1. Create a New User

- To add a new user examuser:

```
adduser examuser
```

2. Editing the Configuration File (slurm.conf)

- To configure Slurm, you attempted to edit the slurm.conf file:

```
nano slurm.conf

# Make changes as necessary in this file for your Slurm setup.
```

3. Navigating and Working with Scripts

- Navigated to the build directory:

```
cd build/

# Then, edited the newscript.sh file:

nano newscript.sh
```

4. Copy Configuration to System Directories

- After configuring slurm.conf, it was copied to /etc/slurm and /etc/slurm-llnl/: and other Compute Nodes.

```
cp slurm.conf /etc/slurm
cp slurm.conf /etc/slurm-llnl/
```

5. Restarting Slurm Services

- After editing the configuration, the Slurm services were restarted:

```
systemctl restart slurmd
systemctl restart slurmdbd
systemctl restart slurmctld
```

6. Check Job Queues and Partitions

- To check the job queue and partitions:

```
squeue
```

7. Create Account and User in sacctmgr

- Create an account for examuser:

```
sacctmgr add account examuser --immediate
```

Create the user:

```
sacctmgr create user examuser defaultaccount=examuser --immediate
```

8. Create QoS for the User

- Create QoS (Quality of Service) for examuser:

```
sacctmgr create qos examuser
```

Set priority for examuser:

```
sacctmgr modify qos examuser set priority=12
```

9 . Modify User Settings (MaxJobs)

- To modify the MaxJobs limit for the user examuser:

```
sudo sacctmgr modify user examuser set MaxJobs=2
```

10. Check QoS Settings

- To verify the QoS settings:

```
sacctmgr show qos format=name,priority,MaxJobs
```

11. Submitting Jobs as examuser

Log in as examuser:

```
su - examuser
```

Then submit jobs using:

```
sbatch newscript.sh
```

Check job status:

```
squeue
```

12. MaxJobs Exceeded (QoS Limit)

- If the user exceeds the MaxJobs limit, the job will be queued with the following message:

