transformer

CASE STUDY

ACUO succeeds with Transformer

Derivatives collateral management solution needed Transformer's data transformation prowess

Messaging in derivatives collateral management

Creating a leading-edge derivatives collateral management platform from scratch is by no means a simple project. In addition to the complexity of the core processing calculations and the demands of the regulatory environment, the messaging requirements are considerable. Because many parties and services are involved, message complexity and variety is a key consideration. Key data structures need to be transformed several times to carry out the complete process.

Each of the main data flows have their own challenges: clients send derivatives portfolio data in a wide range of formats; this data must be sent to the appropriate valuation provider; calculated margins have to be reconciled with counterparties; collateral info needs pricing and other enrichment from external providers; and actual collateral movements need to be tracked across custodian accounts.

Selection of Transformer

When ACUO set about building just such a system in 2016 they therefore knew that a powerful data transformation capability would be an essential component. The intention was to deliver a SaaS solution, either as an integrated workflow or as a host of microservices that could be consumed in isolation. While their own platform would communicate via APIs and use JSON, they knew that a wide range of legacy data formats and standards would be required. These included CSV, XML, FpML, FIX, ISO 20022 and SWIFT MT as well as various proprietary formats.

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ACUO conducted in-depth assessments of the leading data transformation tools, before selecting Trace Financial's Transfomer.

ACUO was impressed by Transformer's model-based approach, which requires no coding at any stage, no matter how complex the transformations required. Instead users select from a comprehensive range of ready-built mapping actions, including complex conditional logic if needed. Transformer's use of strong data typing means that users do not need to consider the internal syntax of, say, a date field, but can simply 'copy' the business-level field from source to target.

More generally, Transformer was chosen for its twin capabilities - to handle the intricacies of the major messaging standards involved, and to perform well in a JSON/API environment.

JSON functionality

For Java-based systems the general transition away from legacy interfacing methods and towards APIs in recent years has made the capability to handle JSON issues an essential factor. Transformer's advanced JSON capabilities were thus critical factors driving ACUO's selection of the product.

This includes the ability to work with popular means of defining data structures, including JSON Schemas and Swagger API specifications.

Transformer users can import JSON Schema or Swagger definitions and use these to create message definitions. These message definitions can then be used in mappings.

An export facility is also provided, allowing users to author JSON structures in Transformer and then export them as JSON Schema or Swagger specifications to share with API-based projects in the organisation.

JSON interoperability

Interoperability is a key feature of Transformer's JSON capabilities, dramatically reducing the number of mappings that need to be created. The ISO 20022 standard for example is normally structured in XML, but when communicating these messages via an API users want to have the ability to easily model this format in either XML or JSON as necessary.

ACUO can achieve this 'out of the box' when using the Transformer ISO 20022 library, because the user can define whether the output is to be produced in its native structure (in this case XML) or in JSON. This also means that users can define a single mapping to/from ISO 20022 and then when deploying to runtime specify, say, that one instance might use XML and another JSON.

This functionality is available for use with any message definition, whether it is a pre-built standards library supplied by Trace Financial or a proprietary message definition that users have created for themselves.

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Summary

The core ACUO solution has been built and is now being marketed, while additional features such as interfacing to a GLEI (Global Legal Entity Identifier) database are in development.

Conor Cunningham, CEO and Founder of ACUO stated: "Transformer has been instrumental in helping us to build and grow the ACUO solution. Transformer's strength and depth in traditional messaging standards together with its flexibility in JSON/API based mapping have provided us with a mapping solution which is easily able to meet all of our needs."

About ACUO

ACUO is a derivatives collateral management platform for financial institutions. Regulations have rendered the domain extremely complex and capital intensive. ACUO's solution addresses the challenges by connecting the data, enriching it and delivering output that simplifies the complexity.

About Trace Financial

Trace Financial Limited are leading specialists in financial message transformation and have been designing, implementing and supporting mission critical solutions to the financial industry for over 30 years. Trace Financial is part of the privately-owned Trace Group.

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