

An abstract digital illustration of a tunnel or wormhole. The central part of the image shows a bright, glowing circular opening at the end of a perspective-lined tunnel. The walls of the tunnel are composed of a grid of blue and purple rectangular blocks, creating a sense of depth and perspective. The background is a dark, textured blue with a subtle pattern of small, light-colored dots. The overall color palette is dominated by various shades of blue and purple, with a bright white and yellow glow at the center of the tunnel.

# **TUNNELING**

# OSI Model

## Layers

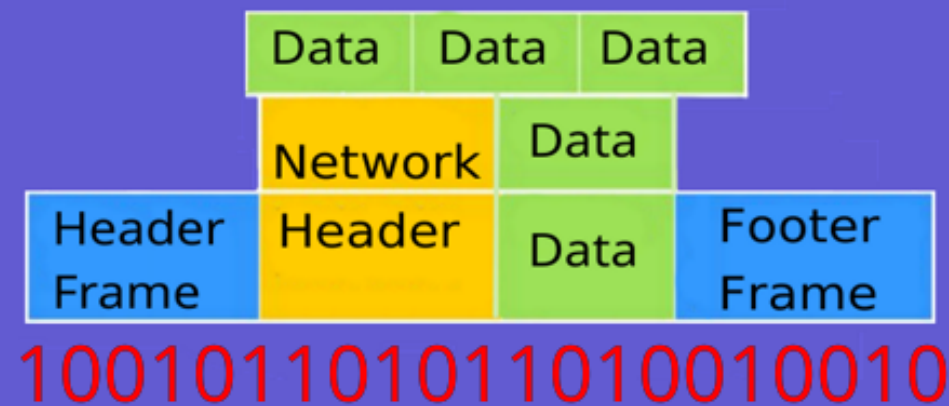
DHCP - FTP - HTTP(S)  
HTML - XML - Unicode  
NetBIOS - SOCKS

