Con-Way takes the road to better service with online invoicing.

Overview

Con-Way is a subsidiary of transportation and supply chain management leader CNF Inc.

- **Challenge**
  Grow business and increase competitive advantage by providing its customers stable, easy-to-use, Web-based e-business capabilities
- **Solution: Integrating Stage**
  A suite of e-business management tools, including electronic bill of lading (e-Bill)
- **Why IBM**
  Customer was highly satisfied with its IBM enterprise systems, including IBM DB2® Universal Database™ and IBM @server zSeries™, and believed that IBM WebSphere® Application Server would integrate smoothly into this environment
- **Key Business Benefits**
  Reduction in costs of invoice processing; significantly faster and more accurate invoice processing; considerable savings in development time for new applications and from leveraging existing server infrastructure; enhanced customer service and increased customer loyalty; better staff productivity; faster payment cycle

Drive along a scenic stretch of North American highway and you're likely to spot a less-than-truckload carrier operated by Con-Way Transportation Services, Inc. (Con-Way). Every day, its family of carriers hits the road to move more than **57,000** shipments for its customer base of 200,000.

Based in Ann Arbor, Michigan, with more than **19,000** employees, Con-Way is a $2 billion transportation and services company, operating more than 26,000 tractors and trailers. Con-Way (*www.con-way.com*) prides itself on its 99 percent on-time performance to next-day delivery destinations.

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—Don Smith, IT Manager, Con-Way Transportation Services, Inc.

*e*business

Key Components

Software

- IBM WebSphere Application Server Advanced Edition, Version 4
- IBM VisualAge® for Java™ (the predecessor to WebSphere Studio Application Developer)
- IBM WebSphere MQ for Windows NT®, Version 5.2
- IBM DB2 Universal Database for z/OS™
- IBM CICS®

Servers

- IBM @server zSeries

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– Tom Paulsen, e-business Project Coordinator, Con-Way Transportation Services, Inc.

Just as important as meeting its delivery schedules, is managing invoices accurately and promptly. "When customers can send data to us electronically, we're one step ahead of our competitors," says Don Smith, Con-Way IT manager. For more than 15 years, Con-Way used an electronic data interchange (EDI) channel to transmit invoices and to receive bills of lading from customers. "However," Smith explains, "Our small and medium-size customers, who represent approximately two-thirds of our customer base, didn't always have the budget to support EDI. We use paper-based documents, but that is both labor-intensive and error prone. We needed an efficient, reliable electronic channel that our smaller customers can afford to use."

Aiming to deliver a low-cost, Web-based channel to its customers, the company sought an e-business platform for building reusable architectural components with Java 2 Platform, Enterprise Edition (J2EE) technology. After reviewing more than 40 products, the company eventually had two finalists: IBM WebSphere Application Server Advanced Edition, Version 3.5, and BEA WebLogic Server. And it was clear early on that WebSphere Application Server was the way to go.

"We were already an IBM shop, with IBM DB2 Universal Database for z/OS as our enterprise database and an IBM @server zSeries mainframe," notes Tom Paulsen, e-business project coordinator for Con-Way. "We were confident that WebSphere Application Server would integrate smoothly into our environment, and we were impressed by its performance. In addition, leveraging our existing server infrastructure has resulted in considerable savings."

Enhancing productivity and customer service

Con-Way has produced several major customer-facing applications based on its new architecture developed with WebSphere software and J2EE technology, including an electronic invoice presentment (EIP) system, an electronic bill of lading and pickup order management solution, and a sales management solution.

The EIP system currently e-mails invoices to 650 registered customers after their shipments are processed. Thanks to this system, the company's invoice processing department is enjoying substantial productivity enhancements. "By e-mailing invoices, we're saving on postage and the time spent processing the mail," says Paulsen.

The department is also spending less time on data entry and tracking lost invoices and more time serving customers' other needs. This lowers the cost of processing invoices substantially and results in more accurate documents and happier customers. In addition, faster invoice processing speeds the entire payment cycle, enabling Con-Way to reconcile its accounts receivables in a timelier manner.

