Networking And Protcols

GSEC 401

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Introduction

- You cannot get very far in any subject without a good basic understanding of that topic's fundamentals

- What is Networking ?

Plan

- Network Protcols
- Layer 3
  - Internet Protcol (IP)
  - Internet Control Message Protcol (ICMP)
- Layer 4
  - Trasmission Control Protcol (TCP)
  - User Datagram Protcol (UDP)
- Tcpdump

Plan

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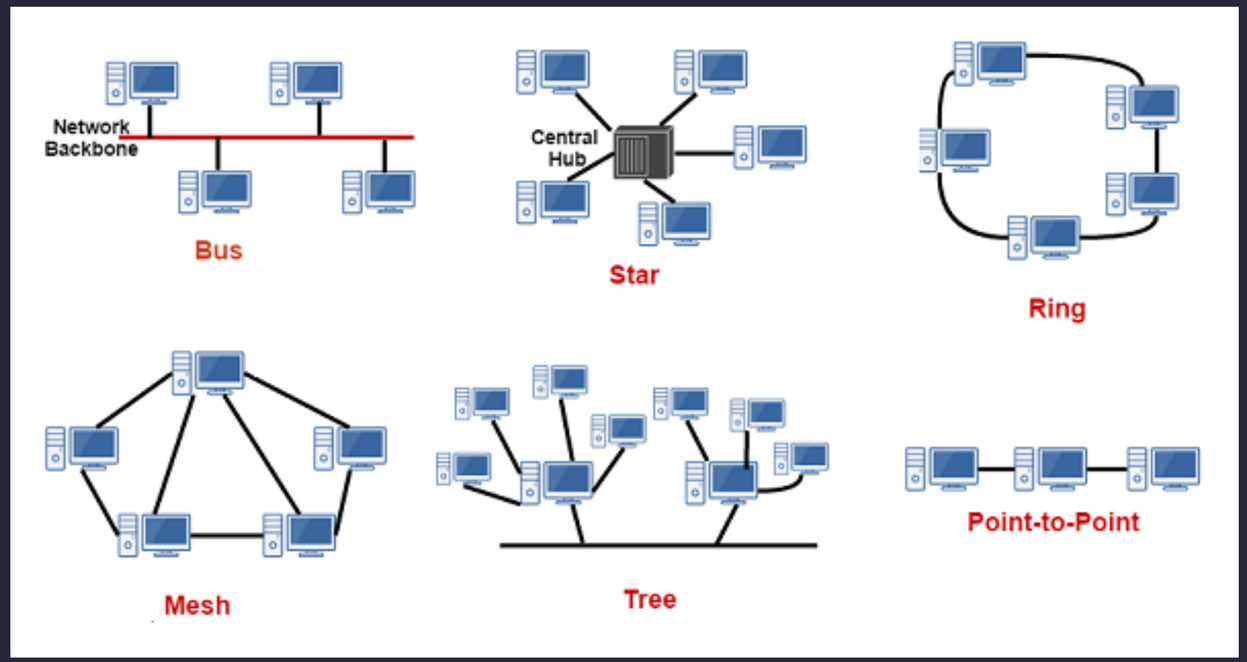
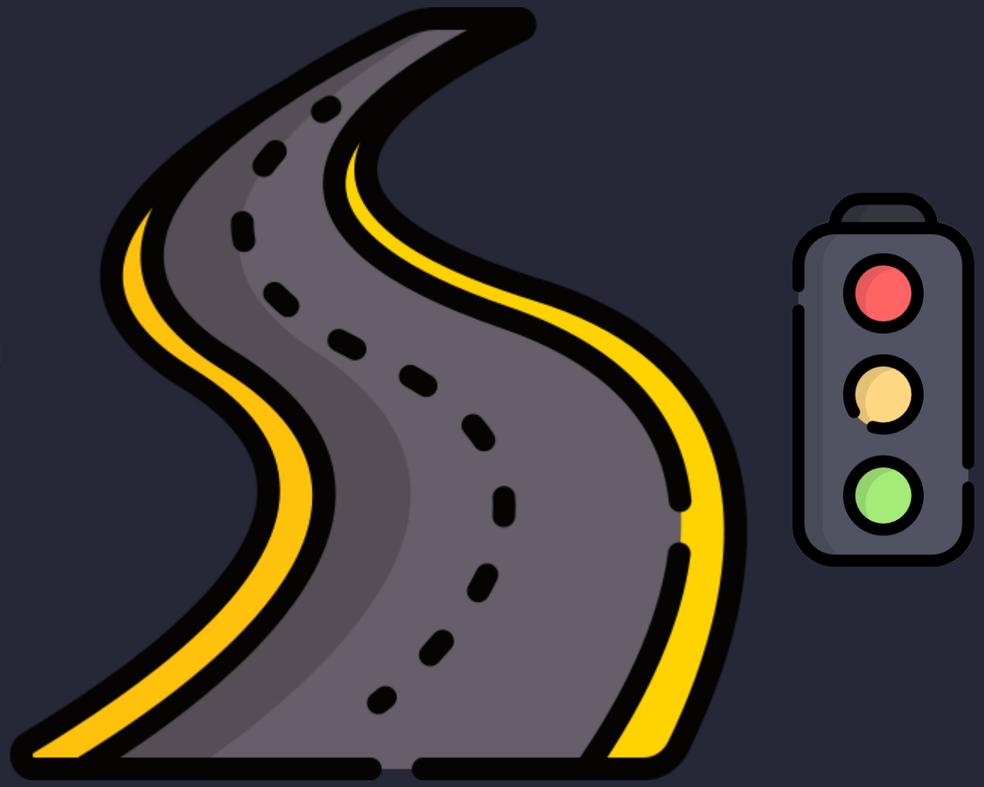
Network Protcols