TCP - UDP  
ICMP - IPv4 - IPv6  
PPP - Ethernet - Wifi  
Bluetooth - ADSL

7. Application  
6. Presentation  
5. Session

4. Transport  
3. Network  
2. Data Link  
1. Physical

} Data Flux





Layer 2: Data Link

PPTP

L2F

OpenVPN

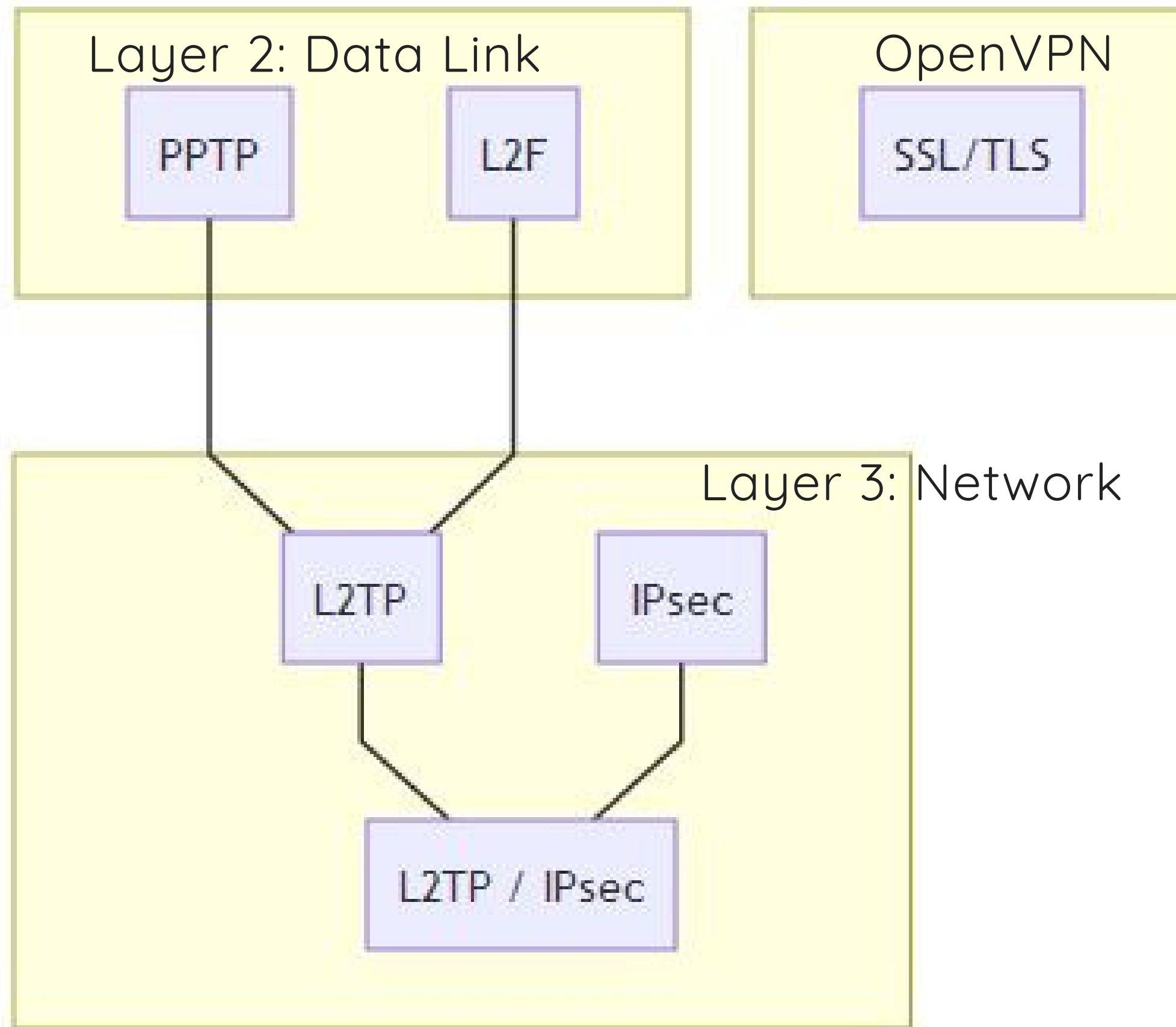
SSL/TLS

Layer 3: Network

L2TP

IPsec

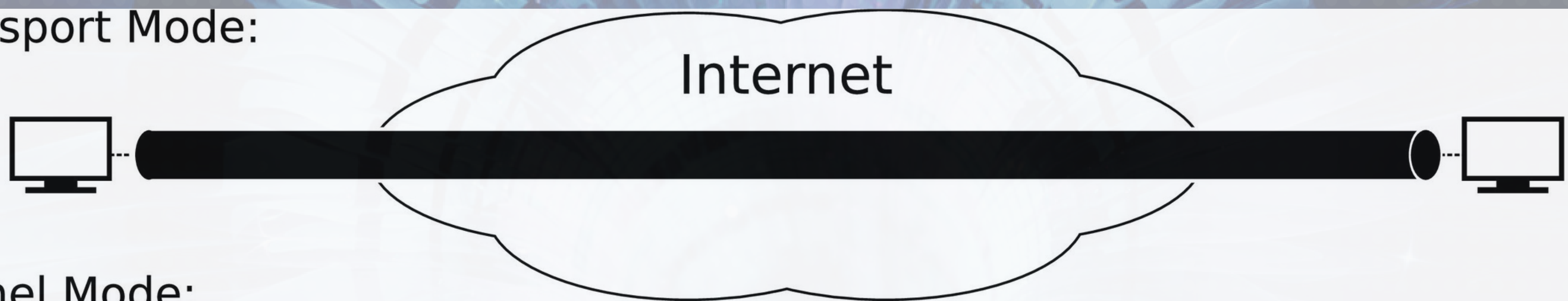
L2TP / IPsec



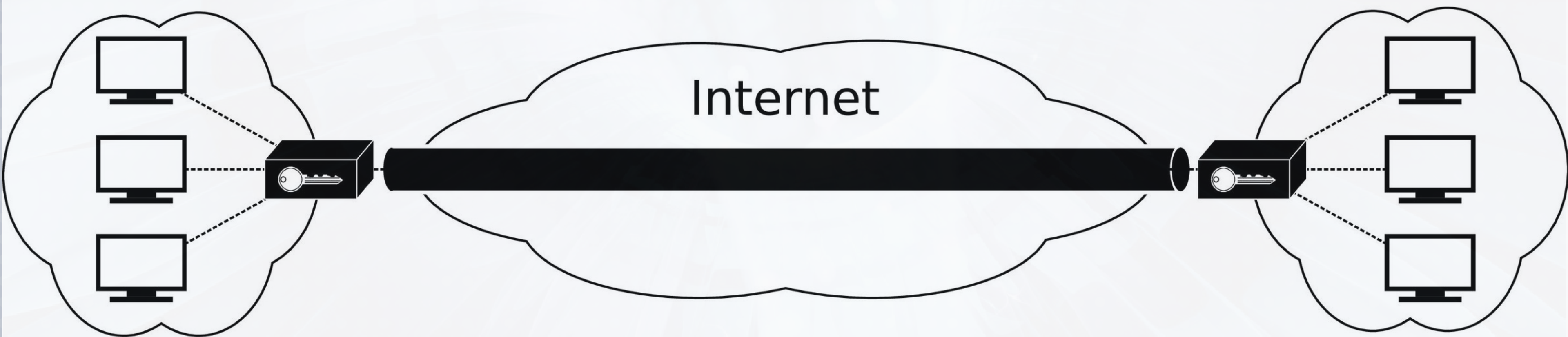
**AH :**  
AUTHENTICATION HEADER

**ESP :**  
ENCAPSULATING SECURITY PAYLOAD

