

Submitting batch jobs

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Available resources

- Jefferson LAB Ifarm
 - Slurm
- Digital Research Alliance of Canada (Beluga, Narval)
 - Slurm
- Open Science Grid
 - HT Condor

Ifarm

Account Creation

Fill out [Access Registration Form](#) along with the emergency contact information requested - the information will be used for identification later.

Send an email to helpdesk@jlab.org and ask to create an account on ifarm. You will need to provide your name, your supervisor and institution name, and also mention that you are part of the moller12gev group under halla.

Complete [the GEN034U training](#).

Job Submission

<https://github.com/JeffersonLab/remoll-job-submission/tree/ifarm>

Maximum 1000 jobs at a time.

Ifarm (Continued)

Backing up Data

The `/mss/halla/moller12gev/simulation/` directory has been created, and should now be usable for everyone in the `moller12gev` group. You should be able to submit files to the MSS system from your directories on volatile.

From the SciComp website: Every file written to tape requires a certain amount of overhead during its processing and storage. As file sizes decrease beneath several hundred megabytes, this overhead quickly outweighs the actual I/O time. Please be judicious about submitting files smaller than 200MB. If possible, package directories with many small files in `.tar` or `.zip` archives for storage on tape. The optimal size for files stored to MSS is in the range 2GB-20GB.

We have proposed that everyone would create their own subdirectories, and would do so by doing the first `jput` like this:
`jput <full_path_of_one_file> /mss/halla/moller12gev/simulation/<username>/<projectname>/<filename_of_the_file>`

Later `jput` commands can use a list of files or be wildcarded, and can just use the MSS directory:

```
jput <full_path_of_file1> <full_path_of_file2> ...  
<full_path_of_fileN> /mss/halla/moller12gev/simulation/<username>/<projectname>/
```

If you want a deeper directory structure that's fine too; just do a `jput` with the directory structure you want:

```
jput <fullpath_to_file> /mss/halla/moller12gev/simulation/<username>/<projectname>/<subdir1>/<subdir2>/<filename>
```

(Contact Dr. Paul King pking@jlab.org if you need more information)

Beluga/Narval

Account Creation

<https://www.computecanada.ca/research-portal/account-management/apply-for-an-account/>

Please contact Dr. Juliette Mammei (jmammei@physics.umanitoba.ca) for being added as a collaborator to the MOLLER project on Compute Canada. Access is limited to students at Canadian institutions.

Job Submission

<https://github.com/JeffersonLab/remoll-job-submission/tree/beluga>

Open Science Grid

Account Creation

<https://support.opensciencegrid.org/support/solutions/articles/5000632072-registration-and-login-for-osg-connect>

Add yourself to the MOLLER project (PI: Dr. Wouter Deconinck)

Job Submission

<https://github.com/JeffersonLab/remoll-osg>

Keep job duration as small as possible on open science grid (1-2 hours).

Best for large scale repetitive analysis with fixed objective [[Example](#)]

10k jobs can be submitted simultaneously. Use `max_idle=2000` to restrict the flow to help scheduler perform optimally.

Supplementary Resources

[Swif workflow manager on Ifarm](#)

[Dagman workflow manager with HTCondor](#)

[GREX Open On Demand](#) -<https://aurochs.westgrid.ca/>