

Data management

This page presents the way to move data between the different locations used for either processing or storing data. The three main locations are hereafter referred to as: **laptop**, **cluster**, and **NAS**.

- **Laptop**: the personal computer you use for your daily work (usually a laptop)
- **Cluster**: one of the clusters managed by the DCSR (wally or axiom)
- **NAS**: the Network Attached Storage from UNIL

Laptop <-> Cluster

Note: If you work from home, you first need to connect to Unil's VPN using Pulse Secure (see [VPN instructions](#)).

To copy data between your laptop and a cluster you will have to use **scp** (secure copy).

Linux/Mac

Linux and Mac users simply have to open a terminal.

From laptop to cluster: `$ scp /path/to/fileToCopy <username>@<server>: /path/to/dest`

From cluster to laptop: `$ scp <username>@<server>: /path/to/fileToCopy /path/to/dest`

Where:

<code><username></code>	your UNIL username
<code><cluster></code>	wally or axiom
<code><server></code>	<code><cluster>-front1.unil.ch</code>

Examples

To copy file "file.txt" to your home directory:

```
scp file.txt ulambda@wally-front1.unil.ch: ~
```

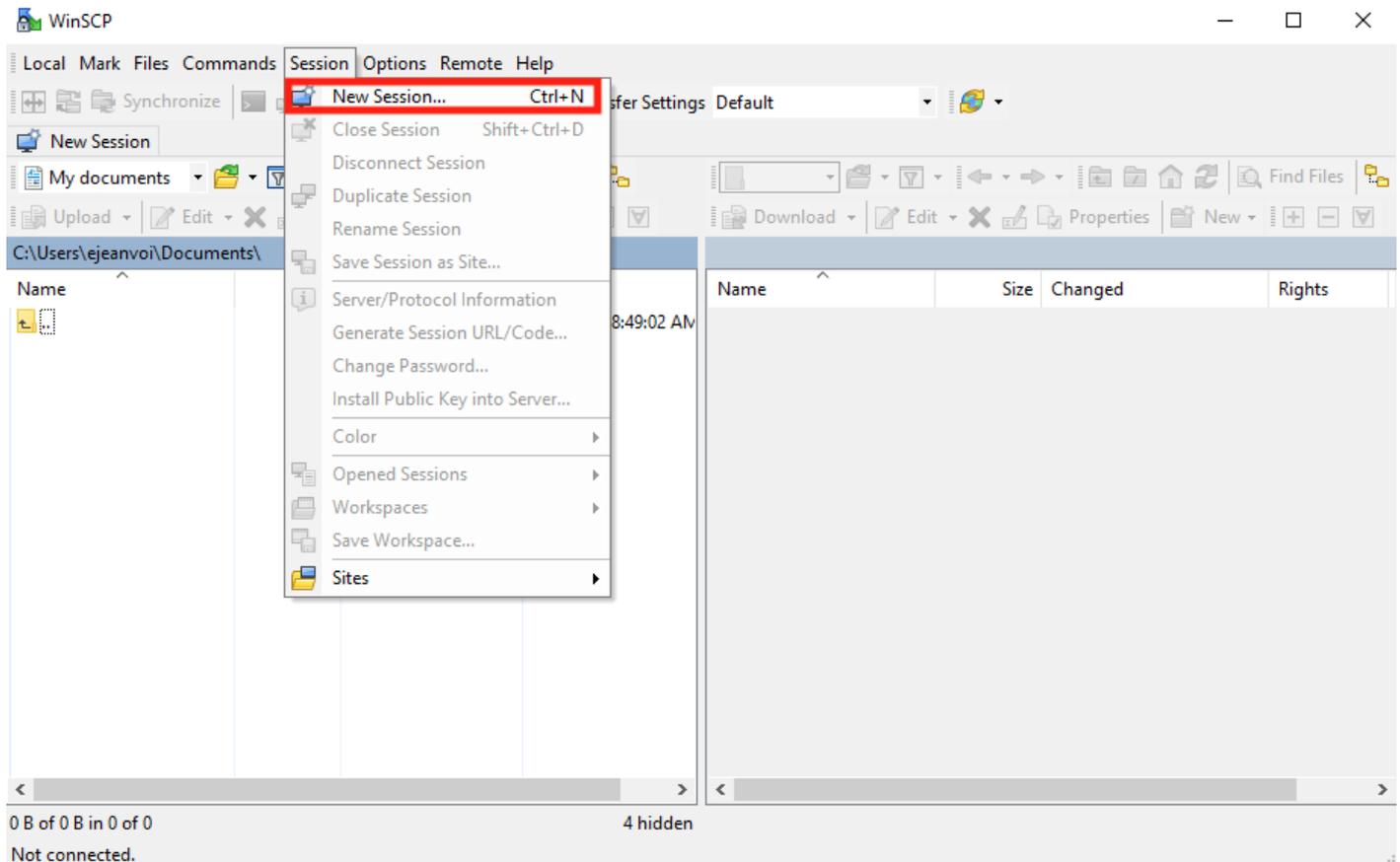
To copy the entire directory "dirA" to your home directory:

```
scp -r dirA u\lambda@wally-front1.unil.ch: ~
```

