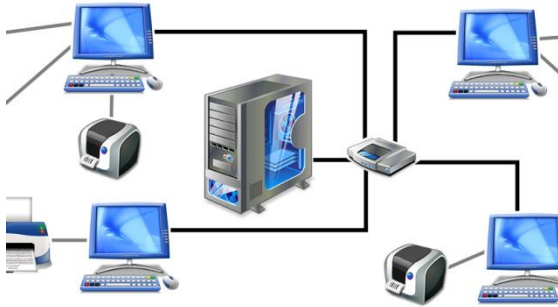


Networking Devices



- Modem
- RJ-45 connector
- Ethernet Card (NIC)
- Router
- Switch
- Gateway
- Wi-Fi Card

MODEM : Modulator Demodulator – Computer peripheral that allows to connect one Computer with other via telephone lines. Telephone lines carries the analog signals. Modem is a device that can convert the digital signals to analog signals (i.e. modulation) and convert that signals back to digital (i.e. demodulation). Modem is the device that converts digital signals to analog and vice-versa.

RJ45 Port

- The "RJ" in RJ45 stands for "registered jack,"
- Registered Jack 45 (RJ45) is a standard type of
- physical connector for network cables.

- RJ45 connectors are most commonly seen with Ethernet cables and networks. Modern Ethernet cables feature small plastic plugs on each end that are inserted into the RJ45 jacks of Ethernet devices

Ethernet Card / NIC

- It is also known as NIC (Network Interface Card)
- Is a device that is attached to each of the workstations and the server and helps the workstations establish all
 - important connection with the network.
- It contains RJ-45 slot to connect Ethernet cable with RJ-45 connector.
- Each NIC attached to workstation has a unique number identifying it, known as MAC Address.
- Also known as Network Interface Unit.

Hub : Hardware device used to connect several computers together. Hub ranges in size from four to several hundred ports.

Three types of Hub :

- Active Hub : This type of Hub regenerates the signal before forwarding them.
- Passive Hub : This type of Hub combines the signals of different network segments and forwards without regenerating.
- Intelligent Hub : This type of Hub regenerates the signals as well as chooses the path to send the signals.

It is a hardware device used to connect several computers together. A hub contains multiple ports. When a packet arrives at one port, it is copied to all the ports of the hub (i.e. in broadcast manner).

Switch: It is a device used to segment network into different sub networks called subnets or LAN segments. The main advantage is it prevents traffic overloading in a network. It is distinct from a hub that it only forwards the data to the ports involved in the communications rather than all ports.

Access point (Wireless access point): It is a hardware device that establishes connection of computing devices on wireless LAN with a fixed wire network.

Three types of Access points:

Bridge	Router	Gateway
Used to connect networks with similar topology and similar protocol.	Used to connect networks with similar topology and different protocol.	Used to connect networks with different topology and different protocol.

WIFI Card

- Similar to Ethernet card, but it allows our computer to connect with other device without wire i.e. for wireless connectivity.
- It may be internal or external with built-in wireless radio and antenna. The most common Wi-Fi card used in desktop computer are PCI-Express Wi-Fi card made it fit the PCI- Express card slots on the motherboard.
- It allow to connect our device to hotspot available.
- Advantage is that it allows computer to become part of network without being physically connected through wire and can be placed anywhere.

