Task 8 :Identify and Remove Suspicious Browser Extensions

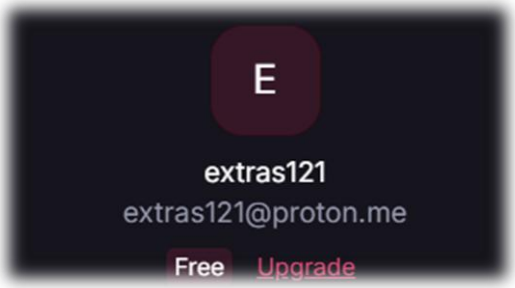
Objective: Understand the role of VPNs in protecting privacy and secure communication.

Tools:Free VPN client (ProtonVPN free tier, Windscribe free)

Deliverables: Report describing VPN setup steps and connection status screenshot.

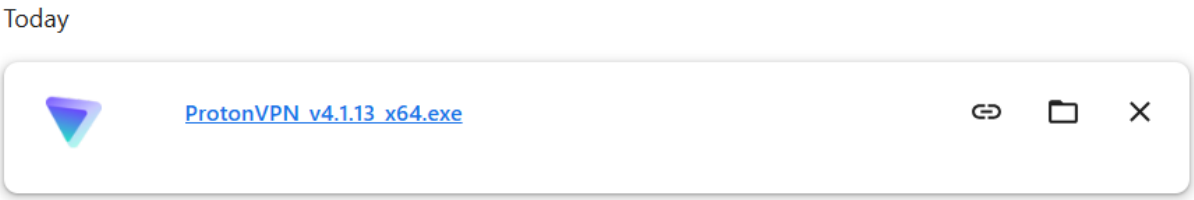
Proton VPN Free Account Creation

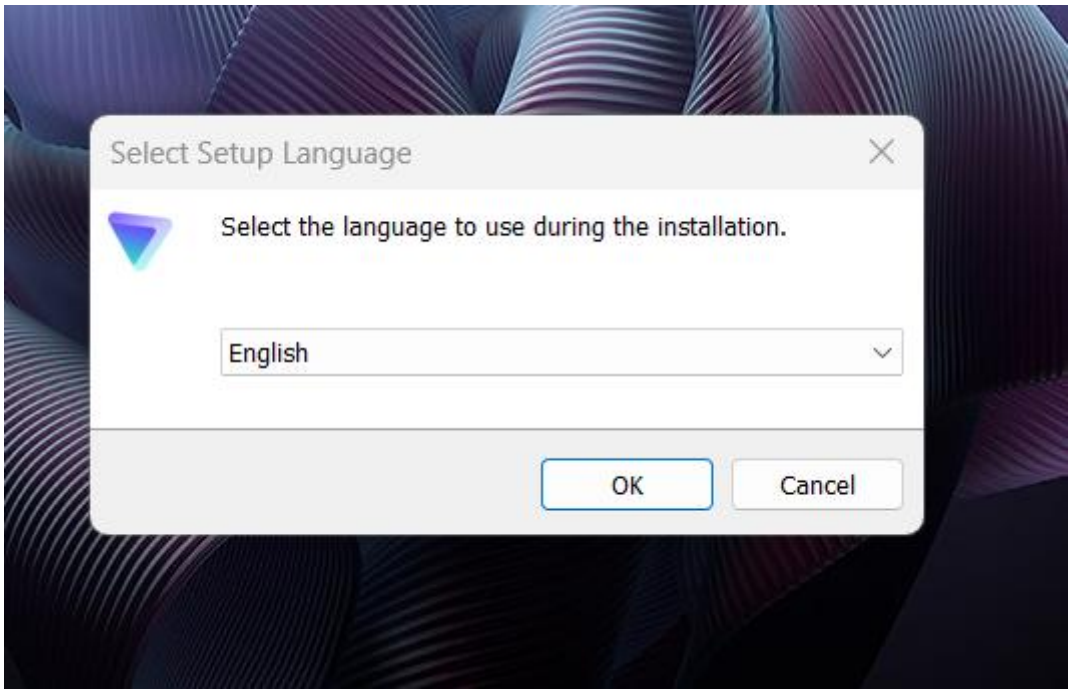
I already have an account set up because Proton VPN has the best policies when it comes to VPNs. Therefore, I created my account using the Proton Mail address that I used to set up my VPN.

