High Performance Computing Advisory Group

The Information Technology Center
March 8, 2016
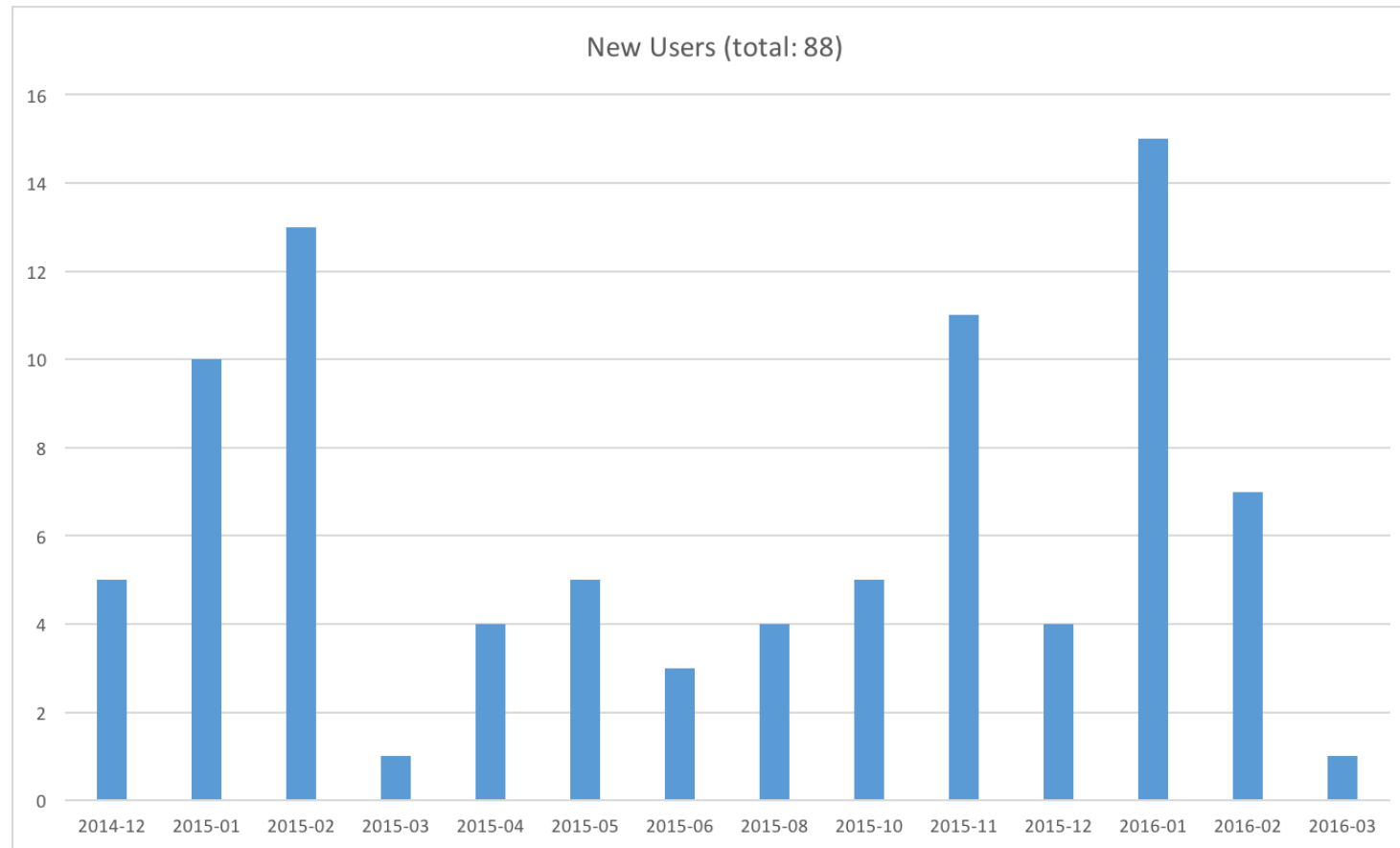
MOUNTAINS AND MINDS

HPCAG Agenda

- Review and Approval of Minutes

- Updates
  - Metrics: User Numbers and XDMOD
  - Staffing
  - Compute Node Purchase
  - Backup Appliance Purchase
  - Research Storage

- Discussion
  - Queue Changes

User Demographics for Hyalite

- Number of Users (Total: 88)

New Users (total: 88)

EXSEDE Metrics on Demand (XDMoD)

- XDMOD Open Source Software Developed by Academic HPC Community to Allow for Standard View of Cluster Usage, Bias on Jobs

- Have Installed and Done Initial Deployment
  - Currently available at http://hyalite.rci.montana.edu:5000

- Recommendations
  - Secure interface behind HTTPS for Montana State Users
  - "Tweak" dashboard to develop standard for usage to be discussed monthly
  - Follow community development of additional modules

- All Staff in the RCI Team Are Unfunded

- Based on Need for Support Have Augmented Staff
  - BIOS-IT as behind the scenes support
  - .20 FTE for six months funded to supplement current staff, allowing increased productivity.
    - Funded from ITC state salary savings

- ITC Has Collapsed Two Business Office Positions to Create a Full Time HPC System Administrator position
  - Position will be posed in April of 2016

MONTANA
STATE UNIVERSITY

Cluster Compute Node Purchase

- 16 Compute Nodes (cluster from 44 to 60 nodes)
    - Standard (32 cores, 64G RAM)
    - Increase number of compute cores by 36%

- Currently Finalizing Contract Modification with BIOS-IT
    - ETA: End of April (for procurement)
    - Installation window also used for BRIDGER network changes
        - Private IP Address reassignment
        - 4 days of outage
        - Will be scheduled for most convenient time (between semesters)
        - Possibly could stage the installation

Backup Appliance Purchase

- Are Unable to Procure Under Existing Contract with BIOS-IT Which Requires Us to Use Modified Bid Process

- In Conversations with Procurement but Believe We Will Be Able to Use and Invitation for Bid. Speeds Up Process for Multiple Month to Single Month

- Must Articulate Technical Requirements and Vendor That Meets Those and Has Lowest Cost Wins.

- ETA: End of April

Research Storage

- Asking for Input for Faculty/Staff for Two Focus Group Meetings in April to Discuss Requirements (Archival/Big Research Storage)

- Research Data Census will be Launched Again This April with Input used to Inform Creation of RFP

- Close to Finalizing "Lawyer Agreement" on Intellectual Property for Off-Site Redundant Storage at Indiana University
  - Appreciate any thoughts you have on criteria for usage

Queue Changes

- Queue Wall Clock Requirement Appears to Be Working
  - 1 User request for BigJob queue (7 day R job)

- Default-Only Nodes Moved from 36-44 to 03-11
  - Recommendation by Mark Owkes

- Stats (for jobs between 2/11 and 3/7)
  - 29 active users
  - 4,476Jobs Run
  - 2.13 hours average wait time
  - 10.36 hours walltime average per job
  - 439459.4 core hours used