Assignment No 3

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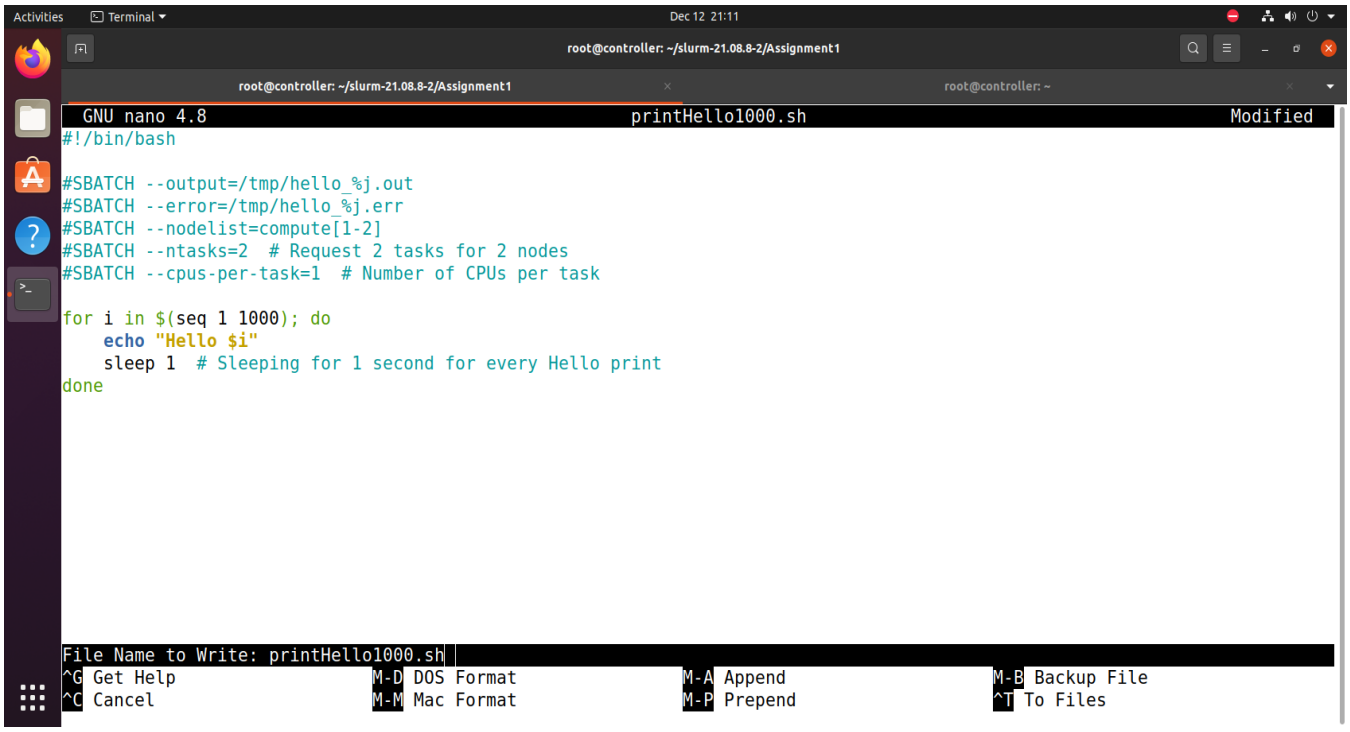
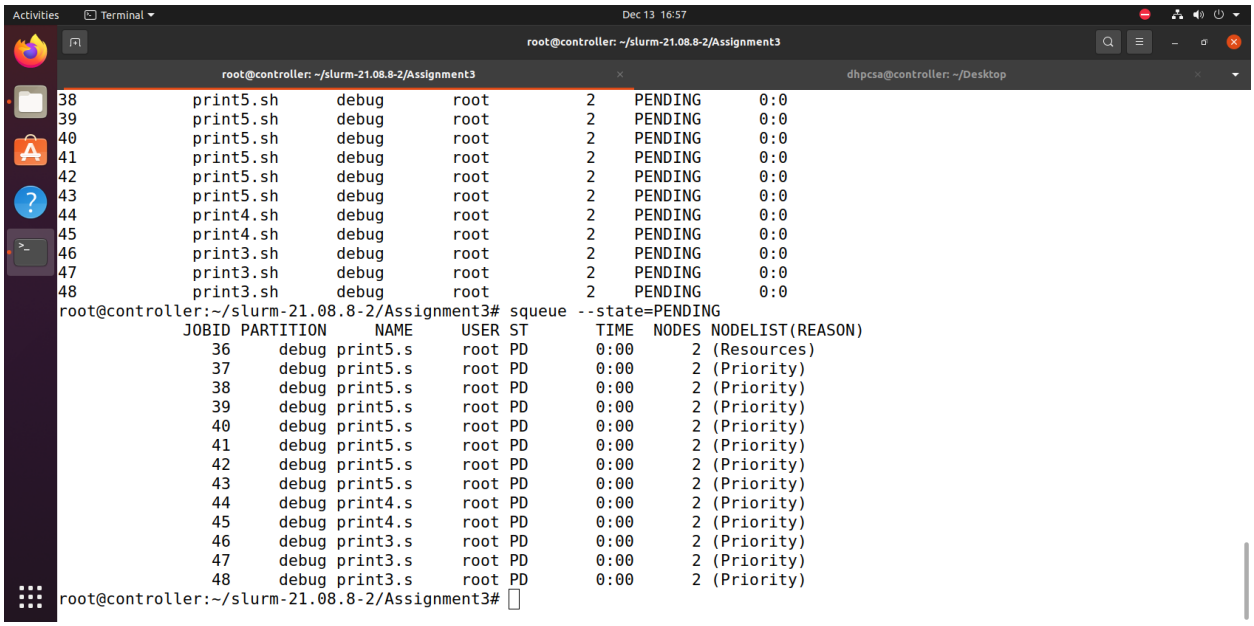
1. You have multiple jobs in the queue, and you want to list only the jobs that are currently pending (not running). How can you do this?
2. You want to monitor the resource usage (e.g., CPU, memory) of a running job. What command can you use to monitor job resource usage in real-time?
3. After a job finishes, you want to check its exit code to know whether it ran successfully. How do you check the exit code of a completed job?

