Remote Access Procedure at SOLEIL PROXIMA-1

NoMachine Setup

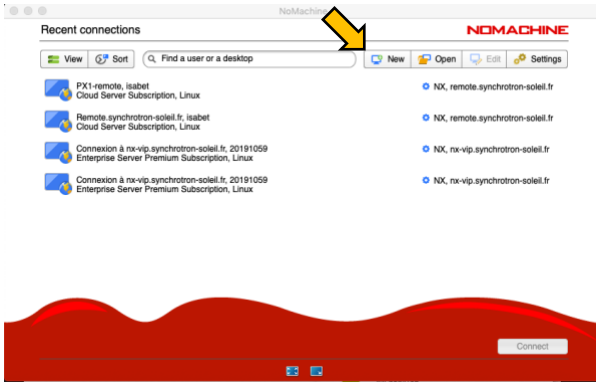
In order to remotely use PROXIMA beamlines, some prior settings need to be defined, the most important one being setting up the middle-ware NX NoMachine for accessing to the beamline from outside. Here are described the basic steps for properly setting up NoMachine. Eventually, and equally important, to experience a smooth control over MXCuBE, you may want to operate on a display with a screen resolution of 2560 x 1440, as MXCuBE on PROXIMA-1 has been optimised for this resolution. Lower resolution displays will still work, however the experience will be less pleasant as you may have to play with sliders when shifting windows.

NoMachine installation

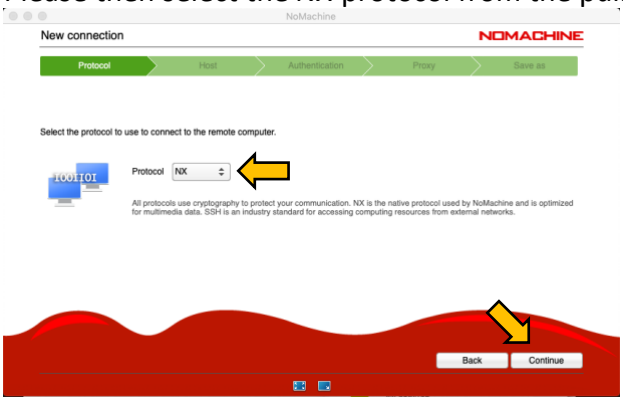
The current procedure is adapted for NoMachine version 5.3.10. Most likely the same procedure could be applied for more recent versions as well. The middle-ware NoMachine Player, its installation procedure and related can be obtained at the following URL: https://www.nomachine.com

Connection setup

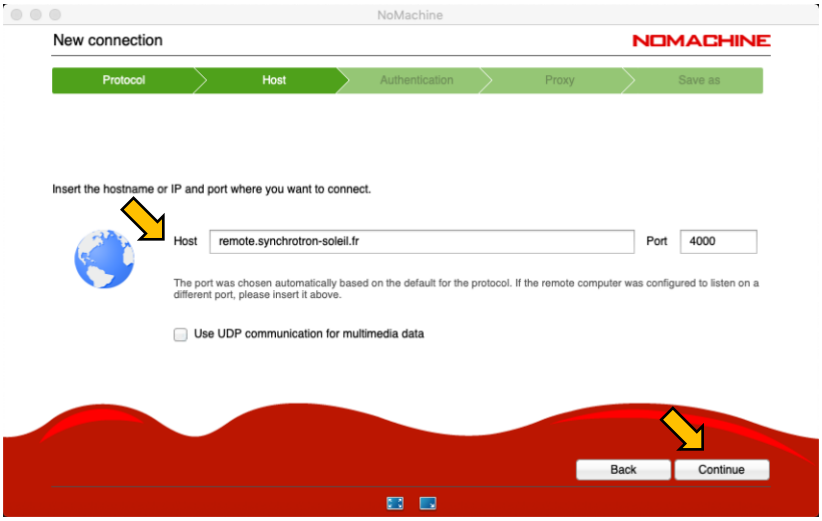
Once NoMachine is installed, you will need to setup properly the connection to the SOLEIL PROXIMA-1 server in order to take control of the beamline. At the main window, select the *New* icon to create a new connection.



