



Double safety net with uScale

DGD KRANKENHAUS SACHSENHAUSEN IN DGD STIFTUNG GGMBH: ONE FOR ALL

The initial situation

Digitization is one of the greatest challenges the DGD Stiftung is facing. The reason: today's employees would like to be able to work in a more modern, faster and more flexible way, even from home. This increases the costs for IT security, networking, IT equipment, and operation. In addition, extensive legal requirements need to be met in terms of digitization - and skilled staff is in short supply.

To improve its agility and become more powerful, the DGD Stiftung took the decision in 2016 to unify data center services and standardize processes. With its holding company in Marburg, the DGD Stiftung is an association of diaconal healthcare facilities. This includes hospitals, rehabilitation clinics, medical care centers (MVZ), senior citizen facilities, and two nursing schools. A total of more than 3,700 people work for the organization. The plan: bundling services to be well-positioned for the future and ensuring compliance with the legal requirements for digitization.

The data center of DGD Krankenhaus Sachsenhausen in Frankfurt am Main is the central service provider for IT and digitization in the network. Its task is to provide

centralized basic IT services that every facility needs. These include application programs such as a document management system, nursing software, financial accounting, data warehouse, facility management or an invoice receipt archive. As a general principal, large facilities such as MRI or CT are excluded from this centralized idea, and remain local.

True to its claim of "More than medicine," the Central IT and Digitization Service sees itself as a caretaker for physicians, employees and patients alike. The primary goals are to design and support processes in such a way that IT becomes faster and leaner; ensuring that patients receive high-quality care during their stay in the hospital.

The requirement

As the end of maintenance for the existing IT infrastructure drew closer, the IT manager at DGD Krankenhaus Sachsenhausen turned to Concat AG for advice on alternatives for renewing server, storage and backup systems.

Upon analyzing the various options, it became clear that a five-year horizon for the procurement of storage systems is not acceptable for an organization like the DGD Stiftung. This is because growth of the association - for example, through the acquisition of a clinic or care facility - would immediately make such a plan obsolete again. "In the past, we were repeatedly faced with the challenge of needing significantly more disk space at short notice because requirements, which had been unknown at the time, were added, and had to be implemented subsequently," Björn Schneider, head of the data center at the DGD Krankenhaus Sachsenhausen site, explains.

After looking at hardware from three vendors, IT management took the decision to stay with Fujitsu, the current supplier. The reasons for this were the high stability and robustness of the systems over the past six years, as well as the economic benefits of uScale's pay-per-use approach. "That we don't have to make a high, one-time investment for the storage systems, but rather pay for them monthly is quite appealing. The flexible scalability is enormously important for us," the data center manager says.

The solution

To ensure a high level of reliability, the central data center (RZ) of the DGD Stiftung at the Sachsenhausen site is divided into two rooms in different building complexes. As production systems for the storage infrastructure, IT management selected two Fujitsu ETERNUS AF250 storage systems (all-flash), with a

net capacity of 140 TiB, which can be expanded to more than 1.3 PiB, per data center location. In the server area, the decision was made to purchase eight Fujitsu RX systems. Each storage system is based on four Brocade SAN switches.

The storage systems are configured as a cluster network to mirror data synchronously and enable transparent failover. In the event of a failure, the Quorum server (Fujitsu PRIMERGY RX), at a third site, automatically kicks in and ensures that the connected servers continue to work on the remaining storage system without interruption and without users noticing.

Concat technicians prepared all Fujitsu systems, tested them and defined the migration path. They were then implemented in the two computer rooms in Frankfurt. In consultation with the IT team, the migration of the total of 230 virtual machines only took place after the high availability and failover functions had been tested beforehand and it was ensured they were working properly.

The most important applications run on the VMware infrastructure and uScale. Concat has also been the service provider for the VMware installation for DGD Krankenhaus Sachsenhausen for many years. The same applies to the Veeam software for backups.

Monitoring of all systems, the cluster and storage consumption is performed directly by Fujitsu via the AIS Connect interface. The Concat service desk provides support for servers, storage, switches, and proactive management. The existing managed service contract with Concat was adapted for this purpose.

Now the data center has a media break-free landscape, and it can easily expand the storage environment if the DGD Stiftung makes an additional purchase.

"When we reach the buffer and need more capacity, we simply upgrade - without any time-consuming procurement effort," Björn Schneider reports happily.

"With Fujitsu's uScale model, the DGD Foundation does not have to spend money to be prepared for something that might possibly happen at some point. The storage capacity is cost-efficient and dynamically available, offering sufficient reserves, and they can be upgraded automatically."

