

Using XGrid on the cluster for batch executable submission.

First, ssh into the cluster:

```
ssh -l <afsid> bio8.bio.nd.edu
```

If we have multiple jobs we want to run, we don't actually "run" the executables directly- we write shell scripts that call the executables with their respective arguments, and submit them to the grid queue. For instance, if we wanted to batch run `ls -l`, our script would look like this:

```
#!/bin/bash
ls -l
```

If we save a script as "job.sh", we first need to make it executable.

```
chmod +x job.sh
```

Then submit the job to our grid queue:

```
xgrid -h heart -job submit job.sh -so <output-path> -se
<error-path>
```

`heart` is the hostname of the grid controller. Jobs wait in the job queue on `heart` until there is a free slot for processing. When a slot is available, the grid controller automatically sends the job to the open node for processing. There are four nodes that have 2 slots a piece.

To get a list of submitted job ids:

```
xgrid -h heart -job list
```

To get info about your job's status:

```
xgrid -h heart -job attributes -id <job-id>
```

To get the output from your job:

```
xgrid -h heart -job results -id <job-id>
```

or look at the output file as specified with the `-so` option during job submission.

For a marketing infused overview of Xgrid, see:

http://images.apple.com/server/pdfs/Xgrid_TB_v10.4.pdf

For more information regarding Xgrid job submission, try:

```
man xgrid
```