

# Lab: Using the Launcher

# Setup

## 1. Grab the lab files

```
$tar xvf ~train00/lab-launcher.tar  
$cd lab-launcher
```

## 2. Load the Launcher module

```
$module load launcher
```

## 3. Grab the launcher.slurm file

```
$cp $TACC_LAUNCHER_DIR/launcher.slurm .
```

# Looking at the Job Decks

- The lab directory contains three different paramlist files
  - paramlist.stdout
  - paramlist.task-output
  - paramlist.job-output
- Each of these paramlist files has 48 jobs
- You can view the contents of each paramlist file by using the `cat` command
  - `$cat paramlist.stdout`

# Submitting the Job Decks

- Alter the launcher.slurm file using your editor of choice (nano, vi, emacs) to use the appropriate paramlist file.
  - The environment variable CONTROL\_FILE points to the paramlist file you wish to execute
  - Example: set CONTROL\_FILE to paramlist.stdout

```
Export CONTROL_FILE=paramlist.stdout
```
- Try submitting each job deck
- Since each job deck uses similar output filenames, wait for one to finish before cleaning up and starting the next
  - To clean up, remove the output files (`rm output.*`)

# Changing the Number of Tasks

- So far we have been using 16 tasks on a single node to perform these tests
  - $N=1, n=16$
- Change the launcher.slurm file to use 8 tasks on 1 node ( $N=1, n=8$ ) and rerun the job decks
- Now try 32 tasks on 2 nodes ( $N=2, n=16$ )