Gulf Coast Seal

Industrial Seal Maker Eliminates the Uncertainty from Electronic Invoicing

Overview

Country or Region: United States
Industry: Manufacturing—Industrial machinery and equipment

Customer Profile

Houston-based Gulf Coast Seal manufactures and distributes high-performance industrial seals primarily for the oil and gas industry. The company has 130 employees and annual revenues of U.S.$35 million.

Business Situation

The company needed a way to confirm that invoices sent over the AS2 transport protocol were received and accepted by the customer and to be notified of any problems associated with that process.

Solution

Gulf Coast Seal upgraded to Microsoft® BizTalk® Server 2006 R2 and, as a result, was able to immediately send invoices over the AS2 protocol and receive confirmations or negative notifications.

Benefits

- Worry-free electronic invoicing
- Lower costs
- Improved customer service
- Enhanced competitive advantage

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As a leading manufacturer and distributor of high-performance sealing products for the oil and gas industry, Houston-based Gulf Coast Seal continues to expand its supply-chain integration with customers and vendors. The company used Microsoft® BizTalk® Server 2006 to automate invoicing with key customers, and a third-party adapter to send invoices through the AS2 transport protocol. Gulf Coast Seal also needed to track that invoices sent over AS2 were received, and to be notified if they were rejected. To accomplish these goals, Gulf Coast Seal upgraded to Microsoft BizTalk Server 2006 R2, which includes native support for the AS2 transport protocol. Through this upgrade, the company is able to send invoices through the AS2 protocol, confirm their receipt, and identify problems, thereby helping it avoid increased overhead costs, improve customer service, and enhance its competitive edge.

Microsoft®
BizTalk® Server 2006 **R2**

Situation

Gulf Coast Seal, headquartered in Houston, Texas, is a leading manufacturer and worldwide distributor of high-performance sealing products, including O-rings, seals, and gaskets used to secure oil and gas pipelines. The company has 130 employees, including certified technical sealing specialists and highly experienced sales people, who offer expertise in engineering, product design, and material specification.

Although its growth averages 20 percent annually, in the first half of 2007 Gulf Coast Seal grew by 32 percent. "The energy business is growing rapidly," says Jeff Lynch, Information Technology Manager at Gulf Coast Seal. "We've been able to accommodate that growth very successfully using technology, without having to add a large number of employees."

Gulf Coast Seal relies to a great extent on supply-chain integration with customers and vendors and offers services such as product integration—kits and special packaging—supply integration, and secure systems integration for Internet-based business-to-business (B2B) transactions. In 2005 the company implemented Microsoft® BizTalk® Server 2004 as a B2B integration platform and upgraded to BizTalk Server 2006 the following year when it also upgraded to Microsoft SQL Server™ 2005 database software for its common data store. The company uses BizTalk Server 2006 to process thousands of inbound purchase orders and outbound invoices every year with major customers and suppliers.

Soon after that, one of the company's largest trading partners launched an electronic invoicing initiative that required invoices to be sent over the AS2 transport protocol. The AS2 protocol allows electronic data interchange (EDI) transactions to be done over the Internet without requiring a value-added

network. AS2 messages go out encrypted and encoded and are decrypted at the other end. A message disposition notification (MDN) is sent back to the originating system to confirm that the invoice was received. "The MDN is for nonrepudiation so we can prove that we legally delivered the invoice and that the trading partner received it," Lynch says.

Before the release of BizTalk Server 2006 R2, Gulf Coast Seal bought a third-party AS2 adapter to accommodate the AS2 protocol requirement. "The AS2 adapter provided the basic functionality we needed to send the invoices, but it did not integrate seamlessly with BizTalk Server so that we could ensure that all invoices were sent and received properly," says Lynch. "We ran into some cases where a customer received invoices that it wasn't able to process due to a certificate issue. We didn't receive an MDN telling us that it was an issue so we didn't catch the problem until we had sent several hundred invoices with the same problem."

