ADAPT SLURM

Startup Guide
Purposes

• Why not just run manually/interactively?
  • Fair Sharing & Scheduling
  • Resource allocation efficiency
  • Scaling
Useful commands

• sinfo : Show simple info regarding available nodes.

• squeue : More detailed breakdown of job queue

• sbatch : Submit a batch-script based job

• scancel : Cancel/terminate a running job you own
Usage

• Most basic, single binary with no resource constraints

```bash
#!/bin/bash
#SBATCH --job-name=coin
#SBATCH --ntasks=1
#SBATCH --export=ALL
srun -n 1 ~/coin
```

```
[ssinno@above101 ~]$ cat coin.j
Submitted batch job 127
```

```
[ssinno@above101 ~]$ squeue
  JOBID PARTITION     NAME     USER ST    TIME NODES NODELIST(REASON)
  127 myNodes coin ssinno R 0:04 1 beyond102
```
Characterize resource requirements

- Ganglia
  - https://www.nccs.nasa.gov/internal/monitoring/dsc/ganglia-test/
- `top`
Adding Resource Requirements

• Without these, you may unnecessarily constrained by your allocation limits.

```bash
#!/bin/bash
#SBATCH --job-name=coin
#SBATCH --ntasks=12
#SBATCH --cpus-per-task=1
#SBATCH --mem=512
#SBATCH --export=ALL
srun -n 12 ~/coin
```

• Note: --mem units are in MB