

**HITACHI**  
DATA SYSTEMS



## Hitachi Storage at Work

### Delta NV

#### Industry

Utility

#### Infrastructure

2 x Hitachi Freedom Storage™ Thunder 9570V™

Hitachi Dynamic Link Manager™

Brocade® SilkWorm® 3200 and 3800 switches

Hitachi TrueCopy™

FalconStor® NAS Gateway

#### Cost-effective SAN solution

"In short, with Hitachi Data Systems, storage capacity has more than doubled without a proportionate increase in the total cost of ownership."

Hans de Moor  
Head of IT Services  
Delta NV



## Extra capacity a commercial necessity for Delta NV efficiency

Delta NV faced storage challenges when the energy market in the Netherlands was deregulated. In order to ensure business success in this new environment, Delta NV needed adequate data storage facilities and constant access to accurate customer data. Furthermore, the unbundling of network and delivery tasks was making administration processes and billing services considerably more complex. As a result the existing systems were adapted, placing increasing pressure on the capacity of the network. The basic storage environment could not cope with these developments. This led Delta NV to search for a reliable, stable and constantly available storage environment that could be easily managed.

# Hitachi Data Systems delivers the foundation for long-life storage for Delta NV

From its inception Delta NV supplied gas and water via its own network to the province of Zeeland and South-west Brabant in the Netherlands. As a result of utility privatisations and the deregulation of the energy market, there has been a considerable expansion in the range of services the organisation has to offer. Apart from electricity, gas and water, Delta NV now also supplies cable, Internet and media services to businesses and individual customers.

## Changing requirements

Within the organisation, as well as in the external environment, Delta NV discovered that changes were required: "A number of situations happened simultaneously which required rapid and focused action. Our mainframe had reached the end of its life and we wanted

to make the transition to a distributed UNIX environment", explains Hans de Moor, Head of IT Services at Delta NV. "At the same time, requirements to access diverse data within the organisation increased significantly. Internally, customer data needed to be stored and analysed in order to increase customer retention. Externally, the government had forced us to exchange data with other network organisations and suppliers which created a need for additional capacity. Finally, our development teams were demanding additional capacity in order to facilitate the necessary changes to a variety of administrative, billing and measuring systems. It was clear, therefore, that we had to take rapid action in order to guarantee the continuity and quality of our business activities."

## Maximum availability

Central to Delta NV's supplier selection process, was the proven ability to deliver an extremely stable storage solution that could cope with rapid growth as well as provide a reduction in the Total Cost of Ownership (TCO). Of the many suppliers considered, Hitachi Data Systems and its implementation partner, i3 Solutions, most closely matched these requirements. "Apart from storage, Hitachi Data Systems offered backup facilities. The constant access to data is an important differentiator to Delta since, as a result of deregulation, customers have increased freedom of choice. Because of this, high levels of service and maximum system availability are essential to commercial success," explains Hans de Moor.



**“In the event of the failure of one of the sites, we can ensure that business-critical systems are up and running again within just four hours. This illustrates the enormous success that we’ve achieved at the storage level with our new Hitachi Data Systems infrastructure.”**

Hans de Moor  
Head of IT Services  
Delta NV



### Long distance connection

The primary production site for the new storage facility is Delta NV’s head office in Middelburg. This site is connected by means of an optical fibre network to the secondary site in Goes, some 50 kilometres away. The new storage environment at the main site was constructed within six weeks. The secondary environment was, due to unexpected circumstances, begun in Middelburg before being transferred to Goes in a single day. A unique element of the Hitachi Data Systems solution was its ability to duplicate data synchronously over the 51 km distance between sites.

### A single point of contact for total support

“The solution from Hitachi Data Systems ties in with our strategic choice to include as few different components as possible within our storage infrastructure. Our preference has been, and continues to be, to have a single point of contact for total support. We also want to limit the variety of components used because of the potential integration and communication risks. In view of their functionality and the cost-efficiency of the solution, the combination of Hitachi Data Systems and i3 Solutions was clearly the best choice for us”, says Hans de Moor.

### Rapid disaster recover capability

Delta NV’s new storage environment, is based on the Thunder 9570V Series which combines both SAN and NAS technology and offers excellent scalability and flexibility. As well as providing the urgently needed expansion in storage capacity and throughput, the new storage environment also provides highly robust backup and recovery processes using Hitachi TrueCopy. “We now have a stable basis for coping with various emergency scenarios should we encounter major disruptions or disasters”, explains Hans de Moor.

Delta NV has now evolved rapidly from a single SAN to a centrally controlled redundant SAN environment with plenty of room for expansion. “This was important because the trends in data growth are set to continue. For example, during the last four to five years we’ve experienced an average data growth of 37%. In the last year alone, the amount of data stored grew from 1.3 TB to 6 TB. With our Hitachi Data Systems-based storage environment we can easily handle this growth, and the availability and stability of the system is guaranteed. In short, with our Hitachi Data Systems solution our storage capacity has more than doubled without a proportionate increase in the total cost of ownership”, concludes Hans de Moor.