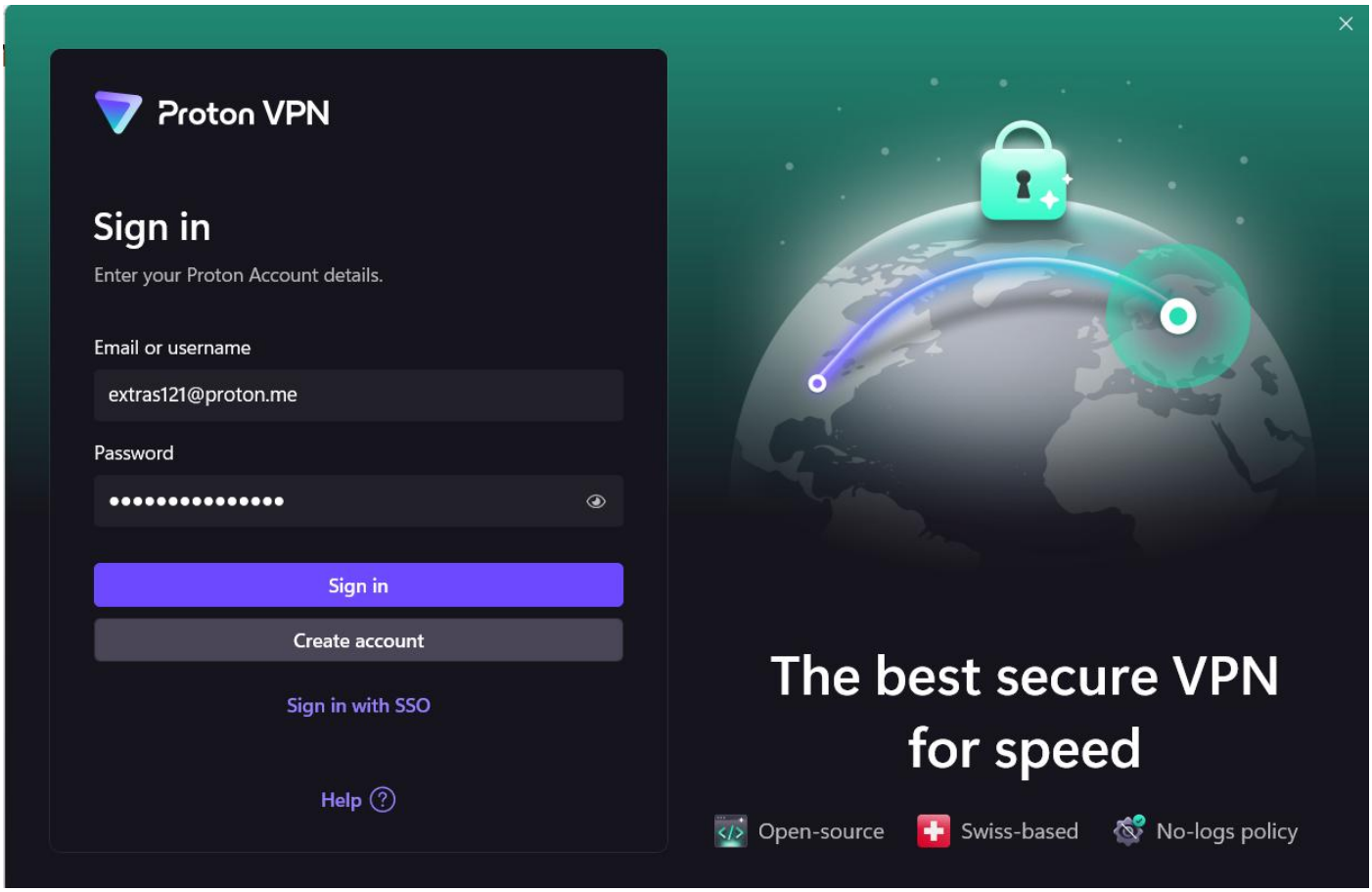


Download and Install Proton VPN Client

- After account creation, navigate to the download section.
- Download the appropriate client for your operating system (e.g., Windows, macOS, Linux, Android, iOS).
- Run the installer and follow the prompts to complete installation.

