



CLIENT OBJECTIVES' SUMMARY

Client Background

A London-based company, this ebusinessware client has developed high-performance, high-volume electronic trading, decision-support and risk management solutions for the world's premium investment banks.

To ebusinessware's advantage, interaction with the client through two erstwhile projects and the presence of several ebusinessware engineers onsite resulted in a very good understanding of the client's infrastructure and procedures related to development.

The nature of business necessitates the use of various types of information within the client's systems. Relatively external in nature and generally static in nature, this information comprises instrument, country, currency, account and counterparty data.

Client's decision to develop new system

The client has a Fixed Income Front Office solution for fixed income desks. This system incorporates trade capture, pricing, real-time risk, quote and order management. For the whole system to work, a strong backbone of domain data needs to be presented. This data is expected to integrate with bank's information system. The client entrusted ebusinessware to come up with a solution for handling this data.

The Static Data Service (SDS) Design project that was envisaged comprised of designing a facility for manual maintenance of information through screens and reconciliation of information from data feeds and manual intervention screens.

The Client approached ebusinessware

The client approached ebusinessware for the following requirements as part of the project:

- A solution that would assimilate with the client's in-house framework.
- To cater to diverse clients, interface developed for client integration had to be extremely extensible.
- Provide a way for integration of system to feed external data service providers such as Bloomberg.
- To facilitate control on incoming data and provide a workflow for reconciliation.

OVERVIEW

Nature and composition of the Project Team:

The Offshore team comprised a Tech Lead, one infrastructure support member, four engineers and one quality analyst.

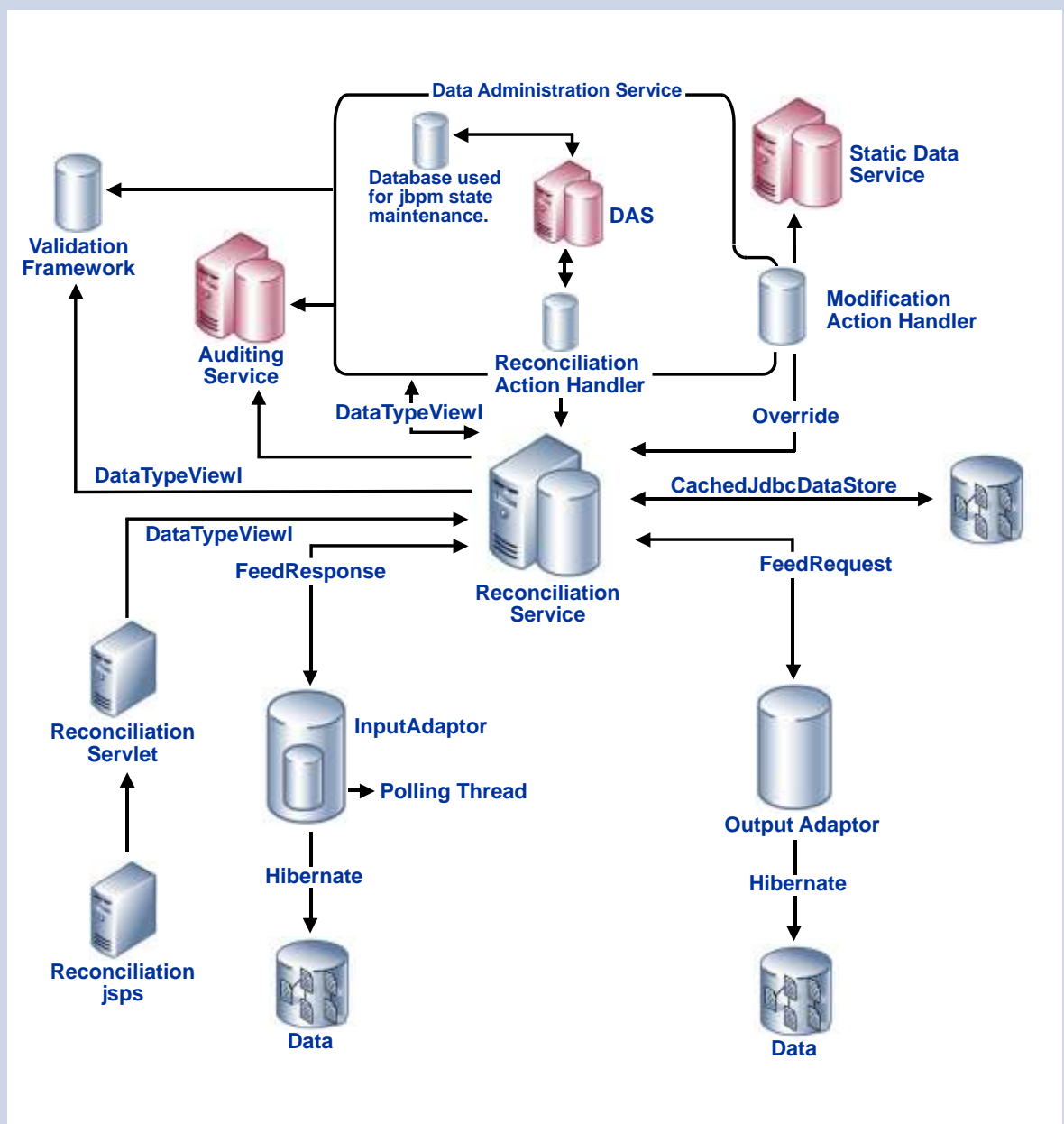


Detailed Core Architecture

Ebusinessware deployed a team of engineers on-site to understand the problem and master the client's in-house framework. On their return, they further trained a small team in the processes and applications of IRIS Financial. This combined team designed and proposed a solution for the data maintenance system. It was a Java based solution with browser-based interfaces for user interactions.

