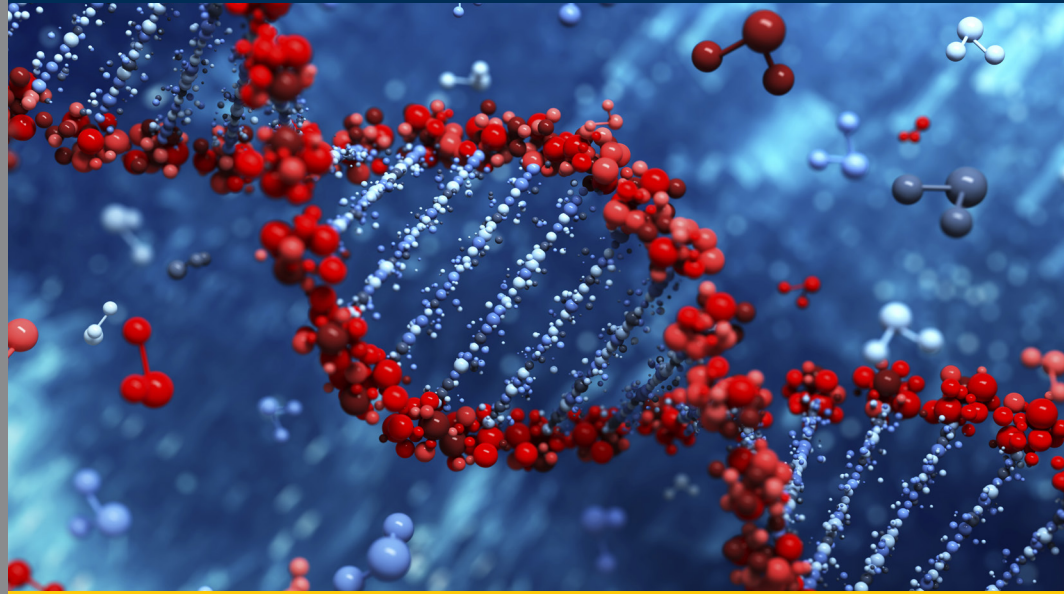


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Marc Mühlfeld
IT Director



Center for Human Genetics and Laboratory Diagnostics

Situation

For more than 15 years, the Munich Center for Human Genetics and Laboratory Diagnostics (AHC) has provided doctors and institutions with a wide range of diagnostic methods and technologies. Analysis of bodily fluids and tissue samples, as well modern analytical technologies of molecular diagnostics are the core expertise of the Center. The samples are collected at recording offices, labeled and distributed for closer examination at appropriate locations. The Center also offers a genetic counselling center using the latest scientific technology to inform and educate patients.

SITUATION (cont'd)

The Center was in search of a backup solution that would support its entire IT infrastructure. “The majority of backup vendors we’ve seen neglect Linux environments,” said Marc Mühlfeld, IT director of the Center for Human Genetics and Laboratory Diagnostics. The Center uses a wide variety of different software solutions for diagnostic tests that must be reliably backed up.

CHALLENGE

The institute works with the latest laboratory diagnostic technologies in areas such as immune genetics, biochemistry, molecular genetics, pathology and microbiology. Next Generation Sequencing devices offer the latest measurement technologies to analyze the entire human genome. These practices create large amounts of data generated by high-resolution images. Their size varies from several hundred MB to a few GB per image. Each time the devices are used, they produce about 200 GB to 1 TB of raw data, depending on the device. Two years ago, the Center backed up 5 TB of data per day – today, they manage 20 TB.

“Data is housed on our network for four to six weeks. We keep it until diagnosis and results are completed. During this time, our data volume continues to increase,” said Mühlfeld. “Something had to change with our backups. We needed to absorb this amount of data so that we could keep the backups at least 30 to 35 days before they are overwritten.” Since the amount of data had increased exponentially, the IT team was forced to choose between buying a new storage cluster, performing deduplication on the storage or deduplication with SEP.

SEP Software

SEP Software is the premier technology leader providing high performance backup and disaster recovery solutions for professional IT infrastructures of all sizes. SEP delivers seamless solutions with one central interface to easily manage backups for heterogeneous environments.

SEP's software ensures that data security for both virtual and physical environments can be easily and cost-effectively achieved. SEP is the ultimate expression of German engineering and attention to detail. Design and programming originate from SEP offices in Weyarn, near Munich, Germany, where overall performance and reliability are of the utmost concern.



CHALLENGE (cont'd)

The Center's backup solution would need to be compatible with a mix of different platforms – Linux, Windows, MySQL, MS SQL, Oracle and PostgreSQL. The Center needed to have the ability to perform fully integrated Bare Metal Recovery tasks on both Windows and Linux servers. They were looking for a solution that would support deduplicated backups to disk and then to tape with automatic replication on GlusterFS.

SOLUTION

Due to its ability to protect and restore mixed environments of all sizes, including its wide range of support for Linux, SEP was chosen as the Center's new backup solution. The software fit perfectly into the Center's IT environment. "Our entire IT infrastructure is covered with SEP. We have a wide range of databases and applications that have special demands on a backup solution. But the advantage with SEP is its ability to back up any environment running on any platform," explained Mühlfeld. "We took a look at the backup market and quickly found out that most vendors are far less scalable."

Unfortunately, the old storage cluster had reached its capacity limit, which made the transition from classic data storage to deduplication impossible. That was when SEP's Si3 target Deduplication came into play. "An effective deduplication solution is critical for our business. The data that stays in our network is backed up six times, so I can significantly reduce the amount of data on the backup storage," recalls Mühlfeld.

The Center benefited from independent storage clustering, highly flexible backups with a minimal demand of storage volume, lowered space requirements in the server room and reduced electricity costs. SEP's Si3 deduplication method divides files into variable sized blocks. The storage medium then compares the stored blocks and indexes any duplicates. The Center for Human Genetics and Laboratory Diagnostics can now concentrate on their research and diagnostics business with the knowledge that their data is secured with SEP.

ABOUT AHC

The Center for Human Genetics and Laboratory Diagnostics in Martinsried near Munich was founded in 1998 from the Institute of Clinical Chemistry (University Hospital Großhadern) of the Ludwig Maximilians University Munich (LMU). AHC specializes in genetic, biochemical and immunological diagnostics, the analysis of the cellular components of blood using molecular, cytogenetic and flowcytometric procedures, as well as innovative services in the field of molecular diagnostics such as array-CGH, gene expression arrays, Blotting, FACS, FISH, HPLC, Next Generation and Sanger Sequencing, pyrosequencing, real-time PCR and tandem mass spectrometry. The private corporation employs 120 specialists, including doctors, scientists, and technical staff.