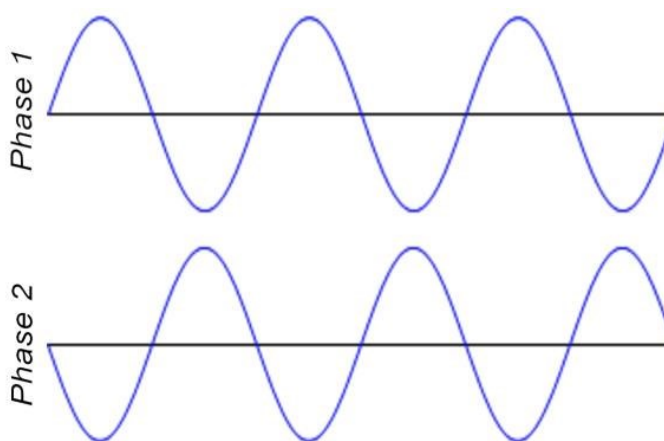

Figure 1. A-C Power Waveforms.

A 110-volt outlet connects to either phase 1 and neutral or phase 2 and neutral. For example, an appliance needing 220 volts connects to both phase 1 and phase 2. Since phase 2 is the negative of phase 1, such a connection applies twice the voltage to the appliance as that between one of the phases and neutral.
Thus, although some devices may need 220 volts, the maximum voltage in your house is 110. By the way, if you measure the voltage, you will find it's about 125. When electric power was first developed, it was 110 volts, but that label is no longer accurate.

Figure 2 shows a portion of a home breaker box, which is the interface between your outlets and devices and the power company. At the top is the master breaker through which all the individual circuits connect. Turn this off to remove all the power in your house. Below are the breakers for the individual circuits.
If your home is new, there is probably a sheet on the breaker box cover that lists what each breaker controls. In older houses, this sheet is often out-of-date or even missing. Note that the two top individual breakers are actually two individual ones; these are for 220-volt service.

As you go from top to bottom, alternate breakers connect to phase 1 and phase 2. Thus, as breakers are added, the loads on phase 1 and phase 2 remain approximately equal, and adjacent breakers can control 220-volt circuits.
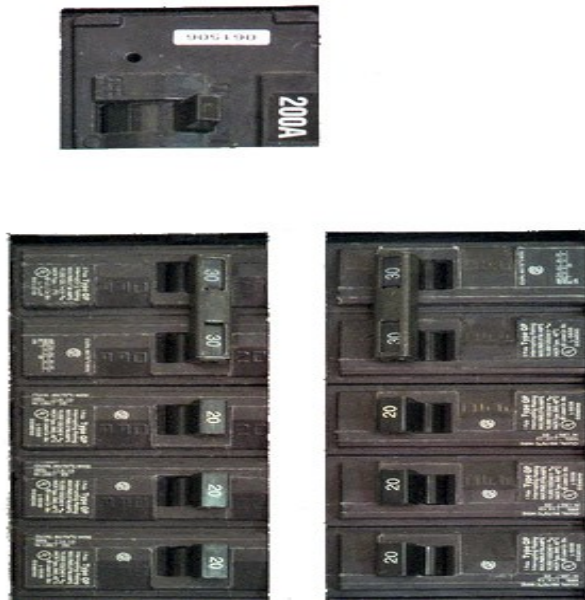
Figure 2. Residential Breaker Box.

There are two types of 110-volt outlets in the U.S., as shown in Figure 3, but the two-wire one is usually found only in older houses.
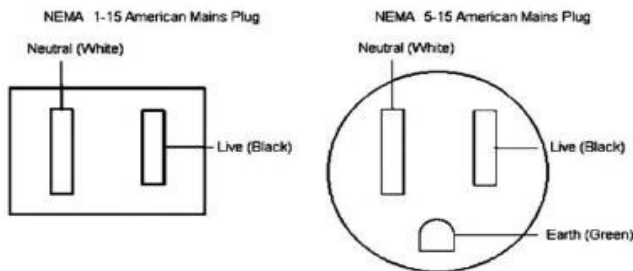
Figure 3. U.S. 110-volt Power Outlets.

The live slot connects to either phase 1 or phase 2 of the incoming power, and neutral connects to neutral. Ground does not connect to the power company but to a good earth ground in your home, typically the incoming water pipe.

