# CASE STUDY: THE FOUR SEASONS HOTEL

Restoring Comfort and Energy Efficiency

## ABOUT THE CUSTOMER

The Four Seasons Hotel in Miami, Florida is a high end, mixed use 70 story building that includes the Four Seasons Hotel, The Sports Club LA, and Class A Office Tower. The building has 221 luxury guest rooms and 84 condo hotel rooms. Floors 40 to 70 house its luxury residences.

Located in the heart of Miami, the Four Seasons Hotel, as one of the world renowned Four Seasons properties, is a luxury hotel that promises the customer an experience of exceptional comfort and service.

## CUSTOMER REQUIREMENTS

The customer wanted to update the older Johnson Controls System that was installed back when the building was constructed in 1992. Because the system no longer met with the building owners  objectives they contracted with a third party firm to analyze the system, make recommendations as to what the new system should accomplish and  to help with execution.

The building owner wanted each customer in the building to be comfortable. Whether an overnight guest in the hotel, luxury condo or living space resident, an office worker or a patron of the gym, everyone should be comfortable, with the building operating in an energy efficient and cost effective manner.

## ABOUT THE PROJECT

South Florida Controls was awarded the contract for the new BCS. The initial approach was to do a full retrofit; however, due to the high replacement cost, and the operational impact to the Four Seasons business, the integration path was chosen and followed in the project.

The decision was made to partner with The S4 Group, Inc. The S4 Open: BACnet-N2 Router establishes a cost effective gateway from legacy Metasys® N2 to BACnet IP, quickly adding value and extending the life of legacy systems. The BACnet-N2 router was used as a gateway to the Delta Controls system which provided enhanced visualization, improved control sequences, and energy efficiency improvements. The BACnet-N2 Router acted as a BACnet server, the Delta Controls head end, ORCAview acted as a BACnet client, polling data from the S4 Open: BACnet-N2 Router.

Over the long term the S4 Open Appliances facilitate the migration away from the legacy Metasys® N2 devices to a pure BACnet environment, without having to take the building out of service for a retrofit. The installation of the seven S4 Open:BACnet-N2 Routers allowed the project to salvage the N2 controllers and integrate the large (500+) number of VAV boxes, lighting controls, exhaust fans, and pressurization systems to Delta ORCAview. The power and flexibility of the S4 Open Device Type Template technology facilitated defining the point definitions needed to

interface to custom configurations of the Metasys® controls utilized in the original installation. The critical central plant equipment was retrofitted to Delta Controls controllers to maximize their efficiency because of the heavy demand for cooling capacity year-round.

A large part of the plan called for the Johnson Controls NCMs to be kept online and functioning. The S4 Open: BACnet-N2 Router is the only technology that allows an integrator to meet this requirement. The Upstream N2 Interface of the BACnet-N2 Router enables the legacy NCMs and Metasys® Operator Workstation to co-exist with the new ORCAview head end. The integration of the legacy Metasys® N2 devices and the new Delta field devices was seamless to the owner and building operator. The end user was able to immediately pick up all his points on the front end and continue working on the system as though nothing ever happened. Since Delta Controls is 100% Native BACnet, the whole integration process went off "without a hitch". The customer never experienced any downtime which was a major concern in a building with so many tenants, customers, hotel guests, & residents to attend to. This S4 product really helped us pull off the integration as planned.

The Supervisory Controller as a BACnet Client feature allows the transactions coming from the NCM to participate in the BACnet priority array structure, making control of any point in the system by either the NCM or ORCAview completely deterministic.

Project planning and preparation provided a major role in the success of the project. By using the Combus Quick Tester to validate the installation before starting the integration, the condition of the existing system was well understood. The customer was provided a list of what was working and what was offline; offline items were placed on the task list to be fixed as part of the project to ensure that required data was available for the new system. With a known and validated N2 bus and operational controllers and mechanical systems the N2 devices and points were easy to discover using the S4 Open Management Console's Configure Wizard.

## OUTCOMES

During the integration process, the South Florida Controls team worked in an efficient manner to provide the building owner with the system design, technology, integration services, and training to create the outcomes they specified.

The project is now complete and the owner has verified the outcomes. Since the completion of the project, the building owners have experienced substantial increases in the comfort levels of their guests, residents, employees and tenants in spaces that were previously not properly controlled and either too cold, hot, or humid. Now the increased level of control and visualization has allowed them to track, monitor & adjust the building to optimize indoor air quality while increasing building efficiency.

The goal of having a fully functioning front end BMS has been achieved. The owner can now properly manage all the systems in the building and can see what is operational, non-operational what needs to be fixed, looked at, etc.

The S4 Group {Software Services & System Solutions}

## ABOUT SOUTH FLORIDA CONTROLS

South Florida Controls knows your bottom line is important.  As a result, one of our challenges is to help you find cost savings in your facility. We have the experience to identify those opportunities and make them work for you. Our knowledge and skills, coupled with the innovative products we use, are what set us apart from our competition. If your goal is to reduce your energy costs and enhance your building performance, make us your partner.

As your business partner, we make it easy to do business with us. We will work with you to ensure that problems are solved and deadlines and budgets are met. Our approach is to install systems that are easy to operate, easy to service, and that will stand the test of time. The reason for this is simple: Our success is determined by your success.

South Florida Controls has a reputation for having a high level of integration knowledge and this large complex project increases it. The level of customer service we provide is world class and we provide individualized support to each customer we work with.   We have been integrating BMS systems for the past 12 years and have successfully completed projects with Siemens, TRANE, JCI, Andover, Alerton & Reliable controls , to name a few. Based on the success of this project, South Florida Controls has the skills to develop more business around the S4 technology.

For more information about South Florida Controls please contact Ross Jimenez, Business Development Manager

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## ABOUT THE S4 GROUP, INC

The S4 Open: BACnet-N2 router has always provided the enabling technology to cost effectively migrate legacy Metasys N2 systems to BACnet. The latest major enhancements have focused on publishing each N2 device as a virtual BACnet device under a virtual BACnet network, further streamlining the integration process and saving time and money for the integrator and building owner.  By using the configure wizard feature the integrator was able to complete the integration task and be in a co-existence mode with the replacement BACnet environment within 4 hours.

For more information on how the S4 Group Open products can help you build your business contact Steve Jones at sejones@thes4group.com or call 801-621-1970