Day - 4 of CEH

Network Anonymity & Privacy – Tools and Concepts Documentation

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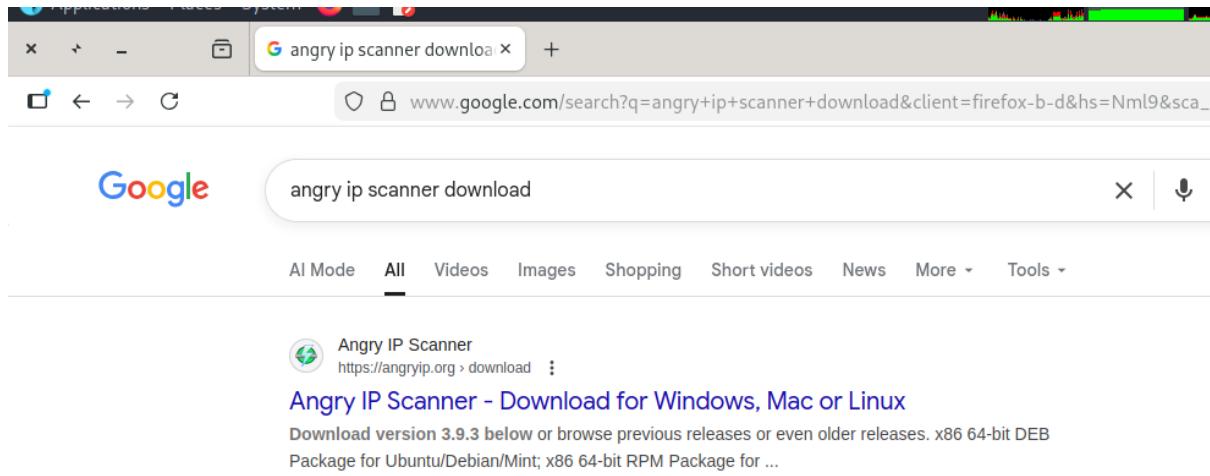
1. Installing Tools Without git clone (Using .deb Package)

In Linux, tools can be installed without using GitHub or git clone by directly installing package files.

Example: Angry IP Scanner Installation (Linux)

Steps

1. Download Angry IP Scanner from the official website using the .deb package.
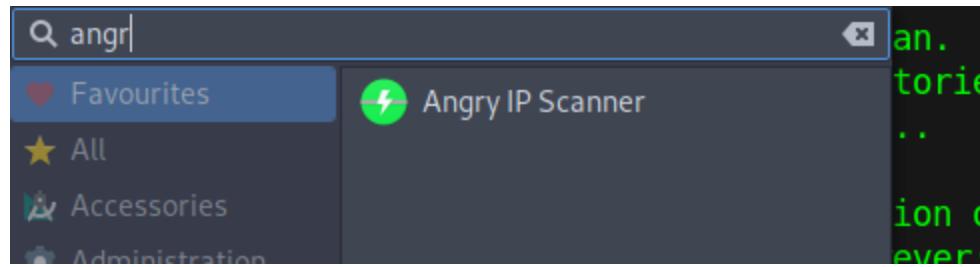
2. Go to the Downloads directory.

3. List the downloaded files.

4. Identify the .deb package file.

5. Install the package using dpkg with the install option.

   - dpkg -i refers to install.

6. Verify installation by searching the tool in the system search bar.

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2. Spoofing

What is Spoofing?

Spoofing is a technique used to falsify identity information in order to impersonate another system or device on a network.


