



Case Studies

MiFID II Integration

Legacy integration with MiFID II provider using
SpringBoot micro service

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The Client

A leading global asset management organisation

The client is a leading global asset management organisation with a multi billion Euro AUM.

The client has an existing Enterprise Service Bus (ESB) architecture based on IBM Integration Bus (IIB) which is used to exchange trading information between multiple front office applications and an outsourced back office facility.

The client is currently in transition, migrating away from this architecture to a consolidated single front office application interfaced directly to the back office.

The Project

Short timescales, specific requirements, high risk

The client's migration to their new architecture was planned to deliver the requirements for MiFID II within the regulatory timeframe mandated. However, due to circumstances beyond the control of the client the new front office application was not able to deliver the MiFID II requirements in a timely fashion.

It became clear that the existing "legacy" architecture would have to support a temporary tactical solution delivering the MiFID II requirements until such times as the new architecture was able to do so.

The nature of the multiple systems involved and the regulatory requirements led the client to adopt a centralised file based interface with the MiFID II provider. All systems were required to deliver files of MiFID II trading data into, and retrieve response files from, a specified windows distributed file system (DFS).

However, the client's own security and other architectural policies prevented the direct connection of the Solaris based IIB ESB with the DFS.

With one month to the MiFID II implementation deadline, Spida Solutions were invited to provide a solution to the exchange of MiFID II information between the ESB and the DFS.

Implementation

Agile, high-velocity, high-quality development

Spida Solutions proposed the use of a windows hosted Spring Boot micro service with embedded Camel to deliver the project requirements. Such a service fitted within the client's architectural and security constraints as it could easily access the DFS while also being able to access the Solaris based MQ environment using JMS.

The micro service is designed to retrieve messages over JMS from an MQ queue on the Solaris based IIB, convert to CSV format and deliver to the DFS. Delivery response confirmations (required by the ESB implementation) are returned to the MQ environment to confirm success of file creation and subsequent integration or failure to deliver the file.

Response files from the MiFID II provider in CSV format are retrieved from the DFS, converted to XML and the result placed onto an MQ queue on the Solaris based IIB server.

All routing and enrichment of data, and interaction with the trading platform trade lifecycle management was handled within the ESB as normal.

The combination of Spring Boot and Camel provided a number of key features that enabled the implementation:

- Fast project startup through an existing Spida Solutions Maven archetype
- The range of in-built Camel components available
- The wide range of features offered by the Camel components and the ease of configuring these features
- Ease of enabling transactional behaviour in Camel routes
- Ease of implementation of success and exception handling routes for response generation
- Ease of mapping between XML and CSV using Camel DataFormats
- Ability to deliver the service as a single executable SpringBoot JAR easily managed as a windows service

Outcome

Rapid delivery, flexible implementation

Spida Solutions developed and delivered the micro service into the Client's production environment well within the deadline for the start of MiFID II reporting.

The service is now running without issue

The flexibility and ease of configuration of the Camel implementation was clearly demonstrated during the User Acceptance Testing phase when changes to specifications arose and were handled easily.

The requirements for MiFID II reporting are highly likely to evolve as the new regulations bed in, resulting in similar requirement changes. The delivery of a highly flexible solution will be a major asset to the Client during Q1 & Q2 of 2018.

Spida Solutions is now in discussion with the client to explore the containerisation of the service using Docker which will be the first implementation of Docker within the organisation.

About Spida Solutions

Innovative, common sense, full-lifecycle solutions

Spida Solutions is an innovative information technology group with a passion for the opportunities presented by the convergence of service and component based architectures.

Spida Solutions strives to provide clients with a common sense approach to software development

We believe in making use of best of breed software without big label licence limitations wherever possible. We also recognise that many organisations continue to work with a range of vendor products and are equally comfortable engaging with such development projects.

Spida Solutions is able to provide both turnkey solutions and consultancy services

We can provide these wherever you are in your project lifecycle, from inception through to implementation. We can enable fast project start up and rapid delivery of robustly tested, high quality solutions either through our extensive library of project archetypes and test frameworks or by consulting with your in-house teams to produce your own.

Spida Solutions seeks to partner with the best of breed software providers including WSO2.

By being part of a global network of partners we can provide customers with the expertise they need to meet their business challenges.