

The ISO/OSI 7 Layer Model

OSI Layer		D.O.D Layer	Devices	Some Protocols	Description
7	Application	L4 Process/Application		HTTP, SMTP, FTP, TELNET	The application layer represents the level at which applications access the network services. The layer represents the services that directly support applications such as software for file transfers, database access, and electronic mail.
6	Presentation			MIME, XML, JPEG	The presentation layer translates data from the application layer into an intermediary format. This layer also manages security issues by providing services such as data encryption, and compresses data so that fewer bits need to be transferred on the network.
5	Session			NFX, X11, RPC	The session layer allows two applications on different computers to establish, use, and end a session. This layer establishes dialog control between the two computers in a session, regulating which side transmits, plus when and how long it transmits.
4	Transport	L3 Host to Host Transport		TCP, UDP	The transport layer handles error recognition and recovery. It also repackages long messages when necessary into small packets for transmission and, at the receiving end, rebuilds packets into the original message. The receiving transport layer also sends receipt acknowledgments.
3	Network	L2 Internetworking	Router	IP	The network layer addresses messages and translates logical addresses and names into physical addresses. It also determines the route from the source to the destination computer and manages traffic problems, such as switching, routing, and controlling the congestion of data packets.
2	Data Link	L1 Network Access	Bridges, Switches	HDLC, ARP	The data link layer packages raw bits from the physical layer into frames (logical, structured packets for data). This layer is responsible for transferring frames from one computer to another, without errors. After sending a frame, it waits for an acknowledgment from the receiving computer.
	MAC/LLC				
1	Physical		Hubs, Nic's, Repeaters	Ethernet, Token Ring, FDDI, 802.11	The physical layer transmits bits from one computer to another and regulates the transmission of a stream of bits over a physical medium. The layer defines how the cable is attached to the network adapter and what transmission technique is used to send data over the cable.

(Steve Cholerton 2006)