

**Ohio Supercomputer Center** 

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## OSC to host fifth meeting of the MVAPICH Users Group

D.K. Panda research group maintains popular HPC communications library

*Columbus, Ohio* – A broad array of system administrators, developers, researchers and students who share an interest in the <u>MVAPICH</u> open-source library for high performance computing will gather at the Ohio



Supercomputer Center (<u>OSC</u>) Aug. 14-16 for the fifth meeting of the MVAPICH Users Group (MUG).

The <u>Network-Based Computing Research Group</u> led by Dhabaleswar K. "DK" Panda, Ph.D., a professor of computer science at The Ohio State University, developed and enhances the popular HPC system software package. Panda is a longtime consumer of OSC computing resources and partners closely with the center's staff on several research projects.

"Dr. Panda's library is a cornerstone for HPC machines around the world, including OSC's systems and many of the Top 500," said Dave Hudak, Ph.D., interim executive director of OSC. "We've gained a lot of insight and expertise from partnering with

DK and his research group throughout the years."

The MUG meeting provides an open forum for all attendees to discuss and share their knowledge on using the MVAPICH2 libraries on large-scale systems and a diverse set of applications.

In addition to hands-on and one-on-one sessions, the three-day event will feature keynote addresses from Dan Stanzione, director of the Texas Advanced Computing Center, and Ron Brightwell, the R&D manager for Sandia National Laboratories. The conference also will include tutorials from Intel, ARM, NVIDIA and Mellanox, focusing on their upcoming



technologies, as well as invited talks from many organizations (North Eastern University, South Korea's Konkuk University, University of Oregon, Lawrence Livermore National Laboratory, Korea's Institute of Science and Technology Information, England's University of Cambridge, the San Diego Supercomputing Center, Pacific Northwest National Laboratory, Virginia Tech and Germany's TU Dresden).

MVAPICH2 is a popular open-source implementation of the MPI-3.1 standard prevalent on systems with InfiniBand, Omni-Path, iWARP or RoCE interconnects. Message Passing Interface (MPI), the lingua franca of scientific parallel computing, is a standard for the communications library that a parallel application uses to share data among tasks and is available on a variety of parallel computer platforms. On the hardware side, InfiniBand is a widely used processor-interconnect architecture favored for its open standards and high performance.

In addition to OSC's Owens, Ruby and Oakley systems and those at more than 2,800 organizations in 85 countries worldwide, MVAPICH also is powering what is currently the world's fastest supercomputer. The

The **Network-Based Computing Research Group** at The Ohio State University is led by Dr. Dhabaleswar K. Panda and investigates modern networking technologies, including InfiniBand and 10GE/iWARP. The group is currently collaborating with National Laboratories and leading InfiniBand and 10GE/iWARP companies on designing various subsystems of next generation high-end systems. For more, visit <u>nowlab.cse.ohio-state.edu</u>.

The **Ohio Supercomputer Center** (OSC), a member of the Ohio Technology Consortium of the Ohio Department of Higher Education, addresses the rising computational demands of academic and industrial research communities by providing a robust shared infrastructure and proven expertise in advanced modeling, simulation and analysis. OSC empowers scientists with the vital services essential to make extraordinary discoveries and innovations, partners with businesses and industry to leverage computational science as a competitive force in the global knowledge economy, and leads efforts to equip the workforce with the key technology skills required to secure 21st century jobs. For more, visit <u>www.osc.edu</u>.

Sunway TaihuLight at the National Supercomputing Center in Wuxi, China, was built to process 125 quadrillion calculations per second.

This year's MUG meeting is sponsored by OSC, Mellanox Technologies, Paratools and Ohio State. More details of the advance program are available at <u>http://mug.mvapich.cse.ohio-state.edu/program/</u>. For more information on the meeting (program, registration, travel & stay), please visit <u>http://mug.mvapich.cse.ohio-state.edu/</u>.

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