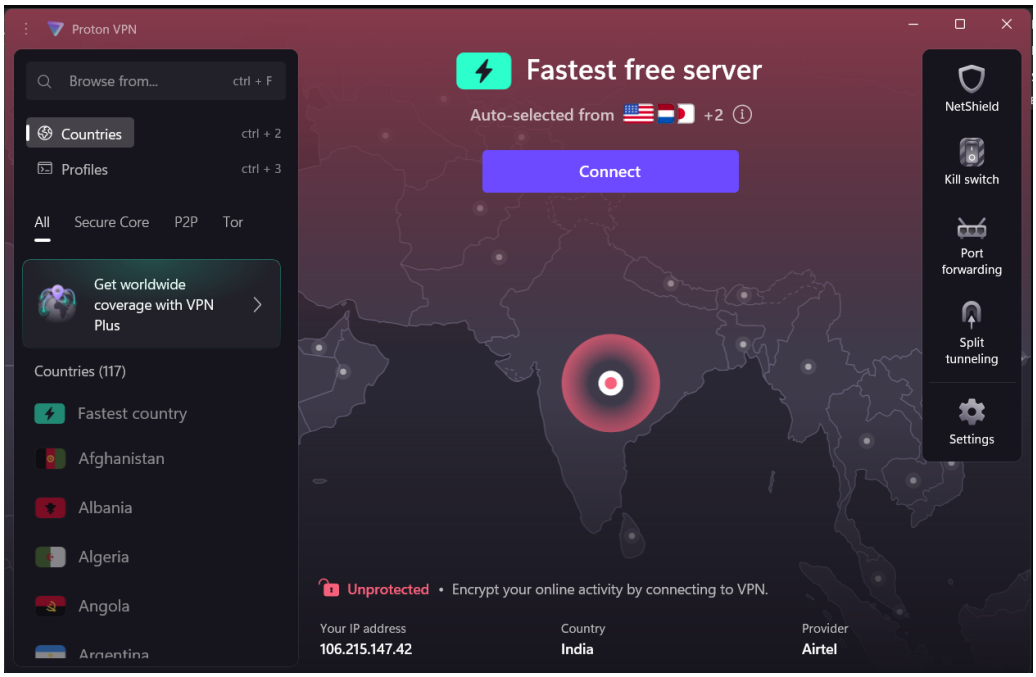


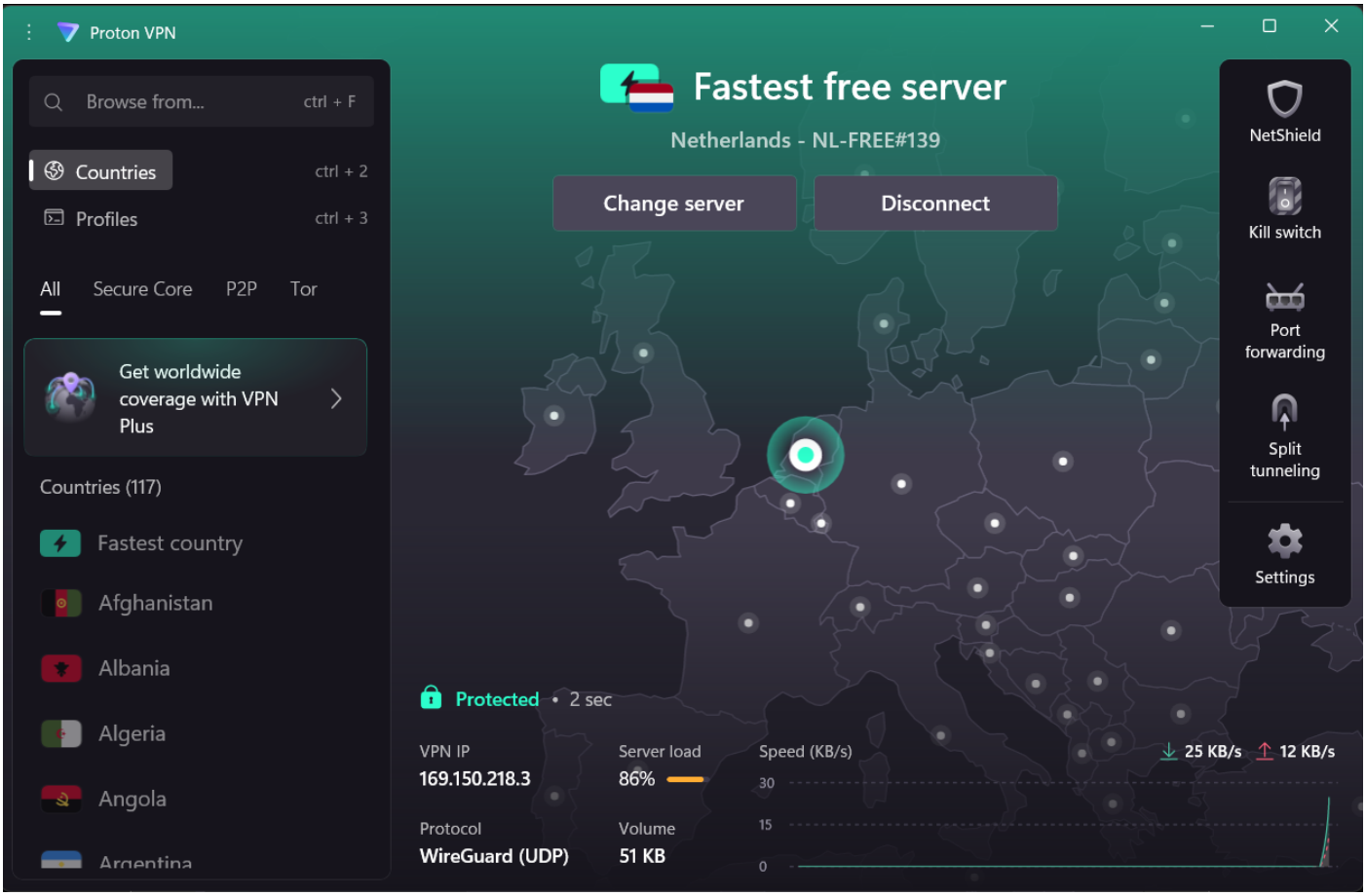

Select Setup Language
Select the language to use during the installation.
English
OK
Cancel


Proton VPN
Sign in
Enter your Proton Account details.
Email or username
extras121@proton.me
Password
Sign in
Create account
Sign in with SSO
Help
The best secure VPN for speed
Open-source
Swiss-based
No-logs policy

