Wicomico County Public Schools Cuts Scheduling Time 99% with Events2HVAC

September 2014

Last year, Jim Urbanski, Energy Manager at Wicomico County Public Schools in Maryland, spent 20 hours each week scheduling heating and air conditioning for after-school events. This year he spends just 20 minutes to schedule two weeks of events. That is a 99% reduction in labor hours, and he isn't done yet.

Urbanski started working at Wicomico five years ago and quickly realized that they were running HVAC systems late into the night to make sure rooms were comfortable for evening events scheduled at their 24 schools. He knew the school system was losing money, wasting energy, and causing unnecessary wear and tear on their HVAC systems. So he changed the HVAC schedules to cover only the school day and began manually scheduling after-hours events – 17,000 of them in the 2013-2014 school year.

"I actually built the monster myself," Urbanski said. "Because when I shortened up the occupied time to end at the end of the school day, anything that happened after the school day I now had to put in as an exception schedule. It was well worth the money we were saving in energy, but it was taking about 20 hours per week to do the scheduling."

Before discovering Events2HVAC, Urbanski said he and the school administrators had been discussing hiring a part-time employee to come in and do the HVAC scheduling.

"But then we found this [Events2HVAC]," Urbanski said, "and this is a lot cheaper than a head count increase. Nobody has to pay benefits or send this program to the doctor."

The Implementation

Wicomico uses Dean Evans EMS District to schedule its 600-700 rooms in 30 buildings spread across the 400 square-mile county. They have a Reliable Controls building automation system, which permits Events2HVAC to send commands via BACnet/IP. They currently have 160 rooms controlled automatically with Events2HVAC, but Urbanski plans to expand its use as retrofits are completed bringing more buildings into the BACnet world.

Urbanski admitted that his background in controls probably made the implementation easier. But he said that he could show someone in 10-15 minutes how to setup rooms and equipment in Events2HVAC.

"So many things automatically populate," Urbanski said. "So once you figure out how to get your device numbers and how to get your variable numbers, it's pretty simple. I would think in 10-15 minutes someone who never looked at BACnet before could do this."

Urbanski said he focused on getting his auditoriums into Events2HVAC first because they are kept in unoccupied mode. Even if the school wanted to use them during the day, he had to schedule them. Since the auditoriums are scheduled almost every day, and there are many pieces of equipment serving each auditorium, Urbanski estimated automating them cut about 50% of his scheduling time.

EVENTS2HVAC
Event Automation Software

Next he focused on getting the gyms, cafeterias, and media centers into Events2HVAC because they are often used after hours by the schools and for community events. Then he looked in Dean Evans EMS to see which classrooms were scheduled most often after school, and began putting those into Events2HVAC.

Urbanski said that during the first week of September 2014, there were 54 after-hours events scheduled automatically by Events2HVAC at Wicomico County Public Schools. But some events require running several different pieces of HVAC equipment, so there were at least 110 different schedules that he did not have to enter into the building automation system. Events2HVAC took care of all of those for him.

Throughout the implementation, Urbanski said there was no interruption to the school. He did not need to shut anything down, install any hardware, or come in on a Saturday. Schools do not need to wait for summer vacation or a long weekend to implement Events2HVAC.

"I would do this in the middle of my busiest school year," Urbanski said. "It's not affecting anything. If I can spend even 20 minutes setting up a few rooms, those few rooms automatically are being scheduled now, and I never have to schedule them again."

Favorite Features

During his Events2HVAC setup process, one of the features Urbanski used often was sending test commands. He set up a split screen on his computer, with Events2HVAC on one side and his Reliable Controls building automation system on the other. As he added each new piece of HVAC equipment to the system using its BACnet ID, he sent test commands through Events2HVAC to turn it on and off. Seeing the test commands start up equipment in his Reliable Controls system gave him confidence that the integration was going to work.

"I hit the test, I see my occupied point come on. I hit the test, I see my occupied point go off," Urbanski said. "So I know it's going to work. I don't even have to worry that, 'Oh my God, am I going to miss stuff tonight?' I just saw that it worked."

One setup decision Urbanski put some thought into was choosing how to set up command priorities. Facility managers have different systems and needs, so Events2HVAC allows them to set the priority level at which commands are sent to the building automation system. Urbanski set up Events2HVAC to send commands at the highest assigned priority so that if there is a community event scheduled on a holiday, Events2HVAC will override the holiday schedule and turn on the HVAC equipment on for the event. But others may choose to set their priorities differently.

Urbanski also likes the way Events2HVAC can be customized to alert controls contractors who are working on his systems to the fact that points are being automatically controlled. Events2HVAC puts a note into building automation system schedules to indicate that a point is being controlled by a BACnet write. During his Events2HVAC setup, Urbanski added "E2H" as a text addition to that note so that his contractors always know which points and pieces of HVAC equipment are being controlled by Events2HVAC.

"They [contractors] can immediately see that Events2HVAC has written to a BACnet variable and it's being run automatically by the EMS schedule," Urbanski said. "So that's a fantastic feature if you've got control people that get confused about what's going on."

TIMING

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