



Gas Distribution to Almost 80% of the Citizens in the Czech Republic



Customer

RWE GasNet
www.rwe-gasnet.cz

Country

Czech Republic

Industry

Gas Distribution

System Integrator

UniControls
www.unicontrols.cz

Application

IGSS - 400,000 objects

Data

Distribution Area

Almost 80% of Czech citizens

Newly created dispatch centers in Brno and Usti nad Labem control more than 2,000 gas step-down stations located in the Czech Republic. Both dispatch centers are fully redundant.

The system controls and monitors gas distribution to almost 80% of the Czech citizens. The system consists of gas delivery stations, step-down stations and other technological equipment which are located all around the Czech Republic.

The Challenge

New dispatch center

The members of the RWE group had been looking for a new dispatch center since 2007. They had prepared a project to unify all levels of control and monitoring of gas distribution in the Czech Republic. Finally, the new dispatch centers in Brno and Usti nad Labem were put in operation in the middle of 2010.

The volume of the dispatch center solution is unique, also in an all-European point of view. More than 2,000 connected nodes, more than 150,000 I/O variables, 13 operator workplaces and the possibility to monitor via the internet.

The whole system is fully redundant. One system is installed in Brno and a second one in Usti nad Labem (distance between the cities is approx. 300 km). Current and historical data is synchronized in real-time between the centers. In case of shutdown of one center, the second center automatically takes over all control functions.

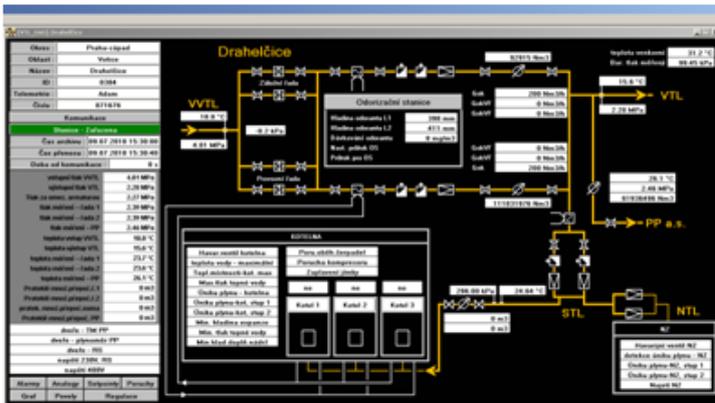
Due to high requirements for availability, fault tolerant systems are used on server levels, LAN equipment and other hardware.



INDUSTRIAL AUTOMATION

Interactive Graphical SCADA System

CUSTOMER CASE



„Thanks to the new dispatch centers, we can finish a process of gas distribution unification in the Czech Republic.“

*Mr. Jiri Zdvoracek,
director of distribution
dispatching of the customer*

The Solution

400,000 objects in one system

The project uses an IGSS multiuser system with 13 operator workplaces and 400,000 objects.

The application is split into 5 areas:

- Gas high pressure distribution of RWE GasNet and VČP Net
- Local gas distribution net of RWE GasNet and VČP Net
- Gas high pressure distribution of JMP Net
- Gas high pressure distribution of SMP Net
- Local gas distribution net of JMP Net and SMP Net

For data collection, a dualized system consisting of two servers, is used. The first server is located in Brno and the second server in Usti nad Labem. Both servers are running in a cluster server and have their own SQL server.

Ethernet communication is used (WAN and GPRS) and the IEC 870-5-104 protocol.

The process control system uses UniNOD Compact stations, CP321, Adam 5001, DIO 3000, ZAT, WAGO and many others.

The Result

Overview and flexibility

The availability of the entire distribution system was rapidly increased.

Furthermore, the overview of the gas distribution was improved and data could be shared by all users. The system is more flexible, open and extendable in the future.

The Future

Prepared for the future

The installed system has been prepared for future connection to all gas distribution equipment. A new project is already in preparation which will add another 2,000 nodes.