

ZAPTHINK ZAPNOTE™

SOA SOFTWARE EXPANDING THE BREADTH OF SOA INFRASTRUCTURE

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Abstract

Throughout the past year, the pace of SOA adoption has continued to accelerate among organizations of all sizes, industries, and geographies. In 2006, companies increasingly funded solutions to business problems that benefited from a Service-oriented approach, and some of those firms have already started to see significant returns. Despite this increasing success with SOA, many organizations still lack the knowledge of what a complete infrastructure for SOA is, and how to properly evaluate technical solutions to the various challenges of SOA.

While there are many SOA point-solution vendors now that have competitive and valuable offerings, as well as large IT vendors who are also building complete SOA offerings, what differentiates SOA Software in its approach is that it is the only pure-play SOA vendor that focuses on providing complete SOA infrastructure solution. SOA Software offers a complete SOA infrastructure product set addressing Enterprise SOA, Legacy and B2B Web services requirements. Many of SOA point-solution vendors have focused on individual parts of the overall SOA infrastructure picture, but SOA Software is committed to providing comprehensive SOA infrastructure capabilities, showing its leadership through its breadth of strategy and depth of execution.

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SOA Infrastructure - the Foundation of the SOA Platform

Service-oriented Architecture (SOA) promises to solve a number of significant, and perennial problems that many enterprises face: the high cost of integration due to tightly-coupled systems, the inflexibility of those systems to deal with change, their inability to leverage existing IT assets for new business processes and requirements, the continual mismatch between business needs and IT capabilities, and the inability for organizations to achieve sufficient visibility and control over their operations. What SOA brings to the table is not simply new technology. Indeed, companies have applied various technologies to their existing IT environment and still have the perplexing issues mentioned above. Rather, companies are increasingly realizing that they need to change the very way in which they architect and maintain complex IT systems.

Such significant IT change requires more than simply applying a technology patch to their problems, but rather requires a systematic and systemic approach to their existing IT capabilities, methodologies, organizations, and governance. Addressing this breadth of change so that businesses receive the significant rewards possible with SOA requires broadening the understanding of what organizations need from the technologies that enable successful SOA implementations.

SOA Infrastructure Requirements

To many applications developers, SOA seems like a new way to expose and connect IT assets, which is but a small part of the overall SOA picture. Certainly, creating loosely-coupled Service interfaces on top of existing IT capabilities is a starting point for many SOA endeavors, and as a result, most companies require capabilities for both exposing such Services as well as executing them in a reliable manner in a heterogeneous environment. Into this heterogeneous environment, companies are now looking to SOA infrastructure solutions to meet their ongoing Service-orientation needs. Simply put, SOA infrastructure solutions provide a means to secure, monitor, manage, and mediate between the various different Service providers and consumers in an enterprise-wide SOA. An effective enterprise SOA infrastructure solution includes a wide range of intermediaries deployed in a wide variety of modes, including in agent and standalone form, as well as strong security, message and service management and monitoring, and a mediation solution to ensure interoperability among disparate, heterogeneous SOA implementations.

Credible SOA infrastructure solutions must also provide a way to manage the disparate policies and metadata throughout the enterprise. This is done most effectively through a centralized policy management system, ideally based on a standard UDDI registry. More advanced, but equally important capabilities of an SOA infrastructure include sophisticated change and version management for both Services as well as policies, collaboration and workflow capabilities to facilitate Service composition, and auditing of Service messages. All of these capabilities should be exposed using standard interfaces, leveraging industry standards such as WS-Policy, WS-Distributed Management, UDDI, WS-Metadata Exchange and others. To help ensure the effective enforcement and implementation of the policies defined and monitored by the core infrastructure services, the solution should also provide a wide range of intermediaries and delegates.

