

## **Slurm Workload Manager SC13 Birds of a Feather**

The Slurm BOF included three technical presentations followed by group discussions. Attendance was the best yet for a Slurm BOF at SuperComputing with about 105 people. Copies of the presentations are available at <http://slurm.schedmd.com/publications.html>

Morris Jette of SchedMD described the current Slurm status. Over 130 people representing dozens of organizations have contributed to the project to date. Five of the Top 10 systems use Slurm, with a similar representation throughout the Top 500 list. Contents of the latest Slurm release as well as the next release were described in some detail. An invitation was also extended to the next Slurm User Group Meeting, to be hosted by the Swiss National Supercomputing Centre on 23-24 September 2014.

Eric Monchalain of Bull presented a longer-term Slurm roadmap. Electricity costs were reported to represent roughly 28 percent of the HPC system budget. A major focus of Slurm development in the coming years is to optimize power management including: accounting, control over power consumption (e.g. power capping and managed changes in power consumption), and cost optimization, namely to get the greatest amount of the most important work completed with the best overall cost. Other areas of focus include improved support for hardware heterogeneity including support for hybrid programming models, improved scalability, and improved energy efficiency.

David Wallace of Cray described a major refactoring of Cray system software currently underway which will permit Slurm to directly manage network resources and launch MPI jobs. This will eliminate the need for Cray's ALPS workload manager and provide new functionality for Cray systems, including support of multiple jobs per compute node. This will be available in the next major release of Slurm, version 14.03, to be available at the end of March 2014.

This was followed by community discussion of best practices, the usefulness of recent developments, and relative value of future planned developments.