You need an adapter between a 3-wire plug and a 2-wire outlet. If you use one, be sure to connect its ground wire to the screw that secures the outlet cover plate. If you have any doubts about your wiring, testers such as the one in Figure 4 are inexpensive insurance. As you can see from its label, the indicator

lamp's pattern shows the outlet's state. It's also helpful during the first step of PC troubleshooting, ensuring it has electrical power.

Figure 4. AC Outlet Tester.

You can also use an inexpensive multi-meter to check the voltage at an outlet, but be careful when you insert the probes into the slot; touching 110 volts is always unpleasant and can be lethal. Non-contact testers avoid this hazard, but user reports indicate they aren't reliable.

If a circuit breaker trips repeatedly, either it's defective or the circuit is drawing too much current. Never replace it with one with a higher rating, as the wires in your house are sized to carry currents only up to the breaker rating. In Figure 2, for example, the wires in the 30-ampere circuits are thicker than those in the 20-ampere ones. If you exceed these currents, the voltage at the outlet will drop, and the temperature of the wires in the walls will rise, perhaps enough to degrade the insulation or even to start a fire. Therefore, any electrical work should be done only by a licensed electrician.

In newer homes, some outlets are protected by a Ground Fault Interrupter (GFI), most often in kitchens, bathrooms, and outside the house. Some, particularly those in kitchens and bathrooms, have a distinctive connector, Figure 5.

Figure 5. GFI Outlet.

If a GFI detects any current flowing to ground, it trips the breaker. Note the two rectangular buttons in the center; "Test" checks the operation by tripping the breaker, and "Reset" restores power. Usually, each GFI outlet connects to two or three others that don't have distinctive buttons but are also protected. It may be worthwhile to press each test button to see what other outlets are affected. Not all GFI-protected circuits have distinctive outlets. Figure 6 shows a portion of a residential breaker box.

Figure 6. Breaker Box Equipped with GFI Breakers.

Note the green squares labeled "Test" on five of them. These are GFI breakers, but all their outlets are normal, with no test or reset buttons. This is probably because the outlets are near the floor and can be obscured by furniture, making them difficult to access.

It would be worthwhile to become familiar with your home electrical power system while it's working.

· Check which lights and outlets each breaker controls and update the sheet on the breaker box cover if needed.

· If you have an older home, use a tester like the one shown in Figure 4 to be sure the outlets are wired correctly. Use the test button on your GFI outlets to find which are on each circuit.

· If you don't have GFI sockets, consider hiring a licensed electrical contractor to install them, at least in your bathrooms and kitchen.

The most frequent power problem is storm damage, usually repaired within a few hours. Gasoline-powered emergency generators are a common solution here but don't use them near your house because of the carbon monoxide they also generate. It's not uncommon for GFI breakers to trip, which is an excellent reason to become familiar with the circuits they control. I've had standard breakers fail, especially when they are old; in such cases, call an electrician.

Intro to IP Addresses and Port Numbers

By John Krout, Presenter and Newsletter Contributor
Potomac Area Technology and Computer Society

The foundation for any app that communicates with other computers is an IP address and port number. Learn how that works.

Introduction

Much of what we all do with computers is based on communication with other computers through a digital network. Email, web browsing and streaming video are three of many examples.

All that communication is based on Internet Protocol (IP) addresses and a related concept called port numbers. This article will explain those concepts and how the device which provides your home Wi-Fi, called a **router**, plays a critical role in digital network communication.

Every computer, smartphone, and tablet has an IP address, at least when connected to a network. The purpose of the IP address is just like your home address, often called a street address. For example, delivery services such as the US Postal Service, Federal Express (FedEx), United Parcel Service (UPS), and many others can deliver mail and packages because packages are labeled with your street address. Likewise, the IP address assigned to your computer, smartphone, and tablet serves the same purpose: digital info for your device is delivered fast and accurately because it is labeled with your device's IP address.

One difference is that your device, a computer, smartphone, or tablet, has to **ask** for digital info. You use an email application or a Web page to request email, and then the new emails are delivered to your device from a computer acting as an email server.

This is an example of **client-server computing**, in which your device's software is called a client, and the email server is called a server. You ask to see the new incoming email, and the server delivers. You use your application or Web browser to compose and send an email, and the computer forwards it to the email server, which then sends it to the destination domain specified in your email.

