

Wk 5d1

Technology, Information Technology



Private and public addresses in IP addressing design IP (Internet Protocol) addresses are majorly divided into two, namely private and public addresses. IP addressing design is important in assigning of addresses. Both private and public networks are considered in the design of IP addresses and are an integral part. Both private and public addresses are unique in their application in IP addressing and have their ideal spaces in which they may be used.

An IP address is termed as private if its IP number is in the range of IP addresses which are reserved for private networks like LAN - local area network. Private IP addressing helps improve the network's security, besides conserving public address space. Private IP addressing is used for connecting client computers on a private network, for example in institutions. This addressing method allows for easier communication between network computers. Private networks allow the network administrator to arbitrarily assign a local machine an IP address of his choice, if it falls within the range of private networks shown above. This is quite different from public networks. The nature of private networks restricts access to the private network. However, it is possible to connect two private networks by use of a device which allows Network Address Translation (NAT), for instance a router.

A public IP address, on the other hand is allocated to each machine which connects to the internet where all IPs are unique. Therefore, it is not possible to have two computers sharing a public IP address on the internet. Public addressing enables multiple computers to connect over the internet and share information. Public IPs are assigned to each computer by the ISP when a

computer connects to the gateway and so the user of the computer cannot change the public IP address assigned to his computer. A computer accessing the internet from a private network has both private and public IP addresses. In essence, it can be said that private IP is for communicating within the network while public IP is applied for internet communication.

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