IP Spoofing
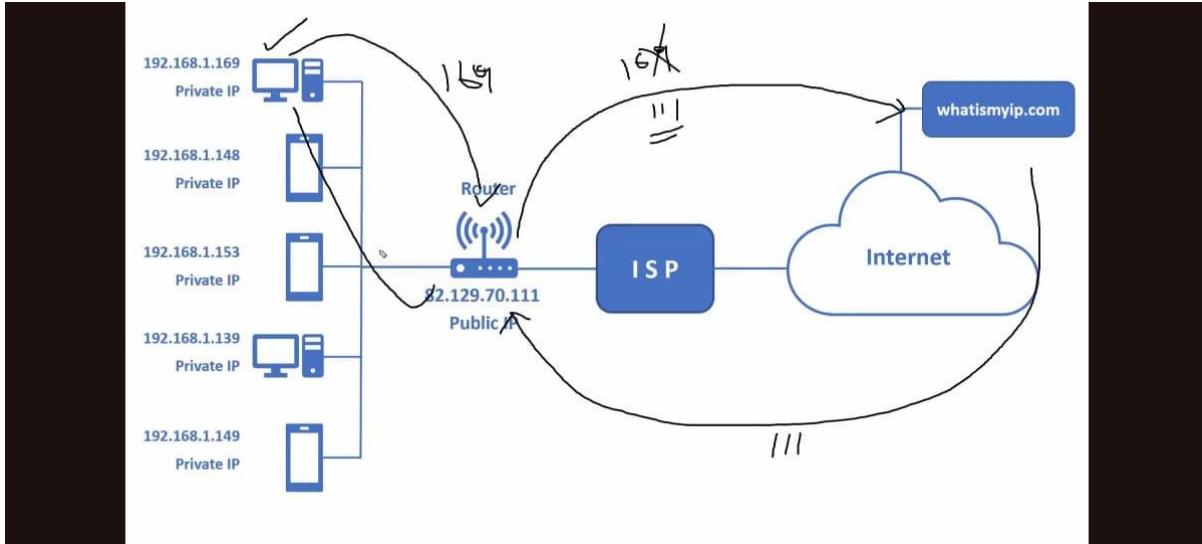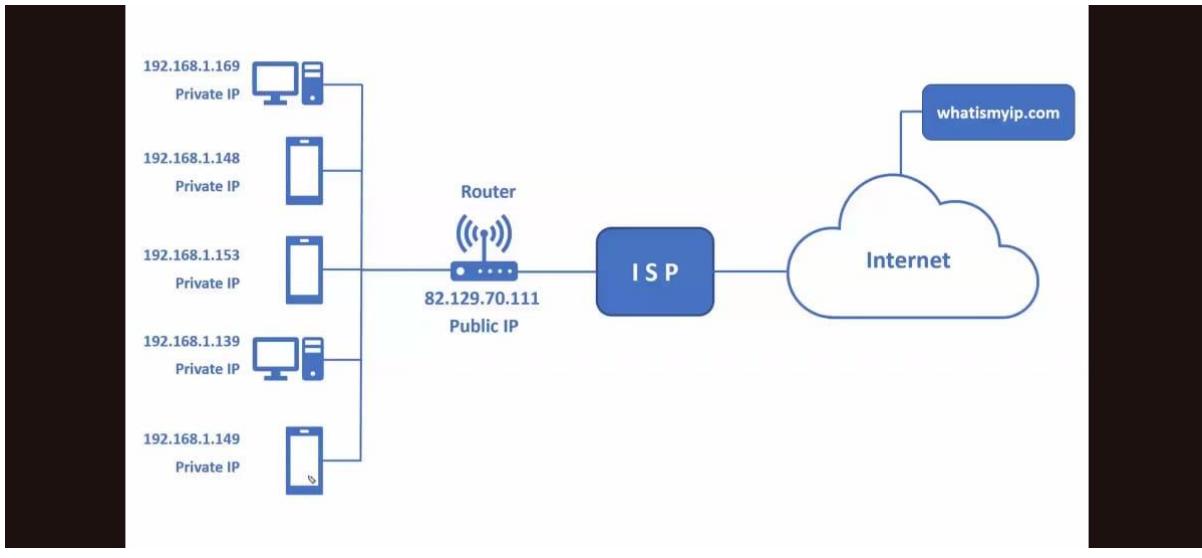
- The attacker modifies the source IP address of network packets.
- Used to hide identity or bypass IP-based restrictions.
- Common in DDoS attacks and session hijacking.

MAC Spoofing

- The attacker changes the MAC address of a network interface.

- Used to bypass MAC filtering and impersonate trusted devices.

Important Note

Whenever an attack is performed on a server, the public IP address is logged. Using this public IP address, attackers can be tracked.



To check the public IP address:
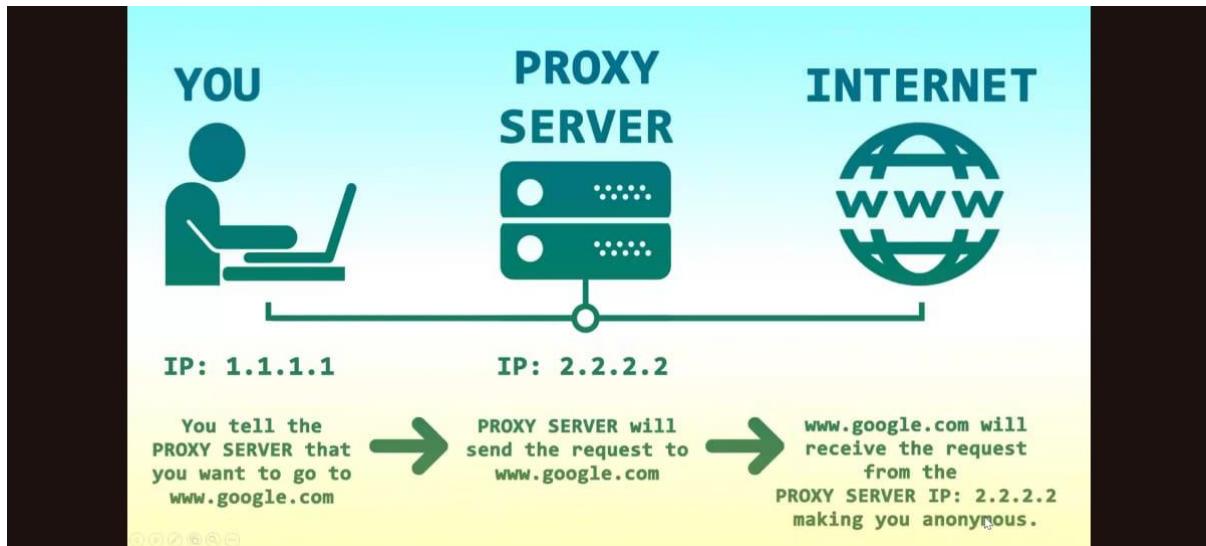
- Visit whatismyipaddress

- The result will be the same in Parrot OS and Windows.

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3. Proxy

What is a Proxy?

A proxy server acts as an intermediary between a user and the internet, masking the real IP address.