In all client-server computing scenarios, the client application does part of the work, and the server application does another part of the work.

Domain Name Service (DNS)

Behind the scenes, when you receive or send an email, or you ask to see a web page, two things happen. First, your request for digital info includes the IP address of the device you are using.

Another server, called a Domain Name Server (DNS), helps in a big way: it converts the domain portion of the recipient address, such as @yahoo.com or @gmail.com, or @nasa.gov, to an equivalent IP address. Using that IP address, other computers can relay your request to the destination and send the reply to your device.

You need to know only the name, *not the IP address*, of the server you contact.

Over time, the destination IP address for a familiar domain name might change, but the DNS stays up to date and allows you to use a familiar domain name instead of a changed IP address.
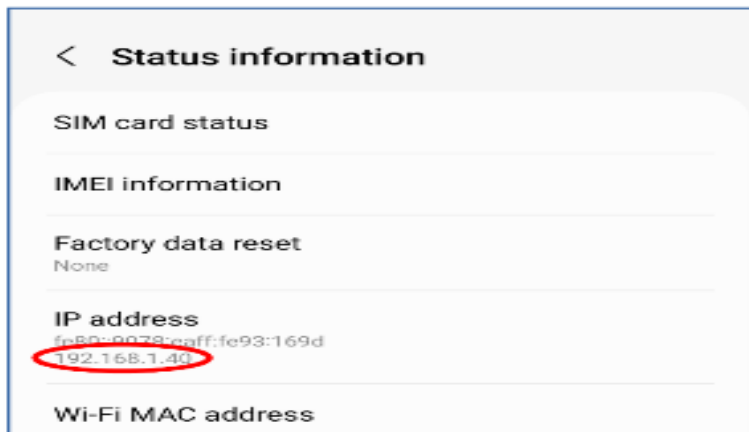
What does an IP address look like?

Inside your computer, smartphone, and tablet, all data is numbers. A byte is a number, a group of 8 bits with a collective value from 0 to 255. Combining bytes in creative ways lets us write emails, display web pages, and so forth.

Likewise, an IP address is a number composed of four bytes. An IP address is expressed

1

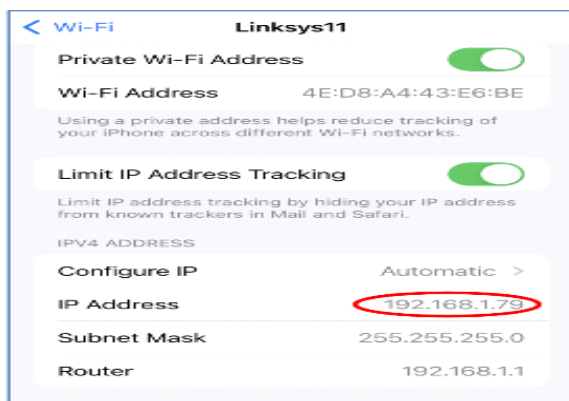like this: **192.168.1.42**. Each byte in the address is separated from the next by a period.

How to See your device IP address

Android 12: Open the **Settings app**, choose **About phone**, and then choose **Status Information**. Look under the heading **IP address**. You can see an example of that screen captured on a Samsung Galaxy S10


running Android

12 in **illustration 1**, with the IP address circled.

