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CONFIGURE YOUR EDUVPN VIRTUAL PRIVATE NETWORK (VPN) ACCESS

User Manual

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1 Introduction

A Virtual Private Network (VPN) is a means to securely connect to a network. The related eduVPN service allows all RESTENA users as well as users of eduID Luxembourg participating institutions to connect to the RESTENA network from remote locations. This may be used to gain access to Intranet services or other third-party services (for instance student records application) that are only accessible from within the RESTENA network.

VPN access via eduVPN is open to RESTENA users as well as other institutions taking part in eduID Luxembourg. To establish a VPN session, you need to use your credentials provided by your identity providing institution.

The VPN solution offered by the Restena Foundation is based on eduVPN, an application that enables research and education stakeholders across Europe to access their institutes' network and the Internet via an encrypted connection (https://www.eduvpn.org): more than 20 countries and 100 participants use eduVPN worldwide. The eduVPN client application allows easy access and configuration of the VPN service on platforms based on Windows, macOS, iOS, Android, and Linux. More information can be found in the following sections explaining installation and configuration of the VPN for the different supported platforms.

The process to establish a VPN connection with eduVPN is the same for all platforms that are supported by the eduVPN client. Once the client is installed and launched it will:

1. Connect to RESTENA's eduVPN service.
2. Authenticate by providing the credentials from your eduID Luxembourg participating institution.
3. Request a VPN configuration/profile from RESTENA's eduVPN service.
4. Use this configuration to establish VPN connections whenever a VPN connection is requested.

The VPN configuration downloaded by the eduVPN client has a validity of 30 days. During this period the VPN connection can be established at will. Once the configuration has expired, the process above will be repeated to request a new VPN configuration. The eduVPN client guides a user, automatically, through this process whenever it is required.

Install and use eduVPN in the following circumstances:

- If you need a secure connection to the Intranet services of the Restena Foundation or the Ministry of Education, Children, and Youth, such as accessing student file applications or SCOLARIA.
- If you are connected to the Internet by a service provider other than the Restena Foundation
- If you are connected to the Internet via an untrustworthy access provider (Non encrypted WIFI, hotel room Internet access, etc.)
- If you are a user of an eduID Luxembourg participating institution.

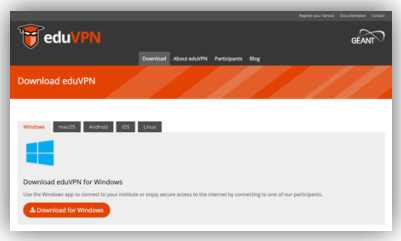
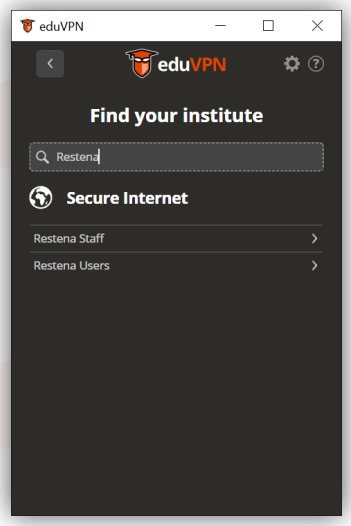
➔ For more information on the VPN service, go to restena.lu/en/service/eduvpn

2 Windows

2.1 Simplified instructions

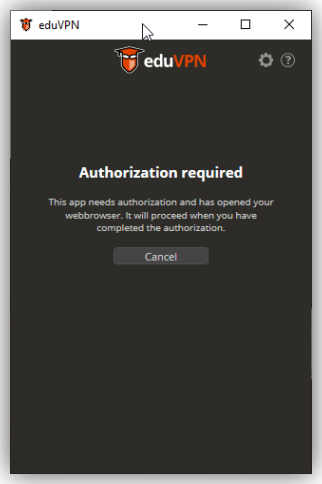
- Download and install the eduVPN client from its official website, https://app.eduvpn.org/windows/eduVPNClient_latest.exe.
- Launch the client.
- In the '**Find your institution**' text box type *Restena*.
- Click on the service listed as '**Restena Users**' in the client.
- In the web browser window that opens you are redirected to your institution login page, use your username and password to login.
- Following successful authentication, **approve** the eduVPN client to establish a VPN connection (still in the web browser window).
- Following approval, the eduVPN client will establish a VPN connection. The status of the process can be seen in the eduVPN client.

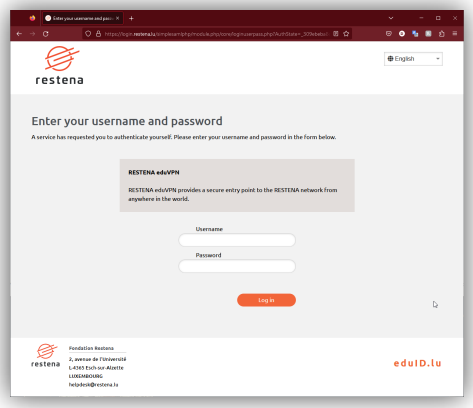
2.2 Detailed instructions

1.	Download the eduVPN client application for Windows using the following link: https://app.eduvpn.org/windows/eduVPNClient_latest.exe Click on 'Download for Windows'.	
2.	Install, and then launch the client on your computer. The client window presents itself.	
3.	• In the '**Find your institute**' text box enter *Restena* to easily access the service in the client. • Click on the service '**Restena Users**' to initiate the connection to the service.	

