CAE-II - Computer Network

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PART - B

⑥ → VPN is a type of private network that uses public telecommunication, such as the internet, instead of leased lines to communication

→ It became popular as more employees worked in remote locations.

⇒ Extends a private network across a public network

→ Enables users to send and receive data across shared to / public networks as if their computing devices were directly connected to the private network.

→ The is How a VPN works / function?

① Two Connections: - One is made to the internet and the second is made to the VPN.

② Datagrams: - Contains data, destination and source infoer information.

③ Firewalls: - VPNs allow authorized uses to pass

though the firewalls

(iv) Protocols — Protocols create the VPN tunnels

→ The 4 critical functions are

① Authentication :- validates that the Data was sent
from the sender

② Access Control :- Limiting unauthorized users from

accessing the network.

③ Confidentiality :- Preventing the data to be read/
copied.

④ Data Integrity :- Ensuring that the data has not

been altered altered.

→ Encryption is a method to of "scrambling" data
before transmitting it onto the internet.

→ Tunneling is a virtual point to point connection
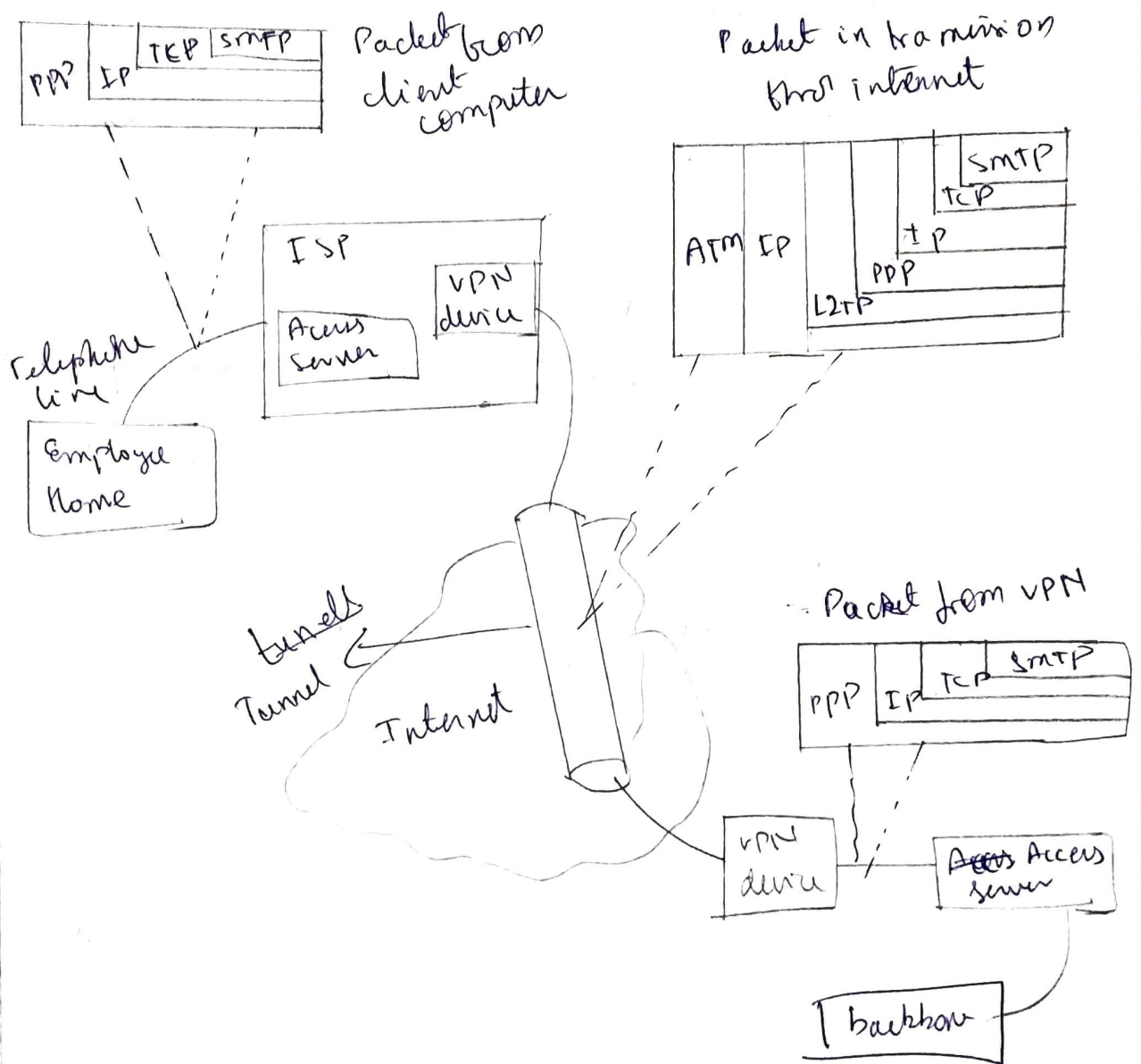made through a public network

