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?





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





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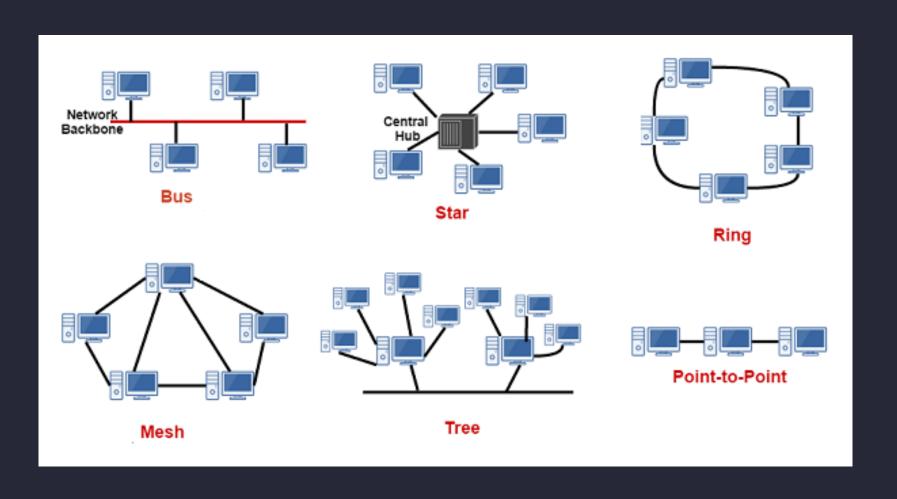


Network Proteols

 It's an agreement or rules of engagement for how computer networks will communicate

Protcols Stack





Proteol Stack

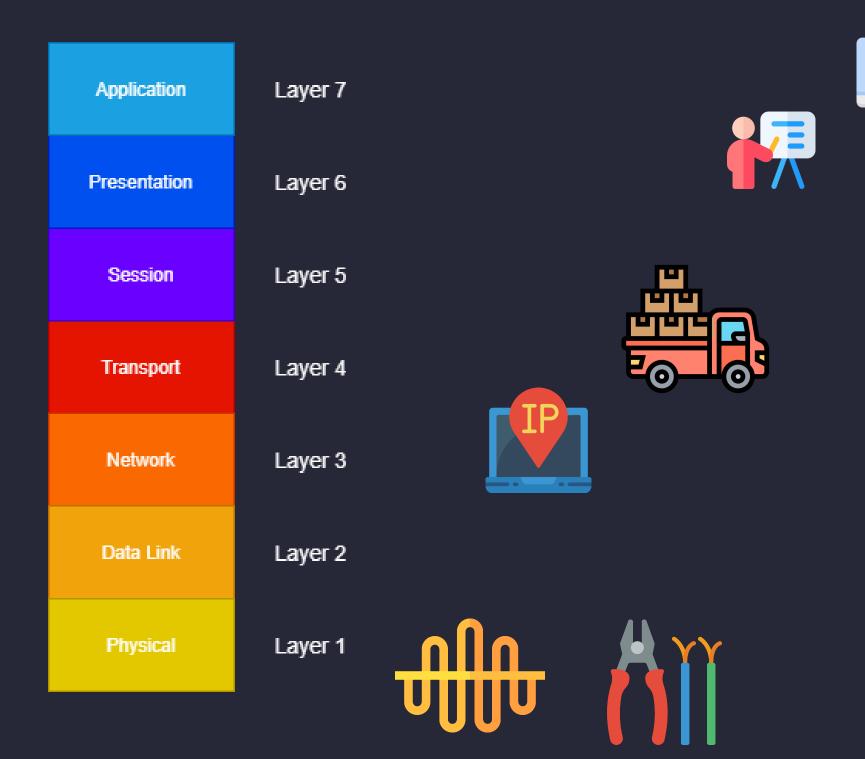
- Why we need protcol?
 - To standardize the format of a communication
 - To specify the order or timing of communication
 - To allow all parties to determine the meaning of a communication





OSI Protcol Stack

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



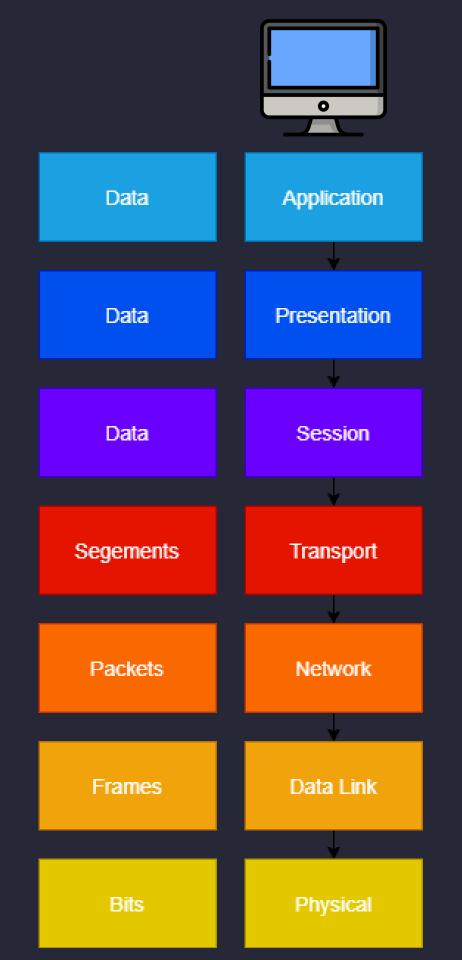
OSI VS TCP/IP

 TCP/IP model used when we are implementing the protool

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

Application	Layer 7	
Presentation	Layer 6	Application
Session	Layer 5	
Transport	Layer 4	Transport (TCP)
Network	Layer 3	Internet (IP)
Data Link	Layer 2	Mohuork
Physical	Layer 1	Network

OSI Data Name For Each Layer



How Proteol Stack Communicate



How TCP/IP Packet Generated

Application

Transport (TCP)

Internet (IP)

Network

HTML Source

TCP Header

HTML Source

Internet header

TCP Header

HTML Source

Ethernet Header

IP header

TCP Header

HTML Source