

- ↳ Theoretical Model
- ↳ 7 layer
- ↳ Never excepted in implementation

DLL

- ↳ 1 to 1 Connection ↗ Node to Node
- ↳ Comm. b/w LAN
- ↳ one device to one device Comm.
- ↳ Error checking
- ↳ Flow Ctrl

NL

- ↳ Sendn data to d/s Network.

TL

- ↳ TCP & UDP

SL

- ↳ Establish Session
- ↳ Synchronisation

PL

- ↳ Data Compression
De Compression
- ↳ ENC or DEC

AL

- ↳ HTTP → Web
- ↳ SMTP → Email
- ↳ FTP → File trans.
- ↳ SSH → Secure Login on server.

etc

The TCP/IP reference model, also known as the Internet protocol suite, is a conceptual framework used to describe the functions of the protocols used in the internet and other similar computer networks. It consists of four layers, each with its own set of protocols and functions.

The four layers of the TCP/IP reference model are:

1. **Application Layer:** The application layer is the topmost layer of the TCP/IP model and is responsible for providing network services to applications. This layer includes protocols such as HTTP (Hypertext Transfer Protocol), SMTP (Simple Mail Transfer Protocol), FTP (File Transfer Protocol), and DNS (Domain Name System). These protocols provide services such as file transfer, email, and web browsing to end-users.
2. **Transport Layer:** The transport layer provides end-to-end communication between hosts, including error recovery and flow control. The two main protocols used in this layer are TCP (Transmission Control Protocol) and UDP (User Datagram Protocol). TCP provides reliable, ordered, and error-checked delivery of data between applications, while UDP provides connectionless, unreliable delivery of data.
3. **Internet Layer:** The internet layer is responsible for routing packets across multiple networks and ensures that packets are delivered to their intended destinations. The main protocol used in this layer is the Internet Protocol (IP), which provides logical addressing and packet forwarding across network boundaries.
4. **Link Layer:** The link layer is responsible for the physical transmission of data over the network medium. It includes protocols such as Ethernet, Wi-Fi, and Bluetooth. These protocols provide mechanisms for framing, error detection, and flow control to ensure reliable transmission of data.

The TCP/IP reference model is a simplified version of the OSI (Open Systems Interconnection) model, which has seven layers. The TCP/IP model is widely used in practice and is the basis for the internet and most modern computer networks.

In summary, the TCP/IP reference model consists of four layers: application, transport, internet, and link, each with its own set of protocols and functions. The model provides a conceptual framework for understanding the functions of the protocols used in computer networks and is widely used in practice.