Netcare keeps finger on pulse with rapid reporting from IBM and SAP

Overview

■ ***The Challenge***

Users at healthcare provider Netcare were unable to access vital information, including stock and financial reporting figures. Existing SAP NetWeaver Business Warehouse capabilities were not being exploited, with poor performance making the solution almost unusable. IT staff struggled to remedy poor response times, impacting information delivery throughout the organization. The challenge was to bring financial, stock and business management information into a single place for effective analysis that would allow Netcare to plan effective allocation of resources.

■ ***The Solution***

Netcare worked with T-Systems to migrate its SAP NetWeaver Business Warehouse environment to IBM DB2 in just eight days, as a few weeks of meticulous planning were done in preparation. During the data migration, T-Systems introduced IBM DB2 Deep Row Compression to help reduce database sizes and increase performance.

■ ***The Benefits***

The migration produced a dramatic change in response times, with typical query time decreasing from 27 minutes on the legacy system, to just 1.21 minutes – a reduction of 95 percent. By taking advantage of the Deep Row Compression capability on DB2, databases have shrunk by an average of 40 percent, freeing up 400 GB of storage space for other uses. Netcare enjoys savings with the lower total cost of ownership associated with DB2.

■ ***Key Solution Components***

Industry: Healthcare
Applications: SAP® NetWeaver® Business Warehouse®, SAP Industry Solution for Healthcare, including finance, accounting, controlling, asset management, materials management, warehouse management, sales and distribution and project systems.
Software: IBM® DB2® for Linux, UNIX and Windows
Services: IBM Advanced Business Partner T-Systems

Netcare operates the largest private hospital network in South Africa. The company employs over 20,000 people in South Africa, providing healthcare services to more than three million patients a year, at sites including 54 hospitals and 83 Medicross Health Centers.

"Netcare focuses on maintaining its position at the forefront of medical innovation, with expertly managed, world-class facilities staffed by specialists," says Travis Dewing, Netcare Systems Integration Manager. "However, operating so many sites, many of them offering different services, presents a highly complex network of processes to be engineered."

To run the business efficiently and profitably, Netcare executives need to understand treatment processes, costs and income in a variety of ways – looking at patient outcomes, average duration of stay, direct and indirect expenses for example. From stock management through to invoice procedures, gaining accurate information is absolutely essential.

IBM® | SAP®

"The first stage of the proof of concept produced such an improvement in response times that we struggled to believe it – we needed to see the solution working in a non-isolated environment. The outcome confirmed that migrating to DB2 would completely overhaul our SAP NetWeaver BW system, with even better results than we had hoped for."

Travis Dewing, Systems Integration Manager, Netcare

The challenge was to bring financial, stock and business management information from multiple modules of the ERP system into a single place for effective analysis that would allow Netcare to plan effective allocation of resources.

For example, Netcare generates a report for all hospital managers and executives, detailing the key performance indicators (KPIs) for the group. The information contained in the report is considered critical in addressing performance issues and identifying trends. However, the existing systems were not capable of producing this critical report more than twice a week, which seriously impacted executives' ability to manage the business in a timely manner.

Information blockage

Netcare relied on SAP NetWeaver Business Warehouse (SAP NetWeaver BW) to provide information analysis and reporting. Transaction data from Netcare's SAP applications are stored in SAP NetWeaver BW, and powerful query tools allow business users to examine business performance, answering process, cost and 'what-if' questions.

However, Netcare's existing database solution was unable to return query results within acceptable time-frames, taking more than half an hour for simple queries. For example, the data needed for urgent performance monitoring and financial results could not be reliably extracted, or required significant manual intervention from the IT department to obtain. As an example the gross profit report used to take 27 minutes to generate, it now takes under one and a half minutes.

The result of the poor underlying database performance was that Netcare was failing to exploit the advantages of SAP Business Warehouse. For example, business users were unable or unwilling to create and run their own queries, and instead asked the IT team support to generate queries on users' behalf. As well as the additional workload, this led to process chains running anywhere between 12 and 24 hours a day, due to the massive delays in processing on the production system.

Finding the cure

Netcare worked with T-Systems, an IBM Advanced Business Partner, to find a solution that would allow the company to utilize the full potential of its SAP NetWeaver BW environment. IBM DB2 immediately stood out as a convincing option.

"We knew that DB2 is considered one of the top three databases in the SAP environment. Following consultations with our partners and taking account of the Netcare Group's existing trusted and long-standing relationship with IBM, the choice was easy," explains Travis Dewing.

