

A photograph of four medical professionals in an operating room. Three are wearing white coats, and one is in teal scrubs. They are looking upwards and to the right, possibly at a screen or a patient. The room is brightly lit by overhead surgical lights.

KERN
CAREFREE ARCHIVING
WITH THE BEST VALUE FOR
MONEY

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DIGITAL ARCHIVING STRATEGY FOR A RAPIDLY GROWING HEALTHCARE AND SOCIAL SERVICES NETWORK

“For us, iTernity isn’t just the best value for money, it’s the best performance for money. The direct line to the manufacturer and the high system availability make all the difference for us.”

Thorsten Seidel,
Head of IT Project Management, KERN



CATHOLIC INSTITUTIONS RUHR AREA NORTH GMBH (KERN)

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Industry:

Healthcare and social services

Initial situation:

The hardware-based archiving solution used to date was outdated and no longer met the clinic's IT requirements. The IT managers therefore set out to find an archiving solution that offered audit compliance, high availability, and high cost efficiency with minimal effort.

Challenges:

- Ensuring the audit compliance of sensitive health data in accordance with strict legal requirements
- Ensuring data availability
- Enormous increase in data growth while maintaining high cost efficiency
- Reducing IT effort for managing the archiving solution

Solution:

iCAS FS storage platform from iTernity,
iTernity iCAS middleware,
DMS from d.velop, DeepUnity from Dedalus
from MEDLINQ Softwaresysteme, SAP, and
many more.

THE SUCCESS AT A GLANCE

- ✓ Centralized, audit-proof archiving for DMS and PACS data
- ✓ High scalability and flexibility for rapidly growing data volumes
- ✓ Managed storage reduces the burden on internal IT and ensures high availability and security.
- ✓ Stable and fail-safe archiving system to ensure patient care, even in HIS emergency scenarios
- ✓ Flexible combination of iCAS and iCAS FS for different requirements

KERN: COMPETENT. PROFESSIONAL. SIMPLY HUMAN!

Katholische Einrichtungen Ruhrgebiet Nord GmbH (KERN) is a strong and continuously growing association of Catholic institutions for medicine, nursing, and education in the Ruhr region. KERN currently employs around 7,500 specialists at approximately 40 locations. Many of the locations are closely linked to the development of industry and mining in the region and are a sign of the social work and social-charitable responsibility assumed by Catholic parishes yesterday and today. The service network is one of the largest employers in the region.

In the course of several mergers and acquisitions – including the merger of St. Augustinus Gelsenkirchen GmbH and Katholisches Klinikum Ruhrgebiet Nord GmbH in 2023 – the goal was formulated to consolidate IT infrastructures and digitize processes. According to department head Thorsten Seidel, a key challenge, particularly in the medical field, was to merge different system landscapes and create synergies – both technically and commercially.

“Our task is to master the balancing act between strategic IT consolidation and operational relief for the specialist departments – in an economically and technologically sustainable manner.”

The diversity of the systems used posed a major challenge for the digital archiving of sensitive health data: different PACS and DMS solutions had to be merged, secured uniformly, and stored for the long term. The goal was to create a central, expandable archiving platform that would meet the high requirements of the health and social services sector.



Key data: KERN

- A total of 40 locations
- Medical locations: 11 hospitals and over 60 clinics with a total of around 2,500 beds
- In addition: retirement homes, kindergartens, social institutions, and residential and commercial buildings
- Employees: 7,500 in the entire group

CONSOLIDATION AND DIGITIZATION IN THE ASSOCIATION

As part of a DMS tender in 2019 for the compliance-compliant archiving of patient files, emails, personnel files, and contracts, our iCAS middleware was selected. The hardware-based archiving solution used in previous years was no longer future-proof. Maintenance and spare parts procurement were problematic, failures occurred, and scaling was costly. The use of iCAS established a flexible, software-defined archiving solution that is hardware-independent, can be easily integrated into the existing infrastructure, and can also be expanded at short notice without any problems.

In the following years, KERN underwent further mergers, particularly in the healthcare sector. This ultimately necessitated a highly available, centralized solution for archiving large volumes of PACS data.

Rapid data growth has a direct impact on costs, personnel planning, and IT security, because more data requires more storage space and new systems. These must be managed, updated, and secured. This, in turn, requires specific expertise, time, and money. In addition, more systems and resources often mean

greater complexity and additional gateways for cyberattacks.

Thanks to their positive experience with iTernity, the IT managers at KERN quickly decided on the iCAS FS managed storage platform. Its easy scalability makes it ideal for the healthcare sector, which is experiencing rapid growth in data volumes, particularly in the field of diagnostic imaging. The managed services approach reduces the workload for KERN IT staff and ensures a high level of data security.

SCALABLE, DECOUPLED ARCHIVE INFRASTRUCTURE

For Thorsten Seidel, the advantages of combining the iCAS and iCAS FS archiving solutions are obvious:

System availability and security

The archive systems run stably, perform well, and require little administrative effort. In the event of an unforeseen storage bottleneck, KERN received direct support from iTernity within 90 minutes—a level of service that is extremely rare in the industry.

„The fact that iTernity responds so quickly and easily in an emergency confirmed our decision. You rarely find service like this,” says Seidel. „For us, iTernity is not the price-performance winner, but the performance-price winner. The direct line to the manufacturer and the high system availability make all the difference for us.“

Scalability

The amount of PACS data increases by up to 20 percent annually, partly due to technical advances in diagnostic imaging and comprehensive legacy data migration in the course of consolidation. iCAS FS can be easily expanded and thus supports the continuous growth of the archive.

