Trinkwasserversorgung Magdeburg GmbH

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Global Leader in Software-Defined Storage.

TWM
Case Study

TWM Consolidates, Streamlines, and Scales Up Its Storage with Cost-Effective Solutions from Nexenta

Magdeburg, Germany
www.wasser-twm.de
Government / Utilities

Summary

Challenge: Needed greater protection for growing amounts of data, but bids from legacy storage vendors out of price range

Solution: NexentaStor High Availability (HA) Cluster

Platform: Dell, VMware, Supermicro, Nexenta

Use Case: High Performance and Availability

Benefits:

- Improved performance
- HA provided protection for disaster recovery
- Open-ended scalability and enormous cost savings

Business Overview

Founded in 1994, regional water supplier Trinkwasserversorgung Magdeburg GmbH (TWM) is responsible for the purchase, production, processing, and transport of drinking water from deep aquifers to public utilities and associations, municipal utilities, and regional companies.

TWM delivers water to six counties, serving more than 800,000 residents, including 338 towns and communities, businesses, and farms spread across 5,700 square kilometers.

TWM ensures high availability and highly resilient water acquisition and delivery operations.

With customer and product data files expanding exponentially, TWM needed to upgrade its data storage capabilities to ensure future scalability and data security – within budget.

> *An integrator offered a legacy storage-based solution, which cost more than €100,000. However, the Nexenta solution implemented by Zstor met budget parameters and offered all required features.*

Rüdiger Meyer
IT Manager
TWM

Challenges

Consolidating physical servers into VMware virtual machines saved money and resources. However, this project drove consolidation into a central data repository that increased the need for high availability and redundancy. TWM's existing backup solutions could not serve data and offer site-to-site replication.

Applications and corresponding data needed to be protected in sync, and given TWM's high-volume operations, performance was critical. Virtualization approaches alone could not provide the complete solution, but legacy clustering bids exceeded budget for purchase and implementation. Plus, TWM needed to ensure that disaster recovery processes did not rely on having highly trained IT staff available.

System Configuration

- NexentaStor High Availability Cluster
- Supermicro (Model No.) cluster nodes SC213A
- Supermicro SC216E26 JBOD
- Four Aggregated Gigabit Network Interfaces
- NFS shares to VMware ESX Hosts
- Oracle DB on NexentaStor

Solution and Benefits

Solution

TWM chose Zstor, an experienced Nexenta Partner in Germany, to implement a NexentaStor solution. TWM used Dell servers for VMware. Two Zstor cluster nodes and two Zstor disk arrays form the storage configuration. The data is stored on energy-efficient and compact 2.5" storage drives. Nexenta integrates with VMware to provide management of the VM environment, with features such as unlimited VM cloning and the ability to replicate VMs to ensure that TWM maximized its virtualization investment.

The system uses a mirrored ZFS RAID Z design (a type of RAID-1 redundancy that works at the ZFS pool level and affects all created file systems in the pool) to maximize performance for end users.

Future expansion with SSD drives also is built into the architecture. Storage is accessed via the Common Internet File System (CIFS) and Network Files System (NFS) protocols.

The NexentaStor implementation is highly available, offering both automatic and manual disaster recovery. Even non-IT personnel can use the user-friendly Nexenta GUI to execute recovery.

Benefits

NexentaStor improved performance for TWM's core operations: laboratory processes, testing, and reporting.

Nexenta's open-ended scalability helped TWM maximize its return on investment in virtualization with features such as unlimited VM cloning and VM replication.

NexentaStor's High Availability features provide protection so that hardware failures don't affect operations. These Disaster Recovery features give TWM the ability to recover from a variety of disasters, without adding dedicated IT staff members.

Overall, the Nexenta solution saved TWM both time and money. It allowed the company to focus on its core functionalities, rather than worry about personnel, security, and future growth. "An integrator offered a legacy storage-based solution, which cost more than €100,000," says Rüdiger Meyer, IT manager at TWM. "However, the Nexenta solution implemented by Zstor met budget parameters and offered all required features."

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