Sicoob avoids USD 1.5 million in annual costs with IBM

Supporting rapid business growth with robust, secure and efficient mainframe technology

Overview

The need
To reach its goal of being the primary provider of financial services to its members, Sicoob needed a flexible, secure and scalable IT infrastructure to support reliable 24/7 service and mobile access.

The solution
Created a virtualized Linux landscape running more than 300 production environments on two IBM® System z® 196 servers, and deployed IBM DB2®, IBM InfoSphere® DataStage® and IBM Cognos® software.

The benefit
Enabled growth of 600 percent in mobile, 200 percent in internet, and 60 percent in in-branch transactions; avoiding USD 1.5 million in electricity costs annually; delivers new services faster.

Credit Unions System for Brazil (Sicoob) is the largest credit union system in Brazil, offering banking and credit services to more than 2.5 million people. Sicoob offers the same range of financial services as any large retail bank globally, but with a crucial difference: its customers are also its owners, so the financial returns benefit their communities rather than enriching shareholders.

As Sicoob's members embrace mobile and social technologies, the organization needs to ensure it can meet the needs of these members wherever and however they choose to interact. Ricardo Antonio, CIO at Sicoob, explains: "Our aim is to be the primary financial institution for our members. Increasingly, this will mean offering a complex set of products and services through self-service mobile channels, available 24/7. Our members need to feel that they can 'take their bank with them' wherever they go."

In recent years, as Brazil has grown into a global economic player, Sicoob has sought to keep pace. "Our challenge has been to create an institution that is more adaptable to the national growth scenario but with stronger social appeal, unlike a traditional bank," says Marcos Vinicius, the organization's head of technology infrastructure.

"Compared with databases on our previous distributed landscape, DB2 running on Linux on the IBM System z platform offers more reliability and performance, and better integration with our backup, monitoring and ETL tools."

—Paulo Nassar, IT Processing and Storage Infrastructure Manager, Sicoob

Rapid business growth, parallel growth in the number and range of Sicoob products and services, and this desire for everywhere-and-always-on services converged to create the perfect storm for Sicoob's existing distributed infrastructure, which was running all core banking services.

"We had a lot of servers to process an operational volume that was considerable for the time," explains Vinicius. "However, ongoing and projected future growth meant that the model of adding new servers one by one was financially unsustainable. In addition, the administration of the infrastructure was becoming increasingly complex and costly."

The bank had accumulated a diverse set of Intel processor-based servers, and this sprawling infrastructure was unreliable, costly, inflexible and difficult to expand. Sicoob had to add new physical servers to support each new requirement or simply to accommodate more transactions and members—each time pushing up the complexity, inefficiency and cost. To support the ongoing rapid growth of its business and the development of new capabilities, Sicoob needed a completely new model for IT. The organization made a strategic decision to virtualize its Intel processor-based distributed servers to the IBM System z platform. Today, Sicoob is running more than 300 SUSE Linux-based virtual servers on IBM z/VM® across two IBM zEnterprise® 196 servers. An IBM System z10® server located at a second site provides a disaster-recovery option and hosts the development landscape.

Smarter Computing: The IT Infrastructure of a Smarter Planet

Sicoob built a private cloud on the IBM System z platform, enabling a transformation in the speed, reliability and efficiency of the financial services it offers to members. Replacing distributed, Intel processor-based servers with Linux virtual servers on System z has also enabled the organization to avoid USD 1.5 million per year in energy costs, and supports Sicoob's ongoing business growth by enabling new servers to be provisioned in seconds. The efficient management and fast analysis of vast quantities of financial and customer data is at the heart of Sicoob's success; the IBM solution includes InfoSphere and Cognos software to support smarter decisions through near-real-time access to rich, highly accurate information.

Solution components

Software
- IBM® DB2® for Linux on System z®
- IBM Cognos® for Linux on System z
- IBM InfoSphere® DataStage® for Linux on System z
- IBM InfoSphere QualityStage® for Linux on System z
- IBM z/VM®
- SUSE Linux Enterprise Server for IBM System z

Hardware
- IBM zEnterprise® 196
- IBM System z10® Enterprise Class
- IBM PureData™ System for Analytics N1001-05 (formerly IBM Netezza® 1000-6)
- IBM Netezza 100

"With IBM System z we are spending 400 percent less on power than if we had a distributed environment instead, avoiding around R$ 3 million [USD 1.5 million] of electricity costs each year."

—Marcos Vinicius, Head of Technology Infrastructure, Sicoob

Denio Rodrigues, Information Technology Executive at Sicoob, comments: "Challenges and opportunities have led us to restructure our technology infrastructure and adopt IBM System z mainframe technology, which guarantees greater stability and performance for our products and services. This facilitates our growth, by lowering the cost of maintenance and administration in the production environment, and by reducing power consumption in the data center. The key benefits in adopting IBM System z are availability, scalability, performance, security, lower licensing costs, easier management, less use of space in the data center, and in particular reduced energy consumption."

Powerful software in the cloud

Sicoob sees technology as a cornerstone of its business, as Ricardo Antonio explains: "The more data we store electronically, the better the financial returns for our members. Why? Paper is expensive to store, expensive to transport, and expensive to handle. As we digitize information and computerize our services, we can optimize processes and grow the business to the benefit of all members. To handle the growth in data-processing capabilities, we opted for a virtualized private-cloud infrastructure on the IBM mainframe. This decision means that we can support enormous growth within the same physical and environmental footprint, and without a corresponding increase in administration and energy costs."

