CryoEM Imaging Workshop

Getting Started

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What we will do

- Provide temporary workshop computer accounts
  - You will need to sign our Acceptable Usage Policy
  - You will be provide a unique login and password for our SLAC computers
- Log onto our SLAC interactive host
- Navigate our file system using unix commands
- Make a symlink to the Relion3 tutorial data
- Start up Relion in GUI mode

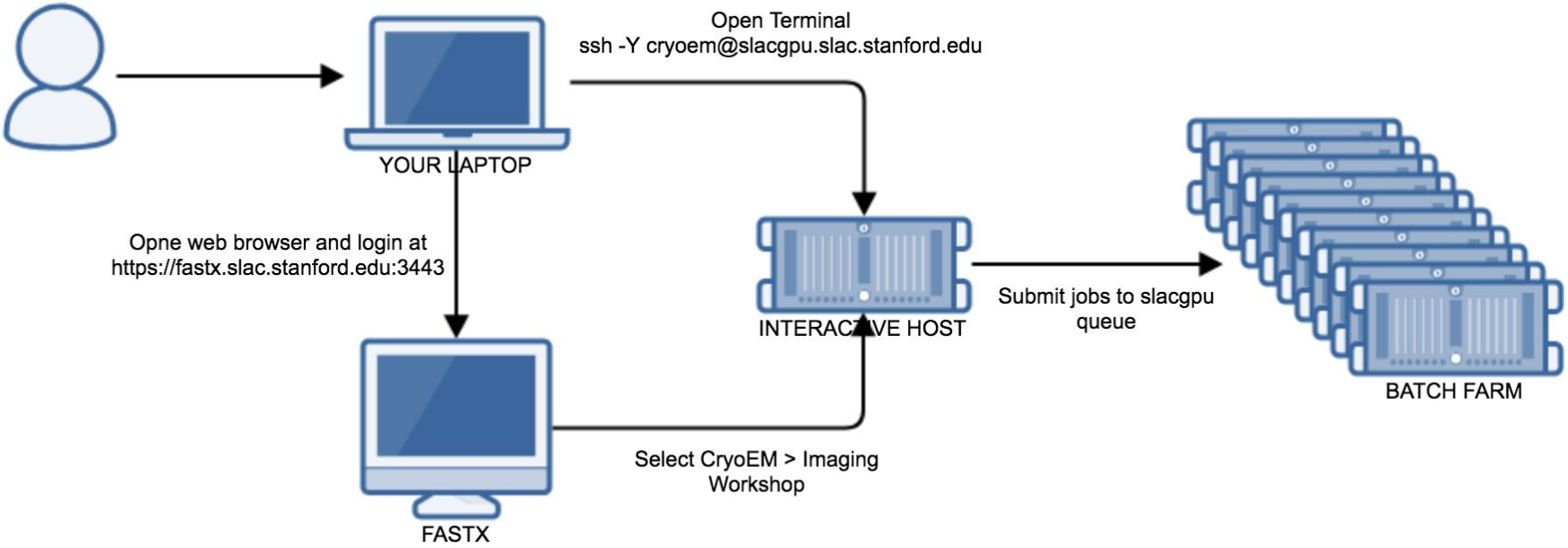
Please See Yee

Surname	Firstname		Surname	Firstname		Surname	Firstname
Campos Chagas	Andrezza		Lasker	Keren		Sun	Stella
Cendra	Camila		Limatola	Antonio		Sun	Rong
Chio	Cynthia		Maker	Allison		Tsutsumi	Naotaka
Cleveland	Thomas		Mann	Randall		Witus	Sam
Goncalves	Kevin		Mishanina	Tatiana		Woldeyes	Rahel
Guimaraes	Samuel		Mou	Tung-Chung		Yang	Qian
Gupta	Meghna		Nedeljkovic	Marko		zhang	jinru
Holliday	Michael		Noland	Cameron		Zhang	Jingji
Horikoshi	Naoki		SARIPELLA	SRIKRISHNA			
Huang	Yongjian		Saxena	Manoj			
Johnston	Jake		Shen	Lunda			
Ke	Shi		Su	Guan-Chin			

Getting Online

- Please connect your WIFI to:
  1. eduroam
  2. visitor

Overview


Open Terminal
ssh -Y cryoem@slacgpu.slac.stanford.edu
YOUR LAPTOP
Opne web browser and login at
https://fastx.slac.stanford.edu:3443
INTERACTIVE HOST
Submit jobs to slacgpu
queue
BATCH FARM
Select CryoEM > Imaging
Workshop
FASTX

Getting Credentials

1. Read to our ‘Acceptable Use Policy’
2. **Sign** the agreement
3. Your temporary **workshop user account** will be `cryoemNN` - it should be attached
4. We will exchange the agreement for your **password**

XWindows

- Relion provides a Graphical frontend
- It can be ‘tunnelled’ back to your laptop using the XWindows protocol

Linux	Mac	Windows/All
good to go!	download and install at https://www.xquartz.org/	use FastX at https://fastx.slac.stanford.edu:3443