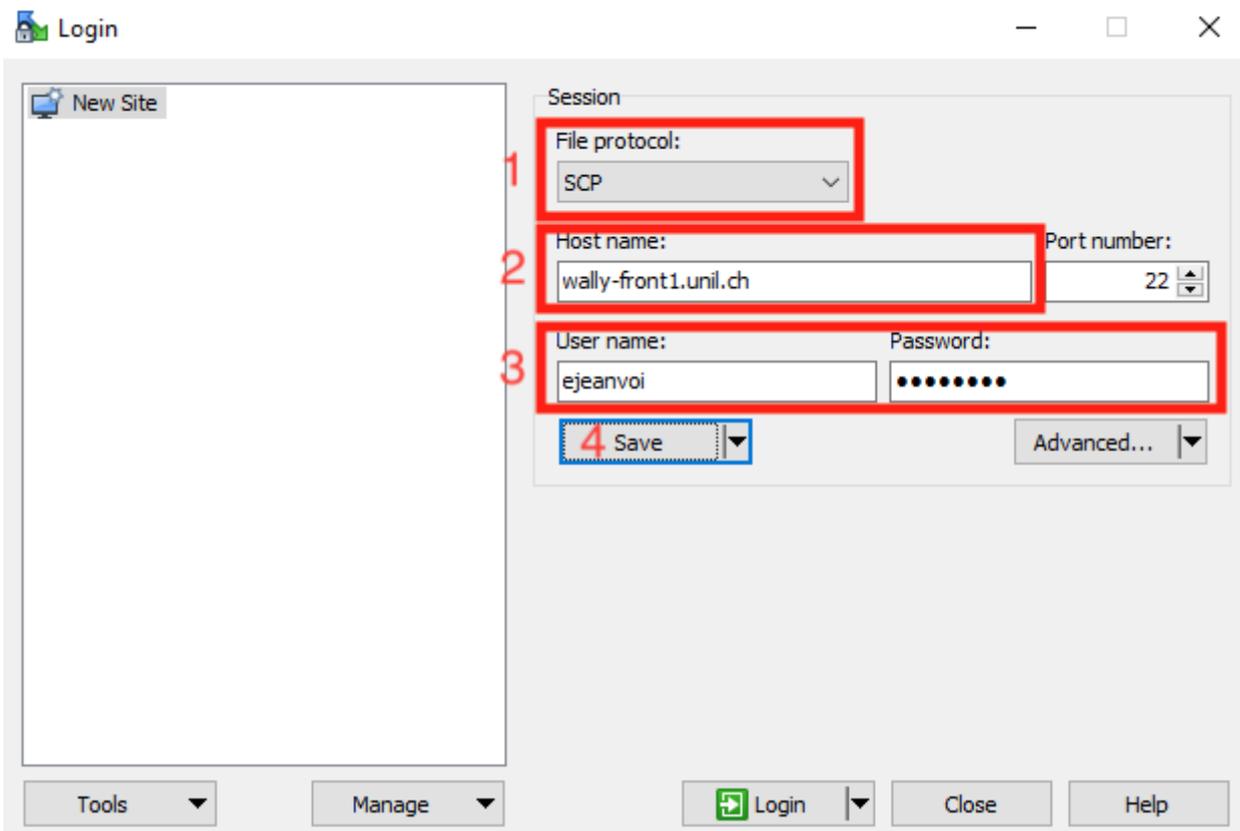
Windows

Windows users can use [WinSCP](#).

