LSU to Massively Upgrade Supercomputing Resources
University will have one of the largest high-performance computing environments in the world

06/21/2006 08:19 AM
LSU's plans for a major renovation of its high-performance computing portfolio not only has the support of the researchers, but also their dollars.

For the first time, individual researchers agreed to invest research funding into the centralized high-performance computing renovation. All the key partners – Center for Computation and Technology, or CCT; Information Technology Services, or ITS; and individual researchers – are banding together to advance a centrally maintained and managed facility, available to all but able to deliver focused service to the individual. LSU is gaining greater leverage through combined efforts.

In terms of computational power and storage, the overall high-performance computing environment will increase by nearly a factor of three. Not only is LSU acquiring a new centerpiece supercomputer featuring Dell technologies, called Tezpur, but LSU is also expanding its groundbreaking Pélican parallel supercomputing cluster with hardware from IBM and Intel, adding 28.8 terabytes of new disk storage, and creating a CONDOR flock, which will utilize unused computing cycles from public access computers. A total of 18.9 million hours of computational resources will be made available annually through this diverse set of supercomputing platforms, and the overall capability of the environment will exceed 21.9 trillion numerical operations per second.

"In today's world, researchers need these tools to be successful in getting grants, and in delivering world-changing discoveries in all disciplines. Having this kind of computational and storage capacity here, coupled with the presence of some of the best minds, will enable those minds to advance the frontiers of science in chemistry, engineering, coastal and environmental studies, and many, many other disciplines that will have a chance to make use of this new capacity," said Harold Silverman, LSU interim vice chancellor for research.

"This massive influx of resources will not only provide for a quantum leap forward in the enablement of existing research at LSU, but also will provide the capacities needed to expand the use of these tools into new areas." said CCT Director Edward Seidel.

"I am excited about these changes. We desperately need available

computational cycles so that we can address our research needs. With these additions, I am hoping to get substantially more computational cycles and my research will be able to more quickly advance," said Sumanta Acharya, professor of mechanical engineering and a partnering researcher.

Recently, CCT and ITS at LSU announced their partnership to advance high performance computing. The supercomputing announcement demonstrates not only the power of this partnership, but marks the dedication of LSU's research community to building the institution's research infrastructure.

"The cooperation and collaboration of faculty, CCT and Information Technology Services is a model for the way in which a university should serve the needs of its computational community. This approach bodes well for the future of information technology at LSU," said Randall Hall, professor of chemistry and a contributing researcher.

"This renovation is just a start for us at LSU, in terms of building information technology infrastructure that advances research and enables teaching and learning. These points are key parts of our just completed Flagship Information Technology Strategy, and we are quickly advancing several action items in that strategic plan through this high-performance computing renovation effort, as well as a number of other new initiatives that will be under way shortly. LSU is here, now, and becoming a leader in IT enablement," said Brian D. Voss, LSU chief information officer.

Components are being acquired over the next 45 days and the new supercomputers should be installed and available to researchers at LSU by the end of summer. Seidel and Voss note that they expect to continue to look for ways to collaboratively expand the resources available at LSU, to satisfy the needs of researchers; open new territories for the use of these advanced tools in non-traditional disciplines like art, music and humanities; and prepare the way to give students access so that faculty can use these tools in teaching the most advanced methods available.

For more information, contact Sheri Thompson from LSU ITS at 225-578-5739 or sjt@lsu.edu or Gina Palermo from LSU CCT at 225-578-0436 or gpaler1@cct.lsu.edu.

This news also appeared in: