

6.2 Batch execution

For batch execution, OpenHPC provides a simple job script for reference (also housed in the `/opt/ohpc/pub/examples` directory). This example script can be used as a starting point for submitting batch jobs to the resource manager and the example below illustrates use of the script to submit a batch job for execution using the same executable referenced in the previous interactive example.

```
# copy example job script
[test@sms ~]$ cp /opt/ohpc/pub/examples/slurm/job.mpi .

# examine contents (and edit to set desired job sizing characteristics)
[test@sms ~]$ cat job.mpi
#!/bin/bash

#SBATCH -J test           # Job name
#SBATCH -o job.%j.out    # Name of stdout output file (%j expands to %jobId)
#SBATCH -N 2             # Total number of nodes requested
#SBATCH -n 16            # Total number of mpi tasks #requested
#SBATCH -t 01:30:00      # Run time (hh:mm:ss) - 1.5 hours

# Launch MPI-based executable

prun ./a.out

# Submit job for batch execution
[test@sms ~]$ sbatch job.mpi
Submitted batch job 339
```

Tip

The use of the `%j` option in the example batch job script shown is a convenient way to track application output on an individual job basis. The `%j` token is replaced with the Slurm job allocation number once assigned (job #339 in this example).