Managed Storage

Der Operation by iTernity relieves the burden on internal IT, which is confrtroneted with growing complexity and a shortage of skilled personnel. KERN benefits from the expertise and direct availability of iTernity's experts.

„In an environment with an increasing shortage of skilled workers, the Managed Storage Service is a real asset for us. We can concentrate on our core tasks.“

Updates and security patches are installed directly by iTernity, ensuring that the system is always up to date.

Compliance and future security

The solution meets all legal requirements for archiving medical and commercial data (including GDPR, GoBD). Even long-term storage requirements, such as for contracts with "perpetual terms," can be securely mapped. Since the future development of data storage cannot be predicted, KERN's IT managers rely on iTernity to ensure long-term data access and security.

The retention periods for the data strictly comply with legal requirements (AO, BGB, RöV, etc.) and are up to 30 years at the hospital. With iCAS FS, this data is stored and protected according to strict specifications.

Ransomware protection

Ransomware attacks, insider attacks, data loss - many dangers force KERN to take special protective measures due to the sensitivity of health data. These are already integrated into the architecture of the archive storage. iCAS FS is based on a hardened Linux system and does not provide administrator access on the KERN side. This minimizes the attack surface for external and internal threats. Thanks to WORM (Write Once Read Many) storage and retention management by iCAS and iCAS FS, data cannot be changed, manipulated, or deleted after it has been written.

LOOK INTO THE FUTURE: STRATEGIC DEVELOPMENT

KERN plans to continuously expand its archiving with iTernity. In addition to new applications from the DMS environment, the focus is on the centralized PACS system. The archived electronic patient records also serve as a failover concept for the HIS in the event of potential cyberattacks – an important strategic aspect in times of growing threats. Whereas medical staff used to be able to access paper-based patient records on the ward in the event of a system failure, this will no longer be possible once digitization is complete.

KERN intends to continue expanding the storage platform flexibly in the future in order to connect new departments and applications. However, the decision to use iTernity was not based solely on technical qualities, according to Seidel:

"We do not want to compromise on data integrity. Our patients and employees trust us to store their sensitive information securely and permanently, and to ensure that it can be accessed reliably and centrally."

Conclusion: With iCAS and iCAS FS, KERN has a flexible, scalable, and future-proof archiving platform. It optimally supports the requirements of a dynamically growing healthcare and social services network, reduces the burden on internal IT, and protects data from encryption, manipulation, and deletion.

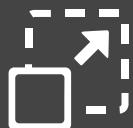
UNLIMITED SCALABILITY FOR LIMITED IT BUDGETS

iCAS FS is a scale-out platform for archive, backup and business critical data of all kinds.

The software-defined storage platform scales without limits starting at 20 TB, and impresses with low TCO, great ease of use and high flexibility.



53% cost savings compared to public cloud storage and you retain the control of your data



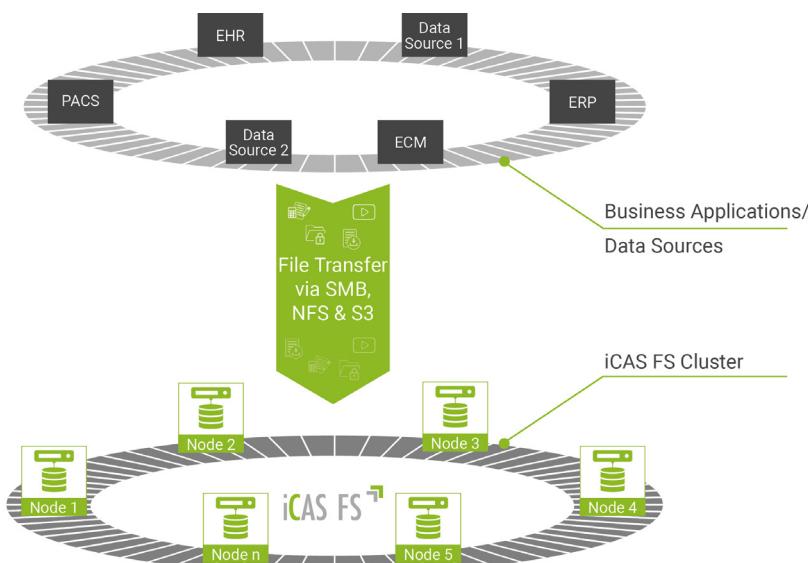
Start small, scale without limits from one node and 20 TB in one software-defined platform



The advantages of public cloud storage in your own data center: high flexibility, easy scalability, little effort



Auto-managed system: zero-touch operation and managed services with monitoring of the complete system



iCAS FS enables future-proof data storage and compliance at a low total cost of ownership.

The platform is ideal for storing and protecting data from multiple applications and sources and enables audit-proof archiving, ransomware-proof backup storage, and relieves your primary storage.

The software-defined architecture is built on standard hardware and a Linux operating system. Thanks to WORM storage, S3 Object Lock, retention management, encryption and audit trail, compliance and security are top priority, which has also been confirmed by KPMG.



WOULD YOU LIKE TO LEARN MORE?

Arrange a demo or discuss your requirements with us:

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