- It’s an agreement or rules of engagement for how computer networks will communicate
- Protcols Stack



Protcol Stack

- Why we need protcol?
  - To standardize the format of a communication
  - To specify the order or timing of communication
  - To allow all parties to determine the meaning of a communication



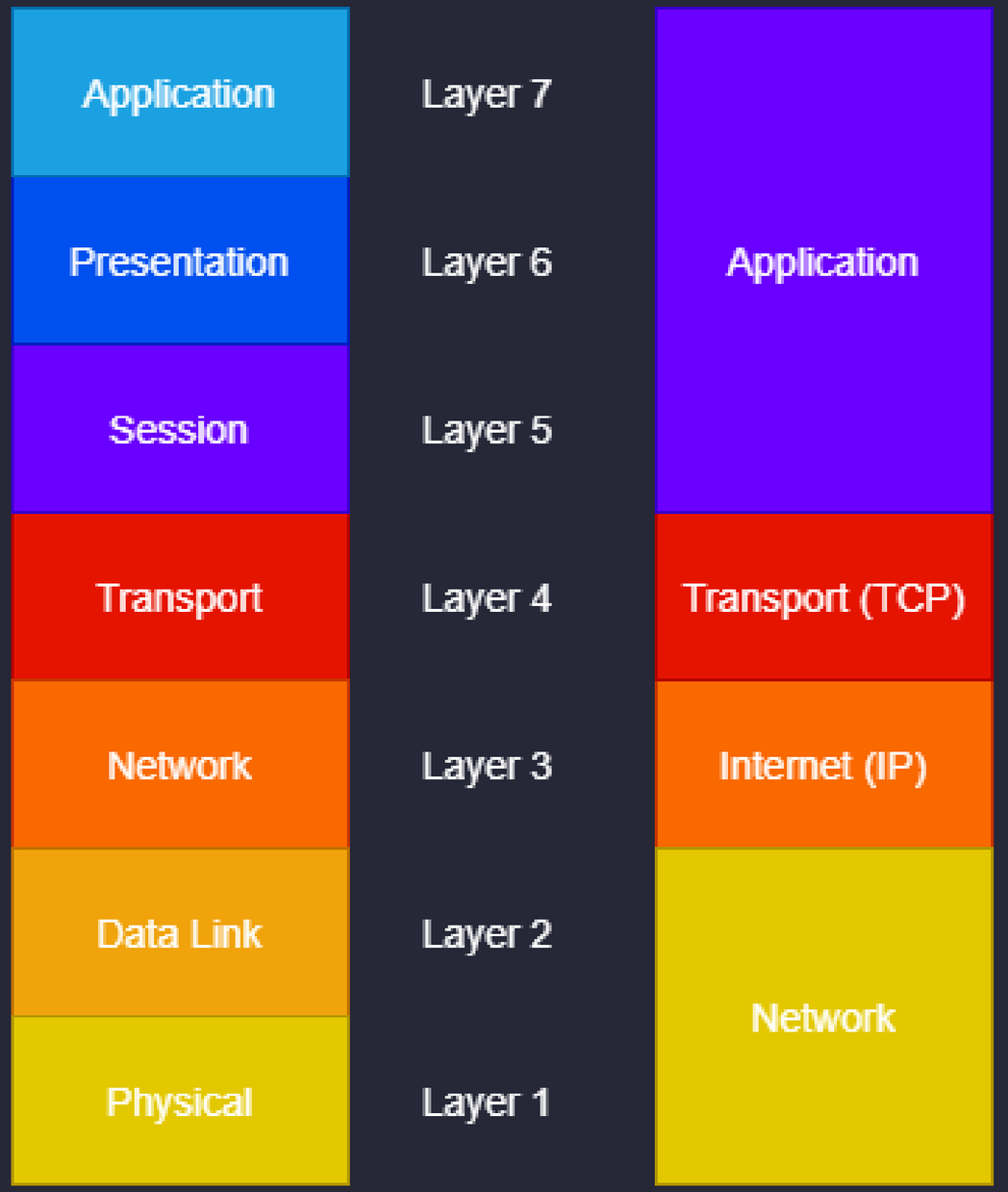
OSI Protcol Stack

- The OSI model is used to describe and talk about the various layers in a protcol stack

