

Basic SLURM commands for Linux cluster

1. sinfo

Description:

For a cluster running SLURM, nodes are arranged into partitions. sinfo is used to view partition and node information in the cluster.

Example:

```
[r2@access2 ~]$ sinfo
PARTITION AVAIL  TIMELIMIT  NODES  STATE NODELIST
xeon*      up    infinite   10  alloc fc430-[2-5],r630-[231-232],r640-[40-43]
xeon*      up    infinite    4  idle r630-[234-237]
e5v3       up    infinite    2  alloc r630-[231-232]
e5v3       up    infinite    4  idle r630-[234-237]
e5v4       up    infinite    4  alloc fc430-[2-5]
scale2     up    infinite    4  alloc r640-[40-43]
knl        up    infinite    1  drain kn181-36
knl        up    infinite    2  alloc kn181-[59,224]
knl        up    infinite   29  idle kn181-[6-9,33-35,48-58,60-63,223,225-230]
vhpc-hko-r2 up    infinite    4  alloc fc430-[2-5]
vhpc-hko-r2 up    infinite    4  idle r630-[234-237]
[r2@access2 ~]$
```

2. squeue

Description:

Displays the information and the states of the submitted jobs.

Options:

- squeue -a shows the jobs of all users
- squeue -u <username> shows the jobs of the specified user
- squeue -p <partition> shows the jobs in the specified partition

Example:

```
[r2@access2 sample_program]$ squeue -u r2
  JOBID PARTITION   NAME   USER ST   TIME  NODES NODELIST(REASON)
   64812  vhpc-hko- paratest   r2   R    0:01    1 r630-234
[r2@access2 sample_program]$
```

3. sbatch

Description:

Submit a batch script to SLURM

Options:

- sbatch -p <partition> <your_script_filename> submits the batch script to the specified partition

Example:

```
[r2@access2 sample_program]$ sbatch -p vhpc-hko-r2 slurm_job.sh
Submitted batch job 64822
[r2@access2 sample_program]$
```

4. scancel

Description:

Sends SIGKILL signal to terminate the specified job.

Example:

```
[r2@access2 sample_program]$ squeue -u r2
      JOBID PARTITION  NAME   USER ST  TIME  NODES NODELIST(REASON)
      64812 vhpc-hko- paratest   r2  R   0:01   1 r630-234
[r2@access2 sample_program]$ scancel 64812
```

5. srun (interactive example)

Description:

Start jobs interactively.

Options:

- `srun --ntasks=<num_processors> -p <partition> --pty bash -i` runs a job interactively with specified number of processors resources allocated in the specified partition. The hostname of the node running interactively will be displayed.

Example:

```
[r2@access2 ~]$ srun --ntasks=2 -p vhpc-hko-r2 --pty bash -i
[r2@r630-234 ~]$
```