“We operate in a dynamic field within a dynamic environment. But with Hitachi Adaptable Modular Storage and Dynamic Provisioning we are equipped to tackle a whole range of scenarios that we could face in the future.”

Michael Schütz
Head of IT
Vereinigte Stadtwerke GmbH

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Hitachi Data Systems
German Energy Service Provider Boosts Storage Capacity, Performance and Reliability with Hitachi Modular Storage

Among its many responsibilities, Vereinigte Stadtwerke GmbH, based in Ratzeburg, Germany, is the energy service provider for the towns of Bad Oldesloe, Ratzeburg and Mölln. It uses SAP to manage customer data and operating data. When the company launched two new SAP projects, one thing became clear: The current storage system did not offer sufficient capacity and performance to make data available in a quick and reliable way. For this reason, Vereinigte Stadtwerke purchased a Hitachi Adaptable Modular Storage system from Hitachi Data Systems.

The renewable energy market is undergoing a period of change, and it is also causing a stir further afield. In addition, the German Energy Industry Act recently brought about changes for the IT administrators working for energy suppliers and public services: The legislation stipulated that customer sales data must be maintained separately from customer data relating to power supply operation. This edict required that SAP systems be partitioned by the end of 2010.

"Put simply, this meant that our database storage capacity would be doubled," explains Head of IT at Vereinigte Stadtwerke, Michael Schütz. "That’s why we have adjusted our infrastructure accordingly, so that we can meet these requirements." For Vereinigte Stadtwerke, this type of multitenancy meant that they must employ, among other solutions, a storage system that offers improved performance as well as increased capacity.

Hitachi Storage and Dynamic Provisioning Composed the Key Solution

Vereinigte Stadtwerke eventually opted for the Hitachi Adaptable Modular Storage (AMS) 2300 system from Hitachi Data Systems. "The system set itself apart from rival storage solutions," explains Dr. Stefan Fries, from Hitachi TrueNorth™ Partner Comparex. "As its controller architecture works in active-active mode, the AMS system offers a high level of performance as well as upscaling potential. Naturally, availability is also a key concern for energy suppliers, and the dual design does not disappoint."

As the AMS system offers extensive functionality, Vereinigte Stadtwerke did not need to introduce a storage virtualization concept. The company already had a long history of storage virtualization concepts, as Comparex implemented one several years ago. "At that time, this approach was the perfect solution," says Schütz. "But when we switched over to a new storage platform, it was essential for us to develop a new storage concept for our data processing center. In general, storage virtualization is a great thing, but in our case, the capabilities of the AMS system were more than sufficient, particularly dynamic provisioning."

Using dynamic storage provisioning, the system can be programmed to believe that its current capacity is higher than it actually is. This means administrators do not have to plan for large contingency reserves during the acquisition phase, and the system can be upcaled to meet the increasing capacity requirements in an agile way.

Along with the aforementioned increase in performance and scalability, another key requirement was to provide sufficient storage capacity for all the connected platforms. Vereinigte Stadtwerke particularly

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noticed the increase in speed when backing up data. Scenario testing and measuring exercises have provided evidence of significant improvements of at least 90%. For example, the old architecture required 4 to 4.5 hours to back up .5TB of data; the same process now takes only 24 minutes. This frees up space during the backup process, which means Vereinigte Stadtwerke can continue to use the current system and will not need to invest in a replacement for several years.

Vereinigte Stadtwerke staff were also especially pleased that the AMS system performs well when it comes to energy consumption.

**Just As It Always Was, Only Better**

With the exception of the storage platform, the design of the data processing center was largely retained. This not only helped to keep costs down, but also ensured that the data could be prepared and migrated with very little effort. The changeover from the old to the new solution was completed in just two weeks, including all planning, inspection and reporting. “The data migration went extremely smoothly, and at no point was business impacted, even when the capacity was partitioned,” confirms Schütz. Hitachi Data Systems and Comparex worked in close cooperation during the data migration, and in the design, detailed planning, installation and implementation of the new system training and dismantling the old storage system.

Nevertheless, Vereinigte Stadtwerke did experience one malfunction: “Even public services sometimes have power failures,” says Schütz. “Faults like these normally occur outside of our organization and are completely out of our hands. The AMS system is actually running perfectly, though it does need electricity.” At the time of the power failure, the AMS system was not yet connected to the uninterrupted power supply (UPS), and the IT team naturally feared the worst. But, on the contrary, the AMS system was the first system to be fully operational and free of errors after the 1.5 hour power failure was over. The system has since been connected to the UPS, as Schütz and his team wanted to leave nothing to chance.

**More Data, More Disks: No Problem**

The Vereinigte Stadtwerke planning process for its IT requirements has to be as accurate as possible, so that they can budget and plan for future needs as well. The current AMS expansion stage is set to last until early 2011. Additional storage space can be retrofitted at any time without causing any interruptions to ongoing operations, and administrative costs are kept under strict control. The entire process is based on the integration of Hitachi Dynamic Provisioning software from Hitachi Data Systems. Thanks to its expanded rack capacity, the storage platform will cover the needs of Vereinigte Stadtwerke for some time to come.

“We operate in a dynamic field within a dynamic environment. But with Hitachi AMS and Dynamic Provisioning we are equipped to tackle a whole range of scenarios that we could face in the future,” says Schütz.