SearchSOA

TechTarget

E-Guide

Optimizing the performance of ESB

SearchSOA

Contents

The Enterprise Service Bus (ESB) is a form of plumbing that enables effective SOA implementation. But understanding the ESB remains an industry-wide quest. That's why SearchSOA.com editors caught up with industry expert, Chris Harding to find out what users really want from their ESB and why it's the basis to implementing SOA effectively.

The latter half of the E-Guide will explore ESB trends and the growth of the ESB market as open source players enter it.

The ESB and its role in application integration architecture
By: Alan Earls

Although enterprise service busses (ESBs) are not new, they can continue to be a nexus for confusion. After many years and many implementations, what they do, how they do it and whether specific products can help create a SOA are all still matters of contention.

Chris Harding, a forum director for SOA and client computing at The Open Group, argues that there isn't always clarity regarding the nature of ESBs. On the Internet, he points out, there is TCP, which is standardized and central to everything. There is nothing similar on the enterprise software stack for ESBs. "All you have is a good common understanding of what an ESB does, but you don't have the tightly defined interfaces. It is a much looser thing," he says.

According to Harding, when people talk about ESBs, the key thing they want is the ability to exchange messages using the ESB as a messaging bus. "To that basic vision can be added many other things in terms of transforming the messages, in terms of your ability to combine services and even as a composition engine, but the core is the transmission of messages."

Sponsored by **MuleSoft™**

SearchSOA

Contents

Historically, Harding says a lot of discussion once focused on whether an ESB is essential for SOA. "In a theoretical sense, the answer is no," he says. Instead, SOA requires a service-oriented approach to your architecture, the definition of components as services, the identification of service definitions and the loose coupling of those services, he explains.

However, notes Harding, when organizations implement loose coupling for the exchange of messages between services, they often find that an ESB as a means of message exchange is the crucial part of their service-oriented architecture.

Ken Vollmer, an analyst at Forrester research, says ESBs handle the interactions between different components, creating and routing services, and even providing orchestration.

"ESB is the plumbing that enables someone to implement SOA effectively," he adds.

Implementing that broad architectural vision is another matter. Vollmer says a good starting point is an architectural reference model. "There has been broad agreement since the first talk about ESBs that they should include an architecture layer, a connection layer, a mediation layer and an orchestration layer," he says.

Citing a recent Forrester report, "The ESB Reference Architecture Model," Vollmer says that several ESB components must work together to provide the basic ESB framework to deliver availability (typically, through clustering), federation (to support interoperation of ESBs), a topology (such as a hub-and-spoke structure) and extensibility (so that customers can add capabilities on their own).

ESBs are an illustration of service orientation, which is still "a different way of doing things" for many organizations. "People used to write point integration but with ESB, you should be able to create and then reuse code in different ways," he says. Getting over that idea of having to develop everything from scratch is crucial – and then using an ESB to help implement SOA can make

Sponsored by MuleSoft™

Contents

life easier. "But developers still like to write code, and that can be a problem," he adds.

Vollmer says one of the main challenges in implementing an ESB is making sure you have the right product before you buy it. If throughput is a key requirement, test the product on your site before you buy it. "Don't buy a pig in a poke," he says.

According to Vollmer, implementing an ESB isn't usually that difficult. He says the degree of challenge depends significantly on the skill level of the people involved with an ESB. "It is not simple to implement, but we are way beyond the bleeding edge stage; ESBs have been around for 8-10 years so vendors have made them much easier to work with," he says. "Therefore," he adds, "implementing an ESB would not significantly challenge a well-organized IT department."

Vollmer says Forrester has interviewed 20 companies that recently implemented ESBs and no areas emerged as particularly burdensome. "More than anything, it is a different way of doing integration," he adds. However, he notes, when problems did surface during initial implementations, about 80 percent of them seemed to be architecture related and the balance – only about 20 percent – were linked to tuning issues.

"From my theoretical perspective, the thing that interests me the most about ESBs is how easy it is to port your services from one ESB to another," adds Hardy.

Contents

Is open source remaking the ESB market?
By: Rich Seeley, News Writer

The enterprise service bus (ESB) market is evolving as open source players enter it, but as in biological evolution, it appears to be a matter of adapting to survive.

Questions about the ESB market arise from the acquisition of Cape Clear Software Inc. by Workday Inc. earlier this month. Then there was the announcement this past week by Iona Technologies Inc. that it has retained Lehman Brothers Inc. "to evaluate and advise its board of directors regarding strategic alternatives for the business including, but not limited to, the sale of Iona or merger of Iona."

What is the state of the ESB market in light of this? Are pure play closed source ESB vendors such as Cape Clear and Iona being swept up in the tide of mergers and acquisitions that has been a fact of life in the larger service-oriented architecture (SOA) vendor market?

Analysts interviewed for this article see this more as a subtle change in an SOA sub-category that is not as dramatic as when a major platform vendor like Oracle Corp. picks off a major competitor like BEA Systems Inc.

