

The session layer establishes, manages, synchronizes, and terminates communication sessions between applications on different devices.

Operates at 5th layer

Manages session setup, maintenance, and termination

Controls dialogue (who sends or receives and when)

Provides synchronization and recovery mechanisms

### **The diagram shows**

How the session layer establishes and negotiates session parameters

Manages token-based dialogue control to avoid collisions

Inserts synchronization checkpoints for recovery from failures

Ensures data integrity by reducing duplication or message loss

Terminates sessions after confirming all data has been exchanged

Session layer protocols:

- **AppleTalk Data Stream Protocol (ADSP):** Developed by Apple for LAN communication with self-configuration support.
- **Real-time Transport Control Protocol (RTCP):** Provides QoS feedback for RTP-based multimedia sessions.
- **Point-to-Point Tunnelling Protocol (PPTP):** Enables Virtual Private Networks (VPNs) over TCP/IP.
- **Password Authentication Protocol (PAP):** Provides password-based user authentication in PPP connections.
- **Remote Procedure Call Protocol (RPCP):** Allows a program to execute procedures in another address space (client-server interaction).
- **Sockets Direct Protocol (SDP):** Supports socket communication over RDMA-enabled networks.