The System z environment provides an optimal combination of IBM hardware and software to help Sicoob tackle the challenges of growth and seize the opportunities of business analytics. With IBM DB2 9.7 for Linux running in virtual environments on its mainframes, the organization has a robust and easy-to-manage platform for processing and storing huge amounts of financial data. Sicoob has 50 DB2 databases storing a total of 22 TB of data. The largest of these—at 10 TB and growing by 300 GB a month—contains scanned images of credit contracts and deposited checks.

"Over the past year, through our self-service channels, we grew by nearly 600 percent. It would not have been possible to support this growth without IBM System z."

—Denio Rodrigues, Information Technology Executive, Sicoob

Paulo Nassar, IT Processing and Storage Infrastructure Manager at Sicoob, says, "Compared with databases on our previous distributed landscape, DB2 running on Linux on the IBM System z platform offers more reliability and performance, and better integration with our backup, monitoring and ETL tools."

He adds, "The built-in management tools enable us to monitor DB2 databases in critical environments in an easy and agile way."

Delivering critical insight

IBM InfoSphere DataStage gathers and transforms data from all Sicoob branch offices and loads it into the central databases. Also on System z, Sicoob uses IBM InfoSphere Information Analyzer to manage the quality of data from acquisition to archival or disposal. The solution employs a single metadata repository to provide a standardized view of the entire data landscape, and provides a customizable interface for creating reports and analysis. IBM InfoSphere QualityStage® delivers accurate, complete information to business users across Sicoob, helping to ensure that decisions are based on information rather than conjecture.

Sicoob is now rolling out a complete business analytics architecture based on IBM Cognos Business Intelligence software running on Linux on IBM System z. Cognos is designed to enable smarter decisions based on the timely analysis of accurate data, helping organizations of all types to manage their performance for optimized business results.

"We previously used in-house systems for analytics in each branch," says Paulo Nassar. "Cognos generates insightful reports and sophisticated dashboards, providing quick and accurate information to senior management. We are now adding more reporting functionality—on business revenue, credit data, loan risks, and so on—to make Cognos the complete decision-support system for Sicoob."

"With System z, growth is easy: we can start a new Linux virtual server on z/VM in seconds, or for a larger requirement, simply turn on a new processor."

—Ricardo Antonio, CIO, Sicoob

To accelerate its analytics, Sicoob has also deployed IBM PureData™ System for Analytics N1001-05 (formerly IBM Netezza® 1000-6) and a smaller IBM Netezza 100 for development. The PureData appliances are connected to one of the z196 servers, simplifying and optimizing the performance of data services for analytical applications, enabling very complex algorithms to run in minutes not hours.

Powering business growth

Sicoob is one of a growing number of businesses that use IBM z/VM to run Linux virtual server landscapes; today, more than 3,000 applications worldwide run on Linux on System z. Sicoob has transformed the speed, reliability and efficiency of the business services it can offer to its members. As the organization builds up its Cognos environment on the same platform, members will benefit from Sicoob's increased ability to analyze their changing requirements and design appropriate financial products to meet their needs. With its mature virtualization technology, the IBM System z platform supports Sicoob in creating an "industrial production line" that allows the bank to deploy new services securely, rapidly and at minimal incremental cost.

In the former distributed infrastructure, the time taken to procure and deploy new physical servers was an obstacle to launching new services. "We had ready-to-go applications that we could not launch because of the lack of infrastructure capacity," recalls Ricardo Antonio. "With System z, growth is easy: we can start a new Linux virtual server on z/VM in seconds, or for a larger requirement, simply turn on a new processor."

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> —Denio Rodrigues, Information Technology Executive, Sicoob

"The System z solution has effectively met all of the criteria evaluated with respect to availability, performance, security, scalability, processing and storage capacity," Rodrigues notes. "This has enabled the growth of our business products and our network in general. Over the past year, through our self-service channels, we grew by nearly 600 percent; Internet banking grew by 200 percent; for mobile solutions, growth was 600 percent. It would not have been possible to support this growth without IBM System z."

Multi-million dollar savings

Sicoob estimates that it would require more than 400 standalone Intel processor-based servers to support the workload managed by the Linux virtual servers on its z196 mainframes. The organization is therefore avoiding the use of an additional 6 million kWh of electricity each year, avoiding 270 tons of CO_2 emissions. Electricity consumption is 23 percent lower than in 2007, despite significant growth in transactional volumes and account numbers. For example, that period saw a 60 percent rise in in-branch transactions, a 625 percent increase in ATM transactions, and more than one million new current accounts opened.

Vinicius comments: "IBM System z gives us flexible and robust processing, capable of handling extreme growth, with very well integrated tools for extracting, storing and manipulating data. We have reduced the complexity of our technology, with fewer servers, less administration, lower software maintenance costs, and a significant reduction in energy consumption. With IBM System z we are spending 400 percent less on power than if we had a distributed environment instead, avoiding around R$ 3 million [USD 1.5 million] of electricity costs each year."

With the robust System z hardware and highly integrated IBM mainframe software, Sicoob has a secure platform capable of supporting its rapid growth as it aims to become the primary provider of financial services to its members.

"We chose what the other major banks throughout the world use: IBM System z," concludes Ricardo Antonio. "It's the best environment for financial services. And when you know you are using the best, you can focus on developing the business rather than worrying about the technology."

For more information

To learn more about IBM solutions, contact your IBM sales representative or IBM Business Partner, or visit us at:
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