Interview Questions

Network Layer

Q1. How is RARP different from ARP protocol? **(Larsen & Toubro Infotech)**
Answer: ARP identifies the physical address associated with a given network address. Generally, ARP is a mapping process from the network layer to the data link layer to determine the MAC address of a specific Internet protocol address. In RARP, reverse ARP is the network protocol address used by the client computer on the LAN to request the Internet protocol. (IPv4) ARP table from the gateway router. The network router creates a table in the gateway router and assigns the MAC address to the corresponding IP address through the table.

Q2. What is the difference between Bootp and DHCP? **(Mphasis Ltd)**
Answer: BOOTP and DHCP protocols are used to obtain the host's IP address and boot program information. The two protocols work differently in some ways. The DHCP protocol is an extended version of the BOOTP protocol. The main difference between BOOTP and DHCP is that BOOTP supports static configuration of IP addresses, while DHCP supports dynamic configuration. This means that DHCP will automatically assign and obtain IP addresses from computers connected to the Internet and provide some additional functions.

Q3. What is Flooding? **(Hexaware Technologies)**
Answer: When a router uses a non-adaptive routing algorithm to send an incoming data packet to any outgoing link except the node where the data packet arrives, flooding occurs in the computer network. Flooding is a method of quickly distributing routing protocol updates to every node on a large network. Examples of these protocols include open shortest path first and distance vector multicast routing protocols.

Q4. Categorize distance vector routing protocols? **(Wipro)**

Answer: Distance vector routing protocols fall into two categories: distance vector or link state. In the distance vector, each router on the network advertises the destinations it can reach, and specific information is used to determine the easiest route to each accessible destination. In link-state router is updated from all routers in the entire network, passing information to the nearest router.

Q5. How link state is different from distance vector protocol? **(Mphais)**

Answer:

- Infrequent routing updates.
- High scalability supports more extensive networks.
- Divides the entire network into smaller segments to limit the scope of routing changes.
- Only updates about link status and topology changes are sent.
- The triggered update can immediately notify the system of differences, reducing convergence time.
- The network design may reduce the size of the link-state database. When the network ID is set by doubling the support path summary, the reduction in the number of paths will reduce the dimensionality of the link-state database.