



Best of breed and the SOA ecosystem

Published: 4th May 2006

Channel: Infrastructure and Management

A major benefit of service oriented architecture (SOA) is the ease with which an ecosystem has developed to support it. This ecosystem is made up of a great array of services from a large variety of vendors. The services cover all phases of the development life cycle, including:

- Operational services, such as credit checks.
- Development services, such as registry/repositories.
- Framework services, such as mainframe integration.
- Operational services, such as performance management.



The reason for this is that developers can create useful individual services that others can use to create an SOA solution. The cost of entry into the ecosystem is low as it just requires that the service obeys some basic rules that enable it to interact with other components of the ecosystem. Also, once a service has been defined it is perfectly possible for other developers to create a better implementation of the service. It is then up to the market to determine which services are really useful and cost effective. It is this mixture of ease of entry, ease of improvement and an open market that has created a thriving SOA ecosystem. It means that any SOA solution should be developed with the assumption that it will be built up with components from different vendors. Even if an initial implementation is based on a single vendor, extensions and improvements will inevitably include services from other vendors as they will include niche, or best of breed, solutions that the initial vendor can not match.

GT Software is a good example of a vendor that provides specific services that depend on other services to be available from the SOA ecosystem. GT Software has provided tools to support mainframe transactional systems for many years. With the advent of SOA it became apparent that there was a need to expose the mainframe operational business processes and data as services.

The requirement was to provide business services, rather than web services. Both the service consumers and providers recognised that the services had to be at this higher level of abstraction. The mainframe developer needed to ensure the consistency of the data managed by them; with dumb screens this was done by ensuring the user completed all the separate steps in a business transaction, the mainframe developer could not relinquish this level of control to a distributed consumer of web services. The distributed consumer did not want to be involved, or understand, the individual steps of a business transaction as they tended to reflect the limitations of dumb screens and mainframe systems rather than reflecting the underlying business process.

GT Software used its deep understanding and experience of the mainframe to create Ivory Service Architect, which is made up of Ivory Studio and Ivory Server. Studio enables a mainframe developer to create business services and register them so that the distributed developer can consume them just like any other service and without having to have any understanding of the workings of a mainframe—in fact they do not even have to know their provenance. Studio provides a graphical environment where developers can quickly and easily assemble multi-step, multi-operation composite business services from existing mainframe assets.

Once developed, the service needs to be registered in a repository and GT Software has taken advantage of the SOA ecosystem to

provide repository services. GT Software has recently announced an integration partnership with Systinet, which enables the automatic discovery and publishing of services by Ivory Studio.

Ivory Studio holds the internal definition of the service as XML and this is passed to the Ivory Server. The Ivory Server takes a service request from a consumer, converts it into a format suitable for the mainframe, and then orchestrates the various steps required to complete the business service. The server can be run on the mainframe as an independent started task, or under the control of CICS, or it can run in an external Windows server. The choice of server environment will depend on what mainframe resources it will be accessing and the topology preference related to where the user is most comfortable running and managing the server.

GT Software has partnerships with other leading SOA vendors, such as Amberpoint, PolarLake, Reactivity, Layer 7, Relativity, Skyway Software, and ActiveEndpoints, so providing their customers with a predefined starter ecosystem. This ecosystem is extended by individual customers to support their unique requirement and no doubt will be extended by GT Software to reflect general SOA requirements.

Ivory Service Architect is an excellent implementation of a niche solution that takes advantage of the wider SOA ecosystem to provide a high quality, simple to use, cost effective services.

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