GEM SYSTEM

Case study Deployment of the AgriBus platform

CLIENT: Ministry of Agriculture of the Czech Republic

Our solution will delight you!

DEFINITION OF THE DELIVERED SOLUTION:

The aim of the project was to implement a new design solutions, infrastructures, implementation of a new platform and migration of existing services from the original platform.

The project was implemented mainly due to the need to periodically compete operation and development of original platform. Migration or the replacement of the old platform with a newer version was from the point of view of the Ministry, also implemented for a fundamental change in architecture Oracle SOA Suite solution between 10g and 11g for which Oracle does not provide a standardized migration tool.

If the Ministry did not implement this project, the old integration platform would remain. It would be a key solution for communication between farmers and the Ministry, including its subordinates organizations without the possibility of support and further development.

The successfully implemented project has brought to the client a safer, more efficient and more reliable solution of the integration platform at a lower price than the original platform.

IT produkt
COMPUTERWORLD 2018

The best solution in the category The communication product is GEM SOA Governance within the competition IT Product 2018 organized under the auspices of IDG experts.

INSTALLED PRODUCTS / MODULES:

- **Oracle Service Bus 12c**
  Oracle SOA Suite 12c
  Oracle Database 12c

- **GEM Services Portal**
  (including GEM SOA Governance)

- **GEM XML Firewall**

- **GEM Traffic Manager**

- **other products for business process management, lifecycle service management and its maintenance.**

The aim was to replace the existing integration platform with 450 web services new solution without any impact to users and service providers.

DETAILED DEFINITION OF THE SOLUTION

- **The Agribus system is responsible for:**

  - Web services – synchronous and asynchronous

  - Managed File Transfer (MFT) subsystem for data transfer:
    - Files through standard transmission protocols (FTP, HTTP, etc.)
    - DB batch transfers (controlled ETL processes)

  - User authorization, data validation, SSL and other security measures

  - SOA Governance tools and methodology

  - Advanced messaging tools

  - Data load redistribution and reverse proxies

- **Agribus operates in high availability mode**

THE PROJECT CONSISTED OF:

- analysis of existing services, used platforms, methodologies and own components

- platform performance sizing and design architecture and customization according to specific customer needs

- deployment and configuration solutions with high availability

- automated migration of services to the platform SOA Suite Oracle 12c using custom migration tool

- automated testing services, testing platform performance

- providing integration standards and methodology

- deployment of solutions in a seamless manner simultaneously with the existing platform due to overlap of production deployment phases

Efficiently and reliable!

PLATFORM DEPLOYMENT:

The platform was deployed to 2 customer data centers to meet availability requirements. The core of the platform consists of:

- 2 load balancers

- 4 application server nodes (active-active mode)

- 2 database nodes with Oracle DB RAC (active-active mode)

PRODUCTION PARAMETERS:

- a total of 450 web services

- services are used by 60 different internal or external systems

- it is provided by 30+ end systems

- the solution is optimized for more than 5 million transactions per day

- it is rated for 60 calls per caller second with automatic evaluation overload

- support of applications and SW infrastructure is provided in 365x7x24 mode for levels L2, L3, in critical SLAs

Integration methodology and administration tools:

The project provided an integration methodology together with software instruments (GEM SOA Governance) which enable SOA management. Tools reports are integrated directly on production runtime platform to make it achieved accurate visibility of services and advanced monitoring services for effective traffic support.

Migration:

It involved the transformation of 450 services Oracle 10g BPEL to Oracle 12c Service Bus (for synchronous services) and BPEL 2.0 processes (for complex and asynchronous services). Transformation has been automated by migration tools system supplied by GEM and adapted to client needs.