**Types of Proxies**

1. Paid Proxy
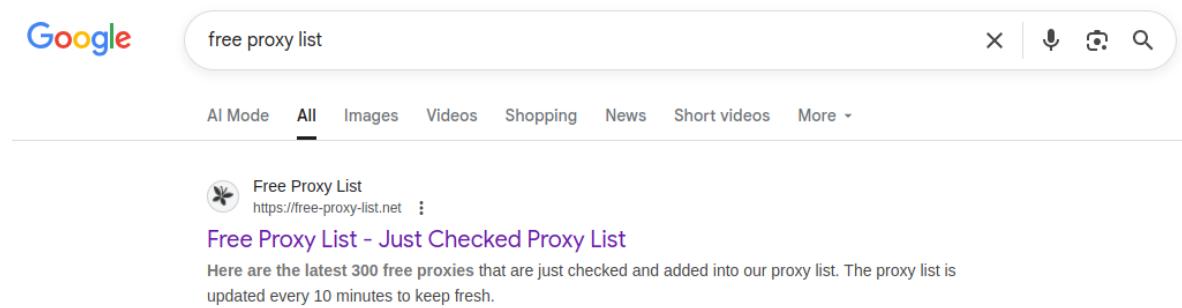
   - Usually does not store logs

   - Faster and more reliable

2. Free Proxy
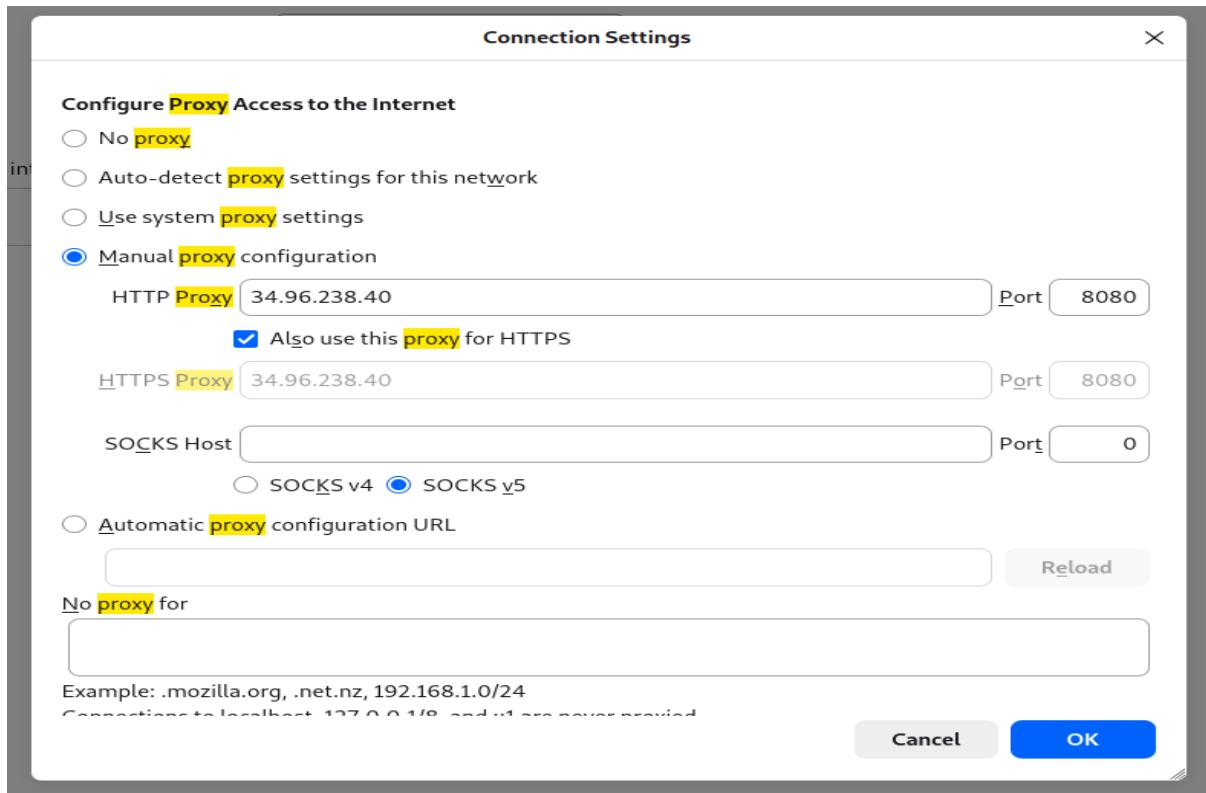
- May or may not store logs

- Slower and less secure

Configuring Proxy in Firefox (Parrot OS)
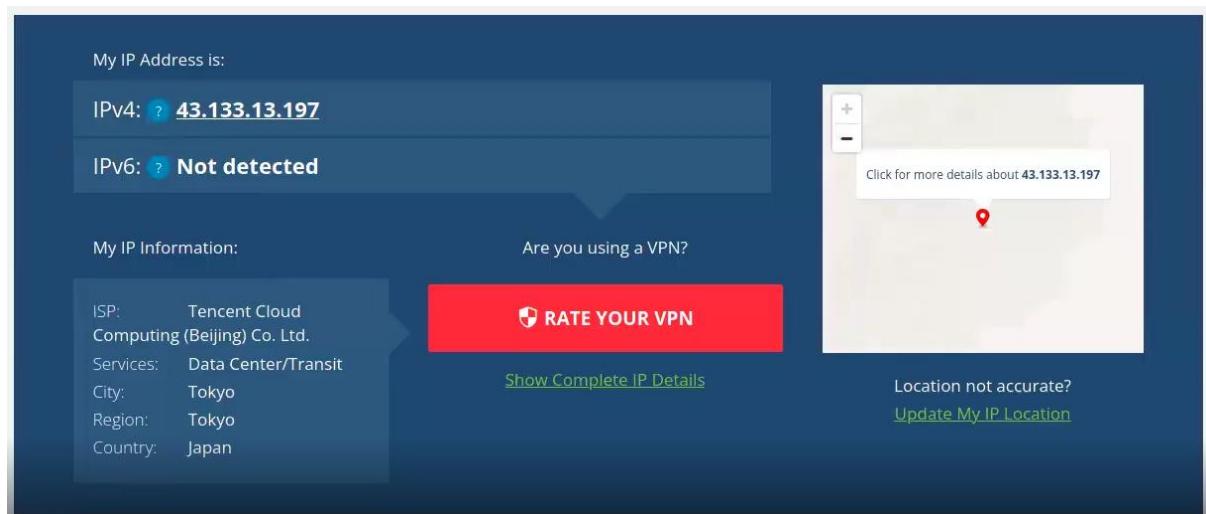
1. Open Firefox.

2. Search for Free Proxy List.

3. Copy the proxy IP address and port number.

4. Open Firefox Settings.

5. Search for Proxy.

6. Open Network Settings.

