

# Case study

## PAALGROUP relies on PRIMERGY servers and ETERNUS storage systems

»We enjoy double benefits with Fujitsu server and storage systems because they are both efficient and powerful. With the heavy demands on our IT infrastructure this goes easy on our budget and makes our virtualization project extremely efficient.«

Ralph Ober, Authorized Representative and Commercial Director, PAAL GmbH (PAALGROUP)



### Global player in the recycling industry

PAAL GmbH started business in 1854 as a publishing house in Osnabrück, Germany. However, only a few decades later entrepreneurial foresight and pioneering spirit geared the company towards waste paper management. Already around 1900 PAAL manufactured balers that could compress mountains of paper into stackable squares; and back then nobody could have predicted how important bale compressing technology would become for the recycling industry one day. In 2002 PAAL's merger with FAES (Spain), DICOM (Great Britain) and COMDEC (France) turns the now multinational group of companies into a global player who concentrates on the design and manufacture of waste recycling machinery. The high performance balers, for instance, are designed to achieve maximum availability while keeping operating costs to a minimum. Today PAALGROUP is Europe's leading manufacturer in this market segment. In the course of their joint history the PAALGROUP companies have delivered more than 30,000 machines to customers from Scandinavia all the way down to South Africa. In Germany PAAL GmbH employs 116 people who generate an annual turnover of approximately 25 million euros. In the meantime the headquarters have been moved to Georgsmarienhütte near Osnabrück.

### Mirrored data center for enhanced security

The central data center of PAAL GmbH stores not only data from customers worldwide, but also construction drawings that provide valuable design and engineering details – hence the company's extremely high data security requirements. PAAL GmbH thus decided to approach Fujitsu's SELECT Partner OSMO-Anlagenbau GmbH & Co. KG, also based in Georgsmarienhütte. From this cooperation resulted a sophisticated concept designed to modernize the company's data center and, for security reasons, to supplement it by a duplicate data center. "The mirror site is located on the PAAL GmbH premises, however, in a separate fire compartment about 200 meters away from the original data center," explains Oliver Bergmann, Consultant at OSMO-Anlagenbau. "Storage synchronization between the two data centers is performed on the basis of ETERNUS storage systems by Fujitsu – this guarantees the highest possible data security."

### The customer

PAALGROUP is Europe's leading manufacturer of high-performance balers for the waste disposing and recycling industry. [www.paalgroup.com](http://www.paalgroup.com)



### The challenge

In order to satisfy the highest security requirements with regard to fail-safety and data security, PAALGROUP was searching for a powerful IT environment for its branch in Germany that would be suitable for data center mirroring.

### The solution

Through the combined solution of Fujitsu servers and storage systems along with VMware virtualization software PAALGROUP attains the highest possible redundancy and fail-safety.

### The benefit

- Fail-safety due to data center mirroring
- More flexibility and higher productivity through virtualization
- Lower energy costs due to efficient server and storage systems

### Products and services

- Servers: 5 x PRIMERGY RX300 S6
- Storage systems: 2 x ETERNUS DX90 with a total of 10.8 TB
- Backup: 1 x ETERNUS LT40
- Network: 4 x Brocade 300 FC-Switch 8 Gb/s
- Virtualization software: VMware vSphere 4 Advanced
- Management software: Fujitsu ServerView Suite
- Backup software: Symantec Backup Exec

### All-round efficient

To help ensure PAAL's specific requirements OSMO has recommended the deployment of the ETERNUS DX90 storage system. "Especially in a fibre channel environment Fujitsu storage systems prove to be highly efficient and failsafe," Oliver Bergmann clarifies. "With the controller-based mirroring of two ETERNUS DX90 systems our customer is provided with the perfect approach to implementing a cost-efficient high-availability solution in two fire compartments." Also in terms of energy savings ETERNUS DX90 is trailblazing, as certain services that are not required during the night "can be switched into the stand-by mode or shut down completely – and that saves a great deal of energy," Bergmann praises the overall functionality.

### Remote maintenance lowers service costs

The Fujitsu PRIMERGY RX300 S6 servers range among the most efficient systems in their power class and thus serve as a stable and reliable basis for PAAL's recently virtualized IT environment. "Thanks to these extremely energy-efficient systems PAAL GmbH is able to cut its energy expenditure by as much as 40 %," Bergmann, who previously carried out a comprehensive TCO analysis with his customer, is pleased to state. "We appreciate the confidence of PAAL GmbH as their full service provider. For one thing PAAL has entrusted us with consulting and financing. And due to the sophisticated server management solution provided by Fujitsu ServerView we are also able to offer the company cost-effective servicing via remote maintenance. This software enables us to react proactively in the event of potential failures, as ServerView issues early warnings in case of suspicious incidents in the data center."

### High-availability environment

On the part of PAAL GmbH Ralph Ober, Authorized Signatory and Commercial Director, has been responsible for the implementation of this

major project: "Now that our IT environment is virtualized via VMware we achieve true added value," Ralph Ober explains. "The positive consolidation effect is plain to see: We manage efficiently with only half as many productive servers as before. Thus the step towards a mirrored data center wasn't that big after all." And, as Ralph Ober is pleased to note, the new IT environment fully satisfies the company's expectations regarding fail-safety:

"We are genuinely satisfied with the powerful Fujitsu PRIMERGY servers. These systems function smoothly in our redundant IT environment. However, we wanted to test what happens in case of a system failure: When the servers in a data center fail to react, the mirrored data center assumes its tasks within a matter of seconds."

### A storage solution that grows along with demand

In terms of data storage PAAL has made sufficient provisions. Each of the two ETERNUS DX90 systems housed in the two data centers is provided with twelve disks with 450 GB each, i.e. with 4.5 TB per system. "However, our storage solution is scalable up to 120 disk drives with a capacity of 2 TB per disk, and the two ETERNUS DX90 systems are designed to grow along with the needs of our business for quite a while," says Ralph Ober. Regarding its backup solution PAAL relies on Fujitsu as well. And this is where the ETERNUS LT40 tape library system with Symantec Backup Exec software comes in. With the ETERNUS LT40 that features cutting-edge LTO technology PAAL has opted for another flexible solution scaled to its needs. Presently PAAL has licensed this system for the base configuration with one tape drive including 12 slots. Based on the growth of the company's data volume the storage capacity of the tape library is easily upgradable by activating an additional tape drive and slots via a software license.

For further information about ETERNUS products by Fujitsu please refer to: [ts.fujitsu.com/ETERNUS](http://ts.fujitsu.com/ETERNUS)



### Partner



[www.osmo-kommunikation.de](http://www.osmo-kommunikation.de)

### Contact

Fujitsu Technology Solutions  
 Customer Interaction Centre  
 Mo. – Fr. 8 am – 6 pm  
 E-Mail: [cic@ts.fujitsu.com](mailto:cic@ts.fujitsu.com)  
 Telephone: +49 (0) 1805-372 100  
 (14 cents/min via German landline,  
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