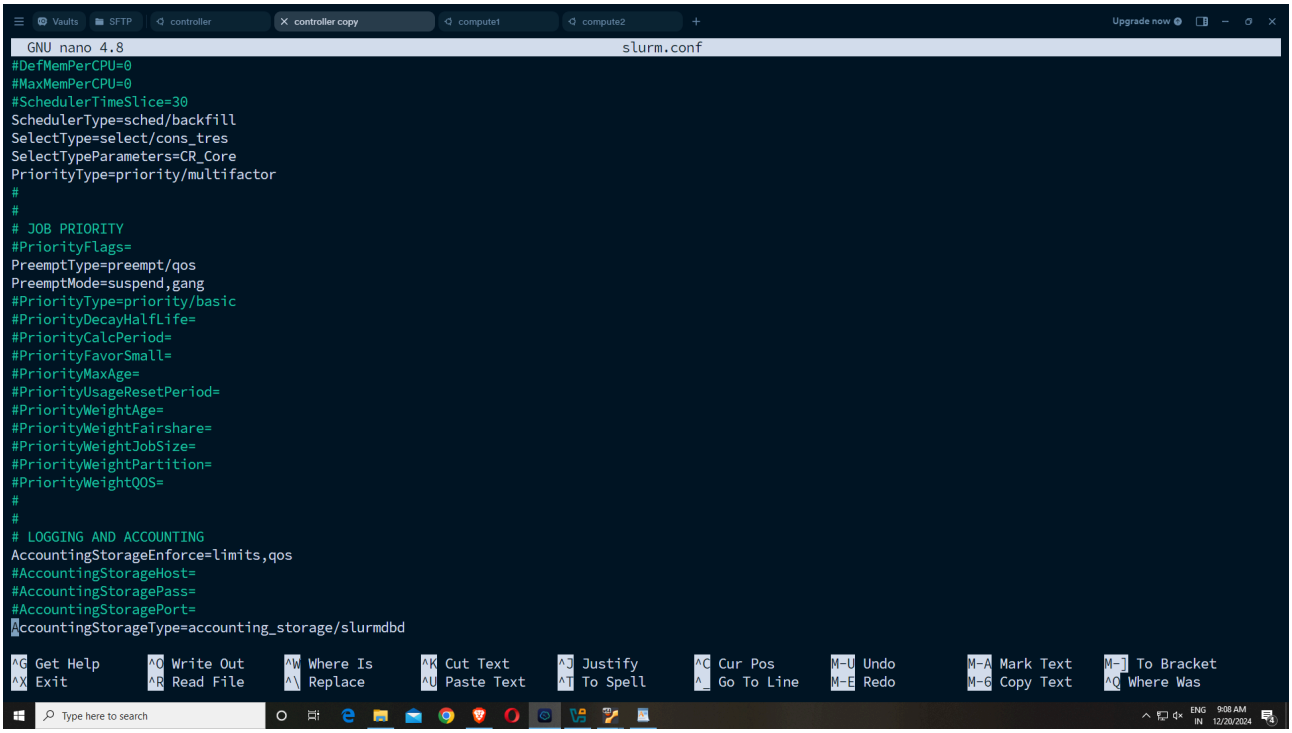
```
squeue
```

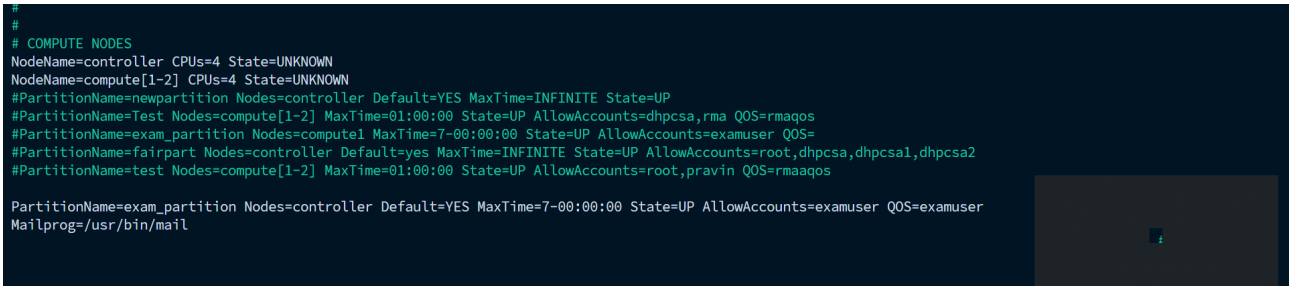
---------- Implementation Screnchots----------

