



Customer: Laboratory of Neuro Imaging,
University of California at Los Angeles

Web Site: www.loni.ucla.edu

Customer Size: 100 employees

Country or Region: United States

Industry: Education—Higher education

Customer Profile

The Laboratory of Neuro Imaging at the University of California at Los Angeles is dedicated to the development of scientific approaches for the comprehensive mapping of brain structure and function.

Software and Services

- Microsoft Server Product Portfolio
 - Windows HPC Server 2008

Hardware

- Cray CX1 supercomputer

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www.microsoft.com/casestudies

University Speeds Research and Enhances Researcher Agility with HPC System

“The Cray CX1 with Windows HPC Server 2008 helps our researchers be more nimble and shortens the time from theories and concepts to tangible results.”

Rico Magsipoc, Chief Technology Officer, Laboratory of Neuro Imaging, UCLA

Business Needs

The Laboratory of Neuro Imaging (LONI) at the University of California at Los Angeles (UCLA) studies brain function across species. Its researchers conduct complex mathematical tests that require significant computational power. To complete these tests in a matter of hours or minutes rather than weeks or months, they use high-performance computing (HPC) systems. Until recently, researchers who wanted to use the LONI HPC cluster needed both expertise in working in a Linux environment and extreme patience. The system was so heavily used that they typically had a long wait before getting access to the resource.

Solution

LONI decided to try the Cray CX1™ desktop supercomputer running the Windows® HPC Server 2008 operating system. “Many of our researchers develop for the Windows platform, so bringing in a stand-alone computer that provides Windows HPC Server 2008 was a great boon to us,” says Rico Magsipoc, Chief Technology Officer for LONI. “Rather than waiting for the large cluster, researchers can use the self-contained computer, which

they can reconfigure at any time to meet their specific computational needs.”

One such researcher is Dr. Yalin Wang, who employs the system to run parallel computing experiments using Mathworks MATLAB. “With the Cray CX1 with Windows HPC Server 2008, I can test a new idea every day,” says Wang. “I save time because I no longer have to transfer my Windows-based code to Linux, recompile it, modify it, and resubmit it. I can do everything I need to do right on the CX1.”

Benefits

With its new, alternative HPC solution, LONI is increasing the pace of scientific research and is experiencing:

- **Excellent performance**, with compute speeds comparable to those of other HPC systems.
- **Ease of use**, due to the familiar Windows interface, which makes it easier for more researchers to take advantage of HPC.
- **Increased tools integration**, which saves time and adds convenience because tools, such as those for debugging, are available without transferring code to other systems.