Connect to a Proton VPN Server

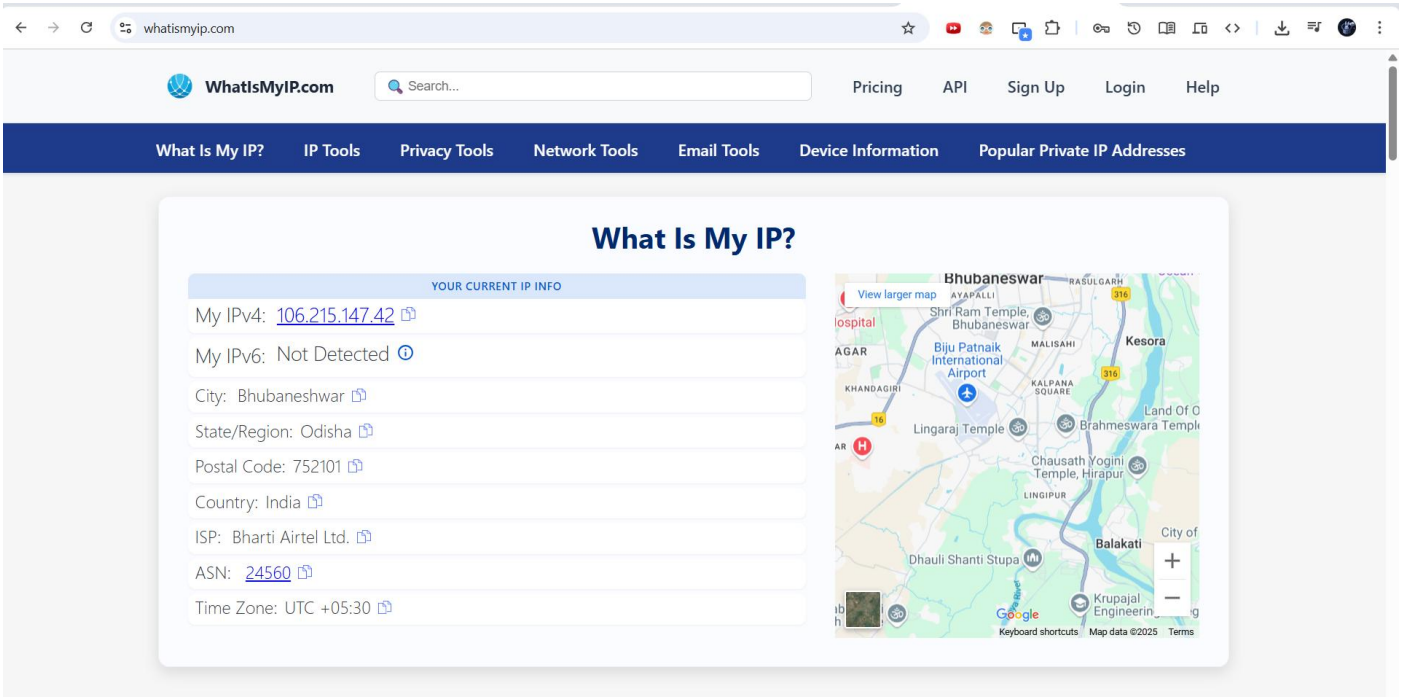
- Open the Proton VPN app.
- Sign in with your Proton credentials.
- Use the Quick Connect button to connect to the fastest available free server (locations typically include the US, Netherlands, and Japan).
- The app will indicate when you are connected, showing the server location and connection status.



