


JBoss SOA PLATFORM AUTOMATES OPERATIONS FOR CADTEL CUSTOMERS

FAST FACTS

Industry	Telecom	
Geography	Phoenix, AZ	
Opportunity	Integrate service delivery systems with communications providers' back office systems to automate network allocation and subscriber provisioning processes	
Migration Path	Proprietary Software running on an AS400 to JBoss Enterprise SOA Platform	
Software	Windows and Linux operating systems; JBoss Enterprise SOA Platform; Oracle and MySQL databases	
Hardware	Dell PowerEdge Blade Server, AIX Server, SUN enterprise SAN	
Benefits	Automate the allocation of network resources in support of customer order processing, network resource management and service fulfillment.	

BACKGROUND

Founded in 1985, CADTEL Systems is a premier provider of integrated Operational Support Systems software that helps communications providers manage network resources efficiently. Automating many of the complex tasks involved in delivering next-generation products and services to subscribers, CADTEL's solution offerings enable communications providers to improve response time to customer demands while lowering operational costs.

OPPORTUNITY

To meet the growing demand for diverse network-based services and to support the complex back office systems interaction required to deliver them, CADTEL's customers needed a way to streamline the ordering, configuration management and delivery aspects these services. "It's critical for Communications Service Providers to have instant, accurate access to the status of all their network assets—from the circuits residing inside buildings to the cables that run in the ground underfoot or strung on poles overhead. We have always provided such access via our standalone outside (OSP) and inside (ISP) plant engineering systems. However,, integrating our systems into the rest of a customer's back office systems and legacy network elements

traditionally required daily, or monthly batch processing—in some cases even manually copying data from a printed spreadsheet into a green-screen application", said Bryan Rank, VP Engineering at CADTEL Systems.

CADTEL required a robust middleware platform that could tightly integrate between inside and outside plant engineering systems, as well as with other operational support systems, such as mainframe-based billing and legacy telephone switches. "Our goal was to automate the allocation of various network resources as well as the activation of subscribers on those resources. By doing this, we wanted to improve both the timeliness and accuracy of service order fulfillment for our customers," said Rank.



SOLUTION

In order to provide customers with the required system integration, CADTEL developed its own proprietary Business Practice Management (BPM) and Enterprise Service Bus (ESB) software. Soon after the company's first deployment, however, JBoss released the JBoss Enterprise SOA Platform, including jBPM and JBoss ESB open source solutions. "After comparing JBoss to Mule and ServiceMix, we switched to the JBoss Enterprise SOA Platform. JBoss gave us the functionality we required while providing us with the flexibility and security to modify the source code as needed," said Rank.

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—Bryan Rank, VP Engineering, CADTEL.

By using JBoss Enterprise SOA Platform to integrate its OSP and ISP systems, CADTEL created a unified set of data and processes for its customers, enabling them to converge billing, operational, and service delivery functions smoothly. "In the past, our customer's order managers had to fax multiple departments to check on availability of services and process orders. With JBoss, we now provide a unified view of all inside and outside network assets, making it easy to track allocations, activate network elements, and fulfill customer orders in real time," said Rank. "JBoss also integrates our service delivery systems with the rest of the communications provider's back office to facilitate the flow of data and functionality between all operational support systems."

BENEFITS

JBoss solutions enabled CADTEL to strengthen its product and service offerings, providing expanded integration services and improved software that automates customers' operational support processes. According to Rank, JBoss cut processing time for CADTEL's customers from two weeks to two minutes. In the past, customers had to keep an overstock of network assets on hand because it was difficult to track which equipment was serving each customer. Rank explained that by automating network allocation processes, JBoss technology enables his customers to reduce capital expenditures on excess stock and streamline productivity, which saves on operational expenses.

Thanks to the relationship with JBoss, improved development has been another huge benefit for CADTEL, leading to better-quality code, greater levels of customization, and significant cost savings. "We consider JBoss as an extension of our development team. By adopting JBoss Enterprise SOA Platform, we have automatically increased the number of people working on our code," says Rank. "We maintain a smaller amount of code that is well tested and more robust, and our group can focus on customizing solutions that meet the specific nuances of our customers' needs, rather than on building new tools. JBoss Enterprise SOA Platform saves us at least half a million dollars in development costs per year."

With access to the seasoned JBoss technical team, CADTEL can now provide better customer support as well. "We serve as part of our customers' IT departments. Having access to JBoss support, as well as the open source code, is crucial. We know we can turn to the JBoss technical team or look at the code directly to provide immediate resolution if a system goes down. This is critical to serving Tier 1 communications providers," said Rank.



NORTH STATE COMMUNICATIONS



North State Communications is a 100-year old Incumbent Local Exchange Carrier (ILEC) providing local, long distance, wireless, and Internet services. As the company undergoes continuous expansion for next-generation offerings, North State realized that its existing mainframe billing and service order management platform was not able to accommodate the inter-departmental processes required for provisioning more complex data services. As a large percentage of the company's workforce was beginning to look toward retirement, North State was also facing the challenge of providing more services with less people. "To help North State meet the growing demand for new services, we needed to bridge the gap in both data and process flow that existed between traditionally autonomous business units," said Bryan Rank, VP Engineering at CADTEL.

North State chose to convert to a new billing system, which then required integration with the company's existing Outside Plant Engineering application, SpatialBASE from CADTEL. North State saw such innovation in the integration strategy proposed by CADTEL that it decided to use the same approach to integrate and automate the various remaining operational departments. Using JBoss Enterprise SOA Platform, CADTEL rated the data from the outside plant, inside plant, order management, and customer service and sales departments to form a modern supply-chain management system that truly addresses the nuances of communications service providers, such as North State. "JBoss gives all departments access to geospatial designs, network element configurations, network asset assignments, and service types in order to allocate the right resources, activate services, and bill appropriately," said Rank.

With JBoss, CADTEL was able to create and deploy North State's "automated design and assign enabled" telecommunications back office. "The benefits of having a flow-through provisioning system based on our live engineering data are far reaching for us", says Bob Perry, the head of Outside Plant Engineering at North State. "The system increases the accuracy of our operations and brings down the cost of doing business significantly." Today, the North State system runs Linux with a MySQL database on JBoss Enterprise SOA Platform.

As a result of deploying the new system, North State experienced an immediate improvement in productivity and reduction in operating costs. Rank points to the tight system integration provided by JBoss as the reason why North State can now provision more than 80% of its orders automatically and with little or no human intervention. In addition, North State will continue to leverage the system to gain much better control over its network assets. "Thanks to JBoss technology, North State will no longer need to carry great quantities of spare parts to ensure that an order can be met," says Rank. "The company will experience great capital and operational savings."

