Big Bank, Big Data

Vertica enables large financial institution to better manage risk, reduce fraud, and enhance compliance

Overview

In the aftermath of the 2008 global financial crisis, banks woke to a new reality—one where big data is a business critical priority. Banks were newly sensitized to risk, and more resolved than ever to avoid it. Regulatory scrutiny was heightened as governments tightened their oversight of marquee financial institutions.

"Banks realized they had to invest in big data analytics to better understand the impact of markets on their liquidity," notes Mike Krolnik, who serves as Head, Technology and Engineering at a large North American bank. "And regulators today need banks to track more granular data." Krolnik's bank therefore implemented the Vertica Analytics Platform.

> **"Today's banks need the kind of speed and scale that Vertica delivers."**
>
> **MIKE KROLNIK**
> Head, Technology and Engineering
> North American Bank

Challenge

A Quarter of the Hardware— without Compromising Performance

The bank's decision to deploy Vertica software began around three years ago when it began consolidating its RISC platform reporting solutions. Krolnik, who had worked with Vertica previously, was tapped to head up the initiative; he oversaw an evaluation of six big data analytics solutions. "We performed around 100 tests, from batch uploads to different types of analytics queries, on both our hardware and the vendors,'" Krolnik recalls.

Vertica emerged as the clear favorite.

First, the SQL analytics solution's well-known query speed meant analysts could get results 500 times faster on their standard SQL or Oracle databases.

Cost-effectiveness was another benefit. "Vertica could run on 25% of the hardware footprint of the other solutions," Krolnik says. The Vertica licensing framework also let the bank align the solution to its capacity needs. "Vertica doesn't require a minimum buy of 100 terabytes, like other vendors."

At a Glance

■ **Industry**
Finance

■ **Location**
North America

■ **IT Matters**
+ Billions of rows of data—and queries take only minutes
+ Queries 500x faster
+ Hardware footprint 25% the size of other solutions
+ Straightforward Hadoop integration

■ **Business Matters**
+ Accelerated risk analysis supports faster business decisions
+ Faster fraud detection protects bank customers, bank brand
+ Enables regulatory compliance despite fast-growing, fast-changing regulatory requirements

Krolnik's team liked Vertica software's development tools, which were compatible with an agile development approach. And finally, the bank was considering Hadoop, and Vertica is easily integrated with a Hadoop data repository.

Solution

Lightning-Fast Queries on Billons of Rows of Data

For a couple of years after the bank purchased Vertica, Krolnik worked on other IT projects. Then the bank decided to implement Hadoop, and he was recruited to lead the new project. So after a clean-up period, Krolnik's team stood up Hadoop and migrated Vertica onto new hardware.

Along the way, the team also expanded the Vertica license from a single Terabyte to 70—an expansion needed to support the bank's increasingly demanding big data analytics needs. "Our analysts are querying billions of rows of data," Krolnik says. "With Vertica, they can model extremely complex scenarios in minutes."

Results

Reduced business risk, improved fraud detection and enhanced regulatory compliance—on an accelerated timeframe. "When you run a query in Vertica software, it's going to be lightning fast," Krolnik concludes. "It's performance you wouldn't think is possible."