4. A display screen ‘Authorization required’ and a web browser window for authentication automatically open.

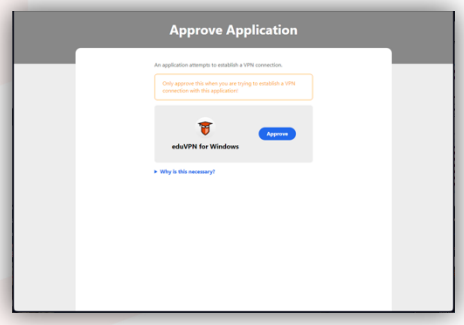
   You will be redirected to the web page of your identity provider. On the page ‘Enter your username and password’ enter your eduID credentials (those from your eduID Luxembourg participating institution or RESTENA username and password for RESTENA Users) as requested.





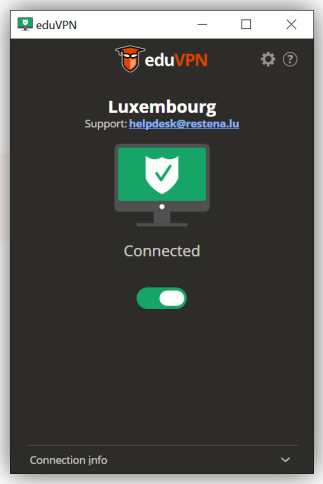
5. Once authentication has succeeded a new page in the web browser requests approval for establishing a VPN connection from the eduVPN client.

   Click on **‘Approve’** and close the browser tab or window.



6. Looking at the eduVPN client you now see the client attempting to establish a connection.

   Once the connection is established the eduVPN client confirms it has successfully established a connection.

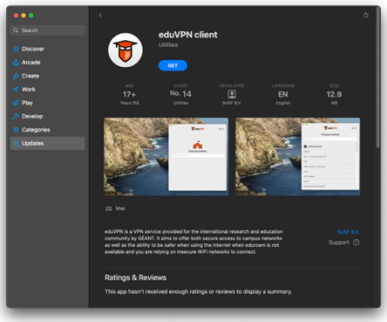
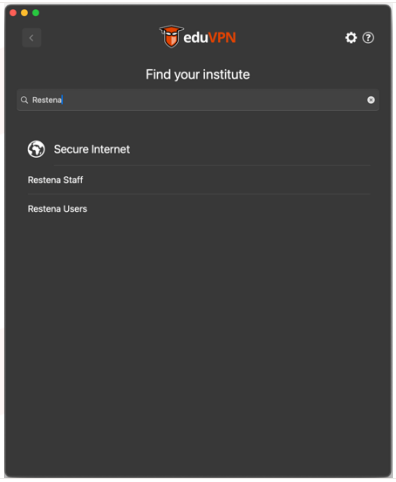


3 macOS

3.1 Simplified instructions

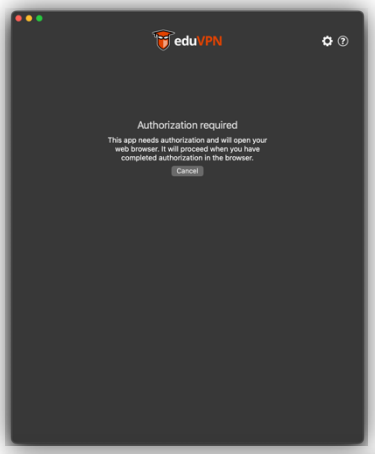
- Download and install the eduVPN client from Apple Store, at https://apps.apple.com/app/eduvpn-client/id1317704208?mt=12
- Launch the client.
- In the '**Find your institution**' text box type *Restena*
- Click the service listed as '**Restena Users**' in the client.
- In the web browser window that opens you are redirected to your institution login page, use your username and password to login.
- Following successful authentication, **approve** the eduVPN client to establish a VPN connection (still in the web browser window)
- Following approval, the eduVPN client will establish a VPN connection. The status of the process can be seen in the eduVPN client.

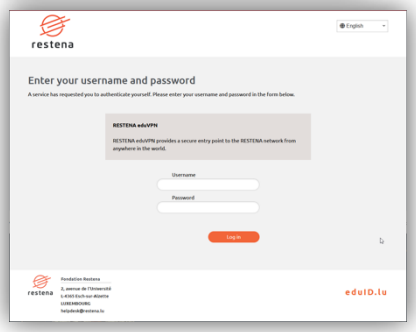
3.2 Detailed instructions

1.	Download the eduVPN client application from the Apple store: https://apps.apple.com/app/eduvpn-client/id1317704208?mt=12 Click on '**Get**'.	
2.	Install, and then launch the client on your computer. The client window presents itself.	
3.	• In the '**Find your institute**' text box enter *Restena* to easily access the service in the client. • Click on the service '**Restena Users**' to initiate the connection to the service.	

