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The Forrester Wave™: Enterprise Service Bus, Q4 2005

by Mike Gilpin and Ken Vollmer

TECH CHOICES

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Evaluation Of Top Enterprise Service Bus Vendors Across 100 Criteria

by **Mike Gilpin and Ken Vollmer**

with John R. Rymer and Lindsey Hogan

EXECUTIVE SUMMARY

Service-oriented architecture (SOA) is hot. And as today's primary entry point for SOA, the emerging enterprise service bus (ESB) market is heating up, too. For example, within the last few months two major application platform vendors, BEA Systems and IBM, formally entered the ESB market, legitimizing the concept for many potential buyers. To assess the state of the ESB market and see how the vendors stack up against each other, Forrester evaluated the strengths and weaknesses of top ESB vendors using 100 criteria. The result: The market has two segments, with different leaders in each. The *ESB suites* segment is led by Cape Clear Software, Fiorano Software, BEA Systems, and Sonic Software, whereas the *comprehensive ESB suites* segment is led by Oracle, Oracle, TIBCO and Sun Microsystems. Included in this report is an interactive vendor comparison tool that provides detailed product evaluations and customizable rankings.

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NOTES & RESOURCES

Forrester conducted ESB evaluations in Q3 2005 and interviewed 28 vendor and user companies, including: BEA Systems, Cape Clear Software, Fiorano Software, IONA Technologies, Oracle, PolarLake, Sonic Software, Sun Microsystems, TICBCO Software, and webMethods.

Related Research Documents

["Your Paths To Service-Oriented Architecture"](#)

December 7, 2004, Trends

["What Is An Enterprise Service Bus"](#)

August 13, 2004, Tech Choice

["Integration In A Service-Oriented World"](#)

July 6, 2004, Best Practices

THE ESB IS THE LEADING ENTRY POINT FOR IMPLEMENTING SOA

By the end of 2005, Forrester expects that 77% of large enterprises, 51% of medium enterprises, and 46% of small enterprises will be actively implementing SOA.¹ Furthermore, of large enterprises implementing or planning to implement SOA, 69% are using SOA for internal integration, while 50% are using SOA for external integration with business partners and customers (see Figure 1). An enterprise service bus is the most popular way to do SOA-based integration — Forrester estimates that about a third of US infrastructure decision-makers plan to increase the scope of ESB deployment in the next 12 months.

The ESB Market Landscape

An ESB is infrastructure software that makes reusable business services widely available to users, applications, business processes, and other services. ESBs achieve this goal by mediating between services.² An ESB helps enterprises obtain the value of SOA by increasing connectivity, speeding change, and providing greater control over use of the important resources it binds.

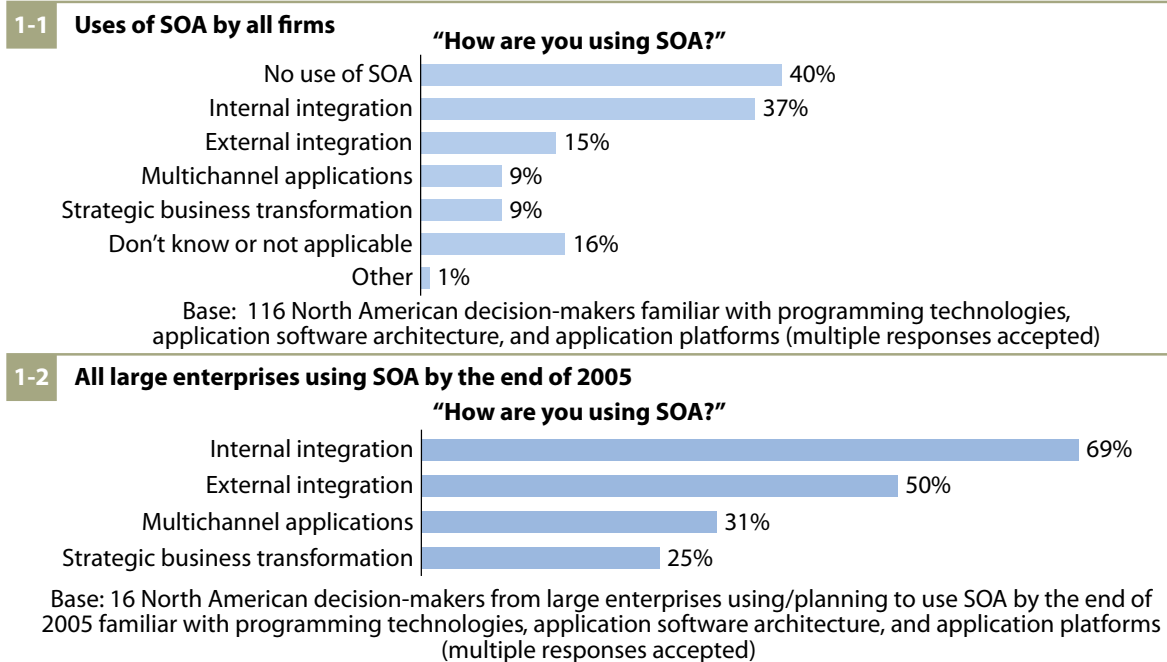
The ESB market has grown out of two other markets, enterprise application integration (EAI) and Web services infrastructure:

- **EAI provided integration based on message-oriented middleware.** But by now, IBM, Sun Microsystems (Sun acquired SeeBeyond in June 2005), TIBCO Software, webMethods, and the EAI leaders, have added support for Web services in response to the SOA opportunity. IBM's recently announced WebSphere ESB is not yet available and so not included in this comparison.
- **Web services infrastructure is fragmented, but includes some elements of an ESB.** An ESB provides more than just integration. Segments of the Web services infrastructure market also include security, management, and registries, all of which are delivered to some extent by an ESB. This ferment of Web services infrastructure technologies is still bubbling and spawning a variety of solution types, from appliances, to ESBs, to combined solutions for managing and securing Web services based exchanges. The boundaries between these segments are continuing to move, and are unlikely to settle down for another few years.

