Pulse - Case Study

Konya Metropolitan Municipality, Turkey

Pulse SCADA Helps Monitor and Control the City's Large-Scale Water Distribution Project

Introduction

Konya, located in the center of Anatolia, is the fifth-largest city in Turkey, with a total population close to 2,000,000.

KOSKI (Konya Su ve Kanalisasyon Idaresi) - Konya Water and Sewage Company , is responsible for water distribution in Konya, including the operation of pumping stations and the flow of water to the reservoirs.

The Systems Integrator Company

A local Integrator which is a leading SCADA system supplier and system integrator for Oil & Gas, Water & Waste Water and Electric industries in Turkey, providing professional services and products in the data communication, and supervisory control and data acquisition.

The Integrator was chosen as the prime contractor solely responsible for the design, engineering services and commissioning of the SCADA system.

The Objective

KOSKI needed to upgrade its control facilities and required a robust, centralized SCADA system that could easily collect and manage the municipal water system's large volume of data, including generating alarms and historical trends, reports and more.

The Solution

The client gave a contract to design a SCADA system for KOSKI, as well as the telemetry for monitoring the pumps alarms, levels, and status at the remote pumping stations.

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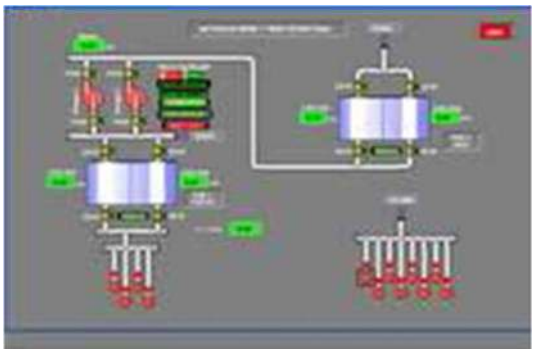
Case Study

The project comprises:

- Pulse SCADA installation
- Total I/O - 134,000 which are monitored by Pulse
- Seven clients in the control room connected to two pairs of Pulse redundant servers
- Two projectors in the control room
- Two clients in the pumping stations

AfconSWS Pulse SCADA was selected as the central monitoring and controlling system for the city water distribution system.



The Pulse SCADA system manages two pairs (one for redundancy) of database servers comprising 134,000 I/O points for data acquisition and alarm generation, and history servers for producing trend information. In the control room, it provides real-time data on level, flow, alarm and equipment operation status and alarms that are automatically logged for late analysis. Trends can be dynamically displayed by selecting graphical elements on the screen and enables maximum flexibility to the operators. The system also permits operators to perform control operations like remote start, stop and more.

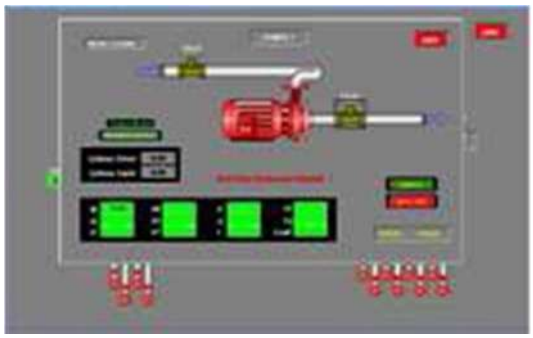
Pulse's integrated redundancy system ensured the system's reliability in maintaining communications and data transfer on a continual basis. To avoid data loss, the system functions as a fully hot redundant Pulse SCADA/HMI system on two pairs of servers. Additionally, AgconSWS' native driver for Gateway supports the Gateway redundancy. The driver can switch dynamically to the active Gateway, performs time synchronization, and manages the polling cycle of the RTUs and more. This ensures the reliability of the data being received by the client operator workstations.

The Pulse Supreme Report module, accessible through a web browser, enables automatic generation of statistical reports, providing vital information on water level and consumption.

The RTUs monitor and control the pumping stations. They communicate to the Pulse SCADA/HMI servers via four RF frequencies, which is a necessity in the Konya vicinity's rough terrain.

Benefits

Implementing the Pulse SCADA has made it easier to monitor and control the water pumping stations, wells, and water level.



Pulse's visualization tools, reports and alarms management allow operators to diagnose any equipment malfunction and react fast to stabilize the system.

The system provides superior flexibility for future upgrades and expansion.

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