VPN : Virtual Private Network

→ VPN extend private N/w accross the public N/w and enable user to send and recieve data accross shared (or) public N/w an if computer devices where directly connected to private N/w

→ It create by establishing a virtual point to point connection through user of dedicated circuit (or) ate with Tunneling protocol over existing N/w

→ **VPN Server :**

→ An switched virtual N/w Network management software participant operation as well as configuration and reporting middleware component known as virtual Network server

Services :

→ Directory service

→ Security service

→ Connection management service

→ Bandwidth service

→ virtual routing service

VPN Security Model
→ Confidentiality
→ Authentication
→ Integrity

Types
→ Remote access
→ Site to site
→ extranet based site to site
   ↓
   Connecting outside the n/w

VPN Protocol:
→ it determine as exactly how data is routed through a connection
→ protocol have different specification based on benifits and decides circums to main
→ Two main approaches
   1. 2 protocol is used { for data
                           for security
   2. 1 protocol is used

→ PPTP ⇒ point to point tunneling protocol
   IPsec/L2TP ⇒ layer 2 tunneling protocol
   open VPN
   SSTP ⇒ secure socket tunneling protocol
   IKEV2 ⇒ internet key exchange version 2

VPN Benifits

→ high hide user IP address and Browsing history

→ Secure connection with encryption

→ Pausing geo blocked content

→ Making more difficult for advatiser to target adds to individual

Challenges

→ Not all devices made supports VPN

→ VPN donot protect against every threads

→ Paid VPN are more trusted and secure

→ A VPN makes low Internet speed

VPN Architecture