Forrester's analysis of ESB requirements yields two customer segments: "keep it simple" and "I want it all now."

The requirements of the "keep it simple" group typically include:

- **Simple and low-cost integration compared to EAI.** Many organizations have been successful with EAI and business process management (BPM), but some have spent millions of dollars without obtaining the promised returns. Customers that have lived through one of these debacles are often the most enthusiastic proponents of a "keep it simple" approach to integration, and are looking for simpler, lower-cost integration from an ESB.

Figure 1 SOA Is Used For Internal Integration — And More

Source: Forrester Research, Inc.

- **Support for service orchestration.** Most ESB customers Forrester interviewed about their use of ESBs during this evaluation project said they wanted support for service orchestration, and many were already using service orchestration tools and BPEL-based runtimes provided by their ESB vendor. They use orchestration to enable simple composition of large-grained services from fine-grained services. They also use the lightweight process modeling facilities of these tools to drive their service-oriented integration projects, and use these simple executable process models to increase flexibility. It's easier to change a model than to change the code in a service.
- **The core of future support for the service life cycle.** The “keep it simple” buyers want lightweight, plug-and-play service life-cycle solutions, not a cradle-to-grave environment that provides everything they would ever need. Eclipse is often part of these environments, as an enabler of this plug-and-play approach. Service life-cycle management tracks services and their related artifacts through their whole life cycle, from development, reuse, and integration, to deployment and management, to optimization.³

The requirements of the “I want it all now” group typically include:

- **ESB within a broader application or integration platform.** These buyers want ESB features from their broad platform strategy, whether an application platform or an integration suite.

- **Solid support for the service life cycle.** If the “keep it simple” crowd knows they want service life-cycle management, this high-end crowd really knows it — and they want it *now*. Unfortunately, even the major platform solutions don’t completely address this requirement, but they come closer than the lightweight solutions — albeit at the cost of some added size and complexity in the toolset and related infrastructure for managing the service artifacts.
- **Support for at least parts of a full BPM solution.** The “I want it all now” customers are using BPM, not just service orchestration. Business processes are central to their understanding of SOA, and modeling those processes is a critical requirement that plugs into many parts of the development life cycle, not just integration. Many have additional requirements for advanced features like process simulation, monitoring, and optimization.

And finally, there are also some requirements that the two groups have in common:

- **Full support of SOA.** Different integration solutions provide varying levels of support for SOA — customers seeking ESBs typically want as much support for SOA as they can get, although the reality of doing a real implementation while the technology is still evolving tempers this desire, leading to a variety of pragmatic compromises. But even when compromise is accepted in the short term, customers want deep SOA support to be delivered as soon as possible.⁴
- **Support for open standards.** Unlike earlier EAI solutions that were, at least at first, based on primarily proprietary technology, customers today are looking for standards-based integration. But this one attribute, although still essential, is no longer a clear differentiator — as most vendors have added some level of support for standards like Web services. There are still differences in the level of standards support different vendors provide, as reflected in this Wave, but it’s no longer as meaningful to talk about a “standards-based integration” category.

The difference between these two sets of requirements is the main force behind the segmentation of the ESB market. And we also encountered some companies where both buying groups were active at the same time — in one part of the company, an “I want it all now” buyer was addressing ESB requirements by building up from one or more incumbent platforms, whereas in another part of the same company, a “keep it simple” buyer was using a lightweight ESB — and with the same platforms!

- **ESB suites.** These are ESBs with optional components for service orchestration, service management, and partner collaboration, delivered as suites. They evolved from Web services infrastructure or lightweight messaging products, not from integration suites.
- **Comprehensive ESB suites.** These are full-service integration suites that encompass all of the ESB suite features plus support for human workflow, vertical industry solutions, portals, rules engines, and more. They evolved from the EAI space and have added support for SOA.

In this report we have applied the same ESB criteria to both segments. However, the criteria have been weighted differently for each segment to reflect Forrester's assessment of the differences in customers' needs and preferences in each segment. So for example, pricing receives greater weight for ESB suites, as we expect that buying population to be more price sensitive — which was borne out by several of the Wave™ interviews.

BEA Systems presented a problem in deciding which segment it belongs in. The new AquaLogic Service Bus product could be seen as fitting in the ESB suite segment — but sometimes needed features of WebLogic Integration to be used to provide equivalent features to other ESB suites. On the other hand, WebLogic Integration, augmented by AquaLogic Service Bus, could clearly be placed in the comprehensive ESB suite segment. We decided to solve this problem by evaluating BEA in both segments of the market.

ESB EVALUATION OVERVIEW

To assess the state of the ESB market and see how the vendors stack up against each other, Forrester evaluated the strengths and weaknesses of top ESB vendors.

