

The Challenges of Managing Small HPC Centers Google Group:

<https://sites.google.com/site/smallhpc/home>

The Google Group was established in 2009 to facilitate discussions among those who manage small-scale (a cluster, or two) research computing resources. While most members manage US-based, campus research computing facilities, some are from industry or private research groups. It began with around 30 members, and has grown to 251.

A Supercomputing Conference birds-of-a-feather session (SC-BoF) was planned each year (except SC16—nobody could lead the effort). Historically, roughly half of the members attended the SC BoF, and about 1/3 responded to an annual survey.

The annual survey was conducted from 2009 until 2015. The types of questions pertained to resource management trends and tools, including: are accelerators used (GPUs/MICs), memory per core, memory per compute node, what's used for scheduling, monitoring, trending, alerting, sharing, OS supported, cloud engagement, do you allow serial jobs on your cluster, a series of storage questions, personnel questions, industries supported, etc.).

While the relatively small sampling collected via this survey didn't support a scientific outcome, the annual survey results help managers understand what their peers are doing/using, allow us to identify longitudinal trends and helps to frame discussion points for future meetings.

The Special Interest Group for HPC in Resource-Constrained Environments (SIGHPC-RCE):

<https://sighpc-rce.acm.org/>

The Association of Computing Machinery Special Interest Group on HPC in Resource Constrained Environments (SIGHPC-RCE) was formed in 2014 by Chapter President Hensley Omorodion (University of Benin, Nigeria), Vice-chair Elizabeth Leake (STEM-Trek), and Treasurer/Education Adviser Rachel Vincent-Finley (Southern University at Baton Rouge, Louisiana-US).

SIGHPC-RCE is the first virtual ACM SIG that convenes in virtual spaces since it's rarely feasible for a global community to hold face-to-face meetings, with the annual SC BoF being the exception. There are currently 20 members, and about 2/3 are from African institutions, but we hope membership will be expanded to include people from all countries that support cyberinfrastructure for open scientific research. The charter and bylaws were approved by ACM in 2015, and a web site was built by Chapter Member Sidafa Conde (U-Mass, Dartmouth) in 2016.

ACM SIGHPC-RCE membership requires an annual fee of \$10.00 for professional members and \$5.00 for students. Officers must also be members of ACM and SIGHPC. Fee revenue will support meeting facility, AV and catering costs, and/or travel grants for students and early-career scholars from RCE's. Chapter officers can waive the SIGHPC-RCE fee for applicants who can't afford it (for example, economically-depressed regions rated 29 and higher on the [World Bank](#) list). To apply for a fee waiver, contact info@stem-trek.org.

Nominations for 2017-19 chapter chair, vice-chair, treasurer, secretary and membership coordinator will be solicited in late May through July 15, and new officers will be elected before August 15, 2017.

Summer 2017 Migration:

Members of the “Challenges of Managing Small HPC Centers” Google Group who wish to follow the annual survey, or future activities must join the SIGHPC-RCE chapter. In summer 2017, the “Challenges” group, will be disbanded.

This change is happening for the following reasons:

1. There will be a single, comprehensive communication channel supported by ACM, and a great web site (thanks, Sid Conde!)
2. Economy of scale/critical mass for collective bargaining purposes
3. A charitable platform from which to solicit donations/travel grants and support for meetings (SIGHPC-RCE donations are tax-deductible/leveraging ACM’s 501.c.3 status)
4. Fees collected will sustain the framework
5. Sustainable leadership model; rotates every two years
6. One BoF during SCXX (helps manage leadership workload)
7. Fosters multinational collaboration and science diplomacy

Future activities that are likely to interest members of both groups include:

1. Annual survey of management tools/trends (we can survey for 2016 & 17 in June)
2. HPC Donation/Adoption pipeline concept
3. Free and low-cost training resources and workshops
4. Donated software licenses
5. Economical innovations useful in RCE’s, cloud and other
6. Employment opportunities
7. SCXX BoF
8. Science diplomacy
9. Resources that support secure, inter-federated data-sharing
10. Like-minded, cross-functional community where you’ll find collaborators, mentors and more

If you have questions or concerns, please contact info@stem-trek.org.