Joachim Opper, authorized signatory at Concat AG



“Modernizing the infrastructure and switching to the Fujitsu uScale consumption-based financial model for our storage worked well. The migration took place during ongoing operations, and we didn’t have a single minute of downtime. There is hardly anything we could have done better.”

Björn Schneider, Head of the Computer Center of the DGD Stiftung



STIFTUNG

The advantages

The most important criteria in selecting Fujitsu as the manufacturer were the flexibility of uScale for the storage area and the robustness of all installed components. “The Fujitsu systems have been running very well since 2017, there been no significant failure in all these years,” Schneider reports.

Like many other healthcare facilities, the DGD Stiftung is struggling with the shortage of skilled workers. “Because of the upcoming changes, brought on by the Krankenhauszukunftsgesetz (hospital future act), we need every single employee and will have to continue standardizing a great deal, so as to satisfy these demands,” Björn Schneider explains.

In 2018, one of the first measures for the central operation of IT services was the decision to locate the exchange infrastructure in the central data center. For this, the IT team, supported by Concat programmers, implemented a multi-tenant exchange cluster that functions like a cloud service. Ever since, local administrators have been able to manage the active directory for all users and mailboxes themselves, via a self-service portal. Operations, patch management and backups are all in Concat’s hands.

“This year, we will migrate three more sites to the central exchange cluster. This will relieve the local IT teams of standard tasks, allowing them to dedicate themselves to and drive clinical processes on site.”

One of uScale’s most economically compelling arguments is found in its design, in which the manufacturer retains ownership of the systems, and the customer pays a flat-rate, monthly fee for the use of the consumed resources. For the association’s future growth, brought on by the purchase of additional facilities, it is worth its weight in gold. “It’s nice to know that we

no longer have to worry about capacity limits. We can remain calm when presented with new storage requirements and scale up and offer services in the shortest possible time,” the IT strategist says, expressing his satisfaction.

DIE KURZE ZUSAMMENFASSUNG

The challenge

- Resolution taken by DGD Stiftung gGmbH to centralize IT services
- Significant increase in data, following acquisition of facilities
- End of maintenance for IT infrastructure
- Legal requirements for digitization
- Shortage of skilled staff

Solution

- Fujitsu uScale in the central data center (on premises)
- Stable systems and high reliability
- All-Flash technology: equal priority for all applications
- Flexibly scalable memory: short-term additions or deductions
- Standardization and consolidation of IT services and software

The advantages

- Storage-as-a-Service: no investment, monthly billing
- Agility in the own data center, like in the cloud
- Risk minimization and transparent IT operating costs
- Rapid data availability for all employees
- Central exchange cluster as an internal cloud service



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**Krankenhaus
Sachsenhausen**

DGD Stiftung – DGD Krankenhaus Sachsenhausen

With its holding company in Marburg, the DGD Stiftung is an association of diaconal healthcare facilities. These include hospitals, rehabilitation clinics, medical care centers (MVZ), senior citizen facilities, and two nursing schools. In total, more than 3,700 people work for the organization. The DGD Stiftung is a member of the Diakonisches Werk Hessen und Nassau und Kurhessen-Waldeck e.V. It is part of Diakonie Deutschland and the Gnadauer Gemeinschaftsverband. “DGD” stands for Deutscher Gemeinschafts-Diakonieverband.

DGD Krankenhaus Sachsenhausen (KHS) is a diaconal acute care hospital that treats about 40,000 inpatient and outpatient cases annually. The hospital is not only an

Academic Teaching Hospital of the University of Frankfurt that participates in the region’s emergency care: it is a certified reference center for bariatric surgery, a certified “5-Star Treatment Facility” for people with diabetes (BVKD), and also specializes in minimally invasive gynecological surgery (MIC III center), interventional radiology, and gastroenterology. Approximately 800 babies are born in the obstetrics department each year. Another focus is invasive cardiology, with a certified chest pain unit and a cardiac catheterization facility. For the cross-sectoral care of patients, the hospital also includes the MVZ Sachsenhausen, the MVZ Radiology Sachsenhausen, MEDIPARG GmbH and the inpatient long-term care Füreinanderdasein GmbH, with its respiratory care. DGD Krankenhaus Sachsenhausen gGmbH is certified according to DIN ISO 9001:2015. The KHS data center acts as a central point for the provision of IT services for the network’s facilities.



Concat AG IT Solutions

We have been implementing customized IT infrastructures since 1990. On request, our managed service organization provides support and operating services (24x7) for these. In addition, we offer private cloud enterprise solutions and lean, fully managed services in the hybrid and public cloud area. All data is encrypted and stored in German data centers (certified according to ISO 9001 and ISO 27001).



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