Evaluation Criteria

After examining past research, user need assessments, and vendor and expert interviews, we developed a comprehensive set of evaluation criteria (see Figure 2). We evaluated vendors against approximately 100 criteria, which we grouped into three high-level buckets:

- **Current offering.** This section evaluated the vendor's features and functions for connection, mediation, and change and control. Connection consists of protocols (including Web services support), adapters, and architecture — including support for SOA. Mediation includes transformation and mapping, repository and registry, trading partner management, and process management. And change and control includes policy management, service life-cycle support, security, and monitoring and management. All these attributes are associated with the elements of an SOA platform, which can be grouped by change, connection, and control.⁵
- **Strategy.** We evaluated this section based on the vendors' product strategy and vision; the scope and strength of any strategic alliances among systems integrators, application partners, and resellers; overall corporate strategy; and solution cost.
- **Market presence.** To evaluate each vendor's market presence we looked at its installed base, number of new customers, the scope and size of their sales and implementation organizations and their financial viability.

Figure 2 Evaluation Criteria

CURRENT OFFERING	
Connection	How sophisticated is the ESB's support for messaging and connectivity?
Mediation	How rich a set of mediation services and capabilities does the product provide?
Control and change	What capabilities does the ESB provide in the area of control and change management?
STRATEGY	
Product strategy and vision	How strong is the vendor's product strategy and vision?
Strategic alliances	How strong are the vendor's strategic alliances?
Corporate strategy	How strong is the vendor's corporate strategy?
Solution cost	What is the relative cost of the vendor's ESB solution?
MARKET PRESENCE	
Installed base	How large is the vendor's installed base of customers for this product and for all products?
New customers	How many customers are buying or upgrading any version of the product?
Delivery footprint	What is the vendor's method of delivery?
Financial viability	How strong is the vendor's financial position?

Source: Forrester Research, Inc.

Evaluation Methodology

Forrester used a combination of three data sources to assess the strengths and weaknesses of each solution:

- **Vendor surveys.** Forrester surveyed vendors on their capabilities as they relate to the evaluation criteria. Once we analyzed the completed vendor surveys, we conducted vendor calls where necessary to gather details of vendor qualifications.
- **Product briefings.** We asked vendors to brief us on their products and to discuss their vision and product strategy for the future of this market. We used findings from these briefings to form our opinions on each vendor’s potential in this space.
- **Customer reference calls.** To validate product and vendor qualifications, Forrester also conducted reference calls with two to three of each vendor’s current customers.

Evaluated Vendors

Forrester included 10 vendors in the assessment: Cape Clear Software, Fiorano Software, IONA Technologies, PolarLake, and Sonic Software on the basis of their ESB suites and Oracle, Sun Microsystems, TIBCO Software, and webMethods based on their comprehensive ESB suites. BEA Systems was evaluated in both groups due to its unique position of providing both an ESB suite and a comprehensive ESB suite. Each of these vendors:

- **Offers ESB features.** To qualify, the product must be able to support a customer implementing SOA, doing integration using Web services. This assessment was made based on a comparison to the technical evaluation criteria for this report.
- **Has a tangible presence in the ESB market.** To qualify, the vendor must have either actively marketed a product as an ESB, or else provided an integration suite with equivalent features, positioned to support SOA.
- **Had customers using the generally available product before the evaluation began.** Other products that were released after the evaluation began, such as IBM's new WebSphere ESB, or the new version of IBM WebSphere Message Broker (V6) with extended ESB capabilities, did not qualify. This and other new ESBs will be evaluated in a future report.

ESB SUITES

The evaluation of this market segment uncovered a market in which (see Figure 3):

