

CASE STUDY

The Korea Institute for Advanced Study (KIAS) utilizes archive solution from Spectra Logic to preserve up to 750TB of natural science research data

“ The Korea Institute for Advanced Study performs rigorous research on a daily basis, producing mass amounts of valuable data that must be retained long-term. Our environment requires large scale, low energy, small-footprint storage, and Spectra Logic’s T950 and BlackPearl were able to provide us just that. ”

Ho-young Kim, Administrator of Center for Advanced Computation



About KIAS

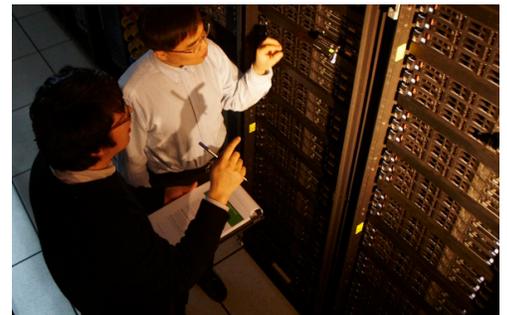
The Korea Institute for Advanced Study (KIAS) was founded in 1996 by the Korean Government to promote world-class, fundamental research in basic sciences. The institute is located in Seoul, the capital of South Korea, on a 120,000 square-meter site, and offers its members a research-friendly venue for advanced learning and active discovery of new ideas. Scientists from all over the world travel to KIAS for collaborative research, sabbatical leave, and various scientific pursuits aimed at contributing to the advancement of our civilization. The faculty and research bodies at KIAS are composed of diverse nationalities, and strive to explore the frontier of knowledge and insights on nature and its structures.

The Challenge

Scientific research environments, like the Korea Institute for Advanced Study, require data storage that is 1) highly scalable - to accommodate massive data sets and growth, 2) energy efficient - to decrease TCO expenses, and 3) high capacity in a small footprint - to conserve valuable, and often limited, data center space. KIAS’s previous storage solution consisted of a network-attached storage (NAS) device with an rsync file transfer utility. KIAS was looking to replace this solution with one capable of archiving up to 750TB of Natural Science research data indefinitely. The institute required a solution with a small footprint that was high capacity, high performance and energy efficient.

The Solution

After considering several options, KIAS selected a Spectra® T950 Tape Library and Spectra® BlackPearl® Converged Storage System to address their storage needs. Having considered solutions from competitors like IBM and Oracle, KIAS found that the Spectra Logic solutions had unsurpassed data transfer speeds, greater storage capacities, and lower total cost of ownership (TCO), all at a remarkably low price. The combination of Spectra’s BlackPearl with its T950 tape library provides an easy-to-use archiving system capable of scaling to meet the extreme data growth anticipated by the institute.



A KIAS campus building, and part of the KIAS data center

CASE STUDY: Korea Institute for Advanced Study

Environment Snapshot

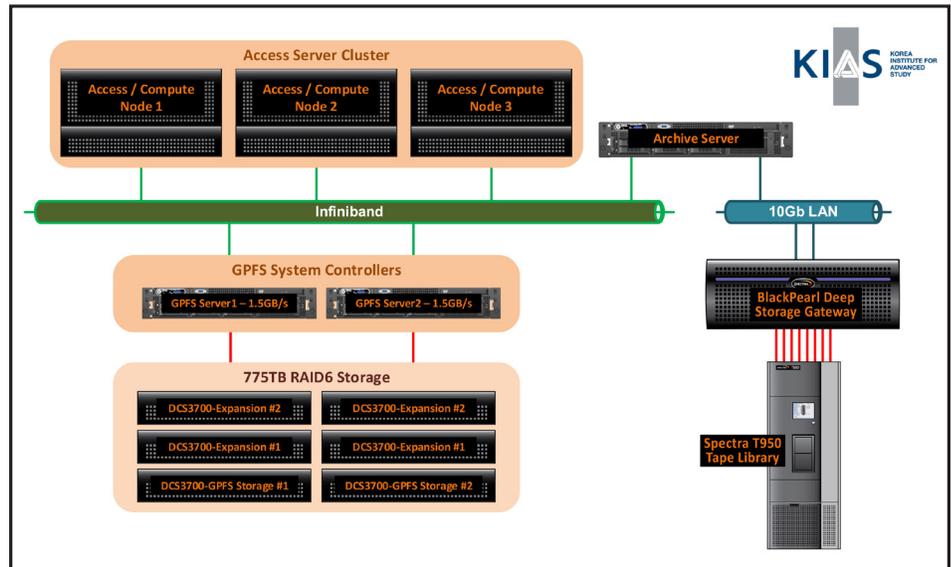
- Spectra T950 Tape Library
- Spectra BlackPearl Converged Storage System
- Java CLI software
- LTO-7 drives and media with Media Lifecycle Management (MLM)
- BlueScale® Encryption Software
- GbE connectivity
- CISCO NEXUS 7000 network switch
- CentOS 6.x servers
- Up to 750TB of research & Natural Science research data

Why Spectra?

- Scalability
- Performance
- Ease of use
- Low energy consumption
- Cost effective

Solution Recap

Spectra T950 Tape Library: The T950 leads the field in innovation, flexibility, performance and functionality, from its super high storage capacity to its proactive media management. Designed to meet the stringent requirements of the enterprise for data integrity, data security and high reliability, the T950 library reduces staff involvement and scales easily in capacity and throughput. From 50 to 10,020 LTO slots, you can store over 60PB (150PB compressed*) of data. With up to 120 drives you can transfer data up to 129.6TB/hr. (324TB/hr. compressed*) using LTO-7 tape technology. The Spectra T950 provides maximum flexibility by allowing you to populate your library with LTO tape technology, or you can select IBM® TS11X0 enterprise tape technology and/or Oracle® StorageTek® T10000x enterprise tape technology, enabling you to choose the tape technology that is perfect for your business.



Spectra BlackPearl Converged Storage System: The Spectra BlackPearl Converged Storage System solves the problem of costly and complex approaches to digital preservation by combining NAS and S3-based interfaces with multiple storage targets into

a simple and affordable solution. Designed for numerous concurrent workflows, BlackPearl reduces the need for expensive third-party data movers by integrating Spectra S3 with a range of certified clients and simple file movers.



Ho-young Kim, Administrator of Center for Advanced Computation, accessing their T950 library