7. Select Manual Proxy Configuration.

8. Paste the IP address in HTTP Proxy and the port number.
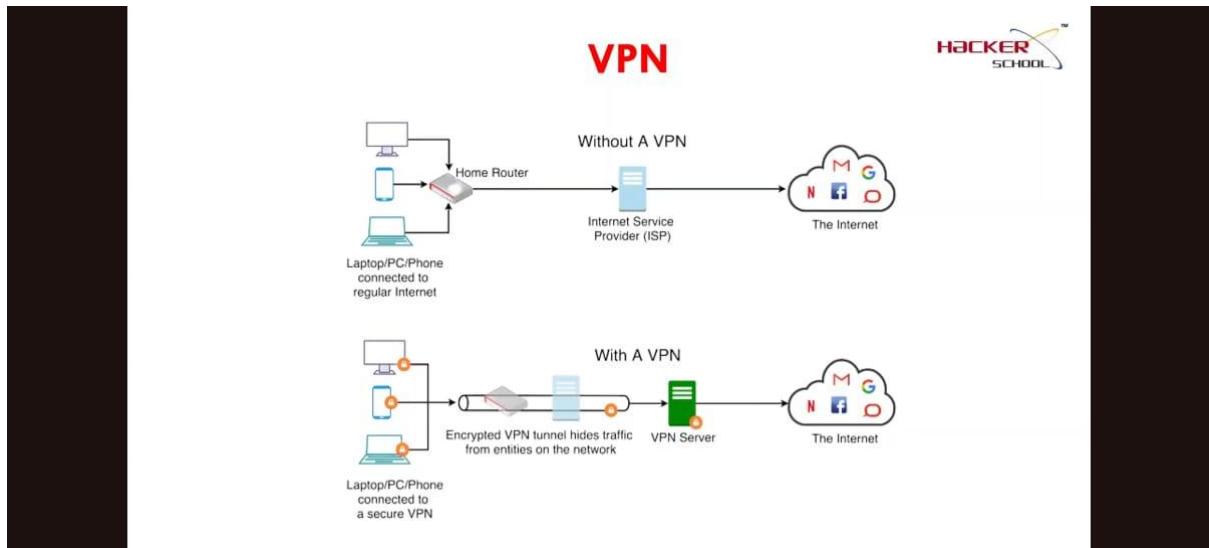
9. Enable HTTPS proxy.

10. Save the settings.

11. Verify the IP change using whatismyipaddress.

12. Disable proxy by selecting Use system proxy settings.

4. VPN (Virtual Private Network)

What is VPN?
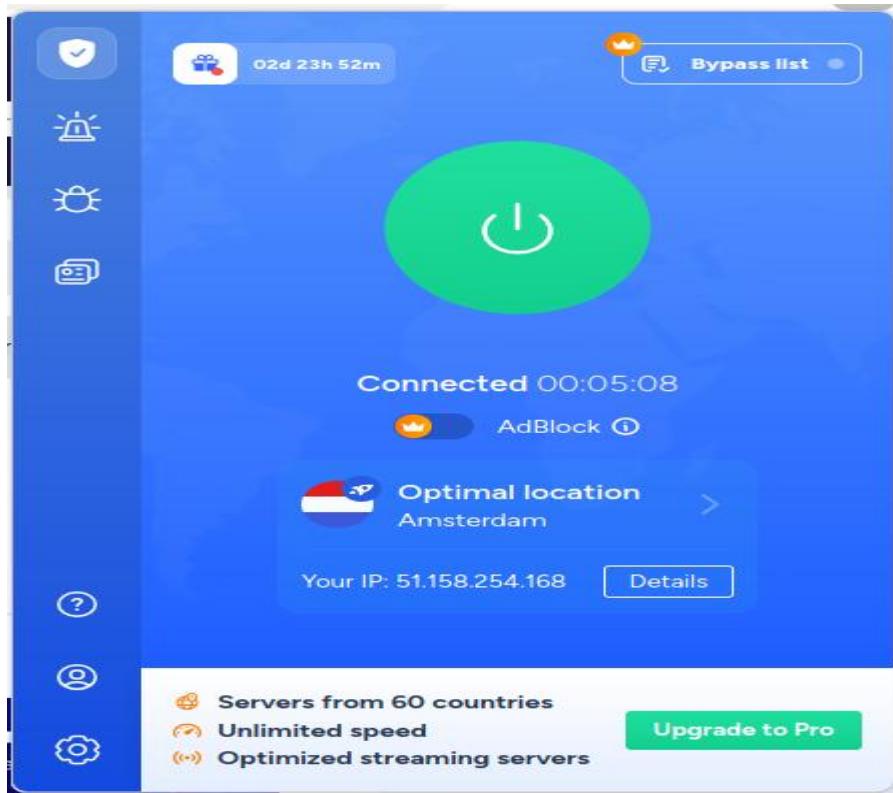
A VPN encrypts internet traffic and hides the real IP address, providing privacy and anonymity.


