Using TU Eindhoven's VPN with Ubuntu

Using TU Eindhoven's VPN with Ubuntu 14.04 or 16.04

TU Eindhoven’s Virtual Private Networking (VPN) service can be used on Linux computers.

This document describes how to do it using Ubuntu 14.04 or 16.04 with its default GUI environment (Unity).

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Installing VPN client software on Ubuntu

We need to be sure software is installed is for Cisco AnyConnect Compatible VPN (openconnect). To do this, install the Ubuntu package named network-manager-openconnect-gnome (with its dependencies).

One way to do this is by opening a terminal (e.g. by typing Ctrl-Alt-T), then typing

```
sudo apt-get -y install network-manager-openconnect-gnome
```

and supplying your password. Another way is using the Ubuntu Software Center.

Once this is done, you can create a VPN connection of the right type.

Configuring VPN to TU/e on Ubuntu using the GUI

To configure a VPN connection, on your Ubuntu desktop, click on the networking icon in the top right-hand menu (the icon shape varies depending on the state of your networking connections).

A menu will open. In that menu, Enable Networking and Enable Wi-Fi can be enabled or disabled by clicking on them. Of course, Enable Networking must be enabled, and you need a working Internet connection (by cable or Wi-Fi) before you can use a VPN connection.

Now, select VPN Connections. Initially, no VPN connection will be shown.
Depending on which software you have installed, a menu item `Configure VPN...` may be shown. If present, you can use this to configure the TU/e VPN connection.

Alternatively, click on `Edit Connections ...` menu item, then `Add`,

or to go to `System Settings → Network`, then click `+`, select VPN and press `Create ...`:
You will be asked to choose a connection type. Select Cisco AnyConnect Compatible VPN (openconnect):

Click Create .... The following dialog appears:
(On Ubuntu 14.04, the Software Token Authentication part is missing.)

Fill in a connection name of your preference. As the gateway, fill in `vpn2.tue.nl`. You don’t need to specify a certificate.¹ Click Save ....

¹ If you do, select `/etc/ssl/certs/DigiCert_Assured_ID_Root_CA.pem`.
You now have a new item in the VPN Connections submenu. Select it to enable it:
The following dialog will pop up (Ubuntu 16.04 shown on the left, Ubuntu 14.04 on the right):

Next to GROUP, select the range of traffic you want to go through the VPN connection. Specify your TUE domain username and password. If you check Save passwords, your password will saved in your login keyring, which is encrypted, but automatically unlocked when you log into the Ubuntu GUI.²

Then, click Login.

If your credentials are correct, the connection will be established:

² This will allow anyone who cracks your Ubuntu account to use your TUE password on every service for which it is used, unless you set a password on the keyring.
To break the VPN connection, select the checked `vpn2.tue.nl` menu item.
The low-level VPN connection name is `vpn0`:
Configuring VPN to TU/e on Ubuntu using the command line

Instead of using GUI configuration, you can connect and disconnect using the openconnect command line application, which is installed by installing Ubuntu's openconnect package. A script to automate connecting to vpn2.win.tue.nl using this command can be found at

http://www.win.tue.nl/~rp/bin/vpn2

To use it:

1. download it
2. make it executable
3. inspect its contents (in case it has been tampered with)
4. run it from the command line:
   ```bash
   vpn2 start # to create a VPN connection to vpn2.tue.nl
   vpn2 stop # to break it if it exists
   vpn2 restart # to stop, then start
   ```

It creates a networking interface called tun0 rather than vpn0.
Other than that, the effect appears to be the same as by using the GUI.