iOS 15 (Apple): Open the Settings app and choose Wi-Fi. You will see your Wi-Fi network name below the Wi-Fi switch, with some gadgets to the right. Tap the info button (the letter i in a circle) to the right of the name of your Wi-Fi network. A new screen appears. Scroll down and find the **IPv4 address heading**. Below that, you will see both your device's IP address and the internal IP address of your router. Finally, you can see an example captured from an iPhone X and iOS 15 in **illustration 2**, with the IP address circled.
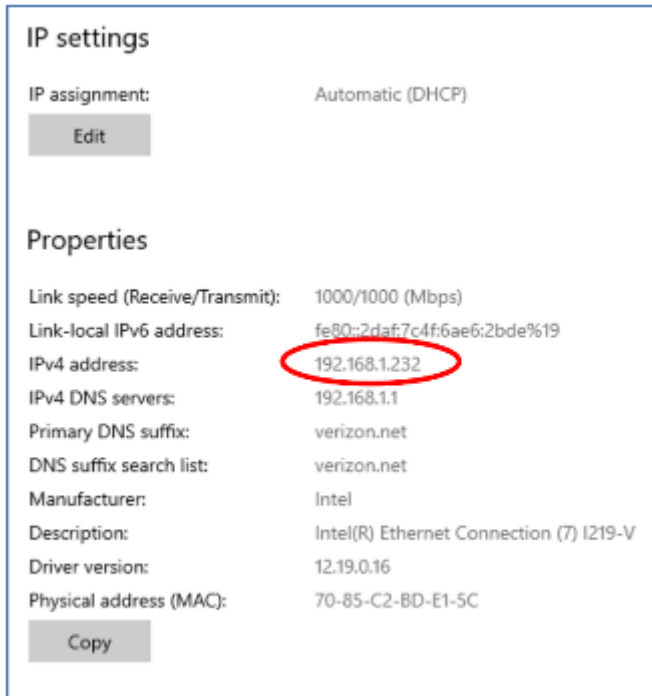
Windows 10: Open the Settings application, choose Network & Internet, and click the Properties button in the right-hand pane. A new screen appears; scroll to the bottom and find the **IPv4 address.** You can see an example in **illustration 3**, circling the IP address.

Port Numbers

As you know from experience, your device can communicate with many other computers simultaneously. For instance, your device can run an email client application, a web browser, and a video streaming application concurrently.

Your device uses a second concept called **port numbers** to properly deliver incoming digital info to the correct application on your device.

Ports are analogous to apartments within an apartment house. Each apartment has its own apartment number. Physical deliveries are directed to the correct apartment by being labeled with the correct apartment house address and apartment number.

Think of your device's applications as apartments. Each uses a port devoted to the purpose of the application.

The ports are numbered, the number range is 0 through 65535, so there are 65,536 ports.

Some of the port numbers are, by internet convention, devoted to specific purposes. For example, some port numbers are devoted to email, and some are for web browsing, and so forth.

The port numbers in the range of 0 to 1023 are called **well-known port numbers** because those are pre-assigned to specific purposes such as email or web browsing. I reviewed a Wikipedia page listing all of the pre-assigned port numbers; there are many devoted to purposes and applications I have never heard of and many I use every day. Port numbers greater than 1023s can be used for any purpose and are called **ephemeral ports**.

Some web page addresses include both a name and a port number. For example, you may have accessed a web page like this: https://www.anyserver.com:8080 (this is not a real URL, do not click it).

In this example, the number after the colon character, 8080, is a port number. It is part of the range called ephemeral ports. Using a temporary port number as part of the address allows web servers to host many different home pages, and each home page is assigned a different port number.

Your Router

The device which provides your home Wi-Fi service is called a router. It does a lot more than send and receive Wi-Fi radio signals. Overall, it serves as the city name for various apartment buildings.

The total possible number of IP addresses is close to 4 billion. That sounds like a lot, but in most metro areas, there are more devices than people by a large margin.

Long ago, the internet developed a solution. That solution is built into your router, the device that provides your home Wi-Fi.

The router has two responsibilities. First, it assigns IP addresses to itself and your devices in one of two ranges of **reserved IP addresses**, either 192.168.x.x or 10.x.x.x. The address assigned to itself is called the router's **internal IP address**. Second, the router acts as your connection to the internet. As such, the router is assigned an external IP address by your internet service provider (ISP), such as Cox, Comcast, FIOS, or Frontier.

Like a central post office, the router forwards every digital info request from your device to the destination. For the return address, the router substitutes the router's own external IP address for the internal IP address of your device. From the viewpoint of the outside world, the only destination address for responses to your requests is the external IP address of the router. When the corresponding digital response arrives at the router, the router forwards it to your device.

In practice, an unlimited number of routers can assign the same range of IP addresses to connected devices. Your neighbor's router can, by chance, literally assign the same IP address to your neighbor's phone that your router assigns to your phone. The neighbor's router serves a different "city" and has a different external IP address than your router has, so servers on the internet can direct responses to the correct router.

My own router's external address, assigned by my ISP, begins with 96. However, that is not necessarily a **permanent** IP address assignment. Each assignment of an IP address by an ISP to a router has a fixed

duration, called a lease. A lease typically expires in 24 hours. Then the lease is renewed by the ISP. However, my router's external IP address has not changed in many months.

