The National Bank of Canada Accelerates Deployments at Scale

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Executive Summary

The National Bank of Canada (NBC), the country's sixth-largest commercial bank, set out to transform its infrastructure for speed and scale. NBC's ultimate goal was to dedicate more of the organization's time and resources to business innovation instead of infrastructure management. By shifting away from an on-premises installation of its core trading solution, Murex's MX.3 platform, the bank was able to provision new instances in minutes instead of months and gain better visibility into costs. NBC now runs its non-production MX.3 environments exclusively on Amazon EC2 instances.

A Commercial Bank Seeks an Easier-to-Manage Solution

The National Bank of Canada (NBC), one of Canada's largest financial services organizations, wanted to optimize its existing on-premises installation of MX.3, an open platform from Murex that supports trading, treasury, risk, and post-trade operations. Across the numerous projects in parallel, MX.3 ran on more than 100 servers in the bank's own data center. NBC spent significant time and resources managing and upgrading this on-premises infrastructure, making deployments of new installations a complex, nearly impossible process. "We wanted to scale the infrastructure to provision environments to meet growing business needs. The business continued to enhance MX.3 and create new projects, but it typically took weeks or months to order, procure, and implement new infrastructure. This made it difficult to achieve our objectives," says Sylvain Gagnon, software system specialist at NBC.

Gaining Agility and Scalability by Moving to AWS

NBC chose to use the AWS Cloud for development and test environments for MX.3 installations. Murex had certified its MX.3 platform on AWS so its customers could move MX.3 installations running on premises to AWS. "We knew we wanted to use the cloud, and AWS was the most efficient cloud provider in the market," says Gagnon. "AWS gave us the scalability and flexibility we were seeking." NBC runs its MX.3 environment on Amazon Elastic Compute Cloud (Amazon EC2) for compute and high-performance computing (HPC) layers; Amazon Elastic File System (Amazon EFS) and Amazon Elastic Block Store (Amazon EBS) for persistence of system data; and Amazon Simple Storage Service (Amazon S3) for storing binaries, logs, and more.

NBC Financial Markets uses MX.3 across asset classes, including interest rate derivatives, fixed income, equity derivatives, and commodities, from front to back office, including limits management and enterprise market risk. Within one platform, the same pricing libraries are used by front office and risk management teams, delivering accuracy and consistency across the organization.

NBC also wanted to understand the total cost of ownership of running different MX.3 installations at the outset. "For each new business dream, we were unable to provide an accurate cost estimate. One objective was to provide a detailed breakdown of infrastructure costs – down to a specific monthly number. Moving to a pay-per-usage model enabled cost efficiencies that were previously not possible when we had to resource for peak capacity," Gagnon says. "In addition, we lacked the flexibility to scale the infrastructure after the initial estimate. We were looking for the direct effect on the usage cost to be reflected in real time."

About National Bank of Canada

NATIONAL BANK

The National Bank of Canada (NBC) is the sixth-largest commercial bank in Canada, with 2.4 million customers and branches in most Canadian provinces. Based in Montreal, NBC is the largest bank in Quebec and the second-largest financial institution in the province.

Launching MX.3 Instances in Minutes Instead of Months

NBC achieved more agility and scalability by directly spinning up as many MX.3 instances as required from a menu of two available MX.3 image sizes and a range of historical dates when snapshots were taken. “By using AWS, we can spin up MX.3 instances in minutes instead of several months,” says Gagnon. “This is another world for us, and it has completely transformed how we do things. We could never have achieved this in our data center. For example, if the business needs 90 new MX.3 environments this afternoon, we can now meet that request.”

The organization’s IT staff can spend more time innovating instead of managing the server infrastructure. As a result, the NBC IT team can spend its time extending usage of the MX.3 application and creating functional value for the company’s lines of business. “We formerly had a team of 20 people managing 120 servers. Now, the majority of that team can work on other projects instead,” says Gagnon. “They can improve the services we offer to the business, explore new AWS services, and migrate additional financial applications to AWS.”

Gaining Visibility into Costs

NBC’s leaders can now monitor the costs of running MX.3 installations in real time. “We have gained visibility into our costs by using AWS, which helps us speak accurately to the business about exactly what we’re spending, so we can better control our costs,” Gagnon says. “And taking advantage of the elasticity of the cloud, we can scale down to a lower number of instances to save money in real time when we’re not using those environments. We expect to deliver greater value from efficiencies as we expand our use of AWS services.”

In an industry pressured by costs, evolving business expectations, and the need for faster time-to-market, NBC was able to modernize and free up precious resources for more high-value tasks.

About Murex

Murex provides enterprise-wide, cross-asset financial technology solutions to capital markets players. Its cross-function platform, MX.3, supports trading, treasury, risk, and post-trade operations, enabling clients to better meet regulatory requirements, manage risk, and control IT costs. Murex has clients in many sectors, from banking and asset management to energy and commodities.

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