DnB NOR chooses BladeCenter and System i5

Overview

■ **The Challenge**
Support branch offices in several European countries with high-performance two-tier banking software; create new infrastructure within physical and power limits of existing data centre

■ **The Solution**
Implemented ibis s2 international banking software from Financial Objects; worked with IBM Business Partner Northdoor to upgrade transaction processing server to IBM System i5 520 running i5/OS V5R4, with IBM BladeCenter containing five blade servers integrated via iSCSI connection to run Web-based front-end under Microsoft Windows Server 2003

■ **The Benefits**
High-performance solution offering intuitive graphical user interface; compact solution for reduced use of costly data-centre floorspace; improved energy efficiency, reducing costs and emissions; single, enterprise-class backup procedure for both i5/OS and Windows systems

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DnB NOR Group is Norway's largest financial services group, with total assets of more than NOK 1,400 billion (€170 billion). The company has more than 2.2 million retail customers and 188,000 corporate customers, and employs around 11,500 people. DnB NOR is active in commercial and syndicated lending, and has principal branches or subsidiaries throughout Norway and in Copenhagen, Hamburg, Helsinki, London and Stockholm.

DnB NOR's London branch runs the group's core banking applications for many of its European operations. The bank recently took the opportunity to migrate from its existing green-screen user interfaces to a more user-friendly graphical interface. The required upgrade to ibis s2 software from Financial Objects entailed a move from a single tier to a two-tier architecture, meaning that DnB NOR needed to install 10 new Intel-based servers alongside its existing transaction processing platform.

By choosing to run the new Microsoft Windows workload on an IBM BladeCenter, integrated with a new IBM System i5 520 via an iSCSI connection, DnB NOR successfully adopted the new two-tier architecture within the physical constraints of its existing data centre. Patrick Dungan, IT Director, comments: "Space is at a premium in the City of London – we fight over every last floor tile in the data centre – and we also had concerns about the total electrical load of the new servers. The IBM BladeCenter

and System i5 solution delivers the performance we need in a compact, low-power footprint."

High-performance solution

DnB NOR chose Northdoor (www.northdoor.co.uk), a leading IBM Business Partner, to help deploy the solution, and IBM's Global Financing function put together a leasing package to meet the bank's business requirements. Northdoor had kept DnB NOR informed about the possibility of integrating Windows environments with the System i platform, including the new iSCSI-connected BladeCenter option. Working with the DnB NOR team and with Financial Objects, Northdoor designed and implemented the new infrastructure, providing in-depth training on the management and expansion of the BladeCenter solution.

Says Patrick Dungan, "The Northdoor consultants provided excellent service throughout the engagement. BladeCenter is practically a data centre in itself, and Northdoor's skill in setting up the technology was a major factor in the success of the project."

BladeCenter is a chassis that provides shared power, cooling, drives, switches and ports for ultra-slim diskless blade servers, which simply plug into a pair of midplanes. The IBM blades are hot-pluggable, so inserting one into the BladeCenter chassis – which can hold a total of 14 – connects it immediately to the network and power supply, with no additional cabling required.

"Beyond the space and power constraints in our data centre, a key requirement was high performance, and that meant keeping the Windows front-end as close as possible to the core transaction processing engines on the System i5 platform," says Patrick Dungan. "By implementing a new two-way i5 520 and using iSCSI to link it to BladeCenter we have achieved excellent performance."
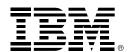
DnB NOR uses DataMirror Transformation Server software to transport transactional data from the DB2/400 databases on the i5 520 to the Microsoft SQL Server databases on the BladeCenter.

Financial Objects had recommended two servers per instance of the ibis s2 software. In practice, the performance delivered by the IBM HS20 blade servers enables DnB NOR to allocate just one server to each of its two production instances, one for London operations and one to support an expanding range of services in Sweden. A further two blades act as user acceptance environments for London and Sweden, with the fifth blade acting as a hot spare. The bank plans to mirror this configuration in its Norwegian data centre for high availability, where the second set of blades will be attached to an i550.

Simple and powerful

A key benefit of integrating the Windows servers into the i5 environment is the facilitation of a single backup process, saving the cost and complexity of multiple procedures and multiple tape drives. The blade servers themselves are diskless; the i5 allocates virtual storage space for them on its own drives, effectively acting as a storage area network. The standard i5/OS backup process sees each Windows virtual disk as an object and backs it up in the usual way.

"Using BladeCenter integrated with System i5 has given us a very compact, efficient and easy-to-manage infrastructure," says Patrick Dungan. "What's more, the System i5 offers excellent reliability at relatively low cost: we consistently deliver the highest reliability in the Group. The new i520 provides more of the same: very high availability to support crucial banking transactions, with very low management overhead."