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Microsoft BizTalk Server 2000 Helps Company to Define New Approach to Vehicle Repair and Maintenance



Solution Overview

To provide motorists a dramatically different way of accessing car repair and maintenance—that's the vision of a new company known as JoeAuto. Now, with the help of Microsoft® Windows® 2000 Advanced Server and Microsoft BizTalk™ Server 2000, JoeAuto is realizing its vision, through a versatile, extensible, and comprehensive solution that integrates systems supporting Point of Sale, invoicing, accounting, parts ordering, and customer notification, among others.

Profile

Houston-based JoeAuto (<http://www.joeauto.com>) is changing the way cars and trucks are serviced, with a workflow application, accessible to customers through the Web, that vastly simplifies the process for individuals and businesses.

Scenario

Business to business, business to consumer, line of business

Microsoft Technologies Used

Microsoft Windows® 2000 Advanced Server
- Active Directory™ service
- Internet Information Services
- Message Queuing Service
- Terminal Service
Microsoft Active Server Pages
Microsoft BizTalk™ Server 2000
Microsoft COM +
Microsoft Exchange Server 2000
Microsoft Extensible Markup Language
Microsoft Great Plains Dynamics
Microsoft SQL Server™ 2000
Microsoft Visual Studio®
Microsoft Consulting Services

Benefits

Supporting its aggressive growth plans, JoeAuto has deployed a reliable and flexible workflow application that seamlessly integrates the functionality of diverse systems supporting the auto-service process from initial order to parts purchase, from billing to informing the customer of repair status, and much more.

Hardware

Compaq ProLiant server and desktop PCs, Compaq iPak PCs, Compaq storage equipment, Cisco networking equipment

Company Overview

Founded in 1999, Houston-based JoeAuto is looking to capture a significant share of the nation's \$110 billion market for vehicle maintenance and repair by offering individuals and businesses a convenient way of keeping their cars and trucks running smoothly. Launched in response to surveys that cited car maintenance and repair as one of life's most annoying chores, JoeAuto enables motorists to use the Web to access a business that gives new meaning to the term "full service."

For example, at any hour of day or night a customer can access the JoeAuto Web site to schedule an appointment, including vehicle pick-up and delivery and arrangement for a loaner or rental car. While the vehicle is in the shop the customer can see it being worked on thanks to Webcams that are set up in the service bays. Additional services include same-day and overnight repair and maintenance seven days a week, nighttime service for fleet vehicles so they can stay on the road during the day, and the onsite availability of parts to expedite service.

Business Challenge

Having opened its flagship store in mid-2001 to a favorable reception from investors and customers alike, JoeAuto is now implementing an aggressive five-year rollout plan targeting major metropolitan areas nationwide. "To pull this off, we knew early on that we needed not only creative management and talented technicians, but also a powerful and easily extensible approach to

managing vital information and workflow processes,” says JoeAuto CIO Bob Worrell. “That’s the reason we spent considerable time evaluating competing software technologies. That’s also the reason that after conducting this evaluation we selected a solution based on Microsoft BizTalk Server 2000 and other technologies in the Microsoft .NET Enterprise Servers family.”

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 Bob Worrell
 Chief Information Officer
 JoeAuto

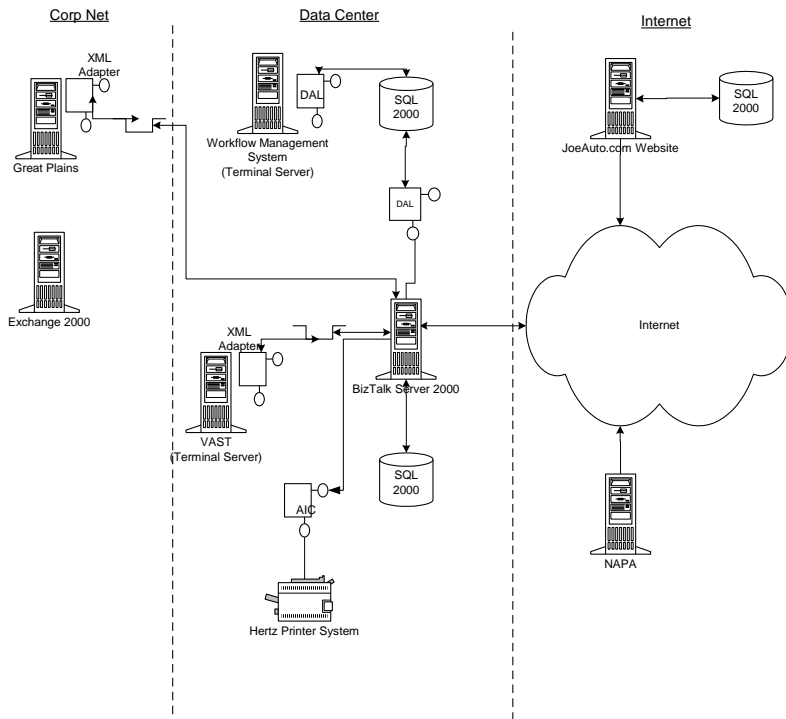


Figure 1 At JoeAuto, Microsoft BizTalk Server 2000 acts as an EAI server to efficiently and seamlessly tie together line-of-business, point-of-sale, and corporate financial systems and the databases they rely on.

