

Networking

Encapsulation and Decapsulation



Encapsulation and Decapsulation

- Encapsulation – Packet traveling from Application layer to the Physical Layer
 - Header and footer added
 - Human-readable data turned into 0's and 1's
- Decapsulation – Packet traveling from Physical Layer back to the Application Layer
 - Header and footer removed
 - 0's and 1's turned back into the human-readable data

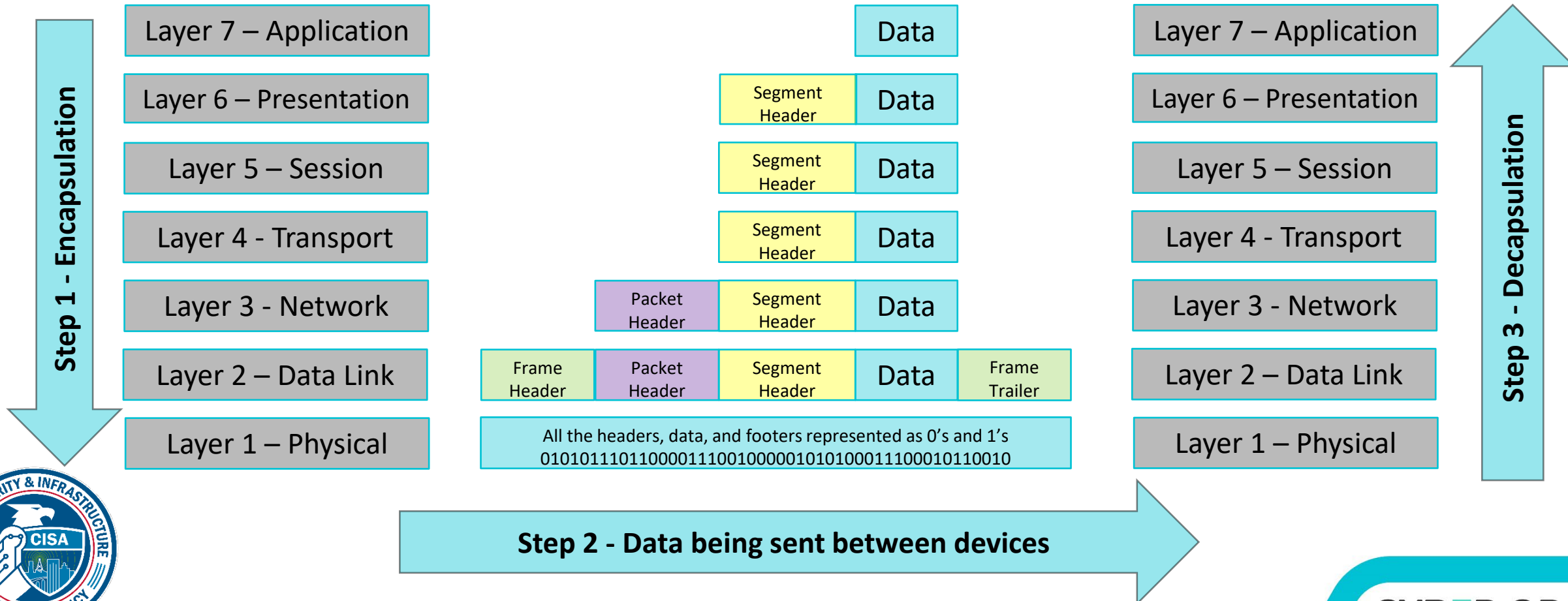


Encapsulation and Decapsulation



The system sending the data

The system receiving the data



Encapsulation and Decapsulation

- Payload – The data being sent
 - Does not include the headers and footers
- Maximum Transmission Unit - MTU
 - Largest packet size that can be sent
- IP Header – Header added at the network layer
 - Contains address and routing information



Encapsulation and Decapsulation

- Ethernet Header – Header added at the data link layer
 - Contains MAC address information for sender and receiver
- TCP/UDP Headers – Header added at Transport Layer
 - TCP is for checking packets
 - UDP does not use to check packets
- TCP Flags – Flags in a TCP header
 - Common flags are **syn**, **ack**, **rst**, and **fin**