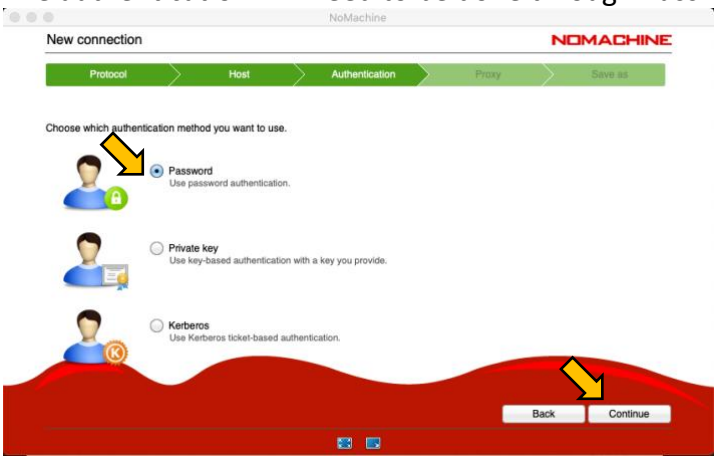
Please then select the *NX* protocol from the pull-down menu, and confirm with *Continue*.



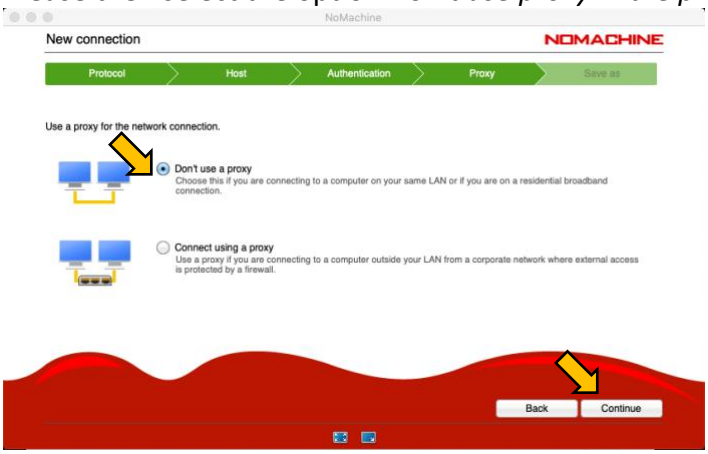
In the Host sub-window, please specify *remote.synchrotron-soleil.fr* for the host name, with port number *4000*. You will also need to unclick the UDP communication checkbox, and confirm with *Continue*



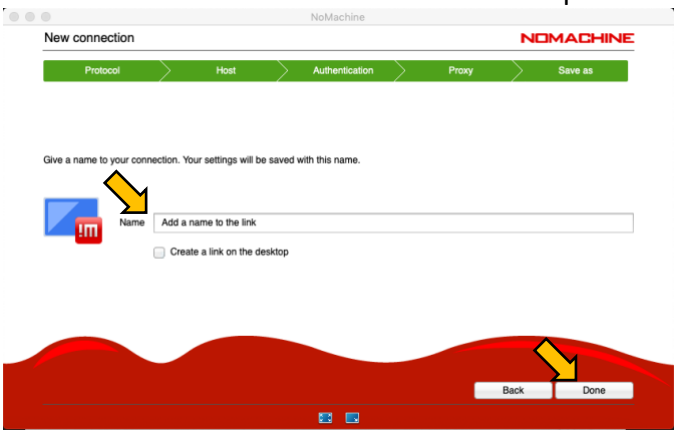
The authentication will need to be done through *Password*.



Please then select the option *Don't use proxy in the proxy* sub-menu.

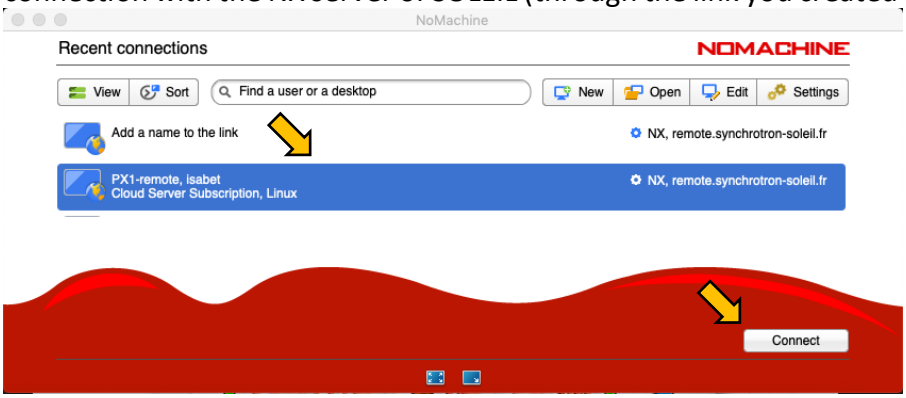


You then need to save this connection setup as it suits you.

