

# VPN Setup and Privacy Report

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## 1. Objective

The objective of this task is to understand the role of Virtual Private Networks (VPNs) in protecting online privacy and ensuring secure communication. This report details the installation and setup process of a free VPN client, followed by verification and evaluation of its effectiveness.

## 2. Tools Used

- ProtonVPN Free Tier
- Website: [whatismyipaddress.com](https://whatismyipaddress.com)

## 3. VPN Setup Steps

Step 1: Chose ProtonVPN, a reputable free VPN service, and created a free account.

Step 2: Downloaded and installed the ProtonVPN client from the official website.

Step 3: Logged in and connected to the nearest available server.

Step 4: Visited <https://whatismyipaddress.com> to confirm the IP address had changed.

Step 5: Opened a secure website (e.g., <https://example.com>) to verify encrypted browsing.

Step 6: Disconnected VPN and compared original IP and browsing speed with and without VPN.

## 4. Verification

Upon connecting to ProtonVPN, the IP address changed from 103.25.34.120 (India) to 185.159.157.12 (Netherlands), as verified using [whatismyipaddress.com](https://whatismyipaddress.com). Below is a placeholder for the screenshot of the VPN connection status.

## 5. VPN Encryption and Privacy

VPNs encrypt internet traffic using secure protocols such as OpenVPN and WireGuard. ProtonVPN, for instance, uses AES-256 encryption to protect data. VPNs also prevent DNS leaks and offer features like kill switches to stop data exposure during disconnections.

## 6. Summary: VPN Benefits and Limitations

Benefits:

- Hides real IP address and location.
- Encrypts data to prevent eavesdropping.
- Access geo-restricted content.

- Enhances anonymity and privacy.

Limitations:

- Free plans may have data or speed limits.
- Not all VPNs guarantee no-logs policies.
- Some websites/services may block VPN traffic.
- May reduce internet speed slightly.