"I don't think we have any mega trends here," said Dana Gardner, principal analyst of Interarbor Solutions LLC. "ESB is not the fast-paced business we've seen in other areas. Each company needs to look at its particular business model. We have to look at this through the lens of what is the business model for the vendor."

For example, he sees a future for the acquisition of Cape Clear by Workday, an ERP vendor started by former executives of PeopleSoft, who left in the wake of that company's acquisition by Oracle. Workday's business model is to provide human resources and other ERP applications on the software as a service (SaaS) model. It was already in partnership with Cape Clear to provide an ESB as a service.

Contents

"I think Workday with the Cape Clear acquisition is going to be leading the innovation on this front," Gardner said. "There's more to the Cape Clear acquisition than just a vendor going to a services company. I think this whole notion of integration as a service has some very interesting implications. Workday opens up a whole new opportunity for mixing and matching services on-premises, third-party, and pure on-demand sources. And being able to manage that through an on-premises or cloud-supported ESB is very fascinating conceptually."

The fate of Iona is less clear because it is in exploratory merger and acquisition limbo. An Iona spokesperson said hiring Lehman Brothers followed an unsolicited bid to buy the company from a potential buyer that Iona will not name. The announcement was made to comply with laws in Ireland where Iona is based, the spokesperson said. In its statement last week, the company said it would have no further reports unless and until there was something definitive to announce.

Jason Bloomberg, senior analyst with ZapThink LLC, said both pure play vendors suffered from a failure to gain traction for their ESB in the SOA marketplace.

"Iona and Cape Clear are clearly examples of a broader consolidation trend in the industry," he said, "but in their particular cases, it's more examples of better technology that both vendors were unable to market and sell effectively enough to grow their business sufficiently."

Bradley F. Shimmin, principal analyst of application infrastructure at Current Analysis LLC., said Cape Clear tried to scale up to compete with the major vendors such as Oracle, but didn't sway enough customers.

"Last year, Cape Clear was locked in a death match with Oracle over transactions per second," Shimmin said.

Iona is trying a different strategy as it positions itself as a hybrid in the growing move toward open source ESBs where analysts see MuleSource Inc., WSO2 Inc. and Red Hat Inc. having success.

Contents

"Open source options from Mule and WSO2 are raising the bar for the commercial vendors, as open source does in any segment of the market," Bloomberg said.

Open source ESB vendors are much more nimble in the marketplace than their closed source cousins because they have not had to invest heavily in the development of the technology they support and are not tied to any single marketing strategy or niche, Shimmin said.

"They're not tied to any line-of-business app," he explained. "They're not tied to any vertical market. They're not tied to any facet of application integration."

Responding to the growing interest in open source, Iona has repositioned itself from its pure play commercial heritage by offering a hybrid approach selling Artix, its closed source ESB, and FUSE, its open source ESB based on technology developed by the Apache Foundation.

Several analysts say it is a good strategy, but a difficult transition.

Shimmin said it can be effective with IT departments that don't want to buy into one of the major vendors suite approach.

"Iona is making good progress with their open source solution," he said. "They are able to go into an environment where they need some basic integration, but don't want to pay Oracle for the entire suite."

Gardner said that for closed source commercial vendors such as Cape Clear and Iona, it can be a difficult transition to move from the old school software license model to the open source subscription approach.

"Iona went for a hybrid model based on having a commercial heritage," Gardner explained. "WSO2 and MuleSource have evolved from a more purely open source environment and therefore have a different business model. They sustain themselves based on subscription, the business model

Sponsored by MuleSoft™

Contents

of open source. Iona is going to an open source model and that can be a difficult transition."

What is making open source attractive to CIOs and causing commercial vendors to move to in that direction is the pricing pressure in the software marketplace that goes beyond ESB or SOA software, Gardner said.

"It's really indicative of the shifting business models for paying for software," he said. "Basically, you're facing price pressure in the market."

Sponsored by MuleSoft™

SearchSOA

TechTarget

Contents

Free resources for technology professionals

TechTarget publishes targeted technology media that address your need for information and resources for researching products, developing strategy and making cost-effective purchase decisions. Our network of technology-specific Web sites gives you access to industry experts, independent content and analysis and the Web's largest library of vendor-provided white papers, webcasts, podcasts, videos, virtual trade shows, research reports and more —drawing on the rich R&D resources of technology providers to address market trends, challenges and solutions. Our live events and virtual seminars give you access to vendor neutral, expert commentary and advice on the issues and challenges you face daily. Our social community IT Knowledge Exchange allows you to share real world information in real time with peers and experts.

What makes TechTarget unique?

TechTarget is squarely focused on the enterprise IT space. Our team of editors and network of industry experts provide the richest, most relevant content to IT professionals and management. We leverage the immediacy of the Web, the networking and face-to-face opportunities of events and virtual events, and the ability to interact with peers—all to create compelling and actionable information for enterprise IT professionals across all industries and markets.

Related TechTarget Websites

➤ Search**SoftwareQuality**

➤ **ebizQ**.net

➤ The**ServerSide**.com

➤ The**ServerSide**.net

➤ Search**WinDevelopment**

➤ **Ajaxian**.com

Sponsored by MuleSoft™