

“The transition to a next generation storage solution using Hitachi Data Systems technology is a key enabler for Lloyds Banking Group’s WMTT Infrastructure Maturity Model strategy.”

*Colin Everett
 Head of IT Infrastructure
 Wholesale Markets Treasury and Trading
 Lloyds Banking Group*

**LLOYDS
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 GROUP**



Lloyds Banking Group

INDUSTRY Finance

SOLUTIONS *Enterprise Platform, Virtualisation, Consolidation*
Hardware — Hitachi Universal Storage Platform® V (3) and Hitachi Universal Storage Platform VM (1); Hitachi Virtual Storage Platform
Software — Hitachi Tiered Storage Manager, Hitachi Tuning Manager and Hitachi Dynamic Provisioning
Services — Solution design and deployment consultancy provided by Hitachi Data Systems Global Solution Services

Lloyds Banking Group Transforms Its Data Centre with Hitachi Virtual Storage Platform

Following the integration between Lloyds TSB and HBOS in 2009, the newly formed Lloyds Banking Group emerged as the UK's largest retail bank. In order to ensure its Wholesale Markets and Treasury and Trading (WMTT) department could operate at an enterprise level, the division consolidated and integrated its storage infrastructure by virtualising its SAN behind Hitachi Universal Storage Platform® V and VM systems. It followed the success of this project by testing the new Hitachi Virtual Storage Platform to run a business critical application. The tests delivered better than expected results.

Lloyds Banking Group was established in January 2009 following the integration between Lloyds TSB and HBOS. Offering banking services to one in three people in the UK, it is now the country's largest retail bank. With a goal of being the best financial services provider in the UK, the Group is dedicated to building not only its scale, but its reputation and customer relationships as well.

The Need for Scalability

The Group's WMTT department is part of its wholesale banking arm and is made up of the Bank of Scotland (BOS) Treasury and Lloyds Corporate Markets. The data held on the WMTT's storage system is essential for the success of the business as a whole,

so it must be accessible at any time. All the division's trading systems depend on it, making it one of its most important resources. However, the newly merged department found that it faced a significant IT challenge as its storage platform could not scale to meet the increased data demands.

The legacy modular storage model could not support the new enterprise environment that had effectively doubled in size. It saw a 20% quarterly increase in its structured data and a 30% growth of unstructured data, which is much greater than the industry average. And it needed to ensure it could cope with sustained growth of this nature in line with its aggressive business expansion strategy. In short, the bank needed

an enterprise-class storage solution with greater flexibility, scalability and capacity.

The business looked into a variety of storage solutions to identify the one that would best fit its requirements. Through a rigorous process based on storage architectural principles, vendor solutions were evaluated for reliability, scalability and performance, and the business decided to deploy the technology from Hitachi Data Systems.

Hitachi Storage Meets Technology and Infrastructure Requirements

Head of IT Infrastructure in the WMTT department, Colin Everett, explains: "We needed a storage platform that would guarantee us availability and great performance as well as the ability to scale out when required. At the same time we needed to ensure we could provision resources quickly to the parts of the businesses that need it. Hitachi Data Systems not only met these technical requirements, but its roadmap aligned with our IT infrastructure strategy, too."

The business deployed one Hitachi Universal Storage Platform V (USP V) to support its primary data centre and another USP V for its disaster recovery system. Another two of these, along with one Hitachi Universal Storage Platform VM were also installed to support the department's development environment on a separate site. It then virtualised its live storage environment behind the USP V, enabling its entire SAN, which holds 1PB of data, to be pooled into one virtual resource.



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This enables the storage team to deliver a more flexible service to business users, making the appropriate resources available whenever and wherever needed, without impacting performance.