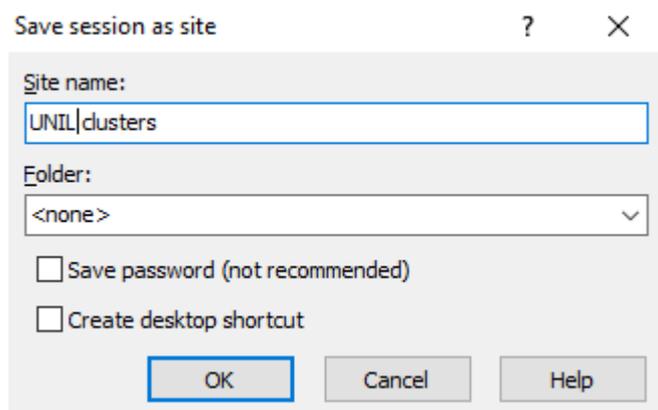
Step 1: create a new session



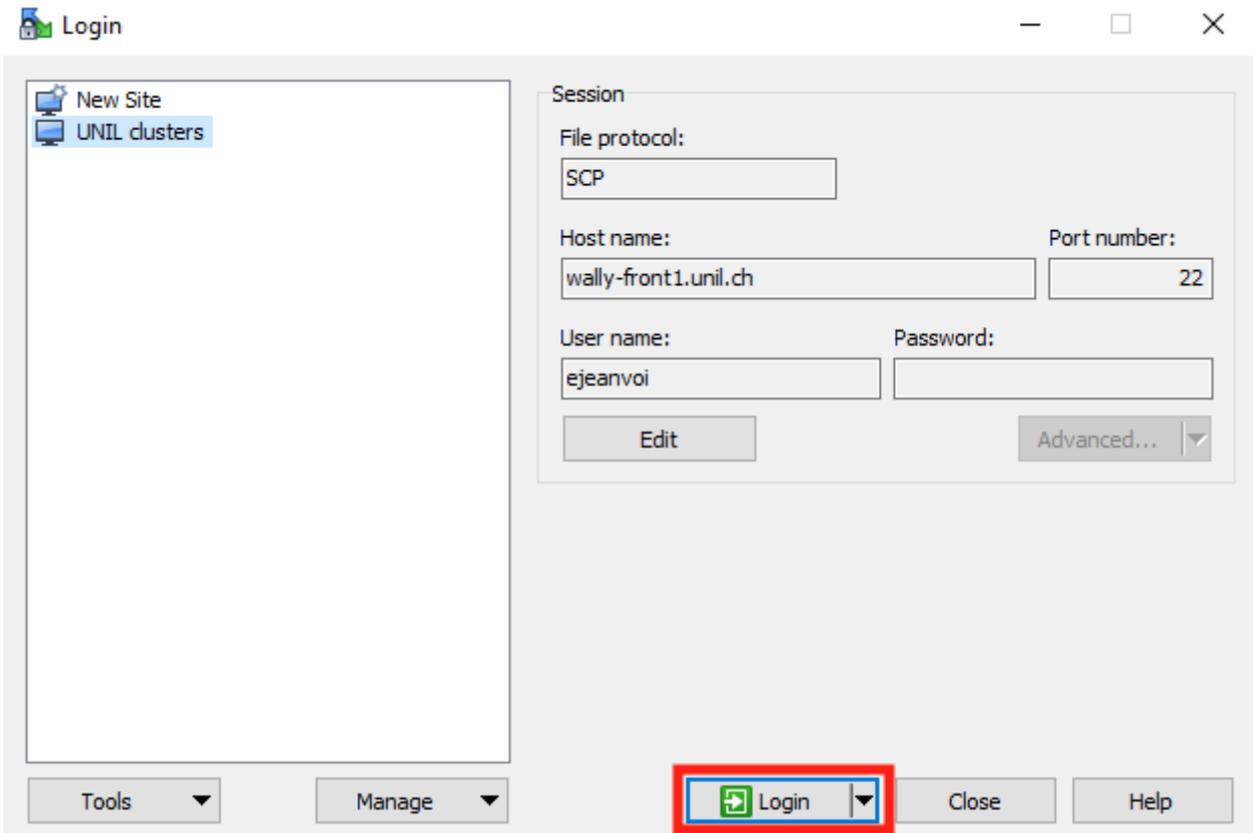
Step 2: enter the configuration elements (SCP file protocol, hostname, and credentials). Finally, save the session details



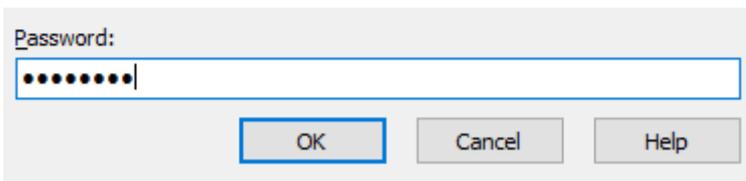
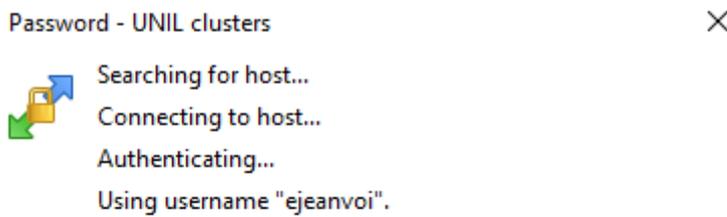
Step 3: enter an explicit session name