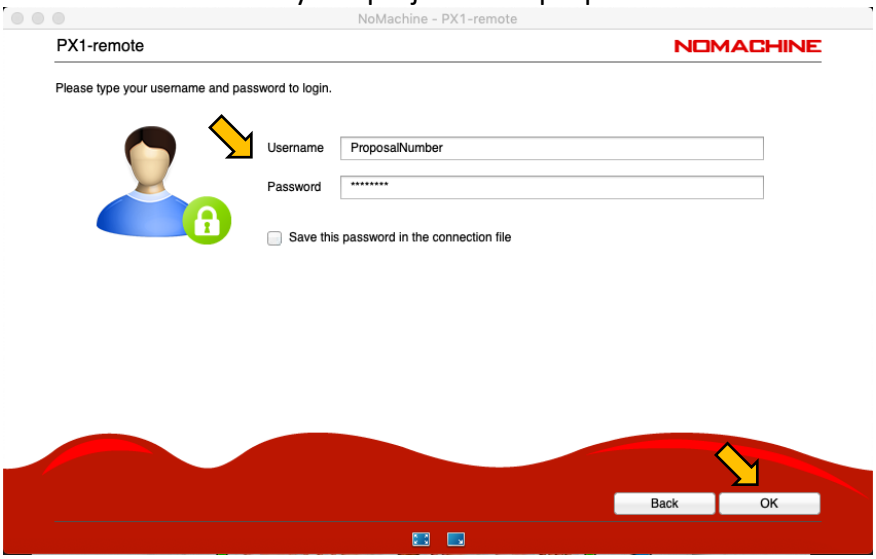


CONNECTION TO PROXIMA-1

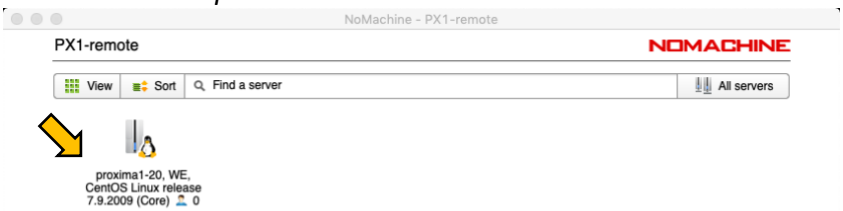
Once you have set up properly NoMachine for connecting to SOLEIL, you will need to create a session for properly getting access to the beamline control. From the main window, start a connection with the NX server of SOLEIL (through the link you created in the previous section).

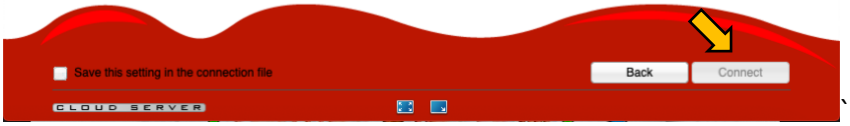


Inform then your *Username* and *Password*, as indicated in the SUNset for your session. Classically, the Username corresponds to the proposal number, and the password should have been communicated by the project main proposal.



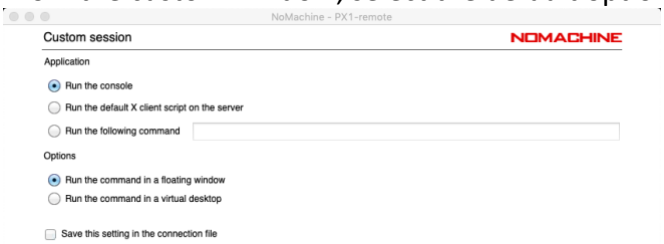
Double-Click on *proxima1-20*





To create a new custom session, click on *New Desktop,* Then *Create a new custom session* and confirm with the *Continue* button.

From the custom window, select the default options and *Continue*



After few seconds, a Terminal will then start while you will now be connected to the computer controlling the beamline experiments, from which the experiments can be performed using MXCuBE.

To simplify procedures, we suggest that you open a new Terminal for each applications (control, viewing, data analysis…).

MXCuBE and Data Processing

From a Terminal, you can have access to MXCuBE and process the data (one terminal per applications).

To connect to MXCuBE, use the following command:
mxcube

To start albula (program to see standard collection diffraction images):
Albula_3.2 (dans *EIGER monitor*, check if IP address is *195.221.8.71* port *80* Pause *2*)
or
adxv or adxv_follow (to see characterization images).

To process data on the fast server
process

Controlling the Beamline with MXCuBE

To perform the experiments using MXCuBE, you need to login using the same credentials as the ones you used when connecting to the beamline control computer. The use of MXCuBE from remote remains the same as on local.