

Scotiabank reduces its cost per transaction while improving availability of core applications

Meeting new business needs with legacy applications and IBM IMS Connect

Overview

Challenge

Shorten recovery times for servers critical to customer service delivery and protect the bank's investment in core banking software.

Solution

Deploy IBM® IMS™ Connect software and IBM IMS Connect Extensions to change the connectivity mechanism for key servers, making applications more available and extending TCP/IP networking throughout the infrastructure.

Key benefits

IBM IMS Connect software and extensions deliver immediate value, dramatically reducing recovery time by 90 percent for IMS applications and reducing transaction costs while enhancing application management. IMS Connect also helps reduce future costs by enabling the bank to continue leveraging its core banking applications to meet new business needs.

Scotiabank is one of North America's premier financial institutions, and Canada's most international bank. Since welcoming its first customers in Nova Scotia in 1832, Scotiabank has continued to expand—and today offers personal, commercial, corporate and investment banking to 18.6 million customers in more than 50 countries around the world.

Highly effective IT systems are essential for supporting the bank's strategy of diversifying its products and locations, and the Scotiabank IT team continually looks for ways to optimize its infrastructure. Years of investment and fine-tuning by Scotiabank have also resulted in a set of highly stable software applications for core banking functions—an investment the bank seeks to preserve.

To power the core banking software, Scotiabank relies on the secure and scalable IBM® z/OS® operating system on IBM System z® mainframe computers. Connected to the mainframes is a large and growing tier of midrange IBM System i® servers running IBM AIX® and front-end applications ranging from cash management to online banking. These midrange servers connect to the mainframes for core banking functionality and to thousands of PCs, laptops, automated teller machines (ATMs) and other computing terminals used by bank branch employees and customers in North America.

IBM Information Management System (IMS) software plays a vital role for Scotiabank, enabling high-performance processing of transactions between the server tiers and user computers. For example, when a customer walks into a branch, the IMS environment helps enable a service representative to instantly pull up an account history for that customer and process a deposit or loan application for them.



Ensuring reliable customer service requires faster system recovery

To ensure reliable customer service, Scotiabank maintained a hot-standby implementation of the IMS environment for rapid recovery in case of a failure. But while the PCs and terminals automatically reconnected to the standby within two or three minutes, the midrange servers did not reconnect with the IMS transaction manager and the mainframes. “The problem was the communications link,” explains Craig Oddy, senior enterprise architect at Scotiabank. “The software that handles communication for the mid-tier servers had to be manually shut down and reconnected.”

The bank had been using the Systems Network Architecture (SNA) communications protocol stack, including the virtual telecommunications access method (VTAM), to connect its mainframe computers to the IMS transaction manager and mid-tier servers. “We narrowed the problem down to our use of SNA,” says Oddy. “In particular, VTAM made the reconnection process extremely slow.”

IBM recommends IMS Connect to shorten recovery time and reduce costs

Oddy turned to IBM to help find a solution. “IBM recommended using IMS Connect to change our IMS connectivity mechanism from SNA to TCP/IP,” says Oddy. “That change had the potential not only to shorten our recovery times, but also to lower our cost per transaction.”

IBM Rational® Developer tools for System z enabled a smooth deployment. IMS Connect provides high-performance communications for IMS using the TCP/IP protocol. Data processing takes place on the IMS message queue and uses simple interface commands. IMS Connect can manage many thousands of transactions per second, while maintaining state and updating IBM IMS and IBM DB2® databases as part of the transaction process.

IMS Connect Extensions provide strong transaction management

To provide robust management of IMS transactions, the bank also deployed IMS Connect Extensions. With the extensions, the IT team can analyze problems and optimize performance by recording details of activity in IMS Connect, and create detailed IMS Connect reports in conjunction with IBM's IMS Performance Analyzer. Additionally,

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— Craig Oddy, Senior Enterprise Architect,
Scotiabank

the Scotiabank team is using a real-time feed into IBM OMEGAMON® XE to view graphical real-time reports of TCP/IP activity. If a delay or other problem occurs with a transaction, IBM Connect Extensions allow the bank to quickly pinpoint the source of the difficulty. “Moving away from SNA has not caused us to lose any monitoring or management capabilities,” says Oddy. “In fact, they’re better than before.”

Scotiabank reduces recovery time

The Scotiabank IT team conducted proof-of-concept (POC) tests using IMS Connect, with excellent results. “Based on the POC, we can achieve much better availability of the applications in the IMS environment,” says Oddy. “The user will see only a small blip.”

Recovery times may be even shorter, because the bank IT team decided to deploy multiple redundant back-end IMS systems and IMS Connect instances. IMS Connect Extensions enable the team to optimize transaction routing. “We have the traffic spread out among three different IMS servers,” says Oddy. “If we were to lose one server, connectivity will continue through the others. That way, only a third of the transactions are affected and we have fewer connections to recover.”

IMS Connect helps Scotiabank reduce transaction costs

Implementing IMS Connect has enabled Scotiabank to immediately operate at a lower cost. The bank regularly tracks the cost of transactions using a mechanism that accounts for factors such as hardware, software and operational expenses. Because TCP/IP is a newer and simpler communications protocol compared with SNA, it is less expensive. “By making the change to IMS Connect, we are spending less money to deliver our IMS applications than we were previously—as much as 30 percent less according to some preliminary estimates,” says Oddy.

With IMS Connect, the number of transactions is reduced as well, because TCP/IP permits transmitting larger blocks of data than SNA. For a customer with a large number of accounts, for example, pulling up an account history might take several transactions to get all of the data from the IMS database. But with TCP/IP, the same data can be handled in one transaction—resulting in faster service for the customer and less overhead for the bank.

Key Components:

- IBM® System z®
 - IBM IMS™ Connect
 - IBM IMS Connect Extensions
 - IBM Rational® Developer for System z
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Moving to TCP/IP helps keeps core applications relevant to tomorrow's needs

In addition to faster recovery times and transaction cost savings, implementing IMS Connect also means that the bank now has end-to-end TCP/IP connectivity throughout the infrastructure, leading to lower networking and support costs. “Even more important, the change helps us strategically because the Internet protocol is the wave of the future,” says Oddy. “With everything from mainframes to mid-tier servers and end-user devices speaking the same language, our infrastructure is well positioned. We can use our legacy core applications as key elements in integrated, enterprise-wide solutions to meet new business needs.”



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November 2011
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