JUSTUS-LIEBIG-UNIVERSITÄT GIESSEN

JustHPC Cluster I quick reference

Hessisches Kompetenzzentrum für Hochleistungsrechnen

File Systems

Path	Shell variable	Purpose	Quota	Back-ups
/home/ <lab>/ <userna-me>	$HOME	non-repro-ducible data, data with high repro-duction cost	200 GB	nightly
/scratch/ <lab>/ <userna-me>	$HPC_LOCAL	temporary data, large files, interme-diate results, easily re-computable results	2 TB	none

Default

Users are required to use partitions that best fit their use case. Refer to the cluster wiki (https://justhpc.hpc. uni-giessen.de/trac/wiki/SlurmExamples) for example job scripts.

Access

Only members of the JLU Giessen are eligible to obtain a cluster account.
Login is only possible from within the university's net-work. From outside connect to the internal network via VPN.

Connect to the cluster's front-end node via SSH:
```
$ ssh -XC <username>@justhpc.hpc.uni-gies-sen.de
```

Partitions/ Runtime constraints

Partition	Time limit	User case
single	5 days	single *node* jobs
debug	30 minutes	testing and de-bugging
serial	5 days	single *core* jobs
regular	5 days	parallel produc-tion jobs
bigmem	5 days	jobs with large RAM require-ments

Module System

Hint: Load *all* required modules inside your job scripts! `module purge` should be your first command!

Common commands:
- `module [un]load <name of module>`: Load / unload a particular module
- `module purge`: (use in job script as first `module` command)
- `module list`: List all currently loaded modules
- `module avail`: List all currently loadable modules

Please refer to the cluster wiki (https://justhpc.hpc.uni-giessen.de/trac/wiki/ModuleFiles) to learn more about the details of our module system.

Help

In case you have questions or run into some issues (e.g. required software not installed) file a ticket in our ticket system: https://justhpc.hpc.uni-giessen.de/trac.

Please note that the ticket system is only accessible from the JLU internal network. From the outside you need to connect to this network via VPN.

SLURM commands

For details refer to the man pages or the Slurm website: https://slurm.schedmd.com

Most important commands:
- `sbatch`, `scancel`, `squeue`, `srun`

`sbatch` examples
- Submit a jobscript:
```
$ sbatch <job script>
```
- Submit a jobscript as a specific account (other than default):
```
$ sbatch --account <account> <job script>
```
- Submit a jobscript that only starts after the other given jobids have finished successfully:
```
$ sbatch --dependency=afterok:<jo-bid>[:<jobid>[:...]] <job script>
```

`scancel` examples
```
$ scancel <jobid>
```
- **Note**: `skill` is *not* a slurm command!

`srun` examples
- **Note**: `srun` is used inside a job script to start subtasks.
```
srun [-N <number of tasks>] /path/to/ap-plication
```

`squeue` examples
- Show all running and pending jobs
```
$ squeue
```
- Show running and pending jobs of a user (for yourself, you can also use `squeue -u $USER`)
```
$ squeue -u <username>
```
- Show a time *estimate* when this job will be starting (can change over time!)
```
$ squeue --start -j <jobid>
```