Concerns about the business risk of migrating business-critical systems to a new database platform were countered by the consequences of continuing with the existing,

almost unusable, system. To mitigate the migration fears, the company first conducted a proof of concept by implementing DB2 on Netcare's disaster recovery (DR) environment so that results could be directly compared with the production system. The performance improvements were so dramatic that Netcare decided to test DB2 in its live environment to confirm them.

"The first stage of the proof of concept produced such an improvement in response times that we struggled to believe it – we needed to see the solution working in a non-isolated environment. The outcome confirmed that migrating to DB2 would completely overhaul our SAP NetWeaver BW system, with even better results than we had hoped for," says Travis Dewing.

Moving to new medication

Netcare migrated its entire SAP NetWeaver BW live environment – including production, development and quality assurance systems as well as the DR solution – onto DB2. After meticulous planning the migration was completed in just eight days.

"The migration was conducted smoothly and with little disruption," comments Travis Dewing. "As healthcare providers we simply cannot afford any interruption of service to users, and the combination of T-Systems' extensive experience and the excellence of the IBM and SAP technology produced a painless migration process. T-Systems consultants blended seamlessly with our onsite team, to ensure sensitive patient data was transported securely and efficiently."

The solution unites processes, patient service and back-office operations. SAP Industry Solution for Healthcare applications are a tailored and integrated set of SAP components that enable healthcare support. Healthcare-specific analyses, reporting and budgets can all be managed from within a single platform. This includes document management, coding and pricing controls, invoicing and payment handling, patient administration, management and services, and resource planning and scheduling.

Rapid response times

Managers were amazed to find that the live environment produced even more impressive results than promised by the proof of concept. It provided a stark comparison with the prior database for the first time, the SAP NetWeaver BW application team would not be called upon to generate queries, compile reports and either email them to the relevant people or save them in file repositories. Instead, users would be able to reliably generate their own queries, gaining direct access to the information they need.

For example, with SAP applications and DB2 in place, the critical KPI report is now generated and distributed daily to hospital managers. The data highlights performance issues and allows executives to take preventive actions at an early stage and fine-tune Netcare's business efficiency.

"The improvement delivered by SAP and IBM DB2 has been so remarkable that there is disbelief amongst all affected stakeholders that we are running the same system. For example, previously average query processing time was 27 minutes, which has now been cut by 95 percent to just 1.21 minutes – a change which has transformed our operations. One instance of this is the fact that IT staff are no longer

"The improvement delivered by SAP and IBM DB2 has been so remarkable that there is disbelief amongst all affected stakeholders that we are running the same system. For example, previously average query processing time was 27 minutes, which has now been cut by 95 percent to just 1.21 minutes – a change which has transformed our operations."

Travis Dewing, Systems Integration Manager, Netcare

SOLUTION LANDSCAPE

Software: IBM DB2 for Linux, UNIX and Windows, SAP NetWeaver Business Warehouse, SAP Industry Solution for Healthcare, including finance, accounting, controlling, asset management, materials management, warehouse management, sales and distribution and project systems.

Users: 30 users of SAP

required to compensate for slow query processing times, and are free to focus on other, more profitable operations."

With the SAP Industry Solution for Healthcare, patient, stock and cost data is entered at a single time and stored in a single place, and the solution handles the onward and related business processes, from invoicing to stock control.

Savings on space and costs

IBM DB2 includes advanced data compression technology, designed to reduce the data storage space required and to improve system performance.

Netcare was impressed to find that taking advantage of the Deep Row Compression capability in DB2, it was able to cut database sizes by an average of 40 percent. From a starting 900 GB of production data, compression reduces the data to approximately 500 GB, returning some 400 GB to the company's storage pool.

"It is a massive asset to us to have freed up so much extra storage space. This has translated into a massive saving for Netcare, ensuring optimal use of resources."

Travis Dewing concludes: "Our users are extraordinarily satisfied with the outcome of the migration and we continue to receive extremely positive feedback, and we have high hopes for exploring other DB2 capabilities in the future to further improve our systems. We are delighted to have a database that offers SAP NetWeaver BW the performance we need to manage Netcare's highly complex environment.

"The integration offered by the SAP applications and DB2 makes the two solutions perfect partners for our needs... Ultimately, this timely insight produces what has often been considered to be impossible: better healthcare and, at the same time, better business results."

Travis Dewing, Systems Integration Manager, Netcare

"The integration offered by the SAP applications and DB2 makes the two solutions perfect partners for our needs," says Travis Dewing. "Users can access data on demand, providing an overview of the company that allows managers to make unified decisions about money, medicine and management. Ultimately, this timely insight produces what has often been considered to be impossible: better healthcare and, at the same time, better business results."

IBM Deutschland GmbH
D-70548 Stuttgart
ibm.com/solutions/sap

SPC03290-ZAEN-00 (December 2010)