



# Case Study: Center for High Performance Computing at the University of Utah

**RAID Inc. and the Center for High Performance Computing Center at the University of Utah Work Together to Convert 120TB of Server-based Storage to a Centralized SAN**  
*HPC Center increases productivity and decreases cost, while increasing availability and scalability*

## **The Center for High Performance Computing at University of Utah**

The Center for High Performance Computing (CHPC) provides large-scale computer systems, networking, and the expertise to optimize the use of these high-end technologies. CHPC facilitates advances in academic disciplines whose computational requirements exceed the resources available in individual colleges or departments. Since 1996 these collaborations have resulted in more than 420 technical publications. CHPC's purview is to support faculty and research groups whose main focus requires computing and advanced networking as core instrument(s) central to their research.

### **Problem**

The HPC Center had accumulated over 60 Linux servers which hosted all storage internally. Over time, this type of storage configuration grew increasingly more difficult to deal with, as disparate drive sizes, operating systems and versions, software, and RAID card drivers began to become more and more of an issue. At this point, the infrastructure that was initially put in place to save money and time as a "turnkey solution" started to cost the Center so much in time, effort, and employee hours that it became clear a major change was in order. Additionally, storage requirements were increasing much faster than CPU needs, therefore, finding a cost effective solution that could scale over time was becoming a necessity.

### **Solution**

The Center evaluated the process of building an "in house" customized solution using a Linux clustered suite, but decided against it due to the man hours involved. Next, the Center began to evaluate Tier-1 storage vendor solutions and ruled them out due to cost. After contacting RAID Inc. looking for a customized solution, RAID proposed a SAN configuration using SATA-2 disk that could scale to meet their needs, provided centralized storage services with the ease of management, configuration, and recovery which was appealing to the administrators.

**"We buy from RAID Inc. so that we have a resource to lean on when problems creep up."**

*-Brian Haymore, Lead Computation Cluster Administrator*

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## Results

The Center for High Performance Computing at the University of Utah is funded by the university. All infrastructure costs are covered, but disk is not included, so competitive pricing was a necessity, or else research teams might take their projects elsewhere. RAID Inc. delivered a customized solution to meet the Center's needs in price, performance and scalability.

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The professors and scientists at the University are beginning to see the vast difference between the new and the old storage setup. One professor in particular was concerned about a large data set that could have taken weeks or even months to migrate using the previous storage infrastructure. He was surprised when he was able to complete the entire migration in about a day.

“We buy from RAID Inc. so that we have a resource to lean on when problems creep up. We needed a solutions provider that would provide us with customized solutions versus just seeing us as some trivial customer that no real time could be spent to explore their issues and needs. Price-wise, we knew that if we wanted to go “bare bones” we could buy cheaper solutions than we have paid RAID. So the success of our relationship really stems around the level of expertise that RAID brings into the relationship and how that expertise keeps us being successful using the products RAID sells to us,” stated Brian Haymore, Lead Computation Cluster Administrator.

**For more information, please visit RAID Incorporated at [www.raidinc.com](http://www.raidinc.com).**

A Consultative Approach to All Your Storage Needs

5 Branch Street, Methuen, MA 01844 Phone: 1-800-330-7335 Fax: 978-683-6656 [www.raidinc.com](http://www.raidinc.com)

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