4. A display screen ‘Authorization required’ and a web browser window for authentication automatically open.

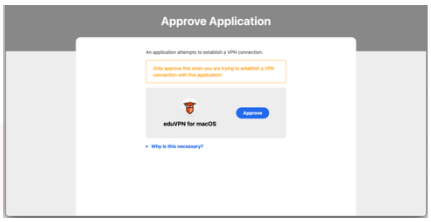
   You will be redirected to the web page of your identity provider. On the page ‘Enter your username and password’ enter your eduID credentials (those from your eduID Luxembourg participating institution or RESTENA username and password for RESTENA Users) as requested.





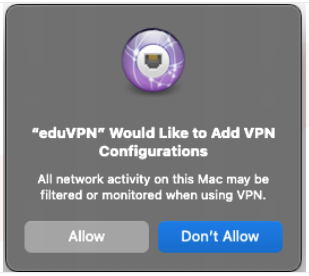
5. Once authentication has succeeded a new page in the web browser requests approval for establishing a VPN connection from the eduVPN client.

   Click on **‘Approve’** and close the browser tab or window.

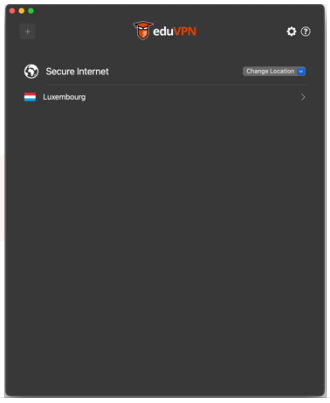


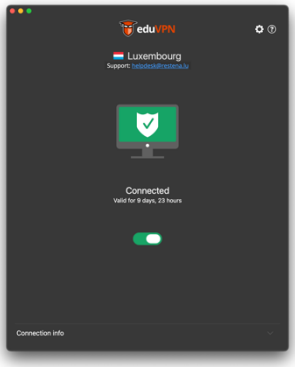
6. Another window pops up requesting permission to add VPN configuration to System Settings.

   Click on ‘**Allow**’.



7. Looking at the eduVPN client you now see a configuration for **Luxembourg**. By clicking on ‘**Luxembourg’** the connection is initiated.



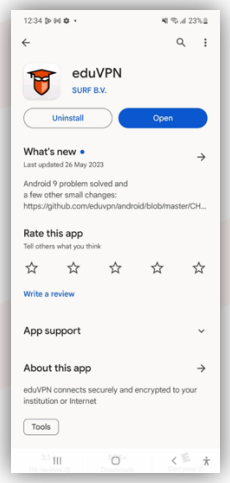
8.	Once the connection is established the eduVPN client confirms this by saying 'Connected' and showing the remaining validity of the configuration.	

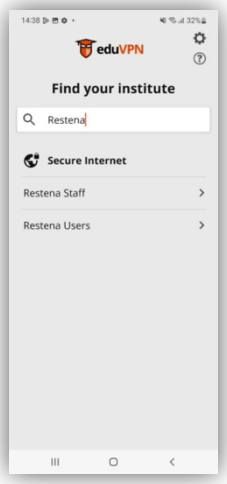
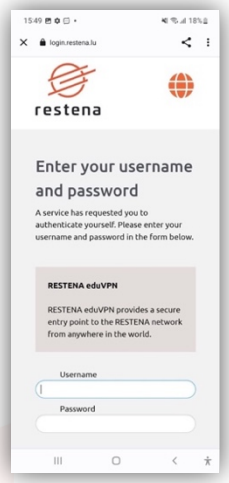
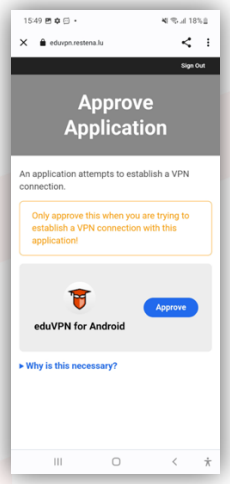
4 Smartphone Android

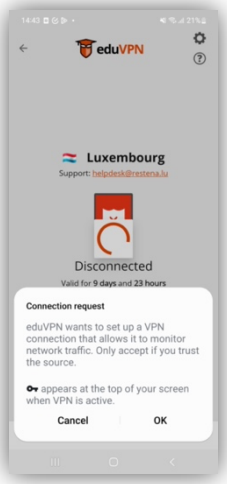
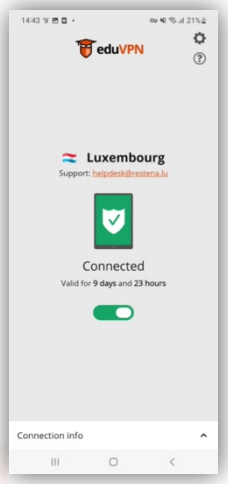
4.1 Simplified instructions

- Download and install the eduVPN client from Google Play Store, https://play.google.com/store/apps/details?id=nl.eduvpn.app
- Launch the client.
- In the '**Find your institution**' text box type *Restena*
- Click the service listed as '**Restena Users**' in the client.
- In the web browser window that opens you are redirected to your institution login page, use your username and password to login.
- Following successful authentication, **approve** the eduVPN client to establish a VPN connection (still in the web browser window).
- Following approval, the eduVPN client will establish a VPN connection. The status of the process can be seen in the eduVPN client.

