

Lotus to J2EE Migration
for an Independent Claims
Service Provider



Client

One of the leading independent claims service providers offering tailor-made claims solution to the Insurance industry. Client offers claims as well as damage assessment services to Insurance companies, Insurance brokers and Self-insured corporations across the globe.

The Challenge

The existing claims management application built on Lotus technology had a number of known problems accumulated over a period of time. This was due to in-house resources constraints as well as scalability issues with the Lotus platform. This forced the client to look out for an ideal offshore partner who could support them on a short-term basis as well as provide a long-term migration plan to a scalable platform. The rapid growth in the number of clients as well as new feature requests made migration to a scalable platform combined with relational database an inevitable and top priority assignment. Since the Claims Management application had lots of custom made business scenarios leveraging on built-in functionalities of Lotus platform, use of an automated tool for conversion was not a feasible option.

The immediate challenge for the client was to find an offshore partner who could support them with immediate problem resolution in the Lotus application. In addition to this, the offshore partner could use this time to understand the business scenario for the technology migration.

Solution

Client approached Cordiant Technologies considering its experience in Lotus Domino technologies and its experienced consultants. Cordiant's rich experience in providing Enterprise Java solutions with IBM WebSphere application server proved to be decider for the offshore partner evaluation.

Cordiant quickly identified a team of Business Analysts, Lotus Consultants and J2EE professionals to prepare a migration plan for the Claims management application. Lotus consultants gained a good understanding of the application while fixing the existing bugs and shared their knowledge with the migration team on regular basis. The critical functionalities and complexities involved in various business scenarios were documented at the end of the hand holding phase.

Cordiant's Lotus consultants not only fixed the assigned bugs pertaining to the Lotus application, but also exceeded client expectation by unearthing few critical bugs in the application unidentified at the client end.

The Migration team made a detailed assessment of the existing system and presented the analysis in the form of use cases and functional specification document to the client. Subsequent to the approval of functional specification document, Test cases were prepared by the test engineers identified for the migration project.

Since the client wanted to make as much use of the investments in the existing environment, Cordiant presented an optimal path to migrate the Lotus application into a J2EE environment. Instead of going for full fledged migration, Cordiant carried out the migration assignment two phases.

The initial phase was to convert the Lotus Script code into Java code using existing Domino environment. During the conversion process the migration team identified that there were number of problem areas which affected the performance of the system. This was mainly due to script libraries used by the application which consumed considerable memory and inconsistent coding.

Lotus agents used to create separate instances for various requests adding to the performance issues, unlike a Java servlet which serves multiple requests with a single instance. Hence the migration team replaced the Lotus agents with servlets resulting in better performance. All configuration documents were loaded into memory during the servlet initialization. This helped to reuse the same object for multiple requests, rather than going for separate initialization. Further Java's collection framework was extensively used and replaced dynamic arrays of Lotus Script. Lotus java API along with Domino java classes replaced existing Lotus objects.

During the second phase of the project, the migration team took up the task of linking a relational database to the migrated application. The team researched on various options to benchmark the best suited RDBMS for the application.

The open source MySQL was chosen after careful study for its robustness as well obvious economic consideration. Subsequently, the storage medium for the system was changed from ".nsf" files into MySQL. The migration team also took-up the challenge to replicate the search functionality effectively which had to be still user friendly as it was in lotus notes. The end result was an application which was scalable as well as measured up well on its performance parameters.

Technologies

- JDK 1.3
- Lotus Notes/Domino Java API
- Java Servlet Development Kit 2.0
- Eclipse IDE 3.0.1
- VSS Plug in version 1.6 for Eclipse 3.0
- Microsoft Visual Source Safe 6.0

About Cordiant

Founded in 1995, Cordiant Technologies builds globally aligned India teams for Independent Software Vendors worldwide. Cordiant has offshore product development centers in Chennai and Kochi, Southern India; and a US subsidiary in Princeton, NJ.

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