Case study Migration of AgriBus platform services

CLIENT: Ministry of Agriculture of the Czech Republic

IMPLEMENTED SOLUTION:

Replacement of the existing integration platform with a new solution. Infrastructure delivery, solution design, platform implementation and migration of existing services.

Make sure the success of migration on second page!

IT produkt COMPUTERWORLD 2018

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

PROJECT REALIZATION:

The project was implemented mainly due to the need to periodically compete operation and development of original platform. Migration or the replacement of the platform with a newer version was also implemented from the customer's point of view due to a fundamental change in the architecture of the Oracle SOA Suite solution between versions 10g and 11g, for which Oracle does not provide a standardized migration tool. If this project is not implemented, the customer would not have a partner for the supply of development and operational services of the platform, as the contracts cannot be extended arbitrarily within the state institution. At the same time, the client would not even have a supported / updated version of the platform and would lose the right to adequate „maintenance" of the product.

INSTALLED PRODUCTS / MODULES:

- Oracle Service Bus 12c and Oracle SOA Suite 12c
- Oracle Database 12c
- GEM Services Portal (including GEM SOA Governance)
- GEM XML Firewall
- GEM Traffic Manager and other products for business process management, service lifecycle management and maintenance.

DETAILED MIGRATION SOLUTIONS:

As part of the project, in addition to the construction of the entire Agribus infrastructure, the migration of all 450 integration services was provided. This migration was performed for the original integration services implemented in Oracle 10g BPEL to Oracle Service Bus 12c in the case of synchronous services and to BPEL 2.0 processes or to the Oracle BPEL 12c component in the case of complex and asynchronous services. The transformation was automated on the integration services migration tool provided by GEM and tailored to the client's needs. The service units were also implemented as bulk batch services by using ETL tools and managed by using Oracle Service Bus.

GEM SYSTEM

MINISTRY OF AGRICULTURE OF THE CZECH REPUBLIC

KNOW-HOW REFERENCE GEM SYSTEM PRO REALIZACI:

Our company has already implemented a number of migration projects of integration platforms and has a developed solution procedure and its own tools in this regard. These procedures and tools are always tailored to the specific state of the integration platform so that the migration is automated as many steps of individual service modifications as possible and at the same time affects the largest possible portfolio of integration services.

The whole migration consists of:

- **Detailed analyzes of individual integration services, which aims to:**
  - Identify services to migrate from services that remained on the platform for historical reasons, e.g. due to backward compatibility and currently are no longer needed.
  - Classify services according to complexity and technological interfaces.
  - Find the same implementation elements of services – it is usually assumed that integration services are developed according to defined standards for specific integration platform
  - Define a migration progress plan with respect to criticality of the whole migration plan and, where appropriate due to the concurrence with the existing old integration platform.
- **Customization of migration tools and possible addition of other automated steps.**
- **Verification of mass automated deployment of services** on the integration platform (in the case of hundreds of services, this may be a process that consumes a large amount of resources for some technologies of integration platforms and the implementation of such mass deployment is therefore not trivial).
- **Full automation of integration services tests.**
- The cycle of the last 3 points was repeated several times to achieve maximum migration automation.

SUMMARY OF MIGRATION SUCCESS:

A few percent of the migration of the entire integration services portfolio always remains, they are migrated / modified manually due to their complexity or quantity commercially technical activities which it carries out or due to high security, or also due to the use of unique technologies or technological approaches and protocols.

Despite all the above, we achieve the whole integration within the migration platforms an average of 2 man – hours per migration of one service (in the case of migration of hundreds of integration services from analysis to deployment to production environment). This was also the case with the Aribus project.