

# Klinikum Freising safeguards data-driven hospital operations



NetApp ONTAP solutions deliver business continuity, protect all data, and accelerate digital hospital processes.

Klinikum Freising is a municipal hospital that provides superior primary care for the district of Freising and its adjacent counties. With about 1,000 employees, it is the largest employer in the Freising district.

With 350 beds, 40,000 inpatient and outpatient cases, and about 1,000 births a year, Klinikum Freising is one of the medium-sized clinics in Germany. Despite limited financial means, it invests carefully to enhance its reputation for caring competence and attractiveness as an employer. As part of a multi-year modernization project, the hospital management wants to expand and redesign its range of services, structural conditions, and technical infrastructure in a future-proof way. Applying and managing digital data throughout patient care will play a central role.

NetApp and their channel partner CANCOM helped put the hospital's digital future on a secure storage basis.



## Up to 6 times faster backups

“We want our users to be unaware of IT and just be able to access and store their data—today, tomorrow, or 5 years from now. NetApp solutions just run, and the data is safe. We can meet the high demands of a data-driven hospital with a small team. That’s worth a mint.”

**Maria Strey**

Head of IT, Klinikum Freising

### All digital data at a glance

At Klinikum Freising, data must be immediately accessible wherever it’s needed, regardless of where it was created in the course of treatment. The hospital’s management has an ongoing initiative to further simplify work and processes and optimize care by creating a comprehensive digital view of every patient.

However, there are still process and interfacing gaps to be closed around Klinikum Freising’s MEDICO hospital information system (HIS). For medicine and nursing, the HIS is the portal to digital patient files and will soon also give access to the digital fever curve, which gathers all bedside care data. The aim is to automatically stream all digitally generated data into the patient record folders, where it is stored and archived.

### Lower risk from core to client

Klinikum Freising knew that digitization requires more security from the data center core to the users’ clients, as well as powerful data storage performance. These requirements necessitated an update of the current NetApp® MetroCluster for all hospital data. From initial concept to implementation to financing, CANCOM was the partner chosen to execute this strategy.

According to Maria Strey, head of IT at Klinikum Freising, “We considered several solutions and partners. The reliability of the NetApp ONTAP systems and the good experience led us back to NetApp, but now to all-flash storage.”

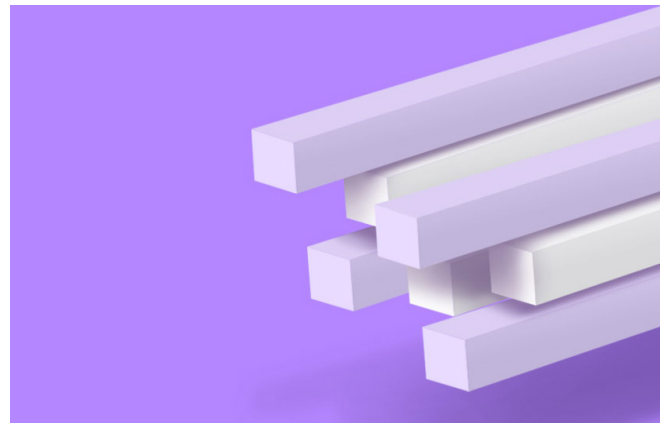
“CANCOM convinced us with their competence and great commitment,” Strey said. “The team recommended the NetApp MetroCluster IP configuration, a future-oriented storage concept, and helped us to include the purchase in the overall planning for public funding.”

Because the investment is intended to increase IT security, it was eligible for funding through the German Hospital Future Act. Applying for the subsidies and implementing the measures requires a government-certified IT service provider. CANCOM has the in-house expertise and certified specialists to meet the requirements of the act.

“We proved how comprehensively NetApp can protect data. Backup, disaster recovery, business continuity, audit

security, and more come as part of the NetApp storage, which is also open to other solutions. Klinikum Freising can significantly increase the level of security with little effort,” said Bernward Anders, vice president of sales at CANCOM Hannover.

