

A large bank in Asia enhances its world-class digital banking services with IBM Automatic Binary Optimizer for z/OS

Solution

IT Infrastructure

Industry

Banking

Company name

A large Bank in Asia

Introduction

To continue providing world-class digital banking services for their customers, the bank always makes sure that their critical online applications are performing at the highest level. They leveraged the world's most advanced COBOL optimization technology to achieve high performance without recompilation or extensive testing, and reduced operating costs as a result.

"Enterprise COBOL for z/OS®" is referred to as Enterprise COBOL or COBOL throughout this article.

Business challenge

To continue delivering a world-class customer experience for its banking clients, the bank aimed to realize the full potential of its new IBM Z® hardware to enhance the efficiency of its core business applications.

Transformation

Using IBM Automatic Binary Optimizer for z/OS's world's most advanced COBOL optimization technology, the bank was able to exploit the latest Z hardware capabilities, reduce CPU usage without recompiling their COBOL code, and keep their development and testing efforts where it was most needed.

Results

1000 to 2000 MIPS	Around 300 COBOL modules	Z hardware exploitation
saved by optimizing COBOL modules using the world's most advanced optimization technology of ABO.	successfully optimized with ABO, while retaining the same program behavior.	without recompiling source, keeping testing efforts minimal as a result.

Business challenge story - How can a bank enhance its digital services with minimal effort?

With high demand comes great opportunity for advancement. Today's banks face the need to advance their digital transformation when it matters the most. But with core applications that are running on older code, transformation can come with extra effort and risk. The bank faced a big challenge: how can they upgrade online applications that are running on older COBOL code without the complexity of a complete migration of their entire COBOL estate?

The bank relied on IBM Z for transaction and data processing for many years. They recently upgraded to the IBM z14+ server and wanted to take full advantage of the hardware architecture. However, the bank has not migrated the COBOL compiler to COBOL 6. As a result, these applications are not able to take full advantage of their z14 server. " We have core business applications running on COBOL 4.2. Upgrading to COBOL 6 would allow us to get the most out of the latest Z hardware; however, this upgrade requires changes to the compiler options and source code as well as testing to validate those source code changes. The process involves a lot of time and effort. Since no source code changes are required with ABO, testing is significantly less. " said the IT lead.

To avoid this effort and exploit IBM Z hardware more quickly, the bank turned to IBM Automatic Binary Optimizer for z/OS (ABO). ABO uses the world's most advanced optimization technology to optimize COBOL code without recompilation while maintaining original program behavior. This not only helps to reduce migration efforts, but the preservation of program behavior also helps to reduce risk, which keeps testing efforts at a minimum. "We were pleased that ABO optimized our code without recompilation. As a result, we are able to quickly deploy the optimized modules with minimal testing effort. ABO is an excellent solution to optimize modules that were compiled with older versions of COBOL."

Transformation story - Upgrading the old to enhance the new experience

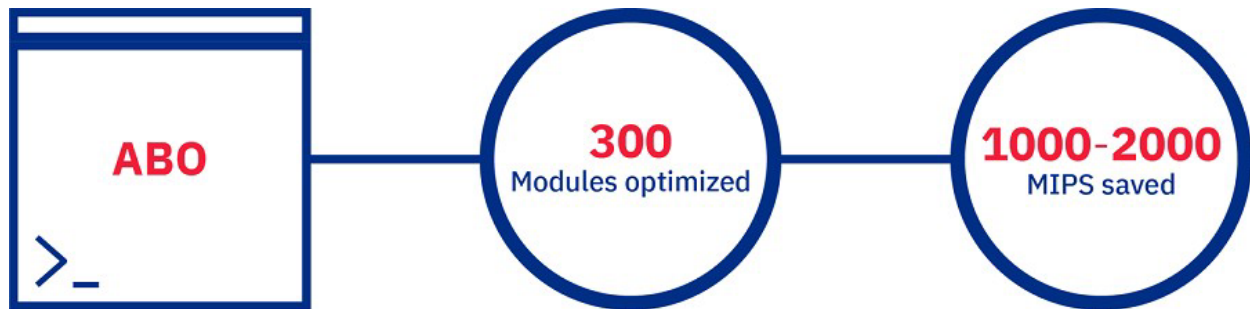


Working with IBM, the development team started by trying the on-premises ABO trial, by using a few COBOL modules. The optimizations were successful, and they continued on to their plans for optimizing online COBOL modules with ABO.

To make the most of ABO, the bank chose COBOL modules to optimize based on how much CPU time they consumed. "We chose the top CPU-consuming COBOL modules to optimize because we knew that that is where we would receive the most benefit from using ABO," explained the IT lead. They determined how much CPU time the COBOL modules consumed by conducting a performance analysis of the COBOL modules that were the most executed. They chose and optimized around 300 online COBOL modules so far by using ABO. ABO users can use the powerful [ABO Performance Advisor](#) for an automatic performance analysis, or refer to [step-by-step tutorial](#) for a manual analysis.

The bank then decided to break up deployment into two phases. This was done to reduce the risk of deploying the updated modules into production. "We deployed the modules in two batches: 30 modules in the first batch, and 270 modules in the second batch. We used the first batch of 30 modules to verify whether the optimized modules can work normally in the production environment. We found that the ABO-optimized modules preserved the original program behavior, and did so with better performance. As a result, we deployed the second batch of modules confidently. Within a few months from first trying ABO, we had all the optimized modules running in production."

Results story - Successful deployment with CPU savings



To continue delivering a world-class customer experience and meet the demand for efficient online banking services, this bank found a way to optimize older COBOL code without the effort of recompilation with COBOL 6. Using IBM Automatic Binary Optimizer for z/OS, they were able to optimize around 300 online COBOL modules without recompilation or added testing effort. This is because ABO preserves the original program logic, delivering increased performance without changing the behavior of the programs. Overall, they saved 1000 to 2000 MIPS, increasing efficiency and decreasing their operating costs. "ABO met our expectations. We were happy to get a reduction in CPU usage by 1000 to 2000 MIPS. ABO was the perfect tool for this," said the IT lead. By using ABO, they were able to optimize older modules with minimal effort, while keeping their recompilation and testing effort directed at new code development or existing code enhancement.

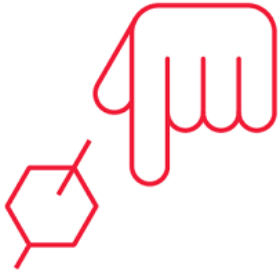
About a Large Bank in Asia

They aim to meet their customers' banking needs by providing reliable and flexible digital services.

Solution components

- IBM Automatic Binary Optimizer for z/OS
- IBM Automatic Binary Optimizer for z/OS Trial Cloud Service
- IBM Enterprise COBOL for z/OS
- IBM Z

Take the next step



To try out ABO without installing it, use the ABO Trial Cloud Service at <https://www.ibm.com/account/reg/cn-zh/signup?formid=urx-49350>. To learn more about how clients are experiencing success with IBM Automatic Binary Optimizer for z/OS, contact your IBM representative or IBM Business Partner, or see the [ABO product page](#).