

Job Options

Account to be charged for resources used

```
-A, --account=<account>
```

Job array specification (sbatch only)

```
-a, --array=<index>
```

Initiate job after specified time

```
-b, --begin=<time>
```

Required node features

```
-C, --constraint=<feature>
```

Bind tasks to specific CPUs (srun only)

```
--cpu-bind=<type>
```

Number of CPUs required per task

```
-c, --cpus-per-task=<count>
```

Defer job until specified jobs reach specified state

```
-d, --dependency=<state:jobid>
```

Specify distribution methods for remote processes

```
-m, --distribution=<method:method>
```

File in which to store job error messages (sbatch and srun only)

```
-e, --error=<filename>
```

Specify host names to exclude from job allocation

```
-x, --exclude=<name>
```

Reserve all CPUs and GPUs on allocated nodes

```
--exclusive
```

Export specified environment variables (e.g., all, none)

```
--export=<name=value>
```

Number of GPUs required per task

```
--gpus-per-task=<list>
```

Job name

```
-J, --job-name=<name>
```

Prepend task ID to output (srun only)

```
-l, --label
```

Job Options (cont)

E-mail notification type (e.g., begin, end, fail, requeue, all)

```
--mail-type=<type>
```

E-mail address

```
--mail-user=<address>
```

Memory required per allocated node (e.g., 16GB)

```
--mem=<size> [units]
```

Memory required per allocated CPU (e.g., 2GB)

```
--mem-per-cpu=<size> [units]
```

Specify host names to include in job allocation

```
-w, --node-list=<hostnames>
```

Number of nodes required for the job

```
-N, --nodes=<count>
```

Number of tasks to be launched

```
-n, --ntasks=<count>
```

Number of tasks to be launched per node

```
--ntasks-per-node=<count>
```

File in which to store job output (sbatch and srun only)

```
-o, --output=<filename>
```

Partition in which to run the job

```
-p, --partition=<names>
```

Signal job when approaching time limit

```
--signal=[B: ]<num> [@time]
```

Limit for job run time

```
-t, --time=<time>
```

The options can be used on the command line or in the case of a submission script they must be preceded by #SBATCH

Job submission

sbatch Submit a batch script

salloc Request allocation for interactive job

srun Request allocation and run an application

sbatch and salloc examples

```
# Request interactive job on
debug node with 4 CPUs
salloc -p standby -c 4
# Request interactive job with
V100 GPU
salloc -p comm_gpu_inter --
ntasks=1 --gpus=3
# Submit batch job
sbatch runjob.slurm
```

sprio options

Output format to display

```
-o, --format=<options>
```

Filter by job IDs (csl)

```
`j, --jobs=<job_id_list>`
```

Show more available information

```
-l, --long
```

Show the normalized priority factors

```
-n, --norm
```

Filter by partitions (csl)

```
-p, --partition=<partition
_list>
```

Filter by users (csl)

```
-u, --user=<user_list>
```

csl = comma-separated list



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Not published yet.
 Last updated 28th March, 2024.
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sprio examples

```
# View normalized job priorities
for your own jobs
sprio -nu $USER

# View normalized job priorities
for specified partition
sprio -nlp standby
```

scancel examples

```
# Cancel specific job
scancel 314159

# Cancel all your own jobs
scancel -u $USER

# Cancel your own jobs on
specified partition
scancel -u $USER -p standby

# Cancel your own jobs in
specified state
scancel -u $USER -t pending
```

scancel options

Restrict to the specified account

```
-A, --account=<account_list>
```

Restrict to jobs with specified name

```
-n, --name=<job_name>
```

Restrict to jobs using the specified host names (csl)

```
-w, --node list=<hostnames>
>
```