4.2 Detailed instructions

1.	Download the eduVPN client application from the Play Store using the following link: https://play.google.com/store/apps/details?id=nl.eduvpn.app Click on '**Open**'.	
2.	Install, and then launch the client on your phone. The client window presents itself.	

3.	• In the '**Find your institute**' text box enter *Restena* to easily access the service in the client. • Click on the service '**Restena Users**' to initiate the connection to the service.	
4.	Another pop-up opens, this time related to the login for authentication with your eduID. You will be redirected to the web page of your identity provider. On the page 'Enter your username and password' enter your eduID credentials (those from your eduID Luxembourg participating institution or RESTENA username and password for RESTENA Users) as requested. Press '**Continue**'.	
5.	Once authentication has succeeded a new page in the web browser requests approval for establishing a VPN connection from the eduVPN client. Press '**Approve**' and close the browser tab or window.	

6.	Looking at the eduVPN client you now see the client attempting to establish a connection. • Press the **toggle** to initiate VPN session, then • Press '**Allow**'.	
7.	Once the connection is established the eduVPN client confirms it has successfully established a connection.	

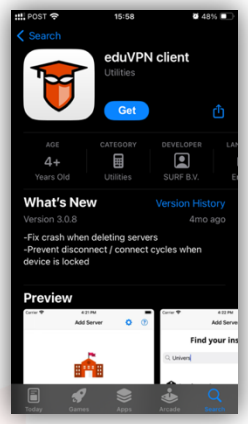
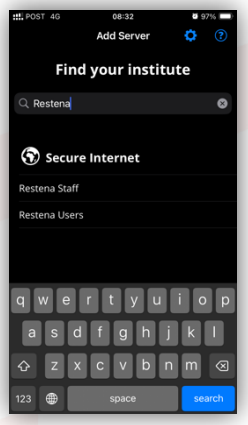
5 iPhone / iPad 12+

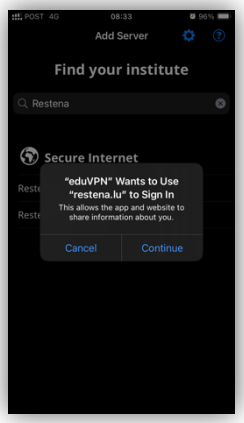
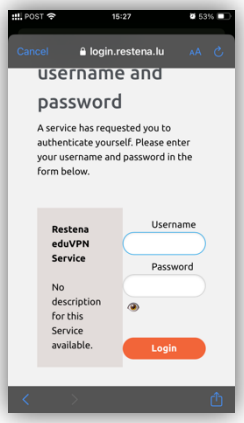
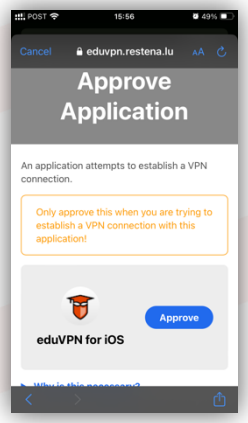
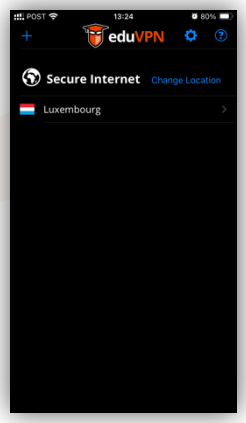
eduVPN client is supported on iPhones and iPads running iOS 12.0 or later.

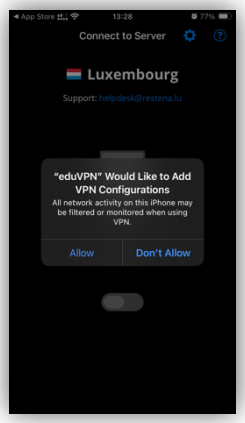
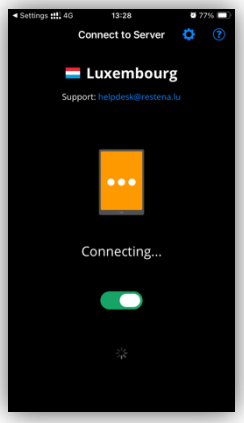
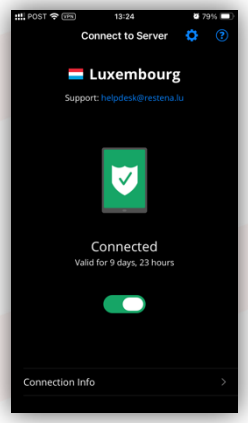
5.1 Simplified instructions

- Download and install the eduVPN client from Apple Store, https://apps.apple.com/app/eduvpn-client/id1292557340
- Launch the client.
- In the '**Find your institution**' text box type *Restena*
- Click the service listed as '**Restena Users**' in the client.
- In the web browser window that opens you are redirected to your institution login page, use your username and password to login.
- Following successful authentication, **approve** the eduVPN client to establish a VPN connection (still in the web browser window).
- Following approval, the eduVPN client will establish a VPN connection. The status of the process can be seen in the eduVPN client.

