

Unprecedented flexibility and efficiency at E.ON Hungária with Landis+Gyr industrial AMM system

Operational flexibility, efficient data exchange and a high performing interface were the key requirements for E.ON Hungária Zrt., Hungary's leading energy provider and one of the country's largest utilities, when deciding on the renewal of their data acquisition system.

When E.ON Hungária Zrt. decided to renew the data acquisition systems of its energy utility companies, the advanced Landis+Gyr Converge system offered a perfect solution for the customer's demand.

Aiming for an advanced, integrated system

E.ON Hungária Zrt. had set several targets for its project to renew all of its data acquisition systems. The basic requirement was that the system acquired active and reactive energy as well as load profiles and billing values. One of the major determinants of the system was a highly automated and high performing interface for billing values and load profiles to the SAP billing system. Another important factor was the data exchange between the market participants and the market operator MAVIR with pre-defined XML-formats (Import and Export), which needed to run smoothly and efficiently. Furthermore the focus was on the investment savings and operating costs, which would be reached by using one single system, Application Service Provision, ASP, by all three energy providers.

Extending the project

E.ON Hungária Zrt. decided to use the Converge Meter Data Warehouse from Landis+Gyr to achieve the project targets. Initially the project started with 2,000 meters. Since then, it has been extended continuously with meter points, interfaces and server hardware, by

approximately 1,000 meters every two to three months. System size in the Autumn of 2008 was reported at 19'000 metering points.

Overview of the system and architecture

The Meter Data Warehouse installation consists of central system software, an SAP Interface for billing values and load profiles, and the XML Data Exchange module.

The system at E.ON IS, E.ON's IT provider, is set up as a multi-server system. The scalability of the metering system allows distribution of data acquisition and report processing among dedicated servers. The door stands open for further growth. For preservation or improvement of performance with additional meters, the system can be completed with additional processors or servers.

Servers, serial port servers and modems are compactly installed in rack cabinets and located in a dedicated server room. Administration and maintenance is mainly done over remote access. Data acquisition is done during early morning hours over 80 modems, five serial port servers as well as 64 iMEGA communication ports over GPRS.



The entire system is embedded into the existing IT-environment of E.ON IS. Data exchange in XML formats is made over the ftp Unix server in the “de-militarised zone”. Billing and load profile data is provided to SAP IS-U over a database link. A separate test system allows the verification of software updates and it can also be used for training purposes.

Application Service Provision to reduce costs

A major step to reduce operating costs was the decision to concentrate DA/DP processes in one system, serving three utilities. This concept is called Application Service Provision (ASP). E.ON IS acts as ASP provider for the three utilities. E.ON IS operates and maintains the Meter Data Warehouse and ensures the availability of the system.

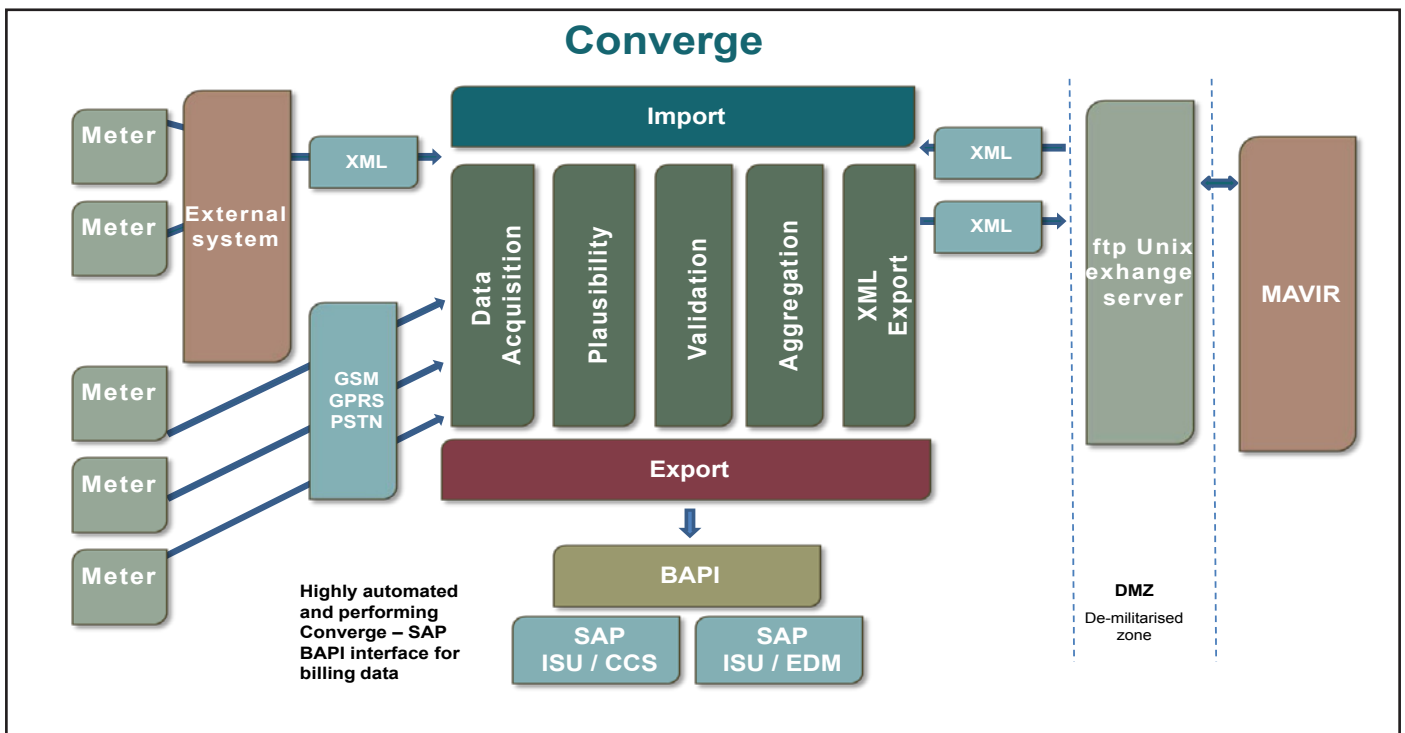
Highly automated workflow

Converge is software designed for data acquisition and processing, which is widely used for reading the load profile and billing values of meters as well as processing the acquired data.

