

# SOA - Airlines

## Business Challenge

Build a unified integration platform, which would remove point to point integration across different IT Systems, Service Providers and offer a uniform and transparent mechanism for different clients to access information from these different IT Systems and Service Providers.

## Description

In airline industry real time data, like flight status information, flight schedules, passenger and freight bookings, payments etc gets collected through multiple channels. Each of these channels operates over varied protocols. Since there were disparate channels, which use different formats of messages and different protocols for communication, it becomes tedious to manage the existing integrations, as well as supporting any new future integrations.

To overcome these integration challenges, the management was looking for a single integration platform that would act as nervous system for integration between their existing set of applications and with new application they will introduce in future, as well as re-use of existing business logic wherever possible.

Apart from simplifying the integrations, the integration platform will also form the foundation of the proposed Service Oriented Architecture (SOA) initiative, which allows re-use of discrete business logic between applications. All future applications will use the integration platform as their main integration point, reducing system complexity. As required, current applications will be modified to follow the same integration pattern.

In this regard, they were looking for an IT Vendor with a strong integration background and who would have the requisite expertise in assessing their need, evaluating their current applications and recommending a suitable integration platform.

## Client

Leading airlines from middle east

## Industry Sector

Airlines

## Technology

- IBM WebSphere Message Broker v6.1
- IBM WebSphere MQ v6.0
- WebSphere Service Registry and Repository v6.1
- Oracle v10.2
- Tivoli Omegamon v6.2
- IBM WebSphere Business Integration Adapters (EJB, PeopleSoft etc)
- High Availability Cluster Multi Processing (HACMP)
- AIX

## Solution

Gramener with its expertise in process modeling, enterprise architecture and integration combined with its domain understanding, was given the task of creating this unified integration platform.

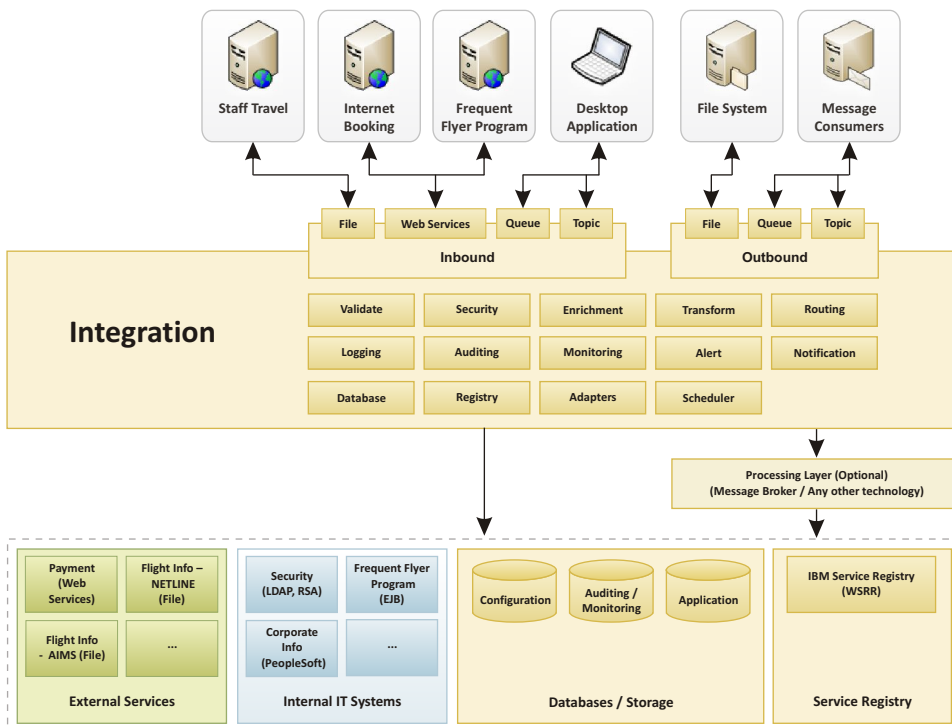
Gramener strongly believed that a middleware with faster, reliable communication medium that can support multiple transport mediums can provide solution to its problem. We proposed IBM WebSphere Message Broker v6.1 (IBM WMB) based solution to meet this requirement. IBM WMB has the built-in multi protocol support, using which we can integrate with discrete back end systems as well expose the services over discrete protocols for the client application to make use of these services. It can also transform and route messages from disparate channels to the format, back end business systems can work with.

IBM WebSphere Service Registry and Repository (WSRR), was used to store all the required validation, transformation, service end point and governance information. WMB uses this information for offering the dynamic behavior to support various services.

IBM WebSphere Business Integration Adapters (for EJB, PeopleSoft etc) were used to integrate with existing IT applications and offers their functionality as services through the integration platform.

Tivoli Omegamon was used to monitor different aspects of the platform including health, usage, and performance of different components of the platform.

## Architecture



## Benefits to the Client

- The architecture provided multiple channels for client applications to integrate with different services enabled by the integration platform.
- The Service Oriented Architecture (SOA) delivered significant benefits to the client such as:
  - ▶ Decoupling of the services (systems and modules) which enables better maintainability
  - ▶ Ability to integrate new application with minimal effort (with zero coding)
  - ▶ Monitor the usage of different services at different levels like service level, channel level etc.
  - ▶ Provide long-term security and control, to let newly built and re-engineered applications for more successful business processes.

## For More Information

Gramener IT Services,

call us at +91 40 6454 5009

email us at [contact@gramener.com](mailto:contact@gramener.com)

visit our web site at

[www.gramenerit.com](http://www.gramenerit.com)