

# Remote access using VPN

## Sterrewacht

There is a new OpenVPN server that allows you to connect your personal computer/device to the internet as if it were part of the Observatory computer network. The server is a standalone server with the sole purpose of providing VPN connections, and to which you can connect using an OpenVPN client.

For OpenVPN you will need a special `.ovpn` file to get access to our VPN service. Please request one via [helpdesk@strw.leidenuniv.nl](mailto:helpdesk@strw.leidenuniv.nl)

There are OpenVPN clients for the major operating systems:

- [MacOS](#)
- [Windows](#)
- [Linux](#)
- but also for [Android and iPhone](#)

## Sterrewacht

### DNS problem work-around

Recently, some people working from home have been reporting problems when trying to connect to Sterrewacht (or even all Leiden University) computers, especially people renting apartments with DUWO. There is likely a problem with the DNS (domain name server) of the local internet provider. To bypass this problem, Sterrewacht users can activate the STRW VPN. For this to work, users with an existing VPN client (`.ovpn`) file need to make a small change. From the OpenVPN program or app, select to edit the configuration file. In the editor that appears, replace the text `vpn.strw.leidenuniv.nl` with `132.229.224.4`, then save the changes. From that point onwards, when connecting to the STRW VPN, the internet connection uses the STRW DNS instead of the local provider's DNS. Note that all internet traffic from that point onwards goes via the Sterrewacht networks, unless you set up split VPN as described below.

### Split VPN connections

The provided VPN client file redirects all internet traffic over the Observatory VPN. There are however situations in which it is unnecessary or even discouraged to tunnel a connection via our VPN. Imagine, for instance, how inefficient it is to tunnel a videoconference through a VPN tunnel.

In these cases, you can tweak your `.ovpn` config file to bypass VPN at your will. Here is an example.

## Example: Only Leiden University IPs via VPN

Add the following lines somewhere in your `.ovpn` client file provided by us

```
# Only UL IPs via VPN
# With the exception of the Sterrewacht VPN IP address
pull-filter ignore "redirect-gateway"
route 132.229.0.0 255.255.0.0 vpn_gateway
route 132.229.224.4 255.255.255.255 net_gateway
```

## Lorentz Institute

|                                                                                          |                                                                                                                                                       |
|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br>NEW | Since end October 2021, beside your IL username and password, you will have to insert also your <b>TOTP</b> to initiate a connection                  |
|                                                                                          | For instance, if your IL passwd is mypassword and your OTP at the time of login is 123456, then your VPN password <b>will become</b> mypassword123456 |

The Lorentz Institute offers its staff members an OpenVPN service for remote connections to the IL intranet. Apart from preserving users privacy, the IL OpenVPN lets you access services that would otherwise be unavailable when working remotely. A use-case would be to access scientific journals contents using the Institute subscription.

Request your IL OpenVPN access via [support@lorentz.leidenuniv.nl](mailto:support@lorentz.leidenuniv.nl) and you will receive your personal <sup>1)</sup> `.ovpn` file.

Launch your `.ovpn` with your favorite OpenVPN client <sup>2)</sup> to initiate a connection. There are OpenVPN clients the following major platforms:

- [MacOS](#)
- [Windows](#)
- [Linux](#)
- [OpenVPN for Android](#)

## Split VPN connections

The provided VPN client file redirects all internet traffic over the Lorentz Institute VPN. There are however situations in which it is unnecessary or even discouraged to tunnel a connection via our VPN. Imagine, for instance, how inefficient it is to tunnel a videoconference through a VPN tunnel.

In these cases, you can tweak your `.ovpn` config file to bypass VPN at your will. Here follow some examples.

### Example 1: Only Leiden University IPs via VPN

Add the following lines somewhere in your `.ovpn` client file provided by us

```
# Only UL IPs via VPN
# With the exception of the very IL VPN IP address
pull-filter ignore "redirect-gateway"
route 132.229.0.0 255.255.0.0 vpn_gateway
route 132.229.227.248 255.255.255.255 net_gateway
```

### Example 2: VPN-bypass IPs in range

Add the lines in the following code snippet somewhere in your `.ovpn` file if you want to

- Tunnel through the VPN only those connections to the IL/STRW servers that have IP in the range 132.229.214.0/24
- Let all other connections unaffected by the VPN (that is also those to the most common videoconf systems)

```
pull-filter ignore "redirect-gateway"
route 132.229.214.0 255.255.255.0 vpn_gateway
```

### Example 3: VPN-bypass multiple IPs

Add the lines in the following code snippet somewhere in your `.ovpn` file if you want to

- Tunnel through the VPN the connections to the IL/STRW servers that have IP in the range 132.229.214.0/24
- Tunnel through the VPN the connections to the IL web server 132.229.227.253
- Let all other connections unaffected by the VPN (that is also those to the most common videoconf systems)

```
pull-filter ignore "redirect-gateway"
route 132.229.214.0 255.255.255.0 vpn_gateway
route 132.229.227.253 255.255.255.255 vpn_gateway
```

### Example 4: Exclude IP from VPN tunnel

Add the lines in the following code snippet somewhere in your `.ovpn` file if you want to

- Tunnel through the VPN all connections but those to the IL web server 132.229.227.253

```
route 132.229.227.253 255.255.255.255 net_gateway
```

## LION Physics

For the PHYSICS domain there is a separate Windows Based VPN server, that provides the same functionality as the OpenVPN example above, but is better geared to the Windows environment.

Before you can setup a VPN connection you need to contact [helpdesk@physics.leidenuniv.nl](mailto:helpdesk@physics.leidenuniv.nl) to obtain

a Secret Key and have your PHYSICS account enabled for VPN use.

You can connect from:

- [Windows](#) or
- [MacOS](#)

Once you have a VPN connection you can use:

- Remote Desktop to connect  
to your LION Desktop computer

1)

This file contains confidential information and should be treated/protected like a password. Do not store it on public or shared devices.

2)

Make sure that you are using a client compatible with OpenVPN v2.4+

From:

<https://helpdesk.strw.leidenuniv.nl/wiki/> - **Computer Documentation Wiki**

Permanent link:

<https://helpdesk.strw.leidenuniv.nl/wiki/doku.php?id=vpn&rev=1648126376>

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