Report

▶ Competitive Intelligence Report

IBM Gets ESB Concept Right

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Module:
Application Infrastructure - U.S.

▶ Summary

Event Summary

September 16, 2005 -- IBM has jumped on the bandwagon. In a comprehensive SOA products-and-services push, Big Blue joined a list of companies offering products labeled as ESB (enterprise service bus). In addition to WebSphere ESB, IBM also rolled out a business process server, modeler, and monitor; a component assembler; and a set of best practices for SOA.

Analytical Summary

• Current Perspective: Positive on IBM's release of its ESB, along with other integration products as it is covering its bases in terms of product coverage and attempting to make its extended product line more coherent.

• Vendor Importance: Moderate to high to IBM as it needed to offer more simplified offerings to cover new SOA environments and buying patterns.

• Market Impact: Moderate on the market as competitors will also feel compelled to take action to modify their integration products for the new SOA environment, and this includes releasing an ESB type of offering.

▶ Perspective

Current Perspective (Positive)

We are taking a positive stance on IBM's release of new integration products, including an ESB, and enhancements to existing products. The ESB product has a good set of features, and the firm generally does grasp the concept of an ESB. It has also added more coherence to the integration product line. The firm still has redundancies and could do more to accommodate the issues with SOAs, but there is ample time to build out those features, as most users are nowhere near a pure SOA environment at present.

IBM is jumping on the trend fully as evidenced by last week's announcement of its "SOA Foundation" (see "IBM Lays SOA Foundation," September 14, 2005). IBM has much to gain as application logic in the form of composite applications is put in the middleware layer instead of in applications, which IBM doesn't sell. Unfortunately, the SOA Foundation announcement suffers from the syndrome common in many large companies whereby all conceivable products have to fit into a new architecture, even if they are only marginally relevant. This is particularly incongruous with SOAs, since they are supposed to be all about simplicity and cost savings, among other things.

Report

IBM Gets ESB Concept Right

IBM's actual integration products, which are most relevant to SOAs, are evolving nicely to fit this architecture, however. The new WebSphere ESB, priced at $25,000, includes a JMS message bus, routing, configuration of Web services end points, as well as basic XML transformation. It runs on WAS and inherits all those reliability features. Derived in part from the firm's Interchange Server product and based on the new Service Component Architecture, the ESB will also support new WS-* standards as they relate to messaging and other items. This simple ESB layer can be upgraded to another new product, dubbed Process Server, that includes WebSphere ESB functionality, plus a process tool, including process modeling and execution, human workflow, business rules, and B2B partner management. This product, which runs on WAS 6, is derived from (WebSphere Business Integration Server Foundation,) Interchange Server and MQ Workflow, and provides a simpler, lower cost entry ($85,000) into process-based integration. It is a more realistic product for today's SOA environments, which are still "works in progress" and need back end adapters, and other items common to EAI environments.

The company is making improvements to its process tools and adding a bit more coherence to the suite. It has improved WebSphere Business Modeler to include more simulation, and tools to build KPIs. These models can be assembled into WebSphere Integration Developer tool to prepare them to be deployed on Process Server or WebSphere integration developer. The latter tool, WebSphere integration developer, is an option derived from previous WAS process products. All these products are further unified through Eclipse interfaces and the support of BPEL, at least for import/export, and in some cases natively. Most run on WAS (including Process Server and Integration Developer). There is also a common "event processing" layer that sends event information on up to a higher Tivoli console. It is likely that IBM will further develop event processing as this infrastructure is put into place at these lower levels.

While these products come closer to providing the type of integration services most needed by an SOA, it is not all the way there. The firm should consider putting basic BPEL functionality into its ESB, for multi-step integrations or "microflows." This can later be incorporated into more business oriented BPM process flows, if need be. SOA styles of integration would seem to require management of distributed services as part and parcel of the integration functionality. Yet, IBM's Web services management remains part of the Tivoli suite. UDDI 3.0, which is a common way to discover, view, manage, and apply rules to services is also not part of this announcement, although it is supported in WAS. IBM should attempt to bundle Web services management with these integration products and provide commonalities. It should consider an expanded UDDI-based registry layer, also linked with integration. There is adequate time for this as SOAs are mainly works in progress at many firms. IBM still has several entry points into integration and process functionality, some if it is unavoidable (although competitors will seize on this in sales situations). Also, while Big Blue is clearly supporting Message Broker, it seems to be a bit disconnected from the new ESB and process products. It is named Advanced ESB (it is positioned as an Advanced ESB), but it is not really all that related to WebSphere ESB (the upgrade path from ESB is to Process Server not Advanced ESB, despite the name).

