




BRAZILIAN FEDERAL SUPREME TRIBUNAL ADOPTS JBOSS ENTERPRISE MIDDLEWARE

FEDERAL AGENCY SELECTS JBOSS ENTERPRISE SOA PLATFORM AND JBOSS OPERATIONS NETWORK FOR IT GOVERNANCE PROCESS

FAST FACTS

Company	Brazil Federal Supreme Tribunal's Information and Technology Office (STF)	
Industry	Government	
Geography	Latin America: Brazil	
Business challenge	Needed a service-oriented architecture that improved Brazil's Federal Supreme Tribunal's (STF) system integration process and the database and deployment governance in the STI (Technology Information of Office Secretary)	
Software	Red Hat Enterprise Linux, JBoss SOA Platform, including frameworks: JBoss ESB, JBoss jBPM, JBoss Rules, and Hibernate, JBoss Operations Network (Jboss ON)	
Hardware	x86 commodity servers with Intel Xeon Processor based servers	
Benefits	Reduced costs and increased agility, functionality, and flexibility with a combination of Red Hat and JBoss solutions	

BACKGROUND

Brazil's Federal Supreme Tribunal's Information and Technology Office (STF) provides systems development for the Brazilian High Court's coverage area which involves all Brazilian regional tribunals for second court appeal, which means something about 35 tribunals from all Brazil states.

This includes providing new technology adoptions, computing and database net management, and software and equipment technical support and specialized assistance.

All the systems that are supported by the Technology Office have both internal and external users who constantly demand new functionality. Among these demands is system integration, which was one of STF's most critical functionalities.

BUSINESS CHALLENGE

While STF had a functional level system and solid applications development, there was a lack of performance in information sharing. Users complained about slow access and shared files did not appear in real time.

In addition to a low performing and a great demand of trials, STF experienced system integration problems. The team needed an architecture that could offer a quick and easy integration between systems.

STF needed components, applications, services, programs and users to easily integrate with one another to successfully share critical files, such as contracts and processes.

STF also needed system integration capabilities that could handle requests per file and setup procedures for remote calls by shared database and message lines.

JBoss ON allows the STF IT team to focus on specific system issues as JBoss ON will resolve issues that can be addressed by an enterprise SOA management solution.

SOLUTION

When considering various platform options, STF researched:

- The Federal Government guidelines for open software usage
- STI's prior experience with Red Hat
- Evaluation of the capabilities and experience of system administrators, developers, and other IT professionals with the platform vendor's technology

The team determined that an Enterprise Service Bus (ESB) was the best solutions to meet its demands and requirements in a message system with the capability to implement several open integration patterns. After researching several SOA and ESB options and various open source software providers, the team chose Red Hat's JBoss Enterprise SOA Platform.

JBoss Enterprise SOA provides automatic message routing and supports several information exchanging providers and channels, such as FTP, SMTP, JMS and Web Services. JBoss Enterprise SOA Platform enables business execution, responsiveness, and flexibility in a cost-effective, open platform and aggregates pluggable security, auto-discovery, localization independence, and integration patterns implementation functionalities.

Every STI/STF architecture is now developed on open source software with Java technology. For software development and support needs, STF now uses Red Hat's JBoss Enterprise SOA running on Red Hat Enterprise Linux. STF uses (ESX 3.5) Virtual Machine, 2 Processors 3 GHz, 2 GB and JBoss Enterprise SOA Platform memory.

The JBoss Enterprise SOA Platform (customized by STF for services patronization) is currently in the implementation phase. STI has a subscription for Red Hat's technical support for four CPUs in Red Hat Enterprise Linux and JBoss Enterprise SOA Platform.

STI's governance project will begin generating its services still in 2009, which STI expects to improve the aggregate value and transparency of the entire organization. 90% of its new projects will be based off JBoss Enterprise SOA and 100% of its legacy is currently in migration from JBoss.org and Fedora to JBoss Enterprise SOA. By using more efficient services, all of those who communicate with STF are expected to have benefits. For example, the lawyers win agility when they have to introduce a petition to the

ministers of government. It can be done electronically, which represents a great evolution of government service.

Every STF service in production must be monitored and manageable, such capabilities are achieved using JBoss ON - JBoss Operations Network, which offers accurate information about the processing of the Services hosted in the JBoss ESB, as well as the quality and metrics delivered by the JMS technology. Based on the Alerting features of JBoss ON, STF can receive alerts in order to prevent any unpredictable service behavior, in addition to this, in certain cases, some default actions can be taken according the alerts, it allow the IT team to focus exactly in real potential problems, letting JBoss ON resolve issues that can be addressed by an enterprise SOA management solution.

For the STI team the most important benefit has been getting an infrastructure more flexible and maturity with development systems to assist the STF needs. Also, the IT team got governance, being able to manager and measure its contribution for the Supreme Tribunal's strategies.

BENEFITS

STI reports positive experiences with Red Hat's support as the team receives quick and informative responses. Red Hat's support model eliminates the need for STI to staff Red Hat specialists in-house, thus cutting costs.. The STI also finds great benefit in the Red Hat Business Partner Tecnisys, which provides specialized technology consulting and support, as training and specialist technicals to assist STI needs.

STI has experienced increased agility and flexibility with JBoss Enterprise SOA Platform. From the commercial point of view, the cost savings are significant with the usage of open source software, and from a technology perspective, the infrastructure is more stable and failure tolerant; the service buses allow the IT team to work on more strategic work deployments, by the reuse of the available services in the service buses.

An additional, unexpected benefit from using Red Hat and JBoss is the STI developers' attitude shift. Instead of thinking in components, developers now think in terms of aggregating services. This attitude shift contributes to increased service performance, agility, and maintenance economy.



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