Modify a pending job : qalter

How to modify a job already submitted?

Modifying resources request:

If your job has already been submitted, and it is not running yet, and you decide that you need to modify some of the submission parameters, you can use the command qalter:

```bash
$qalter -h u JOBID
```

For example suppose that you initially submitted a job using the queue instance queue1, but later realize that queue2 would be better:

```
[testuser@login-node-1-0 ~]$ qsub -q queue1.q myjob.txt
Your job 3185289 ("myjob.txt") has been submitted

[testuser@login-node-1-0 ~]$ qalter -q queue2.q 3185289
```

As another example, consider a situation in which you have submitted 100 jobs, and some of them start running and crash because you forgot to allocate enough memory.

You realize you can modify the pending jobs simply adding the memory request:

```
[testuser@login-node-1-0 ~]$ qalter -l mem_free=2G -l mem_token=2G 3185289
```

**Note**: In some case qalter allows you to change the parameter of a job already running. In that case (except for rare exceptions) the modification will happen only when the job is restarted or relocated.

If you need to trigger suspension and relocation of your own job, please check out the documentation of the command qmod.

Putting jobs on hold:

You can also put a pending job "on hold" in case you realize you need to complete some other task before the job starts:

```bash
$qalter -h u JOBID
```
[testuser@login-node-1-0 ~]$ qsub -l myqueue.q test.job
Your job 3185678 ("test.job") has been submitted

[testuser@login-node-1-0 ~]$ qstat
job-ID prior name user state submit/start at queue
slots ja-task-ID
-----------------------------------------------------
3185678 0.00000 test.job testuser qw 02/12/2015 10:44:09
1

[testuser@login-node-1-0 ~]$ qalter -h u 3185678
modified hold of job 3185678

[testuser@login-node-1-0 ~]$ qstat
job-ID prior name user state submit/start at queue
slots ja-task-ID
-----------------------------------------------------
3185678 0.00000 test.job testuser hqw 02/12/2015 10:44:09

NOTE: to remove the hold state you can use:
>$ qalter -U JOBID

[testuser@login-node-1-0 ~]$ qalter -h U 3185678
modified hold of job 3185678

[testuser@login-node-1-0 ~]$ qstat
job-ID prior name user state submit/start at queue
slots ja-task-ID
-----------------------------------------------------
3185678 5.05270 test.job testuser r 02/12/2015 10:46:05
myqueue.q@compute-4-16.local 1

NOTE: to implement in a more organized way dependencies between jobs, please read these instructions