

# NetNordic Sweden Case Study

## NetNordic Avoids Vendor Lock-In and Reduces Cost with Nexenta

NetNordic, Stockholm, Sweden

[www.netnordic.se](http://www.netnordic.se)

Systems integration and cloud services



### Summary

**Challenge:** Unreliable legacy storage solution was causing ESX to freeze

**Platform:** NexentaStor

**Use Case:** Centralised storage repository for NetNordic and its customer base

**Benefits:**

- Reduced write latency by 3 milliseconds
- Consistent performance and uptime
- Efficiency benefits have been passed on to customers

### Business Overview

NetNordic is an independent systems integrator, specialising in networking solutions and cloud-based services, with operations around the Nordics. Founded in 2001, the company is comprised of two main departments – Network Solutions and Enterprise Communications. Between these business entities, NetNordic boasts more than 80 operators and 300 enterprise and government customers throughout Norway, Sweden, Denmark and Finland. The company has 125 employees and a turnover of around 373m Swedish Kronor.

NetNordic's Network Solutions business provides solutions for fibre and copper broadband networks to enterprises and network providers. It provides network integration services, such as managing infrastructure and onsite support for hardware and software products; as well as managing customers' wider IT infrastructure. NetNordic Enterprise Communication is an advanced communications solutions integrator that targets enterprises of all sizes. A fully manned Network Operation Centre (NOC) is operational 24/7, 365 days a year, and provides a comprehensive monitoring service where all issues and alarms in a customer's network can be analysed and prioritised. When necessary, the NOC performs troubleshooting and escalates issues to the appropriate department to manage and resolve. NetNordic also has an internal IT team to manage and monitor its own infrastructure. The company works with a number of leading hardware and software providers in order to deliver high quality, cutting-edge services to its customers.

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Sander Petersson

Operations Engineer, NetNordic

## Challenges

NetNordic's business was growing rapidly, and with an increasing number of customers found that its storage solution was struggling. The solution, which was NetNordic's own, began to suffer from high latency and low availability. In fact, the latency would on occasion spike so high that it made the ESX freeze – a huge performance flaw that was impacting the level of service provided to customers. The solution had been in place for three years but, as it came close to reaching its capacity, the low performance issues become more frequent. It was no longer cost-effective to operate and NetNordic made the decision to review the market. While the team was originally looking at hardware solutions, it opted for Software-Defined Storage (SDS) as it offered greater value for money and would provide the scalability needed for a number of years.

## System Configuration

- Capacity: 40TB Raw
- Storage Solution: NexentaStor High Availability (HA) cluster
- Server Brand Name and Type: 2x Dell PowerEdge R730 servers
- Server Memory: 192GB RAM per node
- JBOD: Two Dell PowerVault MD1400
- HDD/SSD: 20x 2TB Nearline SAS HDD, 2x 8GB ZeusRAM, 2x 200 GBs SSD

## Solution and Benefits

### Solution

When NetNordic first conducted a review of the storage market it considered a number of hardware providers, including Huawei, Alcatel, IBM and HP. It quickly became apparent that an SDS solution would offer more at a lower cost and the company opted to install NexentaStor on two Dell PowerEdge R730 servers configured in an Active-Passive High Availability (HA) cluster.

NexentaStor is now the organisation's centralised storage repository for its own business, as well as its customers. NetNordic is trying to use as many features as possible in order to get the most out of the solution. It currently uses the snapshot function for backups, and is in the process of looking to buy another Nexenta system to replicate the snapshots to another site. It's also been highly impressed by Nexenta's compression. While its previous solution had very little available space, NexentaStor offered an extra 1TB of data with compression turned on.

"This was very significant to us," said Sander Petersson, operations engineer at NetNordic. "About 97 percent of the virtual machines (VMs) that we store on Nexenta are Linux VMs which don't contain anything other than just basic text files. So this means that the built in compression in ZFS saved us about one TB of used data. Thinking of the compression, it's excellent and when we were looking through the figures and graphs we will not be needing to buy more storage in quite some time." The company has also been impressed with NexentaStor's HA integration. NetNordic's NOC monitors a lot of businesses' infrastructure and it is imperative that it does not go down.

The monitoring system is performance heavy, but the combination of NexentaStor and HA can cope with the workload, while providing good value for money.

While NexentaStor was chosen for its feature-rich capabilities and cost-effectiveness, Dell was selected as it was the only company to offer the services that NetNordic required. It was incredibly important to them that, should any hardware breakdown, delivery of spare parts and on-site service would be fast. No other company offered the same support level as Dell.

Working with Layer 8 IT-Services, the company installed NexentaStor within a month from order. Once NexentaStor had been chosen and NetNordic had received the Dell hardware and new switches, Layer 8 attended the site and had the system up and running within two days.

"It was very fast," said Petersson. "We've worked with Layer8 for everything from delivery to support and we're very happy. Once it was deployed, Nexenta was very straightforward to use – it just worked."

## Benefits

NetNordic is delighted with the fact it now has more choice. The team no longer feels like it is stuck with a solution that can't grow as they need it to and it is no longer locked in with hardware vendors. The solution has greatly improved NetNordic's ability to make use of its IT hardware, with the efficiency benefits passed on to its customers. The solution runs with two ZeusRAM disks which optimise writes from NetNordic's VMs as well as its logging data. Running together with the HA storage nodes, that each possess 192 GBs RAM for ARC, and also two 200GBs SSD for L2ARC – available as read cache – the company is able to make better use of available resources, enabling far shorter data access times. After the VMs were migrated to the new solution, NetNordic was able to lower its write latency times by three milliseconds. Most importantly, since deploying NexentaStor, the company hasn't suffered the same spiking latency issues that caused the ESX to freeze; ensuring customers are provided with consistent performance and uptime.

While cost was not as important to NetNordic as performance, it believes it has saved money. Not only was NexentaStor's initial purchase price point lower than other solutions, it has also given the company more confidence in the services it offers.

"While not directly a cost saving, we now have far greater confidence in the services we sell and this means our sales team can be quite aggressive," explained Carola Edenhill, chief operations officer at NetNordic. "When we talk about performance and redundancy to customers we know that we can deliver what we say we will."

The company has also been able to offer more services to its customers since installing NexentaStor. It is beginning to offer more cloud services and tools where clustering is required. Prior to implementing Nexenta, it didn't have the centralised storage it needed to do so effectively, but now can, meaning Nexenta has provided NetNordic the opportunity to do far more with its storage.

*"Working with NetNordic has been very rewarding. The team there has such strong technical expertise meaning they knew exactly what results they wanted and we did our utmost to meet those expectations. Now it has a platform that can be easily expanded to meet future capacity and performance needs; when the hardware is nearing end-of-life, the company can simply move its existing licenses to a new platform."*

Johan Tungström

CEO, Layer 8 IT-Services



Toll free: 1-855-639-3682  
sales@nexenta.com  
nexenta.com

twitter.com/nexenta  
facebook.com/nexenta  
LinkedIn: Nexenta Systems Inc

**Nexenta Systems, Inc.**  
451 El Camino Real, Suite 201  
Santa Clara, CA 95050

