

Suggested Teaching Guidelines for

Resource Management and Accounting – PG-DHPCSA August 2019

Duration: 20 class room hours + 30 Lab hours

Objective: To introduce Resource Management and Accounting in HPC.

Prerequisites: Knowledge of Computer Fundamentals

Evaluation method: CCEE Theory exam– 40% weightage

Lab exam (Case Study based) – 40% weightage

Internal exam – 20% weightage

List of Books / Other training material

Course ware: No specific courseware for modules, faculty may share some course materials

Reference:

- <http://docs.adaptivecomputing.com/>
- <http://slurm.schedmd.com/documentation.html>

Note: Each session mentioned is for theory and of 2 hours duration. Lab assignments are indicatives, faculty need to assign more assignments for better practice.

Session 1

Lecture:

- Batch systems
- Resource manager
- Scheduler

Session 2 & 3

Lecture:

- Torque / SGE installation and configuration
- Submitting and managing jobs
- Writing the batch script

Session4 & 5

Lecture:

- Slurm installation and configuration
- Submitting and managing jobs
- Writing the batch script

Session 6 & 7

Lecture:

- Application level check pointing
- Managing nodes
- Setting server scheduling policies

Session 8

Lecture:

- Scheduler integration, Maui, Moab

Session 9 & 10

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Lecture:

- Accounting records
- Gold

Assignments –Lab:

- Torque / SGE installation and configuration
- Slurm installation and configuration
- Submitting jobs
- Managing jobs
- Scheduling policies configuration
- Gold installation and configuration
- Maui / Moab scheduler integration