

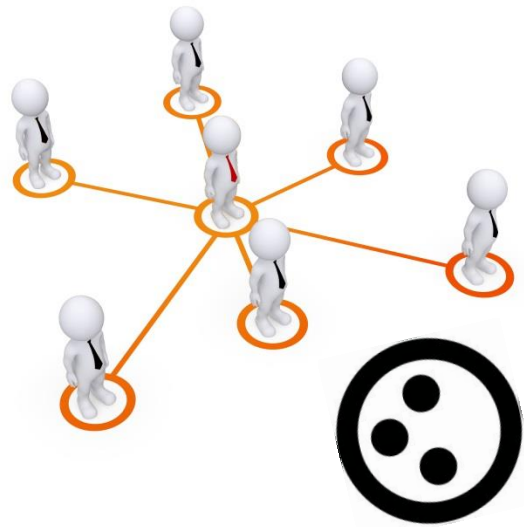
Case Study

BACnet IP and COSM

To keep the customer anonymous, we replaced their name with “ACB Company”.

OVERVIEW

ABC Company’s site consists of several sensors and power meters located on a remote location. Currently ACB Company has the sensors behind a firewall and does not have access to them without physically traveling to the remote site in order to view the information. This Current process of accessing the information is a hassle for the customer as it is time consuming and costly. Every time they need access to the data, they have to send someone over to the remote site to manually retrieve it.



We have been asked to help the customer find a way to gain access to the sensors’ and power meters’ information directly from their office through an HMI.

ACB COMPANY NEEDS/REQUIRES

- **A HMI system to gather and present data to the required individuals**
- **Stable hardware to gather store and transmit data from the remote location to the office**
- **Protocol conversion drivers to poll the data from the sensors and power meters and pass it to the office database.**
- **Needs to be cost effective, efficient, and sustainable**

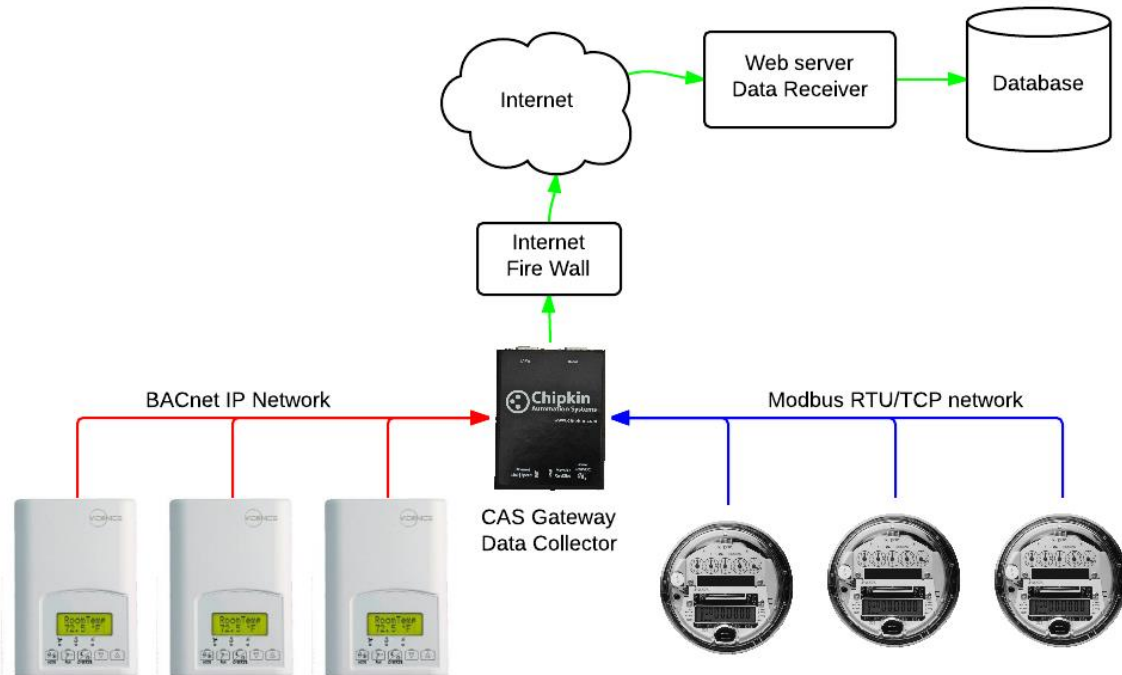
SOLUTION

Provide the customer with a system to store tend values in a local database and allow the values to be polled directly from the customer’s office and have them accessible through a visual HMI for public users to view.

Our solution for the customer is to install a gateway behind the firewall which requests the values from the local sensors and power meters and stores them in its internal database. From there and using our unique COSM driver, our gateway pushes the data through the firewall onto a web server which is then stored in the office database. The key solution here is that our Gateway is enabled to push the data to the cloud which can

be accessed from anywhere as long as the customer has the appropriate database in place.

Looking at the figure below, we offer to install our CAS gateway on the factory's local network. From there, the CAS gateway collects data, packages it up, and PUSHES it to a web server which is then stored on the offices database.



How it works

The CAS Gateway (Data Collector) is installed on the factory's local area network behind the firewall. Since the CAS Gateway is behind a firewall it can poll the devices on its local network for their present values. The CAS Gateway is able to communicate with many different devices, such as BACnet IP thermostats or Modbus Power meters, etc. CAS Gateway reads values from the 3rd party devices and temporarily stores the values in its internal database.

Once the CAS Gateway has collected the required information and stored it in its database, periodically, it then packages these values and creates a JSON message and PUSHES them to the Web server running the data collector software. Since the CAS Gateway is initializing the request, the firewall does not block it.

When a user browses a page on the web server, the Web Server will generate a graph or chart based on the data stored. The web server will then pass this data to the Data Receiver, in this case ABC Company's office, which stores the data in its local database for everyone to view.