Free VPN (Browser-Based)

Example: VeePN for Firefox

1. Search for VeePN Firefox.

2. Open the official link.

3. Click Add to Firefox.

4. Accept permissions.

5. Open the extension.

6. Click Connect.

7. Verify the IP address using whatismyipaddress.

5. Proton VPN Installation (Linux / Parrot OS)

Account Creation

1. Visit the Proton VPN website.

2. Click Get Proton VPN.

3. Select Proton Free.

4. Create an account.

5. Complete verification if required.

6. Set a password.

Download OpenVPN Configuration File

1. Go to the Downloads page.

2. Select Platform as Linux.

3. Choose protocol UDP or TCP.

OpenVPN configuration files

These configuration files let you choose which Proton VPN server you connect to when using a third-party VPN app or setting up a VPN connection on a router.

1. Select platform

- ( ) Android
  View guide
- ( ) iOS
  View guide
- ( ) Windows
  View guide
- ( ) macOS
  View guide
- (●) GNU/Linux
  View guide
- ( ) Router
  View guide

2. Select protocol

(●) UDP   ( ) TCP

What is the difference between UDP and TCP protocols?

3. Select config file and download

( ) Country configs   ( ) Standard server configs   (●) Free server configs   ( ) Secure Core configs

4. Select a server with low load.
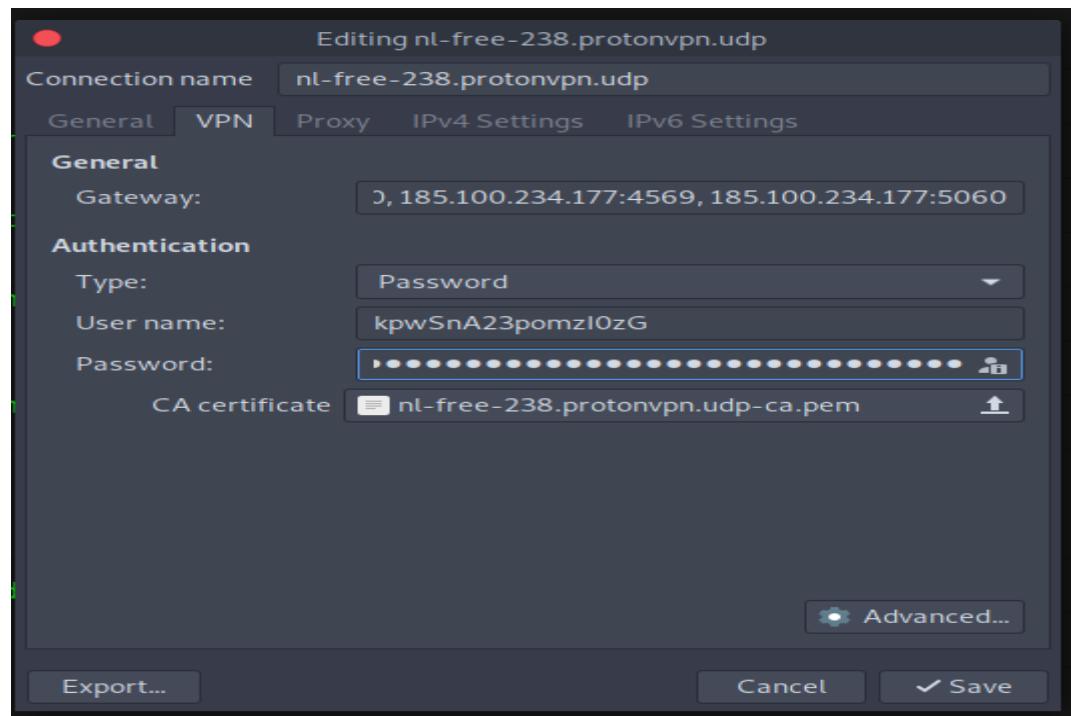
5. Download the .ovpn configuration file.

## Import VPN Configuration (GUI Method)
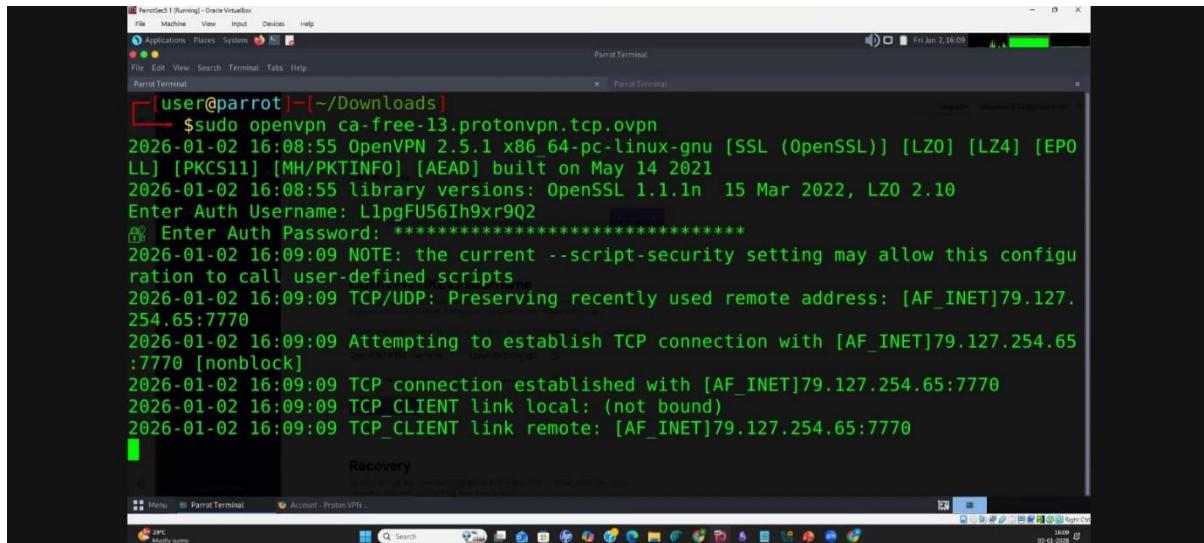
1. Open Network Connections.

2. Go to VPN and select Import VPN.

3. Choose the downloaded .ovpn file.
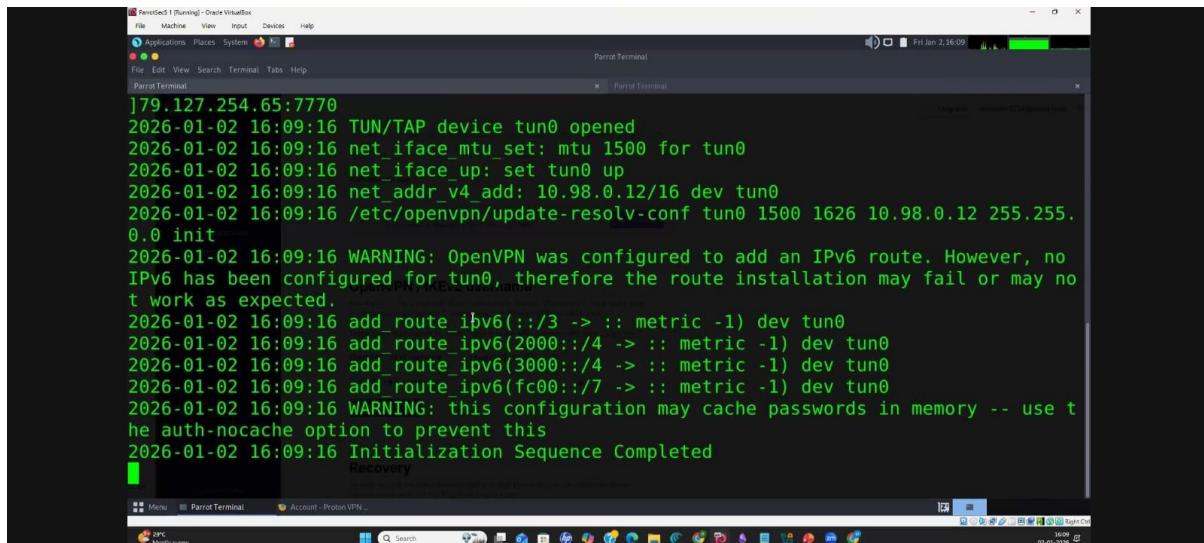
4. Enter the Proton VPN username (IKEv2 username) and password.

5. Start the VPN connection.

Terminal Method (If GUI Fails)

