Network Protocols

Internet Protocols Overview
Internet documents

- Internet drafts
- Proposed, draft and internet standard
- Informational
- Historical
- Experimental
- Best Common Practice
- For Your Information
Internet Protocol (IP)

- Datagram format
- Addressing
- IPv4 versus IPv6
- Unreliable
- End-to-end
- Datagram independence
Address Resolution Protocol (ARP)

- Layer 2 ½?
- Medium access control (MAC) addresses
- Internet Protocol (IP) addresses
- ARP tables and ARP caches
Internet Control Message Protocol (ICMP)

- Status and errors
- Unreachables
- Echo / echo-reply messages
- Redirects
- Source quench
- Other
Dynamic Host Configuration Protocol (DHCP)

- Automatic address assignment
- Lease time and renewals
- Dynamic DNS updates
Domain Name System (DNS)

- Records
- Delegations
- Iterative versus recursive
Routing

- Routing information protocol (RIP)
- Open shortest path first (OSPF)
- Border gateway protocol (BGP)
IP multicast

- Group management (IGMP)
- Routing (PIM, MBGP)
- Session Announcement (MSDP)
Other protocols

- User datagram protocol (UDP)
- Session initiation protocol (SIP)
- Stream control transmission protocol (SCTP)
- Simple network management protocol (SNMP)
- Trivial file transfer protocol (TFTP)
- IP security (IPsec)
- Network time protocol (NTP)
- syslog