

TCP/IP and Subnet Masking

1. What is TCP/IP version 6?

TCP/IP version 6 is different in the way it configures; It is an updated version from TCP/IP version 4.

2. What version of TCP/IP will we focus on?

TCP/IP version 4

3. What does it mean when we say that TCP/IP is actually a protocol suite?

TCP/IP protocol is multiple protocols (TCP and IP) all tied up together into one “suite”.

4. What is a routable protocol?

A routable protocol is dividing networks into multiple subnetworks with boundaries, in which can only be connected with routers.

5. What OSI layer does IP reside upon?

IP resides on the Network layer (layer 3).

6. What OSI layer does TCP reside upon?

TCP resides on the Transport layer (layer 4).

7. In TCP/IP what is windowing?

How data transfers from one computer to another. Windowing starts with sending one packet and doubles the number of packets sent until it encounters a problem and reverts to transmitting one packet, then doubling again, so on and so forth.

8. How many bits does an IPv4 address have?

An IPv4 address has 32-bits.

9. In TCP/IP, what is the default gateway?

The router for the subnetwork that you are on. Allows you to connect to computers outside of your subnet.

10. What does a Domain Name Server do?

DNS map domain names to IP addresses. Basically allows us to use names instead of IP addresses to connect to a site or device

11. What is Network Address Translation (NAT)?

NAT allows an infinite number of connected devices to the Internet because it modifies IP addresses as they move into a new space. Keeps from having the need for every device connected to the internet from needing their own IP address.

12. In a TCP/IP address, what is an octet?

IPv4 uses four octet's which are made up of 8 bits.

13. What is the purpose of a subnet mask?

The purpose of a subnet mask is to identify what part of an IP address is part of the network identifier and what part of it is the device identifier.

14. What would the subnet mask be if you wanted to use 8 bits for the network address and 8 bits for subnets?

255.255.0.0

15. When was the last time that class full addressing was commonly used?

1992

16. What replaced class full addressing?

Classless Internet-Domain Routing (CIDR)