



University of Toronto

Revolutionizing analytics with 106-times faster reporting on student enrolment data

Overview

The need

To help shape strategy and improve understanding of its enrolment environment, the University of Toronto sought actionable insights into patterns and trends in its admissions and enrolment data.

The solution

The University of Toronto chose IBM® DB2® with BLU Acceleration, which has already delivered 106-times faster response times for admissions and enrolment queries in a proof-of-concept environment.

The benefit

With faster answers to recruitment and admissions queries, the University will free up more time for additional analytics – helping it to uncover insights and build new strategies to achieve enrolment goals.

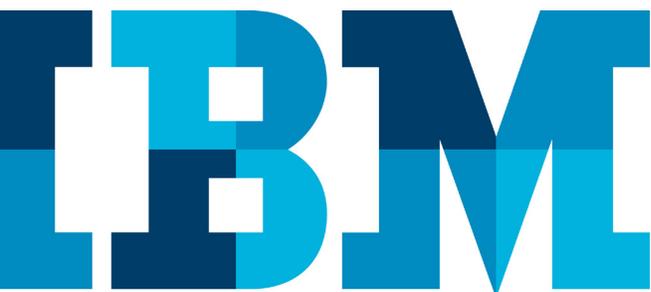
The University of Toronto (UofT) is a public research university in Toronto, Canada. It is home to approximately 65,000 undergraduates, 15,000 postgraduates, 11,500 faculty members, and 6,000 administrative staff members.

Setting the scene

To build on its international reputation as a leading research and learning environment, the University of Toronto wanted to ensure that it could continue to attract excellent students from the Greater Toronto Area, Canada and around the world.

Christine Beckermann, Business Intelligence Administrator at the University of Toronto, takes up the story: “Our clients use analytics cubes to measure key performance indicators, such as course enrolment by subject, students’ performance on their chosen courses, and UofT’s enrolment share relative to other Ontario institutions.

“Competition for the top students is no longer just a local focus, it is global, and the recruitment game is much tougher. Thanks to tools like IBM DB2 with BLU Acceleration, we have powerful data at our disposal to allow us to be extremely strategic and targeted with our recruitment resources, and with that UofT has been able to continue to meet enrolment targets and attract top students from around the world,” says Ken Withers, Director of Student Recruitment at the University of Toronto.



Solution components

Software

- IBM® DB2® with BLU Acceleration
 - IBM Cognos® Business Intelligence
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“This information is extremely helpful for our business administrators, as it enables them to detect patterns, and make recruitment adjustments accordingly. For example, UofT can look at its recruitment regions to see if those efforts are paying off and determine whether strategic adjustments need to be made.”

Facing a mountain of analytics data

With a data warehouse growing by 50 percent each year, UofT faced a tough challenge uncovering timely insight from this store of information.

Brenda Boshoff, Senior DBA at University of Toronto, says: “The amount of data we need to analyze is increasing all the time. We often invested time in developing new reports, only to find that our clients were not running them because they took too long to complete.

“There were a few admissions and enrolment queries that could take longer than 30 minutes to execute – and if there were any errors, the client would have to start all over again, or simply cancel the job outright. This wasted valuable time, and greatly diminished clients’ perceptions of the value we add to the business intelligence process.”

Building on a modern data platform

As experienced users of IBM DB2 and the IBM Cognos® Business Intelligence platform, UofT turned to latest-generation IBM solutions to boost the performance of its analytics workloads.

“After reviewing our options, we were confident that purchasing latest version of IBM DB2 with BLU Acceleration would deliver the performance gains we were looking for,” says Boshoff. “To confirm that we were on the right track, we worked with IBM to conduct a thorough proof-of-concept [POC].”

UofT deployed a test environment based on IBM DB2 with BLU Acceleration – a next-generation data platform that powers transactional and analytical workloads in a single, cost-efficient package. By utilizing compressed, columnar in-memory technology, the solution enables lightning-fast performance for complex analytics workloads.

Accelerating analytics by 106x

“The results of the POC were outstanding,” says Boshoff. “Not only did IBM DB2 with BLU Acceleration deliver the targeted performance, it proved to be both simple to use and integrates seamlessly with our IBM Cognos platform.

“Thanks to our IBM solutions, we are better placed than ever to discover ways to enhance our evidence-based decision making, which will ultimately help with student recruitment and retention efforts.”

— Brenda Boshoff, Senior DBA,
University of Toronto

“From the time we started the installation, it took less than three hours to start running queries in the POC environment. Compared to our current production system, test queries on DB2 with BLU Acceleration ran 106-times faster for our admissions and enrolment workloads.”

Beckermann adds: “Purchasing the newest version of IBM DB2 delivered a near-instant 15 percent performance improvement for our overall reporting processes, and laid the solid foundation we needed to begin the BLU Acceleration deployment.”

Freeing time to uncover deeper insight

With the implementation process well underway, UofT anticipates major improvements to the depth, frequency and utility of its enrolment and admissions reports.

“In some cases, clients have become used to setting up a report, and then waiting a substantial amount of time for it to complete,” says Boshoff. “When IBM DB2 with BLU Acceleration goes live, that will all change. For example, there was one query that clients would often cancel if it didn’t finish in 30 minutes. Soon, it will run in 56 seconds every time.

“By freeing up that time, our clients will be able to run more reports and perform much deeper analyses more efficiently. Thanks to our IBM solutions, we are better placed than ever to discover ways to enhance our evidence-based decision making, which will ultimately help with student recruitment and retention efforts.”

Saving hundreds of hours a year

Since the new solution eliminates the need for repetitive, manual database tuning tasks, the University estimates that it will be able to boost its operational efficiency substantially.

“The simplicity that BLU Acceleration provides is remarkable,” says Boshoff. “We have seen much faster query performance with literally no tuning, no index creation, or anything else. We project this will save us 42 days per year in lower administration and tuning efforts – and that’s just for our data architect who tunes the queries. With IBM DB2, we get faster queries, predictable response times and a reduced need for database tuning – what more could we ask for?”

Withers concludes: “Thanks to tools such as IBM DB2 with BLU Acceleration, we have powerful data at our disposal to target our recruitment resources strategically. Using deep analytics insights, the University of Toronto continues to meet enrolment targets and attract top students from around the world.”

For more information

To learn more about IBM DB2 solutions, contact your IBM sales representative or IBM Business Partner, or visit us at: ibm.com/db2

For more information on the University of Toronto, visit: utoronto.com



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