1. Create a New User

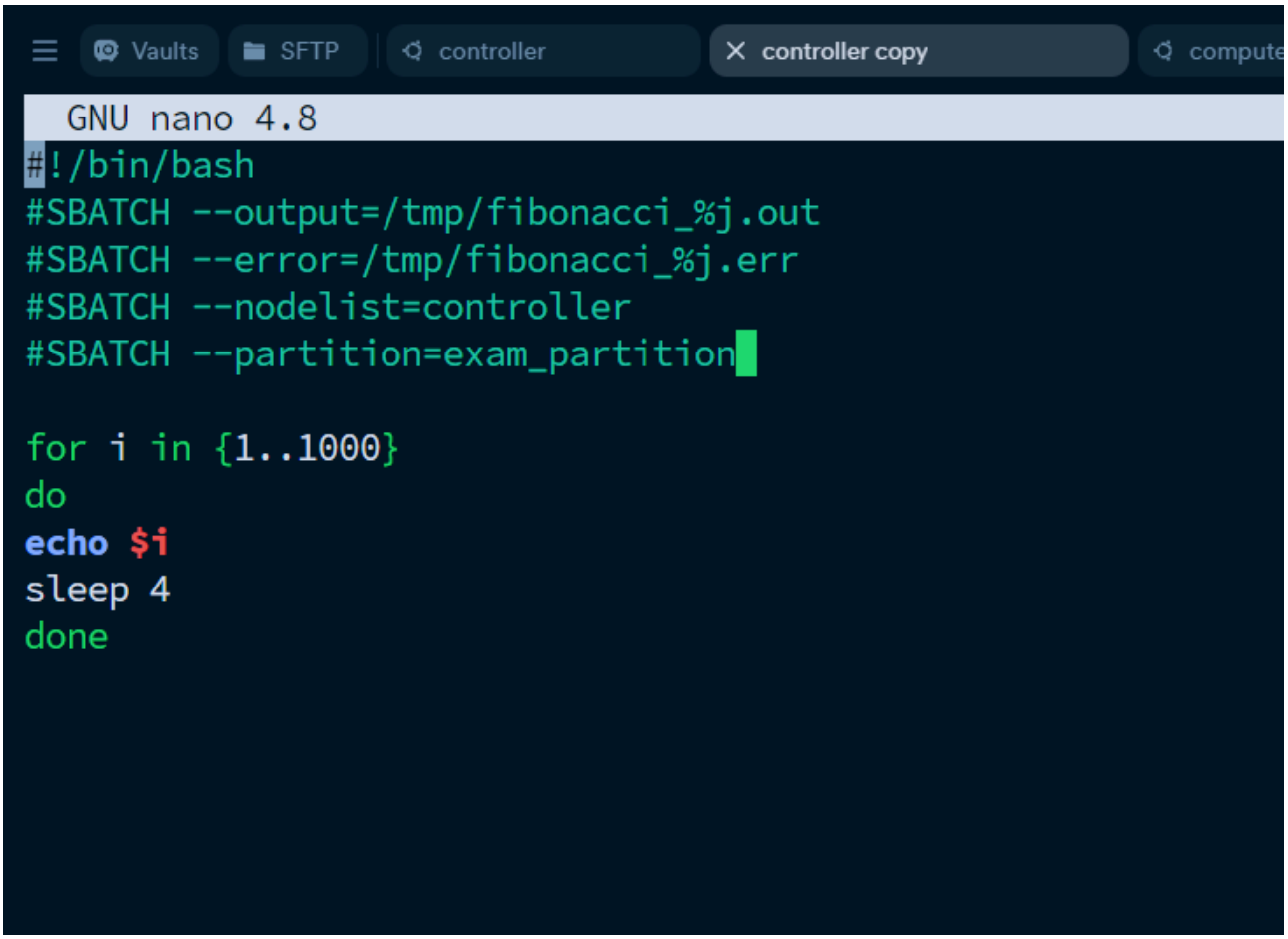
```
root@controller:/home/dhpcsa/slurm-21.08.8/etc# adduser examuser
Adding user `examuser' ...
Adding new group `examuser' (1010) ...
Adding new user `examuser' (1010) with group `examuser' ...
Creating home directory `/home/examuser' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for examuser
Enter the new value, or press ENTER for the default
        Full Name []:
        Room Number []:
        Work Phone []:
        Home Phone []:
        Other []:
Is the information correct? [Y/n] y
```