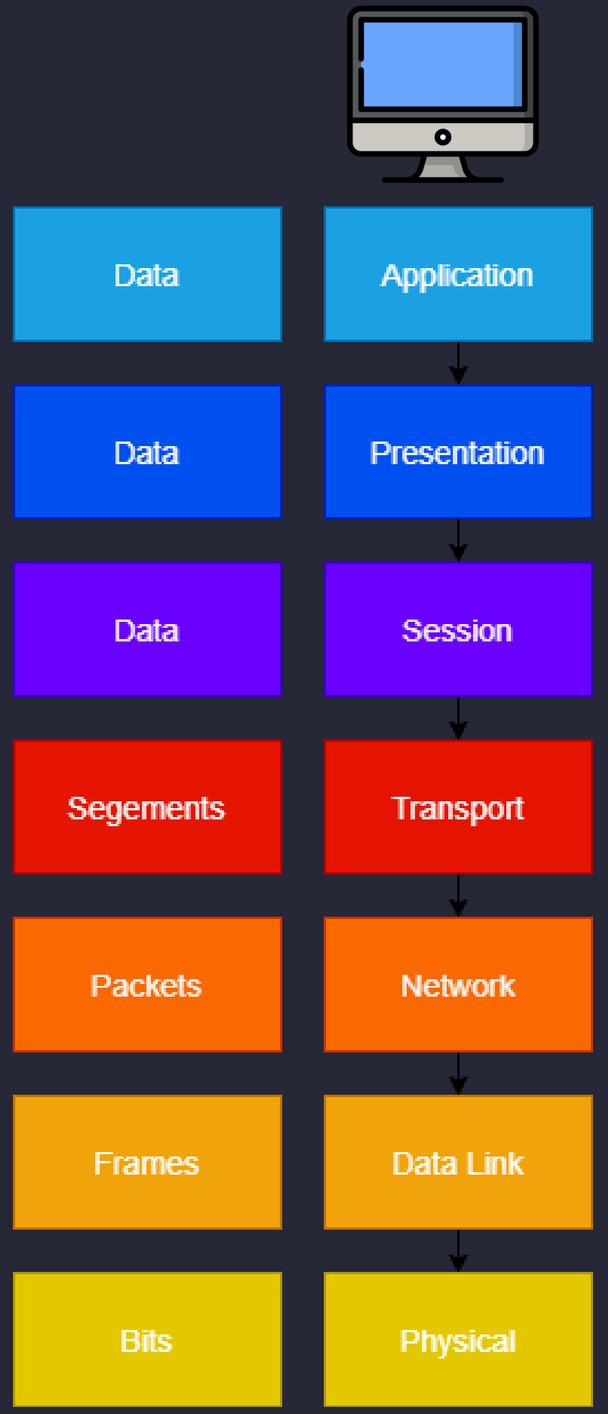
OSI VS TCP/IP

- TCP/IP model used when we are implementing the protcol

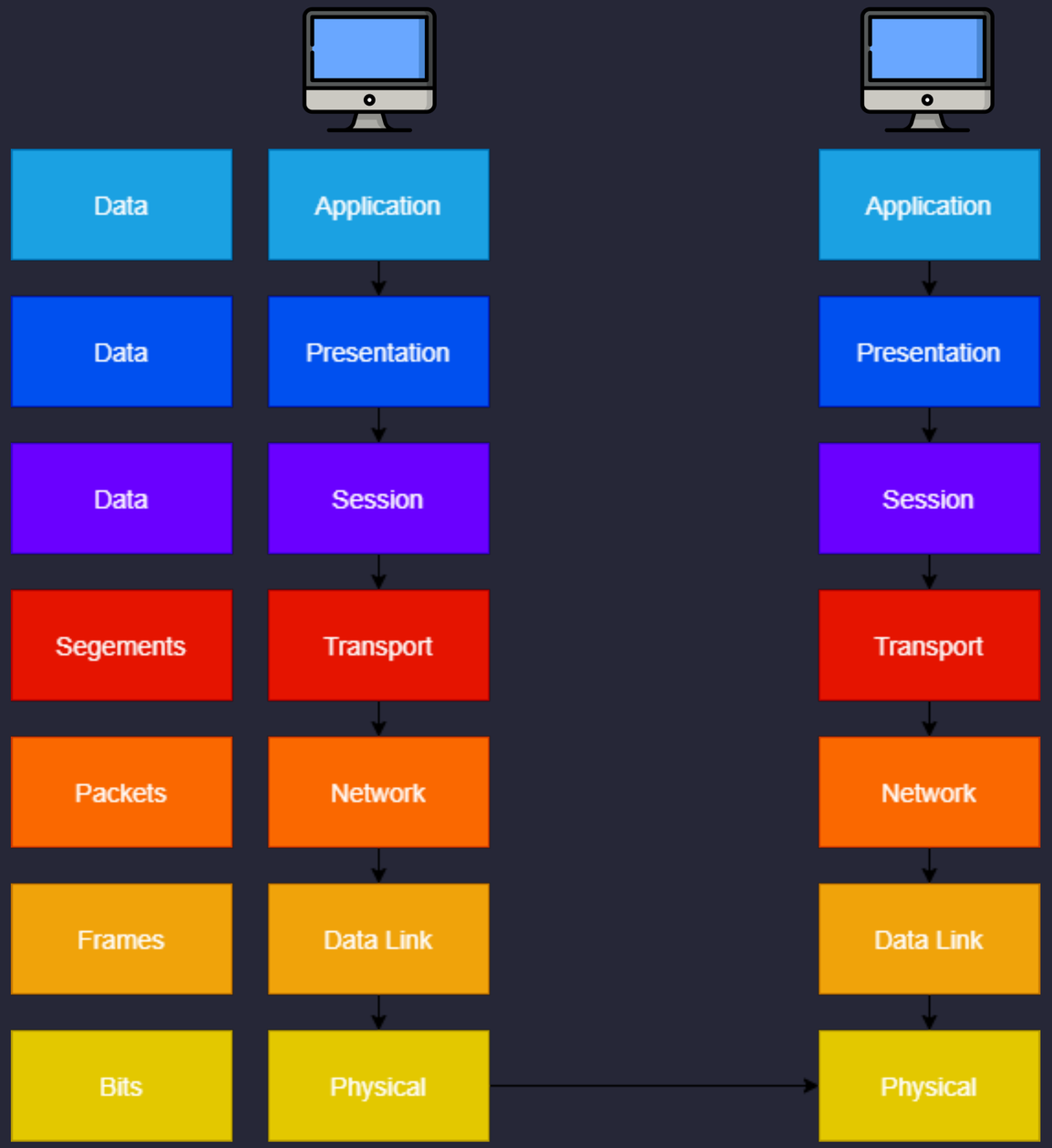
- OSI model used when we are talking about a protcol and we are referencing each layer



OSI Data Name For Each Layer



How Protcol Stack Communicate



How TCP/IP Packet Generated