CHIPKIN

Case Study

iSense Management Console to BACnet/IP Integration

Overview

Our client, Analog Devices, needed a way to maintain monitoring of his electrical field devices after his existing monitoring solution was being phased out. At the core of his system was the **iSense Management Console**, a web-based interface used to configure and monitor devices. The iSense console communicated over **HTTPS**, while the client's **Building Management System (BMS)** required data in **BACnet/IP** format. To avoid losing visibility of essential operating data, such as voltages, Analog Devices sought a solution that could act as a protocol bridge.

The goal was to deploy a **FieldServer Gateway** that could convert the iSense Management Console's HTTPS data into BACnet/IP objects for integration with the BMS.
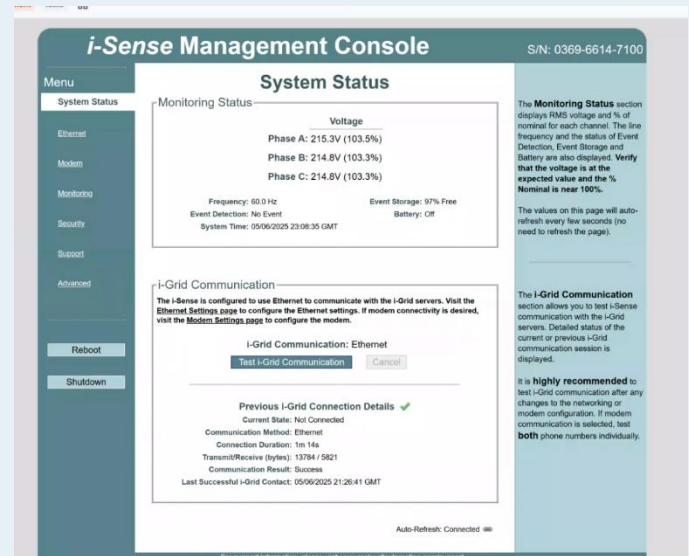
Chipkin's approach to the solution

The integration began with very limited information. The client was unable to provide the XML configuration file, had no knowledge of internal addressing or data structures, and only had a URL pointing to the iSense console. Without such information, a FieldServer configuration could not be written using standard methods.

To overcome this, Chipkin engineers combined browser analysis and packet inspection techniques. Using the browser's Inspect tool, XML point definitions were extracted directly from the iSense web interface, providing a list of available monitoring points. At the same time, Wireshark was deployed to capture HTTPS traffic, which confirmed the data transmission format and allowed the team to verify how values were being sent across the network. Below is a network diagram of the integration.
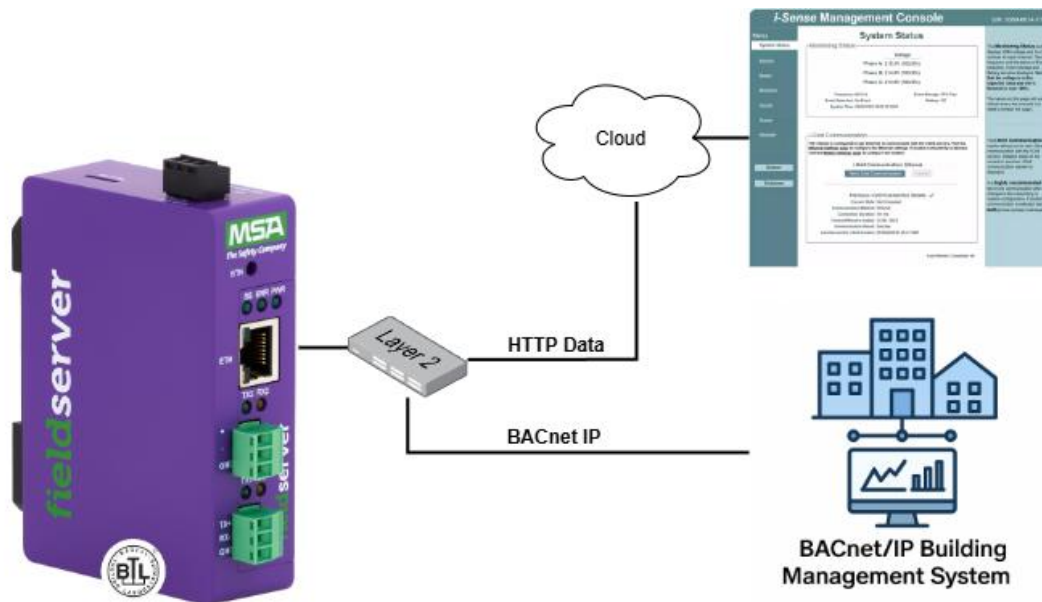
This process effectively reverse-engineered the iSense communication method. While the lack of documentation and parameters posed challenges, combining XML extraction with traffic analysis enabled Chipkin to build a complete and accurate mapping of iSense points into BACnet objects on the FieldServer Gateway.

Outcome

The integration was completed successfully, enabling **Analog Devices** to continue monitoring voltages and other key values from the **iSense Management Console** through their **BACnet/IP BMS**. This avoided the cost of replacing equipment while preserving visibility as the original monitoring method was retired.

By bridging HTTPS to BACnet/IP with the FieldServer Gateway, Analog Devices secured a reliable and future-proof solution that protects operations, reduces risk of downtime, and extends the life of their existing infrastructure.

Client Feedback:

While no written testimonial was provided, the client expressed strong appreciation for the support, noting that the experience left him feeling Chipkin was a "great friend" throughout the process.