

## TCP/IP & "Stacks"

**What is TCP/IP?** TCP/IP (Transmission Control Protocol/Internet Protocol) is the basic communication language or protocol of the Internet. It can also be used as a communications protocol in a private network (either an [intranet](#) or an [extranet](#)). When you are set up with direct access to the Internet, your computer is provided with a copy of the TCP/IP program just as every other computer that you may send messages to or get information from also has a copy of TCP/IP.

(1) [TCP/IP](#) is frequently referred to as a "**stack**." This refers to the layers (TCP, IP, and sometimes others) through which all data passes at both client and server ends of a data exchange. A clear picture of layers similar to those of TCP/IP is provided in our description of [OSI](#), the reference model of the layers involved in any network communication.

The term "stack" is sometimes used to include utilities that support the layers of TCP/IP. The Netscape Handbook says (and we quote): "To make a successful connection to the Internet, your PC needs application software such as Netscape plus a TCP/IP stack consisting of TCP/IP software, [sockets](#) software ([Winsock](#), [dynamic link library](#)), and hardware driver software ([packet](#) drivers). Several popular TCP/IP stacks are available for Windows, including [shareware](#) stacks."

(2) In programming, a stack is a data area or buffer used for storing requests that need to be handled. The *IBM Dictionary of Computing* says that a stack is always a push-down list, meaning that as new requests come in, they push down the old ones. Another way of looking at a push-down list - or stack - is that the program always takes its next item to handle from the top of the stack. (This is unlike other arrangements such as "FIFO" or "first-in first-out.")