Why hasn't my job started?

You can get information about what is preventing a queued job from running with `checkjob`:

```
$ checkjob jobid
```

The output of `checkjob` is complicated and technical. Mostly a job remains in the queue because it is waiting for resources to become available (you can check how busy the system is with `pbs_top`). Other likely causes are that it is waiting on a job dependency, or you have reached the limit of simultaneously running jobs for a single user. If your job has been waiting a long time and you would like help understanding why, contact us.

In the example below the job requested 12 large-memory nodes, and the blue text on the last line indicates that the scheduler has not yet found a large enough timeslot slot in which it can run (note that it has found four such nodes available).

```
$ checkjob 3718378
job 3718378
AName: testme.q
State: Idle
Creds: user:sl151 group:users account:ITS class:p12 qos:p12
WallTime: 00:00:00 of 00:01:00
BecameEligible: Thu Feb 13 12:47:51
SubmitTime: Thu Feb 13 12:47:46
(Time Queued Total: 00:00:10 Eligible: 00:00:04)
NodeMatchPolicy: EXACTNODE
Total Requested Tasks: 24
Reg[0] TaskCount: 24 Partition: ALL
Opsys: --- Arch: --- Features: mem48gb
Dedicated Resources Per Task: PROCS: 1 MEM: 1365M

Notification Events: JobFail
IWD: /home/sl151/batch_scheduler
Flags: RESTARTABLE
Attr: checkpoint
StartPriority: 1999
compute-9-0 available: 12 tasks supported
compute-9-4 available: 12 tasks supported
compute-9-7 available: 12 tasks supported
compute-9-13 available: 12 tasks supported

NOTE: job cannot run in partition crunch (insufficient idle nodes available: 4 < 12)
```