Regional Facilities - N8 HPC

Accessing the N8 HPC Facility

The University of York has a one eighth share of the regional N8 HPC facility. Details are here: http://n8hpc.org.uk/

Please contact andrew.smith@york.ac.uk if you require assistance in using the facility.

How to request advanced reservations

An advanced reservation is the ability to submit a job such that it runs at a specified point in time in the future.

It has been decided as a matter of policy to restrict the usage of this and so it is available on request on a per-reservation basis by emailing york@n8hpc.org.uk. You should look at the manual information for the command qrsub which will indicate how you would submit an advanced reservation request ordinarily and this will indicate the information you should provide in your request to the above email address.

A typical qrsub would be:

```
qrsub -a 1303080900 -d 12:00:00 -pe openmpi 512
```

Which indicated an openmpi job with 512 slots to run. The parameter following -a is the data time specification:

```
date_time
```

The date_time value must conform to [[CC]YY]MMDDhhmm[.SS], where:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC</td>
<td>denotes the century in 2 digits.</td>
</tr>
<tr>
<td>YY</td>
<td>denotes the year in 2 digits.</td>
</tr>
<tr>
<td>MM</td>
<td>denotes the month in 2 digits.</td>
</tr>
<tr>
<td>DD</td>
<td>denotes the day in 2 digits.</td>
</tr>
<tr>
<td>hh</td>
<td>denotes the hour in 2 digits.</td>
</tr>
<tr>
<td>mm</td>
<td>denotes the minute in 2 digits.</td>
</tr>
<tr>
<td>ss</td>
<td>denotes the seconds in 2 digits (default 00).</td>
</tr>
</tbody>
</table>

And the option after -d is the duration (HH:MM:SS format) and so the above would be a reservation for a 12 hour job.

There may be other options you would wish to add, e.g. the other mpi parameters selecting nodes or spreading jobs over nodes, and so on. Please check the manual pages on www.n8hpc.org.uk and http://n8hpc.org.uk/research/runningjobs/batchsystem/submittingjobs for details, or look at the qsub commands you are currently using or contact local support.

After passing this information off an advanced reservation will be created and assigned a number which will be passed back to you. You should then add -ar number to your qsub command. E.g. if the ar number is 11 then qsub -ar 11 ....your usual parameters...

Requesting a large number of cores at short notice is unlikely to run, so the best suggestion here is to submit a job of the type you might run, then determine when it might run, and then submit the
advanced reservation request to be some time after that that is convenient for you. There is no
certainty it will run then, as there is a chance that someone else has also submitted a clashing
advanced reservation.