



JBoss Enterprise Application Platform in the Restaurant Industry



CITYTECH

OVERVIEW

This case study reviews a recent CITYTECH engagement with one of the largest global foodservice retailers. As a JBoss Partner, CITYTECH was brought in to provide expertise and guidance around the JBoss Enterprise Application Platform product, as well as to provide general JEE architecture advice related to the client's global point-of-sale (POS) retail system. CITYTECH was asked to solve two issues:

1. Provide a migration from a JBoss Community version to the supported platform.
2. Resolve some critical performance issues the application itself was experiencing.

The client was running a proof-of-concept application on an older community version of JBossAS. This application was a module within the POS system that provided management of products, prices, promotions, and screen layouts for the POS devices in the restaurants. The application was also scoped with distributing the POS data globally to the restaurants. As the adoption rate for this application began to grow globally beyond a few test locations, it became a critical enterprise component requiring the support available with the JBossEAP subscription. CITYTECH was brought in to help make this migration seamless and successful.

To accomplish this objective, CITYTECH worked with several disparate vendors on behalf of the client. For example, the hardware and networking for the client were outsourced to a local vendor while the server administration was outsourced to an offshore vendor. A third vendor had final responsibility for the application development and support. CITYTECH worked with these vendors along with two internal client teams to achieve the project's goal.

DELIVERABLES

CITYTECH was tasked with several deliverables as part of this project. These were prioritized into a phased approach based on the global rollout of the application to each region.

Configure and Load Test the JBoss Enterprise Application Platform

CITYTECH reviewed the existing production environment and installed a baseline production configuration to begin. The application was then ported from the community version to JBossEAP, making only the minimal changes required to run in the newer Java 1.5 JVM.

The application and configuration were then load-tested on the new platform using HP LoadRunner. Working with the client's QA team, metrics were captured using the Monitoring module within JBoss Operations Network. The client's network team also provided monitoring at the network and database level. Iterations were performed to identify bottlenecks in the overall system. The JBossEAP configuration was tuned along with other system components until the performance results surpassed the baseline results from the older JBoss community platform.

Once this phase was complete, the Pacific Rim restaurants were moved to the new JBossEAP platform along with select U.S. locations. As each region had a customized version of the POS application, these two were considered the most critical in terms of volume and were migrated first. CITYTECH was responsible for formally documenting this process so that the client's internal teams could follow the same pattern for other global regions.

JBoss Enterprise Application Platform

WHAT IS JBOSS EAP?

JBoss Enterprise Application Platform (JBoss EAP) is the market-leading, open source enterprise Java platform for developing and deploying innovative and scalable Java applications. Combining a robust, yet flexible, architecture with an open source software license, JBoss EAP has become the most popular middleware system for developers, independent software vendors (ISVs), and enterprises alike.

JBoss PLATFORM

JBoss Enterprise Platforms

- JBoss Application Platform
- JBoss Portal Platform
- JBoss Data Services Platform
- JBoss SOA Platform
- JBoss Operations Network

