

# Workload Management: How do I run an external Torque server with Bright?

*How do I setup a Bright cluster to use an external Torque server?*

## 1. Enable torque using the wlm-setup utility:

```
[root@ma-b71-c6 ~]# wlm-setup -s -w torque
  Disabling torque services ..... [ OK ]
  Creating default torque config ..... [ OK ]
  Initializing torque setup ..... [ OK ]
    Setting permissions ..... [ OK ]
  Enabling torque services ..... [ OK ]
    Finalizing ..... [ OK ]
```

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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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## 2. Set the externalserver property to yes so that CMDaemon won't complain about stopped torque\_server service

```
[root@ma-b71-c6 ~]# cmsh
[ma-b71-c6]% device roles master
[ma-b71-c6->device[ma-b71-c6]->roles]% use torqueserver
[ma-b71-c6->device[ma-b71-c6]->roles[torqueserver]]% get externalserver
no
[ma-b71-c6->device[ma-b71-c6]->roles[torqueserver]]% set externalserver yes
[ma-b71-c6->device*[ma-b71-c6*]->roles*[torqueserver*]]% commit
[ma-b71-c6->device[ma-b71-c6]->roles[torqueserver]]%
```

## 3. Freeze the torque configurations to avoid CMDaemon writing out the configuration files:

```
[root@ma-b71-c6 ~]# grep Torqu /cm/local/apps/cmd/etc/cmd.conf
```

```
FreezeChangesToTorqueConfig = true
```

```
[root@ma-b71-c6 ~]# service cmd restart
```

## 4. Replace the "master.cm.cluster" with the hostname of the external server.

```
[root@ma-b71-c6 ~]# cat /cm/shared/apps/torque/var/spool/torque.cfg
```

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```
SERVERHOSTma-b70-c6QSUBSLEEP 1
```

```
[root@ma-b71-c6 ~]# cat /cm/shared/apps/torque/var/spool/server_namema-b70-c6
[root@ma-b71-c6 spool]# cat /cm/local/apps/torque/var/spool/server_name
```

```
ma-b70-c6
```

5. Add the following firewall rules to `/etc/shorewall/rules` on the head node to allow communication with the external torque server:

```
ACCEPT net fw tcp 15004

ACCEPT net fw udp 15004
ACCEPT net fw tcp 15003
ACCEPT net fw udp 15003
ACCEPT net fw tcp 15002
ACCEPT net fw udp 15002
ACCEPT net fw tcp 15001
ACCEPT net fw udp 15001
```

```
[root@ma-b71-c6 ~]# /etc/init.d/shorewall restart
```

6. Restart the `trqauthd` and `torque_mom` services and make sure that the `torque_server` is stopped:

```
[root@ma-b71-c6 ~]# service torque_mom restart

[root@ma-b71-c6 ~]# service trqauthd restart
[root@ma-b71-c6 ~]# service torque_server stop
```

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