

A Perfect Marriage

Workflow and EAI

By Rashid Khan

A major business challenge facing companies today is the need to meet heightened customer demand to operate flawlessly in “Internet time.” Workflow technology and Enterprise Application Integration (EAI) solutions were designed to do just that.

Workflow automation was conceived to automate the critical business processes that occur between humans within an organization. By automating these processes, whether a purchase order or a customer request, workflow frees up employees to focus on more strategic tasks, improving corporate efficiency in real-time.

EAI was designed to bring together the software systems from disparate departments within an organization to share applications between divisions. EAI does so by facilitating information transfer across systems that previously were unable to communicate efficiently. Like workflow, EAI ultimately streamlines an organization’s operations and positions it for greater success.

Both workflow and EAI have helped companies meet heightened customer demands, but to achieve the real-time response customers expect, organizations cannot allow islands of automation — one system focused on application-to-application process automation and the other focused on human-to-human process automation. Instead, the two solutions must be brought together. Integrating an EAI system, such as Microsoft BizTalk Server and a powerful workflow automation solution, lets companies combine two of their most valuable assets — people and applications — and accrue the benefits of

both in an optimal configuration.

Enterprise Application Integration

IT professionals recognize the need for EAI, which has become its own industry. Modern enterprise applications, such as Enterprise Resource Planning (ERP), Customer Relationship Management (CRM), and supply-chain management, are islands of automation designed and optimized to deliver best-of-breed solutions within their own realms. The rapid emergence of the Internet and e-commerce has created a strong demand for bridging these islands of automation. EAI solutions are the outcome of this demand. EAI focuses primarily on the movement of data from application-to-application as part of a business process.

Workflow Automation

The need for workflow automation is also well-understood and growing in importance as increasingly robust solutions emerge. Unlike EAI, workflow automation deals primarily with the automation of business processes that involve people and desktop applications.

Business analysts have long observed that, in a typical business process, the lag or queue time consumes 90 percent of the total time a process requires. This lag time is the time tasks are traveling from one person to another or are waiting in the in-baskets. The task time when people actually work on the tasks accounts for the remaining 10 percent. Personal productivity software, such as word processors and spreadsheets, addresses the task time but even if

personal productivity can be improved by 50 percent, the overall process time will only improve by 5 percent.

Workflow automation attacks the lag time. When lag time falls by 50 percent, overall process time shrinks by 45 percent. Since rapid response is a common expectation of customers, suppliers, and partners, deployment of workflow automation is vital to business success.

Besides reducing lag time, workflow solutions enable workflow players to participate in business processes using the browser. This brings workflow automation to every desktop and mobile device such as a Personal Digital Assistant (PDA). Workflow solutions also handle exceptions and special conditions that are rampant in every organization. They reduce the cost of ownership of automated business processes and, because they use a browser-based reporting module, they enable business managers to easily generate process metrics from real-time information.

A Perfect Marriage: Workflow and EAI

Enterprises now face a new challenge. Enterprise resources include human resources and enterprise applications. For optimal performance, these resources must work in harmony with each other. So EAI and workflow automation processes need to be tightly integrated and synchronized. For example, an EAI process often needs to spin-off a workflow automation process. This happens most commonly when exceptions are encountered during a process. EAI processes can effectively handle standard situations. However, when

there are exceptions to the rule, human intervention is necessary. Workflow processes, spawned to handle these exceptions, facilitate human intervention. When they're complete, they may provide feedback to the EAI process so it can continue.

A workflow automation process, which handles tasks in a business process that require knowledge input or decision-making, must also be able to spawn EAI processes. Following task processing, it's often necessary to trigger an EAI process that performs the remaining tasks that don't require any human input. For example, an e-commerce order fulfillment process may need to go through several levels of human review and validation. Once the order is validated, an EAI process can be triggered that transfers the order to an ERP or manufacturing system. Once these systems have completed manufacturing, the control may pass back to the workflow process for the rest of the fulfillment process — including testing, shipping, invoicing, and collection.

For optimal performance, enterprises require the seamless integration of workflow automation and EAI solutions. Each is optimized for its own unique requirements. Seamless integration will enable enterprises to accrue the benefits of both in an optimal configuration.

Microsoft BizTalk Server 2000

Using Microsoft's BizTalk Server 2000 provides the infrastructure and tools for building successful e-commerce communities. It offers business data routing, transformation, and a rules-based tracking infrastructure to enable EAI. The BizTalk Server also helps companies rapidly build and deploy integrated business processes within the organization and with trading partners.

The three major benefits to using the BizTalk Server are:

- **The ability to build dynamic application-to-application business processes** — The BizTalk Server infrastructure helps companies quickly integrate, manage, and automate dynamic business processes by exchanging data among applications within or across organizational boundaries. By providing tools that companies need for business process orchestration, BizTalk Server helps them build processes that span not only applications, but also businesses, over the Internet.
- **The ability to easily integrate appli-**

cations and business partners

— The BizTalk Server makes it easy for developers to integrate applications and businesses. Business analysts and application developers benefit from a host of rich graphical tools for building eXtensible Markup Language (XML) schema, performing schema transformation, establishing trading partner relationships over the Internet, and tracking and analyzing data and exchanged documents. With support for XML and standard Internet technologies, BizTalk Server extends the features of traditional e-commerce and Electronic Data Interchange (EDI) to entire e-commerce communities.

- **The ability to ensure interoperability using public standards** — With extensive support for public standards and specifications, such as XML, EDI, HyperText Transfer Protocol (HTTP), and security standards such as public key encryption, digital signatures, and encryption, BizTalk Server ensures the highest level of interoperability and security with applications inside an organization and those used by business partners.

Microsoft BizTalk Server 2000 and Workflow

The combination of workflow automation software and the BizTalk Server 2000 benefits enterprises in several ways. Workflow automation processes that involve people can be tightly integrated with EAI processes that involve enterprise applications. This provides an enterprise solution that engages the two primary resources of a modern enterprise (people and enterprise application) to deliver value as part of a heterogeneous business process.


Also, the heterogeneous business

processes made possible by the integration of a workflow solution and the BizTalk Server let organizations include their partners and partner applications in the value chain. The result is a true trading community that includes people and enterprise applications.

Conclusion

The two key requirements for organizations seeking more Internet-based e-commerce are:

- Rapid collaboration among people in different organizations
- The ability to rapidly move data between different applications belonging to different organizations.

The combination of workflow automation and BizTalk Server is an excellent example of a heterogeneous business process management that integrates humans as well as enterprise applications. By leveraging the power of people-to-people workflow automation and the application-to-application automation of EAI, such heterogeneous business process management delivers a unified platform for developing business communities in the Internet age. 

About the Author



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