1. Start the VPN using the OpenVPN configuration file.

2. If the message "Initialization Sequence Completed" appears, the VPN is connected.

3. Stop the VPN using Ctrl + C.

4. Verify the connection using whatismyipaddress.

5. Types of Web

Surface Web

- Indexed by search engines

- Publicly accessible

- Examples: Google, Wikipedia, YouTube

Deep Web

- Not indexed by search engines

- Requires authentication

- Examples: Gmail, banking portals, college portals

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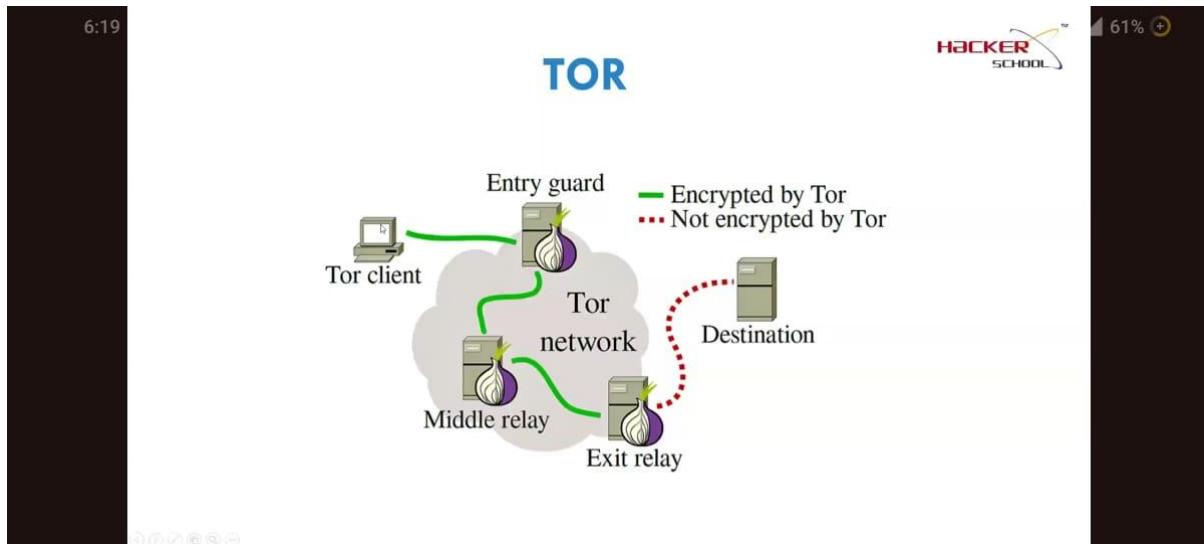
Dark Web

- Requires special browsers

- Provides anonymity

- Contains both legal and illegal content

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7. Tor (The Onion Router)
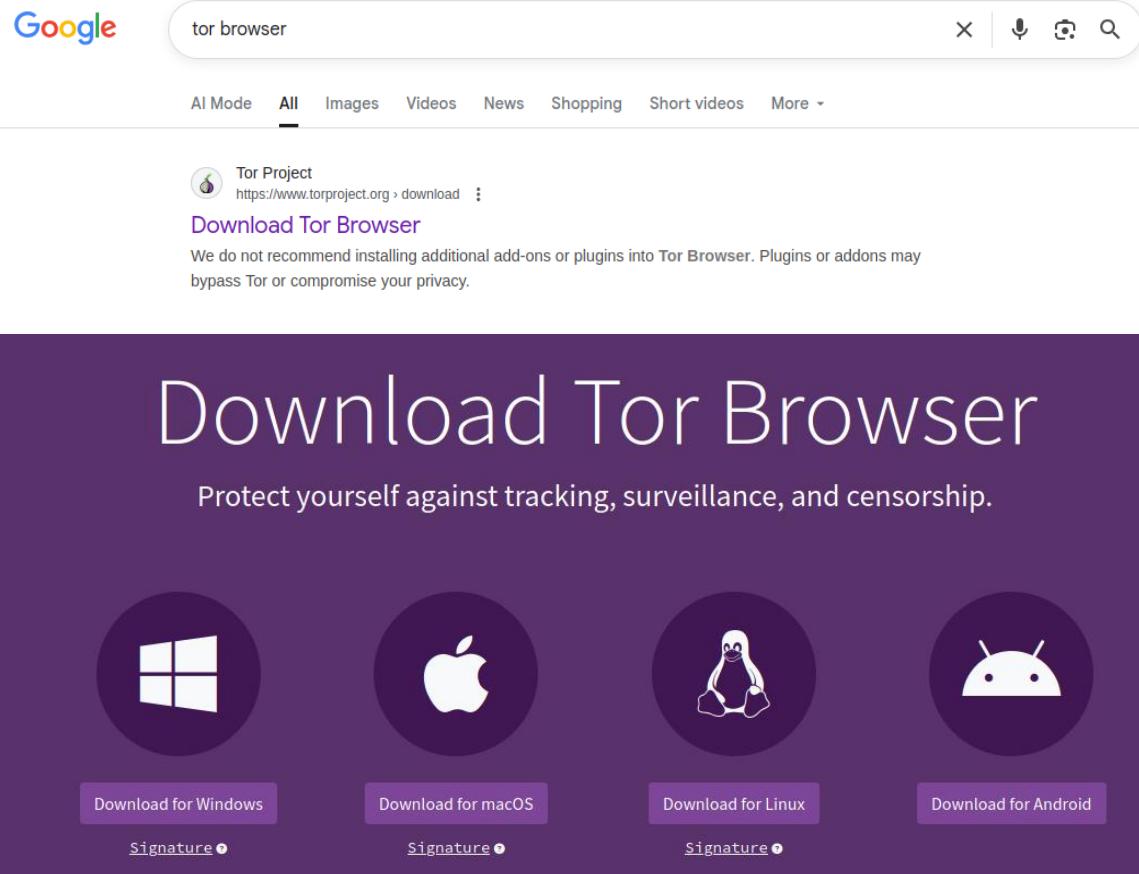
What is Tor?

Tor routes internet traffic through multiple encrypted nodes, hiding the user's identity.