## Hitachi Data Systems’ SAN increases capacity

Hitachi Data Systems, together with its partner i3 Solutions, implemented a redundant SAN environment with two Hitachi Freedom Thunder 9570V systems linked by two Brocade 3200 and two Brocade 3800 switches, all based on 2Gb technology, to provide the increased capacity required. In addition Hitachi Dynamic Link Manager was installed for load balancing and path failover. Synchronous duplication of the storage environment is over a distance of 51 km. All business-critical data is duplicated via the SAN, without using channel extenders, a first for Europe in terms of distance. i3 Solutions installed and certified extender fabrics on the switch allowing this distance to be successfully bridged. Not having to create any channel extenders had a positive effect on the final TCO. Also, by using the FalconStor NAS Gateway, Delta NV can store SAN and NAS related data on the same “open”, robust and highly available Thunder 9570V.

**Corporate Headquarters**  
750 Central Expressway  
Santa Clara California 95050  
U.S.A.  
Phone: +1 408 970 1000  
**info@hds.com**  
**www.hds.com**

**European Offices:**

**European Headquarters**

Hitachi Data Systems  
Sefton Park  
Stoke Poges  
Buckinghamshire SL2 4HD  
Phone: +44 (0) 1753 618000  
Fax: +44 (0) 1753 618550  
**info.eu@hds.com**  
**www.eu.hds.com**

**United Kingdom**

Hitachi Data Systems  
Sefton Park  
Stoke Poges  
Buckinghamshire SL2 4HD  
Phone: +44 (0) 1753 618 989  
Fax: +44 (0) 1753 618 543  
**info@hds.co.uk**  
**www.hds.co.uk**

Hitachi Data Systems  
Hamilton House  
Church Street  
Altrincham WA14 4DR  
Phone: +44 (0) 161 928 4243  
Fax: +44 (0) 161 928 8461  
**info@hds.co.uk**

Hitachi Data Systems  
100 Park Avenue  
Aztec West  
Almondsbury  
Bristol BS32 4TT  
Phone: +44 (0) 1454 625 511  
Fax: +44 (0) 1454 625 502  
**info@hds.co.uk**

Hitachi Data Systems  
6220 Bishops Court  
Solihull Parkway  
Birmingham Business Park  
Birmingham B37 7YB  
Phone: +44 (0) 121 717 4000  
Fax: +44 (0) 121 717 4001  
**info@hds.co.uk**

Hitachi Data Systems  
11 Rutland Square  
Edinburgh EH1 2AS  
Phone: +44 (0) 131 228 4343  
Fax: +44 (0) 131 228 5573  
**info@hds.co.uk**

Hitachi Data Systems  
St Martins House  
16 St Martins Le Grand  
London EC1A 4EN  
Phone: +44 (0) 207 3978670  
Fax: +44 (0) 207 3978676  
**info@hds.co.uk**

**Austria, Central & Eastern Europe**

Hitachi Data Systems GmbH  
Praterstraße 62-64  
1020 Wien  
Phone: +43 (0) 1 245 82 0  
Fax: +43 (0) 1 245 82 250  
**info.at@hds.com**

**Belgium**

Hitachi Data Systems S.A./N.V.  
Woluwedal 28  
B-1932 Sint-Stevens-Woluwe  
Phone: +32 2 643 45 50  
Fax: +32 2 643 45 51

**Denmark**

Hitachi Data Systems  
Egebækgård  
Egebækvej 98  
2850 Nærum  
Phone: +45 4558 1000  
Fax: +45 4558 1001  
**info.dk@hds.com**  
**www.hds.dk**

**Finland**

Hitachi Data Systems  
Keilasatama 3  
FIN-02150 Espoo  
Finland  
Phone: +358 (0) 9 2510 5132  
Fax: +358 (0) 9 2510 5100

**France**

Hitachi Data Systems  
81 rue Marcel Dassault  
92514 Boulogne Billancourt Cedex  
Phone: +33 (0) 1 46 10 14 00  
Fax: +33 (0) 1 47 61 94 24

**Germany**

Hitachi Data Systems GmbH  
Mozartstrasse 2  
85622 Feldkirchen bei München  
Phone: +49 (0) 89 905 06 0  
Fax: +49 (0) 89 905 06 599  
**info.de@hds.com**  
**www.hds.de**

Hitachi Data Systems GmbH  
Industriestrasse 28  
70565 Stuttgart  
Phone: +49 (0) 711 782 61 0  
Fax: +49 (0) 711 782 61 111