1. List Only Pending Jobs in the Queue

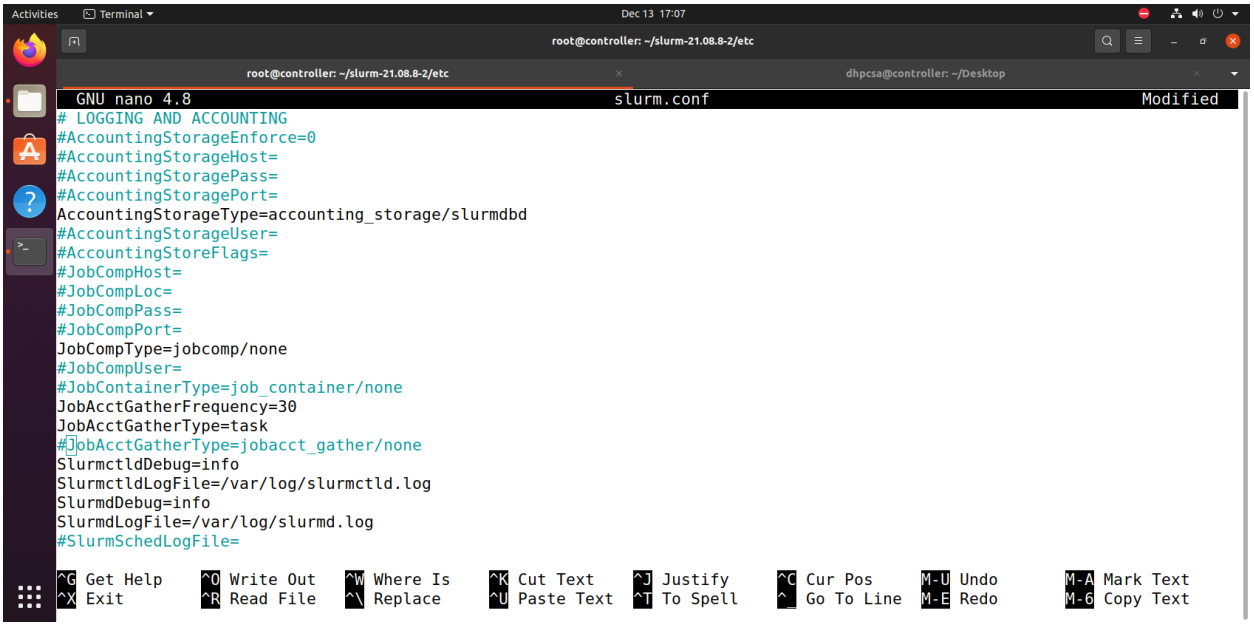
Command: squeue --state=PD

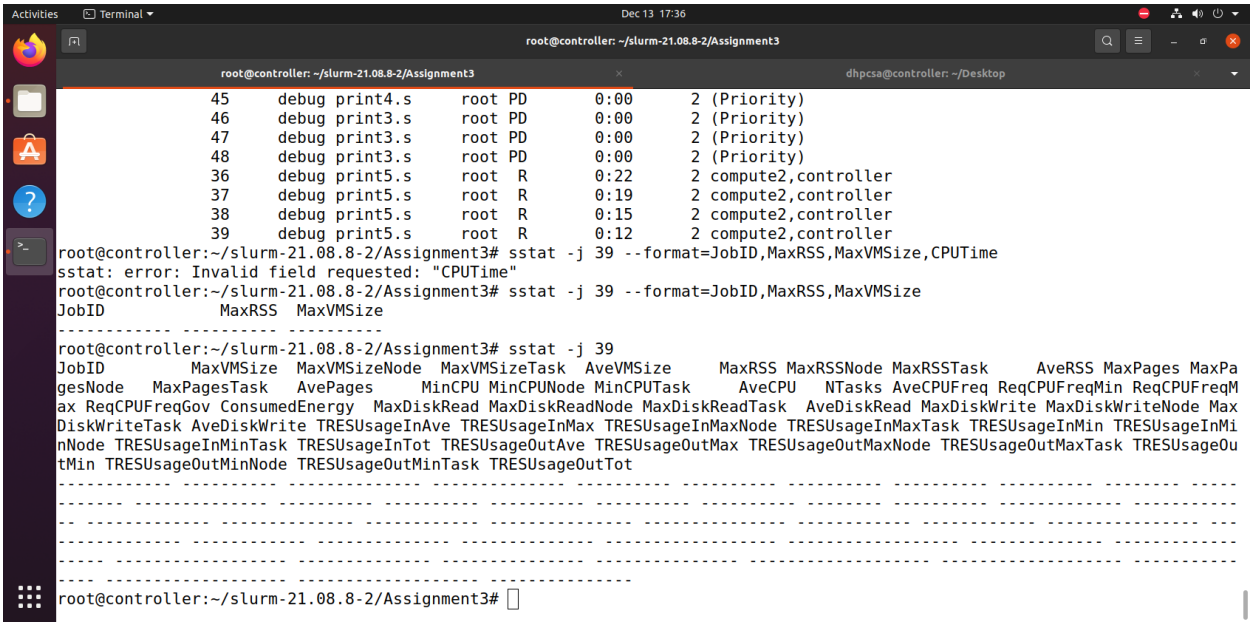


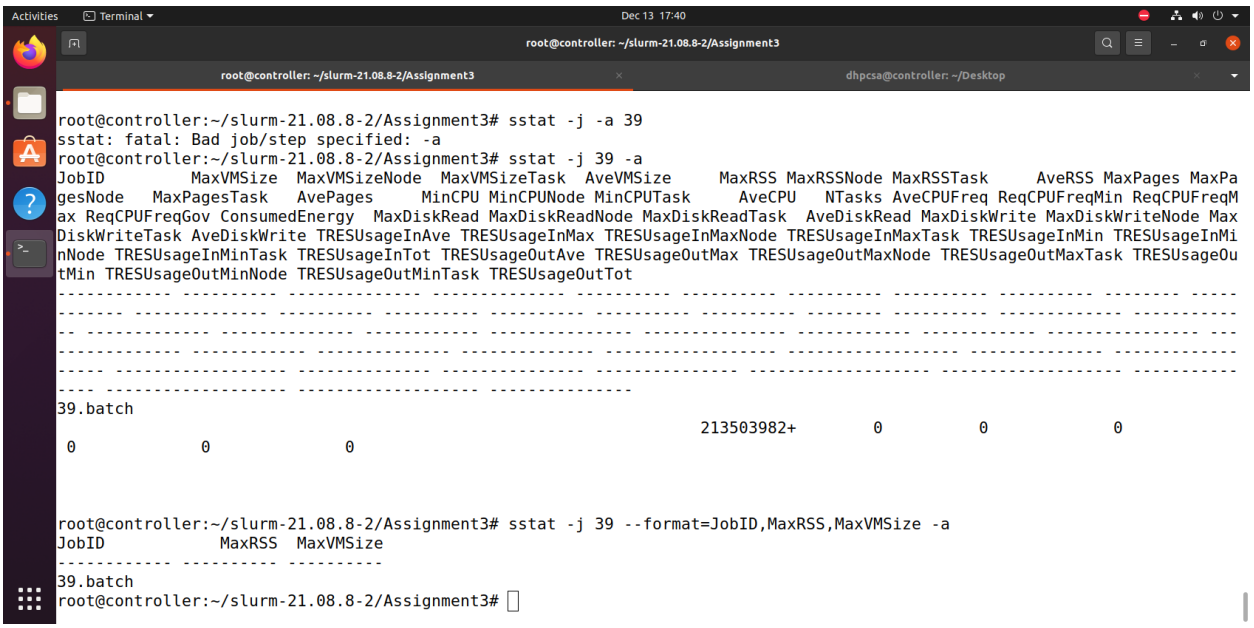


2. Monitor Resource Usage of a Running Job in Real-Time

Command: sstat -j <job_id> format=JobID,MaxRSS,MaxCPU,State




Activities
Terminal
Dec 13 17:36
root@controller: ~/slurm-21.08.8-2/Assignment3
root@controller: ~/slurm-21.08.8-2/Assignment3
dhpcsa@controller: ~/Desktop
45 debug print4.s root PD 0:00 2 (Priority)
46 debug print3.s root PD 0:00 2 (Priority)
47 debug print3.s root PD 0:00 2 (Priority)
48 debug print3.s root PD 0:00 2 (Priority)
36 debug print5.s root R 0:22 2 compute2,controller
37 debug print5.s root R 0:19 2 compute2,controller
38 debug print5.s root R 0:15 2 compute2,controller
39 debug print5.s root R 0:12 2 compute2,controller
root@controller:~/slurm-21.08.8-2/Assignment3# sstat -j 39 --format=JobID,MaxRSS,MaxVMSize,CPUTime
sstat: error: Invalid field requested: "CPUTime"
