Private IP Addresses

Overview

The local address of the home router is set to the default dedicated IP address number. This is usually the equivalent address of the opposite model from that manufacturer and is often seen in the manufacturer's documentation. Your public IP address is the IP address that someone at the other end of your Internet activity will see (if they bother to find it). This is the only reason it is called a public IP address. The web works similarly, except that it guides your activities (emails, answers to Google queries, etc.) and forwards the emails to your computer address. If there is no public IP address, there is nothing you can do. It is your pass to the Internet.

In theory, your computer should have your unique IP address so that it only receives knowledge prepared for you. However, this is not how it works due to an important exception: computers on the network connect to the router and share an equivalent public IP address.

Range of Private IP Address

The organization that distributes IP addresses to the earth reserves various IP addresses for personal networks. In your simple home network, the router is in the middle, the computer is wired or wirelessly connected to it, and these networks are clustered. Once an internet connection is established through your internet service provider, your router sends internet activity to any computer connected to your router, which is the basis of a network innovation called Network Address Translation. (NAT).

- NAT can be a process where your router changes your private IP address to a public IP address so that you can send your traffic across the network and track changes in the process.
- When this information is returned to your router, it will reverse the change from a valid IP address to a personal IP address and forward the traffic to your computer.

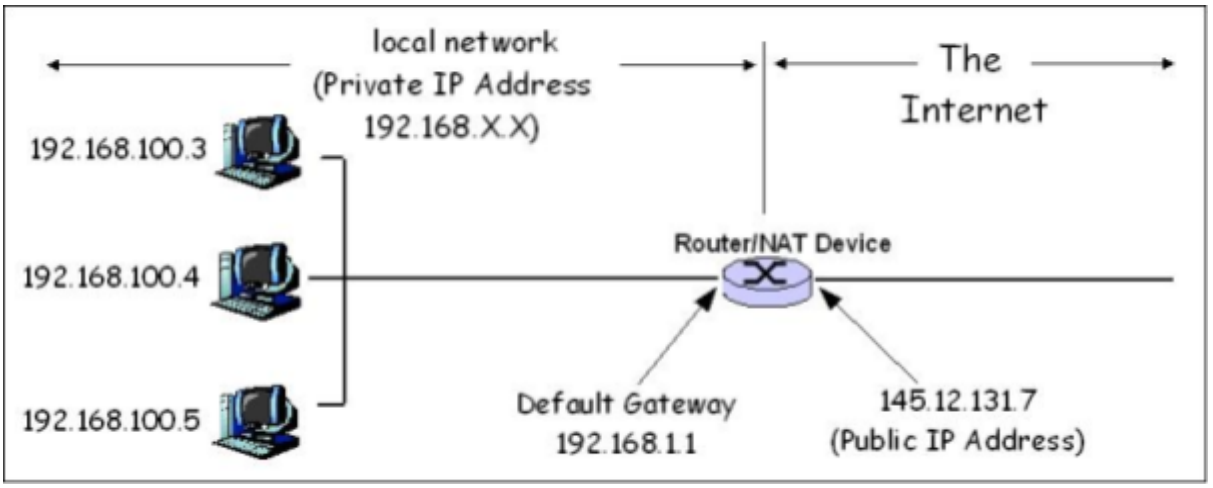

Figure 1: Private Network

Your private address is only used for your router, your network, and you. The range of remote addresses on the web does not need to be in sync with the rest of the earth and therefore does not need to be in sync with the Internet. The private address range is generally used by one address. Network administrators who use these personal addresses have more subnet space and more addresses than those assigned. The private IP address does my job for your home network. A single network typically uses these address blocks. Even if your neighbor uses the same course, it will not cause a problem because that is your network, not yours. You see, these private addresses are called non-routable addresses. Networks on the web only route Internet activity to your public IP address, not your IP.

- 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