2. Editing the Configuration File (slurm.conf)

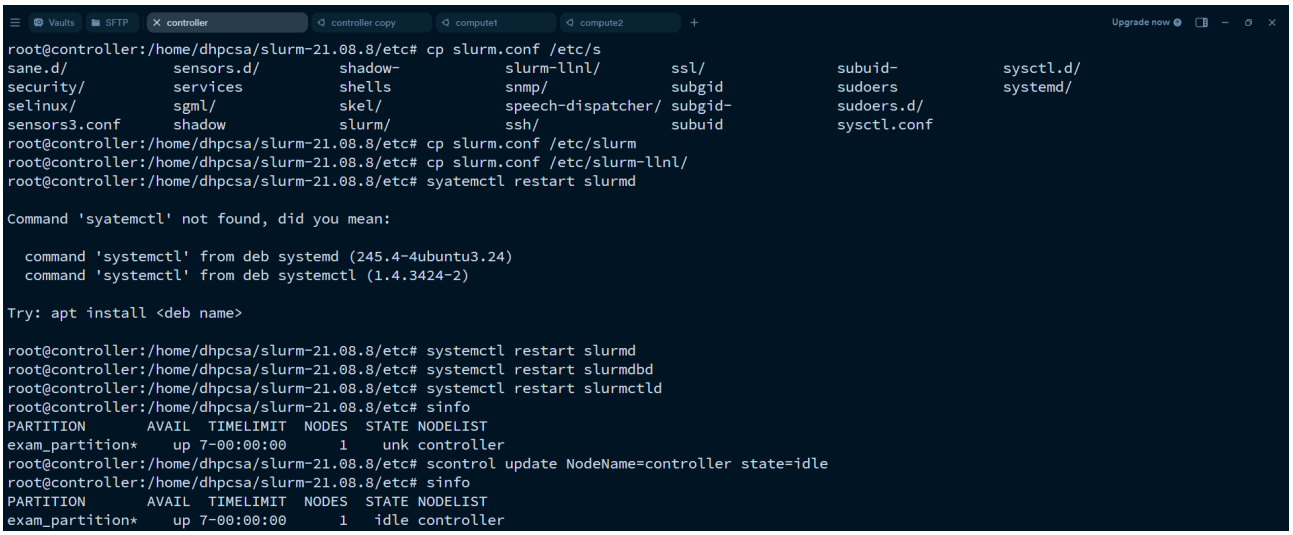




3. Navigating and Working with Scripts



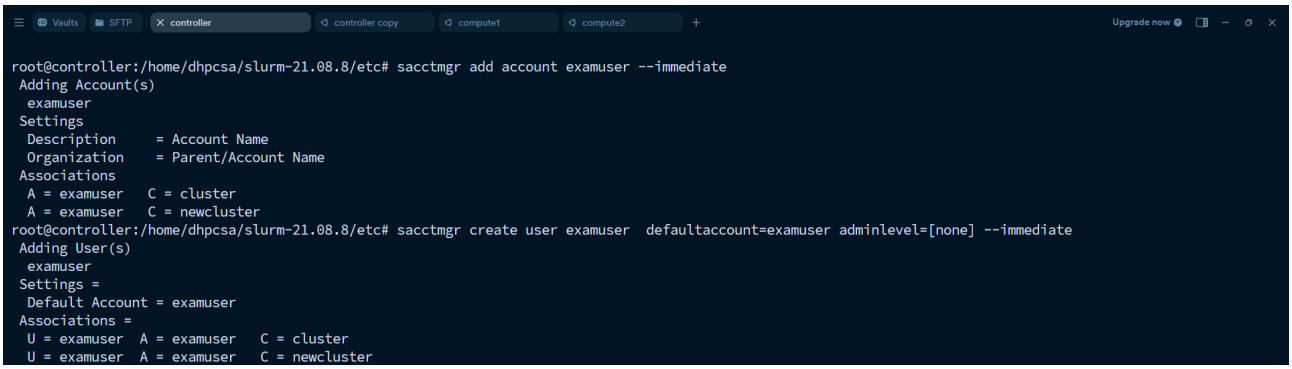
4. Copy Configuration to System Directories