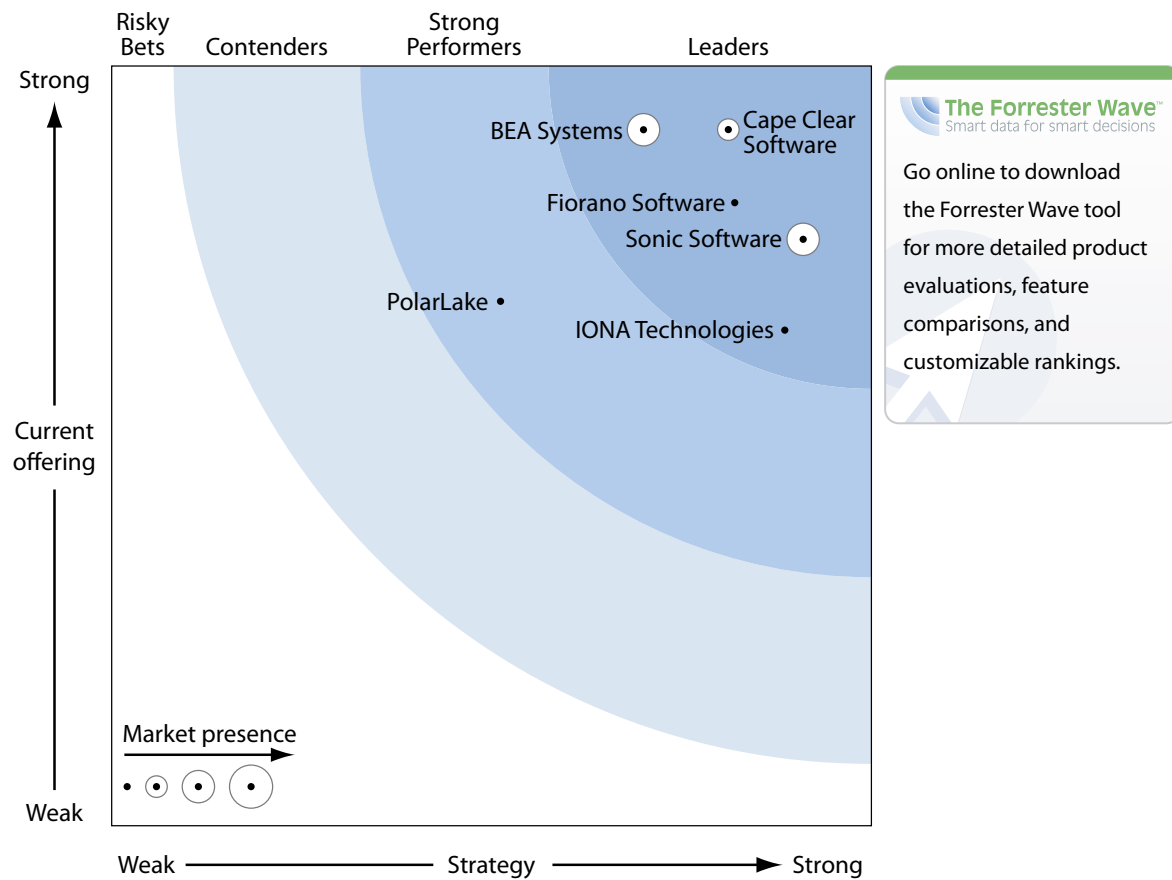
- **Cape Clear, Fiorano, BEA Systems, and Sonic Software lead.** Cape Clear and Fiorano are smaller, privately held vendors, but lead on functionality. Sonic, a longtime sales leader in the ESB category, continues to make a good showing with a strong feature-set at a price in the middle range — and is part of Progress Software, a larger publicly held company.

BEA Systems just entered the market with Aqualogic Service Bus, a lightweight ESB that aims to provide basic connectivity and tooling, but no service orchestration. To fulfill Forrester's definition of an ESB suite, we added the features of BEA's EAI suite, WebLogic Integration, to those of the new AquaLogic Service Bus. As a result it, competes very well on functions — but is higher in price. You may find that AquaLogic Service Bus on its own is sufficient to meet your needs, and if that's the case, the price — and features — of the BEA solution would be reduced.

- **IONA Technologies and PolarLake lag the pack.** IONA has a good basic ESB with features important at the high end, but lacks service orchestration and process modeling, and falls short in application adapters, and service monitoring and management. PolarLake has strong tools, rich mediation, and process modeling, but lacks support for UDDI, Web Services Distributed Management (WSDM), and several extended Web services standards, and has only rudimentary support for service monitoring and management and security.

This evaluation of the ESB market is intended to be a starting point only. Readers are encouraged to view detailed product evaluations and adapt the criteria weighting to fit their individual needs through the Forrester Wave™ Excel-based vendor comparison tool.

Figure 3 Forrester Wave™: Enterprise Service Bus, ESB Suites, Q4 '05



Source: Forrester Research, Inc.

Figure 3 Forrester Wave™: Enterprise Service Bus, ESB Suites, Q4 '05 (Cont.)

	Forrester's Weighting	BEA Systems	Cape Clear Software	Fiorano Software	Iona Technologies	PolarLake	Sonic Software
CURRENT OFFERING	50%	4.58	4.57	4.09	3.26	3.45	3.86
Connection	40%	4.33	4.58	3.98	3.79	3.82	3.61
Mediation	30%	4.70	4.37	3.98	2.21	2.89	3.79
Control and change	30%	4.80	4.75	4.35	3.61	3.51	4.26
STRATEGY	50%	3.50	4.06	4.10	4.43	2.56	4.55
Product strategy and vision	30%	5.00	4.40	4.40	4.10	3.80	4.70
Strategic alliances	20%	5.00	2.60	3.20	3.50	2.90	5.00
Corporate strategy	20%	5.00	3.60	5.00	5.00	3.60	5.00
Solution cost	30%	0.00	5.00	3.80	5.00	0.40	3.80
MARKET PRESENCE	0%	3.70	2.12	1.65	1.56	1.28	3.68
Installed base	20%	3.00	4.50	2.50	2.50	1.75	4.50
New customers	45%	3.00	1.00	0.00	0.60	0.00	3.00
Delivery footprint	20%	5.00	1.60	2.00	2.60	2.40	3.40
Financial viability	15%	5.00	3.00	5.00	1.80	3.00	5.00

All scores are based on a scale of 0 (weak) to 5 (strong).

Source: Forrester Research, Inc.

