

- TCP is a reliable connection-oriented service protocol that allows a transfer of data without errors from one machine to another machine on an internet
- TCP manages flow control & error control

2. UDP

- UDP stands for User Datagram Protocol
- UDP is an unreliable, connectionless service protocol
- UDP is used for transmitting speech (audio) or images (video)

3. Internet

- Internet layer is present above the host-to-network layer
- Internet layer holds the entire architecture together
- The task of internet layer is to deliver the IP packets to the specified destination
- The internet layer defines an official packet format
- It consists of only one protocol called IP
- IP stands for Internet Protocol
- IP is responsible for transmission of packets(datagrams) from source and destination

4. Host-to-network (data link + physical) layer

- In TCP/IP, below the internet layer is a large gap(void)
- TCP/IP reference model does not specify what happens in that gap, except the host is connected to the network. This region (gap) is called host-to-network layer
- Protocols are not specified in the host-to-network layer
- Host-to-network layer supports the following example networks:
1. ARPANET 2. SATNET 3. Packet radio 4. LAN

Comparison of OSI/ISO and TCP/IP Reference Models

<u>OSI/ISO reference model</u>	<u>TCP/IP reference model</u>
1. OSI/ISO stands for Open Systems Interconnection/ International Standards Organization	1. TCP/IP stands for Transmission Control Protocol / Internet Protocol
2. OSI/ISO reference model is a seven layered network architecture	2. TCP/IP reference model is a four layered network architecture
3. In OSI/ISO, the transport layer guarantees the delivery of packets	3. In TCP/IP model, the transport layer does not guarantee delivery of packets
4. OSI/ISO model follows vertical approach	4. TCP/IP model follows horizontal approach
5. OSI/ISO model has a separate presentation layer and session layer	5. TCP/IP does not have a separate presentation layer and session layer
6. OSI/ISO model is developed by ISO (International Standard Organization),	6. TCP/IP model is developed by ARPANET (Advanced Research Projects Agency Network)