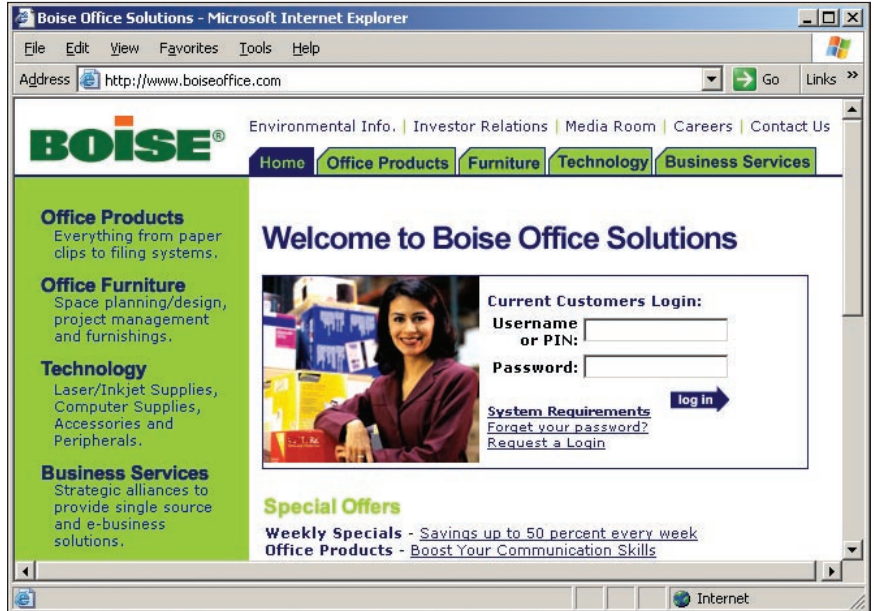


WebSphere software

Boise boosts productivity and customer retention with IBM platform.

Overview

- **Challenge**
Enhance Web site performance and integrate infrastructure with enterprise systems
- **Solution: Integrating Stage**
New version of online store created with IBM WebSphere® Application Server and IBM WebSphere MQ
- **Why IBM**
WebSphere Application Server performed significantly faster than BEA WebLogic Server; customer was impressed with load-balancing and failover capabilities in WebSphere Application Server
- **Key Business Benefits**
90% improvement in application availability; elimination of call center costs; 25% faster development than previous site; short time to market



Customers can order more than 100,000 office products from the Boise Office Solutions Web site, which earns more than \$800 million per year in online sales.

Boise Corporation, the company formerly known as Boise Cascade, has been one of the leading forest-products companies in the world for nearly half a century. For the past several years, however, office products—pencils, pens, computers, chairs and desks—and not forest products, have comprised the largest segment of Boise's annual sales.

Boise Office Solutions (BOS), based in Itasca, Illinois, generates approximately one-third of its revenue from its online business. And because office products customers rely on flawless e-commerce site performance to help reduce their administrative overhead,

competition within this sector is strong. It was no wonder, then, that the 11,000-employee office supply giant found itself in a quandary when its online store simply wasn't up to world-class standards.

“At a time when we needed to enhance our Web site infrastructure and integrate it with our enterprise systems, all we could do was fight fires. iPlanet wasn't working.”

—Blake Moritz, Director of E-commerce, Boise Office Solutions

e-business—redefining the image of business leadership

Key Components

Software

- IBM WebSphere Application Server, Advanced Edition, Version 4.0
- IBM WebSphere MQ
- IBM Lotus® QuickPlace™
- IBM Lotus Sametime®

Servers

- IBM AS/400®
-

BOS's Web troubles stemmed from its iPlanet Application Server, which was failing to meet scalability and performance expectations. In addition, the Web site was not integrated with customer account information, so customers with questions about order status or account balances flooded the call centers. And worse, BOS had to put off integrating its Web site with its customer relationship management (CRM) software until these problems were solved. "At a time when we needed to enhance our Web site infrastructure and integrate it with our enterprise systems, all we could do was fight fires. iPlanet wasn't working. We had to migrate to an enterprise-worthy application server, one that would provide the basis for future growth with Java™ 2 Platform, Enterprise Edition (J2EE)-compliant technology—and we had to do it fast," says Blake Moritz, director of e-commerce for Boise Office Solutions. "We needed to assert our prominence within our market by creating a world-class shopping experience, with CRM capabilities, automatic fulfillment and integration with our largest customers' backends."