VENDOR PROFILES

Leaders

- **Cape Clear.** One of the early innovators in the ESB market, it has grown its offering to a broad suite by adding service orchestration and some management features, and now has one of the deepest implementations of the Web services stack available.⁶ Cape Clear is a small, privately held company, but has built a greater market presence than would be expected for its size.
- **Fiorano Software.** Another early market entrant, Fiorano, like Sonic Software, built its ESB on its Java Message Service (JMS) product, FioranoMQ, but has not implemented as deep a level of support for Web services standards as has Cape Clear.⁷ Fiorano's service orchestration tools are strong, as is its service life-cycle management. But it is a small, privately held company, with limited market presence.
- **BEA Systems.** As a longtime leader in the application platform market, BEA has provided application integration for years (WebLogic Integration). Now BEA has entered the ESB market with a new ESB, AquaLogic Service Bus, intended to enable service-oriented integration across

all platforms, not just centered on WebLogic.⁸ The AquaLogic Service Bus provides solid ESB capabilities, but does not include service orchestration, which BEA delivers in WebLogic Integration.

- **Sonic Software.** There when the market began, Sonic was responsible for a large part of the early growth in the market, and continues to grow today.⁹ With an ESB built on its JMS product, SonicMQ, it has continued to build out its suite of capabilities around the core ESB, delivering process modeling and B2B collaboration. But its tools and repository are not as strong as those of the other leaders, and its support for Web services is also lagging. But like several vendors, Sonic is about to ship a new release, and this will bring stronger support for Web services.
- **IONA Technologies.** IONA, another longtime player in the middleware market, entered the ESB market in 2004, and has made its mark at a number of customer sites, although its ESB Artix still represents a small proportion of its business.¹⁰ The company has done a good job of building on its architectural advantages to establish a niche position at the high end of the market. But although it has strong connectivity and a flexible architecture, it lacks service orchestration and process modeling, and falls short in a few other areas.

Strong Performers

- **PolarLake.** Another company that has been in the integration business for years, PolarLake made the switch to an SOA-driven strategy much earlier than many of its counterparts, although it has not implemented the same depth of Web services support that can be obtained from Cape Clear.¹¹ PolarLake's emphasis is on productivity and maintainability of integrated systems, by providing tools that enable all integration tasks to be performed without programming. It also provides rich support for data transformation and process modeling, but lacks support for UDDI, and several other extended Web services standards, and has only rudimentary support for service monitoring and management and security.

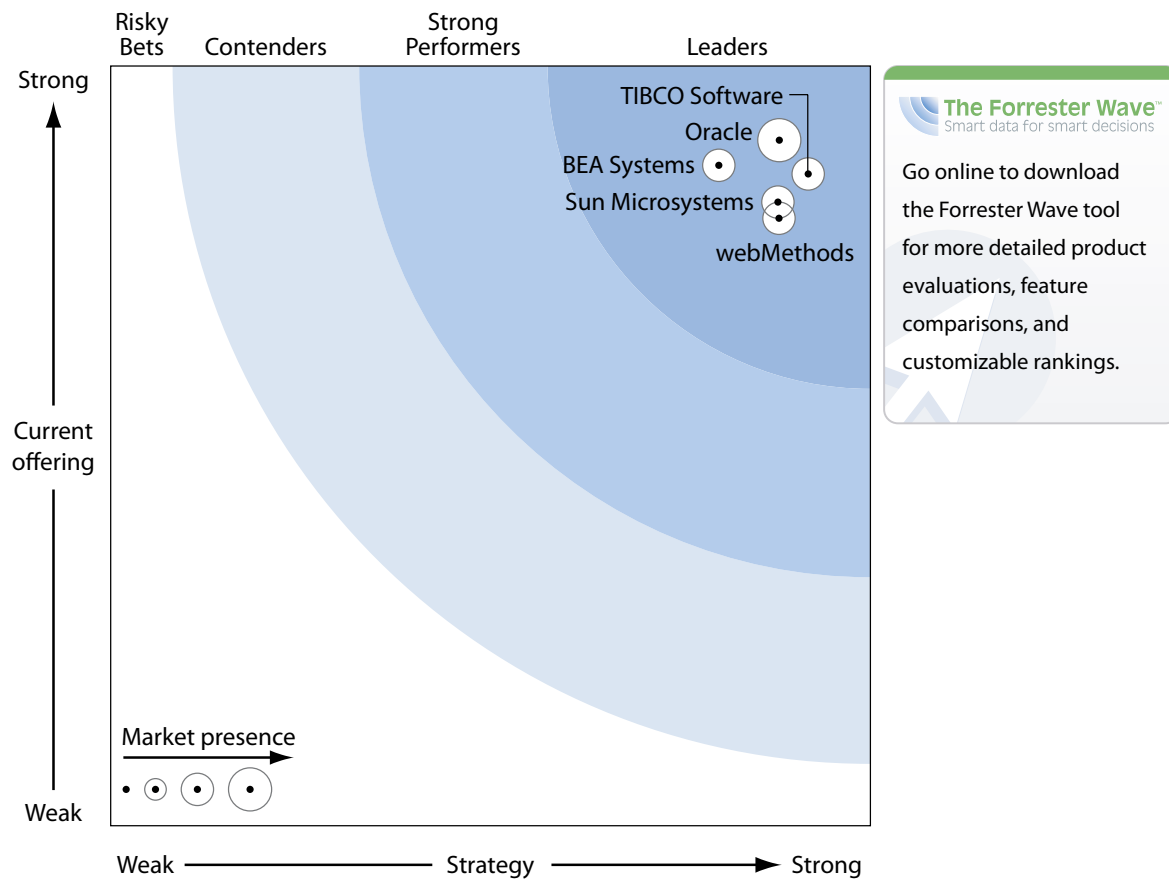
COMPREHENSIVE ESB SUITES

The evaluation uncovered a market in which (see Figure 4):

- **Oracle leads all other vendors.** This is due to strong scores in the current offering category of connection where the vendor provides superior support for a wide range of connectivity protocols, including both core and extended Web service specifications and standards. The vendor also scored well in the areas of mediation and change and control. In addition, Oracle received high marks in the strategy section where it got a better ranking as its solution is more reasonably priced than its competition, with the exception of webMethods.