VPN charaeterstics

① Cheaper

② Easier to establish

③ Less reliable than WAN

④ Less ~~secure~~ secure than isolated LANs/ WANs.
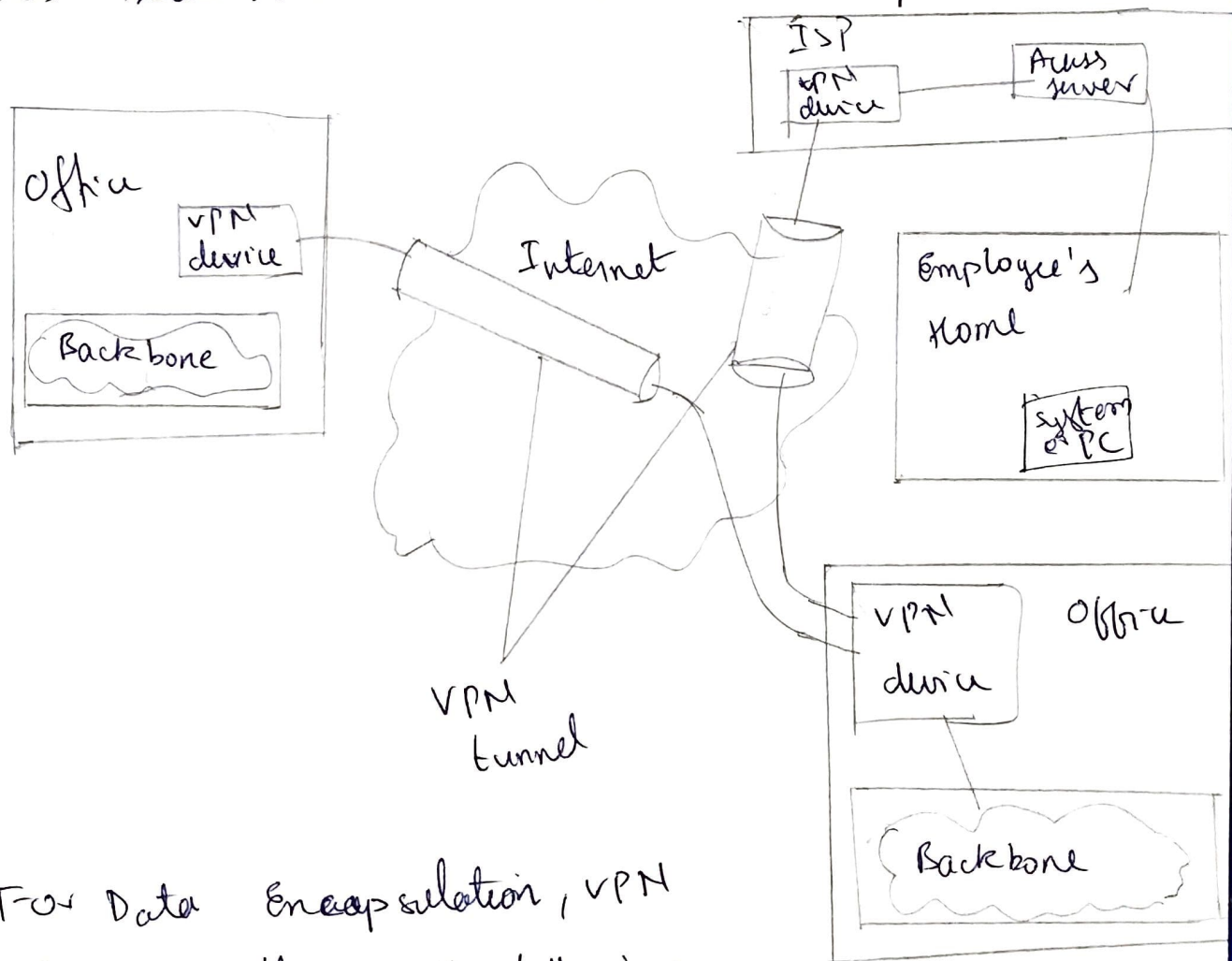
→ For Data Encapsulation, VPN relies on either of the following technologies like GRE, IPSec, PPTP and L2TP

→ In which, IPSec and PPTP are more popular.

PPP | IP | TCP | SMTP   Packet from client computer

Packet in transmission thro' internet

ATM | IP | | | | | SMTP
TCP
IP
PDP
L2TP

ISP

Access Server | VPN device

telephone line

Employe Home

tunnel
Tunnel

Internet

Packet from VPN

PPP | IP | TCP | SMTP

VPN device

Access Server

backbone

(8) The 3 basic phases:-

① Preparation phase :-

→ Describes how to define goals goals in measurable terms.

→ Core set of popular communication tools can be considered using to facilitate the network design process

→ multi media data network and the tools that represent them are complex

→ Simple examples are often insufficient to impart own understanding of the proc process.

→ → Provides the structure and approach that are missing from the user manuals

tasks includes.

goals: goals: Must be stated in measureable terms

Data collection :- topology & traffic of the existing network in captured

→ Principal of goals:

① To develop a validate baseline

⑪ To model the introduction of an asynchronous transfer model (ATM) backbone

⑪ Baseline Phase

→ Information concerning to data capture and validation of such data are presented

guidelines are :-

① Tool use and data collection → validation

⑰ Regency to validate the data network

→ Integrating and validating subnets

(III) Delta Phase

→ the Changes are applied to the baseline network, after which the results are analyzed and summarized.

→ The alterations should be introduced with the same care that the baseline was cont constructed.

PART-A

① End to End Encryption is important to re-create a secure secure secure line of communication that blocks third party user users from intercepting data.

② In case of Remote :- Individual users are connected to the private network & it allows the technique to access the service

Site to Site VPN :- In this case, IPSec tunnell & tunneling method is used. to create an Encrypted tunnel.

③ ① PPTP: Point-to-Point tunneling Protocol.

② L2TP= Layer 2 Tunneling Protocol

③ IPSec = Internet Protocol Security

④ SOCKS = Socket Secure ~~Secure~~ Secure

④ A bridge is a network device that connects multiple LANs together to form a layer LAN. It connects different components so that they appear as part of a ~~si~~ single network.

⑤ The following are the tools

① Simple View

② NEWT

③ Ether Vision

④ Foundation Manager