IBM's moves to offer an ESB will cause others to follow. It should also cause vendors to offer separate SOA Integration type products that deal with issues inherent in this type of environment. One issue that is barely being handled by any vendor in the industry is the fact that many users are broadly defining "services" in their environments and including services not based on SOAP/WSDL. This could be a serious challenge to SOA integration vendors in the future.

Market Impact (Moderate)

• IBM's release of an ESB will legitimize this space and spur competitors to offer true ESBs (not merely rebrandings of products as ESBs) in order to appeal to this portion of the market.

• IBM's moves, along with moves by others, will force competitors to offer integration products that more clearly solve problems associated with highly distributed SOA integration paradigm.

• IBM's distributed set of integration products, which sometimes offer duplicate functionality, will cause competitors to further unify their offerings in order to exploit this weakness.

Vendor Importance (Moderate / High)

• IBM needed to respond to new SOA architectures with products that fit more neatly into this paradigm, including an ESB and its Process Server product.

• IBM needed to respond to ESB players who have the potential to take away some of IBM's market share.

• IBM needed to improve its process tools and simplify the offerings in order to appeal to users who want to build composite applications on top of SOAs.

▶ Positives and Concerns

Competitive Positives

• IBM announces details of its WebSphere ESB, which was mentioned as part of a larger SOA Foundation announcement last week (see "IBM Lays SOA Foundation," September 14, 2005). The product, priced at $25,000, includes a JMS message bus, routing, message login, and configuration of Web services end points, as well as basic XML transformation. It runs on WAS. Derived in part from the firm's Interchange Server product and based on the new Service Component Architecture, the ESB will also support new WS-* standards as they relate to messaging and other items. This product encompasses the spirit of an ESB and an understanding of the basic integration needs of a true SOA. While most users still don't have a true SOA, it will appeal to a growing subset who are building this out, at least in departments, and who want a low cost, standards-based integration option to reflect this. The price point is also comparable to other ESBs on the market.

• The firm also announces a new product, dubbed Process Server, which includes WebSphere ESB functionality, plus a process tool, including process modeling and execution, human workflow, business rules, and B2B partner management. This product, which runs on WAS 6, is derived from WebSphere Business Integration Server Foundation, Interchange Server and MQ Workflow, provides a simpler, lower cost entry ($85,000) into process-based integration and is an upgrade to WebSphere ESB. It provides the process layer on top of the SOA. It is a more realistic product for today's SOA environments, which are still "works in progress" and need back end adapters, and other items common to EAI environments.

• The company is making improvements to its process tools and adding a bit more coherence to the suite. It has improved WebSphere Business Modeler to include collaboration with others working on the model, simulation and "what if" scenarios, and tools to build KPIs into the process. The models are better suited to execution with the new performance metrics and therefore have more coherence with the "deployment options" that IBM offers. These models can be assembled into WebSphere Integration Developer tool to prepare them to be deployed on Process Server.

• All these products are further unified through Eclipse interfaces and the support of BPEL, at least for import/export, and in some cases natively. Most run on WAS (including Process Server and Integration Developer) There is also a common "event processing" layer that sends event information on up to a higher Tivoli console. It is likely that IBM will further develop event processing as this infrastructure is put into place at these lower levels.

• The company is also improving its venerable WebSphere Message Broker product, which will is being positioned as an Advanced ESB. The new version mainly is updated to support new data transformation format types for various industry verticals and more XML support. There is also a performance advancement and support for Data Stage TX as an option for transformation. This product, still a big seller for IBM, will continue to be enhanced, thereby satisfying this large constituency.

