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Please describe the following figure, i.e., Figure 1, in English (>=400 words).



Figure 1. TCP/IP network model

The bottom layer of the TCP/IP network model is the Link Layer. The protocols of the link layer operate within the scope of the local network connection to which a host is attached. This regime is called the link in TCP/IP parlance and is the lowest component layer of the suite. The link includes all hosts accessible without traversing a router. The size of the link is therefore determined by the networking hardware design such as the driver programs and interfaces.

The second bottom layer of the TCP/IP network model is the Internet Layer. Internetworking requires sending data from the source network to the destination network. This process is called routing and is supported by host addressing and identification using the hierarchical IP addressing system. The internet layer provides an unreliable datagram transmission facility between hosts located on potentially different IP networks by forwarding datagrams to an appropriate next-hop router for further relaying to its destination. The internet layer has the responsibility of sending packets across potentially multiple networks. With this functionality, the internet layer makes possible internetworking, the interworking of different IP networks, and it essentially establishes the Internet. The internet layer does not distinguish between the various transport layer protocols. IP carries data for a variety of different upper layer protocols. These protocols are each identified by a unique protocol number: for example, Internet Control Message Protocol (ICMP) and Internet Group Management Protocol (IGMP) are protocols 1 and 2, respectively.

The second top layer of the TCP/IP network model is the Transport Layer. The transport layer establishes basic data channels that applications use for task-specific data exchange. The layer establishes host-to-host connectivity in the form of end-to-end message transfer services that are independent of the underlying network and independent of the structure of user data and the logistics of exchanging information. Connectivity at the transport layer can be categorized as either connection-oriented, implemented in TCP, or connectionless, implemented in UDP. The protocols in this layer may provide error control, segmentation, flow control, congestion control, and application addressing (port numbers).

The top layer of the TCP/IP network model is the Application Layer. The application layer includes the protocols used by most applications for providing user services or exchanging application data over the network connections established by the lower level protocols. This may include some basic network support services such as routing protocols and host configuration. Examples of application layer protocols include the Hypertext Transfer Protocol (HTTP), the File Transfer Protocol (FTP), the Simple Mail Transfer Protocol (SMTP), and the Dynamic Host Configuration Protocol (DHCP). Data coded according to application layer protocols are encapsulated into transport layer protocol units (such as TCP streams or UDP datagrams), which in turn use lower layer protocols to effect actual data transfer. At the application layer, the TCP/IP model distinguishes between user protocols and support protocols. Support protocols provide services to a system of network infrastructure. User protocols are used for actual user applications. For example, FTP is a user protocol and DNS is a support protocol.