Hitachi Data Systems GmbH  
Im Steingrund 10  
63303 Dreieich-Buschschlag  
Phone: +49 (0) 6103 804 0  
Fax: +49 (0) 6103 804 1111

Hitachi Data Systems GmbH  
Kürfürstendamm 21  
Im Neuen Kranzler Eck  
10719 Berlin  
Phone: +49 (0) 30 88706 4010  
Fax: +49 (0) 30 88706 1200

Hitachi Data Systems GmbH  
Valentinskamp 24  
20354 Hamburg  
Phone: +49 (0) 40 31112 900  
Fax: +49 (0) 40 31112 200

Hitachi Data Systems GmbH  
Franz-Rennefeld-weg 5  
40472 Düsseldorf  
Phone: +49 (0) 211 43 835 0  
Fax: +49 (0) 211 43 835 202

**Israel**

Hitachi Data Systems  
Corex Building  
27 Maskit St  
Herzliya 46733  
Phone: +972 (0) 9 9704 500  
Fax: +972 (0) 9 9704 511  
**info.israel@hds.com**

**Italy**

Hitachi Data Systems  
Via T Gulli 39  
20147 Milan  
Phone: +39 02 40 30 92 1  
Fax: +39 02 40 30 92 80  
**info.italy@hds.com**  
**www.it.hds.com**

Hitachi Data Systems  
Via A Cruto 8  
00146 Roma  
Phone: +39 06 55 34 08 1  
Fax: +39 06 55 85 75 3  
**info.italy@hds.com**  
**www.it.hds.com**

**The Netherlands**

Hitachi Data Systems Nederland BV  
Crown Building North  
Hullenbergweg 373  
1101 CR Amsterdam Zuidooost  
Phone: +31 (0)20 650 9000  
Fax: +31 (0)20 650 9199  
**info.nl@hdsbv.nl**

**Norway**

Hitachi Data Systems AS  
Strandveien 18  
1366 Lysaker  
Norway  
Phone: +47 67 51 84 40  
Fax: +47 67 51 84 59

**Poland**

Hitachi Data Systems (Polska) Sp.zo.o.  
Al Jana Pawla II 12  
00-124 Warszawa  
Phone: +48 22 850 99 00  
Fax: +48 22 850 99 09

**Spain**

Hitachi Data Systems S.A.  
Avda Diagonal 640  
08017 Barcelona  
Phone: +34 933 634 100  
Fax: +34 933 634 111  
Hitachi Data Systems S.A.  
C/Capitán Haya 38-8ª Planta  
28020-Madrid  
Phone: +34 914 491 100  
Fax: +34 914 491 111

**Sweden**

Hitachi Data Systems AB  
Frosundaviks Alle 15  
Box 501  
SE-169 29 Solna  
Phone: +46 (0) 8 624 64 00  
Fax: +46 (0) 8 624 64 65  
Hitachi Data Systems AB  
Stora Badhusgatan 18-20  
SE-411 21 Gothenburg  
Phone: +46 (0) 31 701 18 00  
Fax: +46 (0) 31 701 18 19

**Switzerland**

Hitachi Data Systems  
Kriesbachstrasse 3  
8600 Dübendorf/ZH  
Phone: +41 1 802 64 64  
Fax: +41 1 820 39 40  
**info.ch@hds.com**

Hitachi Data Systems  
109, Chemin du Pont-du-Centenaire  
1228 Plan-les-Quates/GE  
Phone: +41 22 884 86 00  
Fax: +41 22 884 86 01  
**info.ch@hds.com**

Hitachi Data Systems  
Bernstrasse 131  
3052 Zollikofen/BE  
Phone: +41 31 910 42 42  
Fax: +41 31 911 64 47  
**info.ch@hds.com**

©2003 Hitachi Data Systems. All rights reserved.

Hitachi Data Systems is registered with the U.S. Patent and Trademark Office as a trademark and service mark of Hitachi, Ltd. The Hitachi Data Systems logotype is a trademark and service mark of Hitachi, Ltd. All trade names, trademarks, and service marks used herein are the rightful property of their respective owners.

Notice: This document is for informational purposes only, and does not set forth any warranty, express or implied, concerning any equipment or service offered or to be offered by Hitachi Data Systems. This document describes some capabilities that are conditioned on a maintenance contract with Hitachi Data Systems being in effect, and that may be configuration-dependent, and features that may not be currently available. Contact your local Hitachi Data Systems sales office for information on feature and product availability.

Hitachi Data Systems sells and licenses its products to certain terms and conditions, including limited warranties. To see a copy of these terms and conditions prior to purchase or license, please go to [http://www.hds.com/products/systems/licenses\\_warranties.html](http://www.hds.com/products/systems/licenses_warranties.html) or call your local sales representative to obtain a printed copy. If you purchase or license the product, you are deemed to have accepted these terms and conditions.