

# ASSIGNMAENT-9

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## Task 1: Create Reservation for the "exam" Partition

### 1. Create the Reservation:

```
scontrol create reservation=examres name=examres partition=exam user=examuser duration=00:10:00  
nodes=ALL
```

### 2. Verifying the Reservation:

```
scontrol show reservation examres
```

## Task 2: Update slurm.conf for Preemption Settings

### a. Set PreemptType to preempt/partition\_prio and PreemptMode to SUSPEND,GANG

```
PreemptType=preempt/partition_prio  
PreemptMode= SUSPEND, GANG
```

### b. Set PreemptType to preempt/qos and PreemptMode to SUSPEND,GANG

```
PreemptType=preempt/qos  
PreemptMode= SUSPEND, GANG
```

### 3. Apply Configuration Changes:

```
systemctl restart slurmctld
```

## Task 3: Submit a Job and Explain the Output

### 1. Submit a Job:

`sbatch --partition=exam --time=01:00:00 --ntasks=4 --mem=4G my_job_script.sh`

```
ubuntu@controller:~/slurm-21.08.8/build$ scontrol show res
No reservations in the system
ubuntu@controller:~/slurm-21.08.8/build$ scontrol create reservation ReservationName=examres PartitionName=exam_partition Users=examuser StartTime=now Duration=00:10:00
Reservation created: examres
ubuntu@controller:~/slurm-21.08.8/build$ scontrol show res
ReservationName=examres StartTime=2024-12-16T23:03:29 EndTime=2024-12-16T23:13:29 Duration=00:10:00
Nodes=compute1 NodeCnt=1 CoreCnt=1 Features=(null) PartitionName=exam_partition Flags=SPEC_NODES,PART_NODES
TRES=cpu=1
Users=examuser Groups=(null) Accounts=(null) Licenses=(null) State=ACTIVE BurstBuffer=(null) Watts=n/a
MaxStartDelay=(null)

ubuntu@controller:~/slurm-21.08.8/build$ sbatch new2.sh
Submitted batch job 22
ubuntu@controller:~/slurm-21.08.8/build$ squeue
      JOBID PARTITION    NAME    USER  ST       TIME  NODES NODELIST(REASON)
       22 exam_part test_job  ubuntu PD        0:00      1 (ReqNodeNotAvail, Reserved for maintenance)
ubuntu@controller:~/slurm-21.08.8/build$ sbatch new2.sh
Submitted batch job 23
ubuntu@controller:~/slurm-21.08.8/build$ squeue
      JOBID PARTITION    NAME    USER  ST       TIME  NODES NODELIST(REASON)
       22 exam_part test_job  ubuntu PD        0:00      1 (ReqNodeNotAvail, Reserved for maintenance)
       23 exam_part test_job  ubuntu PD        0:00      1 (ReqNodeNotAvail, Reserved for maintenance)
ubuntu@controller:~/slurm-21.08.8/build$
```

```
#  
# Example slurm.conf file. Please run configurator.html  
# (in doc/html) to build a configuration file customized  
# for your environment.  
#  
#  
# slurm.conf file generated by configurator.html.  
# Put this file on all nodes of your cluster.  
# See the slurm.conf man page for more information.  
#  
ClusterName=cluster  
SlurmctlHost=controller  
AuthType=auth/munge  
  
PreemptType=preempt/partition_prio  
PreemptMode=SUSPEND,GANG  
  
PreemptType=preempt/qos  
PreemptMode=SUSPEND,GANG  
  
#SlurmctlHost=  
#  
#DisableRootJobs=NO  
#EnforcePartLimits=NO  
#Epilog=  
#EpilogSlurmctld=
```