JBoss Enterprise Frameworks

- JBoss Hibernate
- JBoss Seam
- JBoss jBPM
- JBoss Rules

JBoss Development Tools

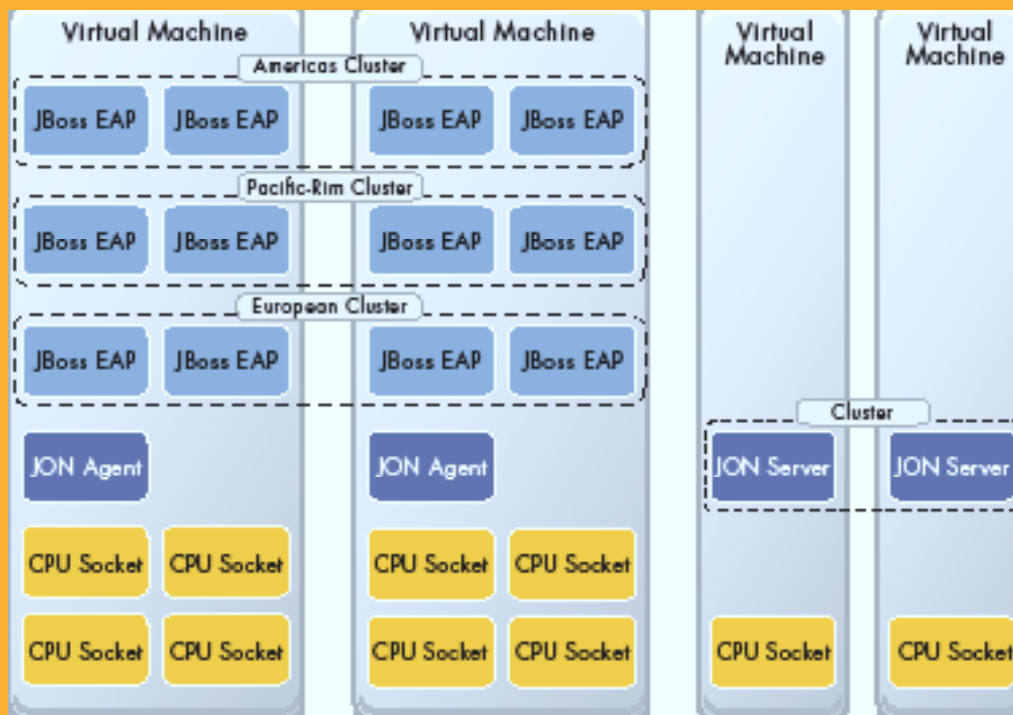
- JBoss Developer Studio



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CITYTECH



JBoss Enterprise Application Platform

WHY CITYTECH?

- We are a certified JBoss advanced system integration partner.
- We believe in leveraging open standards.
- Specialize in architecting and developing highly available and scalable enterprise solutions.
- Agile iterative approach to conquering large application development initiatives.

Review Architecture and Provide Recommendations

CITYTECH, along with the Product Director of the offshore product team, performed an architectural design review of the existing application to identify points of improvement. These discussions revolved around two primary “pain points” in the system:

1. Data access/performance issues at the user interface layer.
2. Messaging throughput time during the generation and transport to global retail stores.

Through a series of whiteboard meetings with the vendor’s architecture team, best practices were discussed and recommendations on the use of JMS, Hibernate, and JBoss Cache were outlined and delivered in a formal document.

OUTCOME

The recommendations for the data access issues in the user interface were reviewed by the client and planned into the product’s next major release candidate. At the same time, the design changes for the messaging issues were immediately implemented, as that was a business critical issue. As a result of these changes, the average critical path for each message getting to the global stores was reduced by 1s-1.25s. The total impact on the process reduced the processing time by almost two hours per day. With Pacific-Rim and U.S. store locations put into production on JBossEAP, select European markets were road mapped for deployment in the next year.

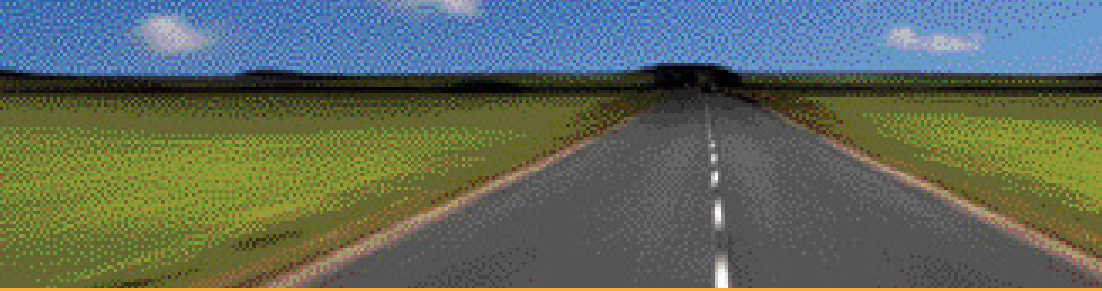
SUMMARY

CITYTECH is an end-to-end solution provider and normally does not get involved in fire-fighting projects. However, this case showcases the ability to step into an existing project, determine the technical issues and constraints, and work professionally with several other existing vendors to provide a solution for the client.

CASE STUDY

KEY DELIVERABLES

- JBoss AS installation and configuration for high availability
- Application Load Testing and JBoss AS tuning
- Architecture recommendations including:
 - Hibernate best practices
 - JMS best practices



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Let us share our methodologies, practices, and experiences to help you achieve your business goals today. CITYTECH believes in leveraging technology to help you with today's challenges and prepare you for tomorrow's opportunities.

WHO IS CITYTECH?

CITYTECH is an IT consultancy specializing in the development of highly available and scalable enterprise applications. We believe the best enterprise solutions are created by technical architects who understand business-related issues and possess the expert knowledge of top software development platforms like Java Enterprise Edition and Microsoft .NET. CITYTECH consultants' grasp of both business and technology ensures that the systems we design won't constrain your organization, but can adapt to meet ever-changing business needs.

ABOUT US

CITYTECH is located in the heart of downtown Chicago. Our success is attributed to executing projects in an agile, but methodical way using a small team of experienced full-time consultants. We achieve our number one priority, client satisfaction, by mirroring our agenda to that of our client. We establish long-term relationships through partnerships with our clients and vendors in order to consistently provide the most up to date, best practices and best fit services.



CITYTECH

LEARN MORE

Contact CITYTECH to learn more about how we can deliver a mission critical enterprise application using the JBoss Enterprise Application Platform.

CONTACT US

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