

Case study

ETERNUS storage systems protect data assets and ensure business continuity in the Fujitsu data center

»The cost-efficient and scalable ETERNUS DX440 S2 storage systems are a central component of the high-availability concept of our internal data center. Besides, they are ideally suited to protect business-critical data.«

Benno Zollner, CIO, Fujitsu Technology Solutions



Save costs and increase security

Today a modern and sophisticated storage system is one of the most essential elements of corporate IT architecture. Only with the right storage strategy is it possible to maintain business continuity, reduce risks and sustain cost cutting.

“Shaping tomorrow with you”

Fujitsu Technology Solutions is Europe’s leading IT infrastructure provider operating in all key markets in Europe, the Middle East, Africa and India for small, mid-range and large enterprises and consumers. With its Dynamic Infrastructures strategy the company offers a comprehensive portfolio of IT products, solutions and services – from clients and data center solutions to Managed Infrastructure and Infrastructure as a Service. Fujitsu Technology Solutions belongs to the global Fujitsu Group and has more than 13,000 employees. In compliance with its brand promise “Shaping tomorrow with you”, the company produces sophisticated IT hardware, among others, in Augsburg, the home of Europe’s most modern computer plant.

Central company location in Augsburg

For Fujitsu Technology Solutions, Augsburg is, however, much more than just an important production site. “Since we are a development, production and logistics site, everything is geared towards high availability here,” explains Robert Mayer who is responsible for IT Governance and IT Infrastructure Management at Fujitsu. “Our IT at the Augsburg site is designed to achieve maximum redundancy and high availability of up to 99.999 percent.” It goes without saying that only the most sophisticated storage systems can meet these challenges. “Of course, it’s also about keeping costs down,” Mayer adds. “With our previous EMC storage system, which was already five years old, maintenance expenditure had been skyrocketing lately.” The company selected a system from its own production that optimally meets all the stringent demands – ETERNUS DX440 S2. Maintenance costs have dropped significantly while data assets are safely stored and performance is clearly enhanced.

The customer

Fujitsu Technology Solutions, Europe’s leading IT infrastructure provider, has more than 13,000 staff and is part of the global Fujitsu Group.

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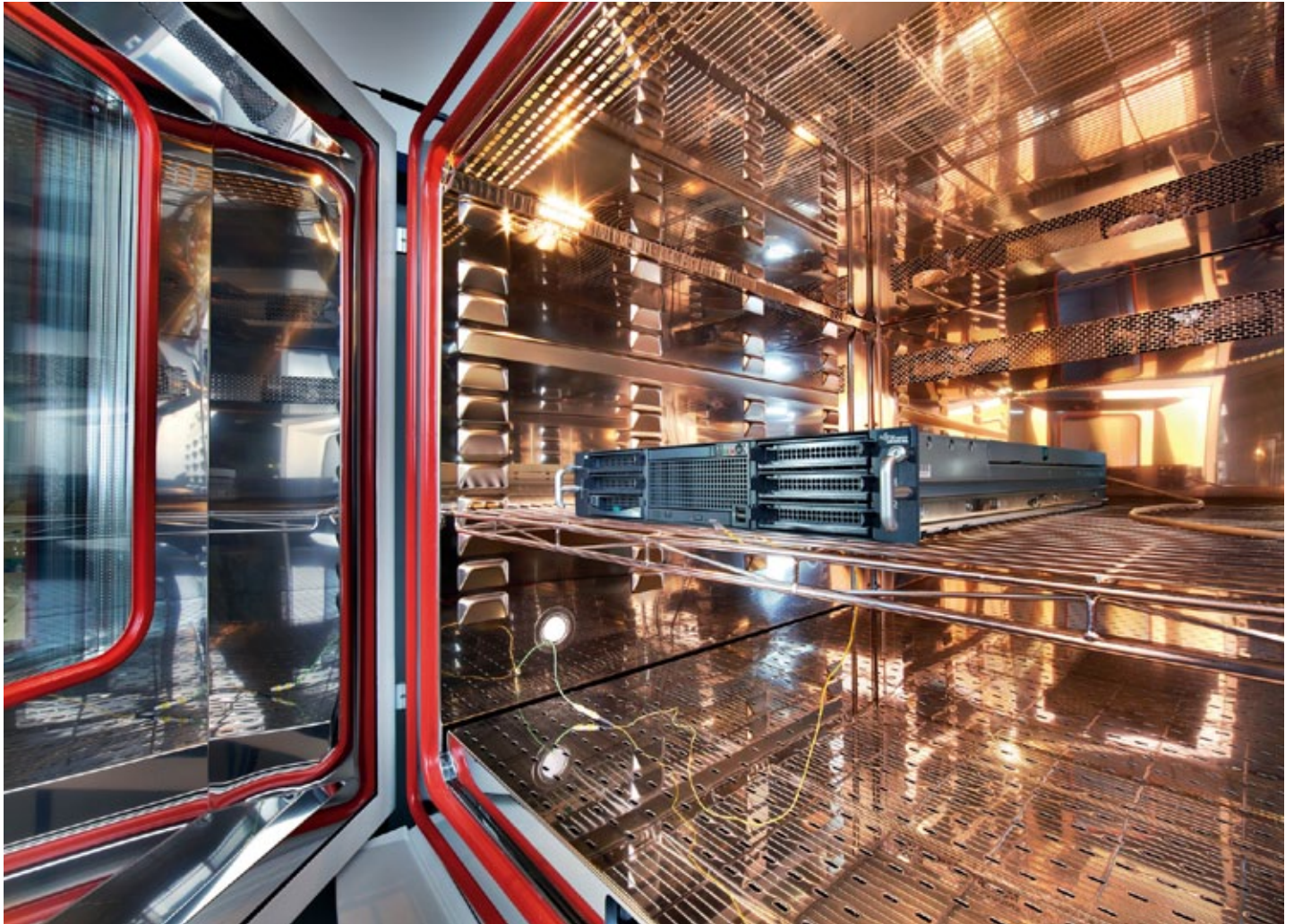
The challenge

