Conquering Database Migration Complexities for a Global Hi-Tech Leader with AWS

xoriant

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Executive Summary

Infor is a renowned enterprise resource planning (ERP) solutions provider, offering tailored platforms with top-notch cloud support to various industries. Their key product, Infor® Hospitality Management Solution (HMS), streamlines hotel operations in the cloud, enhancing guest experiences. Infor sought to revamp and modernize applications, shifting from MS SQL Server to AWS Aurora PostgreSQL via Babelfish. It enables legacy applications to communicate seamlessly with Aurora without requiring extensive code rewrites, streamlining the migration process. While Babelfish effectively translates SQL Server queries to Aurora PostgreSQL, HMS's complexity posed a significant challenge, leading to numerous incompatible SQL statements. The initial task was to pinpoint and address these issues.

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Infor is a multinational leader providing ERP solution and platforms to various industry verticals. They specialize in simplified ERP solution preconfigured to be industry-specific for fast implementation on a platform with world-class cloud support. One of their offerings is the Infor® Hospitality Management Solution (HMS), a hotel PMS built in the cloud to consistently meet and exceed modern guest expectations. With Infor HMS, hospitality organizations can better manage operations, deliver richer guest services.

Challenge

Infor sought to modernize their legacy applications by transitioning them from MS SQL Server to AWS Aurora PostgreSQL while simultaneously establishing a dual-compatible system in which the identified incompatibilities in the core database are resolved to ensure alignment with both SQL Server and Babelfish.

▸ **Streamlining Manual Processes:** Performing manual adjustments on a set of over 1200 objects critical to the integrity, performance, and security of the core database, via the Babelfish Compass tool, was bound to be a time-intensive process.

▸ **Addressing Testing Challenges:** In addition to the database, over 300 screens required testing to ensure a smooth migration process. This posed a significant challenge as the focus was on performance validation, all the while guaranteeing no compromise in user experience during the migration.

Why AWS and Xoriant?

AWS Aurora PostgreSQL stood out as the optimal target database, offering cost-effectiveness, robust performance, and scalability, while BabelFish ensures a seamless transition for existing SQL Server application customers, eliminating any disruption.

In addition, Xoriant's specialized expertise enabled the team to make strategic choices and take a meticulous approach to achieving a smooth, efficient transition, elevating the overall migration experience. It emerged as the ideal technology partner thanks to its expertise in PostgreSQL databases, highly skilled Java developers, and extensive experience in quality engineering, manual and automated testing. Xoriant also played a crucial role in identifying dual-compatible SQL solutions, particularly concerning XML-related SQL.

The Solution

The team of experts at Xoriant presented an outstanding solution that included developing an automated Java program for generating database object scripts, effectively eliminating manual script creation and significantly boosting productivity.

Xoriant successfully resolved incompatibilities across various database objects, including Stored Procedures, Functions, and Triggers. Their team executed test cases and efficiently identified issues, using Java code for debugging and isolating incompatible SQL queries and objects. They also introduced the open-source tool p6spy. This tool significantly improved productivity in identifying queries during the execution of the Inspection Test Plan (ITP) and alleviated the requirement for extensive manual debugging efforts. In the course of the project, the Xoriant team also identified and suggested areas of improvement in Babelfish to cater to certain performance observations and functional issues.

Xoriant promoted knowledge sharing and streamlined communication by implementing a framework for accelerated development of ITP automation, minimizing redundant efforts across the team. They identified critical issues that could be reported to the AWS team for support, ensuring a robust testing process across multiple regression cycles.

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> Xoriant's collaborative approach, knowledge sharing, and commitment to rigorous testing through multiple regression cycles made them invaluable partners in achieving the project's goals, including enhancing automation development for the ITP. Their contribution has proven invaluable in achieving enhanced productivity, immense savings and richer customer experiences."
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> **Chen Yao,**
> VP, Software Development

Overall, Xoriant's expertise and innovative solutions played a crucial role in the achievement of a dual-compatible HMS application.

Results and Benefits

- **Enhanced Productivity:** Implementation of open-source tools like p6spy and automated programs significantly and reduced manual efforts by 30%.

- **Streamlined Debugging:** Reduction in JAVA debugging efforts from hours to minutes, leading to quicker issue identification and resolution.

- **Improved Customer Satisfaction:** Decreased repetitive manual testing workload resulted in higher customer satisfaction.

- **Dual Compatibility Solutions:** Generic solutions were identified, making the application compatible with both SQL Server and Babelfish.

- **Early Issue Identification:** Early detection of critical issues allowed for timely reporting to AWS for future releases.

- **Time Savings:** Automation and Java programs reduced time requirements from 2 hours to just 1 hour, boosting overall efficiency.

About Xoriant

Xoriant is a Silicon Valley-headquartered digital product engineering, software development, and technology services firm with offices in the USA,UK, Ireland, Mexico, Canada and Asia. From startups to the Fortune 100, we deliver innovative solutions, accelerating time to market and ensuring our clients' competitiveness in industries like BFSI, High Tech, Healthcare, Manufacturing and Retail. Across all our technology focus areas-digital product engineering, DevOps, cloud, infrastructure, and security, big data and analytics, data engineering, management and governance -every solution we develop benefits from our product engineering pedigree. It also includes successful methodologies, framework components, and accelerators for rapidly solving important client challenges. For 30 years and counting, we have taken great pride in our long-lasting, deep relationships with our clients.