Policy for Departmental Computing Cluster
(updated 2/7/2020)

Facility Upgrade, Computing, Equipment, and Website Committee members:
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Overview of departmental computing cluster

The department purchased one set of 4 Intel high-memory computing nodes in Feb/2018 and set up a departmental cluster at the High-Performance Computing Center (HPCC, http://hpcc.ucr.edu/) at UCR.

The current configuration of the departmental cluster include:

- 128 Intel computing cores (equivalent to 256 logical cores if hyper-threading is used)
- 1TB total memory to be used by the 128 cores.
- 10TB big data disk rental from HPCC

In addition to the one-time hardware purchasing expenses, the department will pay HPCC $1000/year for the departmental membership and an additional $1000/year for big data disk rental (at $1000/10TB/year rate).

Departmental account billing PI: Esra Kurum

The committee will conduct annual evaluations to assess the needs for additional computing nodes and/or storage space.

User account management

- Faculty members will have long-term accounts.
- PhD students will have long-term accounts. PhD student accounts will be updated annually in the fall quarter (to add new students and remove graduated students).
- Masters and undergraduate students taking stat computing courses will receive one-quarter temporary accounts. The instructor needs to provide a student roster by the end of 1st week of the quarter. These student accounts will be removed after the quarter ends.
- Other Masters or undergraduates students, or postdocs will need to have a faculty sponsor to receive a cluster account. The faculty sponsor should notice the committee to remove an account when a student/postdoc separates from the department.

Current list of user accounts is available at
https://docs.google.com/spreadsheets/d/1W9XyUTCNGjW3Shjc1rYhPGIqjQEUabkargBDhGtbdQA/edit?usp=sharing

Point of contact for account creation/removal: Esra Kurum

User Quota

Departmental policy document from Thomas Girke: https://goo.gl/N5nMV8

	Department User Accounts	**PI User Accounts**
Annual recharge fee	$1000	$1000
Membership	All departmental users	All group members
# of CPU cores available	Only department owned nodes 128 CPU cores	4500+ shared CPU cores
CPU cores **quota**	*32 per user	256 pers user
RAM quota in GB	*128 per user	1024 per user per partition
Basic user disk quota	20GB per user	20GB per user
Big data disk storage	Any amount rented/owned 10TB rented	Any amount rented/owned

** The committee monitor the cluster usage and work with HPCC to adjust departmental user quota when needed. On 1/30/2020, the CPU quota was increased from 8 to 32, and the RAM quota was increased from 16GB to 128GB.*

Preventing abusive usage of the departmental cluster

The departmental cluster is a shared resource. Users are expected to make every effort to maintain a healthy computing cluster environment.

The committee will collect user activity report from HPCC and monitor the usage of department-owned cluster.

If a user occupies more than 200GB of the departmental shared big data storage, and/or uses a substantial portion (10%) of the department shared computing nodes, the faculty sponsor of such user should get a separate PI membership (see the "PI User Accounts" column in the above table, and more information at http://hpcc.ucr.edu/rates.html). Otherwise, abusive users will be removed from the departmental membership.

Faculty must use their own funding for separate PI accounts.

Schedule for HPCC training/workshop

The committee will work with HPCC to schedule regular HPCC Cluster introduction workshops. The first workshop is scheduled on Friday June 15, 2018. The committee is also planning on arranging new student training sessions every year in the Fall quarter.

The HPCC Cluster intro workshop is *mandatory* for all new users with a statistics department HPCC account. Users need to attend at least one introductory level HPCC workshops to keep their accounts active.

Past workshop video and slides are available at the HPCC website. http://hpcc.ucr.edu/events_small.html