The safe storage of the Microsoft Exchange and SAP data of all employees in the CEMEA&I region combined with fast access times.

The solution

ETERNUS DX440 S2, a fast and safe high-availability disk storage solution with the NetApp V series for storage virtualization.

Fujitsu operates Europe's most modern computer plant in Augsburg



Fujitsu development site in Augsburg: Climatic chamber for high-temperature testing

To ensure high availability Fujitsu's Corporate Data Center in Augsburg deploys two ETERNUS DX440 storage systems in different fire compartments. "From here we are able supply the entire CEMEA&I region with corporate services and applications such as SAP," explains Benno Zollner, CIO at Fujitsu Technology Solutions. "Here we manage, for instance, 20,000 Microsoft Exchange mailboxes. Until now e-mail has been the most important application for the exchange between customers and business partners and among colleagues. Every single day our employees send and receive over 400,000 messages." It is obvious, of course, that Fujitsu wants to play it safe when it comes to storing Exchange data – not only for compliance reasons.

Safe storage

"When it comes to SAP and messaging data, companies require a highly reliable and dynamic storage system with superior scalability," Robert Mayer agrees with the CIO. "ETERNUS DX disk storage systems precisely meet these requirements with redundant components, RAID protection and new features such as Redundant Copy – a safety standard that even outperforms RAID." Redundant Copy stands for an automated preventive drive replacement based on the permanent monitoring of error thresholds. The control feature integrated in ETERNUS DX disk storage systems is called "Data Block Guard". It adds check codes to all data blocks and confirms data integrity at multiple checkpoints along the data transmission route.

„As for the SAP environment we have been able to register an increase in performance amounting to as much as 30 percent. That is a noticeable performance boost that considerably accelerates our processes and from which our staff profit worldwide.“

Robert Mayer, IT-Director, Fujitsu Technology Solutions

“This way the storage system virtually monitors itself,” says Robert Mayer. “This not only relieves our IT team tremendously, but also reduces response times.”

Loss risk minimized

All in all, data protection is clearly reinforced: The recovery time objective (RTO), i.e. the duration of time within which a business process is restored after a disruption, is three times faster than previously. “In addition, we have gained more flexibility in the SAP environment with system cloning since now it’s only a matter of minutes,” Mayer explains.

Lower costs, enhanced efficiency

Regarding the higher maintenance costs of the old system and the depreciation of the new disk storage systems, the deployment of ETERNUS DX440 S2 in the Fujitsu data center will lead to an annual savings of 270,000 euros. “We have already reached our return on investment in the first year,” Mayer estimates. “And this is without having included the savings on electricity and definitely more efficient capacity utilization in our calculation.” This results from the greater storage density and space savings due to the compact architecture of the ETERNUS DX440 S2. The expandability of the storage capacity presents another real advantage for the company’s growing storage need. “Thanks to its superior scalability, the storage system now virtually breathes with the workload demand of our applications,” explains the IT Director. “As a consequence, we have become much more flexible.” Currently each ETERNUS DX440 S2 system utilizes a gross storage capacity of 85 TB for SAP data; in addition another 140 TB are needed for Microsoft Exchange data. At this time

the total utilized capacity is 225 TB distributed to 624 SAS HDDs per storage system. The systems are scalable up to 960 2.5-inch hard disks. These can be easily added without interrupting business operations.

