

The Transmission Control Protocol/Internet Protocol (TCP/IP)

There are four layers of the TCP/IP model: network access, internet, transport, and application. Used together, these layers are a suite of protocols. The TCP/IP model passes data through these layers in a particular order when a user sends information, and then again in reverse order when the data is received.

Network access

The Network Access Layer of the TCP/IP model combines Layer 1 (Physical) and Layer 2 (Data Link) of the OSI model. It describes Layer 1 issues such as energy, bits, and the medium used to carry them (e.g., copper, fiber, wireless).

Internet

The Internet layer in the TCP/IP model is where the Internet Protocol (IP) lives, and where the Internet Control Message Protocol (ICMP) is located. The Internet layer is where common issues with addressing occur, such as incorrect IP addresses, subnet masks, or default gateway addresses

Transport

The transport layer of the TCP/IP protocol suite is responsible for reliable communication between two hosts. It sits between the application and internet layers of the TCP/IP protocol stack

Application

The application layer is responsible for providing the interface between the user or the application and the network. It handles the formatting, encoding, and presentation of data, as well as the authentication, encryption, and error detection of messages