Oil Exchange Automation

A solution for Integration, Routing and Transformation of all Oil Exchange Transactions, while providing an operations console for tracking these transactions and enabling reconciliations and joint certificate creation

CLIENT

A Fortune 500 company that operates 2 major refineries producing a wide variety of petroleum fuels & specialties. The company also owns and operates the largest Lube Refinery in the country, accounting for over 40% of India's total Lube Base Oil production. The company's vast marketing network consists of 13 Zonal offices in major cities and 101 Regional Offices facilitated by a Supply & Distribution infrastructure comprising Terminals, Pipeline networks, Aviation Service Stations, LPG Bottling Plants, Inland Relay Depots & Retail Outlets, Lube and LPG Distributorships.

CHALLENGE

Oil Exchange is a process of purchasing and selling of petroleum products between oil companies. This helps Oil Marketing Companies (OMC) supply petroleum products in regions where they do not have a presence. The cost of a manual settlement process for large volumes of petroleum products runs into Crores of Rupees and requires several months.

At the end of every month, a settlement is carried out through paper based joint certificates with each participating company. The amount payable / receivable is then arrived at.

The collection of joint certificates is a long drawn process as it involves collecting physical documents from all involved locations. Due to this, the settlement of exchanges is carried out only once a month. During the period in which the dispute is resolved , a large amount of capital is withheld from creditors thereby causing financial tight spots.

In order to overcome these challenges it was decided that a system be developed that would allow the company to execute real-time oil exchange transactions with OMCs while creating a B2B Oil Exchange framework that could quickly onboard other OMCs in the future.

SOLUTION

Keeping the above challenges in mind, MindCraft in partnership with IBM developed an automated Oil Exchange framework based on the IBM Process Server Platform. It was pertinent to come up with a solution which not only automated the process, but reduced the time taken for reconciliation, thereby enabling prudent financial management.

The solution allows the client to carry out transactions with other OMCs with real-time online exchange of sales and receipts data, thereby reducing the challenges in reconciliation.

TECHNOLOGY STACK

- ✓ IBM WebSphere Process Server 7.0
- ✓ IBM WebSphere Transformation Extender 8.3
- ✓ IBM WebSphere Business Integration Adapter for JD Edwards OneWorld Xe
- ✓ IBM WebSphere Application Server 6.1
- ✓ Oracle Database 11g

BENEFITS

- Saves Time
- Reduces Errors
- Financial Gains
- Easy Reconciliation
- High Availability
- Real-time Exchange
- Instant Notification

FEATURES

- Adoption of SAP IDOC in XML format
- Secure transmission of Messages over the SSL channel
- Transformation of IDOCs to JD Edwards format and vice-versa
- Real-time retrieval and posting of transactions to and from JD Edwards
- Auditing of all transactions to a middleware database
- Http(s) as the transport protocol for posting SAP IDOCs between the OMCs
- Monitoring of all transactions using an Operations Console
- Manual resubmit and automatic retry of failed transactions
- High availability
- Error notifications
- Capability to onboard other OMCs at a future date with minimal changes to the existing deployment
- Receipt and transmission of data over internet

CONCLUSION

The Oil Exchange manual settlement process was a time intensive and error prone one. As a result of these delays, large financial amounts were left unrealized from other OMCs resulting in financial losses by the way of interest earned. The automated Oil Exchange solution developed by MindCraft helped address this as well as overcome other technical challenges the client was facing. Using this solution, the sales transaction data is posted to the other OMCs web-service on printing of the invoice whereas the receipt data is received through a web-service exposed to these OMCs. The system intelligently routes messages to the different destinations and sends relevant notifications to the client. This solution has, thereby, enabled the client to correct the inherent issues in the existing method of settlement and arrive at a more efficient and time saving method.

ABOUT US

MindCraft is a Software Products, Solutions and Services organization. We enable customers to transform their businesses through products for Banking, Insurance, Mutual Fund & Financial Services and a cross industry product suite.
We help our customers get competitive edge through technology services that include Development & Integration, Business Intelligence & Analytics and Systems Software Management. Incorporated in India in 2002, we have a team of over 500. We also have a presence in Singapore, USA & UAE.

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