



# NETWORKING IN DETAILS



A **Computer Network** is collection of computer device that are connected in various ways to communicate and share resources.

The connection between computer in a network are made using wires and cables and some connections are wireless like radio waves.

**Node or Host** – Any computer device on a network is Host or Node.

**Data Transfer Rate** – The speed at which data is transmitted from one device to another within the network.

**Client/Server Model** – The client/server model is a network architecture where a client requests a services from a server, & the server provides the requested resources/services.

## Type of Server

**File Server** – A file server stores files and allows clients to access them on a same network to the multiple users.

**Web Server** – A web server is a hosted website on the Internet that delivers web pages to users' browser using protocols like HTTP or HTTPS.

## Fundamental Networking Components

**IP Address** – An IP address is the unique number assigned to every network device in an Internet Protocol (IP) network.

**Device / Nodes** – A node is a network connection point that can receive, send, create or store data.

**Routers** – A router is a physical or virtual device that sends data “packets” between networks.

**Switches** – A switch is a device that connects network devices and manages node-to-node communication across a network.

**Ports** – A port indicates a specific connection between network devices, with each port identified by a number.

**Gateways** – Gateways are hardware devices that facilitate communication between two different networks.

The **networked devices** use a system of rules, called communications protocols, to transmit information over physical or wireless technologies.