



## **BANCO DO BRASIL BOOSTS MAINFRAMES PERFORMANCE**

*Adoption of the tool DB/IQ, implemented by RSI Informática, saves database disk space, improves performance and delays new acquisitions and costly upgrades*

Production capacity planning and control departments of the Banco do Brasil are in the process of implementing DB/IQ, in order to identify and correct problems concerning the quality of SQL and DB2 databases in the mainframe environment at their centers in Brasília and Rio de Janeiro. The software utility was acquired through the electronic trading room, in December 2006, and although not all features have been implemented, DB/IQ has proved its potential immediately.

After just a few months of use, DB/IQ has regained disk space used by DB2 databases and indexes and improved the processing capacity of the institution's mainframes. Álvaro Peres, manager of division for analysis of performance and capacity planning of the Banco do Brasil proudly quotes *"There are several measured gains, but I believe the main one is the fact that the gain of CPU will allow us to postpone the purchase of new equipment for some time"*.

Developed by InSoft Software GmbH in Germany, DB/IQ is marketed exclusively in Brazil by RSI Informática, who was responsible for implementing the software in the institution. According to Peres, the search for such software, to ensure monitoring and control of the quality of databases and SQL, was initiated because the manual task would be impossible in a large institution's structure such as BB.

*"Applications degrade naturally - imagine this deterioration in a structure that processes 410 million transactions daily. We use DB2 version 8, data totals 260 billion rows and allocates 66 TB of storage. Our largest table has eight billion rows, up to 800 new modules or changes are transferred into our production systems every day; 90% of which with SQL. In short, it was impossible verify quality without the help of a tool"*, affirms the executive.

Furthermore, the processing of the bank's transactions accessing DB2 consumes 67% of the total processing capacity, which reaches 109,410 MIPS. According to Peres, the job of pursuing the consuming "villains" was very much manual and results were often too late. *"The tools that we had gave results, but over a very long period. This is what motivated us to seek something that automated the process"*, he remembers.

So far, two DB/IQ components have been implemented: QA and IA. The first one ensured the SQL standards, while the second one is responsible for checking and optimizing indexes. *"Our main focus is to hinder SQL instructions coming into production, which would otherwise violate standards. For this, we set some goals: optimize disk space, improve performance and identify and solve problems"*, explains Peres.



The manager of the division remembers the initial DB/IQ reports produced, containing information which would have been impossible to raise in so short time in any institution the size of the Banco do Brasil. Some examples: the analysis of the bank's "acceptance" environment presented 1,012 indexes unused, 210 duplicated identical indexes and 6,788 indexes smaller than ten pages. The unused indexes themselves occupied 340 GB of disk space. Another analysis, made in the production environment, unveiled 8,609 unused indexes and 209 duplicate indexes. In this case, the unused indexes occupied 5 TB of disk space.

*"The analysis reports allowed us to take corrective action and standardize our environment"* said Peres, remembering that only the exclusion of indexes guaranteed more space in disk and increased the processing capacity. The manager affirms that the next steps should include the implementation of the QA module in the evaluation of new SQL programs, the adjustment of the process of creating indexes and tables and introduction of features such as DB/IQ's *trace monitor*, which will analyze dynamic queries.

For Roberto Murillo, managing-partner in RSI, the results obtained so far by the Banco do Brasil strengthen the positioning of RSI within the financial segment. "We spent many years strengthening the strategic importance of topics such as testing and quality of software and the financial sector was one of the first to realize this. This has heavily impacted our focus on performance", he says. The executive is right, that the use of DB/IQ by the Banco do Brasil should become a major reference in the financial sector.

**About RSI** - established in 1993, RSI is a company specializing in services directed toward the guarantee of the quality of the information. Pioneer in Brazil in the development of methodology and tooling for testing and quality of software, the RSI is partner of world-wide leader companies of the segment. RSI offers to the market a range of services that extends from consulting, training, diagnosis and implantation of methodologies to services for testing and independent homologation of the software, "on-site" or in the model "factory testing".

With offices in São Paulo (headquarters), Brasília and Rio de Janeiro, the company provides services to corporations with high dependence on information technology and willing to invest in the prevention of failures in their systems by improving the quality of their software. The company keeps its differential supported by three pillars: a market focus on highly specialized, high investment in research and development and strategic management of the human capital.

More information can be obtained on the site <http://www.rsinet.com.br/>

**Further Information:**

**Communi Marketing – Assessoria de Imprensa**

**Coordination Press:** Fabio Barros ([fbarros@comuni.com.br](mailto:fbarros@comuni.com.br))

**Contact:** Rafael Passos ([rpassos@comuni.com.br](mailto:rpassos@comuni.com.br))

**Tel:** +55 11-5501-4007