



Storage Technology Wins Supercomputing 2004 Award

An innovative next-generation archive system developed by researchers at EMSL and the Pacific Northwest National Laboratory (PNNL) along with industrial collaborator SGI garnered the “most innovative use of storage” award at the Supercomputing 2004 (SC2004) Conference held late last year. This award demonstrates continued leadership of PNNL and the DOE user facility in the field of computational storage technologies.

The archive system is designed to store the large quantities of data generated by high-throughput proteomics research at EMSL and PNNL that threatens to significantly overwhelm current storage technologies. It combines commodity storage and a Lustre™ file system—the latter designed to serve very large clusters—in combination with the PNNL-developed Active Storage, a technology that exploits underused computational resources of Lustre™ servers where contents of files are stored.

The archive system was demonstrated at SC2004 as part of the StorCloud Challenge, a new initiative that showcases high-performance computing storage technologies. Led by Kevin Regimbal, Technical Group Leader of EMSL’s Molecular Science Computing Facility Operations, the team of researchers earned the prestigious award by bringing together a significant amount of storage, a large Lustre™ file system, and the Active Storage technology to successfully demonstrate a science application indigenous to EMSL’s High-Performance Mass Spectrometry Facility.

Upon return from SC2004, the hardware and Active Storage technology is being implemented as the newest version of NWfs, EMSL’s archive system for storing massive amounts of data—particularly that generated by the facility’s cutting-edge mass spectrometry instruments.

SC2004 is the world’s leading conference on high-performance computing, networking, and storage, and brings experts from technical communities together to exchange ideas and plan for the future.

For more information, contact Kevin Regimbal (509-376-2246).

P.O. Box 999 Richland, WA 99352 • <http://www.emsl.pnl.gov> • 509-376-2553

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