Job Management 101
By Yongjun Choi, iCER Research Consultant

Listing of your jobs
To see a list of your submitted jobs, type `qstat -u username`

![qstat output example](image1.png)

If you need more detailed information, you can type `showq -u username`
(It may take up to about 30 seconds for a job to appear in a `showq` output)

![showq output example](image2.png)

There are three lists provided by this command:

1) **Active jobs**: Jobs that are running now. The maximum is 1000 jobs.
2) **Eligible jobs**: Jobs are waiting for resources to run. The maximum is 15 jobs.
3) **Blocked jobs.** Jobs are blocked for a variety of reasons, the most common are as follows:
   a. Deferred: The job has been deferred to run at a later time (normally 1 hour). You can check the defer time using the checkjob command (see below). The system will defer a job when it does not run correctly. This can happen if the node the job is being submitted to is down. This can also happen if the job crashes on startup due to some resource or programming error. After the defer time the job will be submitted back into the queue. The defer time is used to prevent bad jobs from flooding the system while still letting good jobs run.
   b. Idle: Jobs that are idle have reached the maximum 15 eligible jobs limit. Each of these jobs will move out of idle status when a running job has finished.
   c. Hold: User has enforced some dependencies.

**Detailed information about a job**
To verify that your job has the right resources requested, use the command

```
qstat -f <jobid>
```
Deleting a job
You can delete jobs by issuing the command `qdel <jobid>`

Deleting all submitted jobs
Sometimes, you might need to delete all the jobs you have submitted. In that case, use `qdel $(qselect -u <username>)`
Deleting all jobs in a job array
Sometimes, you might need to delete all the jobs in a job array. In that case, add an open and close bracket (ex: [ ]) to the end of the job id number:

```
dev-intell16-k89:-> $ qdel 51293689[
```

Reordering jobs in the queue
See https://wiki.hpcc.msu.edu/display/hpccdocs/move2top

```
module load powertools
move2top <jobid>x
```

There is also a companion command called move2bot which moves a job to the bottom of the queue, see https://wiki.hpcc.msu.edu/display/hpccdocs/move2bot.

If you have any further question, please feel free to contact us.