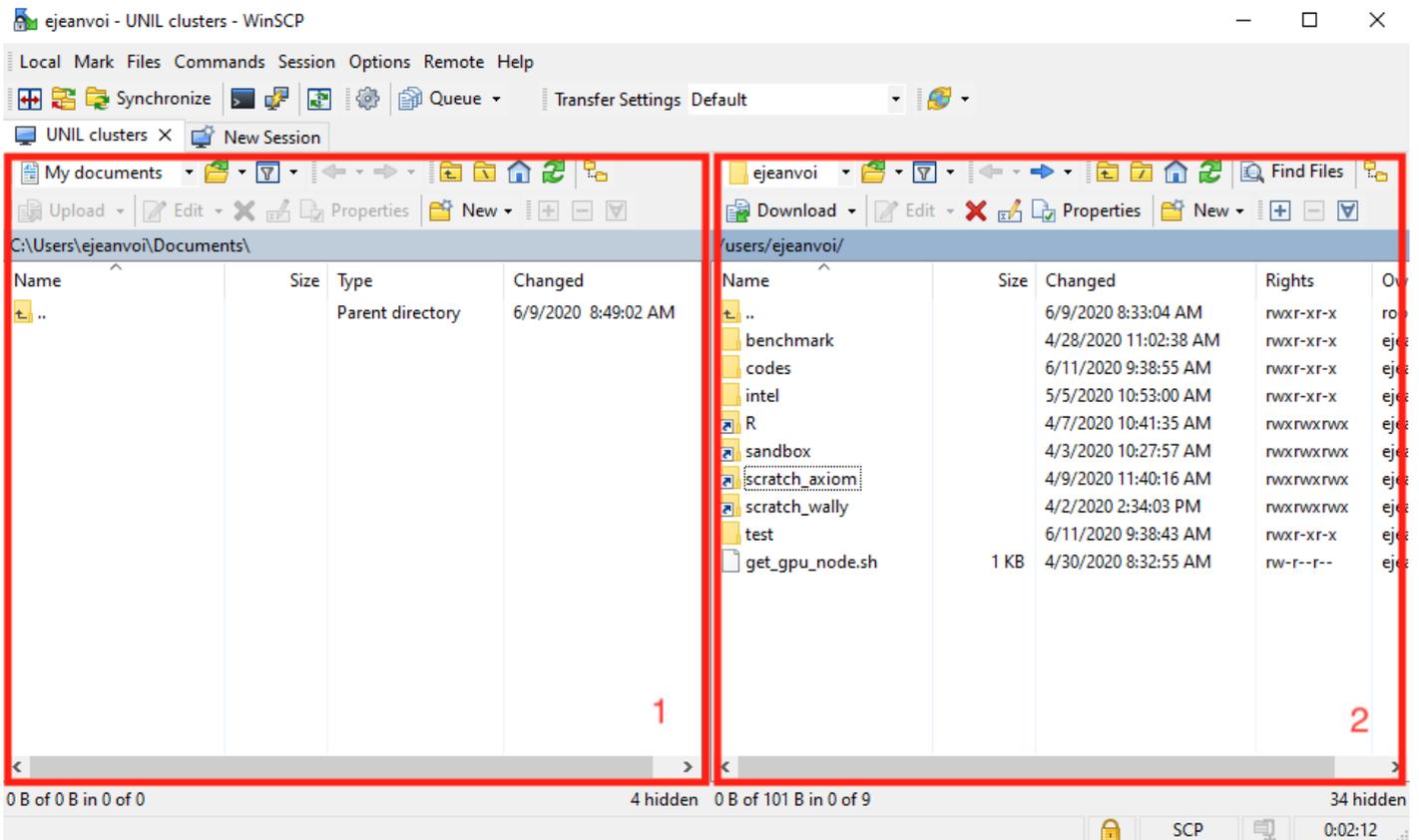
Step 4: login



Step 5: enter your password



Step 6: navigate through folders (1 is for local files, 2 is for cluster files) and copy the files in one way or the other



