SuperNEMO on a Windows PC

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# CCLyon Access

As mentioned on the supernemo.org website, contact Yves Lemiere by email or on slack for a CCLyon username and password. Documentation for the service is available at this link: [CC-IN2P3 overview — CC-IN2P3](https://doc.cc.in2p3.fr/en/Getting-started/overview.html).

For windows users, access to CCLyon is available through the general command prompt by typing out:

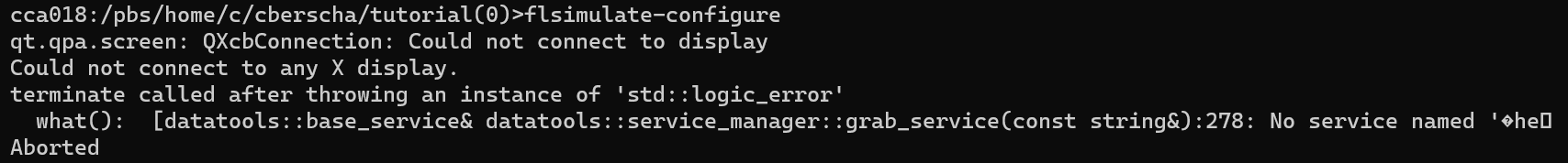
**ssh -Y username@cca.in2p3.fr**

Unlike Linux machines, where you type commands after the $ symbol, the command prompt shows some text followed by > on each line. Once accessing the remote server, the window will ask you to input your password. The password Yves gives you will only be temporary, so when first logging in, the prompt will direct you to change your password.

While the command prompt is sufficient for logging onto CCLyon and changing your password, there are several functions of the SuperNEMO software that are unavailable when you connect via the command prompt.

# Flsimulate

The first error I encountered using the command prompt was when I attempted to generate simulated data with flsimulate, part of Falaise.



I first attempted to work around this error by connecting via vs code (like in the website section below), but that resulted in the same error.

Instead, I recommend using MobaXterm or something similar, which can create the pop-up needed to generate the simulation. MobaXterm is also able to run flvisualize.

Note: there is currently an outstanding error with creating simulated data with this method, where I am unable to change any details of the simulation. Currently, I am only able to create default simulations (2v Se-82).

Additionally, to successfully generate simulated data, you need to create a text file to determine the number of events, and other details for the simulation. The tutorial instructions state to create the file using the commands:

**WRITE COMMANDS**

However, when using MobaXterm, I got this error:

[ERROR]

As a result, instead of the [METHOD] method, I used vi commands to create my text files. This alternative method was able to create the file, and the resulting simulated data, without issue.

[Header 2]: Crash Course – Making a text file with vi

To create a text file, navigate to the desired folder, then type **vi** and enter. You should see a screen like this:

[IMAGE]

To quit without editing, press **Esc** then type **:q!**. To add text, press **i**, then begin typing out your text. When you are done, save the file by first pressing **Esc** then typing:

**:w file\_name.type**

To edit a pre-existing text file, type**:**

**vi file\_name.type**

This takes you back to your file. When you want to save it, press **Esc** then type **:w**. No need to type out the file name for successive saves.

# Website

The method for updating the SuperNEMO website is built only for Mac and Linux systems, so while you are able edit the website on a Windows system, you are unable to visualize your edits before changing the website, which may result in website issues.

As such, it is better to manage the website by remotely accessing a Linux system through a program like vs code.

* Vs code since need to access and edit files
* Got remote Linux access through the university
* Localhost:4000 on browser to view

# ROOT

Accessing ROOT through cclyon is the same for windows users as for mac/linux.

[TRY ON COMMAND PROMPT]

[ADD COMMANDS HERE]

# Working with ROOT files in Python

I use miniconda to create environments and work in Jupyter lab. Unfortunately, the conda-forge root package doesn’t currently work on windows systems. To read and work with root files in my notebooks, I use uproot ([Getting started guide — Uproot documentation](https://uproot.readthedocs.io/en/latest/basic.html)) which can be added to your environment with a simple pip install:

**pip install uproot**

Uproot converts root files to numpy arrays, and can even turn TBranches into pandas series.