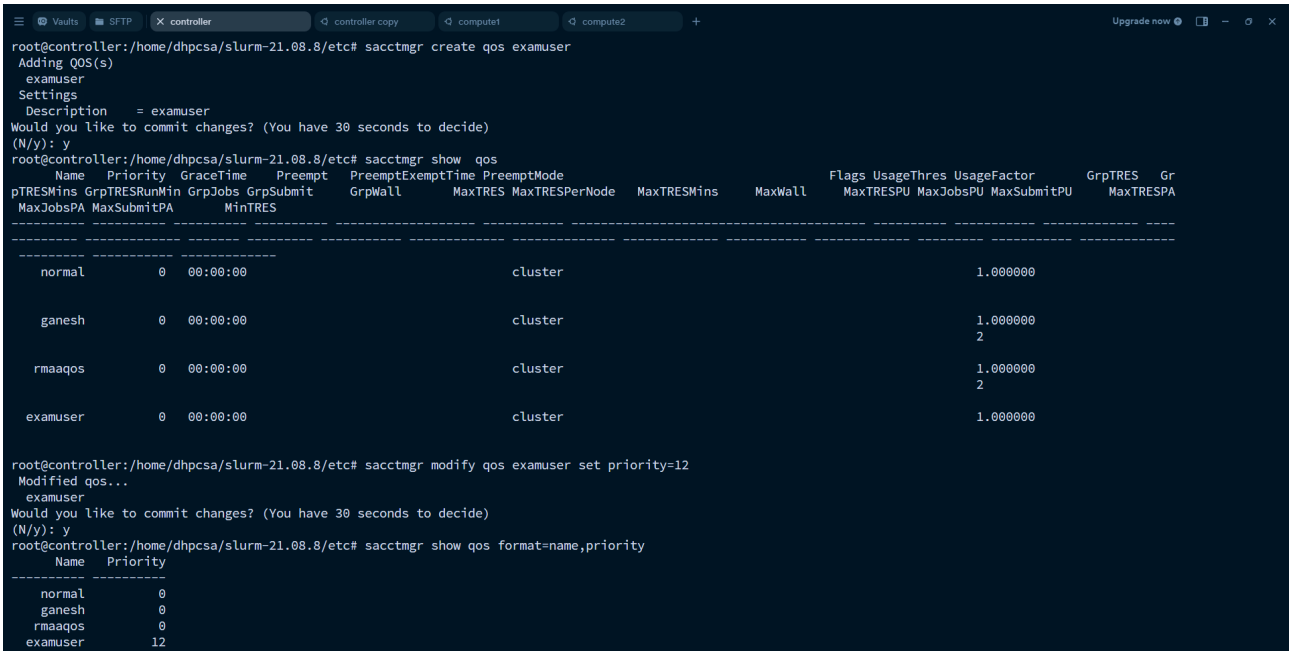
5. Restarting Slurm Services

- After editing the configuration, the Slurm services were restarted:
  - systemctl restart slurmd
  - systemctl restart slurmdbd
  - systemctl restart slurmctld