5.2 Detailed instructions

1.	Download the eduVPN client application from the Apple store: https://apps.apple.com/app/eduvpn-client/id1292557340 Click on '**Get**'.	
2.	Install, and then launch the client on your computer. The client window presents itself.	
3.	• In the '**Find your institute**' text box enter *Restena* to easily access the service in the client. • Click on the service '**Restena Users**' to initiate the connection to the service.	

4.	A pop-up appears explaining that eduVPN wants to use restena.lu for authentication. Press '**Continue**'.	
5.	Another pop-up opens, this time related to the login for authentication with your eduID. You will be redirected to the web page of your identity provider. On the page 'Enter your username and password' enter your eduID credentials (those from your eduID Luxembourg participating institution or RESTENA username and password for RESTENA Users) as requested. Press '**Approve**' and close the browser tab or window.	
6.	Once authentication has succeeded a new page in the web browser requests approval for establishing a VPN connection from the eduVPN client. Press '**Approve**' and close the browser tab or window.	
7.	Press the '**Luxembourg**' service to initiate VPN session.	

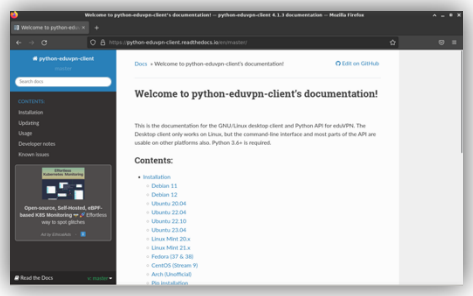
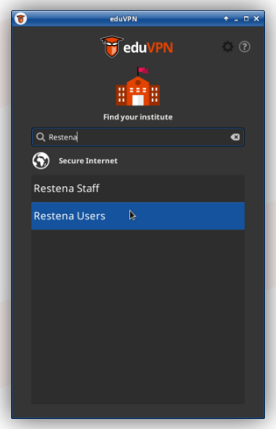
8.	Another window pops up requesting permission to add a VPN connection into iOS VPN configuration. Click on '**Allow**'.	
9.	Looking at the eduVPN client you now see the client attempting to establish a connection.	
10.	Once the connection is established the eduVPN client confirms it has successfully established a connection.	

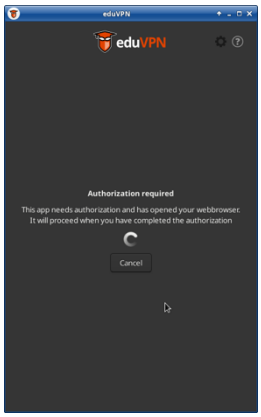
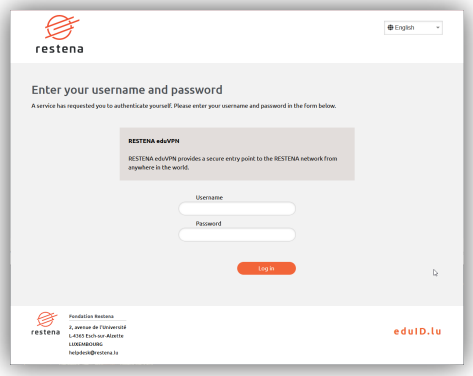
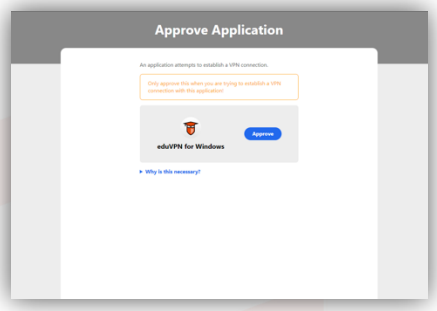
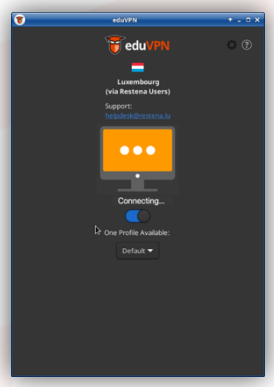
6 Linux

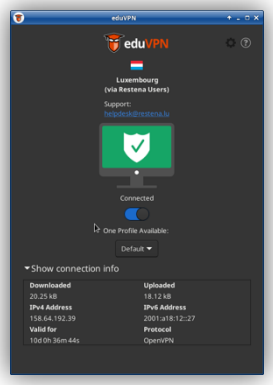
6.1 Simplified instructions

- Follow the distribution specific installation instructions at https://python-eduvpn-client.readthedocs.io/en/master/
- Launch the client.
- In the '**Find your institution**' text box type *Restena*
- Click the service listed as '**Restena Users**' in the client.
- In the web browser window that opens you are redirected to your institution login page, use your username and password to login.
- Following successful authentication, **approve** the eduVPN client to establish a VPN connection (still in the web browser window).
- Following approval, the eduVPN client will establish a VPN connection. The status of the process can be seen in the eduVPN client.

