



Trinkwasserversorgung Magdeburg (TWM)

Leverages NexentaStor™ to create a High Availability Production System and Robust Disaster Recovery in a virtualized environment

Business Impact

- ❖ Performance improved for TWM's core operations – laboratory processes, testing, and reporting.
- ❖ Maximized benefits of server Virtual Machines through Nexenta's VM management and snapshot capabilities.
- ❖ High Availability features of the solution ensures that hardware failures will not impact operations. Disaster Recovery features provide confidence of ability to recover from a variety of disasters.
- ❖ Disaster recovery can be made even without having an IT staff on hand.

Business Overview

Founded in 1994, 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 companies. Serving over 800,000 residents in 338 towns and communities, businesses, and farms spread over 5,700 square kilometers, TWM must ensure high availability and highly resilient operations.

Challenges

The availability and disaster recovery challenges faced by TWM include:

- 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.
- Both applications and corresponding data need to be protected in synch. So, virtualization approaches alone could not provide a complete solution.
- Legacy clustering bids exceeded budget for purchase and implementation.
- Due to TWM's high-volume operations, performance was critical.
- Existing backup solutions could not both serve data and offer site to site replication.
- For disaster recovery, TWM specifies that the processes must not rely on having a highly trained IT staff on hand.



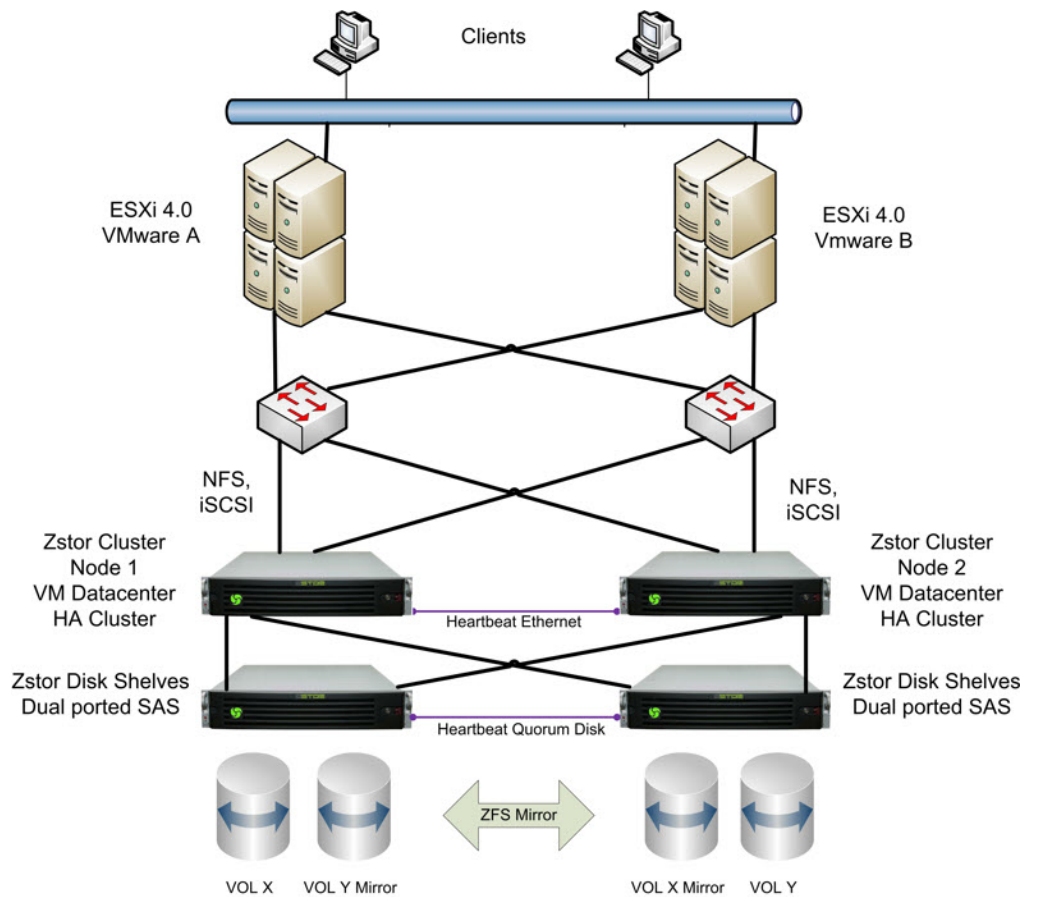
Solution Overview

Zstor (www.zstor.de), an experienced Nexenta Partner in Germany, responded to TWM's needs with a NexentaStor solution (depicted on the next page). TWM uses 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. To maximize performance for end users, a mirrored ZFS RAID Z design and a future expansion with SSD drives are also built into the architecture. Storage is accessed via both CIFS and NFS.

NexentaStor provides core customer needs such as unlimited snapshots for backup and for replication, streamlined administration, and more. The following Nexenta add-ons were also implemented:

- High Availability (HA) Plugin: The HA Plugin enables a NexentaStor implementation to be highly available. Recovery in the event of a disaster can be either automatic or manual. With the user-friendly Graphical User Interface (GUI), recovery can also be executed by non-IT personnel.
- Virtual Machine Datacenter (VMDC): VMDC provides integration with VMware and management of the overall VM environment. With features such as unlimited VM cloning and the ability to replicate VM's, VMDC ensures that TWM maximizes their return from investment in virtualization.

"An integrator offered a legacy storage-based solution, which was > € 100 K. However, the Nexenta solution implemented by Zstor met budget and offered all requested features."
 IT Manager, TWM



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About Nexenta

Founded in 2005 and privately held, Nexenta Systems, Inc., has developed NexentaStor™, the leading OpenStorage enterprise class storage solution and sponsors NexentaCore, an operating system that combines the high performance and reliability of OpenSolaris with the ease of use and breadth of applications of Linux. Both solutions leverage the revolutionary file system ZFS.