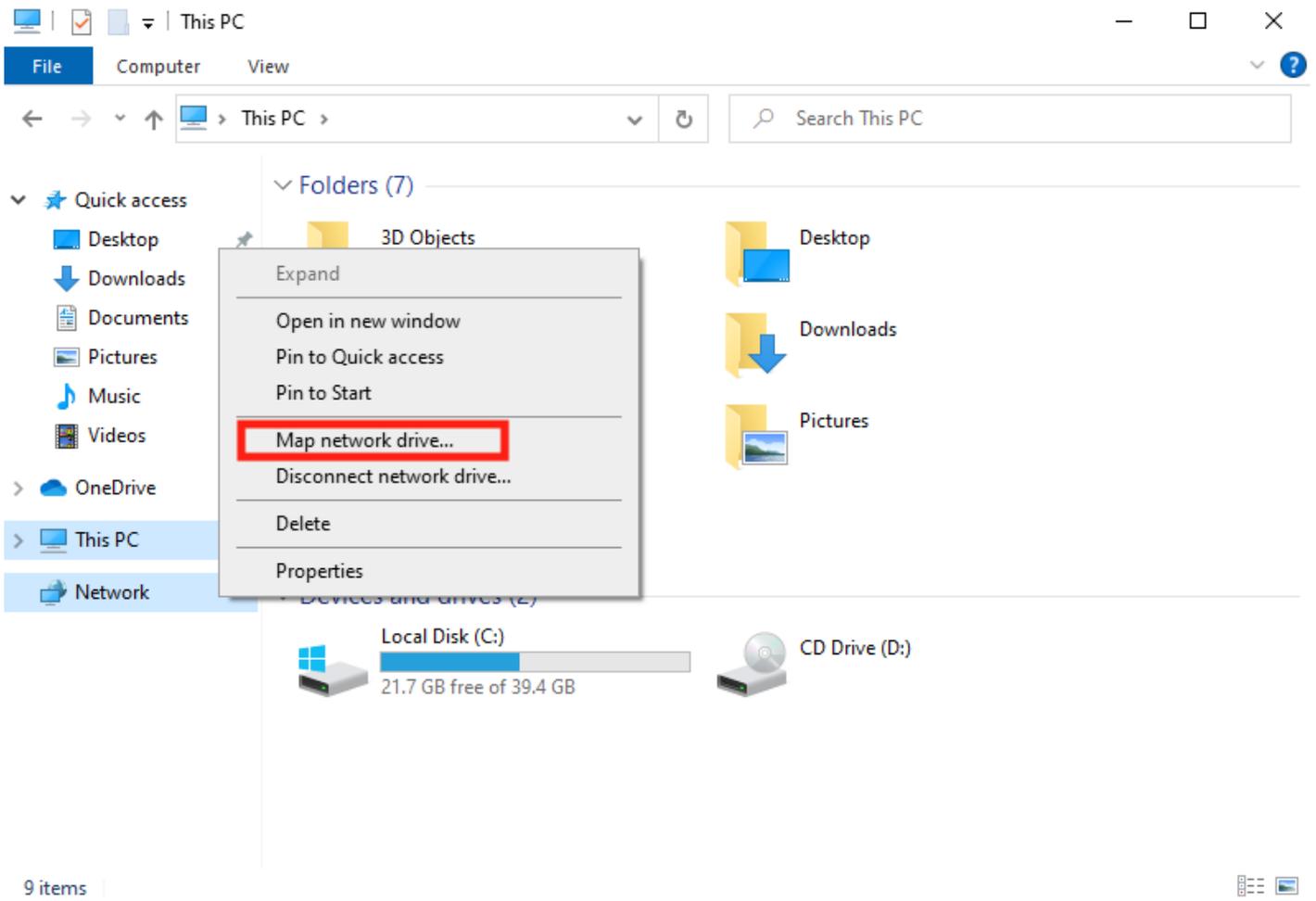
Laptop <-> NAS

Note: If you work from home, you first need to connect to Unil's VPN using Pulse Secure (see [VPN instructions](#)).

Samba server

Windows

Step 1: right click on Network in File explorer and choose "Map network drive..."



Step 2: enter the address of the Samba server and click to finish



What network folder would you like to map?

Specify the drive letter for the connection and the folder that you want to connect to:

Drive:

Folder:

1

Example: \\server\share

Reconnect at sign-in

Connect using different credentials

[Connect to a Web site that you can use to store your documents and pictures.](#)

