University of Minnesota Foundation

Founded:	1851
HQ/Main campus:	Minneapolis
Faculty & Students:	87,562
Vertical:	Education
***SEEK* Solution:**	Adaptive RAID®

UNIVERSITY OF MINNESOTA FOUNDATION DOUBLES ITS ULTRASPARC² PERFORMANCE

The University of Minnesota Foundation in Minneapolis recently had more to worry about than a frozen Golden Gopher (the University mascot). They had frozen data and needed a fast solution to get their online queries and contact management data responding quickly. Kirk Madson, Director for the Information and Computer Services Department, had been using Sun Storage 4 packs and 12 packs of Fast/Wide disk drives in a non-RAID environment to run the Fund and Gift Management programs as well as the Donor and Alumni Management programs.

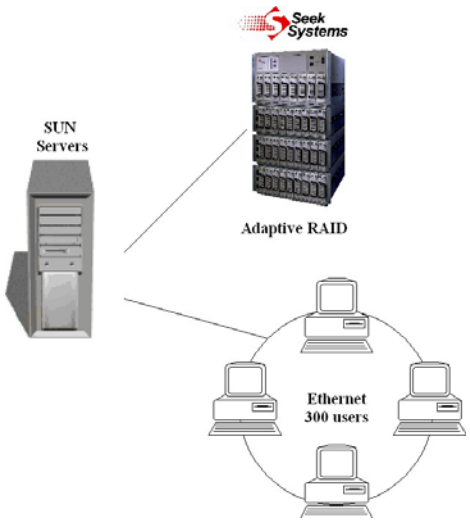
In the university environment where personnel and students are changing steadily over time, Madson had two specific hardware concerns. Primary was the need for a reliable storage system. Off-line problems could potentially cause hundreds of people to be idle. His secondary need was for a storage system that would be easy to manage. Changing staff also increases the training demand on qualified administrators. In the midst of his search, Madson had other issues driving his storage requirements.

The Foundation was simultaneously grappling with two problems: a shortage of available storage and a performance crunch primarily caused by OLTP demands. Madson commented that he was looking for an intelligent approach to bottlenecks, as opposed to just adding more storage. *Seek Systems* was able to be the first vendor to stepped in and delivered a storage array on short order. The Adaptive RAID® array has been instrumental in solving the immediate storage shortage.

The Information and Computer Services department is using a Sparc Ultra Enterprise 2 with (2) Servers and 512MB of RAM per Server, accessing (30) disks via Veritas software, all communication over a LAN. Although very flexible and easy to use, Veritas software had placed some constraints on physical configuration of disks. The RAID set size was limited and the array required tuning for optimum performance. Several performance tests showed that the application had an I/O bottleneck at the disk level. The system utility **iostat** was run, revealing I/O wait times [host to disk transfer] of 20 to 40%. After two weeks of parallel bench tests and live systems tests, Adaptive RAID® consistently lowered all of these wait times to 2 or 3%.

"The on-line processes that took 3 hours dropped to 45 minutes," confirmed Madson. **"*Seek* showed at least a 200% performance improvement, and at times delivered up to 300% faster transaction processing."**

During the testing, installation and implementation, *Seek*'s Service department guided Madson through the fine tuning steps. "*Seek*'s top quality service cemented our decision to purchase the *Seek* Adaptive RAID®," noted Madson. The Foundation was so satisfied with performance they purchased an additional unit of hardware. Two of the most important benefits delivered to University of Minnesota Foundation by Adaptive RAID® are faster online queries and happy users. Shorter test cycle for queries and faster work by the satisfied staff members are saving time and money for the Foundation.



So the answer to the question is simple: How do you get a gopher to cross the road? Buy Adaptive RAID® and feed it hot data...you will run hot and cross any road quickly.