Storage virtualization as a performance turbocharger

The investment has been worth it, also with regard to acceleration. “As for the SAP environment we have been able to register an increase in performance amounting to as much as 30 percent,” says Robert Mayer. “That is a noticeable performance boost that has considerably accelerated our processes and from which our staff profit worldwide when they access our SAP applications.” The performance growth is attributed to different factors. The ETERNUS DX440 S2 system inherently provides high performance and furthermore high-quality hard disks are deployed. A real turbocharger for performance and availability is found in the combination with a V series system by NetApp.

More flexibility thanks to storage virtualization

“With our ETERNUS DX system, NetApp V series takes over storage virtualization and is part of a highly-available metrocluster configuration,” clarifies Daniel Gull, who is an IT architect and was in charge of the project planning. “Along with the enhancement of performance through caching a series of cost-saving functions are available via the deployment of NetApp ONTAP software.” Some examples of these are SnapShots, SnapClones, SnapMirror and data deduplication. The NetApp solution also provides the possibility to connect to more storage systems, if need be, and in turn to consolidate these capacities into one virtualized storage pool.



Good vibrations: At the Augsburg Test Center servers must withstand vibration testing



Made in Germany: Europe’s most modern computer production plant in Bavaria

The benefit

- The reliable and safe storage of valuable business data
- Continual data availability
- Fast expandability of storage capacity
- Superior scalability
- Fast access times
- High energy efficiency

Products and services

- Storage systems:
 - 2 x ETERNUS DX440 S2 with 225 TB storage capacity
 - 2 x NetApp V series for storage virtualization
- Services:
 - Managed Infrastructure Services by Fujitsu
 - Storage Integration Services by Fujitsu
 - Comprehensive project management

“Flexible data access is an additional plus point since the NetApp V series also now enables data to be addressed via NFS/CIFS (NAS) and to be stored on the ETERNUS DX,” Daniel Gull sums up. “Thus all data can be optimally consolidated into one system.” The professional project management including the Storage Integration Service was completely rendered by Fujitsu. Cooperating with NetApp as a close strategic partner was an absolutely smooth undertaking.

Green data center with ETERNUS DX

ETERNUS DX disk storage systems for the mid-range and enterprise area belong to the most efficient in their class. With this Fujitsu has created truly green IT products. All models of the ETERNUS DX family dispose of an Eco mode that ensures that hard disks that are not in use or seldom used automatically shut down after a defined idle time. Once again this leads to reduced energy consumption and consequently results in less heat generation in the data center. For Benno Zollner, the CIO at Fujitsu Technology Solutions, the ETERNUS DX440 S2 is therefore an essential element for green IT infrastructure:

“Green IT is not only what we produce and sell; this trend-setting concept is also an integral part of our own company philosophy. We want to be a green IT enterprise with green data centers. The ETERNUS DX systems utilize an intelligent energy concept. With the ETERNUS DX systems we conserve our customers’ resources as well as our own and make a valuable contribution to saving energy in the data center.”



Augsburg Demo Center for customers

“We have invested a great deal of effort to advance towards our vision of a green data center,” adds Robert Mayer. “Also with regard to air conditioning technology we are strongly focused on Green IT as we only deploy efficient and state-of-the-art systems and integrate them in precisely suited cooling and air conditioning concepts.” Customers can get a practical impression at the Fujitsu plant in Augsburg. The site accommodates not only a Training Academy but also an Executive Customer Center (ECC) where customer scenarios can be acted out on modern server and storage platforms. “At our productive data center we basically deploy everything we sell to our customers,” explains Robert Mayer who is also responsible for the IT infrastructure at the Augsburg-based Fujitsu site. “At our customer Demo Center we present our entire data center portfolio, ranging from Blade Servers and server pooling to efficient storage systems including backup pooling with tape libraries and on to the virtual tape library ETERNUS CS.”

Storing by order of her Majesty

There is another reason why Robert Mayer is particularly proud of the new storage system in the Corporate Data Center in Augsburg. “As our first and own customer we have deliberately chosen to install the ETERNUS DX440 model with the serial number 001 in order to put its practical suitability for our business-critical productive systems to the test. Thus, our data center accommodates the first productive system of this type produced in our Augsburg plant. With this we also ensure that the customers’ product expectations are fulfilled in a complex environment.” And that’s not all. Further, the Corporate Data Center deploys another disk storage system from this series that is mirrored. However, it doesn’t bear the serial number 002, “but rather 007,” according to Mayer. “That’s why internally we fondly refer to it as the ‘James Bond storage system.’”



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