

PBS variables

PBS sets multiple environment variables at submission time. The following PBS variables are commonly used in command files:

Variable Name	Description
<code>PBS_ARRAYID</code>	Array ID numbers for jobs submitted with the <code>-t</code> flag. For example a job submitted with <code>#PBS -t 1-8</code> will run eight identical copies of the shell script. The value of the <code>PBS_ARRAYID</code> will be a an integer between <code>1</code> and <code>8</code> .
<code>PBS_ENVIRONMENT</code>	Set to <code>PBS_BATCH</code> to indicate that the job is a batch job; otherwise, set to
<code>PBS_JOBID</code>	full jobID assigned to this job. Often used to uniquely name output files for this job, for example: <code>mpirun -np 16 ./a.out >output.\${PBS_JOBID}</code>
<code>PBS_JOBNAME</code>	Name of the job. This can be set using the <code>-N</code> option in the PBS script (or from the command line). The default job name is the name of the PBS script.

<code>PBS_NODEFILE</code>	Contains a list of the nodes assigned to the job. If multiple CPUs on a node have been assigned, the node will be listed in the file more than once. By default, mpirun assigns jobs to nodes in the order they are listed in this file
<code>PBS_O_HOME</code>	The value of the HOME variable in the environment in which qsub was executed.
<code>PBS_O_HOST</code>	The name of the host upon which the qsub command is running.
<code>PBS_O_PATH</code>	Original PBS path. Used with pbsdsh.
<code>PBS_O_QUEUE</code>	Queue job was submitted to.
<code>PBS_O_WORKDIR</code>	PBS sets the environment variable <code>PBS_O_WORKDIR</code> to the directory from which the batch job was submitted
<code>PBS_QUEUE</code>	Queue job is running in (typically this is the same as <code>PBS_O_QUEUE</code>).

See an examples of PBS variable below:

```
#!/bin/bash -l
#
#PBS -l nodes=1:ppn=16
#PBS -l walltime=1:10:00
#PBS -j oe
#PBS -m ae
#PBS -M username@yourinstitution.edu
#PBS -q standard
```



```
### Goto the directory from which you submitted the job
cd $PBS_O_WORKDIR
/bin/cat $PBS_NODEFILE

## your job commands
env
sleep 100
```