

Guide to Enterprise Protocols

OSI LAYERS

TCP/IP LAYERS

7

Application Layer
- Supports application and end-user processes
- Offers application services
- User identification, authentication, and privacy

6

Presentation Layer
- Application, system, and network independent data formatting
- Data conversion, compression, encryption, and decryption

5

Session Layer
- Establishes, manages, and terminates application connections
- Manages data transfer permissions and records upper layer errors

4

Transport Layer
- End-to-end connection and connectionless data delivery management
- Ensures reliable packet delivery caused by network congestion & errors
- Congestion avoidance and data transmission flow control

3

Network Layer
- Logical addressing, routing, and packet generation
- Carries out congestion control and error handling
- Route monitoring and message forwarding

2

Data Link Layer
- Performs error detection and correction of the data streams
- Manages flow and link control between the physical signaling and network
- Constructs and synchronizes data frame packets

1

Physical Layer
- Defines physical characteristics of cables and connectors
- Provides the interface between network and network devices
- Describes the electrical, light, or radio data-stream signaling

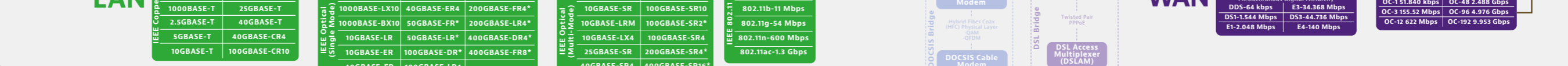
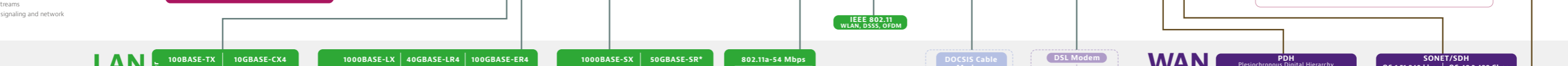
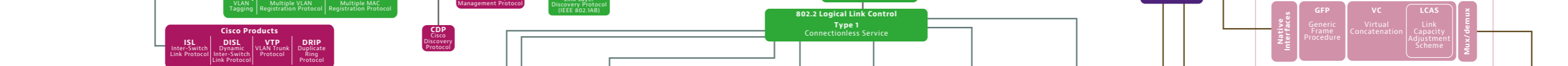
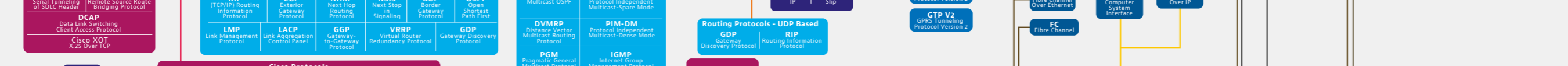
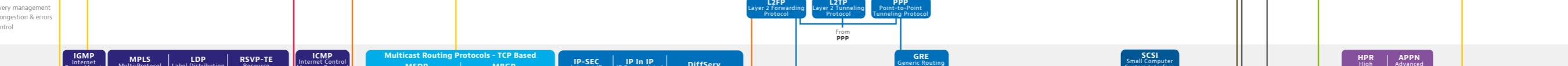
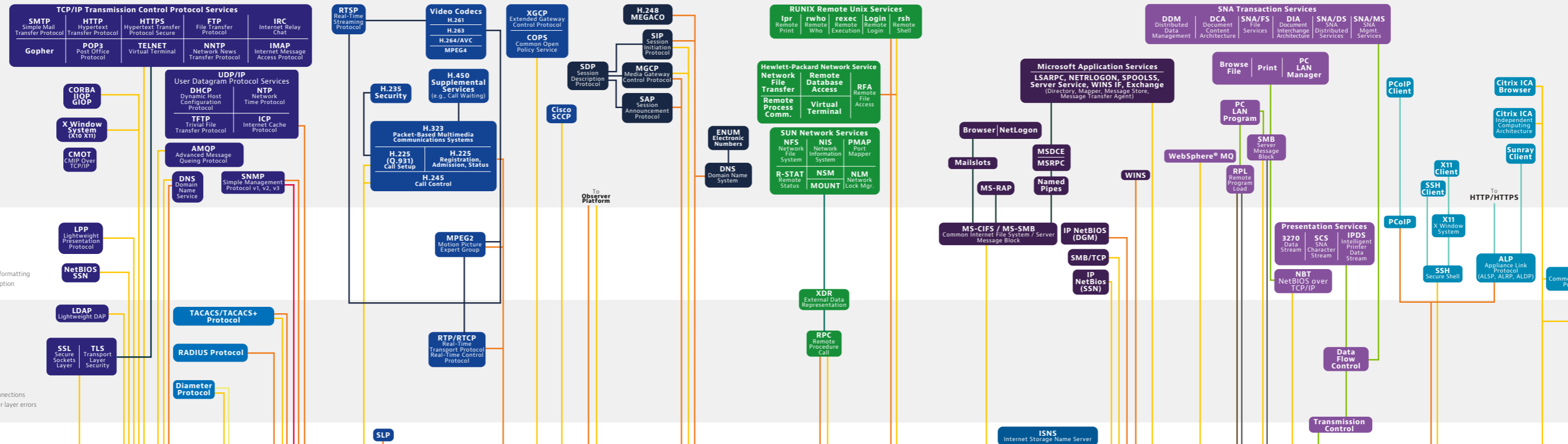
D Application Layer

C Transport Layer

B Internet Layer

A Network Access Layer

TCP/IP Routing/Switching Protocols VoIP/Video/Streaming Cisco VPN/Tunneling UNIX/HP/Sun SAN Microsoft IBM Thin Client Protocols



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