As Worrell explains, JoeAuto initially had sought the recommendations of Hewlett-Packard, with whom it had a partnership, on how to implement an EAI (Enterprise Applications Integration) initiative. In response, Hewlett-Packard recommended using its Process Manager in combination with the webMethods B2Bi server, an Oracle 8i database server, and the HP-UX operating system. The JoeAuto executives wanted another opinion, however, and so they consulted Extreme Logic, the solution provider that had built their Web application. Extreme Logic consultants demonstrated the reliability, scalability, easy of use and administration, and cost-effectiveness of building an application based on Microsoft Windows 2000 Server and other .NET Enterprise Servers, especially BizTalk Server 2000.

“The support of BizTalk Server for EAI was a major factor in convincing us that this product could give us the connections to disparate systems, integration with suppliers, and real-time notification and subscription models we would need for a successful workflow application,” Worrell says. “We



also figured the product's orchestration functionality would be instrumental in facilitating the design of the application process and the translation of that process into a usable code structure."

Solution

To design, develop, and deploy the JoeAuto workflow application, six Extreme Logic consultants worked for six months. This included developing about six weeks for developing three back-end Application Integration Components from scratch, and a few days to integrate them with BizTalk Server.

Today, running on a foundation of Windows 2000 Advanced Server with BizTalk Server integrating functional components, the JoeAuto workflow application tracks vehicles as they progress through the system and provides key corollary services. The application includes online knowledge systems that provide customers real-time information, both text-based and through the Webcams, on the status of work being done. The application keeps vehicle repairs and maintenance on schedule by alerting technicians and team leaders when a repair is at risk of falling behind. The application also tracks time actuals and enables reporting so JoeAuto can clearly differentiate itself to investors in terms of productivity and cost-effectiveness.

The application is available to JoeAuto office staff on Compaq desktop PCs and to service technicians on Compaq iPak PCs on carts in the service bays. Through these systems the technicians can access the application to update their progress and to order parts that are subsequently hand-delivered to them while they work.

Why Microsoft BizTalk Server 2000 was the Right Choice

BizTalk Server is instrumental in supporting communications between the various components of the JoeAuto workflow application. To facilitate customer billing and payment through both online and traditional methods, BizTalk Server uses Microsoft Message Queue Service to send messages between the application and an Anderson BDG VAST POS (Point of Sale) system. To facilitate accounting, BizTalk Server orchestrates event-based messages between the application and the Microsoft Great Plains Dynamics accounting package and performs the transformation and mapping of the requisite data. In addition, BizTalk Server integrates the application with systems for invoicing and enables communications with a customer-notification component and a parts component supporting the direct order and delivery of parts to the technicians.

BizTalk Server also provides the reliability the application will need as JoeAuto deploys it to scores of new facilities. As Worrell explains, Microsoft Message Queue combined with BizTalk Server is helping to ensure that data encapsulated in an XML file reaches its intended destination, for example an application, a system, or a file store. "It's nice to know that the internal SQL queuing mechanism for BizTalk Server ensures that if errors are encountered during file transit, all data is fully recoverable," he says. "This is because BizTalk 2000 stores copies of files in transit so that transactions between systems can be reattempted or rolled back in the event of a failure."

Another crucial advantage of BizTalk Server is flexibility, according to Worrell. "Suppose the management of a new store should decide to use a POS system different from the one used at the flagship store," he suggests. "Because Microsoft technologies are so widely used, odds are good that there's a BizTalk Application Integration Component for that POS system. These

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means that we can integrate the system with our workflow application by simply installing the component and remapping the data transformation.”

All these factors make BizTalk Server the key element in an application that itself is a key element of the larger JoeAuto business mission: to fundamentally change the way motorists interact with their auto-repair provider. “When we first evaluated BizTalk Server, we knew we wanted a technology that would let us connect diverse components, integrate suppliers, and provide the real-time notification model necessary to keep customers informed of repair-related events,” Worrell says. “Seeing now how BizTalk Server is providing the fault-tolerant platform we needed to cost-effectively implement this kind of functionality, we know we made the right choice.”

The .NET Enterprise Servers are Microsoft’s comprehensive server family for quickly building and managing an integrated, Web-enabled enterprise. Designed with scalable, mission-critical performance in mind, .NET Enterprise Servers deliver reliability and manageability for the global, Web-enabled enterprise while delivering on the best performance in their class. The .NET Enterprise Servers are built from the ground up for interoperability using today’s Web standards. With XML built in, .NET Enterprise Servers attain the highest levels of integration and interoperability available today. With production-ready, out-of-the-box applications and the world’s largest partner base of developers and software vendors, .NET Enterprise Servers deliver the fastest time-to-market for the Web-ready enterprise.

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