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Remote computer setup

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Objective

The objective of the present document is to walk the students through the steps required to connect remotely to the Laboratory computers, how to manipulate the new interface, how to share files with the remote environment and, if required, how to start and restart the remote server.

Note

The instructions below require you to know your creditentials (i.e. the account name, the IP and the port). To know which remote computer has been assigned to you, please open the *Lab 0: Remote computer assignment* file that has been provided.

1.1 TUM VPN

Basically, go to `https://www.lrz.de/services/netz/mobil/vpn_en/anyconnect_en/` and follow the instructions provided by the university

1.2 Remote accounts credentials

Each student will be assigned a computer with a dedicated IP. The IPs follow this rule:

`10.162.12.X`

where `X` is the computer assigned to you by the assistant. All the accounts available are named `cps-student-Y` and have for password `cps2021`.

> Remark:
>
> Make sure to solely connect on the computer you have been assigned to!

1.3 Connecting with ssh

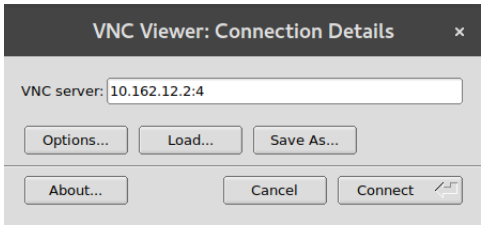
On Linux, install the `ssh` client and on windows, install putty. On Linux, the Lab computer can easily be accessed in `ssh` as follows:

```
ssh cps-student-Y@10.162.12.X
```

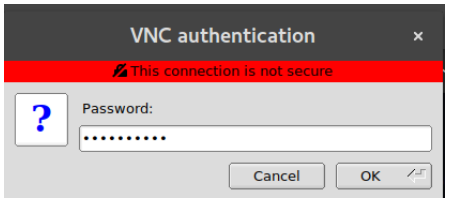
Where `Y` and `X` depends on the account, the IP and the port that have been assigned to you.

1.4 Using TigerVNC

In the folder you have previously downloaded, fetch your installer in either `vnc_viewer/unix/` if you are using a MacOS or Linux based computer or `vnc_viewer/windows/` for windows. In addition, a `java` version is available in `vnc_viewer/java/`. In every cases, no installation is required.



(a) Login IP window



(b) Login password window

Figure 1: TigerVNC login windows

1.4.1 Launching vnc client on Unix

Simply open a terminal, go to the directory `vnc_viewer/unix/` with `cd` (i.e. with `cd vnc_viewer/unix/`). Once there, launch the `vnc` client as follows:

```
./vncviewer
```

Doing so will lead you to a window (Fig. 1a) where you must enter your IP (see the one assigned to you). When the password is required in the following window (Fig. 1b), type `cps2021`. Alternatively, one can directly specify the IP as follows:

```
./vncviewer 10.162.12.X:1
```

Where `X` must be replaced by the lab room computer that has been assigned to you. This way, you will directly end up with the password window (Fig. 1b).

java:

For the `java` executable, the process is similar. Go to the `vnc_viewer/java/` folder and type:

```
java -jar VncViewer-1.10.1.jar
```

to arrive in the IP window (Fig. 1a) or

```
java -jar VncViewer-1.10.1.jar 10.162.12.X:Y
```

to diretly arrive in the password window (Fig. 1b). Where `X` must be replaced by the lab room computer that has been assigned to you and `Y` is your group number. When the password is required, type `cps2021`.

1.4.2 Launching vnc client on Windows

With your file system navigator, go to the `vnc_viewer/windows/` and double click on the executable to start.
On the window that just popped up (Fig. 1a), enter the IP `10.162.12.X:Y` where X must be replaced by the lab room computer that has been assigned to you and `Y` is your group number. When the password is required (Fig. 1b), type `cps2021`.

java:

For the `java` executable, the process is similar. Go to the `vnc_viewer/java/` folder and double click on `VncViewer-1.10.1.jar`.
On the window that just popped up, enter the IP `10.162.12.X:Y` where `X` must be replaced by the lab room computer that has been assigned to you and `Y` is your group number. When the password is required, type `cps2021`.

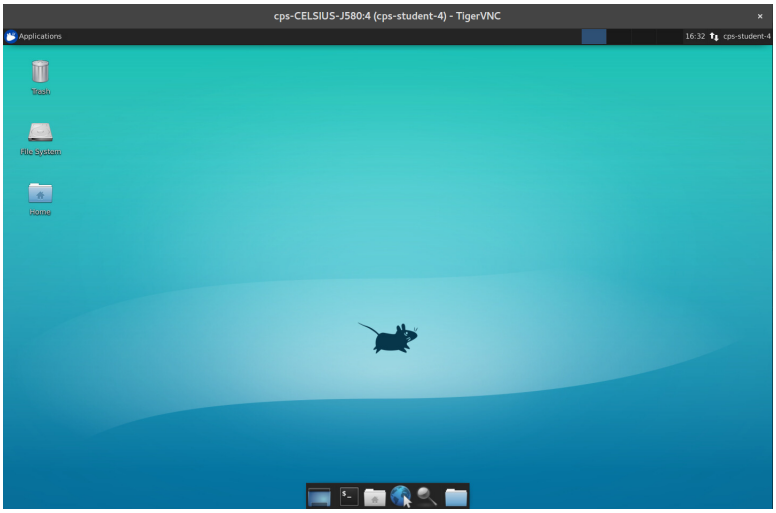


Figure 2: The XFCE virtual desktop

1.5 VNC interface description

The virtual desktop provided is a complete graphical desktop (i.e. XFCE). Once connected, you should see a desktop looking like what is displayed in Fig. 2. This virtual desktop includes everything that you need: web browser, text editor (atom), terminals, file system navigator and so on.

Remark:

Do not shutdown your virtual desktop! Doing so might require the teaching assistant to restart the server and you will waste time. If you are done working, simply close your VNC client.

1.6 Editing files on the remote system

Three options are available to the students:

1. The student can edit files through the VNC client by using either `nano` on the terminal or by launching the pre-installed `atom` editor (by typing `atom`)

2. By connecting to the remote computer with `ssh` and using `nano`, the student can modify directly the files

3. The student can locally edit his/hers/their file(s) and then upload them using the `scp` command (or any Windows equivalent) as follows:

   ```
   scp filename cps-student-Y@10.162.12.X:<path/to/folder>
   ```

   Inversely, students can as well retrieve files from the remote computer as follows:

   ```
   scp cps-student-Y@10.162.12.X:<path/to/file> <path/to/desired/folder>
   ```

1.7 What if the server needs to be restarted ?

If for any reason, the server must be restarted, please contact the teaching assistant!

Remark:

Further options for the `vncviewer` can be found here: `https://tigervnc.org/doc/vncviewer.html`