6. Create Account and User in sacctmgr

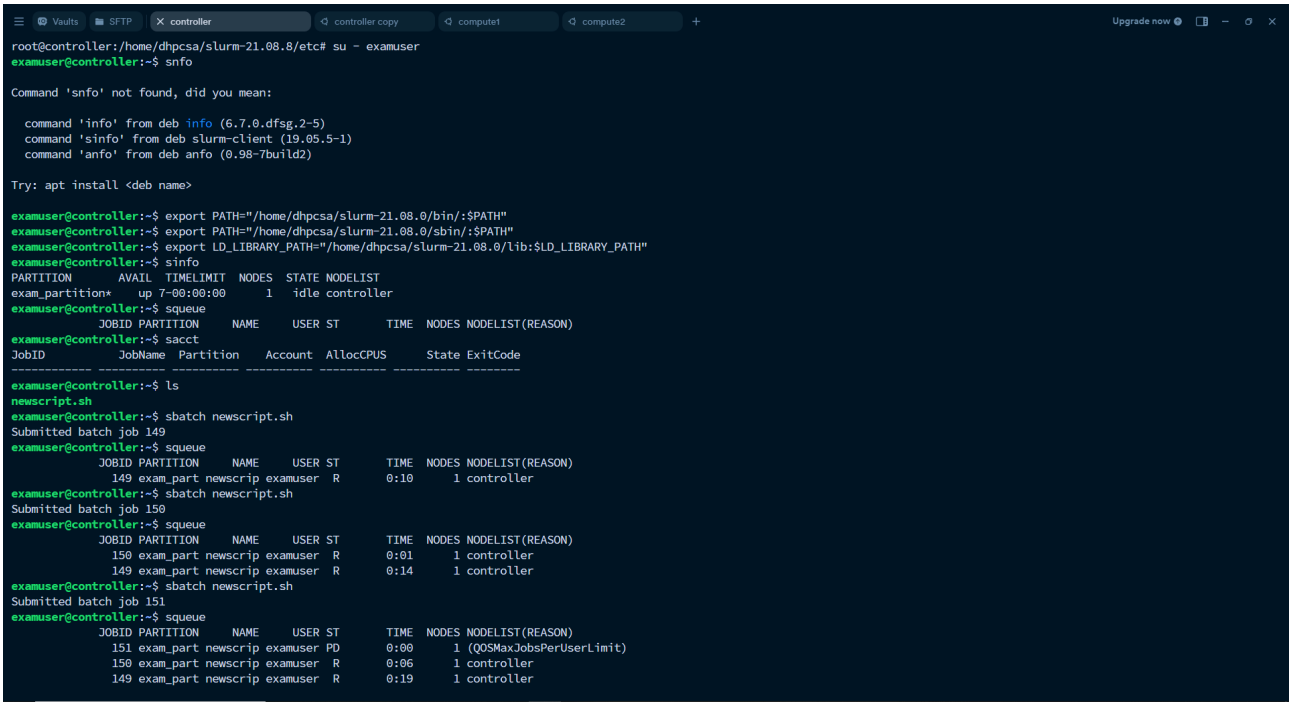


7. Create QoS for the User



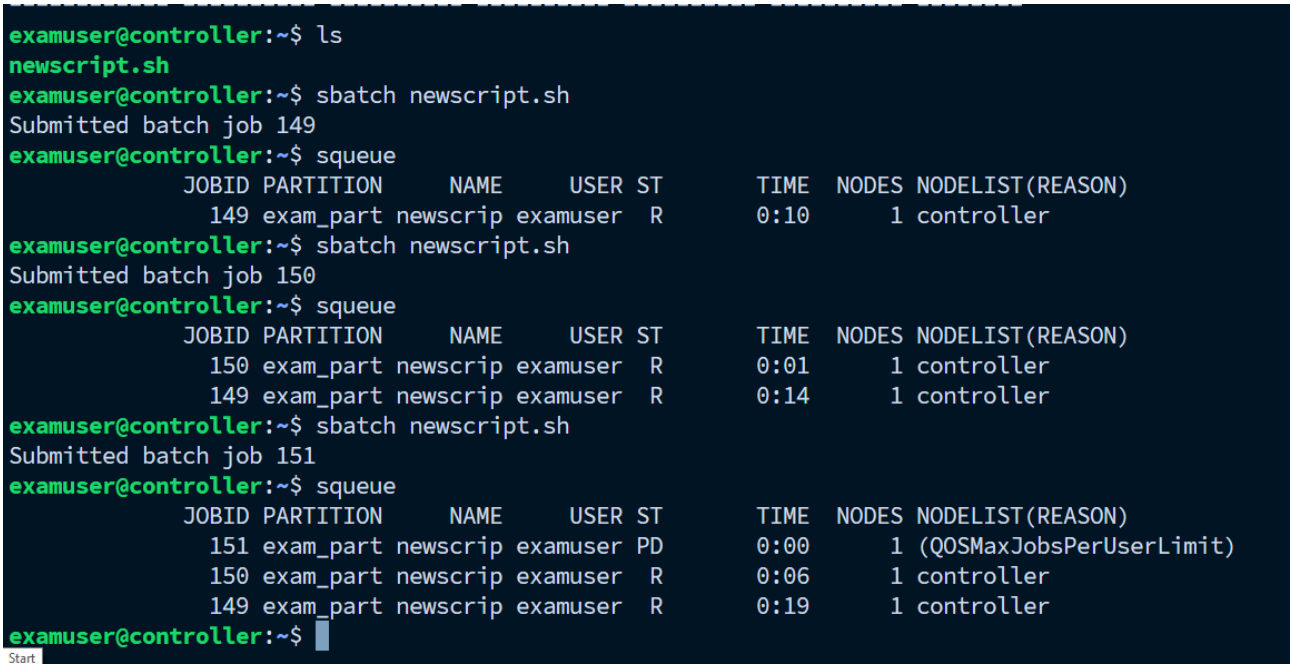
```
root@controller:/home/dhpcsa/slurm-21.08.8/etc# sacctmgr modify qos examuser set MaxJobs=2
 Modified qos...
  examuser
Would you like to commit changes? (You have 30 seconds to decide)
(N/y): y
root@controller:/home/dhpcsa/slurm-21.08.8/etc# sacctmgr show qos format=name,priority,MaxJobs
      Name   Priority MaxJobs
---------- ---------- -------
    normal          0
    ganesh          0       2
   rmaaqos          0       2
  examuser         12       2
```

9. Submitting Jobs as examuser



10. MaxJobs Exceeded (QoS Limit)

If the user exceeds the MaxJobs limit, the job will be queued with the following message:
squeue



Key Points:

● User Management: You created a new user, assigned an account, and set job limits.

● Configuration Changes: The configuration file (slurm.conf) was edited and copied to the appropriate system directories.

● Slurm Services: Restarted necessary Slurm services (slurmd, slurmdbd, slurmctld) after configuration changes.

● Job Limits: Managed user job limits through sacctmgr (e.g., MaxJobs=2).

- QoS: Created and modified QoS for the user.
- Job Submission: Submitted jobs using sbatch and monitored them with squeue.