Logging into our SLAC GPU Cluster

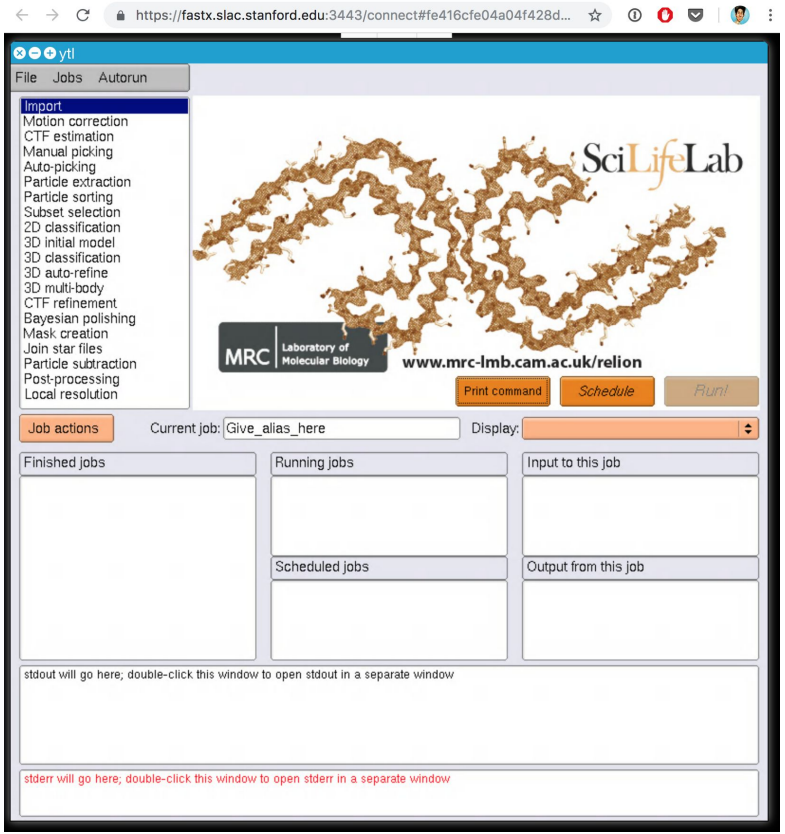
- **Mac+xquartz or Linux:**
  - SSH into the interactive node of our cluster (replace NN with your designated number):
  - `$ ssh -Y cryoemNN@slacgpu.slac.stanford.edu`
- **Windows (or if you don't want to install xquartz):**
  - Open Web browser to
  - `https://fastx.slac.stanford.edu:3443`
  - Select 'CryoEM > Imaging Workshop'

Directory Layout

- Home/Starting directory:
  - `/gpfs/slac/cryo/fs1/g/tutorial/cryoemNN`
- We will create a Project Directory:
  - `$ mkdir workshop`
- We will ‘link’ pre-downloaded demo files
  - `$ cd workshop`
  - `$ ln -sf ../../relion30_tutorial`
  - `$ ln -sf ../../relion30_tutorial_precalculated_results`

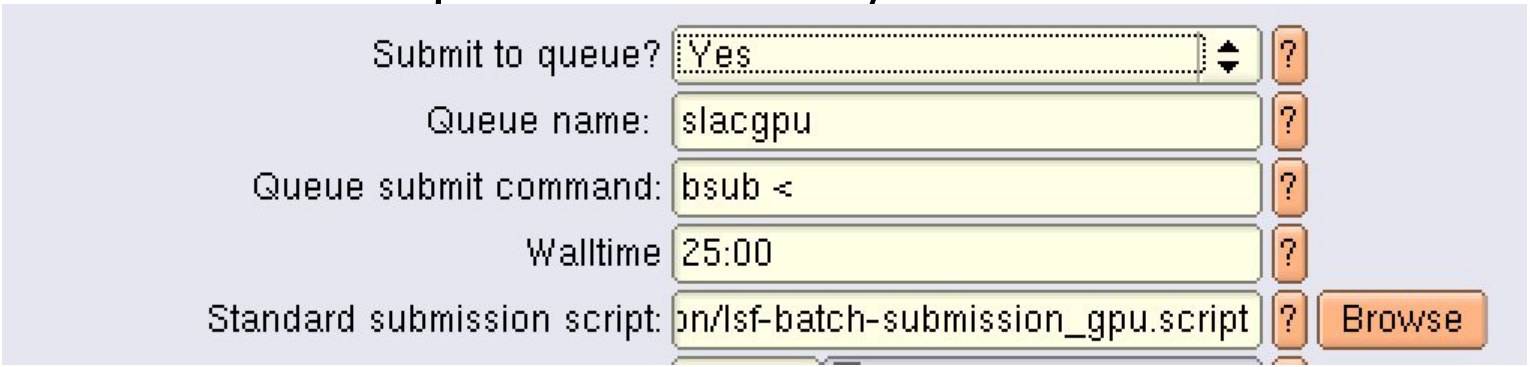
Startup Relion

- ~~Inside [a] project folder~~
- Start relion:
  - `$ relion`
- Upon a new project, enter `y` to start
- You should see the following window pop up on your screen:



Things to know

- You can submit jobs for CPU only or CPU+GPU:



- `/afs/slac/package/singularity/images/relion/`
  - `lsf-batch-submission_cpu.script`
  - `lsf-batch-submission_gpu.script`

Download Tutorial

- http://tinyurl.com/relion3

Questions?