



Student Engagement & Mentoring in Technology

When discussing **network devices**, we're referring to the hardware components that enable communication and data exchange across a computer network. These devices form the backbone of digital infrastructure in home environments, enterprise settings, or critical national systems.

To start, network devices can be broadly categorized into the following types:

1. **Routers** – Direct data packets between different networks. They determine the optimal path for data transmission using routing tables and protocols like OSPF or BGP.
2. **Switches** – Operate at the data link layer (Layer 2) to forward data within a local area network (LAN). Managed switches also function at Layer 3, offering some routing capabilities.
3. **Access Points (APs)** – Extend wired networks by allowing wireless devices to connect, effectively creating or expanding Wi-Fi coverage.
4. **Modems** – Modulate and demodulate analog signals to digital signals for internet access, especially in DSL or cable-based setups.
5. **Firewalls** – Can be hardware or software-based. These control incoming and outgoing network traffic based on predefined security rules.
6. **Network Interface Cards (NICs)** – Serve as the interface between a computer and the network, whether wired (Ethernet) or wireless.
7. **Gateways** – Act as translators between networks that use different protocols, often combining functions of a router and a protocol converter.
8. **Load Balancers** – Distribute network or application traffic across multiple servers to ensure reliability and performance.



Student Engagement & Mentoring in Technology

<https://wordwall.net/play/78709/180/639>

Match Game

<https://wordwall.net/play/78710/029/184>

flashcards

<https://wordwall.net/play/78711/484/852>

Maze