Point, click and ship

The bill of lading solution, called e-Bill, is a sophisticated offering that brings great convenience to users, particularly those who have integrated e-Bill into their own business applications. With e-Bill, customers complete the shipping form from the online template, submitting it electronically, either from a password-protected screen on Con-Way's Web site or from their own internal application. e-Bill then generates a pick-up request with instructions for the Con-Way carrier—a process fully integrated into Con-Way's computer-aided dispatch system. A pick-up confirmation e-mail is forwarded to the customer advising them of receipt. "For clerks who process bills of lading, e-Bill is saving up to half the document processing time by eliminating data entry," notes Paulsen.

Customers who have integrated e-Bill into their own ERP, supply chain management or intranet applications have done so using XML technology. Their connection to e-Bill is seamless, so it works as if e-Bill were part of their internal applications. Explains Smith, "In our component-based infrastructure, creating the XML version of e-Bill simply involved replacing a set of Java classes and JSP [JavaServer Pages] screens with a servlet that processes the XML."

Solid infrastructure based on WebSphere software

Technically, Con-Way's applications work in much the same manner. On the front end of its new architecture, Java servlets and JSP components access Enterprise JavaBeans (EJB) components in the middle tier to fulfill user requests and transactions. The EJB components tap into customer account and shipping data residing on the backend DB2 Universal Database as well as legacy IBM CICS applications running on the zSeries server. Says Jerry Hilts, systems analyst, Con-Way, "DB2 Universal Database has been an integral part of our IT environment and now is an important component in our new architecture. While we do use other databases, up to 90 percent of our critical, day-to-day business

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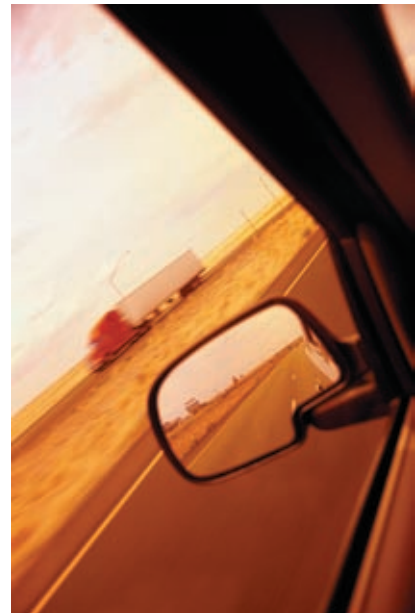
Con-Way carriers support more than 400 service locations in the U.S., Puerto Rico, Canada and Mexico.

information resides in DB2, and our zSeries mainframe provides a powerful platform—with 99.9 percent availability—to support it."

Con-Way used IBM VisualAge for Java (the predecessor to WebSphere Studio Application Developer) to develop the Java servlets and EJB components. WebSphere Application Server running on Windows NT servers functions as a runtime engine for the EJB-based business logic. IBM WebSphere MQ for Windows NT, Version 5.2, acts as a messaging server between the Windows NT servers and DB2 and CICS. By reusing these components for new applications, the company expects significant savings in application development time, enabling its IT staff to focus on application enhancements and other value-added projects.

"WebSphere software, DB2 Universal Database and zSeries servers have demonstrated top-notch performance, scalability and reliability," says Hilts, adding, "Working with IBM has also met our criteria of aligning with a vendor committed to supporting open standards, such as Linux®, which we're evaluating along with others platforms."

The company is currently migrating to newer versions of WebSphere software, moving from VisualAge for Java to WebSphere Studio Application Developer and from Version 3.5 to Version 4 of WebSphere Application Server. "We were very impressed with the development ease and efficiency of VisualAge for Java, as well as its seamless integration with WebSphere Application Server, but migrating will put us in step with the latest offerings and enable us to take advantage of greater support for J2EE technology," notes Paulsen.

Being the best requires the best tools
As Con-Way continues to develop its e-business environment, it is evaluating IBM WebSphere Business Integration Suite as a means to further enhance operational and cost efficiencies. The company is also building a data warehouse that will leverage IBM DB2 DataPropagator™ to populate the warehouse with data from DB2 Universal Database.

"Con-Way is a top-tier company in our industry," says Smith. "We provide the best on-time service, and we want to provide our customers the best electronic channels for doing business with us. With WebSphere software from IBM, we're achieving our goal."

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