Hewlett Packard Enterprise

Krankenhaus St. Joseph-Stift Dresden GmbH

Hewlett Packard Enterprise and Agfa HealthCare deliver IT infrastructure for high availability and scalability

Industry
Healthcare

Goal
Implementation of a future-oriented, flexible IT infrastructure to support the hospital's growth and ongoing development

Approach
Introduction of a comprehensive HPE network, storage and server solution by implementation partner Afga HealthCare

IT improvements
- Dramatic increase in the overall performance of the IT environment
- Simpler IT administration and reduced complexity
- Better management of the IT infrastructure
- Smaller window to perform backups
- Faster backups and restores

Business benefits
- Scalability to support growth and ongoing development of hospital operations
- More reliable planning
- Cost transparency

Charitable hospital in the heart of Dresden

As a general hospital in the heart of Dresden, St. Joseph-Stift is dedicated to providing medical expertise and patient care in a friendly atmosphere. Good medical practices and compassionate care are inseparable. The attention, time and understanding with which the Catholic hospital serves its patients and their families are highly appreciated. In surveys on patient satisfaction—for example, those conducted by the Weisse Liste gemeinnützige GmbH, a German search service for healthcare providers, or the Techniker Krankenkasse, a popular health insurer—St. Joseph's always is among the front runners in Dresden and Saxony.

Future-proof data storage

The IT department at St. Joseph-Stift provides indispensable support for medical diagnosis, prevention, treatment and post operative care of patients, not to mention assistance with medical documentation. It also functions as an IT hosting provider for its partner hospital, St. Marienstift, in Magdeburg.

In particular, the digitization of patient data and today's imaging techniques generate a flood of data at St. Joseph-Stift. Despite the enormous amount of data produced, the highest standards of availability, performance and data security are maintained with complete competence.

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"We anticipate the increase in data volumes and new requirements with full confidence."

- Dirk Andrae, Chief Information Officer, Krankenhaus St. Joseph-Stift Dresden GmbH

Krankenhaus St. Joseph-Stift Dresden GmbH

St. Joseph-Stift is a charitable hospital in Dresden. It offers a comprehensive range of diagnostic and therapeutic services, has 240 beds and employs approximately 700 people. Approximately 40,000 patients are treated annually in specialist clinics for internal medicine, which represent a broad range of healthcare services—including palliative care, geriatrics, surgery, orthopedics, gynecology, obstetrics, anesthesia, intensive care, and pain therapy.

Since its inception in 1895, St. Joseph-Stift has continuously expanded and today continues to drive innovation to ensure they meet the demanding requirements of modern hospitals.

As a teaching hospital for the Technical University of Dresden and through its own nursing school, St. Joseph-Stift takes active part in training new generations of medical and nursing professionals.

Unchecked data growth

In addition to the digitization of medical records, the use of medical devices that generate image and video documentation has resulted in explosive growth in the data volume at St. Joseph-Stift. Multimedia objects such as tumor boards and telemedicine are establishing themselves at an increasing rate. The introduction of new methods for diagnosis and documentation for quality assurance and certification of centers for colorectal cancer or breast center, for example, require complex data management. Emerging regulations further increase the effort required to manage documentation.

Pressure to modernize due to stiffer requirements

The hospital currently manages over 16 terabytes of data. Of those, around 5 terabytes are archived in auditable data storage. Dirk Andrae, the hospital's CIO, expects the data volume to double in the next three years. The HP data storage used up until this time would not have been sufficient to manage this growth. Although it had fulfilled its function, it was approaching obsolescence as well as the end of its support

life cycle. Backups at the hospital had to be performed within an ever-shrinking window. Server and network performance would not have delivered on the increasing demands at St. Joseph-Stift over the medium term. What's more, the hardware deployed at several locations operated as so many "siloes."

"If we had not implemented the project, neither growth nor continuing current practices and new development at the hospital would have been possible," says Dirk Andrae.

Overhaul of the entire IT infrastructure

As the hospital's longtime IT partner, Agfa HealthCare advised the hospital to switch to a single comprehensive solution based solely on HPE. Agfa HealthCare developed the hospital information system ORBIS, which is the key application at St. Joseph-Stift. "From the outset we were willing to consider any solution—as long as it was state-of-the-art. We were keen on acquiring a standards-based solution that would support a future-oriented investment. And we wanted a partner who would take over responsibility of the entire solution," says Andrae.

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Images:
St. Joseph-Stift Hospital

Seamless transition

The move to the new hardware was performed according to a detailed project plan, in which Agfa HealthCare played a key role. The hardware components were preconfigured by Agfa HealthCare, then delivered, assembled, and tested on site. The existing databases were migrated to clustered HPE 3PAR StoreServ data storage systems. This procedure involved an overnight downtime of only 11 hours. The changeover to the new HPE ProLiant servers and HPE FlexFabric networking technology with virtualized IRF technology was performed smoothly with no disruption of operations.

Redundancy put to the test

Today, dual data centers running redundant servers and storage and network systems provide the hospital with high data security and high availability. "Our primary focus is on the welfare of our patients. Core system failure or failed access to important information is not an option for us," says Andrae. The redundant design of the hospital's data center passed its road test with flying colors, although the test came unexpectedly—upon delivery of the new hardware, the second data center had not been completed yet. Following its completion, the redundant components in the first data center were shut down, moved to the second data center and booted there. "The move of the redundant components succeeded seamlessly and during active operation. Of that we are quite proud," says Andrae.

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Customer solution at a glance

Hardware
Servers: HPE DL380 Gen9

Storage:

- HPE 3PAR StoreServ 7200 (data storage),

- HPE MSL 2024 (tape library)

Network
HPE FlexFabric 5900AF with virtual IRF technology

Software
Hospital information system ORBIS from Agfa HealthCare as well as about 140 additional applications

For data storage:
- HPE 3PAR Operation Suite with operating system and management console

- HPE 3PAR Replication Software Suite for virtual and remote copy functions

- HPE 3PAR Application Suite for VMWare for efficient management of the VMWare environment

- HPE 3PAR Reporting Suite for transparency and reporting functions

In excellent shape

Since the introduction of the holistic HPE solution, the time required to perform backups and restores at the hospital has halved. The increased performance achieved through new server and network technology has been much appreciated by users at the Dresden and the Magdeburg sites. Thanks to its scalability, the IT infrastructure can be extended exactly as needed, for example, to accommodate data from newly introduced modalities.

In daily business, the new HPE solution facilitates the work of the IT department in the hospital immensely. The first point of contact for the ORBIS application, the database, the servers, backups and the network is always Agfa HealthCare. It has all the information pertaining to the system configurations.

The IT administration at St. Joseph-Stift is now much more straightforward. The IT infrastructure is easier to manage. "On the business side, we recognize the value of more reliable planning and greater cost transparency," Andrae concludes.

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