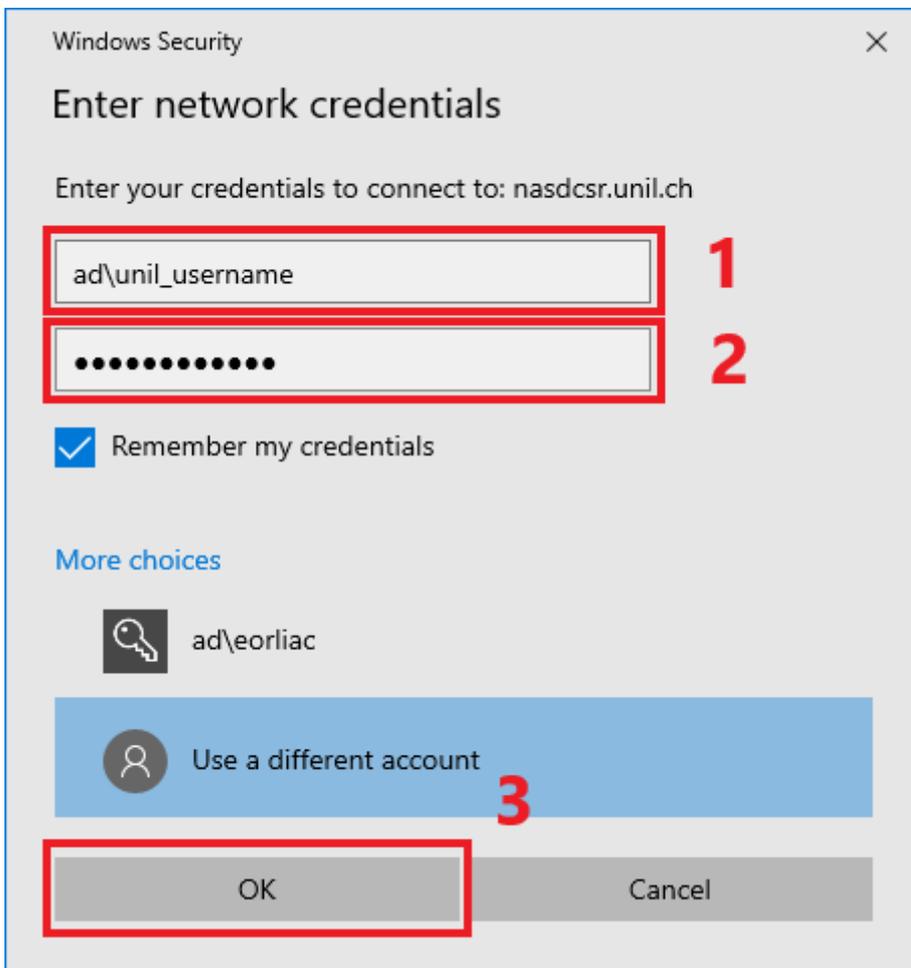
2

Finish

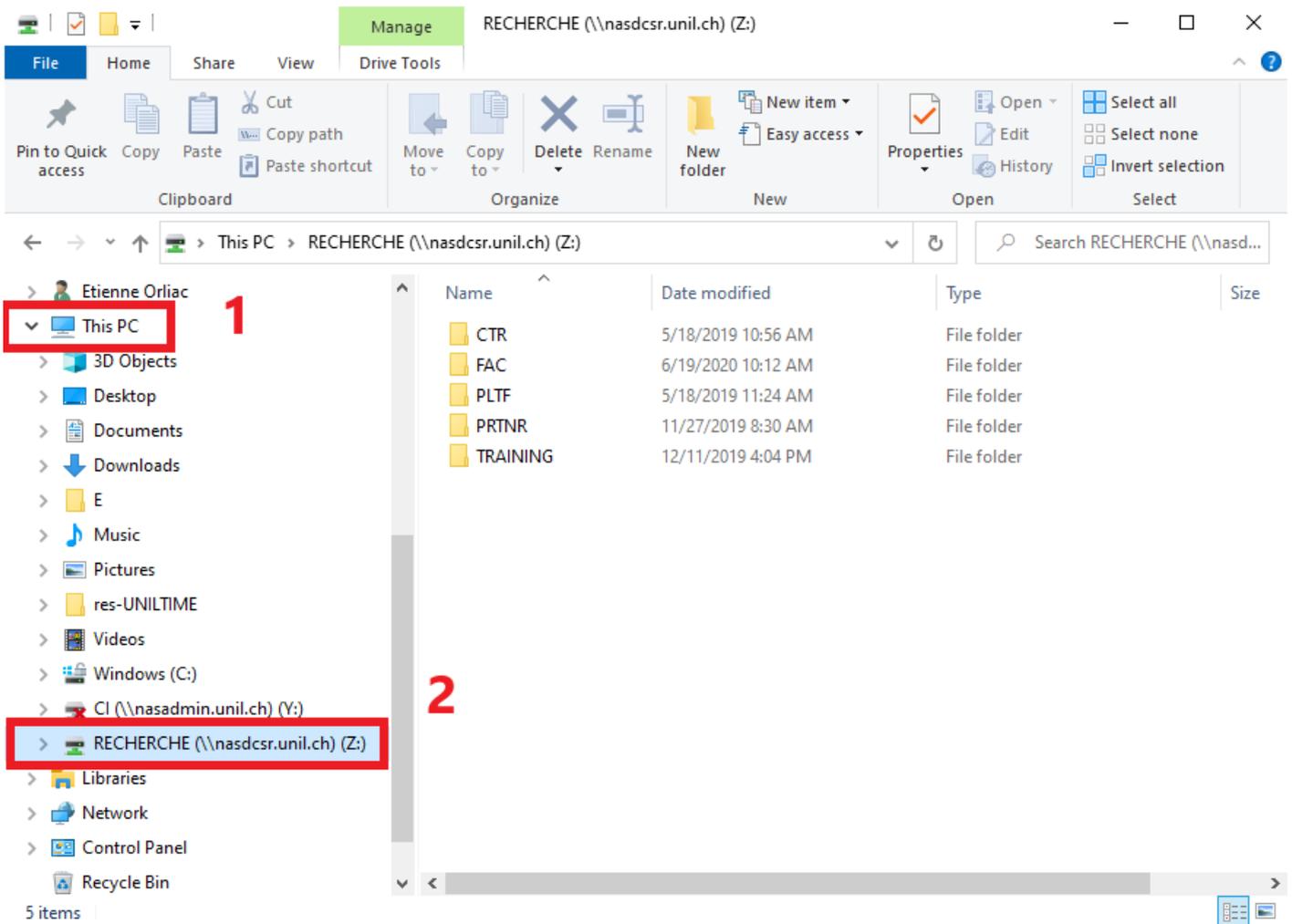
Cancel

Step 3: enter your Unil credentials and clicc "OK"

- username: (for example)
- password



Step 4: click on "This PC" and then on the new network drive



Linux

It is possible to use a GUI but there are as much solutions as desktop managers. So here is a way to mount the NAS using command line interface. **Don't forget to adapt the `username=` field in the `sudo mount` command!**

```
# First install the packages
# Debian/Ubuntu version
$ sudo apt install samba cifs-utils
# Fedora/RedHat version
$ sudo dnf install cifs-utils

# In the following, ~/nas is chosen as a mountpoint, but it could be elsewhere
$ mkdir ~/nasdcsl
$ sudo mount -t cifs -o
username=unil_username, domain=ad, rw, iocharset=utf8, dir_mode=0700, file_mode=0700, uid=$(id -u)
//nasdcsl.unil.ch/RECHERCHE ~/nasdcsl
```

```
# Perform the required operations
$ cd ~/nasdcsr
...

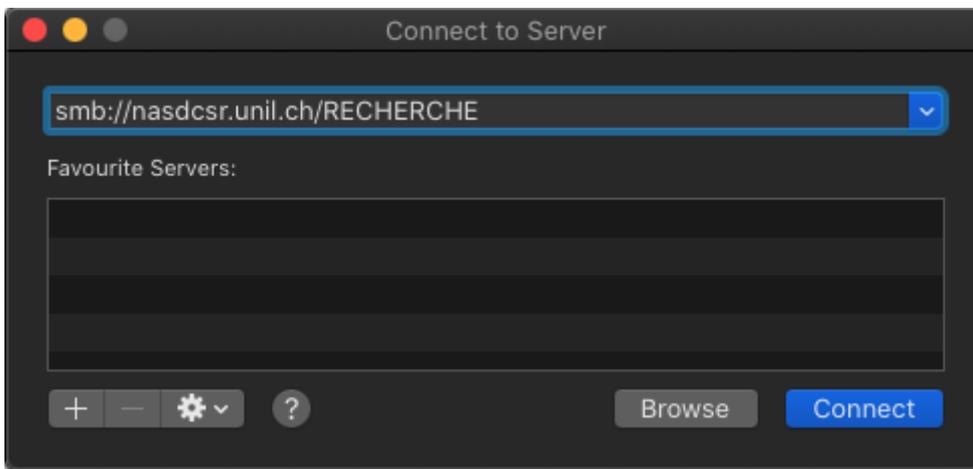
# When finished, don't forget to unmount it
$ sudo umount ~/nasdcsr
```