Competitive Concerns

• While these products come closer to providing the type of integration services most needed by an SOA, it is not all the way there. For example, services will be profoundly distributed in an SOA (in more ways than one) and in fact, in most user cases, services will be built and run on other platforms, including .Net. This would seem to require management of distributed services as part and parcel of the integration functionality. Yet, IBM's Web Services management remains part of the Tivoli suite. UDDI 3.0, which is a common way to discover, view, manage, and apply rules to services is also not part of this announcement, although it is supported in WAS. In general IBM has been behind competitors such as SAP and a few others in developing a full service "registry" which can be an organizing force and simplifying force for SOAs.

• The company is not supporting JBI at this point, and has not made a decision about supporting open source ESB architectures (Synapse, etc.).

• Although there is more coherence in its integration products, IBM still has several entry points into integration and process functionality. There is duplication between process tools in Rational, and some slight duplication within integration products (MQ Workflow is still being sold separately). The company has put some guidelines around these entry points (Modeler is for business analysts not interested in deployment issues, etc.), which are helpful, but some duplication will remain.

• While IBM is clearly supporting Message Broker, it seems to be a bit disconnected from the new ESB and process products. It is positioned as an Advanced ESB, but it is not really all that related to WebSphere ESB (the upgrade path from ESB is to Process Server not Message Broker). Instead Message Broker can work with Process Server in some situations.

• While the company is putting in a foundation for collecting information on events for an event processing application, it isn't clear when such a business oriented event processing application will appear. Simply putting it into Tivoli for IT related information seems a waste. Although this is an emerging market, others, including Oracle and TIBCO, have gone further with Complex Event Processing applications and related BAM products.

▶ Recommended Actions

Recommended Vendor Actions

• The firm should consider more tightly aligning its Web Services Management product to its ESB and Process server through a bundling arrangement and common interfaces and agents for services on these products.

• IBM should consider enhancing its UDDI registry and making more of a tool for managing distributed services and applying policies, not just discovering them. It could be subsumed in its Web Services Management tool, or could be a separate "Registry" type of product that can accommodate non SOAP/WSDL services.

• The firm should consider putting basic BPEL functionality into its ESB, for multi-step integrations or "microflows." This can later be incorporated into more business oriented BPM process flows, if need be.

• The firm should put WS-* implementations (including WS-Reliability, WS-transactions, WS-Eventing) into its ESB and/or application server as these reach maturity, as this will allow a standards approach. It! should put its weight behind the Apache Synapse project and attempt to influence this approach to an open source ESB model. It should reconsider supporting JBI, especially if it seems that it is gaining traction among users. The firm is in a position to guide the definition of what an ESB is, but has not exercised that influence as of yet.

• The firm should consider a business oriented complex event processing application, and/or BAM application that makes use of the event information that is being gathered.

Recommended Competitor Actions

• Competitors such as TIBCO, Sun/SeeBeyond, Microsoft, and others should consider an ESB product, which is lower cost and basically connects services. This should include messaging, support for WS-* standards, including WS-Reliability, basic system to system workflow, and some transformation.

• In a larger sense, integration competitors should prepare for SOA style of integration in the long run. They should consider separate products that take into account the issues with an SOA, including a common invocation layer, management of services running on different platforms, WS-* standards (including security), and a registry. A process tool to build composite applications should be included. "Legacy" technologies such as adapters, brokers, and other tools should be included as these will be needed for the foreseeable future.

• Competitors should not duplicate IBM's "multiple points of entry" approach to BPM and process tools, but should instead have a unified development and deployment environment with different role-based interfaces.

• In general, competitors should consider a way to include non-SOAP/WSDL services (i.e., those self defined by users), in their SOA integration products. This will require more research into what users are actually doing with their SOAs now and in the next 12-24 months.

Target Markets

CLECs, End Users, Global 2000, Resellers/Channels, Systems Integrators, Third Party Implementers, Web Portals

Recommended End User / Customer Actions

• End users should consider an ESB product if they have a substantial number of services and want a low cost, lightweight solution to exchange data between them (in other words, perform integrations).

• End users should keep in mind that most ESB products are geared toward traditional SOAP/WSDL services and may not accommodate their own (the users') definition of what a service is in the user's SOA.

• In general, users should move toward an SOA because of simplicity, flexibility, and lower cost. They should ensure that products built on SOAs don't defeat these goals.

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