About 25 percent of the company's outbound invoices (representing about 10 percent of its total billing) are sent over AS2. Typical payment terms are net 90 days, so additional delays caused by invoicing problems had the potential to disrupt cash flow. In addition to not being able to track the receipt of invoices with the add-on AS2 adapter, the IT staff had to enter an entire encryption certificate in the adapter for each trading partner to process encrypted AS2 messages. Because the AS2 adapter cost almost as much to acquire as BizTalk Server 2006, the company wanted to avoid having to purchase another third-party adapter. However, it needed a better way to submit invoices through the AS2 transport protocol so that it would have proof of delivery and notification when an invoice was rejected along with an explanation for the rejection.

Solution

About the same time that Gulf Coast Seal saw the weakness in the third-party adapter, Microsoft announced the pending release of Microsoft BizTalk Server 2006 R2. One of the key features of the new BizTalk Server release was native support for the AS2 protocol. "We were very excited when Microsoft decided to include the AS2 transport protocol functionality within BizTalk Server 2006 R2 rather than require a bolt-on product," says Lynch. "Because we have Software Assurance through our Microsoft Open Volume Licensing agreement, upgrading to the latest release didn't cost any more, so it was easy to decide to upgrade."

Because Gulf Coast Seal was invited to participate in the Microsoft Technology Adoption Program for BizTalk Server 2006 R2, the company's developers started evaluating the product at the beta stage. They installed BizTalk Server 2006 R2 beta on their Windows Vista®–based development computers and sent test invoices (including those that had a known problem) from one computer to another to see how BizTalk Server 2006 R2 would handle them. The new software worked flawlessly. If there was a problem with the invoice, the MDN came back with a negative acknowledgement

saying that it didn't get the invoice, it didn't understand it, or it couldn't decrypt it. "It's very easy within the BizTalk Server administration console to see all the AS2 transactions that have gone out and identify messages about problem invoices," says Lynch.

| Fast Facts	
Microsoft BizTalk Server 2006 R2 Upgrade	
Total number of developers	2
Number of BizTalk Server developers	1
Expected number of external users	100
Internal users	2
Maximum number of concurrent connections	50

After testing with BizTalk Server 2006 R2 beta for two months and being delighted with the results, Gulf Coast Seal upgraded its production BizTalk Server 2006 instance first to the BizTalk Server 2006 R2 beta and then to the release candidate. "It took about two hours to upgrade BizTalk Server 2006 to R2," says Lynch. "We did the upgrade over a weekend and were back in business sending out invoices using the AS2 protocol on Monday morning. It was probably the easiest upgrade I've ever experienced."

There was one situation where a customer's UNIX system didn't understand the byte-order mark at the beginning of an XML document. Lynch went into the BizTalk administration console, turned off that mark, and sent the rest of the invoices without a problem.

In production, the BizTalk Server FTP Adapter pulls outbound customer invoices hourly from an IBM AIX-based ERP system, and then maps them from their original flat-file format to a normalized XML format for further processing by BizTalk Server. The XML invoices are then sent directly to trading

> The BizTalk Server FTP Adapter pulls outbound customer invoices from the ERP system, maps them to a normalized XML format. They are then sent to trading partners using AS2, HTTPS, or FTP transport protocols.
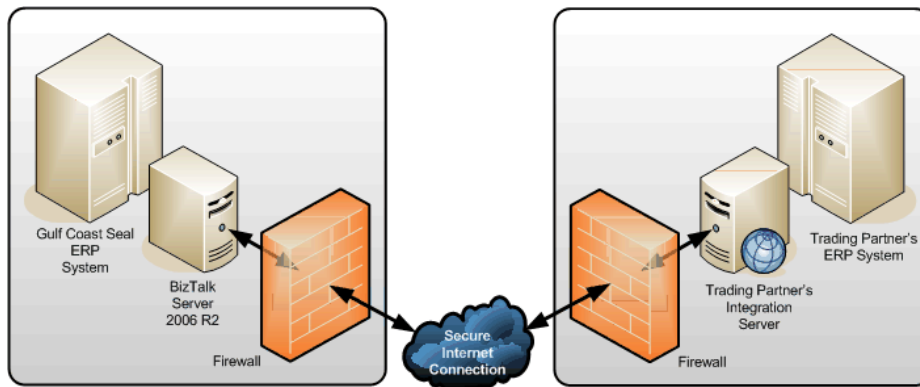
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partners in the preferred XML format using AS2, HTTPS, or FTP transport protocols. Encryption certificates are handled automatically within BizTalk Server and require only that administrators keep them up to date.