Hitachi Virtual Storage Platform Ensures Peak Performance

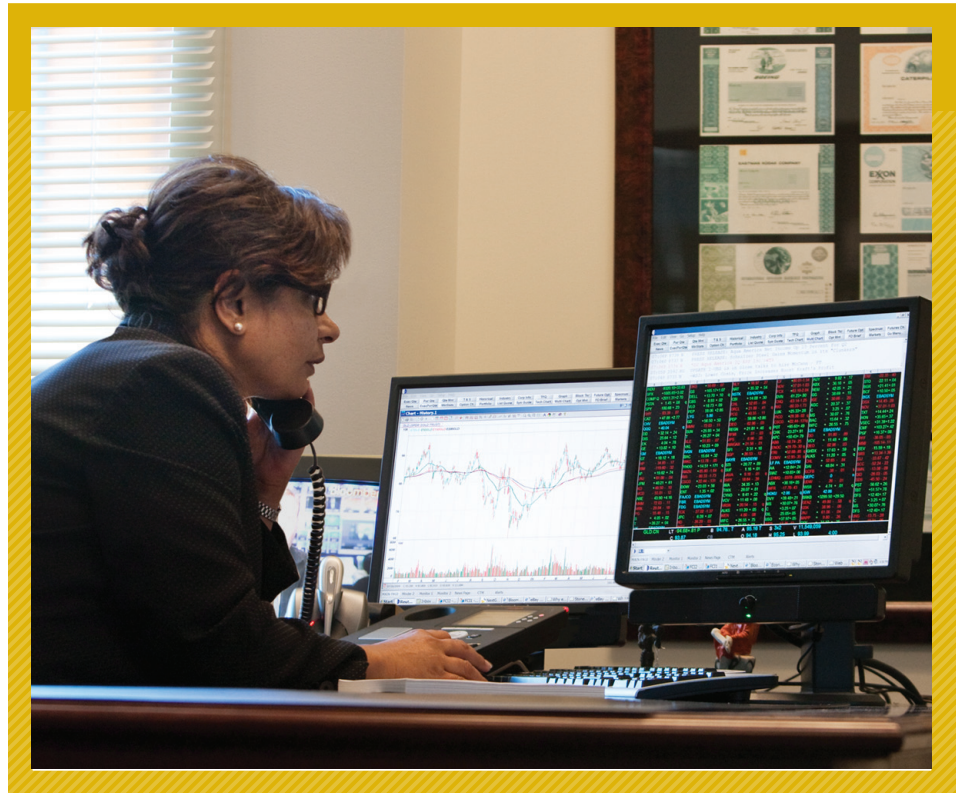
The business is now involved with Hitachi Data Systems in another project aimed at evaluating the new Hitachi Virtual Storage Platform to power one of its most important programs.

This business critical, batch-based 4TB Microsoft® SQL Server® 2005 database loads approximately 50 million transactions every night, as well as being constantly updated in real time throughout the day. A number of different business tools interrogate the program, mining its data for use in most middle office systems across the WMTT department. At the same time, the entire system is replicated in real time, via the SAN, to the disaster recovery site.

To ensure this database and the applications it supports are always running at peak performance, the business chose to run it on the Virtual Storage Platform for three weeks.

Initial results showed that the new platform delivered consistent significant performance improvements for this application workload. During this phase the business also conducted an extensive set of component failure and functional tests under a standard workload to ensure that the platform could deliver the level of uninterrupted service that it requires.

“An important factor of the testing phase was that no application changes or specific data optimization was needed to achieve these results,” Everett notes. “The application was simply restored in the same way that we would have run it on our existing platform. With no time needed for complex optimization, we could get right on with running the application, make the most efficient use of resources and see results right away.”



This was also important in the testing that was carried out on the new platform's provisioning capabilities. The staff involved were able to move easily from the existing platform to the Virtual Storage Platform with no specific training. Its new task scheduling framework allowed multiple provisioning actions to be run simultaneously as background tasks and it was observed that this reduced provisioning time would improve storage administrator productivity.

Following the initial testing, consultants from Hitachi Data Systems worked with the team at Lloyds Banking Group's Wholesale Markets Treasury and Trading to verify the findings.

“The team from Hitachi Data Systems has worked closely with us throughout our initial consolidation and subsequent projects,” concludes Everett. “This collaboration has been key to the success of our new storage environment and we look forward to driving continued IT innovation together in the future.”

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