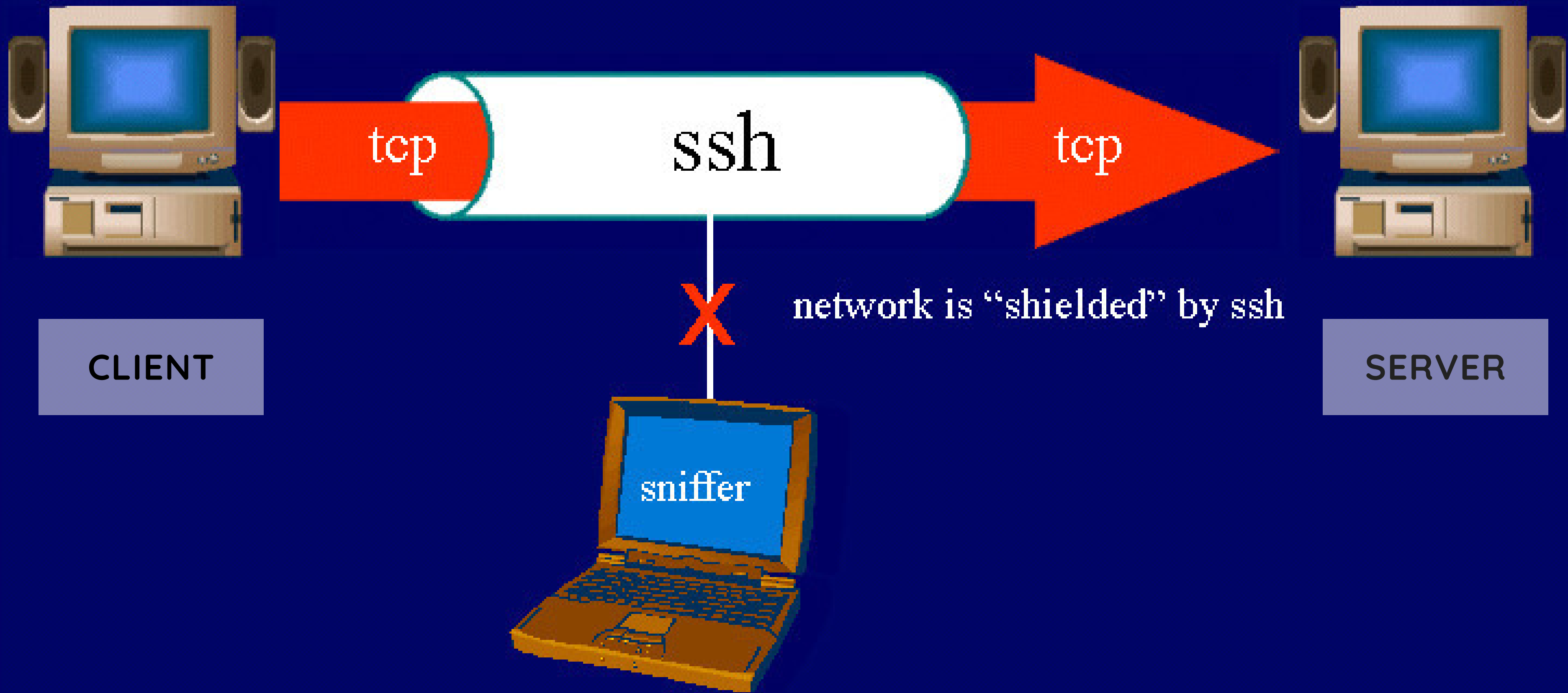
Transport Mode:



Tunnel Mode:



# Secure SHell





# Secure SHell

**SSH Client**



**SSH Server**



1. Client initiates the connection by contacting server

2. Sends server public key

3. Negotiate parameters and open secure channel

4. User login to server host operating system



# Bibliography / References :

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Protocol Evolution Schema: With Mermaid Live Editor

<https://mermaidjs.github.io/mermaid-live-editor/>