Complete documentation included, detailed design specifications, technical architecture, database design and proposed project plan. This was reviewed by a team from the client's organization and after a couple of iterations the design was finalized. Based on the finalized design, ebusinessware proposed a fixed priced solution for its development.

Technical Architecture



Keeping in line with existing Service Oriented Architecture, the following tasks were undertaken:

- 1) Design of a standard interface adaptor API for different sources of data using database as the integration point.
- 2) Reconciliation service for handling reconciliation requirements of data received with existing (old) data in the system with a front end for manual intervention.
- 3) Integration with Data Access service, which wraps Java Business Process Management processes to provide a workflow for reconciliation of data by various actors.
- 4) Enhancing the existing Static Data Service to use database as persistence mechanism instead of existing xml based solution.

User Acceptance Approach

User acceptance plan is being developed by test team at offshore unit. This plan along with detailed test cases and test scripts will be approved by the users for its completeness and correctness. Once approved by the users, these cases would form the basis of acceptance of the application. This approach ensures that acceptance goes through smoothly once the product is delivered.

EBUSINESSWARE'S APPROACH

What was clear to the Project Management team

A series of discussions between the client and ebusinessware project teams facilitating the specification of development details. Following is the summary of the discussions held:

SDS Maintenance Screens

- Maintenance screens for the static data will be generated through a tool rather than manually.
- The project team will research through the best approach to achieve this objective. This is also to enable other projects from this client requiring GUIs to use the same tool.
- Emphasis would be to use the source code available with the java world for this purpose and enhance/modify them to suit ebusinessware's purpose.
- Development of SDS screens will be undertaken after the development of tool.
- Timelines for actual development of SDS maintenance screens will be decided once the approach for the tool is finalized.
- The client will develop a new 'Data Admin Service'. This service will be responsible for managing GUI and reconciliation feed data before it is passed to the relevant static data services.
- This service will present the same Admin API to both maintenance service/JSP and reconciliation service.

Use of Validation Framework

- The client already has a configurable validation framework in place. It would be advisable to use the same in the development of the screens
- The client will provide necessary details so that it can be used during designing phase.

Reconciliation Service

- Details of reconciliation service have been provided by the client.
- Additional feature of grouping the instruments needs to be put in.
- An instrument's fields may be populated from multiple sources, with no field being populated by more than one source. For example, Bloomberg may provide the majority of data, with BrokerTech providing market specific information. If data arrives for a field where the source is not the primary one, then that change is ignored.
- Bonds can be categorized by the sum of two or three fields (to be determined). Bonds with the same category share the same field/source profile. For example, bonds issued by the
- US government denominated in USD are treated as the category 'US Treasury'.

SDS Feed Interface

- Data for a single instance of a type (5 year US treasury for example) can come from multiple sources - basic instrument details from Bloomberg, trading volumes from a market for example. Therefore it must be possible to request data for a single instrument from...



multiple possible sources. A single field will never have more than one source; however an instrument may have many sources for different fields.

- The interface must support international character sets so that, for example, counterparty names can be passed in Japanese.
- All interfaces must be extendable so that additional fields can be easily added in the future.
- A separate adaptor will be written for getting the data from each feed and populating the interface database.
- Creation of the adaptor(s) for the feed(s) is out of scope of this project.

Timeframe

A team of four engineers is currently in process of developing the system using ebusinessware's in-house UNIRAD process. The project is scheduled to be completed over a period of five months with an effort of 12 person months.

CHALLENGE

With multiple challenges in this project, ebusinessware is spearheading the development of a solution that will assimilate with the client's in-house framework. To cater to diverse clients, the interface developed for client integration will be extremely extensible. The solution will provide a way for integration of system to feed external data providers and a way to control incoming data, provide a workflow for reconciliation. A Java J2EE Hibernate project using the JBPM API to implement the workflow, the team is focusing on systems integration with an added thrust on data

INNOVATION

ebusinessware's innovation lies in the ease with which its systems adapt to the client's architecture.

CONCLUSION

After delivering the Static Data Service enhancements using Hibernate and designing the system and interface to adaptor, the project team is in the process of developing Reconciliation facility in the system.

The client team's point of contact has expressed great satisfaction with the progress till date and the continued working relationship.

A weekly progress meeting ensures that all the stakeholders are aware of the status as well as any issues, which might need immediate attention.

our value proposition

