

Question. What is private IP address? What is public IP address? How do they work together to solve problem of not enough IP address?

Ans:

Private IP address:

A private IP address is an IP address used within a private network to identify devices without exposing them to the public internet. They are designed for use within local area networks (LANs).

The ranges for private IP addresses are:

Class A: 10.0.0.0 to 10.255.255.255

Class B: 172.16.0.0 to 172.31.255.255

Class C: 192.168.0.0 to 192.168.255.255

Public IP addresses

A public IP address is an IP address that is assigned to a device to allow direct access over the internet. These addresses are unique and globally routable, and can be accessed from any device connected to the internet anywhere in the world. These addresses are unique across the entire internet.

How do they work together?

Private and public IP addresses work together using a technology NAT (Network Address Translation) that allows multiple devices on a private network to share a single public IP address for accessing the internet. This mechanism helps to solve the problem of IPv4 address exhaustion by enabling private IP address reuse within different networks.