



## Application Integration

### OVERVIEW

In today's competitive and dynamic business environment, an integrated collaborative environment has become imperative for the enterprise in order to maintain and/or exceed their competitive advantage. Application Integration at the enterprise level is the process of linking applications in order to create an integrated collaborative environment in order to realize financial and operational competitive advantages.

One of the challenges facing modern organizations is giving all their workers complete, transparent and real-time access to information. Many of the legacy applications still in use today were developed using arcane and proprietary technologies, thus creating information silos across departmental lines within organizations. These systems hampered seamless movement of information from one application to the other. Application Integration, as a discipline aims to alleviate many of these problems, as well as create new paradigms for truly lean proactive organizations.

OmniSolve helps you to identify silo applications as well as business process activities which may require automation and application integration. We bring best practices, years of experience, lessons learned and the right resources to focus on the problems at hand.

Our Enterprise Application Integration (EAI) Team specializes in creating practical solutions for complex business process challenges which range from Data Consistency Integration, to Multistep Process Integration, to Composite Application Integration thru the use of enterprise service buses, message oriented middleware or point-to-point API connectivity. We can implement the application integration in a variety of ways including the use of:

- Web services
- Extract, Transform, and Load (ETL)
- Communications message protocols
- Screen scraping
- Program calls
- Direct data access
- File transfer

Our practical experience and our solid expertise involves the use of tools such as Message Oriented Middleware (MoM) and BPM for integration solutions that may require data synchronization between applications in the back-office as well as integration solutions that may span business domains across enterprises and may require "Information Sharing" using SOA and web services.

### CHALLENGES

Unfortunately, enterprise integration is no easy task. By definition, integration deals with multiple applications running on multiple platforms in different locations. Software vendors offer EAI suites that provide cross-platform, cross-language integration as well as the ability to interface with many popular packaged business applications. However, this technical infrastructure presents only a small portion of the integration complexities. The true challenges of integration span far across business and technical issues. Some of the challenges for the Enterprise Integration as identified by Greg Hohpe author of "Enterprise Integration Patterns" are:

- Successful enterprise integration does not only need to establish communication between multiple computer systems but also between business units and IT departments -- in an integrated enterprise, application groups no longer control a specific application because each application is now part of an overall flow of integrated applications and services.
- Once the processing of the most critical business functions is incorporated into an integration solution, the proper functioning of that solution becomes vital to the business.
- In most cases, the applications are "legacy" systems or packaged applications that cannot be changed to enable application integration.

### CLIENT BENEFITS

- *Talented, experienced, highly trained consultants with strong focus on teamwork*
- *In-depth experience in service oriented requirements gathering and analysis to ensure solutions conform to customer needs*
- *Experience in working with business lines and providing practical EAI solutions to solving business problems*
- *Results oriented approach demonstrated by successful past performances*

- Existing XML Web Services standards address only a fraction of the integration challenges. Standardizing all data exchange to XML can be likened to writing all documents using a common alphabet, such as the Roman alphabet. Even though the alphabet is common, it is still being used to represent
- While developing an EAI solution is challenging in itself, operating and maintaining such a solution can be even more daunting. The mix of technologies and the distributed nature of EAI solutions make deployment, monitoring, and trouble-shooting complex tasks requiring a combination of skill sets. In many cases, these skill sets do not exist within IT operations or are spread across many different individuals.

## APPROACH

We at OmniSolve approach integration issues both in strategic as well as tactical and operational way. We consider the following factors in determining the readiness for integration:

1. Identify which siloed applications and systems can benefit from integrated data and processes. This is accomplished thru our top-down analysis of the applications and business process and requirements.
2. If the customer does not already have an integration platform solution, we can help the customer select the vendors that can best address their application integration needs and determine which integration solution best supports the integration.

When implementing the integration projects, OmniSolve leverages Gartner's three-phase technical approach:

- Strategize and Plan:** Draft a charter to establish a mandate for the project that aligns with business goals. Scope the project, and establish resources, budget and governance systems, and integration infrastructure standards and architecture.
- Select Solution:** Set requirements and issue RFPs. Analyze market intelligence. Evaluate vendor/service provider options. Choose technologies and vendors/service providers. Negotiate service-level agreements and contracts.
- Build:** Design the technology implementation. Develop workflows, forms and user interfaces. Identify and manage risks. Define organizational and governance structures. Create and track metrics on project success.

## EXPERIENCE

OmniSolve has participated in a multitude of SOA projects, ranging from relatively simple solutions to highly complex. The follow reflects some of our past

- DOJ Automated Booking Station (ABS)**  
OmniSolve in the capacity of the Program Management Office is currently managing application integration of new generation of Automated Booking Stations and biometric based APIs for plug and play middleware from Aware Inc which is leading supplier of biometrics software. In support of this integration project, OmniSolve has contributed its integration expertise by providing the vendor the ABS integration specifications.

- DOJ Enterprise Service Bus (ESB)**

OmniSolve developed information sharing platform for Joint Automated Booking System (JABS) program based on an enterprise service bus using Oracle Service Bus (OSB) and Oracle SOA Suite 11g technology. The platform was developed based on latest WS-\* standards and utilized BPEL as workflow engine, SCA (Service Component Architecture) as composite application. Prior to the implementation, OmniSolve conducted a bottom up analysis and applied Rational Unified Process (RUP) methodology to manage the project and produce the relevant artifacts. The requirements were gathered using the use cases and the message and information models were developed based on Law Enforcement Exchange Specification (LEXS) and National Information Exchange Model (NIEM) respectively.

- GSA Financial Management Enterprise Architecture (FMEA) - Asset Accounting**

OmniSolve along with its partners developed an open source based service oriented integration platform for Asset Accounting for GSA OCIO. The FMEA business model and service model was extended into platform specific SOA infrastructure.

- DHS Integration Platform**

Developed an integration platform to allow DHS applications to receive common data via web services or scheduled batch XML data files. OmniSolve automated extraction of common data into a shared repository utilizing web services to expose the data and various methods for applications to integrate. Developed a user friendly point-and-click environment for interfacing applications to define their data schema and schedule automated generation of the reference data in XML format. Windows Server 2000, ORACLE 9i, ASP.NET, C#, Web Services, and XML

- Teligent WebMethods Platform**

Developed an enterprise level architecture to support various applications in a heterogeneous environment using hub and spoke based on MoM infrastructure from WebMethods. Analyzed order work flows and order rejects to automate "bottleneck" processes in a phased approach resulting in a quick means of improving provisioning timelines for critical products while reducing order rejects by 300%.

## APPROACH HIGHLIGHTS

- Tight oversight and control to ensure projects remain on schedule, on budget, and deliverables are high quality and to the customer's satisfaction**
- Ability to meet with senior management to understand EAI goals and priorities of the organization**
- Ability to develop Standard EAI Operating Procedures and Governance**

## COMPLEMENTARY SERVICE OFFERINGS

Other services offered by OmniSolve that complement this offering:

- Program Management Office**
- Project Management**
- Application Development**
- Service Oriented Architecture**
- Enterprise Architecture**
- Solutions Strategy**
- Performance Management**

For further information about the material presented in this document, or to arrange a consultation, please contact:



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