Mac

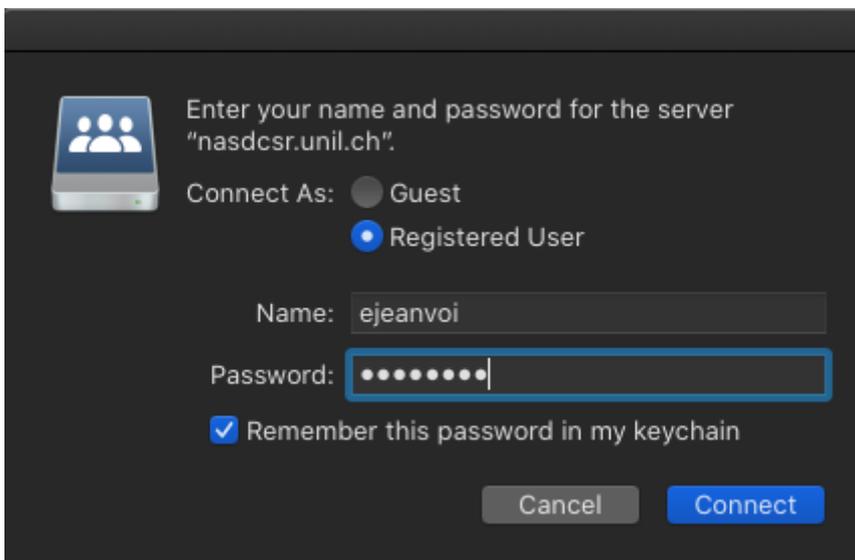
Step 1: open the Finder, in Go menu, select "Connect to Server"



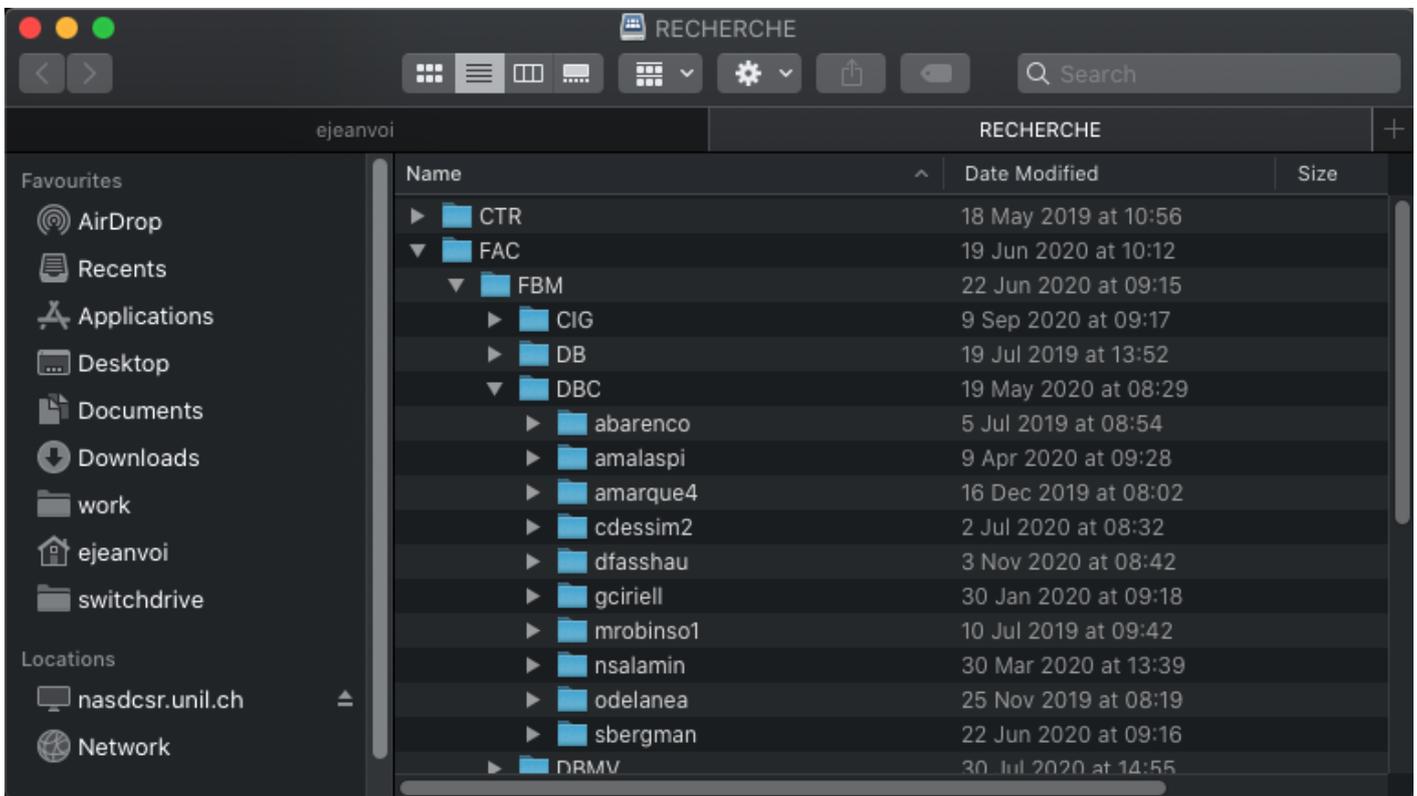
Step 2: enter the NAS url (`smb: //nasdcsr.unil.ch/RECHERCHE`), you also may add this server as a favourite by clicking on + symbol



Step 3: enter your credentials



Step 4: navigate through the directories to find your working directory and push/fetch files as you see fit



Cluster <-> NAS

Note: If you work from home, you first need to connect to Unil's VPN using Pulse Secure (see [VPN instructions](#)).

