

# [Chapter 1 section 2 lans, wans, and the internet](https://assignbuster.com/chapter-1-section-2-lans-wans-and-the-internet/)

End Deviceis either the source or destination of a message transmitted over the network,

Intermediary Network Devicesregenerate and re-transmit data signals,
maintain information about the pathways exist through the network and internetwork , notify of error, direct data along alternate pathway if needed, classify and direct messages along priorities, permit or deny the flow of data.

Mediumprovides the channel over which the message travels from source to destination.

Metallic wiresdata is encoded into electrical impulses

Glass or plastic fibersdata is encoded as pulses of light

Wireless transmissiondata is encoded using wavelengths from the electromagnetic spectrum

topology diagramprovides an easy way to understand how devices in a large network are connected.

Network Interface CardA NIC, or LAN adapter, provides the physical connection to the network at the PC or other end device. The media that are connecting the PC to the networking device, plug directly into the NIC (Figure 2).

Physical PortA connector or outlet on a networking device where the media is connected to an end device or another networking device.

InterfaceSpecialized ports on a networking device that connect to individual networks. Because routers are used to interconnect networks, the ports on a router are referred to as network interfaces.

Physical topology diagramsidentify the physical location of intermediary devices and cable installation.

Logical topology diagramsIdentify devices, ports, and addressing scheme. (Figure 2)

Local Area Network (LAN)A network infrastructure that provides access to users and end devices in a small geographical area, which is typically an enterprise, home, or small business network owned and managed by an individual or IT department.

Wide Area Network (WAN)A network infrastructure that provides access to other networks over a wide geographical area, which is typically owned and managed by a telecommunications service provider. service providers (SP), Internet Service Providers (ISP).

Metropolitan Area Network (MAN)A network infrastructure that spans a physical area larger than a LAN but smaller than a WAN (e. g., a city). are typically operated by a single entity such as a large organization.

Wireless LAN (WLAN)Similar to a LAN but wirelessly interconnects users and end points in a small geographical area.

Storage Area Network (SAN)A network infrastructure designed to support file servers and provide data storage, retrieval, and replication.

Extranetto provide secure and safe access to individuals who work for a different organization, but require access to the organization's data.

DSLBroadband Digital Subscriber Lines provide a high bandwidth, always on, connection to the Internet. runs over a telephone line. In general, small office and home office users connect using Asymmetrical (ADSL), which means that the download speed is faster than the upload speed.

CableTypically offered by cable television service providers, the Internet data signal is carried on the same cable that delivers cable television. It provides a high bandwidth, always on, connection to the Internet.

Cellularses a cell phone network to connect. Wherever you can get a cellular signal, you can get cellular Internet access. Performance will be limited by the capabilities of the phone and the cell tower to which it is connected.

SatelliteThe availability of satellite Internet access is a real benefit in those areas that would otherwise have no Internet connectivity at all. Satellite dishes require a clear line of sight to the satellite.

Dial-up TelephoneAn inexpensive option that uses any phone line and a modem. The low bandwidth provided by a dial-up modem connection is usually not sufficient for large data transfer, although it is useful for mobile access while traveling.

Dedicated Leased LineLeased lines are actually reserved circuits within the service provider's network that connect geographically separated offices for private voice and/or data networking. The circuits are typically rented at a monthly or yearly rate. They can be expensive.

Ethernet WANEthernet WANs extend LAN access technology into the WAN. Ethernet is a LAN technology you will learn about in a later chapter. The benefits of Ethernet are now being extended into the WAN.

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