CSE ICON

How Oil and Gas Operators Minimize Cost and Standardize Reporting Processes Through Consolidating Multiple SCADA Systems

Summary

CSE ICON ("ICON") provides professional services focused on the design, development, and implementation of Operational Technology used in the processing and manufacturing industries. The following case study describes ICON's work consolidating SCADA systems for one of their clients which created immediate efficiency improvements, generated cost savings, and set the stage for future expansion of acquired systems. In doing so, it serves to demonstrate some of the general benefits of consolidating SCADA systems which includes:

- Minimizing the complexity and cost associated with licensing and maintaining multiple SCADA systems
- Standardizing reporting processes
- Standardizing the process for exporting data into third-party apps

The Customer

An independent oil and gas company was using an XSPOC SCADA system to allow its field personnel and control room to monitor and control assets by collecting operational data from 900 wells, in addition to generating alarm callouts and notifications to operators.

The infrastructure for the XSPOC system consisted of two servers. The alarm callout system included an outdated telephone line-based WIN-911 system.

After purchasing the assets of another company, CSE ICON's customer almost doubled the size of its assets to 1,700 wells. At the time of purchase, the acquired company used a different SCADA system (iFIX) to control its wells.

The Mission

To meet the needs of a larger user base and allow room for future expansion, such as the acquisition of more wells, the customer hired ICON to design a single Ignition SCADA system that consolidated their current and acquired systems.

The Process

Executing a project on this scale requires an experienced project manager and a team of engineers with Ignition subject matter expertise. ICON's team of experts held multi-day workshops with the customer to familiarize its stakeholders with the Ignition system and gather project requirements regarding devices, tags, computing infrastructure, and expansion plans.

The information gathered during this workshop helped ICON design a highly redundant Ignition architecture consisting of 12 servers similar to the one shown in the following figure.
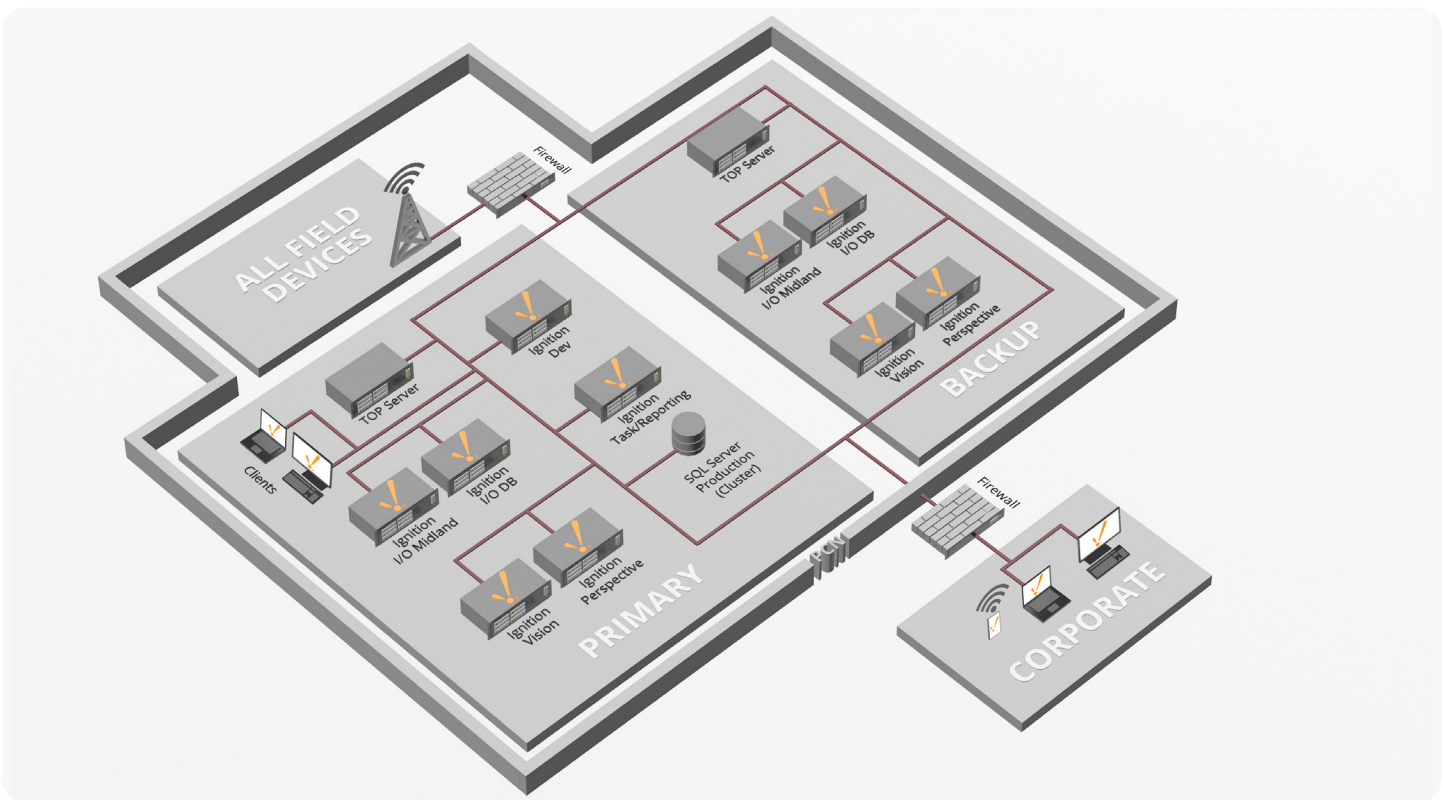

Figure 1 - Ignition Architecture

Upon the customer's review, ICON was tasked with accommodating additional offsite redundancy requirements. Server specifications were then provided to the customer as ICON began extracting information from the XSPOC and iFIX systems for import to Ignition.

With new servers in place, ICON configured and deployed the new system. Following that, ICON's team of engineers began importing the information into Ignition in coordination with the customer's IT department.

The alarm callout system was replaced with a VoIP system using a cloud-based SIP service and the Ignition Voice Notification Module. A custom pipeline to dynamically

generate notification rosters was also developed. Another notable feature of the Ignition implementation was the animation of screens using metadata stored in a SQL Server that related to tags and sites.

Lastly, ICON's experts traveled to the customer's facility to perform user training on the Ignition system and assist with the cutover from the previous systems.

Throughout the project's execution, ICON applied project management best practices to ensure that customer stakeholders stayed informed about project progress and budget status and were able to make informed decisions.

The Result

ICON successfully helped the customer consolidate its conflicting SCADA systems into a unified Ignition system sized to meet the needs of a larger user base and allow for future expansion.

The consolidated Ignition system minimized the complexity and cost associated with licensing and maintaining multiple SCADA systems. It also helped the customer standardize its reporting process and the process for exporting data into third-party applications.

By employing a rigorous project management approach, ICON ensured that the project was executed on time and to the satisfaction of the customer. The project created efficiencies across sectors, which has been shown to increase profitability and employee morale. As one stakeholder said, "the ICON system makes our lives simpler."

Company Overview

CSE ICON is a professional services company focused on the design, development, and implementation of Operational Technology used in the processing and manufacturing industries. Our mission is to bring people and data together thereby helping our customers continuously improve and increase profitability.

CSE ICON

For more information on how CSE ICON's experienced staff can help you and your business, please visit www.cse-icon.com and/or e-mail contact@cse-icon.com.