# Working with VPNs:

## Objective:

 Understand the role of VPNs in protecting privacy and secure communication.

### **Environment & Prerequisites:**

Free VPN client (ProtonVPN free tier)

#### Observations:

- 1.VPN Service Chosen
- ProtonVPN (Free Tier)
- 2. Installation
- Signed up at protonvpn.com
- Downloaded and installed the ProtonVPN client for Ubuntu.
- 3. Connection
- Connected to a VPN server located in Japan .
- The connection was successful and stable.
- 4. IP Address Verification
- Before VPN: IP address was 103.169.xxx.xxx
- After VPN: IP address changed to 138.199.21.212(VPN-assigned IP)

Verified using whatismyipaddress.com

## • 5. Traffic Encryption Check

- Browsed websites like <a href="https://example.com">https://example.com</a> and confirmed HTTPS encryption.
- No DNS leaks detected.

## • 6. Speed Comparison

- With VPN: Slightly slower browsing speed due to encryption overhead.
- Without VPN: Faster, but less secure.

## **Benefits**

- Masks IP address and location.
- Encrypts internet traffic for secure browsing.
- Protects against ISP tracking and surveillance.
- Useful on public Wi-Fi networks.

### Limitations

- May reduce internet speed.
- Free VPNs may have limited server options and bandwidth.
- Cannot guarantee complete anonymity.
- Some websites may block VPN traffic.

