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Customer Success



ENVIRONMENT SNAPSHOT

- Spectra® T950 tape libraries
- Sun x4200 servers
- Solaris 10
- SAM-FS HSM file system
- 4GB FC SAN with redundant fabric between three data centers
- Sun 6140 storage arrays

ABOUT FRIEDRICH MIESCHER INSTITUTE

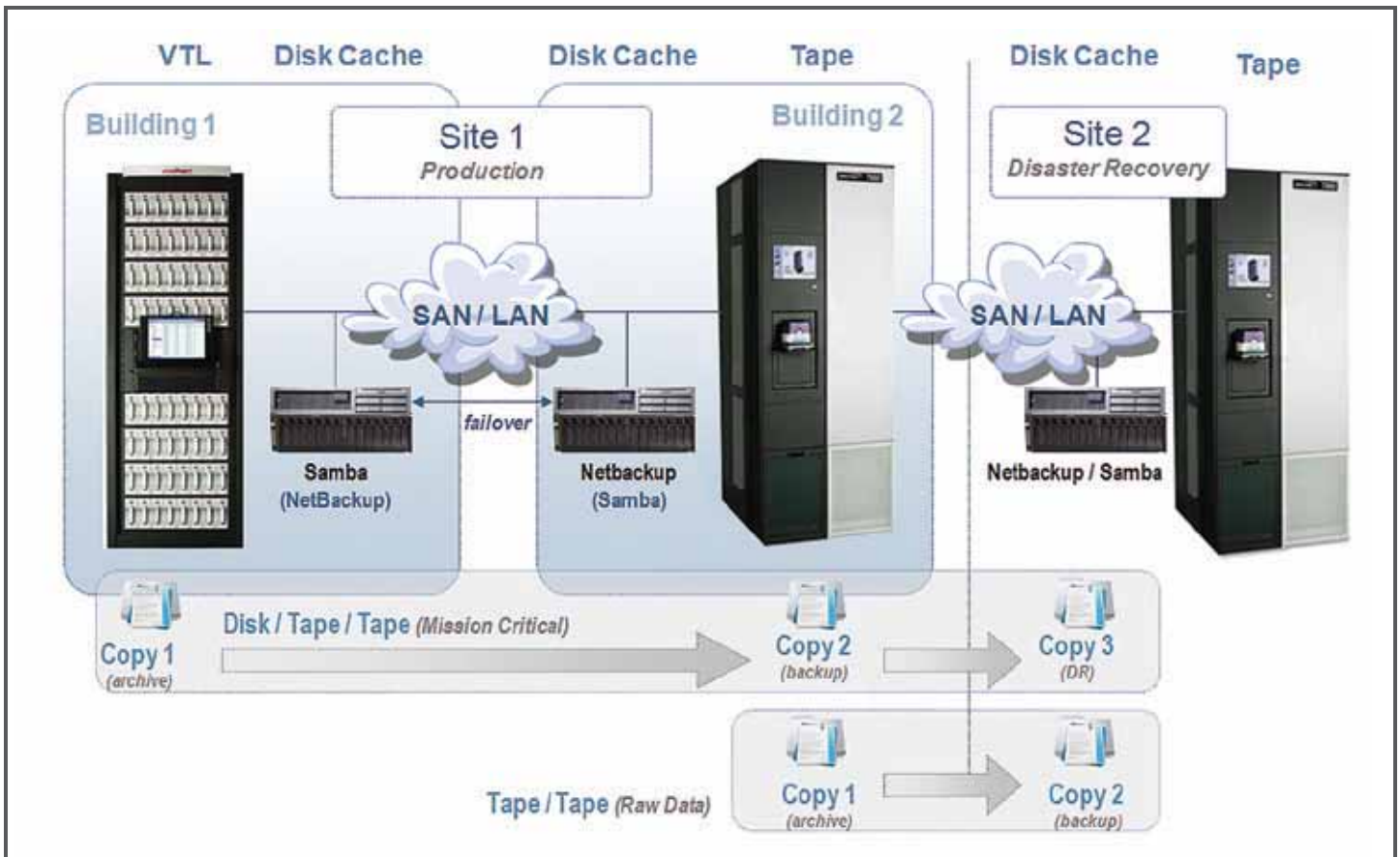
At the Friedrich Miescher Institute for Biomedical Research (FMI), a part of the Novartis Research Foundation, in Basel, Switzerland, some 300 people conduct cutting-edge biomedical research in oncology,

epigenetics and neurobiology, supported by a comparatively small IT staff.

Experiments are designed to validate a hypothesis and the amount of data created to validate a particular hypothesis can be vast. Higher resolution instruments allow scientists to see more than ever before, but as a consequence the storage resources required to support these instruments has dramatically increased.

THE CHALLENGE

FMI's high-throughput sequencing experiments can effectively sequence entire genomes to validate a particular hypothesis. Part of the challenge in terms of supporting this activity from an IT perspective is that at the time of the experiment, FMI's researchers have no way of knowing which piece of data will prove to be critical.



As a result of this, a vast amount of data must be captured and then immediately archived in such a way that it remains easily accessible, and quickly retrievable, in the long term.

THE SOLUTION

For its primary file storage, FMI had installed the HSM file system SAM-FS from Sun Microsystems (now Oracle) with enterprise MAID technology from Copan Systems. As a part of this, FMI wanted to implement a backup and DR solution and selected two Spectra® T950 tape libraries to handle all non-transactional of data within FMI's infrastructure. FMI's data is automatically copied from the SAM-FS file system to the Copan storage array, which acts as a VTL, and then copies it to the first Spectra T950 as an onsite data backup. This data is then later copied to a second T950 library in a offsite location and retained for disaster recovery purposes. In total, the two Spectra Logic libraries provide 300TB of raw storage capacity today with the ability to grow to over 16PB of raw storage as needed in the future.

"We are impressed and happy with the density and cost-effectiveness of the Spectra Logic offering," explained Dean Flanders, CIO at FMI. "Innovation in tape is what Spectra Logic does – and very well – so we have grown very comfortable with entrusting our critical data to their libraries."

THE RESULTS

FMI's storage infrastructure – underpinned by its two Spectra Logic T950 tape libraries – has stood up to the significant challenges posed by the strains of its cutting edge research activities. Around 10TB of new data per week is written to the Spectra Logic libraries from backups and additional data.

"Our storage needs double approximately every two years. Therefore, scalability is extremely important and with Spectra Logic's libraries we know we can scale up with the simple addition of frames. We know our investment is protected and that our archiving and DR infrastructure will grow with us."

The overall implementation has transformed FMI's disaster recovery capabilities, with the IT team being able to bring terabytes of data back online in a matter of minutes. *"In the event of a significant incident affecting our primary data center, we are able to shift from our normal disk staging process to a tape staging process. Recovery of normal file systems would require restoring all data before operations could resume, which could result in an outage lasting for days," said Flanders. "The advanced features in Spectra Logic's BlueScale™ management software give us extra peace of mind that our data is securely backed up and retrievable should we ever need to re-use data for future experiments."*