- **BEA Systems, Sun Microsystems, TIBCO, and webMethods are also strong.** These vendors offer comprehensive ESB suite solutions that scored close to Oracle on most evaluation criteria., TIBCO and Sun Microsystems come closest to Oracle in overall scoring, with webMethods and BEA following closely behind.
- **All five vendors are shown in the leader category.** This is not surprising since each of these vendors has been providing leading-edge integration solutions for many years and each has responded aggressively in adding SOA-based features into its product.

Figure 4 Forrester Wave™: Enterprise Service Bus, Comprehensive ESB Suites, Q4 '05



Source: Forrester Research, Inc.

Figure 4 Forrester Wave™: Enterprise Service Bus, Comprehensive ESB Suites, Q4 '05 (Cont.)

	Forrester's Weighting	BEA Systems	Oracle	Sun Microsystems	TIBCO Software	webMethods
CURRENT OFFERING	50%	4.35	4.51	4.10	4.28	3.96
Connection	30%	4.17	4.88	4.35	4.18	4.18
Mediation	40%	4.36	4.32	3.83	4.20	3.33
Control and change	30%	4.52	4.41	4.20	4.48	4.60
STRATEGY	50%	4.00	4.40	4.40	4.60	4.40
Product strategy and vision	30%	5.00	5.00	5.00	5.00	5.00
Strategic alliances	30%	5.00	5.00	5.00	5.00	5.00
Corporate strategy	20%	5.00	5.00	5.00	5.00	5.00
Solution cost	20%	0.00	2.00	2.00	3.00	2.00
MARKET PRESENCE	0%	3.40	4.25	3.05	3.75	3.21
Installed base	50%	3.00	3.50	3.00	4.50	4.50
New customers	30%	3.00	5.00	2.00	2.00	1.00
Delivery footprint	10%	5.00	5.00	4.50	4.00	3.00
Financial viability	10%	5.00	5.00	5.00	5.00	3.60

All scores are based on a scale of 0 (weak) to 5 (strong).

Source: Forrester Research, Inc.

VENDOR PROFILES

Leaders

- **Oracle.** Oracle was the overall leader in the comprehensive ESB suite category primarily due to its strong support for connectivity protocols and lower price. The vendor has moved very aggressively in the past three years to carve out a leadership position in the integration market in which it was traditionally no better than an “also ran.” This has been accomplished via a combination of internal development and strategic acquisitions.¹²
- **TIBCO Software.** TIBCO was ranked as the overall leader in the Forrester Wave™: Integration Suites evaluation, but came in second behind Oracle in this SOA-based evaluation. TIBCO has adopted a strategy of close alliance to the evolving JBI standard as the basis for new enhancements it will be rolling out during the next two years.¹³
- **Sun Microsystems.** With its recent acquisition of SeeBeyond's ICAN technology, Sun has vaulted itself into the leaders of advanced integration technology. The newly acquired technology meshes well with Sun's other infrastructure software with a minimal amount of overlap and will enable Sun to vigorously pursue new opportunities in the marketplace.¹⁴