The Enterprise Service Bus (ESB): Not Sufficient By Itself

The general category of Enterprise Service Bus (ESB) includes a range of capabilities from messaging middleware applications to EAI suites to integration brokers. The ESB, is an important component in many cases, but is neither sufficient to realize the goals of SOA, nor

is it a necessary new purchase in many instances. Many companies find that existing IT infrastructure can provide most of the ESB capabilities they are most interested in, such as a container for Service execution and loosely-coupled Service messaging and interaction. In some cases, they can simply reapply these systems to the new requirements of their composite, loosely-coupled Services. In other cases, they can purchase add-ons to these infrastructure components to enable new kinds of messaging and interaction. Regardless of whether a company has purchased a new ESB solution or implemented one using their existing infrastructure, what is becoming increasingly evident is that very few companies will have a single ESB that controls all of their Service interactions. Clearly, Services expose assets in an environment of heterogeneity, and as such, some may reside on mainframes, while others reside on application servers, and still others at third-party locations. Rather than require a single instance of an ESB solution that addresses all the various needs of the enterprise, companies are finding that a Service-oriented solution to this problem is to federate such ESB implementations together such that they can independently operate, but jointly manage them.

The typical ESB is not sufficient to meet all these needs of burgeoning SOA implementations. The primary artifacts of a Service are not executable code, but rather metadata. Metadata control the definition of the Service interface, policies around access and interaction with those Services, governance of Service creation and control, composition of Services to meet changing business processes, and the schemas that specify the data the Services exchange. As a result, the piece of infrastructure that most companies are missing is tooling that enables the creation, maintenance, and governance of Service metadata as they change over time. This realization of the importance of metadata control and management emerged with amazing effect in 2006, with a flurry of acquisitions of registry, repository, governance, and metadata management firms by SOA platform contenders. In fact, most firms need all of those metadata-centric capabilities to make their SOA implementations realizable: registries for Service location and binding, repositories of Service metadata, governance and control of Service creation, access, composition, and management, and Service change and version management.

SOA Software: SOA Thought Leadership and SOA Breadth

When Digital Evolution changed the name of their company to SOA Software in 2004, it was making a statement about the focus of its efforts and the brand it planned to build around helping companies realize the benefits of SOA. Realizing that successful SOA efforts require a broad range of product capabilities, the company embarked on a campaign to build, buy, or otherwise extend its offerings to provide as complete a solution for SOA infrastructure as possible.

SOA Software offers a complete SOA infrastructure product set addressing Enterprise SOA, Legacy and B2B Web services requirements through a range of product offerings including *Service Manager*, *Network Director*, *Partner Manager*, and *SOLA* products that provide security, management, mediation and governance for Enterprise and B2B SOA deployments. The figure below illustrates the relationships between SOA Software's products:

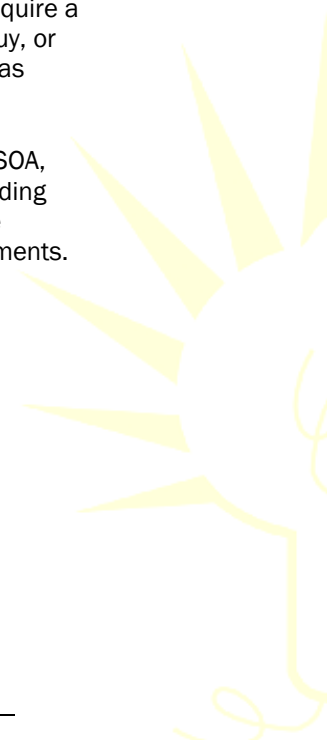
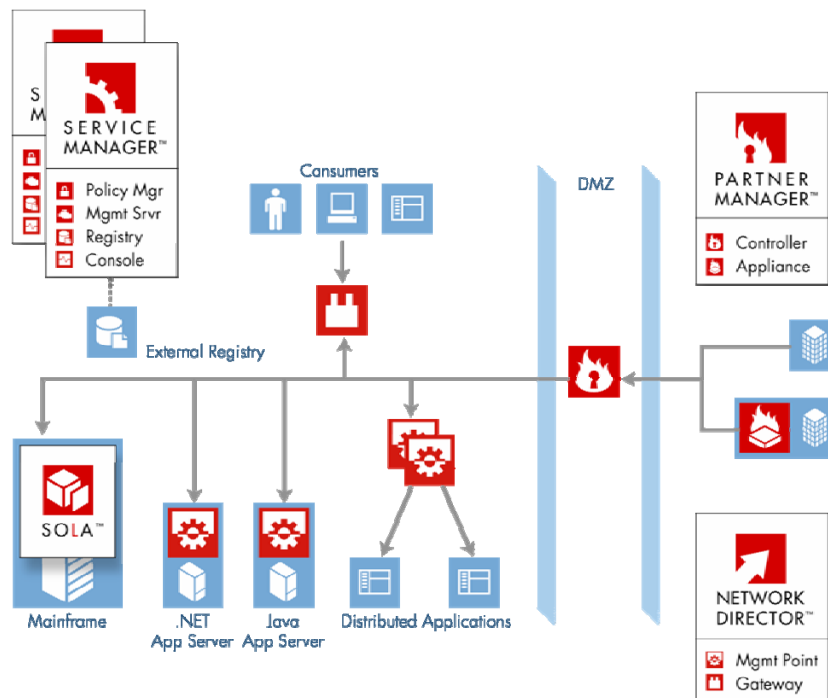


