

Protocols Identified and functions:

Protocol	Full Form	Port(s)	Function
ICMP	Internet Control Message Protocol	--(works at IP layer)	Used for diagnostics (e.g., ping) and error reporting between devices.
DNS	Domain Name System	UDP 53 / TCP 53	Translates domain names (e.g., youtube.com) into IP addresses.
TCP	Transmission Control Protocol	Dynamic (e.g., 80, 443)	Reliable, connection-oriented communication ensuring ordered delivery.
UDP	User Datagram Protocol	Dynamic (e.g., 53, 123, 443 for QUIC)	Fast, connectionless transport protocol used in streaming, DNS, QUIC.
HTTP	Hypertext Transfer Protocol	TCP 80	Transfers unencrypted website data.
HTTPS	Hypertext Transfer Protocol Secure	TCP 443	Secure, encrypted web browsing using TLS/SSL.
TLS	Transport Layer Security	Typically TCP 443 (also others)	Provides encryption and secure communication for HTTPS and other protocols.
ARP	Address Resolution Protocol	-- (works at link layer)	Maps IP addresses to MAC addresses within a local network.
QUIC	Quick UDP Internet Connections	UDP 443	Google-developed transport protocol for faster, secure web traffic (used in YouTube/Google services).
mDNS	Multicast Domain Name System	UDP 5353	Resolves hostnames in local networks without a DNS server (used in IoT, printers).