The meter data is acquired every day according to a defined time schedule in the early morning hours. During office hours, this data can be verified and processed. Most of the daily tasks such as data acquisition or execution of reports, imports and exports are fully automated. The successful completion of tasks can be verified in the Logbook. For serious failure incidents, the system can notify the operator via e-mail.

Thanks to the system’s WEB-GUI, users in the utilities can log into the system simultaneously from any workstation with the web browser on the intranet. This offers high independence from workstations and limits the need for software upgrades for the ASP provider. This is a key advantage for a competitive ASP solution.

E.ON takes advantage of the flexible reporting tools provided by the AMM system. The scheduler executes a large number of reports every day, which are specifically designed for E.ON users. These reports give a good overview of the completeness and quality of the meter data.



SAP IS-U Interface

The SAP IS-U/CCS interface is used to transfer billing data from the AMM system to the billing system. The billing data is stored in a standard form under a so-called “virtual meter” that is identified by a unique metering point ID. The transfer of data between SAP and the AMM system takes place in three stages. In the first stage, reading orders are created on the SAP billing data system and transferred to the AMM system. In the second stage, the corresponding billing data in the AMM system is located via the metering point ID, the OBIS identification code and the planned reading date. It is then added to the reading orders. In the final phase, the completed reading orders are uploaded to the SAP system for further processing.

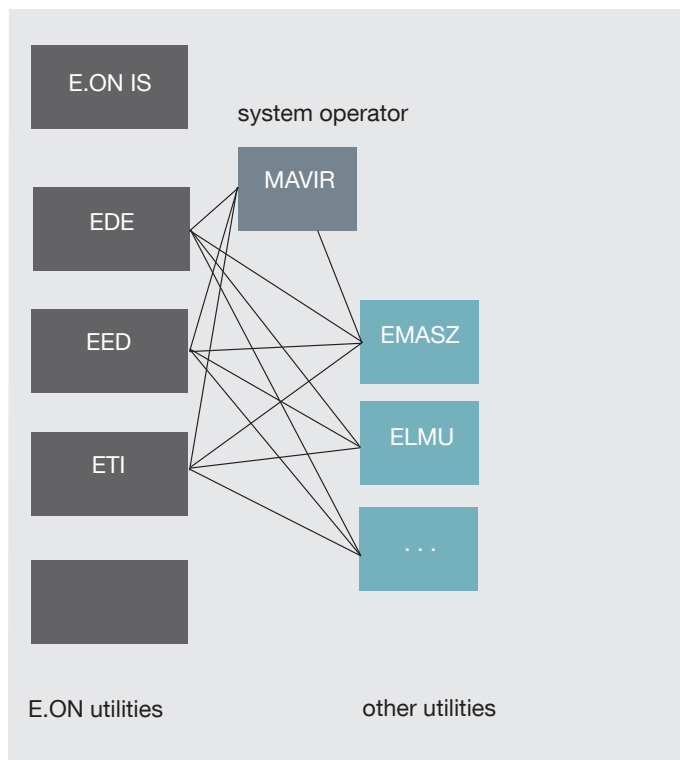
The data is exchanged via a database link. The advantage of the database link is that the two systems have a common view of the transfer table. The interface can be automated to run according to a time schedule without manual intervention. Furthermore it includes a reporting tool that offers the user an overview of the status of the reading orders.

Data exchange with market partners

The XML-Interface at E.ON is capable of automatically importing incoming XML messages and saving the data in the related load profiles. On the other hand, for every outgoing XML message (MAVIR, other Energy suppliers) the user can define a destination in the Converge consumer tree. Message creation can be scheduled and will automatically include all allocated load profiles in the sub-tree of this destination.

Modifications in message headers can be easily adapted in a configuration file. This is essential because in this ASP system, each utility has to communicate under its own name to the other market participants.

„We have been using this system for five years. It gives a great way to control our most important energy market segment. This solution is the right tool for us to reach our company’s goals and deliver high quality metering data to our VIP customers.”
Robert Havasi, Head of Metering Center, E.ON Hungária Zrt.



About E.ON Hungária Zrt:

E.ON has been present in Hungary since 1995 through its legal predecessors. During the privatisation of the energy sector it acquired shares in three electricity service providers EDE, ETI and EED and also, from among the gas service providers in KÖGÁZ and then in DDGÁZ. Later in 2007, in order to improve operational efficiency more organisations were restructured into the current corporation.

Service area: electricity 55,181 km², gas 26,145 km²
Cable and pipe network:
82,976 km electricity lines, 17,560 km gas pipes
Number of customers:
2,470,660 electricity customers,
602,107 gas customers
Sales: 15,575 GWh electricity and 16,5 mio m³ gas

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