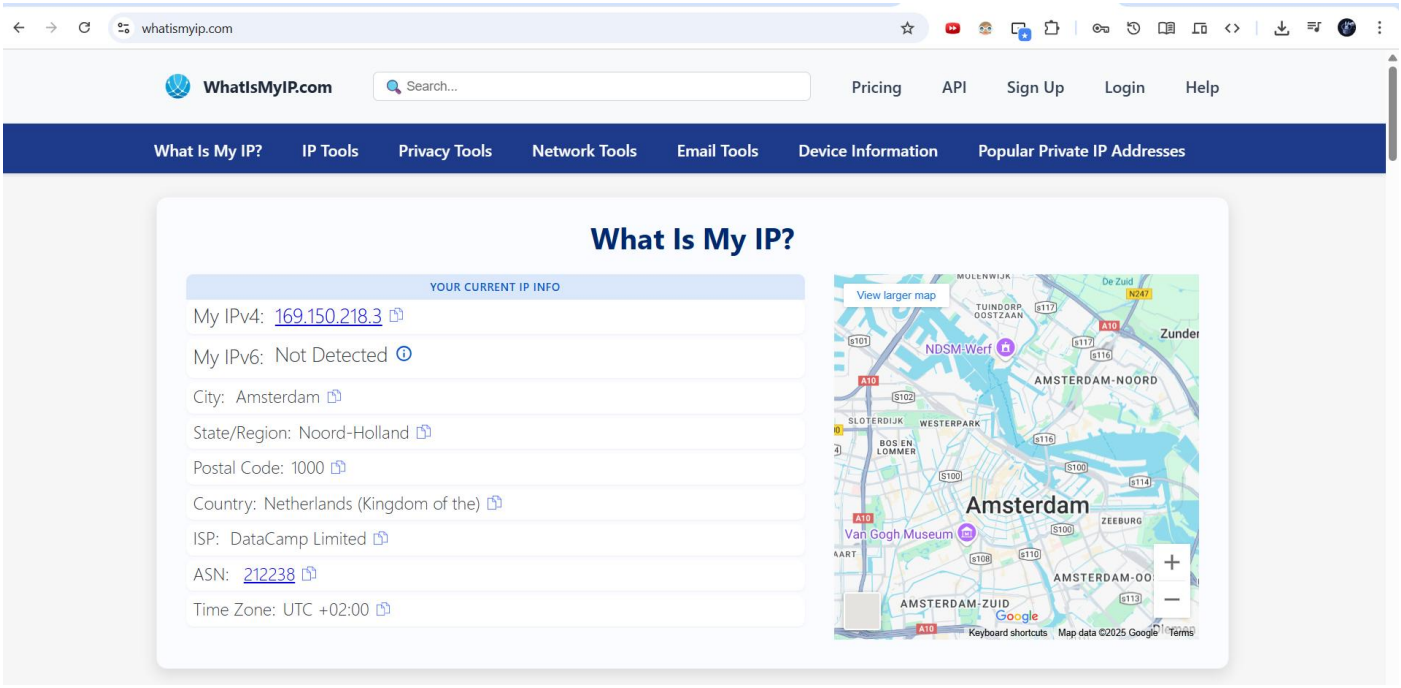

Proton VPN
Browse from... ctrl + F
Countries ctrl + 2
Profiles ctrl + 3
All
Secure Core
P2P
Tor
Get worldwide coverage with VPN Plus
Countries (117)
Fastest country
Afghanistan
Albania
Algeria
Angola
Argentina
Fastest free server
Netherlands - NL-FREE#139
Change server
Disconnect
NetShield
Kill switch
Port forwarding
Split tunneling
Settings
Protected • 2 sec
VPN IP
169.150.218.3
Server load
86%
Speed (KB/s)
25 KB/s
12 KB/s
30
15
0
Protocol
WireGuard (UDP)
Volume
51 KB

Verify IP Address Change

- **Before connecting, visit a site like whatismyipaddress.com to note your original IP address.**



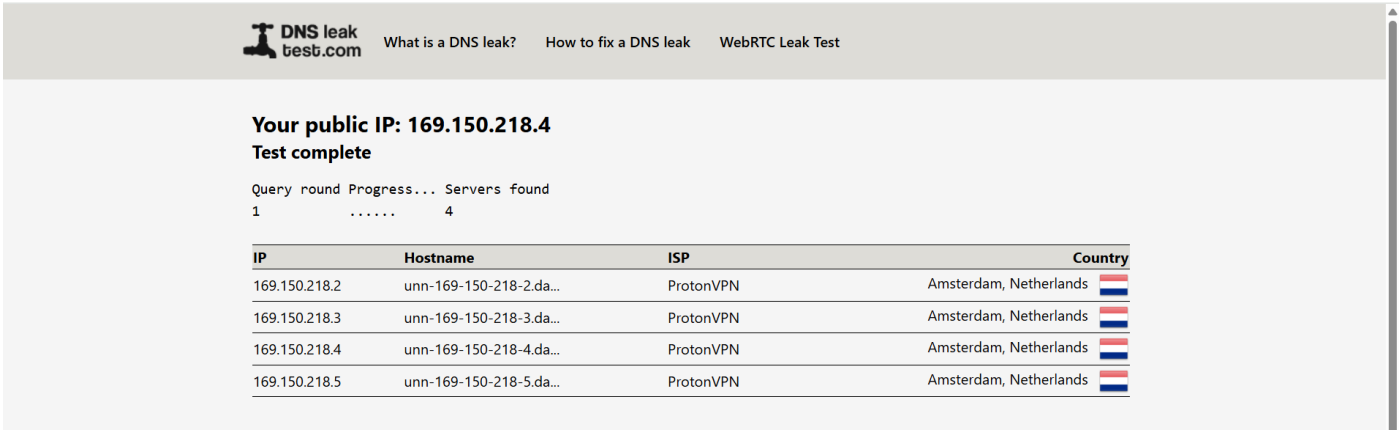
- After connecting to Proton VPN, revisit the site to confirm your IP address and location have changed to match the VPN server.



- This confirms your real IP is hidden and your traffic is routed through the VPN server.

