

# Slurm multi-threaded OpenMP jobs

Multi-threading is a type of execution model that allows multiple threads to exist within the context of a process. Simply speaking, a Slurm multi-threading job is a singler process, multi-core job. Many application can drop to this category: **OpenMP** program codes, **Matlab** scripts with **Parallel Computing Toolbox**, etc.

A sample Slurm Multi-threading job would look like below:

```
#!/bin/bash
#SBATCH --job-name=MyJob
#SBATCH --account=monash001
#SBATCH --ntasks=1
#SBATCH --cpus-per-task=8

./openmp_helloworld.exe
```



This script tells Slurm it is a multi-threading job. It only has only 1 process ( `ntasks=1` ), where for such process it needs 8 cpu cores ( `cpus-per-task=8` ) to handle.