

COMPUTER NETWORKING DEVICES

1.Access Point :-

- It allow the wireless devices (WLAN).
- It creates a Wi-Fi network that lets wireless devices communicate with the internet or other devices on the network .
- Access point are used to extend the range of a network or provide Wi-Fi in area that do not have it.
- They are commonly found in homes, offices and public places provide wireless internet access.

2.Modems (Modulator/Demodulator) :-

- It is used to convert digital signal into analog signals of different frequencies and transmits these signal to a modem at the receiving location.
- These converted signal can be transmitted over the cable system , telephone line and other communication medium.
- Modems are generally used to access the internet by customer of an Internet Service Provider (ISP).

3.Firewall :-

- A Firewall is a network security device that monitor and controls the flow of data between your computer or network and the internet.
- Blocking unauthorized access while allowing trusted data to pass through.
- Firewall helps protect your network from hacker, viruses and other online threats by filtering traffic based on security rules.
- Firewall can be physical devices , programs, or even cloud -based services , which can be offered as SaaS ,through public clouds or private virtual clouds.

4.Repeater :-

- A repeater operates at the physicals layer.
- Its main function is to amplify the signal over the same network before the signal becomes too weak or corrupted to extend the length to which the signals can be transmitted over the same network.
- When the signals becomes weak, they copy it bit by bit and regenerate it at its star topology connector connecting following the original strength.
- It is 2- port device.

5.Hub :-

- A hub is a multi-port repeater.
- A hub connect multiple wires coming from different branches.
- Hubs cannot filter data, so data packets are sent to all connected devices.
- They do not have the intelligence to find out the best path for data packets which treads to inefficiencies and wastage.

6.Bridge :-

- A bridge operates at the data link layer .
- It is a repeater with add on the functionality of filtering content by reading the MAC addresses of the source and destination .
- It is also used for interconnecting two LANs working on the same protocols.
- It typically connect multiple network segment and each port is connected to different segment.
- A bridge is not strictly limited to two ports , it can have multiple portsA router to connect and manage multiple network segment.

7.Switch :-

- A switch is a multi-port bridge with a buffer designed that can boost its efficiency and performance.
- A switch is a data link layer devices.
- The switch can perform error checking before forwarding data, which make it very efficient as it does not forward packets that have errors and forward good packet selectively to the correct port only.

8.Router :-

- A router is a device like a switch, that router data packets based on their IP addresses.
- The router mainly a network layer device.
- Router normally connect LANs and WANs have a dynamically updating routing table based on which they make decision on routing the data packets.
- The router divides the broadcast domains of host connected through it.

9.Gateway :-

- A gateway as the name , is a passage to connect two network that may work upon different networking model.

- They work as messenger agents that take data from one system , interpret it , and transfer it to (different) another system.
- Gateway also called as protocol converters and can operate packets across network layer.

10.NIC (Network Interface Card) :-

- NIC is a network adapter that is used to connect the computer to the network.
- It is installed in the computer to establish LAN.
- It has a unique ID that is written on the chip , and it has a connect the cable to it.
- The cable act as a interface between the computer and the router or modem.
- NIC is layer 2 device which means that it works on both the physical and data link layer of the network model.