

PUSHING BI PERFORMANCE TO THE LIMIT



As one of the world's largest credit bureaus dealing with hundreds of millions of credit records each month, TransUnion has a greater demand for high-performance analytics than most organisations. After partnering with the BI Practice for the implementation of an end-to-end BI solution, TransUnion now has a solution that is faster, more cost effective, and delivers unique competitive advantage.

➔ MANAGING MORE DATA

Data is the driving force behind any business, but none more so than with international credit bureaus. These are the organisations that provide detailed credit information to financial services organisations, helping them to assess the credit worthiness of individuals and

businesses as well as evaluate their own risk profiles. A credit bureau's success is therefore intrinsically linked to its ability to gather, analyse and deliver this critical information, and one of the most successful in this regard is TransUnion.

TransUnion is a global leader in credit and information management, offering a diverse range of risk and fraud management solutions developed for a variety of customers. "We operate across the business-to-business and business-to-consumer markets, serving a broad range of industries such as banking, insurance, healthcare, retail, telecommunications, as well as public sector departments and agencies like SARS," explains Frik Lubbe, data warehouse manager at TransUnion. "In doing so, we manage more data than any other risk information company in South Africa, providing a unique 360-degree view of consumers and businesses."

FACING UP TO CHALLENGES

TransUnion's business used to be about delivering standard operational information, with deeper analytics a mere value-add for customers. But Lubbe says that this has been turned on its head in recent years: "Business intelligence and analytics is now the core of our business – our competitive advantage and future revenue growth depends on being able to deliver ever-more enhanced intelligence to our customer base."

But the local TransUnion operations faced a number of key challenges in achieving this objective, not least due to the huge amount of data it manages. Sourcing data from literally thousands of source systems at thousands of different data suppliers meant that TransUnion was processing more than half a billion records each month. Added to that was the complexity of the data, sourced in a variety of different formats, and containing distinctly different content such as financial, legal or public record information. Even more complex are the linkages within the data – for example, an application enquiry, credit agreement and payment records all need to link together and relate to a single transaction for one individual.

RAISING THE IQ

TransUnion had previously used a DB2 database to manage all these records and data, but performance issues meant that it was looking to replace this with an advanced enterprise data warehouse solution that could meet its analytical business intelligence challenges moving forward. Having identified the market-leading Sybase IQ product as a potential solution, TransUnion began engaging with the BI Practice as far back as 2001 to explore its options.

The BI Practice specialises in the design and deployment of business intelligence solutions that enable companies to access, manage and extract real business insight from their information assets. “We were ideally suited to partner with TransUnion as we could combine our specialist experience in end-to-end BI with high level expertise and understanding of the Sybase IQ product,” says Kenny Struwig, executive account manager at the BI Practice. “After conducting some highly successful ‘proof of concept’ exercises with the TransUnion team, we were soon ready for implementation.”

PERFECTING PERFORMANCE

TransUnion’s choice of Sybase IQ was based on it being the world’s leading enterprise data warehouse solution that is specifically architected for analytics rather than just transactions. It is thus optimised to deliver ultra-high speed business intelligence and reporting on standard hardware and operating systems. But as Struwig points out, to understand the true benefits of Sybase IQ, one needs to understand the constraints of a typical Relational Database Management System (RDBMS). “The performance of any traditional RDBMS is dominated by the simple fact that it takes vastly longer to get data from disk than from memory,” he says. “Owing to the huge data volumes associated with analytical applications, the key to achieving any breakthrough in database performance is to minimise the volume of data that must pass through this bottleneck of disk access. Anything else, including using vast amounts of expensive hardware, fails to address the fundamental problem.”

This is exactly where Sybase IQ excels. Unlike conventional RDBMS, it is designed specifically to minimise the number of pages read from disk. It is so successful that disk access is typically no longer a bottleneck in Sybase IQ implementations, resulting in a breakthrough in query speed. Sybase IQ achieves this by a combination of column-based storage (reading only the necessary columns) and data

WHAT IS UNIQUE ABOUT SYBASE IQ?

Sybase IQ reduces overheads, storage costs and maintenance requirements. Combine this with faster data loads and query response times, and companies are able to realise a rapid and significant ROI. Some of the unique benefits of Sybase IQ are:

- **Faster:** Delivers ad-hoc query performance up to 100 times faster than a traditional RDBMS
- **Lower TCO:** Requires less storage by compressing raw data up to 70%, while traditional OLTP databases explode data by 150 - 500%
- **Easier:** Easier to maintain than traditional databases and does not require time and resource-intensive tuning to obtain excellent performance
- **More scalable:** Offers near-linear user and data scalability to support thousands of users and terabytes of data.

compression (minimising the number of reads of each column).

ACHIEVING NOTABLE SUCCESS

Beginning in mid-2006, the BI Practice began implementing Sybase IQ at TransUnion, putting in place both a development and production server. This was further complemented by Sybase PowerDesigner for the design and modelling of the data warehouse, IBM WebSphere DataStage for management of ETL processes, with Business Objects used as the primary reporting and analysis tool on top of Sybase IQ.

By the end of the implementation phase, TransUnion and the BI Practice had achieved some notable successes:

- **Enhanced data management:** The new Sybase IQ system is geared to handle the hundreds of millions of data records that TransUnion processes each month with ease, and is optimised for the management of the data complexity.
- **Higher speeds:** Performance is now up to 1000% faster in certain cases than with the previous system. “Reports that used to take a team nearly two weeks to produce are now produced in less than an hour,” says Lubbe.
- **Future-proofed system:** The near-linear scalability of Sybase IQ ensures that TransUnion not only has a solution that meets its business requirements now, but can also scale seamlessly to support multiple new users and an anticipated 150% growth in data volumes over the next few years.

- **Lower costs:** The new solution reduces ‘hard’ costs such as storage, and ‘soft’ costs such as administration and maintenance as well as the time and effort it used to take to unlock information value.

As Lubbe points out, the real benefits of the project lie not so much with the tangible reduction in costs, but with how it has positioned TransUnion for future growth. “Reducing costs is always good, but the major benefit to the business is something that is almost impossible to measure – the positioning of TransUnion at the forefront of the industry, capable of achieving things that are beyond the reach of our competitors,” he concludes. “Whether its ‘same-day analytics’ or the development of industry-specific solutions to drive new revenue streams, we can now do more and keep doing more, thereby offering a higher value service to our clients and consistently exceeding their expectations.” 

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