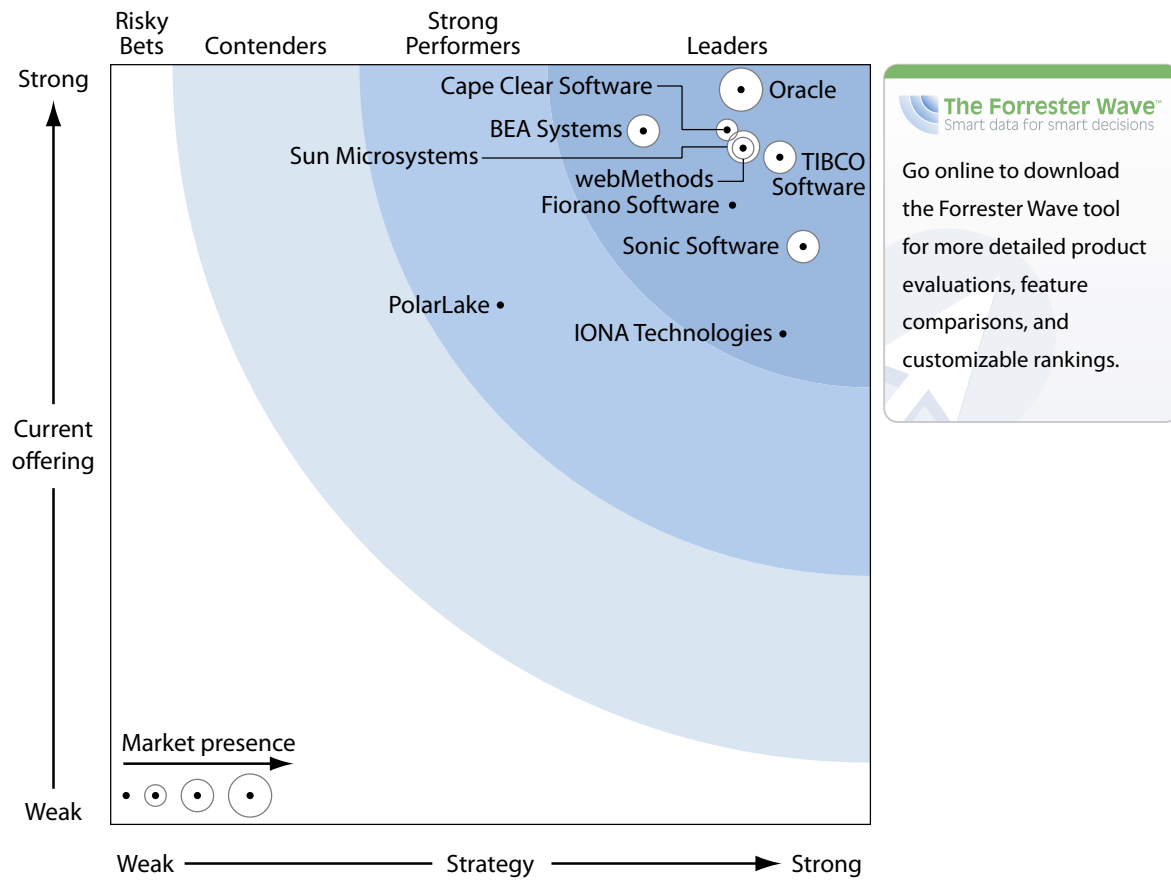
- **webMethods.** During the past two years, webMethods has made a series of strategic acquisitions that have significantly expanded the vendor's SOA capabilities. In particular, the acquisition of The Mind Electric and its advanced Web services capabilities in October 2003 jump-started the vendor's efforts to move quickly into the SOA arena.¹⁵
- **BEA Systems.** After giving up an early lead in the integration solution provider space, BEA has returned to the forefront of this market with its new AquaLogic Service Bus and enhanced WebLogic Integration products, thereby providing its existing customers with leading-edge integration solutions once again.¹⁶

A COMBINED LOOK AT THE MARKET

In many companies, different buying groups will require ESBs from the different segments, and lead enterprise architects to ask “do we really need both these things?” The correct answer will depend on the local situation; it will not always be the case that the high-end solution should be selected and applied to all projects, nor is uncontrolled chaos a strategy.

To facilitate thinking through the issues in this scenario, Forrester has produced a Wave™ that merges all 10 vendors onto one sheet, with weightings that are based substantially on those for ESB suites (see Figure 5). Use the custom-weightings feature of the Wave™ model to make adjustments that reflect your requirements more closely, so that you can understand how the smaller and larger players really stack up based on those needs.

Figure 5 Forrester Wave™: Enterprise Service Bus, Q4 '05



Source: Forrester Research, Inc.

Figure 5 Forrester Wave™: Enterprise Service Bus, Q4 '05 (Cont.)

	Forrester's Weighting	BEA Systems	Cape Clear Software	Fiorano Software	IONA Technologies	Oracle	PolarLake	Sonic Software	Sun Microsystems	TIBCO Software	webMethods
CURRENT OFFERING	50%	4.57	4.57	4.08	3.23	4.83	3.42	3.81	4.47	4.38	4.45
Connection	40%	4.29	4.58	3.96	3.72	4.88	3.75	3.48	4.25	4.13	4.03
Mediation	30%	4.70	4.37	3.98	2.21	4.91	2.89	3.79	4.73	4.61	4.73
Control and change	30%	4.80	4.75	4.35	3.61	4.68	3.51	4.26	4.50	4.50	4.75
STRATEGY	50%	3.50	4.06	4.10	4.43	4.16	2.56	4.55	4.16	4.40	4.16
Product strategy and vision	30%	5.00	4.40	4.40	4.10	5.00	3.80	4.70	5.00	5.00	5.00
Strategic alliances	20%	5.00	2.60	3.20	3.50	5.00	2.90	5.00	5.00	5.00	5.00
Corporate strategy	20%	5.00	3.60	5.00	5.00	5.00	3.60	5.00	5.00	5.00	5.00
Solution cost	30%	0.00	5.00	3.80	5.00	2.20	0.40	3.80	2.20	3.00	2.20
MARKET PRESENCE	0%	3.70	2.12	1.65	1.56	4.70	1.28	3.68	3.22	3.26	2.58
Installed base	20%	3.00	4.50	2.50	2.50	3.50	1.75	4.50	3.00	4.50	4.50
New customers	45%	3.00	1.00	0.00	0.60	5.00	0.00	3.00	2.20	1.80	1.00
Delivery footprint	20%	5.00	1.60	2.00	2.60	5.00	2.40	3.40	4.40	4.00	3.00
Financial viability	15%	5.00	3.00	5.00	1.80	5.00	3.00	5.00	5.00	5.00	4.20

All scores are based on a scale of 0 (weak) to 5 (strong).

Source: Forrester Research, Inc.

SUPPLEMENTAL MATERIAL

Online Resource

The online versions of Figures 4 and 5 are Excel-based vendor comparison tools that provide detailed product evaluations and customizable rankings for each of these two market segments.

Forrester Wave Methodology

We conduct primary research to develop a list of vendors that meet our criteria to be evaluated in this market. From that initial pool of vendors, we narrow our final list to those presented here. We choose these vendors based on: 1) product fit; 2) customer success; and 3) Forrester client demand. We eliminate vendors that have limited customer references and products that don't fit the scope of our evaluation.

