

COVAD

Service-Oriented Architecture Powered by BEA

COMMUNICATIONS

HIGHLIGHTS

SOLUTION:
Indirect Channel Management

PRODUCT:
BEA WebLogic Platform™ 8.1

INDUSTRY:
Telecommunications

PROBLEM

Reduce complexity of the IT infrastructure that had grown organically and rapidly in a short period of time. Improve responsiveness to channel partners. Shorten lengthy problem resolution times.

SOLUTION

Covad is implementing a service-oriented architecture (SOA) on BEA WebLogic Platform 8.1. The unified platform replaces a complex and inflexible information technology (IT) environment.

RESULTS

With the service-oriented architecture, Covad is able to offer Web-based self-service for its end users, increase end-user satisfaction and improve customer relationships. At the same time, the move is lowering costs to serve, simplifying change management, accelerating application rollouts, and facilitating tighter relationships with channel partners.

OVERVIEW

Covad Communications grew its number of subscriber lines in service by 36 percent in 2003. With momentum growing, the company knew that it was imperative to stay ahead of demand, and create a foundation for smart, sustainable growth. The preparations would have to be two-pronged.

First, Covad wanted to unify and simplify its infrastructure on one platform to trim technology expenditures, deliver new applications faster, link existing applications easier, and reduce personnel costs. Second, Covad's indirect sales channel needed additional support. Providing more added value to resellers and reducing the overhead associated with channel operations could allow Covad to strengthen its relationships with these firms.

Covad chose BEA WebLogic Platform 8.1 to provide the foundation for a service-oriented architecture (SOA) that could address Covad's business challenges. The initial solution implemented on the BEA platform is an e-bonding system that links Covad's trouble ticketing system with an Incumbent Local Exchange Carrier (ILEC). Built on BEA WebLogic Integration™, Covad will be able to leverage this work to expose its trouble ticketing system as a service to other ILECs, thereby avoiding infrastructure redundancy.

Another new solution is a portal that resellers are able to customize, brand, and use to support their end users. The solution is built on BEA WebLogic Portal™. It provides end users with direct access to account information as well as

ordering and self-service capabilities. These capabilities significantly lower the cost to serve that channel, while creating a seamless customer experience without inserting Covad between the resellers and their customers.

Covad also plans to migrate several homegrown applications to BEA WebLogic Platform. Those applications include customer acquisition, inventory management, order management, provisioning, and trouble ticketing. After moving the legacy applications onto BEA, Covad can wrap them in Web services and expose them to newer applications as well as to partners across the value chain. This will extend the life of the older investments.

Covad anticipates that the combination of future IT cost avoidance, new revenue generation, reduced expenditures on customer management, improved staff productivity, and increased customer loyalty will enable its investment in BEA to pay for itself many times over.

To help ensure a successful deployment of BEA WebLogic Platform, and complete its initial projects as quickly as possible, Covad employed consultants from BEA. The consultants provided product training and assisted with technical evaluations, performance tuning, and application integration.

“We view BEA as a strategic partner,” said Paul Grantham, vice president of software and information systems at Covad.

CUSTOMER BRIEF

Covad Communications is a leading nationwide provider of integrated voice and data communications. Covad’s network passes more than 50 million homes and businesses in 35 states, giving it the largest nationwide footprint of any DSL service provider. Covad was the first company to deploy DSL commercially in the United States. The company offers DSL, Voice Over IP, T1, Web hosting, managed security, IP and dial-up, and bundled voice and data services directly through Covad’s network and through Internet Service Providers,

value-added resellers, telecommunications carriers and affinity groups to small and medium-sized businesses and home users.

BUSINESS PROCESS CHALLENGE

Covad finished 2003 with 517,000 subscriber lines in service, which represents a 36 percent increase over the previous year. With momentum growing, the company knew that it was imperative to stay ahead of demand and create a foundation for smart, sustainable growth in order to take full advantage of its emerging opportunity.

The preparations would have to be two-pronged. First, Covad had an extremely complex IT infrastructure that had evolved over several years to include a variety of application servers, integration software, and Web technologies. Covad realized that by unifying and simplifying its infrastructure on one end-to-end platform, it could trim technology expenditures, deliver new applications faster, link existing applications easier, and reduce personnel costs.

Second, Covad’s indirect sales channel needed additional support. The channel is critically important to Covad’s business model. The majority of new business is generated by phone companies and service providers that have well-established local customer bases in large metropolitan regions. Providing more added value to these resellers, and reducing the overhead associated with channel operations make Covad a more attractive partner, and allows Covad to profitably strengthen its relationships with these firms.

“We had a strong year in 2003 and we knew that 2004 could be even better,” said Grantham. “The time was right for a strategic investment that would enable us to take advantage of our momentum and position us for long-term success. The new infrastructure that we envisioned would make us much more adaptable, reduce our IT cost structure and protect us against technology obsolescence by utilizing only open standards. All are critical requirements for the dynamic market in which we operate.”

SOLUTION

Covad's ownership experience with BEA products had been very positive. It had several versions of the application server in production, ranging from Version 4.0 to 7.0, all running on a total of 126 Sun processors on the Solaris operating system.

