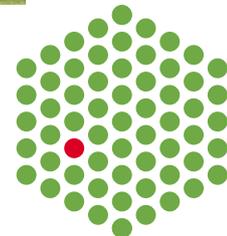


Case Study

PoINT Archival Gateway **EMBL-EBI**



EMBL-EBI



EMBL's European Bioinformatics Institute (EMBL-EBI) stores research data and compressed data of less than 1MB up to 100GB in size, with a current dataset of approximately 50PB. Backup and long-term archiving data is written to tape. The previous in-house solution wrote the data from object storage to a disk file system and then to tape media. However, this approach did not provide sufficient performance for

the growing data volumes. Moreover only 90% of the tape's capacity was utilized. With the introduction of PoINT Archival Gateway, the research institute now has a high-performance and cost-effective solution to write data directly to tape via the standardized S3 interface and to cope with the data growth.

Challenge

- Backup and long-term archiving of object data on tape
- Scalability for constantly growing data stocks
- High performance and capacity requirements

Solution - PoINT Archival Gateway

- Standardized S3 interface instead of S3 Glacier commands
- Native tape integration
- Node-based software solution for high scalability and flexibility

Benefits

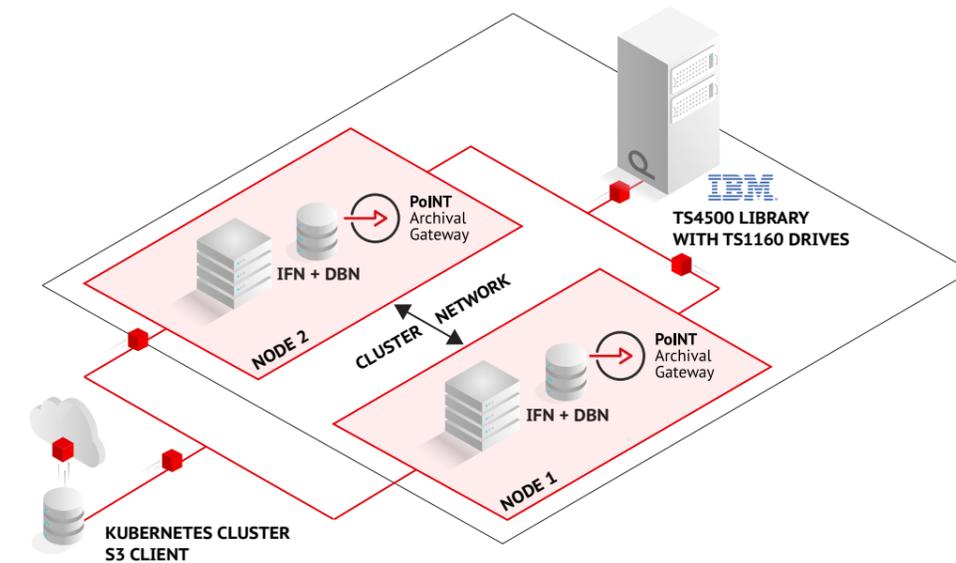
- Cost efficiency through economical use of hardware
- High-performance and flexible storage solution for backup and archiving
- S3 data stream without hard disk buffer directly to tape
- Hardware and vendor independent

About EMBL's European Bioinformatics Institute (EMBL-EBI)

The European Bioinformatics Institute (EMBL-EBI) is a global leader in the storage, analysis and dissemination of large biological datasets. EMBL-EBI helps scientists realise the potential of big data by enhancing their ability to exploit complex information to make discoveries that benefit humankind. They are at the forefront of computational biology research, with work spanning sequence analysis

methods, multi-dimensional statistical analysis and data-driven biological discovery, from plant biology to mammalian development and disease.

The institute is part of EMBL and is located on the Wellcome Genome Campus, one of the world's largest concentrations of scientific and technical expertise in genomics.



EMBL's European Bioinformatics Institute (EMBL-EBI) uses disk-based object storage systems as primary storage for storing research data from genomics projects. In order to store the data for the long term and to be able to access the data quickly and reliably in case of failures of the primary storage systems, a complete copy is backed up to tape. An in-house script was used for this replication to tape, but it did not provide the necessary performance and only utilized 90% of the storage space on the tapes. Given the existing data volume of 50PB and an expected growth of more than 1PB per month, an alternative was sought that met the requirements in terms of performance, cost and future security.

With PoINT Archival Gateway, the institute has introduced a solution which writes the objects as objects directly to tape via the standardized S3 interface. Initially, an IBM TS4500 library with 6 IBM TS1160 drives is used as target storage. PoINT Archival Gateway required only a 2U server. In the course of the current second project phase, the installation was extended to 12 drives and two 2U servers.

PoINT Archival Gateway was chosen as it uses the standard S3 interface, and does not require cumbersome S3 Glacier commands. In addition, PoINT Archival Gateway does not need a hard disk buffer to write to tape. PoINT's use of a RAM cache provides extreme performance and considerable

savings on disk based storage hardware.

PoINT Archival Gateway requires only one 2U server for 6 drives. Due to the economical use of hardware, the solution proves to be particularly cost-efficient and performant at the same time.

"We are very satisfied with the deployment of PoINT Archival Gateway and especially with the cooperation and exchange with PoINT and the partner Mercia," says Marc Riera (Software Development and Operations – Service and Data Management Technical Coordinator at EMBL-EBI). "We feel well prepared for the future data growth and look forward to follow the further development steps of PoINT Archival Gateway."

For example, PoINT Archival Gateway provides the required read and write rate of at least 1PB per week for the planned tape migration. Storage capacity and performance are scalable according to requirements. The vendor-independence of the software solution makes it possible to flexibly combine hardware from different manufacturers and different drive generations. This ensures future security and a high level of investment protection.

About Mercia Solutions

Mercia Solutions based in Castle Donington, England. The british reseller have years of experience in data management and data lifecycle solutions. They can help you from planning through to complete integration of PoINT Software. Mercia Solutions specialise in supporting resellers and channel partners. The reseller has demonstration equipment and pre-sales support available to assist you. Get in touch today and let them help you with your projects.

About PoINT

PoINT Software & Systems GmbH is specialized in the development and distribution of software products for storage, management and archiving of data. Our data & storage management solutions offer an easy and efficient integration of different storage technologies and systems in consideration of enterprise requirements. PoINT products allow optimized usage of storage systems and help to reduce costs and issues caused by data growth.

The software solutions fulfil compliance and archiving requirements and provide independence from storage technologies and vendors.

Additional information and a trial version of the software are available at www.point.de.