root@controller:~/slurm-21.08.8-2/Assignment3# sstat -j 39 --format=JobID,MaxRSS,MaxVMSize
JobID MaxRSS MaxVMSize
root@controller:~/slurm-21.08.8-2/Assignment3# sstat -j 39
JobID MaxVMSize MaxVMSizeNode MaxVMSizeTask AveVMSize MaxRSS MaxRSSNode MaxRSSTask AveRSS MaxPages MaxPa
gesNode MaxPagesTask AvePages MinCPU MinCPUNode MinCPUTask AveCPU NTasks AveCPUFreq ReqCPUFreqMin ReqCPUFreqM
ax ReqCPUFreqGov ConsumedEnergy MaxDiskRead MaxDiskReadNode MaxDiskReadTask AveDiskRead MaxDiskWrite MaxDiskWriteNode Max
DiskWriteTask AveDiskWrite TRESUsageInAve TRESUsageInMax TRESUsageInMaxNode TRESUsageInMaxTask TRESUsageInMin TRESUsageInMi
nNode TRESUsageInMinTask TRESUsageInTot TRESUsageOutAve TRESUsageOutMax TRESUsageOutMaxNode TRESUsageOutMaxTask TRESUsageOu
tMin TRESUsageOutMinNode TRESUsageOutMinTask TRESUsageOutTot
root@controller:~/slurm-21.08.8-2/Assignment3#


Activities
Terminal
Dec 13 17:40
root@controller: ~/slurm-21.08.8-2/Assignment3
root@controller: ~/slurm-21.08.8-2/Assignment3
dhpcsa@controller: ~/Desktop
root@controller:~/slurm-21.08.8-2/Assignment3# sstat -j -a 39
