SLURM configuration

This section details the current SLURM configuration for the ISC Computational Center.

Installation

SLURM has been installed from tarball, version : 24.11.0

All official plugins installed :

- libnvidia-ml
- TODO

Install / upgrade process TODO

Architecture

Chacha

- Client (slurm-smd-client)
- Worker (slurm-smd,slurm-smd-slurmd)
- Controller (slurm-smd-slurmctld)
- Accounting DB (slurm-smd-slurmdbd)

Disco

- Client (slurm-smd-client)
- Worker (slurm-smd,slurm-smd-slurmd)

Schema

TODO

Partitions

Dance

This is the default partition : is is currently composed of Chacha and Disco.

Chacha and Disco

These partitions can be used to restrain an account to use only one server.

Accounts

Accounts have been created in 2 groups :

- Premium Researchers (premium_rs) :
- Standard Researchers (standard_rs) : All users who can't participate financially to the project. Students are also part of this group

There are 2 other groups : Test and temp : Test is only for administration purpose, and temp is a locked group either to migrate someone from another account (can't delete an account when someone has it as a default account) or to disallow someone to run jobs (MaxSubmitJob=0)

QOS and Limits

Current limits on QOS and accounts applied to each project account :

- **premium_rs :**
    - MaxCPUs=44
    - MaxNodes=2
    - MaxTRES=gres/gpu=1,gres/shard=96,cpu=44,mem=500G
    - GrpTRES=gres/gpu=1,gres/shard=96,cpu=44,mem=500G
    - GrpWall=08:00:00
    - MaxWall=08:00:00

- **standard_rs :**
    - MaxCPUs=24
    - MaxNodes=2
    - MaxTRES=gres/gpu=1,gres/shard=96,cpu=24,mem=256G
    - GrpTRES=gres/gpu=1,gres/shard=96,cpu=24,mem=256G
    - GrpWall=04:00:00
    - MaxWall=04:00:00

Scheduling

Fairshare is one way of priorizing jobs in the job queue.

- premium_rs :
    - Fairshare : 750
- standard_rs :
    - Fairshare : 250

User creation

Users fill their form from the page ISC Computational Center , then their information is used to create their SSH access, and their SLURM user in its project account, according to the SLA / QOS we can provide : Premium or Standard.

Several users can share the same project account to work as a team. (Limits are applied both to each user for maximum limits and the group for group limits)

Currently, Rémi creates and configure user accounts.

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