Moab
How can I oversubscribe processors?

Question: How can I oversubscribe processors?

Answer:

The information presented here applies to Moab 9.1.1/9.1.2 and Torque 6.1.1.1/6.1.2.

One can enter more processors in the nodes table than physically exist on a node. For example, given that node "compute00" physically has 4 processors, one can enter the following line in file /var/spool/torque/server_priv/nodes:

compute00 np=8

Upon restarting pbs_server, eventually Moab will recognize 8 procs on compute00. This is not immediate; however, restarting moab after pbs_server will cause the change to appear immediately.

Commands such as mdiag -n will show that there are 8 procs on compute00.

However, if Torque is compiled with cgroups enabled, moab/torque will not allow more than 4 jobs to be run on compute00.

If Torque is compiled without cgroups, then 8 jobs can be run on compute00 thus oversubscribing compute00 with respect to processors.

Unique solution ID: #1203
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Last update: 2018-03-05 23:13

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URL: /phpmyfaq/index.php?action=artikel&cat=1&id=203&artlang=en