



University of Utah's SCI Institute Protects and Preserves Research Data with Atempo Time Navigator™



Problem

The SCI Institute hosts several internationally recognized research centers and a number of active research projects—many requiring the storage of multiple terabytes of imaging and computational science data. The Institute needed a data protection solution that allowed its researchers and technologists to easily and frequently retrieve archived data.

Goal

Reliable backup and data protection solution that ensures preservation of high-value research information, and that enables quick restore of large volumes of scientific data.

Results

- Sophisticated data protection solution that ensures students and faculty that their high-value research data will be backed up and preserved.
- With Time Navigator, researchers can quickly retrieve from any storage media the archived data essential to their projects.
- Time Navigator's scalability ensures that as the number of research projects grows, the increasing volume of computing data will not be an issue.

"By partnering with both SGI and Atempo, we have solved an increasingly complex and critical data management problem. These solutions will help advance our research in diverse scientific disciplines to the next level!"

Steve Corbató

Associate Director

Scientific Computing and Imaging Institute at the University of Utah

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Organization

The Scientific Computing and Imaging (SCI) Institute is an internationally recognized leader in visualization, scientific computing, and image analysis. The Institute is home to over 115 faculty, students and staff whose overarching research objective is to create new scientific computing techniques, tools, and systems to enable solutions to problems affecting various aspects of human life.

The Challenge

Over the years, the University of Utah's SCI Institute has seen tremendous growth in research areas such as biomedical computing, computational science, and medical imaging analysis. In turn, both the volume of high-value research data and size of the individual files had grown outside the capabilities of their existing system. SCI personnel had relied on other commercial and internal backup systems that did not offer the flexibility or sophistication that suited the breadth of the research data.

The SCI Institute sought a sophisticated storage system that would allow its IT team to manage, backup and recover the growing amount of data developed from the numerous research projects and collaborations supported within the Institute.

The Solution

The Institute turned to SGI and Atempo to implement a comprehensive and high-performance data management infrastructure to meet its unique needs. SGI's InfiniteStorage virtualized data management solution allows the Institute to manage and prioritize over 100 terabytes of scientific data across various storage media. To complement this new system, the next critical step was to add a backup and recovery component. The Institute decided to deploy Atempo Time Navigator based on the software's strong performance and integration with the SGI environment.

"We're pleased that the partnership between Atempo and SGI has delivered a sophisticated system that meets our storage-intensive needs," said Steve Corbató, associate director at the SCI Institute. "For our researchers, Time Navigator's ability to go back and retrieve past data files is a particularly beneficial feature in supporting the type of research that we do in computational science."

Having this data consistently available is a critical part of archiving the scientific discovery process. For students, the ability to explore their current research and then go back and look at past data files is essential, making Time Navigator's unique method of navigating through generations of backups and retrieving the required specific data an important selling point.

Characteristics of SCI Institute's Environment:

- SGI Altix 4000 servers
- SGI InfiniteStorage 4500 RAID array
- SGI InfiniteStorage NAS 4550
- Linux server agents
- 9 Virtual Library licenses
- StorageTek SL500 tape library

Results

Close to 50 research projects now rely on the new virtualized data management environment from SGI and data protection and retrieval software from Atempo. This includes active research efforts in biomedical computing, scientific visualization, and medical imaging analysis. The new solution has helped faculty, students and research staff access information quickly and reliably in an environment where researchers in multiple disciplines work with the same source data, often concurrently.

"With the sophisticated SGI and Atempo environment in place, our researchers are able to take advantage of the additional storage space," said Nick Rathke, leader of the IT team at the SCI Institute.