

The Architecture of TCP/IP reference model is illustrated as shown in figure

TCP/IP stands for Transmission Control Protocol / Internet Protocol

TCP/IP reference model is a four layered network architecture

TCP/IP reference model is the most widely using reference model in the network design

TCP/IP reference model consists of the following 4 layers:

1. Application layer
2. Transport layer
3. Internet layer
4. Host-to-network layer

1. Application Layer

- Application layer is the highest layer (topmost layer) of the TCP/IP reference model
- The three topmost layers (application, presentation and session) in the OSI model are represented in TCP/IP by a single layer called the application layer
- Application layer is present above the transport layer
- Application layer consists of various higher-level protocols They are:
1 TELNET 2 FTP 3 SMTP 4 DNS

1. TELNET

- TELNET is a protocol used for virtual terminals
- TELNET is a two-way communication protocol which allows connecting to a remote machine and run applications on it
- TELNET is the Network Terminal Protocol, which provides remote login over the network

2. FTP

- FTP stands for File Transfer Protocol, which is the basis for file transfer, electronic mail, and network news
- It allows interactive file transfer amongst computer users connected over a network
- It is reliable, simple and efficient

3. SMTP

- SMTP stands for Simple Mail Transfer Protocol, which is the basis for electronic mail
- It is used to transport electronic mail between a source and destination
- SMTP is used to deliver the electronic mail

4. DNS

- DNS stands for Domain Name System
- DNS is a protocol used for mapping host names with network address/ IP address
- It resolves IP address into a textual address for hosts connected over a network

2. Transport layer

- Transport layer is present above the Internet layer
- Transport layer deals with the transmission of data
- It is designed to allow peer entities on the source and destination hosts to carry on a conversation
- It consists of 2 Protocols:
1. TCP 2. UDP

1. TCP

- TCP stands for Transmission Control Protocol