

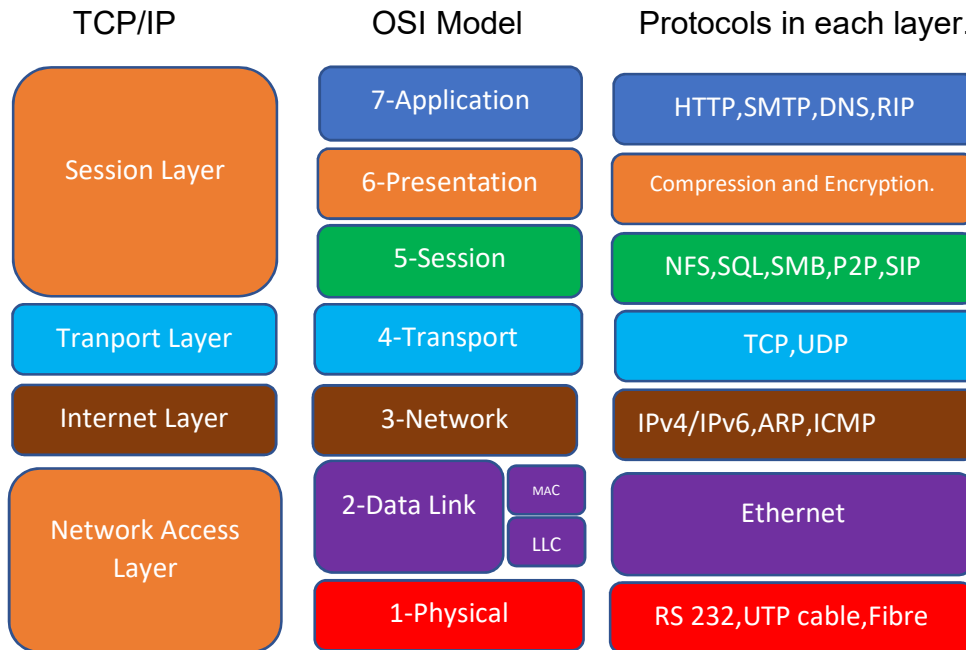
### Unit 3: Network Fundamentals

I revised the concept of computer networks, and I am familiar with networks as part of my job; I configure routers, switches and WAN access points. The fundamental of computer networks is to allow computing devices to connect and communicate with different networks over various geographical locations.

A summary of types of networks is as follows:

Personal Area Network (PAN)	• A personal area network is a computer network for interconnecting devices centered on an individual person's workspace.
Local Area Network (LAN)	• A collection of devices connected together in one physical location, such as a building or office.
Wireless Local Area Network (WLAN)	• Wireless LAN is a network that allows devices to connect and communicate wirelessly.
Campus Area Network (CAN)	• A network used to inter-connect networks in limited geographical locality like university campus or organisational campuses.
System Area Network (SAN)	• A relatively local area network designed for high-speed interconnection in cluster environments servers to server, multiprocessing systems (processor to processor), and storage area networks.
Wide Area Network (WAN)	• A geographically distributed private telecommunications network that interconnect multiple local area networks.
Storage-Area Network (SAN)	• Not to be confused with the system area network, storage area network is a dedicated high-speed network or sub-network that interconnects and presents shared pools of storage devices to multiple servers.
Metropolitan Area Network (MAN)	• A network that interconnects users with computer resources in a geographic area or region larger than that covered by even large LAN but smaller than the area covered by WAN.

In this unit, we covered the OSI and compared it to the TCP/IP model. TCP/IP model is the pervasive protocol on the internet. However, the OSI model is still helpful in my line of work. For instance, I work with layer two switches that use MAC address and MAC address table to determine the path where the frames are to be forwarded. Some network switches are layer three aware, and they can route IP traffic.



We also covered routing protocols in this unit, both static and dynamic routing protocols. Routing protocols enable IP routers to learn and advertise routes to carry network traffic to the destination networks.

There are two categories for dynamic routing protocols: the interior gateway protocol (IGP) and exterior gateway protocols(EGP).