6.2 Detailed instructions

1.	Download the eduVPN client application for Linux using the following link: https://python-eduvpn-client.readthedocs.io/en/master/ On this webpage, click on the installation instructions for the Linux distribution you are effectively using.	
2.	Install, and then launch the client on your computer. The client window presents itself.	
3.	• In the '**Find your institute**' text box enter *Restena* to easily access the service in the client. • Click on the service '**Restena Users**' to initiate the connection to the service.	

4.	A display screen 'Authorization required' and a web browser window for authentication automatically open. You will be redirected to the web page of your identity provider. On the page 'Enter your username and password' enter your eduID credentials (those from your eduID Luxembourg participating institution or RESTENA username and password for RESTENA Users) as requested.	 
5.	Once authentication has succeeded a new page in the web browser requests approval for establishing a VPN connection from the eduVPN client. Click on **'Approve'** and close the browser tab or window.	
6.	Looking at the eduVPN client you now see the client attempting to establish a connection.	

7.	Once the connection is established the eduVPN client confirms it has successfully established a connection.	

7 Manual Configuration

Occasionally use of the eduVPN client may not be possible. This can typically happen when the eduVPN client does not install correctly on the target workstation. The reasons for this can be manifold and hard to track down. Another reason for using this manual process maybe that the OpenVPN protocol is not allowed on the access network. In that case this manual process will allow a user to configure the WireGuard vpn protocol (see section '7.2 Manual configuration for WireGuard client') instead of OpenVPN protocol used by the eduVPN client.

Important! Please note that the connection profiles **expire after a 30-day period**. Once expired your profile will not connect anymore and generate an **Error** message. The eduVPN client manages connection profiles for you and launches the process to generate a new one automatically. Using this manual configuration method, you need to be aware to follow this process again whenever your connection profile has expired. Expired profiles can be deleted from your client application (OpenVPN, WireGuard).

7.1 Manual configuration for OpenVPN Connect client

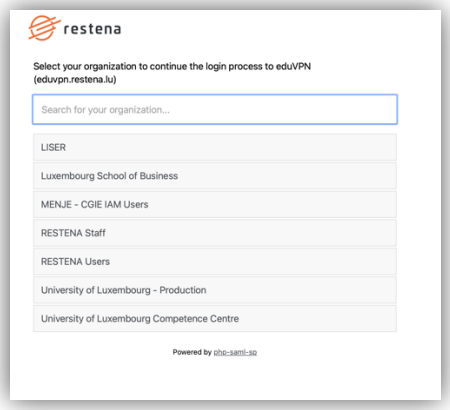
7.1.1 Simplified instructions

- Download and follow installation instructions for OpenVPN Connect client from https://openvpn.net/client/
- Open a web browser and go to https://eduvpn.restena.lu
- In the list select your Identity Provider. For instance, '**Restena Users**' for education.lu accounts.
- Use your username and password to login.
- In the '**Profile**' window select one of the **OpenVPN** profiles. For instance, '**OpenVPN (Prefer UDP)**'.
- In the '**Name**' field type a name to identify the connection profile. For instance, *openvpn-for-iMac*.
- Press the '**Download**' button to download the configuration profile.
- Open the OpenVPN client application.
- Select '**Upload File**' and drag and drop the file downloaded from eduvpn.restena.lu into the specified area.
- Press the '**Connect**' button to start the VPN connection.

7.1.2 Detailed instructions

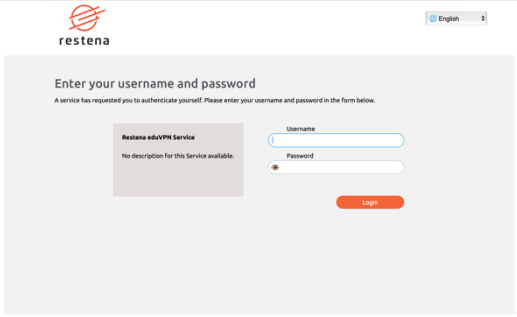
Installation of the OpenVPN Connect client is not covered within this guide. Please follow the online instructions for the client device you are using, specifically provided by the client and described at https://openvpn.net/client/

1.
   - Once the OpenVPN Connect Client is installed, open a web browser and go to https://eduvpn.restena.lu
   - From the list select your identity provider, like for instance '**RESTENA Users**' for education.lu accounts.



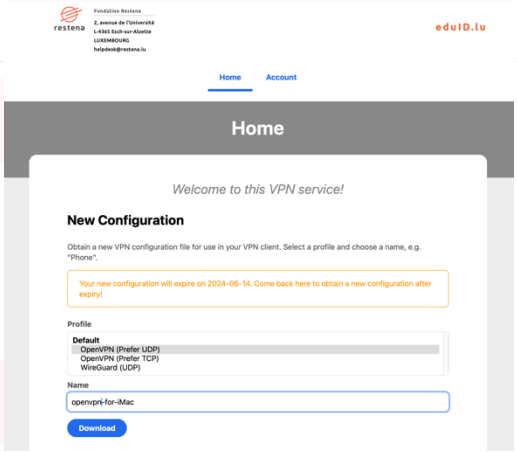
2. You will be redirected to the web page of your identity provider.