Based on that experience, and its review of competing solutions from IBM, Oracle and others, Covad decided to stick with BEA and expand from BEA WebLogic Server to the entire BEA WebLogic Platform 8.1, including BEA WebLogic Integration, BEA WebLogic JRockit™ (a Java virtual machine), and BEA WebLogic Portal. BEA's platform would provide the foundation for an SOA that could address Covad's business challenges.

"We knew that consolidating everything on a single platform and taking an SOA approach would simplify our lives and offer greater efficiency and scalability," said Grantham. "But that wasn't enough. We had to sleep at night without any worries. BEA gives us peace of mind. Its technical and market leadership translate into vendor viability and customer confidence. Our previous experience with BEA underscored its reliability."

The first new solution implemented on the BEA platform is an e-bonding system that links Covad with SBC, one of the largest telecom carriers in the U.S. and a reseller of Covad's broadband services. The solution is built on BEA WebLogic Integration, which is replacing Vitria as Covad's integration framework. The e-bonding solution utilizes the OSS-J (Operations Support Systems though Java) standard to integrate the trouble ticketing systems of Covad and SBC electronically. The intent is to improve customer support by speeding mean time to resolution while lowering costs by automating as much data exchange as possible.

"This is a truly innovative solution," said Grantham. "While e-bonding is increasingly popular in the communications industry, the OSS-J approach is just beginning to gain adoption. By building the solution with an open standard, such as OSS-J, we can leverage our work with SBC on future projects with other ILECs (i.e., local phone companies). We expect to expose our trou-

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Paul Grantham, Vice President, Software and Information Systems, Covad Communications

ble ticketing system as a service to many channel partners. That's one of the big benefits of SOAs. We can reuse software to reduce infrastructure redundancy."

Covad is also using BEA WebLogic Integration for business process management (BPM). Specifically, the BPM capabilities are being used to manage Web services that Covad relies on to integrate commercial off-the-shelf packages with its internally developed systems.

Another important new solution being implemented on BEA is a portal that resellers are able to customize, brand, and use to support their end users. The solution, built on BEA WebLogic Portal, provides end users with direct access to account information as well as ordering and self-service capabilities without inserting Covad between the resellers and their customers. As with the OSS-J project, this is an opportunity for Covad to "build once, use many times." Very little work is required to customize the portal for each partner.

"Our standardization on the new BEA platform is really simplifying our lives by removing a lot of 'moving parts' from our infrastructure and eliminating unnecessary complexity that has been a burden in the past," said Grantham. "We expect to dramatically improve change management, streamline operations, accelerate deployment and integration projects, and reduce our software licensing costs."

In addition, Covad plans to migrate its existing suite of homegrown business applications to BEA WebLogic Platform 8.1. Those applications include customer acquisition, customer self-service environment, inventory management, order management, provisioning, and



trouble ticketing. After moving the legacy applications onto BEA, Covad will be able to wrap them in Web services and expose them to newer applications as well as to partners across the value chain. This will extend the life of the older investments indefinitely and save Covad millions of dollars that would otherwise be spent replacing the existing applications.

Covad has also added 20 Intel-based HP ProLiant blade servers running the Red Hat Enterprise Linux operating system to its data center to further reduce costs and increase flexibility. Covad uses the BEA WebLogic JRockit JVM to optimize the performance and reliability of applications on the Intel-based servers, and provide point-and-click manageability.

RESULTS

“Our vision for IT is to have an infrastructure that is based entirely on open technology,” said Grantham. “We want complete freedom to do what we need to do for the business. We believe that BEA, Intel and Linux take us in that direction. There are inherent cost savings with a service-oriented approach. The SOA we’re implementing makes us more agile and protects our investments well into the future. The fact that we still have applications running fine on BEA WebLogic Server 4.0 is proof that open technology works for the long haul.”

Covad anticipates that the combination of future IT cost avoidance, new revenue generation, reduced expenditures on customer management, improved staff productivity, and increased customer loyalty will enable the investment to pay for itself many times over.

“ROI is a major consideration whenever a company looks at sweeping changes to its IT environment,” said Grantham. “Before any changes are made, we must be certain that the payback will justify the effort. In this case, the evidence was compelling. An end-to-end BEA infrastructure helps us in many ways, not the least of which are consistent documentation and best practices to facilitate future technology adoption and other changes that aren’t even on the drawing board yet.”

He then added, “Our SOA strategy is also accelerating time to value. It allows us to leverage development and integration work repeatedly. Time to value makes a critical difference in a dynamic market such as broadband services; opportunities are constantly evolving.”

To help ensure a successful deployment of BEA WebLogic Platform 8.1, and complete its initial projects on the new platform as quickly as possible, Covad employed consultants from the BEA Services organization. The BEA consultants provided product training and assisted with technical evaluations, performance tuning, and application integration.

ABOUT BEA

BEA Systems, Inc. (Nasdaq: BEAS) is the world’s leading application infrastructure software company, providing the enterprise software foundation that allows thousands of companies to benefit from service-oriented architectures. With more than 15,000 customers around the world, including the majority of the Fortune Global 500, BEA and its WebLogic® and Tuxedo® brands are among the most trusted names in business. BEA has 75 offices in 34 countries and is on the Web at www.bea.com.

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