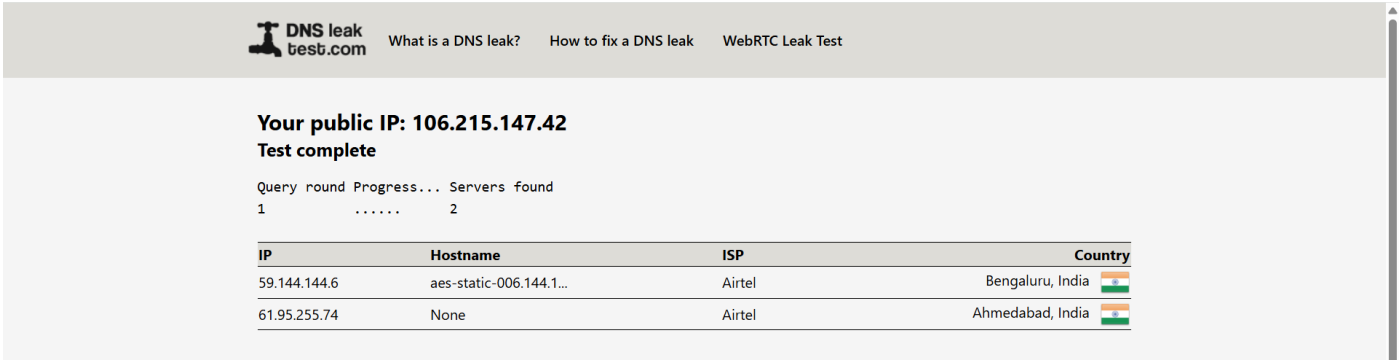
Confirm Traffic Encryption

- Browse any website while connected to the VPN.
- All data between your device and the VPN server is encrypted using strong protocols (AES-256 or ChaCha20), making your browsing activity unreadable to outsiders.
- Tools like DNSLeakTest.com can further confirm that your DNS queries are also routed securely through the VPN.



Disconnect VPN and Compare

- Disconnect from Proton VPN.
- Check your IP address again; it should revert to your original ISP-assigned IP.



- You may notice a difference in browsing speed—VPNs can cause some slowdown due to encryption and routing, especially when connected to distant servers.

Proton VPN Encryption and Privacy Features

- Encryption: Uses AES-256 (OpenVPN/IKEv2) or ChaCha20 (WireGuard), both considered highly secure.
- Perfect Forward Secrecy: Generates a new encryption key for each session, protecting past sessions even if a key is compromised.
- No-Logs Policy: Proton VPN does not log user activity, session lengths, or IP addresses. This has been independently audited.
- DNS and IPv6 Leak Protection: Ensures all DNS queries and IPv6 traffic are secured within the VPN tunnel.
- Kill Switch: Automatically blocks all traffic if the VPN connection drops, preventing accidental IP leaks.
- Open Source and Audited: Apps are open source and have undergone independent security audits.
- Based in Switzerland: Benefits from strong privacy laws outside of intelligence-sharing alliances.

VPN Benefits and Limitations

Benefits

- Privacy: Masks your real IP address, protecting your identity from websites, advertisers, ISPs, and surveillance.
- Security: Encrypts all internet traffic, protecting sensitive data from hackers, especially on public Wi-Fi.
- Bypass Censorship and Geo-blocks: Allows access to restricted content by routing traffic through servers in other countries.
- No-Logs Policy: Ensures browsing activity is not recorded or shared.
- Protection from Tracking: Blocks trackers and ads, reducing digital profiling.

