

# Integrasoft Case Study

## Overview

Integrasoft Inc is a software house based in Iowa that supply ERP and accounting solutions.


They supply their software as SaaS, executing either on the customers own hardware or as cloud based services running in Azure.

They were running Cobol which interfaced to a web-based front end that they created using over 1,000 Web Service interfaces, each driving a Cobol program. Both online and batch was driven by the same web service interfaces so we do not have a distinction between the two. In total, the system comprised around 2.5 million lines of code.

Their customers vary from small (dozen users) up to large (a couple of hundred users) on any one system. The customers interact with their web application which in turn interacts with the COBOL via the web services as described.

But COBOL had performance issues, maintenance issues and the related cost implications were unviable and threatened their competitiveness.

MSS migrated all of Integrasoft's COBOL programs to Java and invented a bespoke solution: Generic Web Service (or GWS).



After a short period of adjustment all of our legacy COBOL developers are now working productively in Java and taking advantage of the new tools now available to them. The way in which the MSS COBOL to Java transcoding works meant that the new Java classes and programs are structured in a familiar way and this made the legacy developers transition relatively painless.

In summary we are now working in a more modern and productive environment, our customers are running the full Java version of IntegraSuite on-premise or in the cloud. Integrasoft is in a position to more rapidly innovate our products and be more price competitive in our product offerings. Integrasoft is in a position to respond faster to the demands of our customers, employees and the business".

Brian Hanna  
VP of Strategy & Development at IntegraSoft Inc

## Business Problem

Integrasoft was facing two main challenges:

1. Maintaining the COBOL was difficult and was becoming increasingly so due to the primary reasons of dwindling resources and cost implications.
2. Maintaining 1,200 web service interfaces was also difficult because each one has to be separately configured with the WSDL information. It was a big maintenance issue, because any change to a COBOL program meant a corresponding change to the WSDLs and the Java programs which supported them. These then had to be re-installed into the application server, which then had to be restarted. This took over 5 minutes for Tomcat to start up each time.

So they had performance issues, they had maintenance issues and the related cost implications. However their major issue was the cost of COBOL licensing, because they had to pay full licensing for the COBOL for every customer, which threatened their competitiveness.

## Business Solution

MSS migrated all the COBOL programs to Java and we invented what we call the Generic Web Service (or GWS) which automatically configured itself by requesting, and caching, configuration information directly from the relevant migrated Java program. In other words there is now one single web service, able to handle all incoming service requests, instead of over 1,000. This was a huge maintenance gain all by itself, with the task of individually maintaining all those WSDLs and associated Java programs (3 per WSDL) simply gone. Tomcat now started in seconds, rather than minutes.

The next thing MSS did was convert all their ISAM files to MySQL. MSS provided programs to automatically take the ISAM files (according to definitions that are created) and transfer them into SQL. We also provided configuration options which allowed IntegraSoft to selectively run the applications on a mix of SQL and ISAM.

An environment was built that allows them to replay whole days worth of transactions that are captured and they can then replay them on ISAM files and replay them on SQL files and compare the difference.

## MSS migrated all the COBOL programs to Java, improving efficiencies and reducing cost

### Results

Integrasoft can now employ Java programmers, outsourcing to a supplier in India who perform the application maintenance for them. They now don't have the increasing challenge of finding COBOL specialists.

So their cost of maintenance dropped, the speed of updates which they can now achieve is better, they have better development environments and whilst performance is not as good as before, it is close enough that their customers haven't noticed. (A single Java application will never outperform a single COBOL application until you start rewriting it - however the move has allowed them to start introducing new concepts and to do things better - the post migration/modernization phase that they have entered into they are conducting themselves).

They have a test environment where they run approximately 18,000 transactions sequentially in a test and they can replay that in either environment.

All in all they consider that quite a considerable win.

## How can we help you with your business challenge?

Our mission is to make transformational IT projects simple and painless. We can help you with your complex modernization challenges.

If you face a similar problem to Ford or want to talk about another challenge, please get in touch. We'll discuss your business problem further and how we can help solve it.

Contact: Sam Shnaps at [sam.shnaps@mssint.com](mailto:sam.shnaps@mssint.com)