

Storage Area Network (SAN)

Electronic storage requirements are growing at extraordinary rates. Industry survey results indicate that storage needs for businesses are growing at a 40% annual rate. Iowa State University's needs are also growing at a similar, if not larger, rate.

Up to this point, IT Services has met campus-wide storage requests primarily with "direct attached" storage architectures where each application/database server has its own dedicated disk storage. While this model has been cost efficient and manageable up to this point, the rate of increasing storage needs requires that the university move to SAN-based storage architectures.

Objectives

- Facilitate storage provisioning and management for all ranges of storage needs. Support both individually accessed "large" files as well as front-end server based file systems.
- Centralize storage management.
- Separate storage from servers in order to facilitate server consolidation and server virtualization.
- Establish support for storage virtualization.
- Improve application availability through hardware redundancy.
- Establish a more efficient backup/restore environment with disk-to-disk to tape and site-to-site backup.
- Make more efficient use of available disk capacity.



Benefits

- Ability to provide effective, efficient, and reliable storage services for the university community
- Ability to deploy current technologies for retention and recovery services as well as storage management.
- Flexibility via tiered disk storage levels and dynamic non-disruptive data movement within the SAN system.

Leadership

- Governance will be led by the IT Services Director's Group with strategic direction provided by the Office of the CIO.
- IT Services SAN technical support staff will provide technical guidelines concerning "best usage" recommendations.
- IT Services Director's Group will provide a funding model.

Investments

- Seed funding for the initial infrastructure came from IT Services.
- IT Services reallocated three FTE positions to support the SAN initiative.
- Ongoing funding will come from the IT Services expense pool under the Resource Management Model (RMM).

Contact

- Steve Stuart-Doig, Assistant Director, Managed Services, IT Services
- Angela Bradley, Director, Networks & Communications/Systems & Operations, IT Services

Recent Accomplishments

- Four major applications identified for first use of SAN: WebCT, eDoc, ADIN, and Exchange (April 5, 2008)
- SAN implementation (June 4, 2008)
- Network design/implementation (June 25, 2008)
- Test and acceptance from EMC (July 15, 2008)

Next Steps

- Best practices backup solution planning.
- Additional staff training.
- WebCT migration to SAN.