

# Moab

## How will Moab act if I add and over subscribe nodes over my license moab.lic limitations

I had a site recently try this and claimed it caused major problems because Moab would try to start jobs there. I tested against this here is what I found. (Version: moab server 8.1.2)

This looks like a non-issue unless you purposely try to tie jobs to the non-licensed nodes. Either the customer was mistaken in what he was seeing OR we was not accurately assessing the information. What I think he might have been doing is he placed all his new nodes in a specific class and then submitted to that class so I tested that as well and the jobs automatically cancel once they were considered for the priority reservation.

```
[nburton@ibm08 ~]$ mdiag -n
```

```
compute node summary
```

```
Name State Procs Memory Opsys
```

```
ibm10.ac Busy 0:40 7823:7823 linux
```

```
ibm11.ac Busy 0:40 7823:7823 linux
```

```
ibm13.ac --- 0:0 0:0 linux
```

```
ibm14.ac --- 0:0 0:0 linux
```

```
----- --- 0:80 15646:15646 -----
```

```
Total Nodes: 4 (Active: 2 Idle: 0 Down: 2)
```

**([ibm13.ac](#) and [ibm14.ac](#) are the nodes in violation of license limits)**

# Moab

[nburton@ibm08 ~]\$ showq

active jobs-----

JOBID	USERNAME	STATE	PROCS	REMAINING	STARTTIME
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415	nburton	Running	40	00:59:51	Fri Aug 5 10:45:22
-----	---------	---------	----	----------	--------------------

416	nburton	Running	40	00:59:52	Fri Aug 5 10:45:23
-----	---------	---------	----	----------	--------------------

2 active jobs 80 of 80 processors in use by local jobs (100.00%)

2 of 2 nodes active (100.00%)

eligible jobs-----

JOBID	USERNAME	STATE	PROCS	WCLIMIT	QUEUE TIME
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417	nburton	Idle	40	1:00:00	Fri Aug 5 10:45:29
-----	---------	------	----	---------	--------------------

418	nburton	Idle	40	1:00:00	Fri Aug 5 10:45:29
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2 eligible jobs

blocked jobs-----

JOBID	USERNAME	STATE	PROCS	WCLIMIT	QUEUE TIME
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# Moab

0 blocked jobs

Total jobs: 4

**(Example of Auto Cancellation when locked into a class on the violating nodes)**

```
[nburton@ibm08 ~]$ echo sleep 100 | msub -l nodes=1:ppn=40 -q test -l  
walltime=300
```

422

```
[nburton@ibm08 ~]$ showq
```

active jobs-----

JOBID	USERNAME	STATE	PROCS	REMAINING	STARTTIME
-------	----------	-------	-------	-----------	-----------

0 active jobs 0 of 80 processors in use by local jobs (0.00%)

0 of 2 nodes active (0.00%)

# Moab

eligible jobs-----

JOBID	USERNAME	STATE	PROCS	WCLIMIT	QUEUE TIME
-------	----------	-------	-------	---------	------------

**422 nburton Canceling 40 00:05:00 Fri Aug 5 10:50:54**

1 eligible job

blocked jobs-----

JOBID	USERNAME	STATE	PROCS	WCLIMIT	QUEUE TIME
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0 blocked jobs

Total job: 1

Unique solution ID: #1117

Author: Nathan Burton

Last update: 2016-08-05 19:19