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Networking devices play a crucial role in the functioning and connectivity of computer networks.

Here are some commonly used networking devices:

1. Network Interface Card (NIC):

A Network Interface Card, also known as a network adapter or network card, is a hardware component that allows a computer to connect to a network. It enables the computer to transmit and receive data over the network by converting digital signals into a format suitable for transmission over the network medium.

2. Modem:

A modem is a device used to connect a computer or network to an Internet service provider (ISP) over a communication medium such as telephone lines, coaxial cables, or fiber optic cables. It modulates and demodulates the digital signals from the computer into analog signals for transmission over the communication medium and vice versa.

3. Hub:

A hub is a simple networking device that connects multiple Ethernet devices together in a local area network (LAN). It operates at the physical layer of the network and broadcasts incoming data packets to all connected devices, regardless of the intended recipient. Hubs have largely been replaced by switches in modern networks.

4. Repeater:

A repeater is a networking device used to regenerate or amplify network signals to extend the reach of a network over longer distances. It receives a weak signal, cleans it, and retransmits it to strengthen the signal and overcome signal degradation due to attenuation.

5. Switch:

A switch is a networking device that operates at the data link layer of the network. It connects multiple devices in a network and forwards data packets only to the intended recipient based on the MAC (Media Access Control) addresses of the devices. Switches provide better performance and security compared to hubs.

6. Bridge:

A bridge is a device that connects two local area networks (LANs) or segments of a LAN together. It operates at the data link layer of the network and uses MAC addresses to filter and forward network traffic between the connected segments.

7. Router:

A router is a networking device that connects multiple networks together and forwards data packets between them. It operates at the network layer of the network protocol stack and uses IP (Internet Protocol) addresses to determine the optimal path for data transmission. Routers are key devices in wide area networks (WANs) and the Internet.

8. Gateway:

A gateway is a device that connects networks using different protocols or technologies. It translates data between different network formats, allowing communication between networks with different architectures or protocols.

9. Wi-Fi:

Wi-Fi, short for Wireless Fidelity, refers to the technology that enables wireless network connections. Wi-Fi devices use radio waves to transmit and receive data within a local area network, allowing devices such as laptops, smartphones, and tablets to connect to a network without the need for physical cables.

10. VSAT (Very Small Aperture Terminal):

VSAT is a satellite communication system that uses small satellite dishes to establish two-way satellite communication. It is commonly used in remote areas where traditional wired or terrestrial communication infrastructure is unavailable or impractical.

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