

Energy Efficient High Performance Computing Working Group
4/10/12 Meeting Report

INTRODUCTION

The EE HPC WG held a meeting on 4/10/12. This Working Group is composed of members representing major Federal departments and independent agencies, private sector representatives, and members of the academic community. More information can be found at the working group's website, <http://eehpcwg.lbl.gov>.

Documents from the group can be found at

<https://docs.google.com/leaf?id=0BzyTVVVRdMKpNWWjNTI5YTEtMTIIZi00YTA5LTikMTYtZmY3ZDIyZjJjZmMy&hl=en>.

NEXT MEETING June 12th, 9:00-10:00AM Pacific Time

NEXT Webinar May 8th, 10:00-11:00AM Pacific Time

John Shalf of LBNL will be presenting:

Aspects of Exascale Power

Introductions and Announcements: *Natalie Bates, LBNL*

Conferences Sub-group Update: *Natalie Bates, LBNL*

- **Future Conferences (more details at <http://eehpcwg.lbl.gov/events-and-links>)**
 - Compute Canada and BCNET's HPC Symposium. May 1-3. Canada
 - National Laboratories Information Technology. May 29-Jun 1. Sun Valley, ID.
 - International Green Computing Conference. June 5-8. San Jose, California
 - International Supercomputing Conference. June 17-21. Hamburg, Germany
 - GovEnergy. August 19-22. St. Louis, MO.
 - 3rd International Conference on Energy-Aware HPC September 12-14, Germany
 - Supercomputing Conference SC12. November 10-16. Salt Lake City, Utah
 - Greenbuild 2012. November 14-16. San Francisco, California

Infrastructure Sub-Group Update: *William Tschudi, LBNL and Dave Martinez, SNL*

- **DC Power Webinar:** Last month, Dennis Symanski of EPRI, presented a webinar on Running High Performance Computers on High Voltage Direct Current. His presentation is posted on the EE HPC WG website. DC power had a very interesting panel discussion at The Green Grid Technical Forum.

- **Shifting IT Loads.** Members of the Shifting IT Load team have been drafting a document that helps better draw a line between the infrastructure and IT loads. The draft will be put it out to the general membership for review. It will also be submitted to SC'12 as a State of the Practice (SOP) paper.
- **Energy Efficiency Dashboards.** The dashboard team continued to hold core team meetings where they have been reviewing documents that capture both IT and facilities recommendations for dashboard/EIS energy efficiency.

Compute System Sub-group Update: *Natalie Bates, LBNL*

- **HPC System Metrics.** There are four early adopters committed to make submissions to the June'12 Top500/Green500 Lists. These adopters represent three vendors (IBM, Cray and Sun) and two countries (United States and Canada). Two other sites are actively interested and exploring the opportunity. They are from Germany and Japan. Their participation would also broaden the vendors to include HP.

A submission has been made for an ISC'12 BoF. This BoF will have early adopters report on their experiences with the improved power measurement methodology. The submission was made on April 9th with Erich Strohmaier, Wu Feng, Mike Patterson and Natalie Bates included as organizers. We will know in early May if the BoF was approved.

Events of Interest:

- *May 8th, John Schalf will present an aspects of exascale power webinar.*
- *June 12th, Satoshi Matsuoka, Tokyo Institute of Technology will present on TSUBAME 2.0 (only system on both Top10 for Top500 and Green500).*
- *Also committed, but with dates to be determined are Jim Rogers, ORNL on GPU/Jaguar experience and Barcelona Supercomputer Center on Mount Blanc (exascale proto-type using ARM-type processors).*

PARTICIPANTS

Name	Organization
Adam Walters	FNAL
Anita Cocilova	LLNL
Ashley Stevens	ARM Corporation
Axel Auweter	Leibniz Supercomputing Center
Bill Tschudi	LBNL
Bruce Myatt	M+W U.S., Inc.
Dave Martinez	SNL
Dennis Symanski	Electric Power Research Institute
Jared Carr	PNNL
Matt Campbell	UCSD
Natalie Bates	LBNL
Rod Mahdavi	LBNL
Susan Coghlan	ANL