Case Study

INSYGNIA: AUTOMATED EVENT MANAGEMENT OF A COMPLEX SCADA SYSTEM

CHALLENGE

Canal Isabel II has a complex SCADA system of more than 50,000 instruments generating about 3,000 alarms per day which need to be analysed spatially with a GIS and where a fault is indicated, maintenance teams are dispatched via the asset management software (CMMS).

The procedures for dealing with alarms can depend on the presence of other alarms or conditions and the time of day and year.

Combined with the fact that the various legacy software systems have different representations of the assets and at different levels of granularity, processing alarms and navigating the different software systems is costly and complex.

ADASA'S SOLUTION

Adasa's solution **was to link the SCADA, CMMS and GIS through a database structure that not only allows operators to easily** navigate between systems, but also automates the maintenance of the data representations so that changes to assets are automatically propagated to each system.

The Insygnia solution includes maintenance automations and event and rule processes.

Adasa **also built a complex event and business rules processing system that defines many of the alarm** analysis procedures and which traverses the links between the above-mentioned systems when evaluating actions.

Case Study

Thanks to Adasa's Insygnia solution, control room operators spend their time planning, supervising and monitoring standards and processes.

RESULT

Today, **control room operators are freed from dealing with most common alarms and instead devote more of their time** to planning and supervision and the oversight of rule and process execution.

They can now **move quickly between systems**, and if desired, review and approve actions prior to execution.

With traceability of alarms and the consequent actions, **there are no more instances of acknowledged alarms without actions** and subsequent analysis allows for operating training and process improvement.

By reducing asset data maintenance costs and automating the **dispatch and traceability of SCADA alarms, operators are more efficient and more effective** at their primary task: managing a complex urban water supply system.

CLIENT

Canal Isabel II is a government owned corporation that collects, stores and supplies water, wastewater, recycled water and stormwater services to more than 6.5 million people in Madrid, Spain.

Managing 14 dams, 13 water treatment plants, 156 wastewater treatment plants and a network of many thousands of kilometres of channels and pipes requires a complex scada system of more than 50,000 instruments.

The system generates about 3,000 alarms per day which need to be analysed often spatially with a GIS and where a fault is indicated, maintenance teams are dispatched via the asset management software (CMMS).

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