The bottom line: routers and reserved IP address ranges make it possible to connect many more than 4

billion devices to the internet at the "cost" of one IP address per router. As a result, my router served nine or more devices most days and even more when my kids lived in my home.

Your router also has a self-assigned internal IP address in the same range it assigns to your devices. For example, my router, which is about two years old, assigned itself the internal 192.168.1.1. The router's local address enables your devices to send digital info requests to and through your router because each computer is connected to the router by Wi-Fi or ethernet, and each smartphone or tablet is connected by ethernet.

When your smartphone leaves your home

When your smartphone is out of range of your Wi-Fi or disconnected from your Wi-Fi, it connects to the cell network or another Wi-Fi if you are in range. At that point, the IP address of your phone is assigned by the network to which it has newly connected and is not necessarily the same IP address your device was assigned on your Wi-Fi.

For example, on my Wi-Fi, on the day I wrote this article, the IP address assigned to my smartphone by my router was 192.168.1.40. When I disconnected my smartphone from my Wi-Fi at home, the IP address assigned to my smartphone by the cell network was **100.87.129.39**. Effectively I have moved my smartphone to a different "city."

How can you receive email when your device's IP address changes? Because your device sends your email account name and password to the email server when you use an email application or a Web page to check for email. The current IP address is simply the address to which the email server must send its response.

Some limitations

In reality, most consumer routers limit the number of devices that can connect to the router simultaneously, much lower than the range of IP addresses that the router can assign. For example, my own router's limit is 241. That total includes devices connected by Wi-Fi and devices connected by ethernet.

ABOUT THE AUTHOR: John Krout has been writing about the creative uses of personal computers since the 1980s. He also writes about the creative uses of smartphones, tablets, routers, and digital cameras. He worked as a software developer for federal government contractors until 2020 when he decided to retire at the start of the pandemic. He lives in Arlington, VA, with many computers and cameras and too many cats (his son finally moved out).
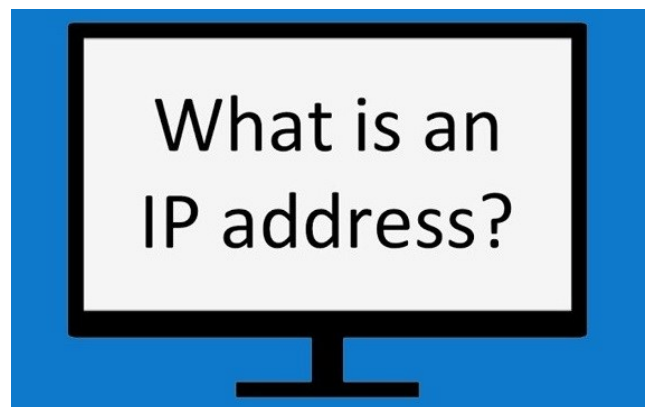
Plateau PC Users Group, Inc.

Application for Membership for 2023

------- New Member   ------ Renewing Member

Return this application with a check for annual dues payable to "PLATEAU PC USERS GROUP" Return to the club Treasurer during our meeting or mail to "PPCUG Treasurer. P.O. Box 3787, Crossville TN 38557"

Our annual dues are now payable July 1st. of each fiscal year.

Persons// families joining during the fiscal year have dues payable as follows:

Join In	July - Sept	Oct - Dec	Jan - Mar	Apr - June
Single	**$24**	$18	$12	$6
Family	**$30**	$22	$15	$7

Date: _____   Amount Paid: $ _____   by Cash _____ , or Check (# _____)

------------------------   -------------------------   ---
Last Name   *First Name*   *Family Member (if family membership)*

Address:

-------------------------------------   ---------   ----------------   (_____) _____
City   *State*   *Zip Code*   *Phone Number*

E-Mail address: --
                           Please Print

I have belonged to a Computer Club before: Yes _____   No _____

I have used PC's since (year): _____

I have knowledge in the following areas that I would be willing to share with club members:

_____

_____

_____

April 2023

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	**3**	**4**	**5** **10:00 A.M.** **PPCUG Board Meeting**	**6**	**7**	**8**
9	**10**	**14 3:00 P.M.** **General Mtg. Presentation. Followed by Q&A Session**	**12**	**13**	**14**	**15**
16	**17**	**18**	**19**	**20**	**21**	**22**
23	**24**	**25**	**26**	**27**	**28**	**29**
30						