



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

```
[ssinno@above101 ~]cat coin.j
```

```
#!/bin/bash
```

```
#SBATCH --job-name=coin
```

```
#SBATCH --ntasks=1
```

```
#SBATCH --export=ALL
```

```
srun -n 1 ~/coin
```

```
[ssinno@above101 ~]sbatch coin.j
```

```
Submitted batch job 127
```

```
[ssinno@above101 ~]squeue
```

<u>JOBID</u>	<u>PARTITION</u>	<u>NAME</u>	<u>USER</u>	<u>ST</u>	<u>TIME</u>	<u>NODES</u>	<u>NODELIST(REASON)</u>
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.

```
#!/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