After examining past research, user need assessments, and vendor and expert interviews, we develop the initial evaluation criteria. To evaluate the vendors and their products against our set of criteria, we gather details of product qualifications through a combination of questionnaires and discussions with client references. We send evaluations to the vendors for their review, and we adjust the evaluations to provide the most accurate view of vendor offerings and strategies.

We set default weightings to reflect our analysis of the needs of large user companies — and/or other scenarios as outlined in this document — and then score the vendors based on a clearly defined scale. These default weightings are intended only as a starting point, and readers are encouraged to adapt the weighting to fit their individual needs through the Excel-based tool. The final scores generate the graphical depiction of the market based on current offering, strategy, and market presence. Forrester intends to update vendor evaluations regularly as product capabilities and vendor strategies evolve.

ENDNOTES

- ¹ Forrester's survey data shows that large enterprises are overwhelmingly adopting SOA: More than 70% of large enterprises report using SOA now. Beyond simply adopting SOA, 29% of large enterprises have an enterprise-level commitment to SOA, and 19% are using SOA for strategic business transformation. By the end of 2005, 51% of medium enterprise, 46% of small enterprise, and 36% of small to medium-sized businesses (SMBs) will have adopted SOA. Internal integration is the predominant use of SOA, though SOA-based external integration has a strong presence among large enterprises. See the April 5, 2005, Trends "[Large Enterprises Pursue Strategic SOA](#)."
- ² Forrester has previously defined the ESB category in broader terms, as an emerging category of products that deliver many elements of an ESB, such as Sonic Software's ESB or webMethods Fabric, or platforms from IBM or BEA Systems. See the August 13, 2004, Tech Choices "[What Is An Enterprise Service Bus?](#)"
- ³ Service-oriented architecture is hitting a wall in the companies that are most aggressive in its pursuit. Why? The profusion of service interfaces and their design artifacts, such as XML schemas and Web Services Definition Language (WSDL), is out of control. Although some development or integration tools support

limited storage and searching of this metadata, none are complete enough. The result: reduced reuse and a maintenance nightmare. Vendors are responding slowly to this need, so interim strategies are needed to increase the chances of SOA success. See the April 26, 2004, Trends, “[Managing The Business Service Model](#).”

- ⁴ Full support of SOA is defined in a detailed way by the evaluation criteria of this Wave™. The specific sections that are most relevant to this requirement are core and extended Web services protocols, MOM connectivity, architecture, repository and registry, process management, repository-based policy management, and service life cycle.
- ⁵ Your SOA platform — the software infrastructure and tools you use to build, configure, deploy, monitor, and manage services — heavily influences your ability to attain the strategic business flexibility and benefits that service orientation promises. See the March 29, 2005, Trends “[Your Strategic SOA Platform Vision](#).”
- ⁶ View the scorecard summary for more detailed analysis on how Cape Clear Software fared in this evaluation. See the November 15, 2005, Tech Choices “[Enterprise Service Bus Scorecard Summary: Cape Clear Software](#).”
- ⁷ View the scorecard summary for more detailed analysis on how Fiorano Software fared in this evaluation. See the November 15, 2005, Tech Choices “[Enterprise Service Bus Scorecard Summary: Fiorano Software](#).”
- ⁸ View the scorecard summary for more detailed analysis on how BEA Systems fared in this evaluation. See the November 15, 2005, Tech Choices “[Enterprise Service Bus Scorecard Summary: BEA Systems](#).”
- ⁹ View the scorecard summary for more detailed analysis on how Sonic Software fared in this evaluation. See the November 15, 2005, Tech Choices “[Enterprise Service Bus Scorecard Summary: Sonic Software](#).”
- ¹⁰ View the scorecard summary for more detailed analysis on how IONA Technologies fared in this evaluation. See the November 15, 2005, Tech Choices “[Enterprise Service Bus Scorecard Summary: IONA Technologies](#).”
- ¹¹ View the scorecard summary for more detailed analysis on how PolarLake fared in this evaluation. See the November 15, 2005, Tech Choices “[Enterprise Service Bus Scorecard Summary: PolarLake](#).”
- ¹² View the scorecard summary for more detailed analysis on how Oracle fared in this evaluation. See the November 15, 2005, Tech Choices “[Enterprise Service Bus Scorecard Summary: Oracle](#).”
- ¹³ View the scorecard summary for more detailed analysis on how TIBCO Software fared in this evaluation. See the November 15, 2005, Tech Choices “[Enterprise Service Bus Scorecard Summary: TIBCO Software](#).”
- ¹⁴ View the scorecard summary for more detailed analysis on how Sun Microsystems fared in this evaluation. See the November 15, 2005, Tech Choices “[Enterprise Service Bus Scorecard Summary: Sun Microsystems](#).”
- ¹⁵ View the scorecard summary for more detailed analysis on how webMethods fared in this evaluation. See the November 15, 2005, Tech Choices “[Enterprise Service Bus Scorecard Summary: webMethods](#).”
- ¹⁶ View the scorecard summary for more detailed analysis on how BEA Systems fared in this evaluation. See the November 15, 2005, Tech Choices “[Enterprise Service Bus Scorecard Summary: BEA Systems](#).”

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