

# Workload Management: How do I Install MOAB 9.x on top of Bright?

## How do I install MOAB in Bright?

(Tested on Bright 7.3 with torque 6.0.1)

1. Download MOAB sources from Adaptive website and extract it on the head node:

```
[root@ma-b73-c7 ~]# tar -xvzf moab-9.1.0-el7.tar.gz
```

2. Change into the extracted MOAB folder and configure the sources with the required configuration parameters. A sample configuration could be as follows:

```
[root@ma-b73-c7 ~]# cd moab-9.1.0-el7
```

```
[root@ma-b73-c7 moab-9.1.0-el7]# ./configure --prefix=/cm/shared/apps/moab --with-init --with-modulefiles=/cm/local/modulefiles --with-ipmi --with-knl --with-homedir=/cm/shared/apps/moab
```

-----  
moab 9.0.2: Configure successful.

Configuration:

```
Install Directory: /cm/shared/apps/moab
Home Directory   : /cm/shared/apps/moab
Server Host      : ma-b73-c7
Server Port      : 42559
Primary Admin    : root
Machine Name     : pbs
With Web Services:
With Insight     :
```

Next:

Type 'make install' as root to install moab.

-----  
Attention:

You have specified a non-default home directory (/cm/shared/apps/moab).  
You must set MOABHOMEDIR=/cm/shared/apps/moab in your environment when starting moab or using moab commands.

3. Install MOAB:

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```
[root@ma-b73-c7 moab-9.1.0-el7]# make install
```

[...]

```
#####  
Moab binaries have been installed into /cm/shared/apps/moab/bin and  
/cm/shared/apps/moab/sbin.  
Moab libraries have been installed into /cm/shared/apps/moab/lib.
```

Please update your PATH and MANPATH accordingly.

```
#####
```

4. Modify the MOAB configuration to point to Torque:

```
[root@ma-b73-c7 moab-9.1.0-el7]# grep RMC /cm/shared/apps/moab/etc/moab.cfg
```

```
RMCFG[torque]    TYPE=TORQUE SUBMITCMD=/cm/shared/apps/torque/current/bin/qsub
```

5. Configure dynamic linker run-time bindings:

```
[root@ma-b73-c7 moab-9.1.0-el7]# cat > /etc/ld.so.conf.d/moab.conf  
/cm/shared/apps/torque/current/lib  
/cm/shared/apps/moab/lib  
[root@ma-b73-c7 moab-9.1.0-el7]# ldconfig  
[root@ma-b73-c7 moab-9.1.0-el7]#
```

6. Copy the license:

```
[root@ma-b73-c7 moab-9.1.0-el7]# cp /root/moab.lic /cm/shared/apps/moab/etc/
```

7. Edit /lib/systemd/system/moab.service to append the required environment variable:

```
[root@ma-b73-c7 moab-9.1.0-el7]# grep Env /lib/systemd/system/moab.service
```

```
Environment=PATH=/sbin:/bin:/usr/sbin:/usr/bin MOABHOMEDIR=/cm/shared/apps/moab
```

8. Enable Torque/MOAB via Bright:

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```
[root@ma-b73-c7 moab-9.1.0-el7]# wlm-setup -w torquemoab -s
Disabling torque services ..... [ OK ]
Creating default torque config ..... [ OK ]
Initializing torque setup ..... [ OK ]
Setting permissions ..... [ OK ]
Enabling torque services ..... [ OK ]
```

-----  
Please note that the changes in the software image(s) have not been propagated to the running nodes. This will happen when the node(s) is/are rebooted.  
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## 9. Test MOAB

```
[root@ma-b73-c7 moab-9.1.0-el7]# mdiag -n
```

```
compute node summary
```

```
Name State Procs Memory Opsys
```

```
node002 Idle 2:2 993:993 linux
```

```
node001 Idle 2:2 993:993 linux
```

```
----- 4:4 1986:1986 -----
```

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

```
[root@ma-b73-c7 moab-9.1.0-el7]# su - cmsupport
```

```
[cmsupport@ma-b73-c7 ~]$ module load torque
```

```
[cmsupport@ma-b73-c7 ~]$ echo "date; sleep 10; date;" | qsub
```

```
0.ma-c-12-22-b73-c7u2-b73-c7.cm.cluster
```

```
[cmsupport@ma-b73-c7 ~]$ qstat
```

```
Job ID Name User Time Use S Queue
```

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0.ma-c-12-22-b73-c7u2-b73-c7. STDIN cmsupport 0 R shortq

```
[cmsupport@ma-b73-c7 ~]$ cat STDIN.o0
```

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