

Re-engineering a Yield Management Solution

Business Situation

We helped a major U.S.-based carrier re-engineer its yield management solution. The client serves more than 750 cities in 120 countries across six continents, with annual revenues in excess of \$10 billion.

Challenge

This client had a yield management solution built with the C language and using the X/Motif GUI builder and Sybase database. The application was difficult to maintain and enhance due to the inherent procedural structure of C and the lack of skilled resources who knew the details of the application.

The company sought to migrate the application to a Web-enabled J2EE-based platform to obtain a networked, browser-based interface. The client also wished to use the IBM DB2 Universal Database (UDB) at the back-end instead of Sybase, since this software would better mesh with its IT architecture. The application takes into account the changes in the client business. These include the addition of low-cost carrier management and the movement from a “bucket concept” -- in which airline seat inventory is divided into different categories like business, executive or economy -- to a “class concept,” where buckets are further subdivided into classes like A, B or C in order to introduce cheaper rates.

Solution

Based on the client's information system standards, we re-engineered the application to a J2EE-based architecture using a three-tier model. The existing Sybase database (and data) will be migrated to IBM DB2 UDB. The project had two phases. The data migration effort was first implemented and tested with the current application. In the second phase, the C-based application was migrated to the J2EE environment. The solution overcame the following challenges:

- Implementation of complex business logic and algorithms.
- Massive amounts of data to be handled.
- Matching performance of a C-based program with a Web-based platform.

Benefits

- Improved maintainability of the application due to a modular architecture with separation of presentation, business and data layers.
- Ease of adding new functionality has increased due to the modular architecture, as well as increased documentation and business understanding.
- Availability of a common IT platform reduces the need for special skilled resources for maintenance and enhancements.
- The browser-enabled application makes the application easily accessible from different global locations.

About Cognizant

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