



# Petrom Logistics – Implementation of a centralized SAP for Logistics area

## Challenge

Petrom is a Romanian company, which deals with:

- domestic and international exploration and production of oil and gas
- crude oil refining and gas processing
- production of petroleum products
- petrochemical and fertilizers; distribution of petroleum products through its retail network.

In December 2004 OMV acquired 51% of Petrom and started in 2005 to improve its business and to aim at competitive costs. Therefore Petrom started to standardize processes and information technology, based on the local and international expertise of its people.

OMV changed the ERP system used at Petrom to SAP, and built up a centralized SAP system for Finance and Controlling area. The mission of the Logistics project was to extend the SAP system also with the Logistics area. The company policy at OMV/Petrom says that the data exchange between SAP interfaces and 3rd party applications, filling stations, suppliers or partners has to be done via webMethods, which is an EAI/BPM tool.

The task of Qualysoft on this project was to build up new webMethods architecture, integrate the defined applications with SAP, and support the implemented processes.

## Solution

The complete webMethods architecture contains development, test and production environments. Development and test environment contains one physical server, with stand-alone webMethods Broker, Integration Server and myWebMethods installed on it.

The production environment contains five physical servers, with webMethods Broker, Integration Server and myWebMethods installed on each one. The five Brokers are clustered on operating system level in active-passive mode; the five Integration Servers are wM software clustered in active-active mode; and the five myWebMethods servers are clustered also on operating system level in active-passive mode. This architecture has high availability, fail-over capabilities, load balancing, and can be easily extended with additional servers.

On all servers RedHat 4.0 Linux 64-bit operating system is installed, and all webMethods components have the version 6.5. As backend database for webMethods components Oracle 10g is used.

As a template for webMethods implementation the existing OMV Iris process was used, and customized/changed according to the Petrom needs. All implemented processes are using the Process Monitoring feature.

The current production system integrates all together 40 SAP interfaces with 7 different application systems. All this integrations were realized as 18 processes in webMethods, which have different complexity level.

WebMethods process daily about 1,2 - 1,4 GB data in 4.000-5.000 process instances. When the system reaches the full productivity, when all systems/applications will be connected, daily there will be up to 15.000 process instances.

None of the current processes requires human interaction, therefor the webMethods workflow component is not used.

The number of users using webMethods is low, therefor the user management is done directly in webMethods via the build in functionality.

### Result

As result of this project Petrom has a centralized Logistics organization, working with standardized and integrated processes and IT-systems, where the central/master system is SAP.

As a result of the EAI implementation, SAP is able to send and receive data in real-time to all filling stations, fuel terminals, or other applications.

The data is transferred automatically, no manual processing is needed.

### Technology

System environment:	LINUX
Programming language:	ABAP4, Java, Flow, HTML, JavaScript, Oracle PL/SQL, XML, XSLT
Database:	Oracle 10g
Tools:	webMethods Developer, webMethods Modeler

