



The Challenge

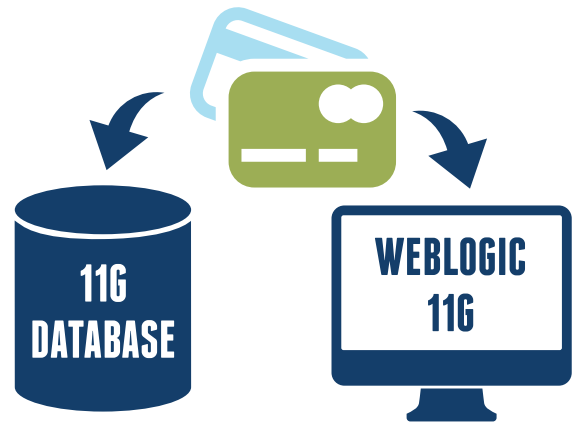
The Customer sought to replace the backend application for a 20 years plus credit card payment processing system written in C/C++ and COBOL—running on both open and Mainframe systems.

THE SOLUTION








A custom, J2EE centralized global payment processing system that runs on Oracle Weblogic 11g and uses Oracle 11g database.

Business Requirements

- ⇒ Flexible and agile payment processing system that allows the front-end applications to change to improve the end user experience
- ⇒ Centralized processing for Domestic and International payers to leverage the volume to get discounts from clearing houses
- ⇒ Improved capability to monitor transactions and forecast revenue
- ⇒ Reduce the cost of maintaining the system
- ⇒ Real-time response time of 2 seconds or less



The Developed Solution

-  Exposed payment services through industry standard interfaces (i.e. Webservices, JMS, etc) making it easy to develop front-end applications around it
-  Allowed the capability of processing multiple payment types for Domestic and International transactions
-  Had a flexible design—extensively uses Xml transformation (XSLT) to transform the data from external interfaces to canonical standard, making it easy to add new clients or make changes to the existing clients
-  High performance due to extensive use of intelligent caching
-  Possessed real-time communication with external revenue control application to provide improved monitoring and forecasting
-  The solution can be ported with minimal change to other Customer business units that require a payments processing system.
 - o The core business logic for processing payments can be reused and the changes needed to interface with front end applications and back end clearinghouses are isolated to a few components.
-  Successfully migrated existing applications from IBM mainframe to Oracle based distributed architecture

Lessons Learned

The most important learning from the project was the process and industry knowledge to deliver a payments processing system that handles up to **7 million transactions per day**, with the real-time peak load of **50,000 transactions per hour**. If it were to be implemented in a different setting where the Customer was receptive to a product based implementation, BIAS would propose leveraging the **Oracle SOA suite on an Oracle Exalogic platform**. Many of the features of the custom application are readily available with existing Oracle products, the core business logic for payment processing could be developed as workflows, and the development timeframe could be shortened.