ENBW AG | INNOVATIONS

Thanks to NetApp and Fujitsu, EnBW has a next-generation data center. Flash technology and storage on-demand ensure high performance and flexibility.

All-Flash and Storage On-Demand for EnBW: Fujitsu and NetApp Take IT Energy Management Systems to the Next Level

Energy management processes place high demands on the underlying storage environment. As part of its IT realignment, EnBW implemented a solution that meets enormous demands in terms of performance, scalability and flexibility, and puts the company in a strong position for the future.

Another NetApp
solution delivered by:

FUJITSU

Flexible storage with on-demand model

3 become 1: NetApp MetroCluster replaces three individual systems

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> "We have a genuine unified system that meets our requirements in terms of performance, scalability, data management and operating costs. We are also reducing our administrative and maintenance costs by using NetApp's flash storage components. We were able to save costs and, at the same time, significantly improve performance. What more could anyone want?"

Frank-Michael Werner, Team Leader, Server and Storage, at EnBW Energie Baden-Württemberg AG

CUSTOMER PROFILE

With 5.5 million customers, approximately 20,000 employees, and annual sales of over EUR 19 billion in 2016, EnBW Energie Baden-Württemberg AG is one of the biggest energy utility companies in Germany. As an integrated utility, the company covers all parts of the value chain for electrical, gas, energy and environmental services – from generation to renewable energy and network operation to trade and distribution.

EnBW operates a dual-vendor strategy for its IT infrastructure. The company implemented its first file share system for internal data management in 1999, with the support of partners NetApp and Fujitsu. Since then, the NetApp/Fujitsu share of the Group's entire storage landscape has grown steadily: NetApp now provides approximately 70 % of the current storage systems.

THE CHALLENGE
Reinvest with Added Value

The reinvestment cycle in a storage environment is 48 months – IT managers then look around for innovative systems and recalculate the costs. The concept: Instead of investing in costly maintenance, the existing landscape is replaced by new technologies, which meet the demanding requirements of energy management systems for IOPS.

"EnBW's aim was to reduce IT operating costs through modernization. At the same time, the Group sought to improve performance – with minimum investment costs," explains Gordon Bievor, Account Manager at Fujitsu Technology Solutions. "That was our starting point for an OPEX financing concept." EnBW had previously used SAS hard drives, which only had a small share of flash cache. The requirements specification therefore prioritized a lot of IOPS. The

new systems had to be high performance and reliable; they also needed to be optimized in terms of storage capacity.

THE SOLUTION
Three Become One: Consolidation and Flash

Thanks to a close and collaborative partnership, Fujitsu and NetApp won the contract to upgrade the energy company's IT environment – even though they were competing with an interesting concept submitted by another vendor. The key to their success was a finance plan, which had been drafted jointly with the customer and included a monthly on-demand usage fee. A particularly crucial component of the plan was a flexible buffer rate, whose usage is reviewed in a monthly report. The company constantly has 70 % data storage capacity available to it. Depending on performance, an additional 30 % can be shared and, if required,

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accessed in return for a temporary increase in the lease price. "Of course, we generally try to stay within the available capacity range," says Frank-Michael Werner, Team Leader, Server and Storage at EnBW Energie Baden-Württemberg AG. "But if a bottleneck occurs, we can easily commission an upgrade of the systems from our service partner, Fujitsu, and increase our storage volume." Switching to an on-demand system reduced costs considerably.

Fujitsu's technical and business solution concept and Financial Services portfolio impressed EnBW, who were presented with the solution due to good sales contacts. "We are delighted that we were able to play an important part in helping to shape an innovative IT environment for our customer," says Stephan Menzel, Regional Manager, Financial Services at Fujitsu. The previous IT landscape was consolidated: the energy utility combined three existing MetroClusters into one system in its storage environment. To do this, it used flash technology, which is now a more cost-effective option.

The implementation was accompanied by migration to a new operating system. ONTAP unifies the SAP data management process and makes it possible to perform future upgrades or software updates of the storage landscape without requiring any downtime. The snapshot technology that was successfully deployed in the past

was used once again. The IT department can now enjoy huge savings in terms of time and capacity when building SAP test systems for the Linux systems via a "golden copy". By way of comparison: since the EnBW databases in the SAP environment can be more than 20 terabytes in size, it previously took several days to build replicas of individual databases using conventional means. Thanks to snapshot and NetApp cloning technology, the process can now be completed within one working day – including configuration.

EnBW independently transitioned from 7-Mode systems to ONTAP. Using NetApp's 7MTT migration tool, the data was transferred seamlessly and with minimal database downtime.

THE BENEFITS
High-Performance, Scalable, Efficient

With NetApp all-flash, EnBW benefits from enhanced performance, which fully meets the needs for IOPS. This was confirmed by the first batch runs. The deduplication and compression features included in the flash system lead to an enhanced performance and increased storage system capacity for the SAP databases. This achieves a 2:1 efficiency factor. Compared to conventional solutions, it means that the provided, reserved capacity can be used as efficiently as if there were double the capacity. In summary, EnBW benefits from a significant

KEY HIGHLIGHTS

Industry:
Energy management

Challenge:
To migrate the existing storage system to a scalable and cost-effective flash solution to meet the high I/O requirements and backup processes of energy management systems.

Solution:
NetApp All-Flash improved the systems' performance and capacity. With deduplication and inline compression, the three systems were consolidated into one MetroCluster. Fujitsu's on-demand model also offers scalability and flexible expansion options.

Benefits:
- Savings through deduplication and compression
- Increased flexibility through storage on-demand
- Predictable costs
- Guaranteed performance, also in a SAP environment
- Greater scalability
- Integrated data protection and backup-to-disk
- Fast and efficient setup of T&Q systems

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acceleration of all operating processes relating to the operation of SAP infrastructures. The energy utility is now also more agile in terms of scalability; the flexibility of the storage on-demand option means that the systems can be expanded if necessary. The company no longer incurs high update and maintenance costs as with the old systems. What's more, compared to rotating hard drives, the solid-state drives have a significantly longer life span – an additional economic benefit. The energy utility also keeps operating costs low, as maintenance costs for the first four years are included in the initial costs of the new flash systems. At the same time – as a result of consolidation – the utility's own HR costs also fell: IT administrators can now focus more of their attention on the tasks that require their particular expertise.

"We have seen a significant decline in our maintenance costs and time," says Werner. "The new solution fits perfectly into our IT infrastructure and meets all our expectations. Consolidating the three MetroClusters into one large cluster means that we now have to manage only one system. We are also saving resources that we can use elsewhere."

SOLUTION COMPONENTS

NETAPP PRODUCTS

NetApp AFF8080

MetroCluster™

ONTAP

Snapshot / SnapRestore

SnapMirror / SnapVault

FlexClone

Thin Provisioning, Deduplication, Compression

All-Flash

PROTOCOLS

FC

NFS

ENVIRONMENT

SUSE Linux Enterprise

VMware ESX

SAP ERP / IS-U / CRM

LEARN MORE

http://www.netapp.com/us/products/storage-systems/all-flash-array/index.aspx

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