

# TCP/IP Model

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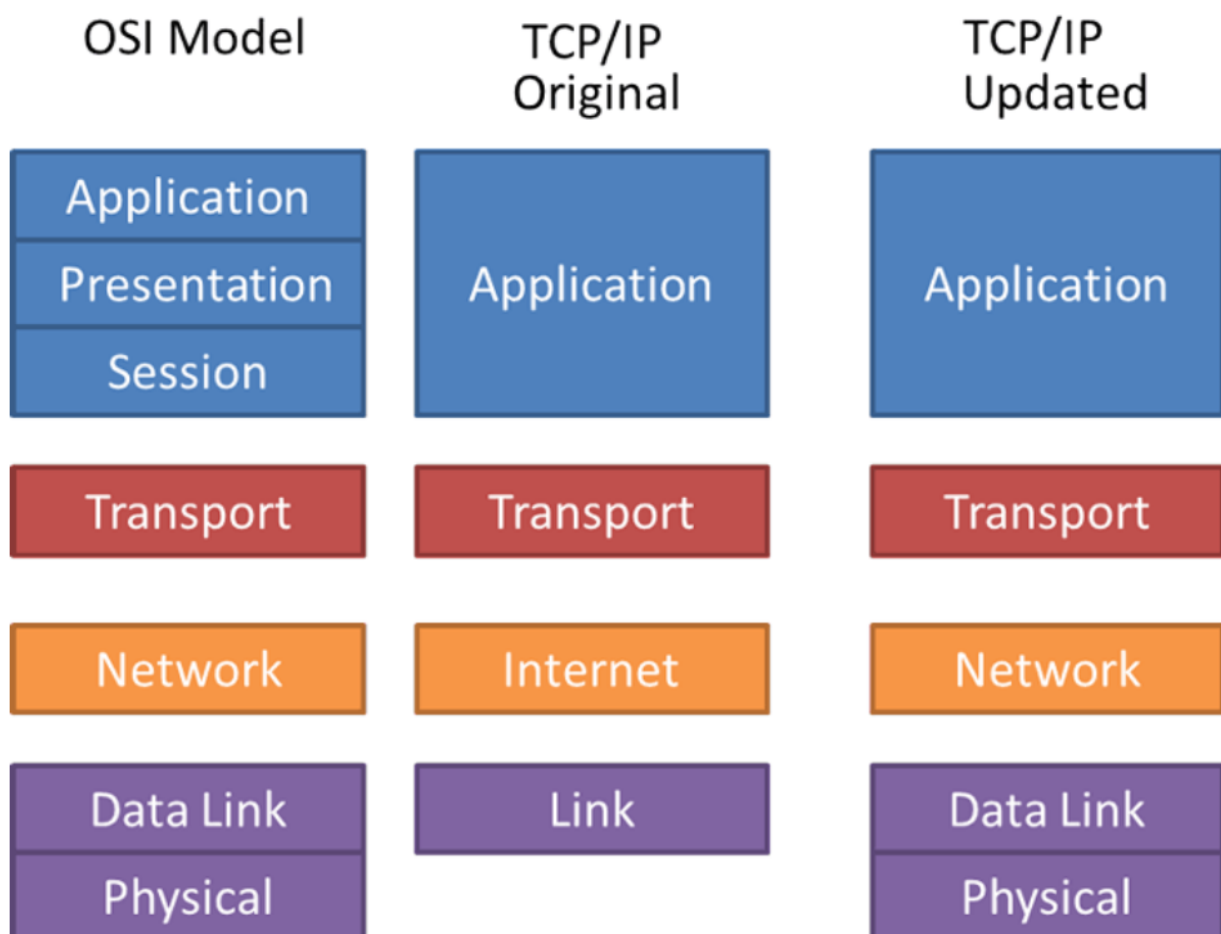
This is similar to OSI Model but OSI model is not used in the real world. So we use TCP/IP Model.

## **OLD MODEL**

- Application
- Transport
- Internet
- Link

## **NEW MODEL**

- Application: HTTP, FTP, SMTP
- Transport: TCP, UDP
- Network: IP, routers
- Data Link: Ethernet, Switches
- Physical: Cables, Network Interface Card (NIC)



When data is transferred each layer adds its own info, which is known as **Encapsulation**.

When data gets to the Physical layer it is sent to the receiving device, which then starts decoding data.

*DATA*

Layer 5 -> Layer 4 : *SEGMENT*

Application - > Transport : Data -> Data + Header (eg TCP - Source and destination port etc)

Layer 3: *PACKET*

Network Layer: Layer 4 DATA + IP header(Source IP destination IP)

Layer 2: *FRAME*

DataLink Layer: Layer 3 DATA + Header (Source and Destination MAC address) + Trailer (Error checking info to maintain data integrity)

- Then the system checks the destination MAC if this matches with our system it is processed further.
- Then system check for the destination IP if it matches with the machine it is process further.

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