

Challenge

Upgrade storage infrastructure, disaster recovery, performance, cost.

Benefits

Two connected data centers provide Disaster Recovery. Improved performance – now and into the future.

Solution

NexentaStor with Auto-Sync

BUSINESS OVERVIEW

The Municipality of Rheden (Gemeente Rheden) in the Netherlands has a history stretching back to 1573 when the sheriff offices at Velp and Rheden were merged. Today, the municipality has approximately 400 employees serving a population of about 44,000 people.

The Municipality's IT department is responsible for providing services for the people of Rheden and the application infrastructure for its employees. The infrastructure is heavily virtualized with as many as 90 virtualized servers using VMware ESXi. It runs a significant number of environments, including Zarafa Groupware, SAP / Netweaver, Oracle, MySQL, Microsoft SQL, and many other Windows and Linux servers.

CHALLENGES

The Municipality's HP EVA 4000 storage environment in its main office was suffering from performance and capacity problems. A decision was taken to replace the EVA environment and introduce a second storage infrastructure as a disaster recovery site to sync with the storage in the main office. The second site also would be used to provide a test environment and a copy of the production environment.

The Municipality was under pressure to implement the new solution before any problems occurred on the old storage environment. With the help of Dutch IT reseller, NL.com, it identified a number of requirements for the replacement storage solution, including high-speed connections (10G iSCSI) and the ability to synchronise to a second site. The Municipality also required enough performance and capacity for the next five years, a minimum IOPS of 3500, a minimum throughput of 350MB for applications, and a base minimum of 20 connected physical servers in each site. In addition, Rheden was keen to include other features for future use, such as data deduplication, CIFS, and NFS access.

SOLUTION OVERVIEW

During the tender process, it became clear that every feature specified was provided, as standard, in Nexenta's software, while the price was significantly lower than proprietary alternatives. Another important consideration was the ability to transfer licences because the Municipality is part of an ongoing transition that, in the future, will see five municipalities merging into one. Rheden wanted to be able to use the licences in the new organization.

System Configuration

Two storage environments with:

- NexentaStor with auto-Sync
- 73GB SAS drives
- Two Intel 160GB SSDs
- Two STEC ZeusRAM 8GB SSDs
- 6GB SAS Interface
- 24 LSI 6GB SATA/SAS JBODs
- VMware ESXi

The two data centers are connected by 10G fibre.

"During the tender, almost every feature we asked for was standard in the Nexenta software. And the price was much lower than those of the proprietary vendor solutions. Nexenta's solution is easy to manage and includes important requirements, such as support for ZFS, deduplication, NFS, and CIFS. If we combine the benefits, key features, and cost savings, we know we have chosen a solution that is scalable and future proof."

Marcel Slotboom
Senior System Engineer
Municipality of Rheden

Once it had decided on Nexenta, it worked with channel reseller NL.com to deploy the solution. The two storage environments include 73GB SAS drives, two Intel 160GB SSDs for read/cache and two STEC ZeusRAM 8GB SSDs with a 6GB SAS interface for write/cache. There are 24 LSI 6GB SATA/SAS JBODs. Both data centres are connected by 10G fibre. The data centre is replicated every night using Nexenta's Auto-Sync. Daily, weekly, and monthly schedules back up the replicated logical disks (LUNs) to tape. Snapshots created by Auto-Sync are used for restores, while the tape is used for disaster recovery or for data that is no longer available in the snapshots.

According to senior system/network engineer and project manager, Marcel Slotboom, deploying NexentaStor has saved Rheden municipality around €100,000 compared to other vendors. The features included as standard in the product, such as ZFS, support for deduplication, NFS, and CIFS also are significant benefits for current and future use. Easy management of the running environment, and the fact there are almost no limitations in ZFS, are important features for the Municipality.

BUSINESS BENEFITS

By deploying NexentaStor, Rheden Municipality was able to replace its existing storage solution and implement a second disaster recovery site while adding performance and capacity for the next five years. The open source roots of NexentaStor will make it possible to transfer licenses when the Municipality is merged with four other regions into a single organization in the future.

NexentaStor features such as deduplication, unlimited snapshots, thin provisioning, and hybrid storage pooling are designed to help customers like Rheden Municipality to implement cost-effective, high performance storage. In addition, NexentaStor supports a wide range of protocols for unified storage including CIFS, NFS, rsync, iSCSI, Fibre Channel, and AoE.

NexentaStor performs particularly well behind VMware's ESXi server. It can share content to ESXi servers via iSCSI or NFS and provide access to other applications while delivering a full suite of back-up and replication services, such as limitless snapshots, Boolean search, and retrieval of snapshots.

Overall, the Municipality saved more than €100,000 compared to proprietary systems from other vendors because NexentaStor includes standard features that the municipality needs now—along with functionalities intended for future use when the regional merge occurs.

As NexentaStor is based on open source technology, Rheden was not locked in to buying more expensive products from a particular vendor or paying unnecessary mark-ups for standard features.