First Steps

Your first steps on the cluster — finding your resources and submitting your first job.

- Finding Your Account and Partition
- Submitting Your First Job
- Useful Tools

Finding Your Account and Partition

Before submitting jobs, you need to know which account and partition you have access to. These are required parameters for every job submission.

Check Your Partitions

Run this command on the login node:

```
check_my_partitions
```

This lists all partitions and accounts you are authorized to use.

Key Concepts

- **Account** — your billing/group account (e.g. `public-users_v2`). Required for all job submissions.
- **Partition** — the queue your job runs in (e.g. `power-general-shared-pool`). Determines which nodes are available and what resource limits apply.
- **QOS** — Quality of Service, controls priority and limits (e.g. `public`). Usually matches your partition.

Useful Commands

```
# View all partitions and their status
sinfo

# View partition details including limits
scontrol show partition power-general-shared-pool
```

```
# View your running and pending jobs
squeue -u your_username
```

Need Access?

If `check_my_partitions` returns nothing or you are missing a partition, contact the HPC team at hpc@tauex.tau.ac.il.

Submitting Your First Job

Once you have your account and partition from `check_my_partitions`, you are ready to submit your first job.

A Minimal Job Script

Create a file called `first_job.sh`:

```
#!/bin/bash
#SBATCH --job-name=first_job
#SBATCH --account=public-users_v2
#SBATCH --partition=power-general-shared-pool
#SBATCH --qos=public
#SBATCH --time=00:10:00
#SBATCH --ntasks=1
#SBATCH --cpus-per-task=1
#SBATCH --mem-per-cpu=2G
#SBATCH --output=first_job_%j.out
#SBATCH --error=first_job_%j.err

echo "Hello from $(hostname)"
echo "Job ID: $SLURM_JOB_ID"
```

Submit It

```
sbatch first_job.sh
```

Slurm will return a job ID:

```
Submitted batch job 12345
```

Monitor It

```
# Check job status
squeue -u your_username

# View output once the job completes
cat first_job_12345.out
```

Job States

- **PD** — Pending, waiting for resources
- **R** — Running
- **CG** — Completing
- **CD** — Completed
- **F** — Failed

Next Steps

Once your first job runs successfully, see **Running Jobs** for arrays, GPU jobs, interactive sessions, and more.

See Also

- HPC Helper Toolkit — AI-powered tool to help with QOS configuration, job submission, and more

Useful Tools

External tools and resources to help with TAU HPC usage.

HPC Helper Toolkit

An AI-powered toolkit to help with common HPC tasks including QOS configuration, job submission, and more.

HPC Helper Toolkit for TAU