   On the page 'Enter your username and password' enter your eduID credentials (those from your eduID Luxembourg participating institution or RESTENA username and password for RESTENA Users) as requested.

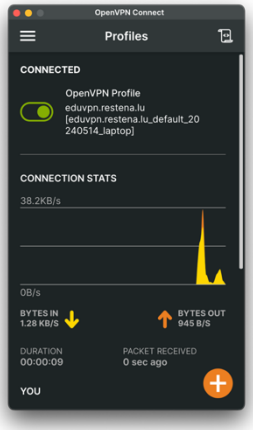
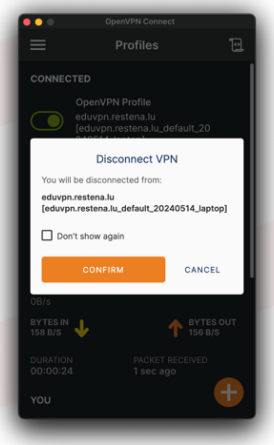
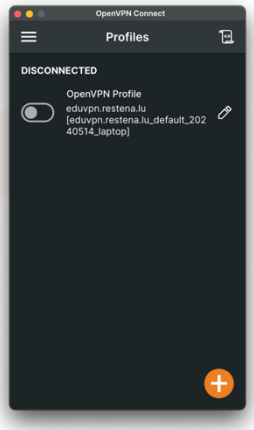


3. Once logged in you will be shown the eduVPN Home Screen. The Home Screen offers the ability to generate new configuration profiles (one to three profiles).

   - Within the selection list under 'Profile' section, select '**OpenVPN (Prefer UDP)'.**
   - In the '**Name**' field provide a name to identify the use of the connection profile, like for instance *openvpn-for-iMac*.
   - Press '**Download**' to retrieve the OpenVPN configuration.



4.
   - Open the OpenVPN Connect Client.
   - Select the '**Upload File**' tab.
   - Either browse for the downloaded configuration file (usually located in the Downloads folder) or drag-and-drop it into the rectangular field.

5.	Once the profile is loaded you can choose to change the profile name. Press '**Connect**' to try the profile out.	
6.	Once connected the OpenVPN Connect Client will show traffic as shown on the right. To disconnect the client, **press** the round green button.	
7.	To disconnect, the client requests confirmation, please press '**Confirm**'.	
8.	A configured profile in disconnected state. To reconnect simply **press** the grey round button.	

'

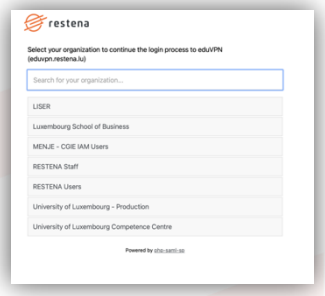
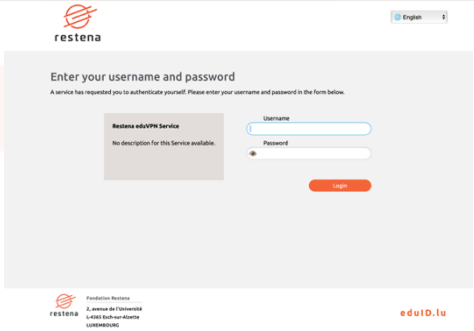
7.2 Manual configuration for WireGuard client

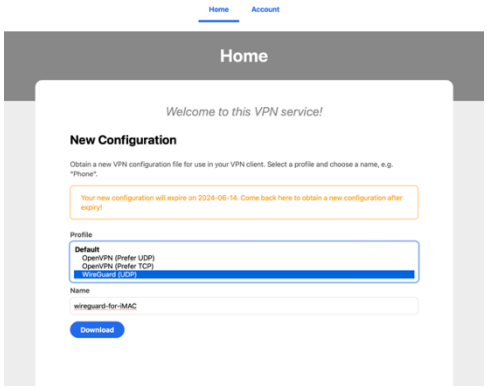
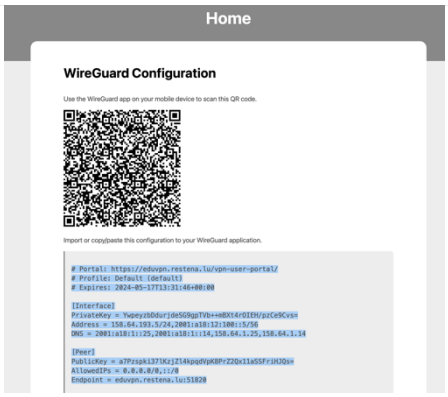
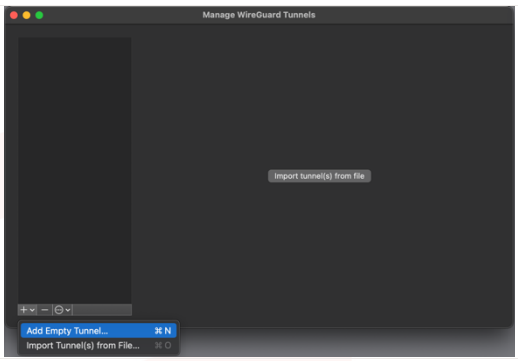
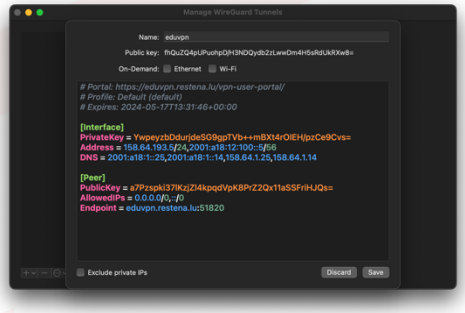
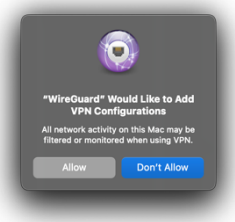
7.2.1 Simplified instruction