Restrict to the specified partition

```
-p, --partition=<partition>
n>
```

Restrict to the specified user

```
-u, --user=<username>
```

csl = comma-separated list

squeue examples

```
# View your own job queue with
estimated start times
squeue --me

# View own job queue with
estimated start times for
pending jobs
squeue --me --start

# View job queue on specified
partition in long format
squeue -lp epyc-64
```

squeue options

Filter by accounts (csl)

```
`-A, --account=<account_list>`
```

Output format to display

```
`-o, --format=<options>`
```

Filter by job IDs (csl)

```
`-j, --jobs=<job_id_list>`
```

Show more available information

```
`-l, --long`
```

Filter by your own jobs

```
`--me`
```

Filter by job names (csl)

```
`-n, --name=<job_name_list>`
```

Filter by partitions (csl)

```
`-p, --partition=<partition_list>`
```

Sort jobs by priority

```
`-P, --priority`
```

Show the expected start time and resources to be allocated for pending jobs

```
`--start`
```

Filter by states (csl)

```
`-t, --states=<state_list>`
```

Filter by users (csl)

```
`-u, --user=<user_list>`
```

csl = comma-separated list

Job Management

squeue View information about jobs in queue

scancel Signal or cancel jobs, job arrays, or job steps

sprio View job scheduling priorities

Partition and node information

sinfo View information about nodes and partitions

scontrol View or modify configuration and state

sinfo options

Output format to display

```
`-o, --format=<options>`
```

Show more available information

```
`-l, --long`
```

Show information in a node-oriented format

```
`-N, --Node`
```

Filter by host names (comma-separated list)

```
`-n, --nodes=<hostnames>`
```

Filter by partitions (comma-separated list)

```
`-p, --partition=<partition_list>`
```

Filter by node states (comma-separated list)

```
`-t, --states=<state_list>`
```

Show summary information

```
`-s, --summarize`
```

sinfo examples

```
# View all partitions and nodes
by state
```

```
sinfo
```

```
# Summarize node states by
partition
```

```
sinfo -s
```

```
# View nodes in idle state
```

```
sinfo --states=idle
```



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Not published yet.

Last updated 28th March, 2024.

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sinfo examples (cont)

```
> # View nodes for specified partition in  
long, node-oriented format  
sinfo -INp standby
```

scontrol actions and options

Show more details

```
-d, --details
```

Show information on one line

```
-o, --oneliner
```

Show partition

```
show partition <pa rti tio n>
```

Show node

```
show node <ho stn ame>
```

Show job

```
show job <jo b_i d>
```

Hold Jobs

```
hold <jo b_l ist>
```

Release Jobs

```
release <jo b_l ist>
```

Show Hostnames

```
show hostnames
```

scontrol examples

```
# View information for specified  
partition  
scontrol show partition standby  
# View inform ation for  
specified node  
scontrol show node tcocs002  
# View detailed inform ation for  
running job  
scontrol show job 314159 -d  
# View hostnames for job (one  
name per line)  
scontrol show hostnames
```

Slurm environment variables

Number of tasks in job array

```
SLURM_ ARR AY_ TAS K_COUNT
```

Job array task ID

```
SLURM_ ARR AY_ TASK_ID
```

Number of CPUs requested per task

```
SLURM_ CPU S_P ER_TASK
```

Account used for job

```
SLURM_ JOB _AC COUNT
```

Job ID

```
SLURM_ JOB_ID
```

Job Name

```
SLURM_ JOB _NAME
```

List of nodes allocated to job

```
SLURM_ JOB _NO DELIST
```

Number of nodes allocated to job

```
SLURM_ JOB _NU M_NODES
```

Partition used for job

```
SLURM_ JOB _PA RTITION
```

Number of job tasks

```
SLURM_ NTASKS
```

MPI rank of current process

```
SLURM_ PROCID
```

Directory from which job was submitted

```
SLURM_ SUB MIT_DIR
```

Number of job tasks per node

```
SLURM_ TAS KS_ PER _NODE
```

Slurm Environment Variables examples

```
# Specify OpenMP threads  
export OMP_NU M_T HRE ADS =$S -  
LUR M_C PUS _PE R_TASK  
# Specify MPI tasks  
srun -n $SLURM _NTASKS ./mpi_ -  
program
```



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Last updated 28th March, 2024.
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