



Press Release

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IBM SUPERCHARGES COMPUTING GRID THROUGH UNIVERSITY PARTNERSHIP

SURAggrid combines assets and expertise of 27 universities to enhance research

WASHINGTON, DC and ARMONK, NY – IBM UNIX-based systems will double the current capacity of one of the nation’s most innovative grid initiatives, uniting resources from 27 institutions in fifteen states, to increase dramatically its research capabilities – from modeling coastal storm surges to advanced genome sequencing. The SURAggrid initiative is actively advancing collaborative work in grid computing to support research opportunities across the southeastern U.S.

Today’s announcement by IBM and the Southeastern Universities Research Association (SURA) confirms a three year agreement under which IBM will provide SURAggrid member institutions with hardware and software, collaborate on SURAggrid projects, and work closely with university researchers to exploit the large-scale computing capability of the SURAggrid. Initial deployments of IBM high performance computing systems acquired by Louisiana State University and Georgia State University are currently in process with an additional system planned for Texas A&M University in early Fall. The addition of these high performance IBM machines will increase SURAggrid’s compute capacity to about 10 trillion calculations per second – an amount that would take one person with a calculator about eight million years to perform.

SURAggrid harnesses the power of heterogeneous computing systems located at multiple colleges and universities into a single, virtualized entity that enables researchers from participating institutions to run advanced scientific inquiries. The computing grid relies on grid middleware from Globus.org that allows disparate systems to work together, and is supported by high-speed network connections throughout the region, including the emerging National LambdaRail.

While the grid is used for multi-disciplinary research, one special focus will include study of coastal storm surges via the SURA Coastal Ocean Observing and Prediction program (SCOOP), funded by the National Oceanic and Atmospheric Administration and the US Office of Naval Research. According to the National Hurricane Center: “Storm surge is simply water that is pushed toward the shore by the force of the winds swirling around the storm. This advancing surge combines with the normal tides to create the hurricane storm tide, which can increase the mean water level 15 feet or more. In addition, wind driven waves are superimposed on the storm tide. This rise in water level can cause severe flooding in coastal areas, particularly when the storm tide coincides with the normal high tides. Because much of the United States’ densely populated Atlantic and Gulf Coast coastlines lie less than 10 feet above mean sea level, the danger from storm tides is tremendous.” [1]

“The addition of IBM UNIX systems not only provides a tremendous boost in compute capability, it enhances the ability of our scientists to collaborate across multiple universities and geographies,” said

Jerry P. Draayer, President & CEO of SURA. "Collaboration is at the heart of SURAgrid's mission, just as it is at the center of scientific discovery and human progress."

IBM System p Infrastructure

SURAggrid will implement IBM System p575 servers, each powered by 16 Power5+ microprocessors running at 1.9 GHz and is configured with 32 GB of memory.

"SURA is a leader in deploying grid technology to address vitally important challenges across a broad range of disciplines," said David Jursik, VP of deep computing, worldwide. "IBM's System p servers, combined with our research capabilities, will help accelerate SURA's mission on these important fronts."

SURAggrid is a consortium of organizations collaborating and combining resources to help bring grid technology to the level of seamless, shared infrastructure. Educational institutions participating in the SURAggrid include:

- * University of Alabama at Birmingham
- * University of Alabama in Huntsville
- * University of Arkansas
- * Bowie State University
- * University of Florida
- * George Mason University
- * Georgia State University
- * Great Plains Network
- * Kennesaw State University
- * University of Kentucky
- * University of Louisiana at Lafayette
- * Louisiana State University
- * Louisiana Tech University
- * University of Maryland
- * University of Michigan
- * Mississippi Center for SuperComputing Research
- * University of North Carolina, Charlotte
- * North Carolina State University
- * Old Dominion University
- * University of South Carolina
- * University of Southern California
- * Southeastern Universities Research Association (SURA)
- * Texas A&M University
- * Texas Advanced Computing Center (TACC)
- * Texas Tech
- * Tulane University
- * Vanderbilt University
- * University of Virginia

SURAggrid evolved from the NSF NMI Testbed Grid, which was initiated as a sub-project of the NSF Middleware Initiative (NMI) Integration Testbed Program in September 2003. SURA developed and managed the NMI Integration Testbed Program for the first three years of the NMI, in partnership with Internet2 and EDUCAUSE (ANI-0123937).

"Using grids to harness the supercomputing power of some of America's finest academic institutions enhances collaboration, reduces computing time and helps scientists tackle complex challenges like hurricane prediction and human genome sequencing," said Ken King, vice president, IBM Grid Computing. "IBM is proud to have provided grid computing solutions to academic and medical research projects in the past and we're excited to be part of SURAggrid."

[1] http://www.nhc.noaa.gov/HAW2/english/storm_surge.shtml

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The Southeastern Universities Research Association (SURA) is a consortium of over 60 leading research institutions in the southern United States and the District of Columbia established in 1980 as a non-stock, nonprofit corporation. SURA serves as an entity through which colleges, universities, and other organizations may cooperate with one another, and with government and industry in acquiring, developing, and using laboratories and other research facilities and in furthering knowledge and the application of that knowledge in the physical, biological, and other natural sciences and engineering. For more information, visit www.sura.org.