The hospital IT team already operated two independent data centers and separately manageable networks, ideal for a failover setup. The new NetApp AFF A220 4-node MetroCluster IP configuration is split symmetrically between the two sites and data is mirrored synchronously, setting the stage for disaster recovery. The team can reroute the data service in case of planned and unplanned site or system failures, maintaining continuity for all hospital processes.



The VMware environment, which contains the MEDICO HIS and all patient data, was migrated to the new MetroCluster according to plan, but the file service was temporarily unavailable for some users. Settings on the legacy system were identified as the cause, and CANCOM remedied the problem. Patient care was not at all affected.

“Without the dedication and knowledge of the CANCOM team, we wouldn’t have been able to correct the file service logon. CANCOM proved to be a true partner,” said Christian Schulz, IT administrator at Klinikum Freising.

### More speed and efficiency with flash

The new MetroCluster runs increased digital processes and workloads efficiently. Because the four storage controllers are integrated into the Ethernet fabric with 2x10Gbit each, the storage performance can be fully exploited.

“In the core, the flash effect is significant. After upgrading the client network, the performance boost will also reach our users,” Schulz said.

NetApp flash is not only fast, it also saves space. “NetApp all-flash storage uses data compaction and applies deduplication and compression at both the volume and aggregate levels. All of this adds up to highly efficient storage utilization and can massively reduce capacity needs,” said Steffen Griebner, senior consultant at CANCOM.

NetApp guarantees a data reduction of 3:1 for its all-flash storage and closes any gap between up-front calculations and subsequent provisioning at no cost. If the data varies widely, as in this case, proper sizing becomes a challenge. NetApp made up the shortfall, and Klinikum Freising covered its storage needs for 5 years with just 112TB.

### Protecting data more often and faster

Data backups are IT basics. As backup frequency and archive durations increase, there is a greater chance of recovering all data after a loss. Klinikum Freising has tightened its backup rules.

Today, NetApp Snapshot™ technology backs up all data on the MetroCluster hourly, reducing the recovery point objective to 60 minutes. For longer-term retention, NetApp Snapshot technology makes a point-in-time copy of all data copies to a FAS2720 system. A specific service advantage for users: File backups are now available for 6 months, rather than just 2 months. VMware backups now sit on a separate backup server for several months before being offloaded weekly to protect against unauthorized access.

Backups are much quicker now—5 times faster in the VMware environment and 6 times faster for Microsoft SQL. According to the vendor’s monitoring, the MEDICO KIS backups ran almost all night before the storage switch. Now backup windows are met easily.

“There are many snapshot technologies, but NetApp invented it. NetApp Snapshot copies integrate with ONTAP software and rely on efficient storage logic. They are done in seconds, take up very little space, and can’t be corrupted,” Griebner said. “NetApp Snapshot technology can deliver very quickly even with large-scale recoveries.”

NetApp SnapLock® Enterprise compliance software also works with Snapshot technology. Klinikum Freising wants to use it to make electronic invoice receipt tamper-proof.

### Fight malware with an early warning system and backups

Malware from macros to ransomware can put data-driven healthcare processes at risk and cause financial liabilities if data privacy is breached. Prevention is crucial, and it requires two things: permanent storage monitoring for rapid detection of anomalies and clean backups for possible data recovery.

Klinikum Freising uses ProLion CryptoSpike, developed for ONTAP storage and connected per NetApp’s FPolicy interface. CryptoSpike monitors user access to files in real time. It detects threats and eliminates them immediately and automatically according to set policies. Users are notified by email about why the access was blocked and when the file is available again. In case of a file restore or recovery, NetApp Snapshot copies are there to help fix the problem.

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#### NetApp products

AFF A220 4-node MetroCluster IP

FAS2720 storage

MetroCluster

ONTAP

SnapLock

Snapshot

SnapVault

#### NetApp Alliance Partner product

ProLion CryptoSpike

#### NetApp Channel Partner

CANCOM

# CANCOM



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As a cloud-led, data-centric software company, only NetApp can help build your unique data fabric, simplify and connect your cloud, and securely deliver the right data, services and applications to the right people—anytime, anywhere. To learn more, visit [www.netapp.com](http://www.netapp.com)



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