

SUCCESS STORY

Research Round-the-Clock

How Vmirror Supports Clinical Research at Leeds Institute of Molecular Medicine

KEY HIGHLIGHTS

Location: Leeds, U.K.

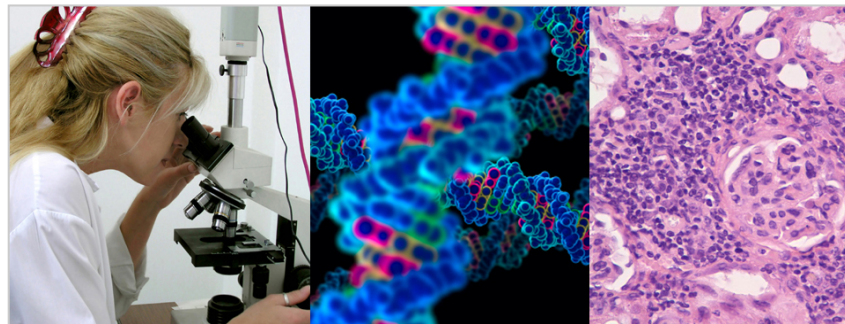
Industry: Healthcare

The Challenge

- Continuously replicate and protect 46TB of critical research data stored on Active Storage ActiveRAID, Promise VTrak, and Apple Xserve RAID storage systems
- Provide high-availability, round-the-clock access to replicated data

Vmirror Benefits

- Uninterruptible, high-availability solution that protects against failures of Xsan-compatible storage systems and SAN fabric
- Continuous protection of critical research data
- Simple, centralized administration
- Affordable, high-reliability hardware-based appliance solution



The Customer

Located in Leeds, U.K., the Leeds Institute of Molecular Medicine (LIMM) conducts research defining the molecules involved in human diseases and translates these studies into novel therapies. Associated with the University of Leeds, LIMM receives its funding from a mix of charitable organizations, pharmaceutical companies, and the private sector.

At LIMM, scientists and clinical researchers in thirteen sections and four main divisions carry out research covering the spectrum of human disease. Research at LIMM is performed in conjunction with a clinical trials section that provides a vehicle for sample acquisition and testing. LIMM takes a multi-disciplinary approach to research into human disease that puts the organization at the forefront of defining molecular events linked to human disease as well as development and implementation of new therapies in the fields of cancer, rheumatology and inherited syndromes.

The Challenge: Supporting Continuous Clinical Research

IT infrastructure at LIMM plays an important role in the conduct of daily research. Desktop systems enable examination of tissue samples, statistics, images, and time-lapse videos that come from the monitoring and measurement of experiments. Here, laboratory systems continuously monitor and collect data from research activities and experiments on a 24/7 basis, often over long periods of time.

Data from this research are gathered at considerable expense, with costs running as high as tens of thousands of pounds per week of operation. At LIMM, Apple is the IT infrastructure of choice, owing to a long history of Apple use by researchers at the organization. Today, out of 800 Linux, Windows, and OSX desktop systems, 300 are Macs. Data files as large as several hundred gigabytes are captured and stored on 76 terabytes of Apple Xserve RAID and Xsan-compatible storage from Active Storage, Promise Technology.

Outage Costs. Data is critical to ongoing research, and ensuring access to this data has been of prime concern to Paul McGrath, IT Manager at LIMM. Of the 76 terabytes of data stored in two data storage tiers, 46 terabytes are vital to the conduct of ongoing research. All of the data are backed up and archived by a VTL-to-tape configuration, but data gathered in between backups may be lost if a storage system outage occurs. For laboratory systems acquiring experimental data, the costs of outage beyond 1-2 hours of local system storage capacity can mean loss of data at costs reaching thousands of pounds in only a few hours. In addition, systems idled during outage means costly loss of researcher productivity.

Solutions. Recognizing that VTL-to-tape represented only a partial answer, Paul and his staff began a search for a mirroring solution to complement LIMM's existing data protection system. After an exhaustive effort, they identified two potential options.

The first consisted of a D2D2T (disk-to-disk to tape) system by a leading backup vendor in the Apple market. Using asynchronous backup and snapshot backup capability, most of LIMM's data could be protected on a near-continuous basis, reducing exposure to catastrophic loss.

The Vmirror ES appliance from Vicom Systems was the second solution identified by Paul's staff. Though Vicom was new to most of the staff, the company has been Apple-endorsed storage partner, and Vmirror has delivered high-availability protection not only for enterprise use, but also for major broadcasting organizations like Korea Broadcasting, NFL Films, and the Associated Press. Intrigued, Paul's team undertook an investigation.



Figure 1. The Vmirror ES Appliance uses high-speed, hardware mirroring.

Benefits: Continuous Data Availability, Data Protection and Superior Support

Following a careful technical and financial evaluation of the two alternatives, Vicom's Vmirror easily distinguished itself as the better choice. From a protection and data availability standpoint, Vmirror mirrored data synchronously using a high-speed, hardware-based mirroring built into in a simple, easy-to-use appliance. For LIMM's requirements, Vmirror would provide two, fully redundant Fibre Channel data paths between mirrored storage maintained at two separate locations and connected via Fibre Channel. Physical separation provides an additional degree of protection in the event of fire or flooding at the primary site. Should outage occur anywhere on the two data paths, Vmirror fails over to the alternate (good) data path, enabling desktop and laboratory systems to continue operating without interruption.

In comparison to Vmirror, the alternative, asynchronous mirroring solution fell short in both mirroring performance and failover speed. Priced at 75 percent of Vmirror, the alternative was expected to have little or no advantage from the standpoint of total costs. From a cost-benefit standpoint, Vicom's solution distinguished itself as the clear winner.

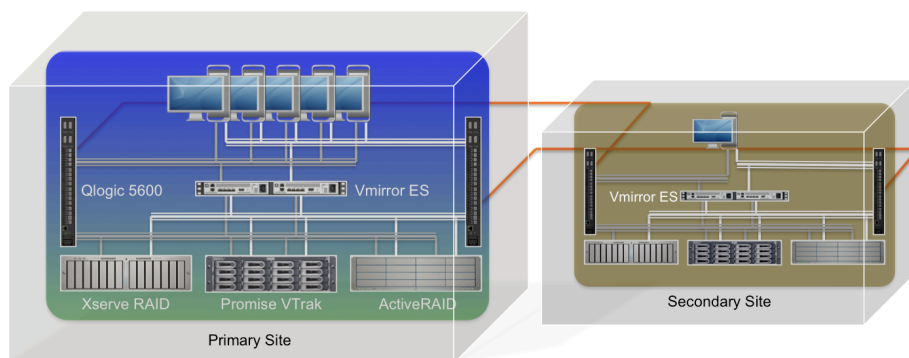


Figure 2. LIMM Mirroring Configuration

LIMM Experience. Following purchase approval, a 46 TB Vmirror/ ActiveRAID solution from Active Storage was quickly brought online. Assisted by Vicom, LIMM found both initial installation and subsequent system operation to have been problem-free.

To Paul McGrath, has the Vmirror system given him peace of mind and high-availability insurance against outages. He has also been impressed by the quality of service and responsiveness by Vicom. "I've been very impressed about the turnaround on our support requests — Vicom staff have been very knowledgeable and very approachable." Paul explained. "When we asked about system operation, they took the time to ensure we understood their answers. It's been a real pleasure," he said.