



Service: Systems Development    Industry: Pharmaceutical    Engagement: Full Lifecycle & Mentoring

#### AFTER AMENTRA

- The application achieved and surpassed its performance and scalability goals
- Previous maximum submission of 10,000 records was increased to 250,000 records
- A maximum of 2 million records could be processed per day
- The system became clustered and could be easily scaled by adding additional WebLogic instances
- All errors in the system were handled in a consistent and recoverable manner
- Oracle performance and error handling were drastically improved
- Informatica performance and error handling were drastically improved
- New requirements were effectively implemented into the system to satisfy the changing business needs

## Amentra Helps Pharmaceutical Company Re-architect Clinical Data Submission and Error Remediation System to Drastically Increase Performance, Scalability, Stability, and Manageability

**INCREASED MAXIMUM SUBMISSION FROM 10,000 RECORDS TO 250,000 RECORDS**

#### BEFORE AMENTRA

A leading pharmaceutical company had developed a data submission, reporting, and error remediation system over the course of several years, and at significant cost. Unfortunately, the system was not scalable or performant and could not support any of the objectives for which it was originally envisioned. The application was in need of a significant overhaul across all of its tiers to support business goals. Since it was based on WebLogic 7 and WebLogic Integration, Oracle, and Informatica, the system required optimization and stability improvements in vastly different technology sets.

Within the pharmaceutical company, there was a lack of the type of specialized knowledge that was required to effect changes across all tiers of the system and to get the application from its current state to one that would support enterprise data loading, remediation, and reporting requirements consistently. In addition, the business unit wanted to add or change several features in the application and had problems getting the requirements effectively communicated to the technical team for implementation, so help was needed in the requirements definition part of the process.

#### EVOLUTION OF THE BUSINESS PROCESS

Amentra approached this project with a two-pronged approach, to achieve the technical goals that had long been sought and to make sure that the business group was satisfied with the functionality that was provided in the error remediation and reporting pieces of the application. This involved constant communication with both business and technical teams and a focused approach to achieving the goals of both groups efficiently. Amentra brought significant structure and feedback to the requirements definition working sessions and mentored the pharmaceutical company's technical staff to help them understand the complex issues surrounding optimization of a high-volume workflow system and multi-user



## TECHNOLOGY USED

- Java 2 Standard Edition 1.3 and JRockit
- WebLogic 7.0.5 Platform (including WebLogic Integration)
- Oracle 9i
- Informatica 6.2
- Red Hat Enterprise Linux
- J2EE
- XSLT

web application. Through the consistent application of these processes, both groups saw the increased value in the application and the underlying technologies as a basis for additional useful business systems in the future. This pharmaceutical company's business and technical teams achieved a level of cooperation not previously realized in earlier phases of development on this application and saw the benefit of such a coordinated joint effort.

## APPLIED TECHNOLOGIES AND EXPERTISE

Amentra utilized its unsurpassed knowledge of enterprise architecture, design, and implementation to provide a scalable and performant solution to the pharmaceutical company's application problems, while keeping or enhancing the existing functionality. This involved specific changes within the J2EE application, XSLT processing, data flow and compression techniques, WebLogic Integration (WLI) workflows, Oracle tables, indexes, and queries, and Informatica processing and maps. Amentra also built out the clustering capability of the application server platform, in concert with the application, to allow for a more scalable and failover safe environment for application processing. The specific knowledge of the WebLogic 7 platform that Amentra provided to the pharmaceutical company was a key factor in the ability to deliver proper workflow and web application solutions to each problem.

On top of all performance, scalability, stability, and manageability enhancements, Amentra also provided enhancements to all levels of testing and testing frameworks so that the application could be properly verified to satisfy all requirements. This involved enhancements to the JUnit unit testing framework as well as a complete set of Load Runner performance tests to run against the completed application for a measurement of maximum throughput and concurrency support in different areas. Amentra brought all of this knowledge and expertise to the project while working offsite, but still managed to educate the pharmaceutical company's resources on many of the important concepts and tools to use while working on projects of this type and scale.

**To find out how Amentra can help you please call 804.355.9360 or visit [www.amentra.com](http://www.amentra.com)**

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