From the login nodes the NAS is available under /nas. The folder hierarchy is:

```
/nas/FAC/<your_faculty>/<your_department>/<your_PI>/<your_project>
```

Cluster -> NAS

To copy a file to the new NAS:

```
cp /path/to/file /nas/FAC/<your_faculty>/<your_department>/<your_PI>/<your_project>
```

To copy a folder to the new NAS:

```
cp -r /path/to/folder /nas/FAC/<your_faculty>/<your_department>/<your_PI>/<your_project>
```

For more complex operations, consider using rsync. For the documentation see the man page:

```
man rsync
```

or check out this [link](#).

NAS -> cluster

As above, just swapping the source and destination:

```
cp /nas/FAC/<your_faculty>/<your_department>/<your_PI>/<your_project>/file /path/to/dest
```

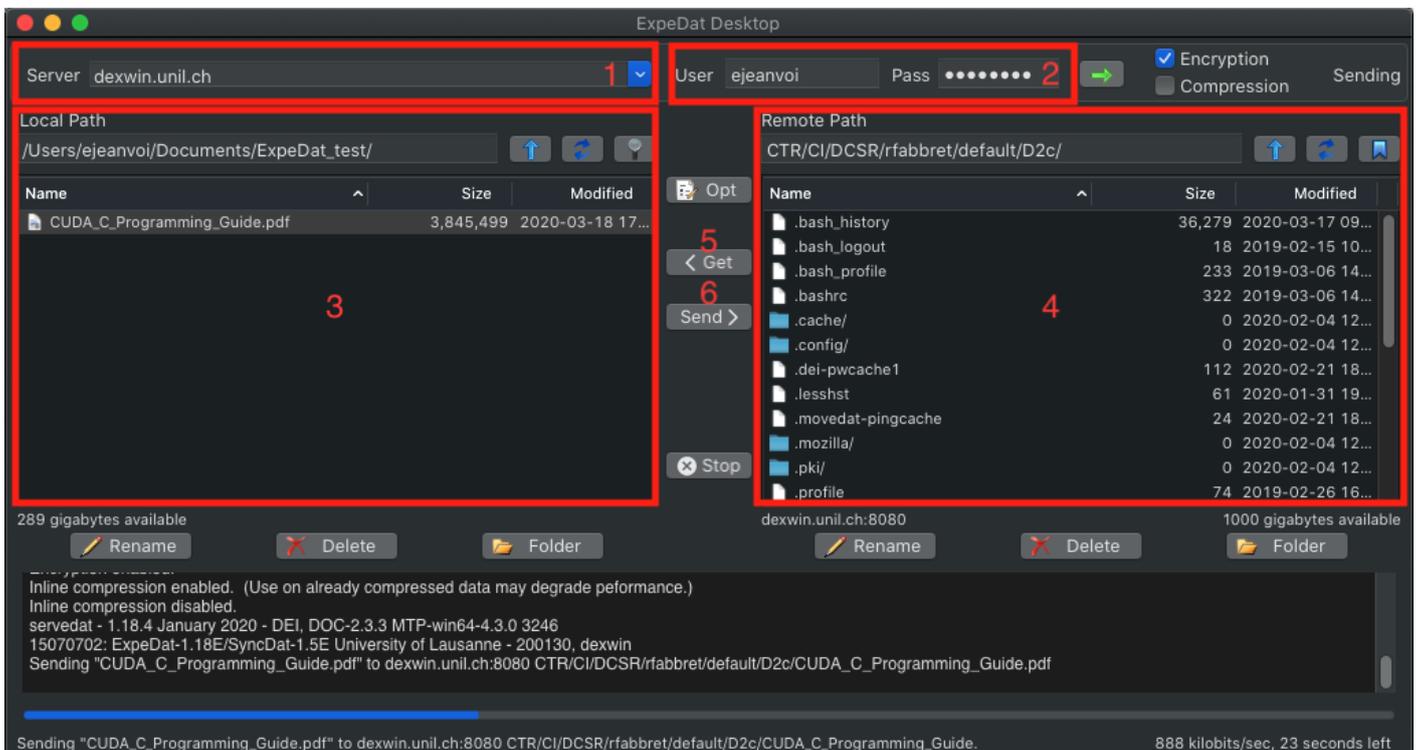
```
cp -r /nas/FAC/<your_faculty>/<your_department>/<your_PI>/<your_project>/folder /path/to/dest
```

Accessing DCSR NAS from CHUV network

Windows and Mac users can install the graphical desktop client from DataExpedition as well if they wish so:

Download Expedat from [here](#), installation instruction from [here](#), and product documentation from [there](#).

Here is an example of ExpeDat session:



On that screenshot you can see:

1. The server of the NAS
2. The user information (login and password)
3. The explorer for the files located on your laptop
4. The explorer for the files located on the NAS (note that the remote path must be set according to your personal working space)
5. The get button to fetch files from the NAS to your laptop
6. The push button to push files from your laptop to the NAS

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