

# SLURM job cancelled due to time limit

## Problem

A job finishes with a message saying slurmstepd error, with the job cancelled due to time limit. The error message will be in the slurm output file. The slurmstepd error message may be preceded with a message from srun that the job step was aborted.

```
slurmstepd: error: *** JOB 3501970 ON nid00161 CANCELLED AT 2018-01-08T15:17:49 DUE TO TIME LIMIT ***
```

## Solution

There are two likely causes. Firstly, the job may have reached the maximum time it was allowed to run. Secondly, if you have a fixed allocation then your allocation may have been used up.

1. SLURM allocates resources to a job for a fixed amount of time. This time limit is either specified in the job request, or if none is specified then it is the default limit. There are maximum limits on all SLURM partitions, so if you have not requested the maximum then try increasing the time limit in the request with the `--time=` flag to `sbatch` or `salloc`.

```
#SBATCH --time=12:00:00
```

To see the maximum and default time limits, use `sinfo`:

```
> sinfo -o "%.10P %.5a %.10l %.15L %.6D %.6t" -p workq
PARTITION AVAIL  TIMELIMIT  DEFAULTTIME  NODES  STATE
workq*    up 1-00:00:00      1:00:00      1  drain
workq*    up 1-00:00:00      1:00:00     20  resv
workq*    up 1-00:00:00      1:00:00     34  mix
workq*    up 1-00:00:00      1:00:00     25  alloc
```

2. Usually if your allocation is not sufficient to support a job running to completion, SLURM will not start the job. However, if multiple jobs start at the same time then each job may not hit the limit but collectively they might. When this happens they will all start, but get terminated when the allocation is used up. You can tell this is the case if the elapsed time does not match the job's timelimit.

```
> sacct -j 2954681 -o jobid,elapsed,time
      JobID      Elapsed  Timelimit
-----
2954681      05:54:30  1-00:00:00
2954681.bat+  05:54:31
2954681.ext+  05:54:31
2954681.0     05:54:30
```

If this is the case, check whether your allocation is used up. If it is, contact the Pawsey helpdesk. See [Submitting and Monitoring Jobs#ProjectAccounting](#) for more information about project accounting.

```
> pawseyAccountBalance
```

## Related articles

- [Nextflow sbatch Job Error](#)
- [SLURM job cancelled due to time limit](#)
- [Exceeded job memory limit](#)
- [More processors requested than permitted](#)
- [slurmstepd: error: execve\(\): executable : No such file or directory](#)

