FUJITSU

Case study
PFI Group benefits from compact PRIMERGY BX400 Blade Server

»Thanks to our Fujitsu Blade Server we benefit from noticeably performance and we have the possibility to scale and centrally manage our server and storage resources. The amount of consolidation is also enormous. We save a lot of space and energy in our data center.«

Stefan Bold, Information Technology Manager, PFI Group

The customer

The PFI group tests, optimizes and certifies with its accredited laboratories, its inter-sectional engineering and its certification offices. www.pfi-germany.de

PFI Group

The challenge

Modernization, consolidation and virtualization of the data center hardware to achieve greater flexibility and fail-safety.

The solution

Fujitsu PRIMERGY BX400 with Windows Server 2008 as the operating system, an ETERNUS DX80 storage system and an ETERNUS LT40 Tape Library as the backup system plus VMware vSphere as the virtualization solution.

PFI: Researching, testing and certifying

After having been founded to serve the needs of the shoe industry, Prüf- und Forschungsinstitut Pirmasens e.V. (PFI) has long since established itself in many other industries. It focuses on testing technology and product analysis based on analytical chemistry and microbiological examinations. Since its foundation in 1956 the internationally renowned service and research center has had its headquarters in Pirmasens (Germany) and today the PFI Group runs institutes in Turkey, China, Hong Kong and Ethiopia. PFI not only conducts examinations, it also awards the CE, GS and SG labels to various groups of products and it certifies the quality and environmental management of companies. Furthermore the engineering department at PFI develops testing machines including software and steering technology.

Virtualization using the Blade Server

Since highly sensitive and confidential research and testing data are created at PFI on a daily basis the IT faces tough demands. The institute wanted to take a giant leap towards the future in terms of data protection and availability and was looking for a hardware base for a virtualization project of the PFI data center in Pirmasens. PFI turned to IT-HAUS GmbH in Föhren, a licensed Fujitsu Channel Partner. „We developed a convincing concept," explains Dennis Jacobi, Sales Key Account HW/SW at IT-HAUS GmbH. „We were able to replace the existing eight servers at PFI with one Fujitsu PRIMERGY BX400 Blade Server that we had fitted with three Server-Blades. That is good consolidation indeed." This means major electricity savings as only one server needs to be powered and not eight, as was the case previously. „The institute also has less waste heat which results in reduced cooling needs," Dennis Jacobi adds. „A Blade Server's compactness quickly pays off." Given the virtualization using VMware vSphere the IT environment's availability is also increased enormously.

The benefit

- Top space efficiency due to ultra compact and modular design
- Easy and centralized monitoring of server, storage and network resources
- High availability and flexibility
- High scalability and state-of-the-art technology
- Lower energy costs

Products and services

- Blade Server: 1 x PRIMERGY BX400 S1with 3 x PRIMERGY BX920 S2 Server Blades
- Storage system: 1 x ETERNUS DX80 FC
- Backup: 1 x ETERNUS LT40
- Operating system: Windows Server 2008 R2 Datacenter
- Management software: Fujitsu ServerView Suite
- Maintenance: Service Pack offering a 4h response time

More simple and compact IT thanks to Blade Technology

Owing to the PRIMERGY BX400 Blade Server, PFI can now extend processing power flexibly on a relatively small floor space while minimizing its energy consumption. High bandwidth is another asset as the Blade Server by Fujitsu uses, amongst others, 8Gb FC Technology. PRIMERGY BX400 offers a compact system that combines server, storage and network as a pre-integrated unit. Stefan Bold, Information Technology Manager at PFI, is very satisfied with this Blade system that was specially designed for the needs of medium-sized companies:

„Our IT has become noticeably faster. Due to this homogenous solution, we are now able to monitor everything centrally. Managing the system has become much easier. In addition it requires less space and fewer cables. Our data center looks great now."

The secret of PRIMERGY BX400 lies in a special edition of the server management solution ServerView that is included. It links the element managers for the Server Blades, the integrated network switches and the virtual storage unit thus allowing an integral look at the entire infrastructure. Everything from user management and IP address setup to storage integration can be combined using drag&drop. This clearly simplifies installation and administration.

Resource extension made easy

„Exchanging hardware and extending it is made a lot easier given the combination of Blade Technology and virtualization," Stefan Bold says. „We have the possibility to add on another five Server Blades to the existing three – and we can do so while the system is running. The virtual machines can move from one Blade to another – without any problems whatsoever." This is when the improved energy management comes into its own as this PRIMERGY Blade Server allows for individual operation of the power input to the individual blades as well as to the main frame thus making the whole system even more cost efficient and flexible.

Data security with SAN storage

By the way, the PRIMERGY BX400 Storage Blades would have also enabled the use of an integrated virtual storage appliance. However, PFI has chosen a greater, external storage solution: ETERNUS DX80 by Fujitsu, which is linked to the blade system via fibre channel. It is home to a comprehensive Oracle database, office and terminal server applications as well as the laboratory information and management system (LIMS) where PFI scientists can enter and administer their measuring and research results. „Just for performance reasons we wanted to move from a pure disc solution to a real storage system," explains Stefan Bold. „The increased data security and the scalability effect are added values."

ETERNUS grows with its storage tasks

ETERNUS DX80 by Fujitsu offers both. PFI initially equipped this storage system with six hard drives at 1 terabyte each and an additional six hard drives at 300 gigabyte each, in other words: 7.8 terabyte all in all. A total of 120 hard drives with a total capacity of 240 terabyte are possible. „What has convinced us is the possibility of an 8Gb fibre channel connection and the great price performance ratio," Bold states who also trusts in Fujitsu when it comes to his backup strategy. „Initially we create a backup-to-disk on a disk storage and then a backup-to-tape," explains Stefan Bold. To do the latter PFI has acquired an ETERNUS LT40 Tape Library, which is also connected via fibre channel and can be expanded to up to 24 tapes. „We have finally left the old and insecure hardware behind," the PFI IT-manager sums up. „These days I sleep very safely and soundly."

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