ABOUT THE CUSTOMER

A commercial real estate investor owns a 400,000 square foot industrial space in Watertown, Wisconsin, which is leased to tenants with climate-controlled warehouse requirements. The building features a sizable JCI Metasys® N2 based BAS which includes Fire systems, HVAC, and power monitoring. Given the recent rental climate, up to 40% of the space is often vacant. This vacancy rate has cut margins thin and motivated the owner to invest in upgrading the energy monitoring technology to control costs.

CUSTOMER REQUIREMENTS

After a quote from Johnson Controls that involved a full system replacement and a price that was higher than the value of the building, the owner refined his automation goals to just an improved power monitoring system. The goal of the building owner was to utilize data collected from the existing N2 power meters as input to a new energy management system, while maintaining the normal operation of the current N2 devices connected to the Metasys® BAS. The owner needed to capture this data to better understand the energy usage in the building to more efficiently manage the property.

ABOUT THE PROJECT

Automation Solutions, LLC. of Germantown, Wisconsin was hired to implement the new energy management system. Automation Solutions has vast knowledge of Rockwell tools and technologies and ability to build the new energy monitoring system to the owner's specifications around Rockwell Automation's control systems. Since a number of N2 based power meters had recently been added to the facility, the owner wished to keep these meters in the solution. The task of the integrator was to get the data from those meters into an AB PLC where it could be monitored and analyzed in near real time. However, they had no experience with the Metasys® system or its N2 field bus technology. To solve this data acquisition problem, they brought in Real Time Automation to install the S4 Open: BACnet-N2 Router and then take the BACnet data from the S4 router to an Allen-Bradley PLC through RTA's 460ETCBC gateway. This project required two protocol conversions. RTA's belief in the S4 router and the integrators belief in RTA led to this unusual but effective pairing. Major components of the solution included:

a. S4 Open: BACnet-N2 Router
b. RTA 460ETCBC
c. Allen-Bradley Micrologix PLC
d. The energy monitoring system based around an AB MicroLogix PLC provided a cost effective solution for energy monitoring.

OUTCOMES

a All the current N2 power meters report data to an AB PLC while still reporting to Metasys®

b Operation of the legacy Metasys® system was not impacted

c. The owner now has the tools to more effectively monitor usage and control energy costs and expects savings of 10-15%

d A 5 year plan was developed to completely replace the entire BAS over time, since a rip and replace approach is not financially possible at this time.

"As a new distributor for S4 I was nervous to take on our first project. Automation Solutions is a trusted customer we couldn't afford to let down. We assisted heavily in the integration both to better understand the S4 Router in a real world application and to lend Automation Solutions our (forming) expertise. My only exposure to N2 and the S4 router prior to this installation was at a S4 boot camp. The boot camp prepared me very well for this challenging application. All the drawing and designs of this network had been lost to time. Finding devices was literally a search. With my training and knowledge of the ComBus Quick Tester, we were able to locate missing devices on broken segments of the N2 bus located all over the warehouse facility. With no prior field experience we were able to successfully deploy the N2 router in a challenging environment. Hats off to my teachers at the S4 boot camp and to the developers of a great product in the S4 router." - Drew Baryenbruch, Real Time Automation

ABOUT RTA

Real Time Automation, Inc. creates connectivity solutions for Industrial and Building Automation. These solutions include gateways, daughter cards, and embedded source code. RTA's simple solutions and industry leading support are guaranteed to save you time, money and headaches. You get support from an engineer who developed the product. A product made in the USA that is always stocked. With RTA you can take a solution from discovered to implement in a day.

If you have questions about this project or have other projects in mind, contact Drew Baryenbruch Drew@rtaautomation.com 262-436-9299

ABOUT THE S4 GROUP

The S4 Group provides cutting-edge enabling technology that transforms building automation systems (BAS) into enterprise solutions. S4 Open Appliances attach to legacy proprietary BAS, extending systems' lifespans and greatly enhancing their value to building owners. The S4 Open: OPC-N2 Router facilitates the convergence between legacy Metasys® installations and standards-based industrial automation /process controls technology. For more information on The S4 products and capabilities contact Steve Jones at 801-621-1970 or sejones@thes4group.com