

Job pipeline using slurm dependencies

Some times we need to launch a list of jobs that execute in sequence, one after another. In those cases we will use the **--dependency sbatch** option, check the manual page for more details, we will only present a simple example.

Simple example

Suppose we need to submit the script **my_first_job.sh** and then **mu_second_job.sh** that should run after the first one:

```
[user@cirrus01 ~]$ sbatch my_first_job.sh
Submitted batch job 1843928

[user@cirrus01 ~]$ sbatch --dependency=after:1843928 my_second_job.sh
Submitted batch job 1843921

[user@cirrus01 ~]$ squeue
JOBID PARTITION      NAME USER ST TIME NODES NODELIST(REASON)
1843928    hpc  my_first_job.sh user  R 0:11    1 hpc046
1843921    hpc  my_second_job.sh user PD 0:00    1 hpc047
```

In this case the second job will run even if the first job fails for some reason. The pending job will execute when the first finish his execution.

Typical example

On a real case we may need the ensure that a good termination of the first job, for example, the first job may produce some output file needed as input for the second job:

```
[user@cirrus01 ~]$ sbatch my_first_job.sh
Submitted batch job 1843922
```

```
[user@cirrus01 ~]$ sbatch --dependency=afterok:1843922 my_second_job.sh  
Submitted batch job 1843923
```

The **afterok** parameter states that the second job would start only if the previous job terminate with no errors.

Complex cases

Check the **sbatch** manual page for more details:

```
[user@cirrus01 ~]$ man sbatch
```

search for the **-d**, **--dependency=<dependency_list>** options explanation.

Revision #1

Created 4 August 2021 20:45:28 by João Paulo Martins

Updated 16 March 2023 15:41:59 by João Paulo Martins