

# VPN (Virtual Private Network) at the Free University of Bolzano/Bozen and EURAC

## Infos regarding the usage of VPN

<https://knowledge.scientificnet.org/workspace/#nd=ab7442f9-c4d0-4ffc-a4f7-1e0d84515cc9&ld=17f4d8ce-edff-4d42-ad33-d98e2cdebc35&ln=it>

## Instructions for MacOS X

We recommend to download and install [Cisco AnyConnect](#) from Apple Store for iOS and connect via Browser to <https://vpn.scientificnet.org> for Mac OSX

### Unsupported Instructions for MacOS X and iOS - use at own risk!

Download, unpack (doubleclick), then doubleclick the unpacked file to install it:

[vpn.scientificnet.org.networkconnect.zip](https://vpn.scientificnet.org.networkconnect.zip)

Under Network settings a new item should appear:

- VPN (IPSec)
- change username to your username
- click Connect and enter your password

### Uninstalling if installation is corrupt in MacOSx

Uninstallation has to be done by running this command on terminal:

```
sudo /opt/cisco/vpn/bin/vpn_uninstall.sh
```

Should the uninstallation or reinstallation be corrupt, run this command on terminal:

```
sudo pkgutil -forget com.cisco.pkg.anyconnect.vpn
```

## Instructions for iOS 9

1. Press Settings
2. Choose General
3. Nearly at the end, click VPN
4. Next click: Add VPN Configuration...
  1. **Type:** IPSec
  2. **Description:** VPN Scientificnet

3. **Server:** vpn.scientificnet.org
4. **Account:** <your-unibz-username>
5. **Password:** <your-unibz-password> or leave empty to ask every time!
6. **Group Name:** Unibz
7. **Secret:**

NrW2z9sj8g3kjJrzXxJwRPbIRNInWakL

5. Press Done in upper right corner of window
6. Status: Slide Button to the right to connect
7. Enter Password if not already entered above

## Instructions for Android 7

1. Press Settings
2. Find VPN Settings, depends on Model
3. Next click: Add VPN Configuration...
  1. **Name:** Unibz VPN
  2. **Type:** IPSec Xauth PSK
  3. **Server-Address:** vpn.scientificnet.org
  4. **IPSec Identifier:** Unibz
  5. **IPSec Pre-shared Key:** NrW2z9sj8g3kjJrzXxJwRPbIRNInWakL
  6. **Account:** <your-unibz-username>
  7. **Password:** <your-unibz-password> or leave empty to ask every time!
1. Press Done
2. Status: Slide Button to the right to connect
3. Enter Password if not already entered above

## Instructions for Linux using openconnect Client (recommended)

### Installation

Run this command to install openconnect client and OpenConnect plugin GNOME GUI

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

Once installed open Settings and go to Network, press + right of the VPN section.



Select **Cisco AnyConnect Compatible VPN (openconnect)** and fill out as shown below:





## Details

1. Make available to other users: tick if you want to allow other users on your system to use the VPN

## Identity

1. Name: VPN work (use a descriptive name)
2. VPN Protocol: Cisco AnyConnect
3. Gateway: vpn.scientificnet.org
4. CA Certificate: download from [here](#), not really necessary!

The rest can be left as it is.

## IPv4/IPv6

1. IPv4 Method: Automatic (DHCP)
2. DNS: ON
3. Routes: ON

Press **Apply**

Now you can enable the VPN connection!

Move the slider from OFF to ON, a small window should open,



make sure that for VPN Host you select: **vpn.scientificnet.org**

Enter your unibz Username, without @unibz.it and your unibz Password.



Press **Login**

If all goes well the slider should remain in ON position, if not check the Log. To verify launch this command in a terminal:

```
ifconfig
```

You should get a new interface -> vpn0: with an IP Address: 172.xxx.xxx.xxx

## Instructions for Linux vpnc Client

1. Install vpnc

```
sudo apt-get install vpnc
```

## 2. For Unibz:

- Create configuration file unibz.conf. Download from here: [unibz.conf](#)

### 2.a For Eurac:

- Create configuration file eurac.conf. Download from here: [eurac.conf](#)

IPSec obfuscated secret needs to be on a single line.

Replace <your-windows-login> with your username.

For Unibz:

```
sudo vi /etc/vpnc/unibz.conf
```

```
#####  
IPSec gateway vpn.unibz.it  
IPSec ID Unibz  
IPSec obfuscated secret  
06294C134E0BEBDA4B449B56BFD305D35D12DABF4044EDB6794926C2CA6D5AEDFE6342DF190E  
566EB11215DDC1591D5CB6ABEBEB593693C6D0B2077D78034B6AFEEA3221E77F4  
C9858DD711AA8DE58F6  
Xauth username your-windows-login  
# e.g. Xauth username fmoser (not fmoser@unibz.it)  
#####
```

apply this rights:

```
sudo chmod 600 /etc/vpnc/unibz.conf
```

```
sudo chown root.root /etc/vpnc/unibz.conf
```

```
sudo ls -l /etc/vpnc/unibz.conf  
-rw----- 1 root root 250 2009-05-02 15:54 /etc/vpnc/unibz.conf
```

