

File Systems

Path	Shell variable	Purpose	Quota	Back-ups
/home	/home or /work/home	non-re-producible data, data with high reproduction cost	40 GB	daily + snapshots
/scratch /work	/work/projects /work/groups /work/sratch/ \$USER	temporary data, large files, intermediate results, easily recomputable results	10TB or 2 mio. files	unused data will be automatically deleted after 8 weeks

Access

Login nodes (name pattern) Systems with GPU: lcluster13.hrz.tu-darmstadt.de (13,15,17,19) Systems without GPU: lcluster14.hrz.tu-darmstadt.de (14,16,18)

```
$ ssh -CX [-p <port>] <username>@lcluster[13-19].hrz.tu-darmstadt.de
```

Partitions / Runtime constraints

Runtime constraints with `-C sbatch` parameter select particular hardware:

Command	Description
<code>-C=avx512</code>	nodes with AVX512 capability
<code>-C=mem / -C=mem1536g</code>	MEM nodes
<code>-C=mpi</code>	MPI nodes
<code>--gres=gpu[:v100,:a100][:1-4]</code>	nodes with 1-4 v100 or a100 GPUs

Note: Combinations of constraints use „&“
Example: `-C „mem&avx512“`

Partition	Limit
test24	24hr limit
test30m	30 min limit
test7d	7 day limit
testgpu24	24hr limit, GPU systems

Module System

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

Common commands:

- `module spider <pattern>` Search modules with name matching `<pattern>`
- `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

SLURM commands

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

Required commands:

- `sbatch`, `scancel`, [`sacct`,] `srun`, `squeue`

`sbatch`

```
$ sbatch <job script>
```

```
$ sbatch --account <account> <jobid> #
```

```
$ sbatch --dependency afterok:<jobid>[,<jobid1>[,...]]
```

`scancel`

```
$ scancel <jobid>
```

- **Note:** `skill` can not be used with job scripts.

`srun`

- **Note:** Only use `srun` *inside* of a job script.

```
srun [-N <number of tasks>] /path/to/application
```

`squeue`

```
$ squeue # Show all running and pending jobs for current user
```

Useful commands:

- *Estimate* start time of currently pending job:
`squeue --start -j <jobid>`
- DA: `csreport` - overview of consumed resources in the past months

Help

- Administrative help:
hhr@hrz.tu-darmstadt.de
- HPC support:
darmstadt@hpc-hessen.de

- https://www.hrz.tu-darmstadt.de/hlr/nutzung_hlr/index.en.jsp
- https://hpc-wiki.info/hpc/HPC_Wiki