Gulf Coast Seal also receives purchase orders over the AS2 protocol. "Having the native AS2 support in BizTalk Server opens up a broader avenue of systems integration services to us," says Lynch. Gulf Coast Seal plans to upgrade to the RTM version of BizTalk Server 2006 R2 when it becomes available.

Benefits

Using Microsoft BizTalk Server 2006 R2, Gulf Coast Seal sends invoices seamlessly over the AS2 protocol and confirms the receipt of those invoices. The increased automation helps the company avoid overhead costs, improve customer service, and enhance its competitive advantage.

Worry-Free Electronic Invoicing

With BizTalk Server 2006 R2, Gulf Coast Seal is able to document the receipt of electronic invoices it sends over AS2, resolve problems, and resubmit invoices that have been rejected. "Now with BizTalk Server 2006 R2, we can look at a single screen and see that an invoice went out, and that the MDN came back confirming that the customer has it and it's the right invoice," says Lynch. "If we receive a negative acknowledgement, it's easy to identify the problem without having to search through a bunch of activity logs."

The AS2 confirmation capabilities in BizTalk Server 2006 R2 also reassure Gulf Coast Seal customers. "Our customers who use the AS2 protocol feel more comfortable knowing that if their system rejects an invoice, we will be notified so that we can resolve the problem," Lynch says. "I sleep a lot better at night knowing that I have records that I can

get to very easily to confirm that an invoice went out and was received, and show how the recipient replied."

The same benefits apply to purchase orders sent over AS2. "When customers send us a purchase order through the AS2 protocol, they get an MDN back saying that we received it, and were able to understand and decrypt it. The MDN is a binding legal confirmation of that transaction," Lynch adds.

Lower Costs

The native AS2 protocol support in BizTalk Server 2006 R2 saves Gulf Coast Seal approximately U.S.$1,500 per year in maintenance costs for the third-party adapter. It also eliminates the need to manually enter encryption certificates and potentially can reduce the number of invoices that the Gulf Coast Seal staff has to manually enter on customers' Web sites.

"Our business is low dollar/high volume," Lynch notes. "We send approximately 25,000 invoices to our trading partners every year, and we expect to double that in the next year. Manually entering even a small percentage of those on a Web site is tedious and cumbersome, and wastes valuable labor hours."

Gulf Coast Seal expects that support for the latest protocols provided by BizTalk Server 2006 R2 will help convince more customers' to move to electronic invoicing. This will help Gulf Coast Seal increase business volume without adding staff.

Improved Customer Service

The increased automation of the invoicing and ordering processes has freed up the company's accounting and customer service staff to work more closely with customers on issues that require personalized service. "We'd rather have our accounting people resolving issues like correcting invoice

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amounts so that we can get paid, rather than typing invoices into a Web site," Lynch says.

On the inbound-orders side, even with the 20 percent average annual growth, the company hasn't had to add customer service people. "With more and more of our customers sending purchase orders electronically, our customer-service staff has more time to spend helping customers find new products, rather than just entering orders for them."

Enhanced Competitive Advantage

Most of the company's biggest customers require vendors to submit invoicing electronically, and more of those customers are looking to switch to the AS2 protocol because it's easy to set up, it's secure, and it documents invoice receipts. "Vendors who don't have BizTalk Server have to buy very expensive third-party solutions that run on a separate server and don't do nearly what BizTalk Server does," says Lynch. Because BizTalk Server 2006 R2 provides the native support for virtually all of the protocols its customers require, Gulf Coast Seal can set up new customers quickly, and easily reconfigure an account if a customer changes transport protocols. "BizTalk Server 2006 R2 broadens the scope of what we can do and allows us to work with business partners we might not have been able to work with so easily before."

Microsoft Server Product Portfolio

For more information about the Microsoft server product portfolio, go to:
www.microsoft.com/servers/default.mspx

Software and Services
- Microsoft Server Product Portfolio
  - Microsoft BizTalk Server 2006 R2
  - Microsoft SQL Server 2005

Hardware
- Dell PowerEdge Servers