BOS rigorously evaluated BEA WebLogic against IBM WebSphere Application Server, asking both vendors to run their software on BOS's hardware. "WebSphere Application Server performed significantly faster than WebLogic," says Moritz. "In addition, the improved load balancing, failover and connection pooling in WebSphere Application Server, Version 4.0 clinched the deal for us." BOS created its new platform using WebSphere Application Server Advanced Edition, Version 4.0 and IBM WebSphere MQ.

The company's new e-commerce Web site was converted to WebSphere in one and a half weeks, and new customer self-service functionality is in development. Since customers will be able to research their questions on the Web, the company no longer needs to fund an additional call center. On the technical side, developers are freed from massive performance troubleshooting, so their productivity has increased by 25 percent, and application availability has improved by 90 percent.

"We're right where we should be with a world-class e-commerce site," says Moritz. "WebSphere software has turned out to be a very good solution for us."

"WebSphere Application Server provides lightning fast responses and integrates well with our mission-critical systems."

—Blake Moritz

Empowering the customer

When customers visit www.boiseoffice.com, they can shop for office supplies, order online training courses and read online newsletters that are customized for them. And when they log on with their PIN and password, they can quickly and efficiently find the items they need in the BOS catalog, order them and check inventory. Customer self-service functions from BOS's Amdocs Clarify CRM system will also be available to help customers view their accounts, check their order status or account balance, request a proof of delivery and initiate returns.

BOS's proprietary RPG-based order fulfillment system on its three IBM AS/400 backend servers reads Web orders just as if they had been generated from the call center, and fulfills them automatically. To make dealing with BOS even more convenient for large customers with enterprise ERP systems, BOS has integrated its e-commerce functions with their backends. Customers can order directly from their ERP systems, send queries and initiate returns.

"Customers feel in control of the whole purchasing process with our new online store," says Moritz. "WebSphere Application Server provides lightning-fast responses and integrates well with our mission-critical systems."

Easy migration to WebSphere Application Server

Migrating to WebSphere Application Server required minimal effort from the BOS IT team. "Because we had adhered to J2EE standards in programming our applications," says Moritz, "we didn't have to do any extra work when we ported the applications from iPlanet to WebSphere. We just changed the deployment descriptors during the proof of concept." WebSphere Application Server runs the JavaServer Pages and servlets that will create BOS's e-commerce applications.

BOS used WebSphere MQ to create a standards-based integration solution that will deliver a comprehensive range of customer self-service functionality from its CRM system to shoppers. When a customer first registers on the site, WebSphere MQ ensures reliable delivery of customer information to the CRM system, which creates a record for the customer and a unique PIN. When the registered customer asks for a proof of delivery or initiates a return, WebSphere Application Server matches the customer with his or her record in the CRM system.

"With WebSphere MQ, we found a reliable, scalable and out-of-the-box integration solution that supports XML and J2EE technology."

—Blake Moritz



From pencils to computers, Boise Office Solutions sends orders from 44 fulfillment centers, which are fully integrated with its sales channels.

The solution leverages Java Messaging Service (JMS) and WebSphere MQ to send the appropriate data in XML from the CRM system to WebSphere Application Server, which delivers the needed information to the Web browser.

To retrieve order, account, inventory and pricing information from the backend fulfillment system, BOS created data queues using the IBM OS/400® toolkit. These queues connect with WebSphere Application Server. WebSphere MQ moves orders from the Web site to the fulfillment system. BOS uses XML messages to integrate its e-commerce functionality with its customers' ERP systems.

"With WebSphere Application Server, we could use the integration technology that was available to us to begin earning an immediate return on investment," says Moritz. "And with WebSphere MQ, we found a reliable, scalable and out-of-the-box integration solution that supports XML and J2EE technology."

Building with WebSphere Portal

Pleased with WebSphere technology, BOS is currently developing a portal with IBM WebSphere Portal Extend. The present plan is to first create a portal for BOS's associates, and then expand it to include customers and vendors. While much of the portal functionality is still under discussion, BOS is eager to take advantage of the collaboration capabilities with the IBM Lotus QuickPlace and IBM Lotus Sametime components of the WebSphere Portal Extend offering.

"BOS operates in 44 locations," says Moritz. "The IBM portal solution enables us to unify our business processes, just as WebSphere Application Server helps us integrate our Web-based business with other mission-critical systems. With IBM's help, we are uniting our system resources into scalable, flexible e-business solutions."

For more information

Please contact your IBM marketing representative or IBM Business Partner.

Visit us at: ibm.com/e-business

For more information about Boise Office Solutions, visit: www.boiseoffice.com



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