SESSION LAYER

Protocols:

- Network File System (NFS)
- Apple Session Protocol (ASP)
- Structured Query Language (SQL)
- Remote procedure call (RPC)
- X Window

Device / or Function:

The Session layer's primary function is managing the sessions in which data is transferred. Functions at this layer may include:

- Keeps data streams separate (session identification).
- Sets up, maintains, and tears down communication sessions.
- Establishment and maintenance of communication sessions between the network hosts, ensuring that data is transported.
- Management of multiple sessions (each client connection is called a session). A server can maintain thousands of sessions simultaneously.
- Assignment of the session ID number to each session, which is then used by the Transport layer to properly route the messages.
- Dialog control that specifies how the network devices coordinate with each other (simplex, half-duplex, and full-duplex).
- Termination of communication sessions between network hosts after completion of the data transfer.
- Coordination of requests and responses between different hosts using the same application.

- **Circuit Level Gateway Firewalls:** Filter traffic based on the sessions state, not the IP address or port number (like layer 3 firewall). It makes filtering decisions based on the session layer information, which is the session ID number. The firewall only allows packets that match after sessions. This requires use of the TCP three-way handshake.
- **Circuit Level Proxies** - operate at layer 5