Public vs. Private IP Addresses

What is a public IP address?

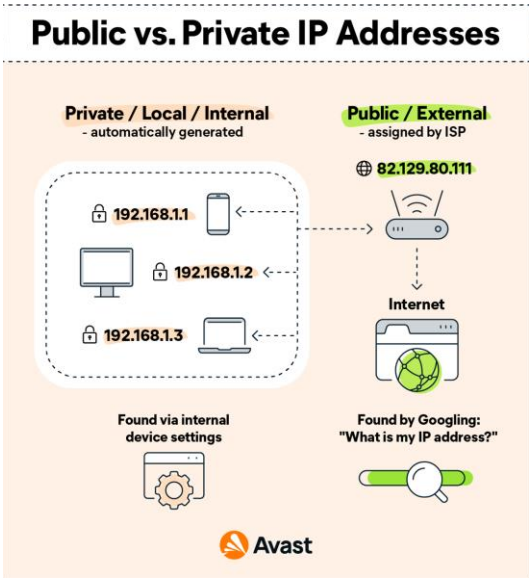
A *public* IP address is an IP address that can be accessed directly over the internet and is assigned to your network router by your internet service provider (ISP). Your personal device also has a *private* IP that remains hidden when you connect to the internet through your router's public IP.

What is a private IP address?

A private IP address is the address your network router assigns to your device. **Each device within the same network is assigned a unique private IP address** (sometimes called a private network address) — this is how devices on the same internal network talk to each other. Private IP addresses let devices connected to the same network communicate with one another without connecting to the entire internet.

By making it more difficult for an external host or user to establish a connection, **private IPs help bolster security within a specific network**, like in your home or office.

you can print documents via wireless connection to your printer at home, but your neighbor can't send their files to your printer accidentally.



Public and private IP address ranges

Private IP address exists within specific private IP address ranges reserved by the Internet Assigned Numbers Authority (IANA) and should never appear on the internet. There are millions of private networks across the globe, all of which include devices assigned private IP addresses within these ranges:

- Class A: 10.0.0.0 — 10.255.255.255
- Class B: 172.16.0.0 — 172.31.255.255
- Class C: 192.168.0.0 — 192.168.255.255

these IP addresses are reserved for private network use only, they can be **reused on different private networks** all over the world

if you have a device or two at home with a so-called 192 IP address, or a private IP address beginning with **192.168**. This is the most common default private IP address format assigned to network routers around the globe.

Public IP address	**Private IP address**
External (global)	Internal (local)
Used for communicating outside your private network, over the internet	Used for communicating within your private network, with other devices in your home or office
A unique numeric code never reused by other devices	A non-unique numeric code that may be reused by other devices in other private networks
Found by Googling: "**What is my IP address?"**	Found via your device's internal settings
Assigned and controlled by your internet service provider	Assigned to your specific device within a private network
Not free	Free
Any number not included in the reserved private IP address range Example: 8.8.8.8.	10.0.0.0 — 10.255.255.255; 172.16.0.0 — 172.31.255.255; 192.168.0.0 — 192.168.255.255 Example: 10.11.12.13