

Salvation Army N2 Integration

S4 Open: BACnet-N2 Router Case Study

The Salvation Army
USA Western Territory
180 East Ocean Blvd.
Long Beach, CA 90802

Project Overview

The Salvation Army Western Headquarters is a 12-story high-rise office building located in Long Beach, California. The building not only serves as the headquarters for the Salvation Army services throughout the Western states but also houses several social/outreach programs to support the Long Beach citizens. The building contained 339 Metasys N2 Controllers on four Metasys Networks with NCM Supervisory Controllers. The number of points on the legacy Metasys network totaled 16,797.



The building's size and complexity confirms the maturity of the S4 Group's S4 Open: BACnet – N2 Router, particularly the ability to find devices and bring them into BACnet.

Initial Situation

The Salvation Army staff was dissatisfied with the current provider's level of customer service. In fact, the Building Chief Engineer contacted The S4 Group Integration Partner Integrity Automation Solutions (IAS) to find out if there were any other options. The building has Metasys® PMI software with lots of VMA VAV controllers on the N2 bus. The customer wanted

to know what migration options are available. The current service provider previously recommended replacing the four NCM 350s with new NAE's to modernize the network; however, this was proving to be prohibitively expensive for the customer.

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Customer Needs/Requirements

After studying the existing infrastructure, IAS proposed a solution that would allow the customer to install Delta ORCAview in their building, salvaging most of their investment in Metasys® N2 field gear, and putting a fresh face on the building controls network.

The Salvation Army wanted enhanced visibility of their control systems, with better statistics to monitor energy efficiency within the building. In addition, the customer wanted the visualization capabilities to determine the condition of their building at any time, and the ability to react to changes as they occurred. As a non-profit, that prides itself on a high percentage of donations received providing community services, the Salvation Army benefits from any possible reuse of existing systems that would lower costs and meet budget requirements.



Solution

The solution identified and implemented by IAS was to replace the legacy Supervisory Controllers with new Delta Controls ORCAview head-end products. The challenge of this project was to keep the Johnson Controls Supervisory Controllers operational in parallel with the Delta Controls ORCAview head-end. The success of the project depended upon this parallel operation.

In addition to utilizing multiple BACnet-N2 Routers, IAS was Beta testing some new Delta Controls products at the same time. It is significant that IAS had enough confidence to BETA test a Delta Controls product at the same time that they were installing The S4 Open: BACnet –N2 Routers.

S4 Open: BACnet-N2 Router

Because of the size and complexity of the project, the S4 Open: BACnet –N2 Router was the only viable option for integrating to the legacy Metasys system. The migration went very smoothly; in fact, IAS President Mark Fulton commented “I have been doing integration projects for many years and the S4Open: BACnet to N2 router made this one of the smoothest.” Once the four BACnet-N2 Routers were installed, they provided a gateway for 67,919 points to the Delta Controls ORCA controllers.

ComBus Quick Tester

An N2 bus was experiencing communication problems that needed to be resolved before this integration could proceed. To pinpoint the cause of the issue IAS used the ComBus Quick Tester hand-held diagnostic tool. This tool helped save the integrators valuable time in arriving at an accurate

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diagnosis. In the end, the communication errors were cleaned up by adding a repeater to the N2 bus. The ComBus Quick Tester was so helpful on this project that IAS has used it on several other projects.



Results

The customer has been very satisfied with the level of support and professionalism of Integrity Automation Systems. The graphic interface of the Delta ORCAview controller makes viewing, and acting upon, real time data updates possible. All of the project goals have met or exceeded the customer's expectations.

About The Parties Involved

Integrity Automated Solutions

Integrity Automated Solutions is a building automation, energy management, and control systems integrator. As the company name implies, it is our company vision and purpose to provide the best automation and energy management solutions to the building industry on time and within budget.

IAS offers a complete line of hardware and software solutions for our customers. We can provide "off the shelf" or custom applications to suit virtually any building specification or requirements.

Please feel free to [contact us](#) for contracting services at any time at (714) 986-9279.

Mark Fulton
President

The S4 Group, Inc.

The S4 Group, Inc. is an innovator in software and network appliance development. Products include the S4 Open family of network appliances that enable the opening up of legacy BAS systems and integrating them into open protocols such as BACnet and OPC.

For additional information, please visit our website at www.thes4group.com or contact Steve Jones, steve@thes4group.com.