

Task 8: Set Up a VPN and Explore Its Role in Online Privacy

Introduction

In this task, I explored how a "VPN (Virtual Private Network)" helps protect online privacy and secure internet connections. While I had heard of VPNs before, this was the first time I actually installed and tested one myself. It gave me hands-on experience with how VPNs work — from "IP masking" to "traffic encryption"— and made me realize just how valuable they are in everyday browsing.

Step-by-Step Process

Selected a VPN

I chose ****ProtonVPN**** (free plan) because it's trusted, has a no-logs policy, and offers solid encryption protocols.

Installed and Connected

I downloaded the ProtonVPN client on my laptop, logged in, and connected to a

nearby server (Netherlands). The connection was quick, and I immediately noticed the VPN icon turning green.

Verified IP Change

To confirm the VPN was working, I visited whatismyipaddress.com before and after connecting. My IP address changed from my local ISP to one in the Netherlands — proof that my internet traffic was being rerouted securely.

Browsed Securely

I accessed a few websites while connected. Everything loaded smoothly. I later disconnected and compared my IP and speed again. There was a small drop in speed, but nothing noticeable during regular use.

Researched VPN Technology

I read about "AES-256 encryption", "tunneling protocols" like OpenVPN and WireGuard, and how VPNs prevent data interception on public Wi-Fi networks.

What I Learned

- A "VPN encrypts" your internet traffic and hides your real IP, making it hard to track your location or behavior.**
- Encryption protocols(like OpenVPN and WireGuard) are key to securing the tunnel between user and VPN server.**
- VPNs protect privacy, especially on public networks, but don't make users completely anonymous.**

Benefits of VPNs

- Hides IP address and browsing activity**
- Protects data over public Wi-Fi**
- Helps bypass geographic restrictions**
- Prevents ISP and third-party tracking**

Final Reflection

This task helped me move beyond the buzzword and understand VPNs as "essential security tools". I now understand how they encrypt traffic, hide identity, and defend users against data leaks — especially when using untrusted networks. It made me

more conscious of online privacy and how I can take simple steps to better protect it.