**Challenge**
The City of Veenendaal’s existing storage system was outdated and suffered from poor performance and regular disk failure. It wanted to find an All-Flash replacement that would offer thin provisioning, compression, deduplication and SCSI Page 83 functionality within a tight budget.

**Solution**
The city asked three local resellers to present a solution that would meet these requirements. Two were far beyond its means, however Scholten Awater proposed an affordable All-Flash solution based on FUJITSU Storage ETERNUS AF250. This now supports 400 virtual servers and over 1,000 users.

**Benefit**
- Application performance has improved significantly, making users more productive
- Scalable storage capacity can be extended to neighboring municipalities, lowering the TCO
- FUJITSU management application provides instant, total visibility of performance and workloads across the estate
- Disaster recovery via synchronous replication provides peace of mind

The City of Veenendaal replaces its aging storage system with two FUJITSU Storage ETERNUS AF250 devices, delivering improved performance, disaster recovery and scalability.

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**At a glance**
- **Country:** Netherlands
- **Industry:** Local Government
- **Website:** veenendaal.nl

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“The new Fujitsu ETERNUS All-Flash storage cluster has transformed our application and database performance and allowed us to extend that performance to multiple partners within the valley.”

J. Visser
IT Manager
City of Veenendaal
Customer
Veenendaal is a municipality and a city in the central Netherlands province of Utrecht. It is the only population center within its administrative borders and covers an area of 19.72 km² with a population of 64,629 in 2017. The original village was founded in the 16th century as a peat colony from which it got its name. In 1997, Veenendaal was elected the greenest city in Europe and, in 2004, of the Netherlands.

Products and Services
- 2 x FUJITSU Storage ETERNUS AF250

Replacing an aging storage system
As a public-sector body, Veenendaal operates within strict budgetary limits, particularly when it comes to technology. When its aging storage system reached capacity and began to suffer from poor performance, it needed to find an affordable replacement.

“Our old storage platform had multiple, ongoing disk errors and application performance had been badly affected, which was to be expected from a five-year-old solution,” explains J. Visser, IT Manager, City of Veenendaal. “We wanted to replace it with an All-Flash storage platform that could provide thin provisioning, deduplication, compression and SCSI Page B3 compatibility without breaking the bank.”

SCSI Page B3 is a vital client-server communications protocol that covers third-party Copy Out commands and is not usually integrated into many disk storage systems. Moreover, All-Flash storage is typically seen as too expensive in relation to Veenendaal’s budget. The municipality set out to overcome these challenges by inviting three local resellers to come up with a solution.

“All-Flash was important to us from a performance and scalability perspective, however two of the proposals we received were simply beyond our means,” adds Visser. “Thankfully, local IT reseller Scholten Awater came back to us with a solution based on a Fujitsu ETERNUS All-Flash cluster that cost the same as our previous system. It also included the outlined functionality and met all our requirements.”

Following this successful proposal, Veenendaal moved quickly to install and migrate to the Fujitsu platform.

A pain-free migration
The new storage platform consists of two FUJITSU Storage ETERNUS AF250 in a cluster with synchronous replication to enable business continuity. It delivers 42TB of raw SSD capacity with performance of 118k IOPS and latency of 0.6ms.

“Fujitsu pre-configured the ETERNUS systems and we then carried out the migration in-house. Using VMware and our fiber channel network made the process simple,” continues Visser. “Over the course of four weekends we were able to migrate all the existing data without disrupting day-to-day operations.”

This storage solution now provides the backbone for 400 virtual servers supporting everything from citizen services to Oracle databases to core business functions such as finance and HR. In addition, Veenendaal has been able to extend its storage capacity to five other local municipalities, bringing impressive economies of scale.

“This new solution supports over 1,000 users who in turn can deliver critical services, including passport applications and ID card registration,” says Visser. “It was easy to deploy and has made a positive impact from day one.”

Speed, reliability and visibility
This positive impact has been mostly felt in terms of performance. There had previously been regular complaints regarding application performance, whereas users are now no longer frustrated – and if there are any issues, the IT team know that it must be due to the application itself and not the storage solution.

“The performance is extremely fast and the management application provides instant visibility of IOPS and workload across the estate. Previously we needed two management servers, which would take forever to give us information, making incidents difficult to resolve,” comments Visser. “In addition, there has been only a single error since deployment. We did have one instance of power loss last year and the storage systems failover was activated without any corruption or data loss.”

The Fujitsu ETERNUS storage cluster also delivers the thin provisioning, compression, deduplication and SCSI Page B3 compliance required straight out of the box. This meant that Visser and his team found it easy to integrate.

“If you have a cluster failover set-up, the fiber channel ID must be the same, which is where the SCSI identifier comes into play,” remarks Visser. “Most disk storage vendors simply cannot provide cluster storage failover with same fiber channel ID, however, with Fujitsu it comes as standard.”

The inherent scalability of the Fujitsu solution is also crucial in enabling Veenendaal to extend storage services to other municipalities within what is known as the Food Valley region, giving it an enhanced return on its investment. The fact that the license is not capacity-based means the cost for expansion and growth is minimal. Fujitsu also provides guaranteed support in the case of any issues arising.

“I can email Fujitsu and know there will be response within our SLA, which gives us peace of mind. At the same time, we have the security of the disaster recovery capability in the event of failure,” concludes Visser. “The new Fujitsu ETERNUS All-Flash storage cluster has transformed our application and database performance and allowed us to extend that performance to multiple partners within the valley.”

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