

Benefits of Using SLURM

1. Fair Resource Sharing

SLURM ensures fair distribution of all the resources.

2. Queue System (No Waiting on Idle Servers)

SLURM automatically runs it when resources become available.

3. Job Scheduling Flexibility

Users can specify how many CPUs, GPUs, and memory they need. SLURM assigns exactly that, avoiding conflicts and crashes.

4. No Manual Monitoring Required

Once a job is submitted, users can log out. SLURM keeps running the job in the background, even if the user disconnects.

5. Reproducibility of Work

SLURM keeps detailed logs of job submissions, resources used, and outputs. This helps users track and reproduce experiments.

6. Priority Handling

Users with urgent or short jobs can get higher priority if policies are set, so they don't always have to wait behind long jobs.

7. Better GPU Utilization

Idle GPUs get automatically assigned to waiting jobs. Users don't waste time finding free GPUs manually.

8. Custom Environments per Job

Users can run jobs in isolated environments (modules, conda, etc.), so they don't clash with others' dependencies.