



## SUCCESS STORIES

# NORSK HYDRO IMPROVES SERVICE LEVELS WHILE LOWERING COSTS WITH COMPANY-WIDE NETAPP STORAGE SOLUTION

“Our decision to deploy Network Appliance storage turned out to be the best investment we could make.”

HARALD SEVALDSEN Service Line Manager, Infrastructure Services, Norsk Hydro



### KEY HIGHLIGHTS

**Location** Oslo, Norway (Headquarters)

**Industry** Energy

#### The Challenge

- Consolidate disparate storage
- Develop IT service offering
- Reduce costs

#### The Solution

- NetApp storage systems
- NetApp NearStore® systems
- NetApp SnapMirror®, SnapVault®, DataFabric® Manager (DFM), and MetroCluster software

#### Benefits

- Tiered storage infrastructure
- Simplified management
- Centralized DR solution
- Significant cost savings

### THE CUSTOMER

Norsk Hydro, Norway’s largest company, is one of the world’s leading energy and materials providers. With approximately 20 billion euro in 2002 revenues, the company’s business areas include oil, energy, aluminum, and agricultural products. Hydro IS Partner, an individual business fully owned by Norsk Hydro, provides information services and IT management that support over 50,000 employees in 60 countries worldwide. The company’s primary responsibility is to maintain global IT operations and create efficient and cost-effective business technology solutions.

### THE CHALLENGE:

#### Consolidate Storage Islands to Improve Availability and Performance

Like many highly diversified global organizations, Norsk Hydro’s installed base of storage grew organically from within. This created a difficult-to-manage mesh of storage networks and direct-attached storage islands that were utilizing various local backup procedures. Approaches differed not only across business units, but also among its Windows®, Novell, and UNIX® environments.

Hydro’s IT unit needed to develop a business model in which it could clearly define different service levels and easily identify its various services as products, allowing a workable pricing structure to be created. Operational units would be able to purchase standard IT services at an attractive price from a reliable internal partner.

After assessing its installed systems base and future requirements, Norsk Hydro carefully evaluated its storage options. “A networked storage approach was clearly the best choice, as it provided lower costs with increased flexibility and it could be smoothly integrated into our existing infrastructure,” explains Harald Sevaldsen, service line manager for infrastructure services at Hydro IS Partner. “We met with all the leading vendors in the marketplace and did a comprehensive analysis of their solutions. Network Appliance offered clear benefits and was the most cost-effective solution. We also received excellent consulting and project advice from the local NetApp sales team.”

### THE SOLUTION:

#### NetApp Storage Solution Consolidates Remote Storage across Multiple Platforms

Norsk Hydro is replacing a multitude of access methods and backup routines by standardizing on multiprotocol NetApp storage systems to build a coherent, centralized storage infrastructure. So far, the architecture supports five sites in Norway and five sites in Germany, and the company is expanding its deployment to consolidate information from more than 400 sites across the world into a single networked storage environment.

Ultimately, NetApp storage will support more than 55,000 users on 17,000 Windows workstations and some 450 UNIX technology-based workstations.

NetApp primary storage systems and NearStore systems currently store 175TB of business data. At the core of the data infrastructure is a mirrored storage platform operating between Norsk Hydro's head office and a separate, secure business continuance center.

Consolidation resulted in the elimination of tape-based backup at remote sites that rely on NetApp systems or Windows servers to provide storage. These sites now routinely replicate data to NearStore systems using NetApp SnapMirror and SnapVault software. SnapVault, which supports both NetApp storage systems and local storage servers, allows data to be replicated and backed up at a central location and managed using NetApp DataFabric Manager.

Some sites have also implemented the NetApp MetroCluster solution, which synchronously mirrors data storage at local sites to clustered storage systems at central sites, ensuring the highest levels of availability and disaster protection for business data.

Project implementation was carried out through close cooperation between Network Appliance in the Nordic region and local reseller ProAct Systems.

**BUSINESS BENEFITS:**  
**Cost Savings, Differentiated Storage Products**

Although the total IT migration project will take years to complete, the initial stages are already demonstrating the impact the deployment will have on Norsk Hydro.