Figure 1: SOA Software's SOA Offering



Source: SOA Software

Underlying these products is a UDDI version 3 registry that provides a store and system of record for Service metadata and policy. While the system utilizes the embedded registry that comes with the product to coordinate Service capabilities, it doesn't mandate the use of its own registry, and can leverage other existing Service registries, repositories, and metadata management tools in the IT environment.

To help provide for reliable and secure Services, SOA Software developed *Service Manager*, which secures and manage enterprise-wide XML and Web services applications. The Service Manager includes a set of centralized subsystems that combine to form a SOA infrastructure solution, including a console for centralized control, monitoring and auditing of transactions, events, warnings and alerts, and delivery of contracts and SLA management capabilities. In addition to the Service Manager capabilities, SOA Software provides *Network Director* that provides Service Manager with intermediaries including the distributed SOA Software Management Point that Implements the various different policy enforcement and enablement mechanisms through standalone and in-container instantiations, and the distributed SOA Software Gateway providing application developers with easy access to security and management capabilities.

On top of these solutions is SOA Software's *Partner Manager* that allows companies to use Web Services as core building blocks of their partners' business processes. Partner Manager focuses on making it easy for companies to securely publish Web services for those partners to consume. It ensures the usability, security, and reliability of Web Services to allow partners to create new business models and execute business transactions. Many companies use Partner Manager to move from Web site-based to Web Services-based partner integration to build and sustain competitive advantage.

And finally, SOA Software offers legacy enablement capabilities through its *Service Oriented Legacy Architecture (SOLA)* that serves to provide customers with a reliable and secure way to expose mainframe applications as Web Services, and allows mainframe applications to consume Web Services as well. SOLA runs as a set of mainframe applications to capitalize on the reliability and performance of the mainframe to deliver Web Services with low overhead and fixed costs.

The ZapThink Take

One of the challenges to making SOA a success is the combination of the immaturity of SOA knowledge, as well as the complexity of implementing enterprise architecture properly. To answer the first challenge, companies need to look beyond the current hype in the market and seek the product capabilities that enable loose coupling, composition of Services, management of change, and operation in a well-governed environment. This is where SOA infrastructure plays – to address the seeming complexity of SOA solutions by implementing a cohesive set of Service-oriented functionality that addresses the needs of loosely-coupled, composite, and reusable Services in an environment of heterogeneity. To answer the second challenge, companies must spend their resources on improving their architecture and skills using SOA infrastructure that enable and implement best practices, rather than simply utilizing yesterday's technology with Service interfaces. Indeed, the best SOA infrastructure capabilities, such as provided by SOA Software, comes at the SOA problem with a fresh approach, leveraging new technologies to solve the new needs of SOA.

