

What Is an IP Address? Everything You Need To Know.



The modern world primarily runs on technology. Everything is connected to the internet, from computers and modems to smartphones and the navigational systems in vehicles.

But what exactly is an IP address, and what is it used for?

Continue reading for everything you need to know about IP addresses, including what they are and how they work.

What is an IP address?

An IP address, which stands for internet protocol address, is a unique identifier for every internet-connected device on a computer network required to access the Internet.

Essentially, it's a list of numbers assigned by the Internet

Assigned Numbers Authority (IANA) to each Internet-connected device.

A good way to think of how your IP address works is it's like your mailing address.

Your computer then uses this IP address to communicate with other computers and websites.

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How do I get an IP address?

Your internet service provider (ISP) assigns an IP address to your networked devices connected to your home network.

Every IP address is unique to each device, and any device that has an internet connection is a member of the World Wide Web.

Some of these internet-connected devices include:

- Computers.
- Laptops.
- Tablets.
- Mobile phones.
- Routers.

Related: [Why Your IP Address May Soon Be Antique | Entrepreneur](#)

What are the types of IP addresses available?

There are two types of IP addresses available. Continue reading for what you need to know about how the internet works regarding dynamic and static IP addresses.

What is a dynamic IP address?

The most common type of IP address is a dynamic IP address.

A dynamic IP address is a temporary address that constantly changes over time and is the default address type provided by internet service providers.

This type of IP address is the perfect choice for the average homeowner as they are easy to manage and don't require the user to go through any extra set-up or network configurations.

Dynamic IP addresses are free and easy to use. They also can provide more security as they change regularly.

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What are the benefits of dynamic IP addresses?

There are a few reasons why choosing a dynamic IP address might be the right choice for you.

Some of these benefits include:

- There is no extra cost associated with a dynamic IP address.
- They are easy to use and reliable.
- It is your internet service provider's most efficient use of an IP address.

What are the drawbacks of dynamic IP addresses?

While they have benefits, dynamic IP addresses also have drawbacks.

These drawbacks may include:

- Slower upload and download speeds than with a static IP address.
- You aren't able to set up a reliable server with a changeable IP address.

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What are static IP addresses?

Another type of IP address is a static IP address. This type of address doesn't change but does require extra steps to set it up.

Unlike dynamic IP addresses, there is also an additional fee for static IP addresses which can make them less appealing to the general public.

Do you want to know what type of IP address you have but are struggling to find it on your Windows or Mac device?

Simply go to www.whatismyipaddress.com, click on "Show Complete IP Details" and find not only your own IP address but whether or not it is dynamic or static.

What are the benefits of static IP addresses?

A few of the main benefits of a static IP address include:

- They provide extra reliability and fixed geolocation.
- They are a great option when you are connecting via a VPN (Virtual Private Network)
- They are ideal for creating or hosting computer servers.

Related: [‘Downright Creepy’: Internet Entrepreneurs Weigh in on Repeal of Internet Privacy Rules](#)

What are the drawbacks of static IP addresses?

There are a few drawbacks of a static IP address as well.

The main drawbacks to this type of IP address include :

- There is an additional cost for this type of IP address.
- They are harder to get as they are by request only.
- There is more set-up than with a dynamic address which isn't ideal for the average homeowner.

Can I hide my IP address?

Your internet service provider provides your IP address, but you can control who sees it.

The best way to hide your IP address and your online activities is to use a Virtual Private Network (VPN).

This is especially true if you log in to a public Wi-Fi network, such as at a coffee shop, and want to protect yourself against cybercriminals and hackers.

A VPN can hide your IP address as you can choose from several servers, including ones outside the U.S.

There are numerous different VPNs to choose from, but they all encrypt your data which provides you with extra security.

Another way you can hide your IP address is with a proxy server.

This reroutes your search request, so it isn't going directly from your computer to your internet service provider and then to the website. This means that website cannot see the IP address where you are located.

Related: Concerned About Privacy on the Internet? Here's How

What are IPv4 and IPv6 addresses?

Now that you know the difference between a dynamic and static IP address and what you can do to hide yours, what are IPv4 and IPv6 addresses?

The standard IP version used a 32-bit number IPv4 format, but they have completely run out of options. That's where a new format called IPv6 comes into play.

The IPv6 produces unique IP addresses significantly longer than its predecessor, including hexadecimal numbering.

This creates many more IP addresses, so an infinite number should be available.

As IPV6 addresses can be significantly longer if there is a string of zeros in the code, you can replace them with a double colon, but that can only be done once per IP address.

Related: Why the Internet's Infrastructure Is About to Be Disrupted | Entrepreneur

What is a domain name?

An IP address and a domain name are two different things.

While an IP address is a string of numbers that communicate the device's precise location, a domain name acts as a link to that IP address.

An excellent way to think of this is the IP address is the code, and the domain name is simply a nickname for that code.

A domain name uses the domain name system (DNS) and acts similarly to a physical address in the real world.

Every part of the domain name includes specific information that helps web browsers locate the correct web page.

Related: [How to Choose and Purchase a Domain Name | Entrepreneur](#)

What are the differences between a public IP address and a private IP address?

So, we've covered the basics of IP addresses – now, let's get into the differences between public and private IP addresses, and how each can be used.

What is a public IP address?

A public IP address is a unique IP address provided by your internet service provider and assigned to the router.

Other devices and websites use public IP addresses to properly communicate with the devices connected to a local area network.

A public IP address is a gateway to the internet and helps websites, emails and other online information reach you properly.

Added security measures such as using a firewall are recommended when using a public IP address.

Related: [You're Probably Being Tracked Online Right Now | Here's How to Protect Yourself | Entrepreneur](#)

What is a private IP address?

A private IP address, on the other hand, isn't routed on the internet as they never leave the local network.

There isn't the option to access the internet directly from a private IP address and users must route their connection through NAT, which then replaces the private address with a public one.

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A doorway to unlimited information

IP Addresses are a doorway that allows you to access the amazing world of the world wide web.

Whether working off a dynamic or static IP address or on a private or public network, the wealth of information the internet offers you is astounding.

By knowing your IP address and the safety precautions available, surfing the internet can provide you with a never-ending source of information.

Check out Entrepreneur's other guides and resources for more information about this topic.

<https://www.entrepreneur.com/science-technology/what-is-an-ip-address-everything-you-need-to-know/453589>