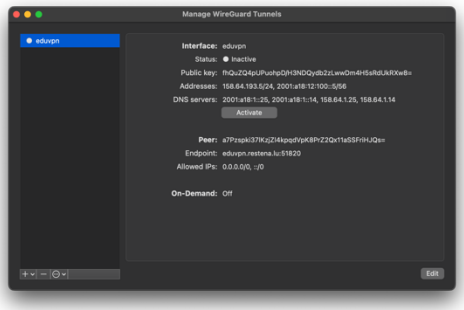
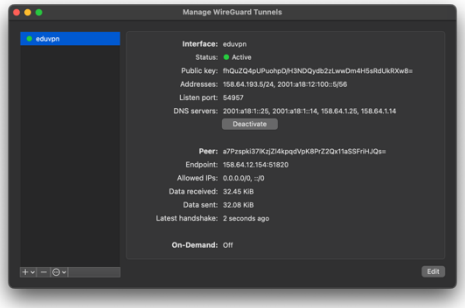
- Download and follow installation instructions for WireGuard client from https://www.wireguard.com/install/
- Open a web browser and go to https://eduvpn.restena.lu
- In the list select your Identity Provider. For instance, '**Restena Users**' for education.lu accounts.
- Use your username and password to login.
- In the '**Profile'** window select the '**WireGuard (UDP)'** profile.
- In the '**Name'** field type a name to identify the connection profile. For instance, *wireguard-for-iMac*.
- Press the '**Download'** button to generate the configuration profile.
- On the following screen, a QR code for the configuration as well as a textual representation of the configuration is displayed.
- Select and copy the textual representation of the profile configuration.
- Open the WireGuard client application, '**Manage Tunnels'** appears.
- Press the '**Add Empty Tunnel'** option.
- In the window that opens provide a **Name** for the configuration, like *eduvpn*.
- In the text area delete the text that is auto generated, and paste the configuration copied from the eduvpn.restena.lu website.
- Press the '**Save'** button.
- Select the newly created profile and press '**Activate'**.

7.2.2 Detailed instructions

Installation of the WireGuard client is not covered within this guide. Please follow the online instructions for the client device you are using, specifically provided by the client and described at https://www.wireguard.com/install/ .

1.	• Once the WireGuard client is installed open a web browser and go to https://eduvpn.restena.lu • From the list select your identity provider, like for instance 'RESTENA Users' for education.lu accounts.	
2.	You will be redirected to the web page of your identity provider. On the page 'Enter your username and password' enter your eduID credentials (those from your eduID Luxembourg participating institution or RESTENA username and password for RESTENA Users) as requested.	

3.	Once logged in you will be shown the eduVPN Home Screen. The Home Screen offers the ability to generate new configuration profiles (one to three profiles). The Profile section on the Home Screen is a selection list providing three different Profiles. • Within the selection list under 'Profile' section, select '**WireGuard (UDP)**' • In the '**Name**' field provide a name to identify the use of the connection profile, like for instance *wireguard-for-iMac* • Press '**Download**' to display the WireGuard configuration.	
4.	A new page is opened displaying the WireGuard configuration as QR code, and as textual representation. Select and copy the textual representation.	
5.	• Open the WireGuard Client. The '**Manage WireGuard Tunnel**s' window will open. • In the bottom right press the '**+**' button and select '**Add Empty Tunnel**'	
6.	A new window will open. • In the '**Name**' field provide a name for this connection like for instance, eduvpn. • In the text area below, delete the auto-generated configuration and paste the configuration copied in the previous step. • Press '**Save**'.	
7.	A pop-up window appears requesting permission to add a VPN configuration. Press '**Allow**'.	

8.	The new configuration appears in the *Manage WireGuard Tunnels* window. Press '**Activate'** button to connect to eduVPN.	
9.	The status shows as *Active*. Press the '**Deactivate'** button to disconnect from eduVPN.