

# IBM Introduces Key Product Enhancements for SOA

## Abstract

On September 12, 2005, IBM announced their Business Process Management Offering for Service Oriented Architecture, a set of integrated business process modeling, SOA enablement and management products that provides a basis for SOA design and implementation. This offering is a collection of six key products that enable an IT organization to incrementally integrate both XML-enabled Web Services assets and legacy, non-XML enabled applications. This announcement is an indication that IBM is gaining agility in reading the pulse of the industry and in translating trends into tools that truly meet the needs of today's IT organizations.

## SOA: Concept vs. Execution

SOA is an idea whose time has come, but which can be difficult to put into practice. Some of the major drivers for Service Oriented Architecture implementation are to simplify platform and system integration, to promote reuse of software assets, and to eliminate redundancy and risk in software development projects. Like any idea that promises simplicity, however, the complexity is often in the execution. IBM's Business Process Management products aim to simplify the implementation and management process, enabling organizations to use a step-by-step approach to gain the control of their infrastructure that is required to realize SOA's promise.

The driving factors for organizations to adopt a SOA can be compelling. Many organizations have significant investment in legacy assets, but are now confronted with the Web Services world which includes Java, .Net and other web-enabled and object-oriented technologies. The proliferation of software development projects which go over budget and under deliver creates a risky climate for attempts to rewrite these legacy applications. Organizations also face the necessity to integrate external systems belonging to clients and suppliers, as well as to absorb unlike systems created by mergers and acquisitions. In addition, object oriented assets, such as Java components, are not being fully leveraged because many organizations do not have the expertise or tools to enable code reuse, resulting in situations where the same code is written numerous times in multiple contexts.

While the SOA concept addresses all of these requirements in principle, most organizations struggle with a vision appropriate to their particular circumstances and lack the expertise required to implement. Implementation requires a clear vision, integration architecture expertise, willingness to reengineer when required, a detailed understanding of the relationship between applications and technology, and the ability to catalog and document details of available software components.

## IBM SOA Foundation: Complexity Simplified

IBM's Business Process Management capability addresses these issues in their offering for Service Oriented Architecture, which includes six key products:

- WebSphere Business Modeler
- WebSphere Process Server
- WebSphere Integration Developer
- WebSphere Business Monitor
- WebSphere ESB (Enterprise Service Bus)
- WebSphere Message Broker

These products have evolved from earlier offerings into an integrated set of products providing extensive capability to model business processes, map models to technology, and ease implementation into SOA architecture. Business Process Models flow from conception to execution through the integrated product set, minimizing the complexity of translating processes into "real world" applications.

WebSphere Business Modeler is used by Business Analysts to model a particular business process. At its simplest, this tool can be used to simply draw processes for documentation. For intermediate and advanced users, however, the tool can be used to set properties for task and resource assignments, providing a framework for business process simulation that can help identify potential bottlenecks caused by staff or resource limitations.

The WebSphere Process Server is the runtime element that, along with Enterprise Service Bus and Message Broker, is responsible for serving up components for consumption

by a requesting program. WebSphere ESB provides the core Enterprise Service Bus and Web Services functionality while WebSphere Message Broker provides additional capability for non-standards based services. The Integration Developer works with the other elements of the product set to map the business process model to the underlying technology. These products together are the technology engine of the product set and the portion that maps to traditional SOA framework.

The WebSphere Business Monitor tracks and manages events and graphically represents them as business processes execute. These events, specified in the Business Process Model, are correlated by an integrated correlation engine so that the same event is reported once instead of multiple times.

The WebSphere ESB, WebSphere Message Broker, provides connectivity for Web Services products and protocols. The Advanced ESB provides integration to those products as well as to non-XML based products. Experienced Integration Analysts can define custom formats by specifying the integration requirements for legacy software.

## Ramifications

For organizations that are struggling to integrate disparate systems or are looking for ways to improve their ability to “write software once, use many times,” SOA may be the way to go. But for SOA to be effective, an organization has to understand very clearly how their business processes map to applications and technology. The task of documenting, designing and implementing such an architecture can be daunting. A toolset that enables process designs to flow through to implementation is very compelling.

The Business Modeler, in particular, provides a powerful methodology that goes beyond simple process documentation and links processes to resources in a way that enables simulations of what will happen when a process is executed. The ability to anticipate and prevent resource bottlenecks proactively can be an extremely effective way to promote business process changes and minimize their impact.

In addition to the tools themselves, IBM can also provide training and/or consulting services. To get full value out of these products, trained staff is required. The power of the tools doesn't preclude the necessity for expertise, but can provide an optimum environment for knowledgeable people to implement sound architecture.

## EMA's Perspective

With this new product suite, IBM is demonstrating its ability to execute on the needs of the marketplace by providing well designed products that address a specific customer need. Many organizations are struggling to gain the skills necessary to implement a Service Oriented Architecture, and the combination of modeling tools and SOA technology provided can go a long way towards enabling a simplified approach to SOA implementation. Although customers should not expect “instant SOA” from this or any product set, these tools can facilitate a cohesive, consistent organizational approach to process modeling and documentation that can provide the basis for either a gradual or rapid adoption of service architectures.

The technology portion of the solution set includes a new product, WebSphere Enterprise Service Bus, as well as a newer version of WebSphere Message Broker. This makes for a seasoned, mature product that is more robust than previous offerings. EMA believes that IBM has matured this solution set in pace with the progress of SOA in general. This responsiveness provides a product suite that can be of value to organizations exploring Service Oriented Architecture implementation.



**ENTERPRISE MANAGEMENT  
ASSOCIATES**

Phone: 303.543.9500, Fax: 303.543.7687

[www.emausa.com](http://www.emausa.com)

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