

Novus Edge

Setting up NE to signal R2 to activate HVAC (lights, A/C)

Overview: By correctly configuring NE software to communicate with an installation of R2 that controls HVAC devices, one may create a scenario in which people who badge in to a building or area are not only granted access, but also turn on HVAC devices (such as lights, or A/C in a particular area)

EXAMPLE SCENARIO: Multi-story building with separate lighting and A/C systems on each floor, all of which are controlled by R2. On the weekends, the lights and A/C are automatically turned off. Sometime, however, some industrious employees come in to the office and work during the weekend. We'd like to make sure that the lights and A/C are turned on the floor they work on while they're there. Here, we'll make sure that two workers, one who works on the 1st floor and one who works on the 2nd floor have lights and cool air while they're working one Saturday, while keeping the lights and A/C off in the rest of the building.

IN NOVUS EDGE SOFTWARE (Ver 7.0):

- Enable modbus. This creates “Environmental Group” category into which users may be placed as members. When these members swipe their badges, access will be granted to them *and* certain HVAC devices activated as defined in R2.
- Decide how many Environmental Groups you will want to create and which users should be members of each of these groups. Do not place users into more than one Env Group. In this scenario, we will create two Environmental Groups: one for the 1st floor and one for the 2nd floor. It is assumed we have placed our two weekend workers in their respective env groups based on which floor their office is on.
- In the NE workbench, you'll open the wire view for the endpoints under which exist the door(s) or elevator where people will swipe their badges to gain access and turn on HVAC devices. In this wire view find the door object that represents the actual door you want to associate with the activation of HVAC when someone swipes their badge.
- See Figure 1 below for the wiring diagram described here. In this scenario, we are wiring the system to send a BACnet message to R2 to activate an HVAC device when access is granted at a specified door.
 - To wire the logic on this screen, you'll need to drop the PostgreSQL DB query into Niagara, then drag and drop two of these objects onto the wire sheet from the Palette.
 - Edit the first PostgreSQL DB Query (PGDB) with the following values
 - DB Name=novus6
 - User Name=root (this is a default value. If you changed it from default, set as appropriate)

- Password=novus (this is a default value. If you changed it from default, set as appropriate)
 - Table Name=novuskey
 - Column Name=keyed
 - Column Value=<leave this blank>
 - Result Column=ownerID
 - Last Result Value=<leave this blank>
 - Now, create a link between Access Granted Key from your door object to Get Result on the PGDB object.
 - Edit the second PGDB with the following values
 - DB Name=novus6
 - User Name=root (this is a default value. If you changed it from default, set as appropriate)
 - Password=novus (this is a default value. If you changed it from default, set as appropriate)
 - Table Name=envgroupmember
 - Column Name=memberID
 - Column Value=<leave this blank>
 - Result Column=groupid
 - Last Result Value=<leave this blank>
 - From the first PGDB query, create a link between Result Value and Get Result on the second PGDB query.
 - From the Palette, drag a StringToStatusString object onto the wire sheet, and drag a StatusStringToStatus object onto the wire sheet.
 - Create a link between the second PGDB query and In on the StringToStatusString object.
 - Create a link between Out on the StringToStatusString object and In on the StatusToStatus object.
 - Drag two Equal objects onto the wire sheet from the Palette. Name these “Zone1” and “Zone2”
 - Create a link from Out on StatusToStatus to In A on the first Equal object. Repeat between Out on StatusToStatus and IN A on the second Equal object
 - Drag two NumericConst objects from the Palette to the wire sheet. Label each one to match the two Environmental Groups you created. In this case, we labeled them Group1ID (1st floor) and Group2ID (2nd floor).
 - Create a link from Out on 1st floor NumericConst object to In B on Zonel object.
 - Create a link from Out on 2nd floor NumericConst object to In B on your Zone2 object.
- You now must enable BACnet in order to communicate with R2.
 - See pages 43-45 in the Novus Edge Edge Manager Guide-Ver 7.0

Door 1		
EdgeDoor		
In Camera1	false	{ok}
In Camera2	false	{ok}
In Camera3	false	{ok}
In Camera4	false	{ok}
Last Key	wg26:0-123	
Granted Key	wg26:0-123	
Denied Key	wg26:0-456	
Unlock		
Door Startup		
Door Not Found		
Strike Error		
Door Open		
Door Close		
Door Held		
Door Forced		
Access Granted		
Access Granted Key		
Access Denied		
Access Denied Key		
Operator Unlock		
Request To Exit		
Scheduled Unlock		
Scheduled Lock		
Key Input		
Door Held Clear		
Door Forced Clear		
Door Tamper		
Door Tamper Clear		
Strike State Change		

PostgreSQL DB Que
PGDBQuery

D B Name	novus6
User Name	root
Password	novus
Table Name	novuskey
Column Name	keyID
Column Value	
Result Column	ownerID
Last Result Value	
Get Result	
Result Value	

PostgreSQL DB Que
PGDBQuery

D B Name	novus6
User Name	root
Password	novus
Table Name	envgroupmem
Column Name	memberID
Column Value	
Result Column	groupid
Last Result Value	
Get Result	
Result Value	

StringToStatus
StringToStatusStr

In	
Out	{ok}

StatusStringTo
StatusStringToSt:

Out	- {fault,null}
In	{ok}

NumericConst
NumericConst

Out	0.0 {ok}
-----	----------

NumericConst1
NumericConst

Out	0.0 {ok}
-----	----------

Zone1
Equal

Out	- {null}
In A	- {fault,null}
In B	0.0 {ok}

Zone2
Equal

Out	- {null}
In A	- {fault,null}
In B	0.0 {ok}