For Eurac:

```
sudo vi /etc/vpnc/eurac.conf
```

```
#####  
IPSec gateway vpn.scientificnet.org  
IPSec ID Eurac  
IPSec obfuscated secret  
56A1CD68CC3AD33B48DB0F727ADDBC0A354DE3287D15C8526ED4CEDE4BC2ACDD1BB2460BC235  
4671A405F6150EA7C294C4DBC4CF9FFE45873BECAD3A2A738C5053BE34F709D592B50AD5BC47  
2CDFF350  
Xauth username your-windows-login  
# e.g. Xauth username fmoser (not fmoser@eurac.edu)
```

```
#####
```

apply this rights:

```
sudo chmod 600 /etc/vpnc/eurac.conf  
sudo chown root.root /etc/vpnc/eurac.conf
```

```
sudo ls -l /etc/vpnc/eurac.conf  
-rw----- 1 root root 250 2009-05-02 15:54 /etc/vpnc/eurac.conf
```

### 3. Start vpnc

For Unibz:

```
sudo vpnc-connect --domain unibz unibz
```

This will first ask for your sudo password and then your <unibz-password>

For Eurac:

```
sudo vpnc-connect --domain eurac eurac
```

This will first ask for your sudo password and then your <eurac-password>

### 4. Stop vpnc

```
sudo vpnc-disconnect
```

## Possible errors

If you get the following error: **vpnc-connect: no response from target**  
try adding the line below to your configuration file (unibz.conf)

### NAT Traversal Mode cisco-udp

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When one attempts to connect to their VPN after installing and configuring vpnc on Ubuntu Oneiric, the following error occurs:

```
root@ubuntu:~# vpnc-connect  
Error: either "to" is duplicate, or "ipid" is a garbage.
```

It appears that the Ubuntu package vpnc comes with an old version of vpnc-script. This script is what sets up all the addresses and routes for you. The OpenConnect project provides an updated / revised release of this script. Download the latest copy from [here](#). Replace the vpnc-script script that comes with the Ubuntu vpnc package: /etc/vpnc/vpnc-script

Access via ssh not possible, MTU value to high!

In some cases the MTU value is too high, which results in an very strange situation: ping works, but ssh hangs at this point:

... debug1: sending SSH2\_MSG\_KEX\_ECDH\_INIT debug1: expecting SSH2\_MSG\_KEX\_ECDH\_REPLY

There are 2 bug reports for this:

<https://bugs.launchpad.net/ubuntu/+source/network-manager/+bug/1110787>

<https://bugs.launchpad.net/ubuntu/+source/openssh/+bug/1254085>

and a possible solution/workaround for Linux Mint:

<https://community.hide.me/threads/setup-problem-on-linux-mint-17.1839/>

Check the current MTU value:

```
ip link | grep mtu
```

Set MTU value on interface eth0 to 1392

```
/sbin/ifconfig eth0 mtu 1392
```

## Decode Group Password

[cisco vpnclient password decoder](#)

# Instructions for Linux Cisco AnyConnect Client

## Installation

1. Open with your browser (tested with firefox 11.0) the following URL:

<https://vpn.scientificnet.org>

2. Enter your Username and password, then press **Login**

3. A "Warning - Security" Windows opens: This will install the Cisco AnyConnect Client in /opt/cisco of your Platform.

4. Press **Run** on the "Warning - Security" Window



5. In order to install Cisco AnyConnect, Admin (sudo) rights are required; a Window opens,

enter your local password.



6. The Cisco AnyConnect is installed and running, you can close the URL.



## Launching Cisco AnyConnect GUI

This allows you to connect and disconnect the VPN service.

```
/opt/cisco/anyconnect/bin/vpnui
```

Please note the vpnagentd must be running for this

- `ps auxww | grep vpn`

```
root      1759  0.0  0.3 17984  7644 ?        S      12:58   0:00  
/opt/cisco/anyconnect/bin/vpnagentd
```

## Launching Cisco AnyConnect NON-GUI

This allows you to connect and disconnect the VPN service.

- `/opt/cisco/anyconnect/bin/vpn`

```
Cisco AnyConnect Secure Mobility Client (version 3.0.5080) .
```

```
Copyright (c) 2004 - 2011 Cisco Systems, Inc.  
All Rights Reserved.
```

```
>> state: Disconnected  
>> state: Disconnected  
>> notice: Ready to connect.  
>> registered with local VPN subsystem.  
VPN> connect vpn.unibz.it  
connect vpn.unibz.it  
>> contacting host (vpn.unibz.it) for login information...  
>> notice: Contacting vpn.unibz.it.  
VPN>  
>> Please enter your username and password.  
0) clientless  
1) scientificnetwork  
Group: [clientless]  
  
Username: <your-username>  
Password:
```

```
>> state: Connecting
>> notice: Establishing VPN session...
>> notice: Checking for profile updates...
>> notice: Checking for product updates...
>> notice: Checking for customization updates...
>> notice: Performing any required updates...
>> state: Connecting
>> notice: Establishing VPN session...
>> notice: Establishing VPN - Initiating connection...
>> notice: Establishing VPN - Examining system...
>> notice: Establishing VPN - Activating VPN adapter...
>> notice: Establishing VPN - Configuring system...
>> notice: Establishing VPN...
>> state: Connected
>> notice: Connected to vpn.unibz.it.
VPN>exit
```

## Uninstalling the AnyConnect Client

The client comes with an uninstallation script

- `sudo /opt/cisco/vpn/bin/vpn_uninstall.sh`

However it doesn't actually uninstall everything properly, it removes files but leaves behind directories.

You can clean up what it leaves behind by deleting the directory `/opt/cisco/` and `/opt/.cisco/`

- `sudo rm -r /opt/cisco /opt/.cisco`

Per-user configuration is stored in your home directory in a file called `.anyconnect`

From:

<https://wiki.inf.unibz.it/> - **Engineering-Tech Wiki**

Permanent link:

<https://wiki.inf.unibz.it/doku.php?id=auth:howto:linux:vpnclient&rev=1587471400>

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