

INTERNET

Internet address

Unique address from each device
Nnn.nnn.nnn.nnn ($0 \leq nnn \leq 255$)

Protocol Stacks

Device information TCP/IP Protocols stack Electrical Signals

Protocol Layers

Application protocol layer - HTTP, SMTP, FTP
Transmission Control Protocol Layer (TCP) - control over ports
Internet Protocol Layer (IP) - control over IP address
Hardware Layer - binary packets to network signals

Domain Name Service (DNS)

Domain Name IP address
Lookup tables
Part of the database stored in the computer

Application Protocol Layer

HTTP & WWW

Service - World Wide Web (WWW)
Protocol - HyperText Transfer Protocol (HTTP)
Communication - Web client, Web servers
Text based protocol

SMTP & E-Mail

Service - Electronic Mail
Protocol - Simple Mail Transfer Protocol
Communication - Mail client, Mail Server
Text-based Protocol

Transmission Control Protocol

Header - port data
Connection Oriented - Must established connection first
Reliable - send confirmation if data received
Make sure the data packets are in-ordered and fully received

FTP - 20/21, SMTP - 25, HTTP - 80

Internet Protocol

Header - IP data
Unreliable - No confirmation / may not received
Data packets may be un-ordered

<http://subdomain.domain.com:port> {application layer data}
Application Protocol | IP | TCP {data tone transmitted}

Hosting

Store website related data (HTML, CSS, JS, Images) in a web server provided by a web hosting service

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