While there are many SOA point-solution vendors now that have competitive and valuable offerings, as well as large IT vendors who are also building complete SOA offerings, what differentiates SOA Software in its approach is that it is the only pure-play SOA vendor that focused on providing complete SOA infrastructure solution. Many of the SOA point-solution vendors have focused on individual parts of the overall SOA infrastructure picture, but SOA Software is committed to providing comprehensive SOA infrastructure capabilities. The large IT vendors are committed to a comprehensive homogeneous SOA platform vision, and they bring to the table their existing strengths in non-SOA areas as well as their substantial resources. SOA Software, however, is betting on the vision that SOA will require a breadth of centralized infrastructure capabilities supporting a truly heterogeneous environment that enterprises will look to vendors such as themselves to provide.

Company Profile

SOA Software	Sept., 2006
Overview: SOA Software is a pure-play provider of comprehensive enterprise class SOA infrastructure solutions including management, security, and governance. It is rapidly becoming the industry's largest pure-play provider of broad SOA infrastructure solutions growing through product development and acquisition.	
Product Offerings:	
➤ <i>Service Manager</i> – Service-Oriented, Web Services Management solution that includes security, monitoring, reliability and registry services.	
➤ <i>Network Director</i> – Infrastructure software that enterprises use to create services networks that enable business agility by	



enabling the sharing and mass consumption of services.

- *Partner Manager* – B2B Web services security and provisioning in both software and appliance form-factors. This allows companies and their partners to share internal applications as critical parts of each other's business processes.
- *Service-Oriented Legacy Architecture (SOLA)* – Production-proven mainframe Web services solution for CICS programmers.
- *UDDI Registry* – For customers that don't have an existing UDDI registry and/or are focusing on run-time governance, the Registry is a UDDIv3 compliant services repository, enabling comprehensive configuration and meta-data management.

Funding: Privately-held, Venture-Backed: Draper Fisher Jurvetson, Redpoint, Mellon Ventures, Paladin Capital Group, and Palisades Ventures Fund.

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Related Research

- *Service Orientation Market Trends Report (ZTR-WS110)*
- *SOA Tools and Best Practices Report (ZTR-WS107)*



About ZapThink, LLC

ZapThink is an IT advisory and analysis firm that provides trusted advice and critical insight into the architectural and organizational changes brought about by the movement to XML, Web Services, and Service Orientation. We provide our three target audiences of IT vendors, service providers and end-users a clear roadmap for standards-based, loosely coupled distributed computing – a vision of IT meeting the needs of the agile business.

ZapThink helps its customers in three ways: by helping companies understand IT products and services in the context of Service-Oriented Architecture (SOA) and the vision of Service Orientation, by providing guidance into emerging best practices for Web Services and SOA adoption, and by bringing together all our audiences into a network that provides business value and expertise to each member of the network.

ZapThink provides market intelligence to IT vendors and professional services firms that offer XML and Web Services-based products and services in order to help them understand their competitive landscape, plan their product roadmaps, and communicate their value proposition to their customers within the context of Service Orientation.

ZapThink provides guidance and expertise to professional services firms to help them grow and innovate their services as well as promote their capabilities to end-users and vendors looking to grow their businesses.

ZapThink also provides implementation intelligence to IT users who are seeking guidance and clarity into the best practices for planning and implementing SOA, including how to assemble the available products and services into a coherent plan.

ZapThink's senior analysts are widely regarded as the "go to analysts" for XML, Web Services, and SOA by vendors, end-users, and the press. Respected for their candid, insightful opinions, they are in great demand as speakers, and have presented at conferences and industry events around the world. They are among the most quoted industry analysts in the IT industry.

ZapThink was founded in October 2000 and is headquartered in Baltimore, Maryland. Its customers include Global 1000 firms and government organizations, as well as many emerging businesses. Its analysts have worked at such firms as IDC, marchFIRST, and ChannelWave, and have sat on the working group committees for standards bodies such as RosettaNet, UDDI, and ebXML.

Call, email, or visit the ZapThink Web site to learn more about how ZapThink can help you to better understand how SOA will impact your business or organization.

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