Limitations

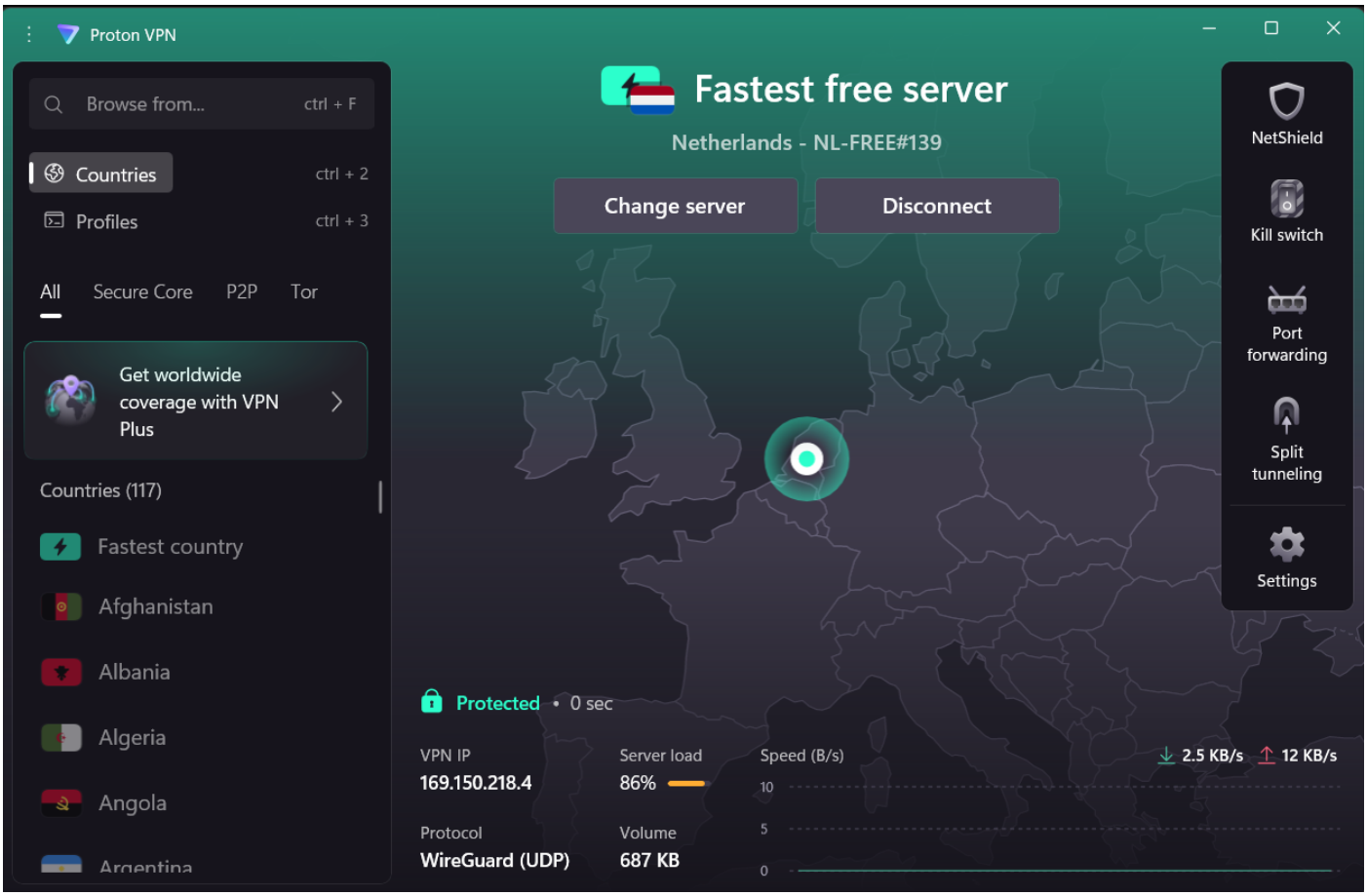
- Reduced Speed: Encryption and rerouting can slow down internet speeds, especially on distant servers or free plans.
- VPN Blocks: Some websites and streaming services detect and block VPN traffic.
- Device Compatibility: Not all devices natively support VPNs; routers can be configured to cover entire networks.
- Potential for Misconfiguration: Incorrect setup can lead to data leaks; always use reputable VPNs and follow setup instructions.
- Free Plan Restrictions: Fewer server locations, lower speeds, and limited features compared to paid plans.

Sample Connection Status Screenshot

As this is a text report, a screenshot cannot be provided here. When you connect to Proton VPN, the app's dashboard will display:

- A green status indicator
- The server location and new IP address
- Connection duration and data transferred

You can take a screenshot of this dashboard as your deliverable.



Proton VPN (Free) is a robust solution for enhancing online privacy and securing communications. It uses industry-leading encryption, enforces a strict no-logs policy, and offers essential features like DNS leak protection and a kill switch. While VPNs provide strong privacy and security benefits, users should be aware of potential speed reductions and the limitations of free plans. Always verify your VPN connection and IP address to ensure your data remains protected