Reliability and data availability have improved significantly, while administration is now handled centrally by only three people who share this responsibility as part of several job tasks.

Previously, 79 direct-attached storage servers supported the company's Norwegian operations at central and remote sites. Storage is now consolidated on four NetApp primary storage systems, making business data seamlessly available across the corporate network and dramatically reducing the need for local IT support.

"Norsk Hydro's new storage infrastructure is crucial to the group's overall IT migration, which is freeing up resources across our entire IT organization. We are now able to allocate team members and resources to the development of new services and applications while actually offering lower running costs to the business units," says Sevaldsen.

Business locations relying on direct-attached storage previously had no alternative to manual tape backup. SnapVault significantly simplifies the backup and restore process by eliminating the need to individually back up each server's data to tape. Instead, SnapVault enables remote IT administrators to back up heterogeneous storage directly to the NearStore system and conserves space by performing infinite incremental backups after the initial full backup. The NearStore system can cost-effectively store weeks of online Snapshot™ copies, minimizing the time and expense of tape backups while ensuring rapid and reliable restores.

"NetApp SnapVault is making tape obsolete across large parts of our organization. Tape is just not economical any more. This has been an attractive and convincing solution for local IT managers looking at the cost of running their IT," says Sevaldsen firmly.

Most importantly, NetApp systems enabled the IT team to implement a cost-effective three-tiered storage infrastructure supporting storage classification based on requested data availability. Lower-priority information and less frequently accessed information are stored on less-expensive storage systems, while mission-critical data is available instantly.

"It was imperative for us to establish a technology platform which would allow us to define our various services as tangible products and in turn be seen as elements of Norsk Hydro's business," explains Sevaldsen. "Network Appliance understood this proposition very well, and partnered with us to build an infrastructure that could support our requirements. Our decision to deploy Network Appliance storage turned out to be the best investment we could make."

**ABOUT NETWORK APPLIANCE**

Network Appliance is a leading provider of innovative data management solutions that simplify the complexity of storing, managing, protecting, and retaining enterprise data. Market leaders around the world choose NetApp to help them reduce cost, minimize risk, and adapt to change. For solutions that deliver unmatched simplicity and value, visit us on the Web at [www.netapp.com](http://www.netapp.com).

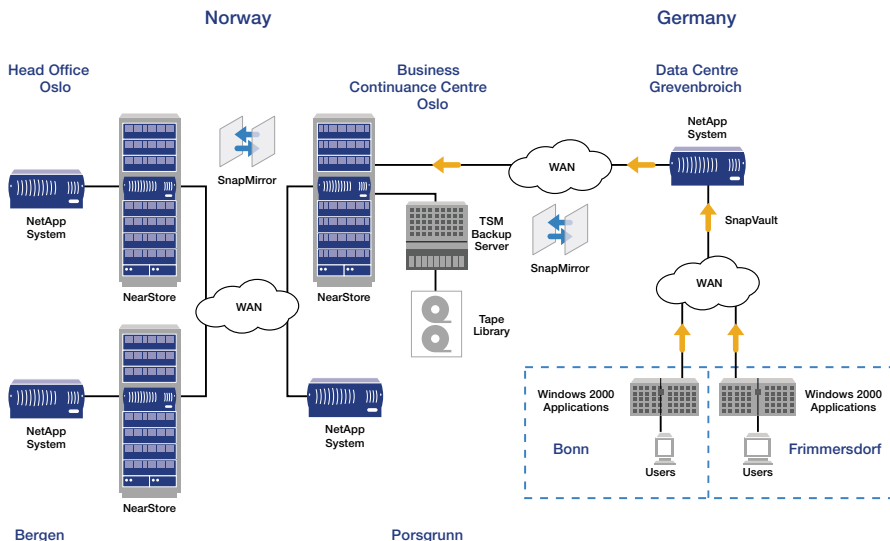


Figure 1) Norsk Hydro storage infrastructure.

