

IMSc Shell/VPN access - quick configuration guide

1. Generating your Key pair – For Shell & VPN connectivity

Install openssh if your system doesn't already have it.

The commands below are to generate an RSA key. You can also generate a DSA key by replacing rsa everywhere below by dsa. Run the command

```
ssh-keygen -t rsa -b 2048
```

The above command will generate two files:

```
$HOME/.ssh/id_rsa
```

```
$HOME/.ssh/id_rsa.pub
```

You should send the **id_rsa.pub** to sysadmin@imsc.res.in for enabling only shell access to IMSc and no need to proceed further steps.

2. VPN Connectivity - Generating Certificate Signing Request(CSR) from OpenSSH private Key

If you have an RSA private key for openssh then it is a 2048-bit SSL private key as well. You can create a certificate signing request for it with the following command (where we assume that **\$HOME/.ssh/id_rsa** is your private key):

```
openssl req -new -extensions v3_req -key $HOME/.ssh/id_rsa -out \  
$HOME/.ssh/id_rsa.csr [single line command with line-break as \ ]
```

The following information need to be given by user.

Country:	IN
State:	TN
Locality:	Chennai
Organization:	The Institute of Mathematical Sciences
Org Unit:	one of (Physics / Mathematics / TCS / Computational Biology)
Common Name:	Full Name of User
Email:	IMSc email address

This will create the CSR file.

```
$HOME/.ssh/id_rsa.csr
```

You should mail the above CSR file by indicating the OS(Linus/Mac/Windows) to be used for the VPN connectivity to sysadmin@imsc.res.in

3. Installing the Openvpn configuration files

The following files will be e-mailed to you by Sysadmin in tar gzip file.

<code>imsc_lan.conf</code>	→ this is for testing vpn in IMSc campus
<code>imsc_wan.conf</code>	→ vpn configuration using <code>access.imsc.res.in</code>
<code>imsc_wan_naccess.conf</code>	→ vpn configuration using <code>naccess.imsc.res.in</code>
<code>imscvpnc.crt</code>	→ IMSc certifying authority file
<code>client.crt</code>	→ Your certificate, signed by IMSc Certifying Authority

In addition, you need to copy your private key `$HOME/.ssh/id_rsa` already generated as `client.key` in the location as indicated as per OS.

The file `id_rsa/client.key` should not move out of your machine(laptop/desktop)!

Use the following command to extract the configuration files.

```
tar -zxvf <config-file.tar.gz>
```

Here is the location of the configuration files depending on your operating system.

System	Directory	Remarks
GNU/Linux	<code>\$HOME/.ovpn/</code>	Create the <code>.ovpn</code> directory for file copying
Mac OS X	<code>\$HOME/Library/openvpn</code>	Create the directory <code>openvpn</code> for file copying
MS Windows	<code>\Program Files\OpenVPN\config</code>	Change the file extension with <code>.ovpn</code> instead of <code>.conf</code> under MS-Windows

4. Configuration of openvpn

4.1 Linux:

1. Network/Wifi Icon --- > VPN Connections - - - > Configure VPN - - - > (+) Add a new connection - - - > Import a saved VPN Configuration

Type `.ovpn` to display hidden `ovpn` config folder and choose one of the following file.

a. choose `imsc_wan.conf`

type your passphrase in `* User key password * box`

b. `ipv4 settings` - - - > `Routes` - - - > Use this connection only for resources on its network (Option to be ticked)

Repeat the above steps to import `imsc_wan_naccess` configuration.

Note: If `* Configure VPN *` option is not available, you need to install the following packages.

The package names may be different for various Operating systems/Linux distribution. For debian/ubuntu use the following command to install. You need to reboot the system after installation.

```
# apt-get install network-manager-openvpn-gnome openvpn
```

4.2 Mac OS X Tunnelblick

Download tunnelblick from following link.

<https://tunnelblick.net/downloads.html> and install the `dmg` file and open tunnelblick. If you install correctly it will show tunnel icon in the panel.

Download attachment files as indicated above in Section 3

Use text editor to open `imsc_wan.conf` comment out `askpass` (“add ! symbol before `askpass`”)

Drag and drop the `imsc_wan.conf` to tunnelblick icon and try to connect

In case if you have difficulty in importing existing configuration files, please send new CSR file for new set of configuration files.