

Award Winning Tiered Storage Management Solution from SGI



Award Details

- 2011 DCS Award for Most Innovative Storage Project
- Significant competition with 450 nominations across 10 award categories
- For more details, visit <http://www.dcsawards.com>

At a Glance

- Significantly reduced storage and storage management costs with SGI's automated, policy-based Data Migration Facility (DMF 5)
- Enabled transparent access to all data, any time with DMF's virtualized data pool and Fibre Channel over IP
- Enabled ability to seamlessly add storage as the business grows, without end user interruptions or operational intervention
- Eliminated single points of failure, and provided automated backup and disaster recovery
- Enabled integrated file tagging and search capabilities
- Single-source supplier and expertise ensured successful implementation & support of the end-to-end solution

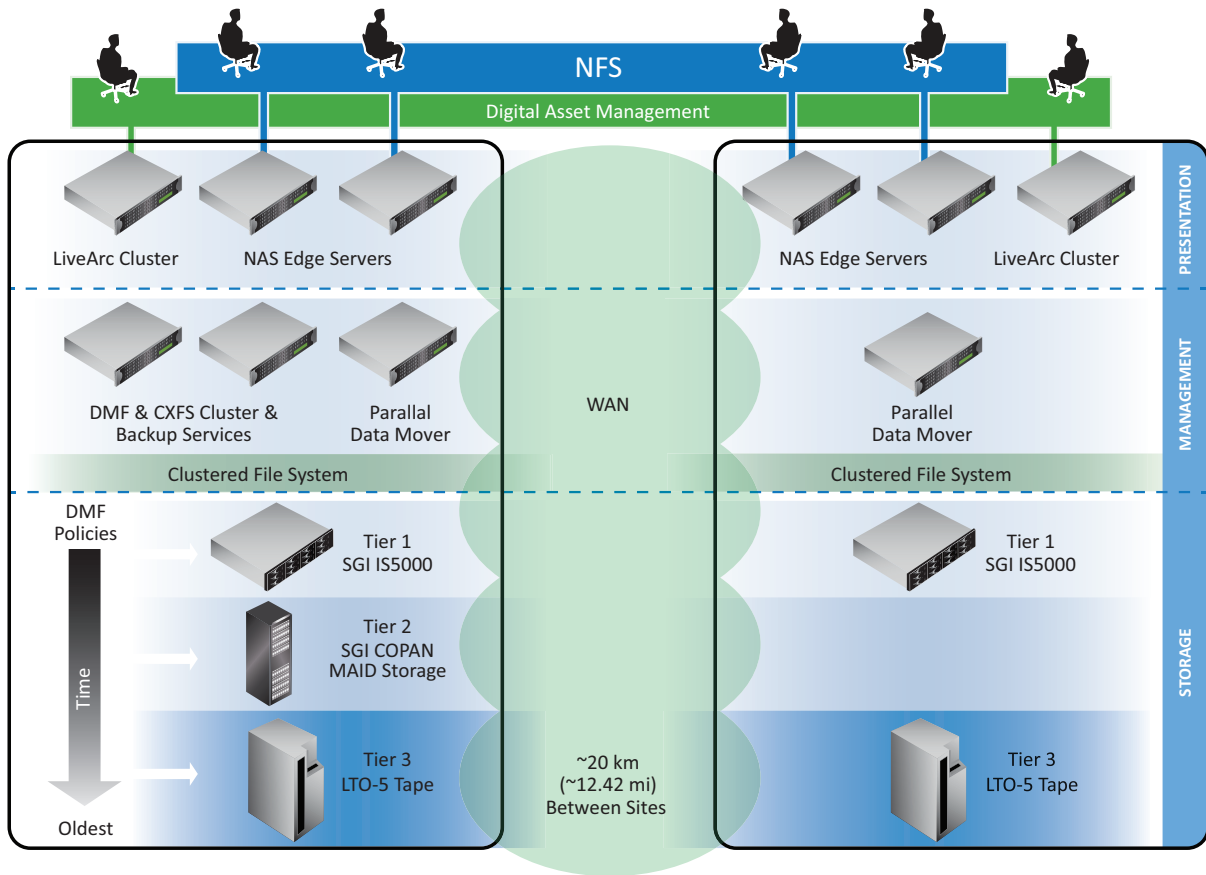
SGI and ICR: Winners of the Most Innovative Storage Project of the Year DCS Award

In May of 2011, SGI and the Institute of Cancer Research (ICR) won the Data Centre Solutions award for most Innovative Storage Project of the Year. The Data Centre Solutions Awards (DCS awards) reward the successful implementation of products and services by companies and teams that have made a significant contribution to their organisations' IT environment. In each of the 10 end-user project categories, awards are presented to both the user and their suppliers; in this case, ICR and SGI.

The Challenge

The ICR was looking for a cost-effective storage solution to support the growth of their massive volumes of cancer research data. To keep pace with the demand for data storage, and the associated management, ICR considered the following key requirements:

- Ability to share, process and correlate large, diverse sets of medical and biological data across two physical sites in London and Sutton
- Efficient storage utilization with an initial capacity of over 1 PB and capabilities to grow beyond tens of Petabytes
- Easily accessible data protected by automated backup and disaster recovery
- Seamless integration with existing HPC and storage infrastructure



Multi-Tiered Storage Infrastructure

The ICR storage infrastructure featured 1.4 PB of usable storage managed as a single virtual file system distributed across 3 storage tiers: an SGI IS5000 disk arrays with SAS drives (8% of capacity), SGI COPAN MAID (20% of capacity), and LTO-5 tape libraries (72% of capacity). DMF, with its automated, policy-based data migration and the ability to provide transparent data recall from COPAN MAID and LTO-5 tape logical data tiers, enabled ICR to store just a small percentage of data on relatively expensive disk, while the bulk of data is stored on cost-effective tape. The location of the data was transparent to researchers – any and all data is available at any time. To deploy the solution across two sites more than 20 kilometers apart, SGI integrated Fibre Channel over IP (FCIP) technology into the design to allow a Virtual SAN to be created.

Data Management

DMF provides users seamless online visibility to multiple types of disk and tape-based storage in a virtualized data pool. Parallel Data Movers (PDMs) provide scalable data migration with integrated backup and disaster recovery by creating multiple


copies and storing them in different locations. SGI’s Clustered XFS filesystem, CXFS, provides a high performance parallel file system with separate control and data paths. Atempo TimeNavigator provides DMF-aware integrated inode backup for disaster recovery and file version recovery.

Presentation Layer

Four high performance SGI NAS Edge Servers using 10GigE interfaces provide seamless presentation of the CXFS filesystems over NFS. The LiveArc Digital Asset Management platform is used for managing user-defined metadata, and metadata generated by automated ingest filters, and is implemented as an active/standby cluster across both sites.

Learn More

- For more information on SGI Storage Solutions, contact your SGI Sales Representative
- To learn how SGI is accelerating ICR’s drug development pipeline visit <http://www.sgi.com/pdfs/4313.pdf>
- For more information on the DCS Awards, please visit <http://www.dcsawards.com>

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