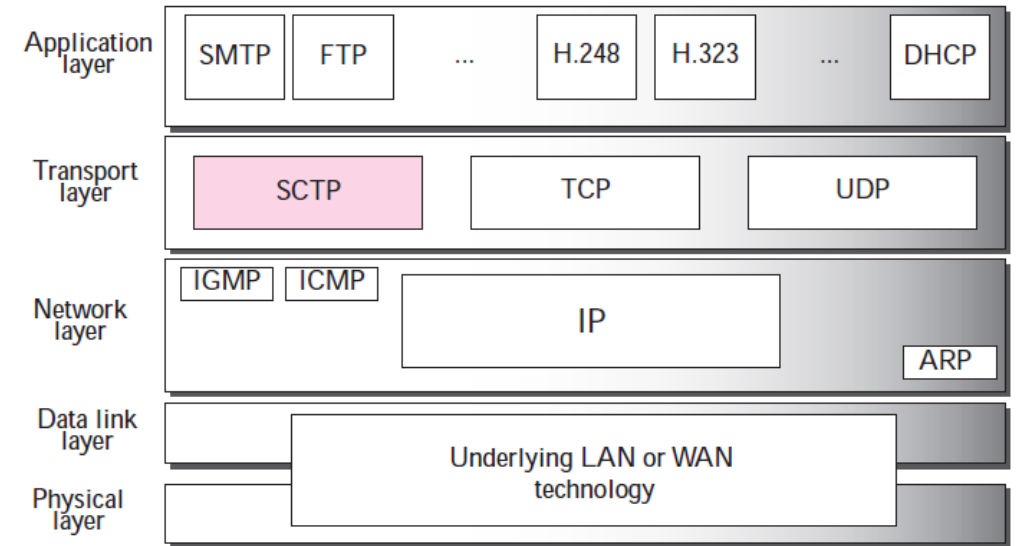




Stream Control Transmission Protocol

Introduction to SCTP

- Reliable, Message-oriented general purpose transport layer protocol
- Capable of handling Multimedia and Stream traffic
- Designed for Internet applications
- Lies between application & network layer
- Serves as a middleman between application programs & network operations
- Combines best features of UDP & TCP



Relationship of SCTP to other Protocols in TCP/IP Suite



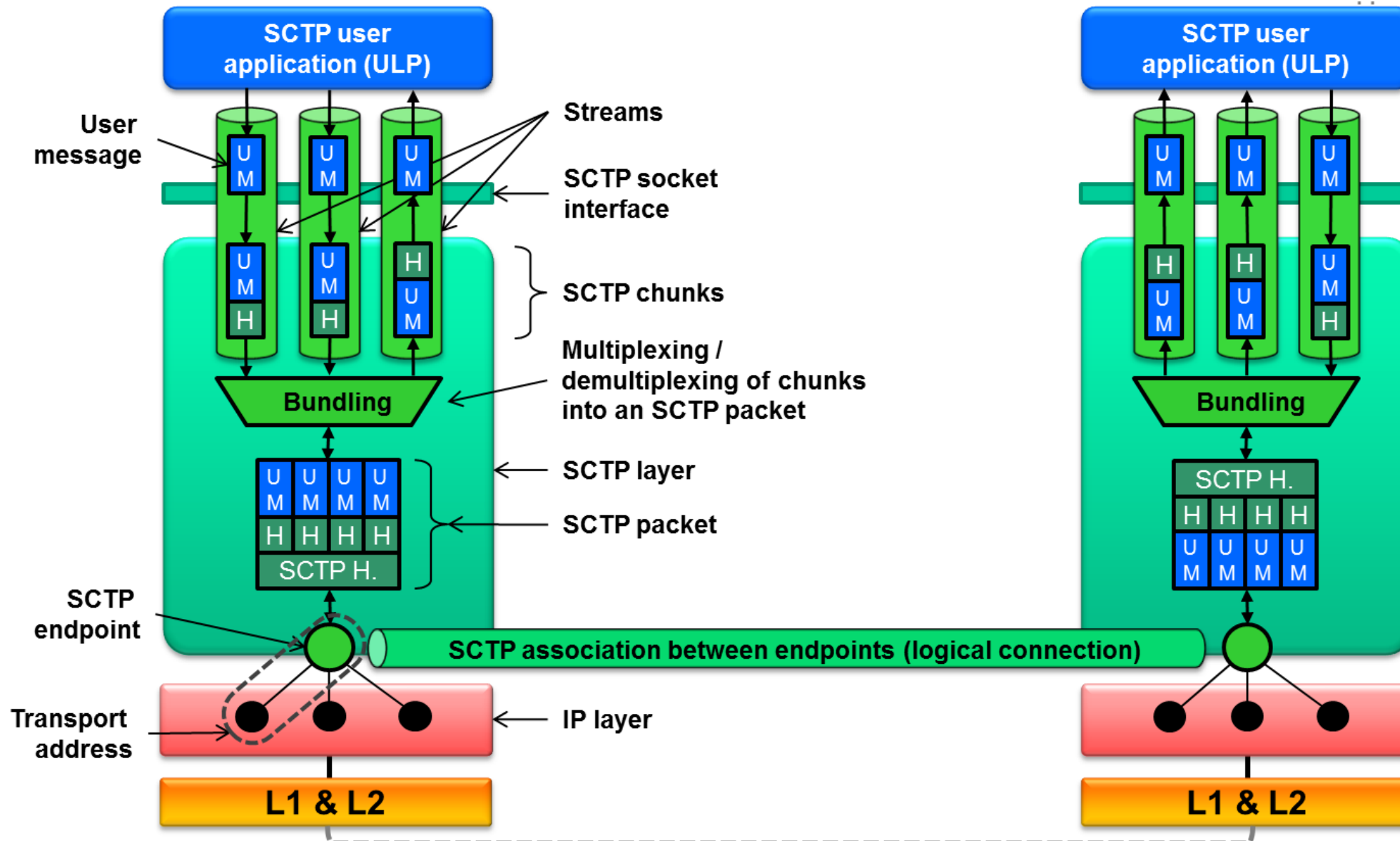
Stream Control Transmission Protocol

Introduction to SCTP Contd...

- SCTP preserves message boundaries
- Detects lost data, duplicate data and out-of-order data
- Congestion control and flow control mechanisms available in SCTP

➤ *Characteristics of SCTP*

- a) Confirmed Transmission
- b) Data Fragmentation
- c) Sequenced Delivery
- d) Bundling
- e) Fault tolerance at Network Level



Conceptual Model of SCTP



Stream Control Transmission Protocol

Introduction to SCTP Contd...

➤ *Key features of SCTP*

- a) No head-of-line blocking
- b) Message-based data transfer
- c) Multihoming
- d) Protection against connection flooding



Stream Control Transmission Protocol

Difference between TCP, UDP & SCTP

| | TCP | UDP | SCTP |
|-------------------|---------------------|----------------|---------------------|
| Reliability | trustworthy | Unreliable | Trustworthy |
| Connection type | Connection-oriented | Connectionless | Connection-oriented |
| Transmission type | Byte-oriented | News-oriented | News-oriented |
| Transfer sequence | Strictly ordered | Disordered | Partially ordered |
| Overload control | Yes | No | Yes |
| Error tolerance | No | No | Yes |



References

Learning Resources Used

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- 3) <https://www.ionos.com/digitalguide/server/know-how/sctp/>

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