CUSTOMER SUCCESS STORY

Kantonsspital Winterthur pushes ahead with digitizing clinic processes

NetApp

NetApp ONTAP solutions support important patient care processes with fast and secure file services.

Kantonsspital Winterthur (KSW) is one of the largest hospitals in Switzerland. It delivers primary clinical care in the greater Winterthur area and has developed into a super-regional central hospital.

KSW processes, from patient admission to discharge, are becoming ever more digital and interconnected. Data must be available faster, and it must be secured and protected from cyberattacks.

With NetApp, KSW has set up an infrastructure that blends performance with security and paves the way for a data fabric with a direct link to the cloud.

KSW
KANTONSSPITAL WINTERTHUR

Partner

itpoint

270,000
patient cases accessed annually

"Stability, Snapshot technology, and flawless integration with the Microsoft world are NetApp strengths. And with NetApp, we keep the option of a data fabric open so that we can move data directly to the cloud one day."

Roger Schwegler
Former Server and Storage Specialist, Kantonsspital Winterthur

Data is a leadership matter

KSW's internal process design and digitization team has a directive from hospital management to drive innovative solutions to a changing hospital world. In the new clinic wing, open spaces and shared zones replace the previous examination rooms and individual offices. The directive for interactions between patients and institutions is "less paper and more digital information." In the future, all patient data will be available digitally to share online beyond KSW's premises.

"KSW has already digitized a lot, but we need to link everything more closely. Data must therefore be available quickly and securely at every spot," said Roger Schwegler, former server and storage specialist at KSW.

Files are everywhere—and they're vital

Forty percent of the data at KSW is file data on NetApp® storage. Almost 4,000 users in medicine, care, and administration need the files every day; the files are crucial to numerous applications. The hospital handles more than 270,000 cases annually, and they generate a broad range of application data, from ultrasound imaging to recorded speech medical reports to cost accounting.

A larger and older population in the region and more medical specializations have grown the hospital's performance and capacity needs on all levels, including the file service. To address the increased demands, the KSW team and its partner ITpoint Systems introduced NetApp all-flash storage AFF A300 and, for better scalability, a cluster switch. The previous production system, a FAS8200 was turned into storage for backup and disaster recovery.

Today the file services run on NetApp all-flash storage across two data centers, one on the clinic campus, the other with a colocation provider. A third, as a failover data center, ensures data consistency in disaster recovery.

The migration was achieved without interrupting any production activities or hospital procedures. Thanks to ITpoint's planning, the changeover had no impact on patients or systems—interruption lasted just 3 seconds.

The flash effect and the smaller storage footprint were very noticeable to the KSW team. NetApp guarantees a 3:1 data reduction for its all-flash storage. Any potential gap between up-front calculations and final deployment is filled at no charge. The majority of files at KSW are highly diverse CIFS data, which makes right-sizing a challenge. NetApp came through to make up the deficit.

"ITpoint is a strong partner and started the compensation process quickly. We received the missing flash capacity quickly and at no cost. A big compliment and thank you to NetApp that everything worked so well," said Schwegler.

The new system offers a much higher security profile. Even a short loss of data access could negatively impact patient care. ITpoint considered and planned for outages or ransomware attacks and other scenarios, and they used the power and efficiency of NetApp all-flash technology to deploy a sophisticated security concept.

Teaming against ransomware

"When it comes to ransomware, you need a cool head, quick diagnoses, and reliable remedies. With the right decision, you can make IT healthy again quickly," said Michael Trutmann, solution architect and consultant at ITpoint Systems.

The ransomware protection, data analysis, and recovery means of Cleondris SnapGuard were coupled with NetApp Snapshot™ and cloning technology. SnapGuard was developed specifically for NetApp ONTAP® storage to protect the data in the background from malicious changes.

ITpoint and KSW developed scenarios, protective mechanisms, and recovery options. Simulation tests showed what to do in each case. A dossier provides instructions on how to act in an emergency.

Back to normal
New flash storage required a new data design. Instead of a few large volumes, the team set up 20 smaller volumes to be more agile when restoring and also to spread the risk of a virus attack KSW uses NetApp Snapshot technology for file backups. Thanks to storage efficiency and all-flash performance, backups across all data can now run hourly. The backups are stored on the production system, mirrored across sites, and kept for up to a year.

The new 1-hour recovery point objective weakens the effect of ransomware attacks. In case a system is completely paralyzed, Cleondris quickly detects unencrypted Snapshot copies. Using the NetApp FlexClone® functionality, the team can recover the initial system status within a few minutes.

"NetApp flash storage and Cleondris are a perfect team. Many NetApp Snapshot backups offer numerous contact points to only repair damaged data during ransomware recoveries with SnapGuard. Recovering only with NetApp SnapRestore may bring back bad data as well," said Trutmann.

Consolidating relieves and helps digitize
KSW's experience with the new infrastructure is very positive. High operative robustness and low administrative effort are a true relief, with many systems and only two people for storage and backup.

NetApp products

- NetApp AFF A300
- NetApp FAS8200
- FlexClone
- ONTAP
- SnapMirror
- SnapRestore
- Snapshot

NetApp Alliance Partner product
Cleondris SnapGuard software appliance

NetApp Channel Partner
ITpoint Systems

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Until KSW is cloud-first, there will be more consolidation of on-premises data. Flash storage and ONTAP efficiency have made it possible to replace file servers with local disks. Several medical applications, such as eye tomography (Pentacam), now connect to the NetApp infrastructure and its automated data protection routines. More Windows and Unix workloads from the departments can migrate easily as needed.

Today's consolidation also makes tomorrow's digitization easier. In the future, when a new hospital information system at KSW is rolled out, NetApp storage will again play a significant role, because vital files are being created constantly and they're vital to the health of KSW patients.

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About NetApp
In a world full of generalists, NetApp is a specialist. We're focused on one thing, helping your business get the most out of your data. NetApp brings the enterprise-grade data services you rely on into the cloud, and the simple flexibility of cloud into the data center. Our industry-leading solutions work across diverse customer environments and the world's biggest public clouds.

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