

Setting Job Rules with Slurm(on NeSI's HPC Maui/Mahuika)

1. Show all info under a account (nesi00213)

```
sacctmgr show account WithAssoc where name=nesi00213 cluster=maui format=user,cluster,GrpTRESMins%30
```

this will show :

1.all users under nesi00213

2. current rules under GrpTRESMins

User	Cluster	GrpTRESMins

jpa198	maui	
schoenher+	maui	
cbs51	maui	
rgraves	maui	
tdn27	maui	billing=1959124
sjn87	maui	billing=870000
leer	maui	
thomsonem	maui	
jmotha	maui	
sharmila	maui	
cde62	maui	
hnr12	maui	
kta54	maui	
ddempsey	maui	cpu=0
riffaultj	maui	
ykh22	maui	billing=31360630
bradleyb	maui	
kmf76	maui	
jagdish.v+	maui	
melody.zhu	maui	
richard.c+	maui	
jeongs	maui	
baes	maui	
vap30	maui	
ksaslam	maui	
daniel.la+	maui	

Removing the 'cluster=' clause will make it show info for all clusters.

Removing the 'format=' will make it show all fields.

2. Show share info for a specific user

```
sshare -A nesi00213 -u tdn27 --cluster maui --format user,GrpTRESRaw%110,GrpTRESMins
```

GrpTRESRaw contains the 'live' usage-data slurm stored.

GrpTRESMins constains current rule/restriction a user is under.

User	
GrpTRESRaw	GrpTRESMins
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vmem=0,pages=0	cpu=21996738,mem=38765191976,energy=0,node=274959,billing=21996738,fs/disk=0,
tdn27	cpu=1472782,mem=15203689887,energy=0,node=18409,billing=1472782,fs/disk=0,
vmem=0,pages=0	billing=1959124

IMPORTANT:

The current way Slurm is installed/setup will have a **two week half-life**.

e.g. all numbers under GrpTRESRaw will decay **every 5 minutes**, with a rate that would halve it in 14 days.
every 5 minute the numbers are multiplied by (1-0.000124008)

3. Set Rules for a User

Lets say will want to give tdn27 4k core hours.

the result from step2 shows that he currently has 1472782

$1472782 + 4000 * 60 * 2 = 1952782$

*60 is because its in minutes, instead of hours
*2 is because its hyperthreaded

```
sacctmgr modify user where name=tdn27 account=nesi00213 cluster=maui set GrpTRESMins=billing=1959124
```

This command will give the user 4k CH.

Note:
because of the decay period, this step has to be constantly updated, or user will have free usage every few days.

4. Extra Notes

Combination with Historic usage from Dash board will be more precise and less manual work (not yet implemented)

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