High Performance Computing Advisory Group
Thursday, January 26, 2017
AGENDA

1. Information
   a. Hyalite Usage
   b. Expansion Update

2. RAM Policy

3. High RAM Nodes

4. Queue Changes

5. Hyalite Documentation
NOTE: An active User on a given date is a User that ran at least one Job on that date.
2016 Hyalite Usage: User Trends
2016 Hyalite Usage: Jobs Trends
The cluster expansion took place earlier this week (1/23-1/25)

- Added 1 Quad Socket, 1.5TB RAM compute node (Xlarge)
- Added 4 regular compute nodes (bringing the total to 64 compute nodes, 2048 HT cores)
- Upgraded 16 compute nodes to 256GB RAM (from 64GB)
- All was completed successfully and on time!
Previously, RAM was not enforced as a job resource

Now, RAM is tracked—

- Default— 2GB RAM per CPU
- Example 1— 16 CPU job, by default will be killed if it uses more than 32GB RAM
- Example 2— 32 CPU job, will use all of a standard node
- Example 3— 1 CPU job, 64GB RAM specified, will fully allocate a default node (previously, this would not fully allocate a node)
High RAM Nodes

16 Existing compute nodes now with 256GB RAM

• Members of the default and priority queues
• Just specify more RAM in job
• Example— to schedule a job to a new high-memory node
  
  # SBATCH -mem 256000
Queue Changes

To accommodate the High RAM nodes and GravityLab Xlarge node–

• Two Additional Queues
  • \textit{Xlarge}: single node, pre-emptive queue for Gravitylab (Yunes)
  • \textit{unsafe}: all nodes (includes Xlarge node), queue for everyone
    • anyone can run a job here, but:
      • jobs can be pre-empted by other queues
      • pre-empted jobs get re-queued

• Xlarge node not a part of \textit{default} queue
Hyalite Documentation

We have some Hyalite documentation posted here:
http://www.montana.edu/rci/hyalite/

• On that page, we’ve posted citation boilerplate
  http://www.montana.edu/rci/hyalite/#citation

• We also have–
  ▪ a QuickStart guide
  ▪ a CheatSheet
  ▪ a list of available modules

Documentation updates for Queue changes to be posted soon
Check it out!