sstat: fatal: Bad job/step specified: -a
root@controller:~/slurm-21.08.8-2/Assignment3# sstat -j 39 -a
JobID MaxVMSize MaxVMSizeNode MaxVMSizeTask AveVMSize MaxRSS MaxRSSNode MaxRSSTask AveRSS MaxPages MaxPa
gesNode MaxPagesTask AvePages MinCPU MinCPUNode MinCPUTask AveCPU NTasks AveCPUFreq ReqCPUFreqMin ReqCPUFreqM
ax ReqCPUFreqGov ConsumedEnergy MaxDiskRead MaxDiskReadNode MaxDiskReadTask AveDiskRead MaxDiskWrite MaxDiskWriteNode Max
DiskWriteTask AveDiskWrite TRESUsageInAve TRESUsageInMax TRESUsageInMaxNode TRESUsageInMaxTask TRESUsageInMin TRESUsageInMi
nNode TRESUsageInMinTask TRESUsageInTot TRESUsageOutAve TRESUsageOutMax TRESUsageOutMaxNode TRESUsageOutMaxTask TRESUsageOu
tMin TRESUsageOutMinNode TRESUsageOutMinTask TRESUsageOutTot
39.batch
213503982+ 0 0 0
0 0 0
root@controller:~/slurm-21.08.8-2/Assignment3# sstat -j 39 --format=JobID,MaxRSS,MaxVMSize -a
JobID MaxRSS MaxVMSize
39.batch
root@controller:~/slurm-21.08.8-2/Assignment3#

3. Check the Exit Code of a Completed Job

Command: sacct -j <job_id> --format=JobID,State,ExitCode