Installing Tor Browser (Parrot OS)

1. Open Firefox.

2. Search for Tor Browser Linux.

3. Download the .xz file.

4. Fix broken packages.

5. Install xz utilities.

6. Extract the downloaded file.
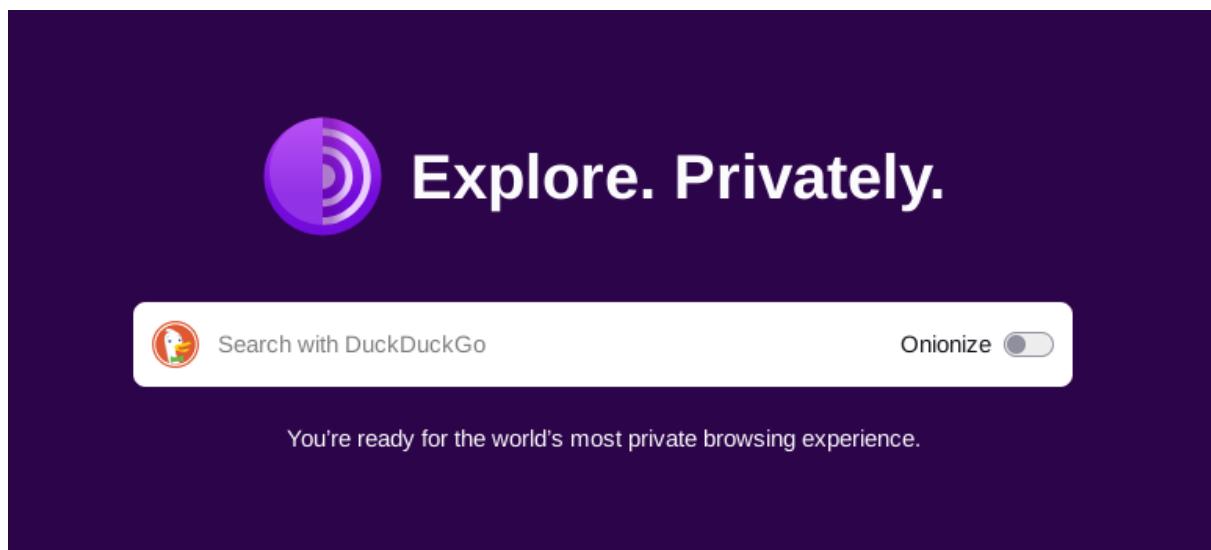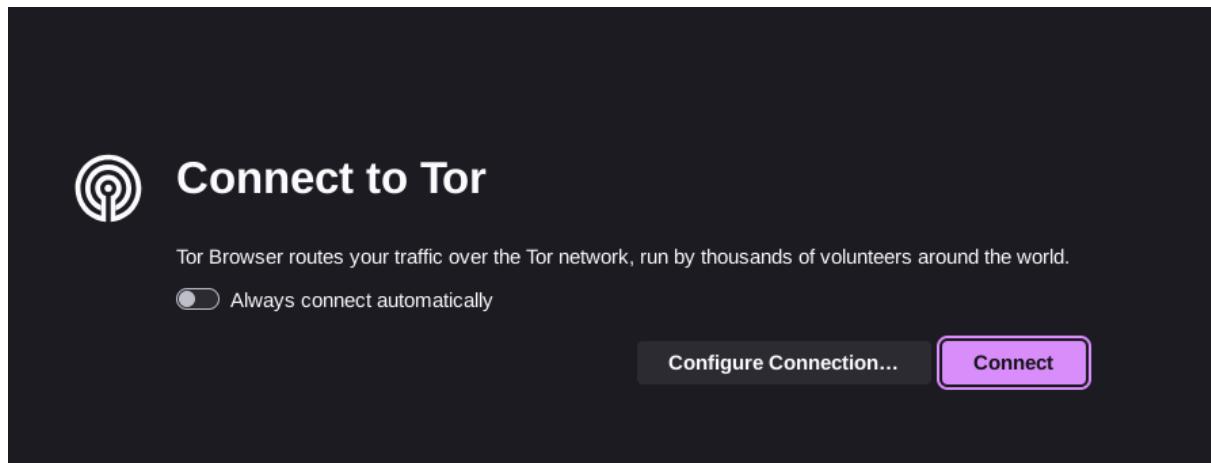

```
bash: tor-browser: No such file or directory
┌─[✗]─[user@parrot]─[~/Downloads]
└──$ls
dbeaver-ce_25.3.1_amd64.deb  ipscan_3.9.3_amd64.deb  mx-free-6.protonvpn.udp.ovpn  tor-browser  tor-browser-linux-x86_64-15.0.3.tar.xz
┌─[user@parrot]─[~/Downloads]
└──$cd tor-browser
┌─[user@parrot]─[~/Downloads/tor-browser]
└──$ls
Browser  start-tor-browser.desktop
┌─[user@parrot]─[~/Downloads/tor-browser]
└──$./start-tor-browser.desktop
Launching './Browser/start-tor-browser --detach'...
┌─[user@parrot]─[~/Downloads/tor-browser]
└──$
```

Meaning of -xf

- -x means extract.

- -f specifies the file name.

Launching Tor Browser

1. Open the Tor Browser directory.

2. Start the Tor Browser launcher.

3. Click Connect.

4. Wait for the Tor network connection.

Accessing the Dark Web

1. Open Chrome.

2. Search for Hidden Wiki.

3. Copy any .onion link.

4. Paste the link into Tor Browser.

5. The site will open only inside Tor Browser.

Conclusion

- .deb packages can be used instead of git clone.

- Spoofing hides identity but public IP addresses are traceable.

- Proxies provide limited anonymity.

- VPNs encrypt traffic and hide IP addresses.

- Tor provides maximum anonymity.

- Dark Web access is possible only through Tor Browser.