

# Access Remote Sessions for CryoEM

Cryo-EM workstations can be monitored and controlled remotely by authorized users.

In order to gain access to the remote session you must first:

1. Have a valid SLAC unix account
2. Have access to a web browser
3. Be able to communicate to SLAC via http from your laptop/workstation etc. (local policies on firewalls differ, please see your local IT staff)
4. Be a collaborator on an active experiment
5. A 4k monitor is recommended for the best experience.

## Instructions for FastX3

1. Open the following link in a web browser
  - a. <https://fastx3.slac.stanford.edu:3300>
  - b. Log in with your SLAC Unix credentials
2. Click on the blue '+' button
3. In the popup menu, select
  - a. TEMBETA
4. Click on the blue 'Launch' button
5. Once up, you should see two windows - one for the Camera and one for the Microscope. You should be able to move and adjust the windows as you would normally.

If the mirrored screen is too large for the window on your local machine, you can zoom out:

1. Move your mouse to the middle top of the browser window (just underneath the URL bar). There should be a grey rectangular box that expands as you mouse over it
2. Click on the cog icon
3. Uncheck 'Use Smart Scaling'
4. Click on the blue bar to set 'Scaling' to 0.5x
5. You may also want to use 'adjust network settings' to optimize responsiveness or image quality. Your feedback on this matter is welcome.

If you wish to make use of multiple monitors and more flexible window layouts, **you can download and use a native client for FastX3 at <https://www.starnet.com/download/fastx-client>**. Use the above url <https://fastx3.slac.stanford.edu:3300> for the server connection settings.

## Issues:

If you get a permission error on a password when you start the windowing session, then it may be because you do not have an active experimental session on the microscope. Please check with your local SLAC representative.

We have seen on occasions that only one of the remote screens show up; with the other showing a 'Connection Reset' error. In this case, please dismiss the dialog, close the active (working window) and try relaunching a TEMBETA session again as defined above.

If you continue to experience problems, an authentication bug in FastX3 may be causing you issues. Basically, a 'token' needs to be acquired in order to gain access, however, we have found that this version of FastX does not consistently renew your tokens. In order to rectify this:

1. Log out of FastX3 (in the original browser window, click your userid on the top right, and select Sign Out)
2. Log back into FastX3 at <https://fastx3.slac.stanford.edu:3300>
3. Click on '+' and select the 'Terminal' icon
  - a. when a window pops up enter  
`kinit && aklog`
  - b. This will ask you to re-enter your SLAC Unix Account password to renew your token
  - c. you can close the window and/or enter exit
  - d. This will automatically close the connection to the Terminal
4. Repeat steps above to open a session on TEMBETA

If you are still experiencing difficulties, please report your issues with your SLAC representative or email [ppascual@slac.stanford.edu](mailto:ppascual@slac.stanford.edu).