Monitoring jobs with qstat

The simplest command for monitoring the state of a job is `qstat`. Run without options, `qstat` will produce a long list of every job queued and running on the system, probably more than you wish to see. To see the state only of your own jobs, use:

```
$ qstat -u NetID
```

For example:

```
$ qstat -u $USER
```

```
soho.es.its.nyu.edu: 
Job ID  Memory  Time  S Time 
------------------------ -------- -------- ----- 
3593014       2gb  44:0  R   7:06
3593016       2gb  44:0  R   7:05
3593017       2gb  44:0  R   7:05
3593018       2gb  44:0  R   7:05
3601576       4gb  44:0  R   5:31
```

Most of the fields in the output are self-explanatory. The second-last column “S” is the job status, which can be:

- Q meaning “Queued”
- H meaning “Held” - this may be the result of a manual hold or of a job dependency
- R meaning “Running”
- C meaning “Completed”. After the job finishes, it will remain with “completed” status for a short time before being removed from the batch system.

Other, less common job status flags are described in the manual (`man qsub`).

Note that the output format in this example differs from that of the first example, which shows the time, memory and total number of nodes and tasks requested as well as the elapsed time. To see this extra information add the “–a” switch to `qstat`:
<table>
<thead>
<tr>
<th>Job ID</th>
<th>Username</th>
<th>Queue</th>
<th>Jobname</th>
<th>SessID</th>
<th>NDS</th>
<th>TSK</th>
</tr>
</thead>
<tbody>
<tr>
<td>3593014</td>
<td>ab123</td>
<td>s48</td>
<td>model_scen_1</td>
<td>1584</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>3593016</td>
<td>ab123</td>
<td>s48</td>
<td>model_scen_2</td>
<td>31262</td>
<td>1</td>
<td>12</td>
</tr>
</tbody>
</table>

For detailed information about a specific job, `qstat -f` produces about a page of output detailing the resources requested, resources used, nodes on which the job is running and much more:

```
$ qstat -f job-id
```

Finally, for more options and more detail on output of `qstat`, see the manual page:

```
$ man qstat
```