

# Nextflow.config file with Slurm compatibility

```
process {
    executor = 'slurm'
    time = < number of hours ('h') days ('d') to let job run eg. '3d' >
    cpus = < number of cpus to request eg. 32>
    memory = < amount of RAM to request eg. '100.GB'>
}
```

## PLEASE NOTE

These values need to be chosen carefully. If the `time` variable is not high enough, then the nextflow job may quit before it can complete. This is because nextflow submits these jobs through slurm which have a default max run time of 30 minutes. The longest your job can run on the HPC is 7 days.

Some tools required a certain amount of memory to be allocated (usually aligners). If you don't reserve enough, your job may error out.

Most tools have a flag to specify the number of cpus to use (may look like `-cpu`, `-threads`, `--threads` etc. Please see the documentation of the tool you're using to correctly specify) to supply that information in the workflow block there is a parameter called `${task.cpus}`

If you do not specify the number of threads for some processes (blastx is an offender) then it may default to a number of cpus specified in the tool - despite the fact you have requested to use a large number of cpus. This can **severely** increase the amount of time it will take your job to complete.

To correctly indicate the number of cpus for a process, see below.

(In nextflow.config)

```
process {
    executor = 'slurm'
    time = '5d'
    cpus = 38
    memory = '300.GB'
}
```

(In `<your_nf_script>.nf`)

```
process my_task {
  script:
  """
  my_command --threads ${task.cpus}
  """
}
```

The command in the process block above will effectively evaluate to `my_command --threads 38`

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