PBS Professional - Quick Reference Guide for users

User Commands		Job Submission options (qsub)	
qsub	Submit a job	-P project_name	Specifying a project name
qsub -I	Submit an interactive job	-q destination	Specifying queue and/or server
qsub -IX	Submit an interactive job with X forwarding	-r value	Marking a job as rerunnable or not
qstat <jobid>	Job status	-W depend = list	Specifying job dependencies
qstat -Q	Print Queue information	-W stagein=list stageout=list	Input/output file staging
qhold <jobid>	Hold a job	-W sandbox=<value>	Staging and execution directory: user's home vs. job-specific
qrls <jobid>	Release a job	-a date_time	Deferring execution
pbsnodes -a	Print node information	-c interval	Specifying job checkpoint interval
pbsnodes -l	Print nodes that are offline or down	-e path	Specifying path for output and error files
qstat -B	Cluster status	-h	Holding a job (delaying execution)
qdel	Delete a job	-J X-Y[:Z}	Defining job array
qmove	Moves PBS batch job between queues	-j join	Merging output and error files
qalter	Alters a PBS job	-k keep	Retaining output and error files on execution host
Tracejob <jobid>	Print log information about a job	-l resource_list	Requesting job resources
qselect	Selects PBS batch jobs	-M user_list	Setting email recipient list
pbs_rsub	Creates a PBS advance or standing reservation	-m MailOptions	Specifying email notification
pbs_rstat	Shows status of PBS advance or standing reservations	-N name	Specifying a job name
Job monitoring		-o path	Specifying path for output and error files
qstat -x	Job History	-p priority	Setting a job's priority
qstat -f <jobid>	Job status with all information	**Environment Variables**	
qstat -ans	Job status with comments and vnode info	PBS_JOBID	Job identifier given by PBS when the job is submitted. Created upon execution.
Deleting jobs		PBS_JOBNAME	Job name given by user. Created upon execution.
qdel <jobid>	kill a job	PBS_NODEFILE	The filename containing a list of vnodes assigned to the job.
qdel -W force <jobid>	Force kill a job	PBS_O_WORKDIR	Absolute path to directory where qsub is run. Value taken from user's submission environment.
Requesting job resources		TMPDIR	Pathname of job's scratch directory
-l select=3:ncpus=2	Request for 3 chunks with 2 cpu each	NCPUS	Number of threads, defaulting to number of CPUs, on the vnode
-l select=1:ncpus=4:mem=1gb	1 chunk with 4 cpus and 1 GB RAM	OMP_NUM_THREADS	Number of threads, defaulting to number of CPUs, on the vnode
-l walltime=01:00:00	Request for 1 hour total wall time	PBS_ARRAY_ID	Identifier for job arrays. Consists of sequence number.
-l cput=03:00:00	Request for 30 minutes CPU time	PBS_ARRAY_INDEX	Index number of subjob in job array.
-l place=pack:exclhost	Request node to be exclusively allocated to the job	PBS_JOBDIR	Pathname of job's staging and execution directory on the primary execution host.