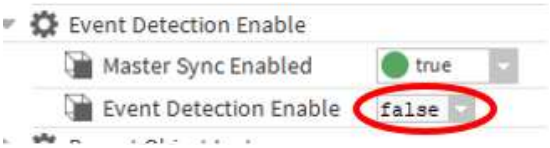
Getting the Green Circle Back – How to Acknowledge IRM Controller Alarms

The Spyder 7 VAV and Optimizer unitary controllers include a status LED on the face of the controller. When a BACnet object raises an alarm the status LED will blink yellow. After the condition has returned to normal the LED will continue to blink yellow until a BACnet acknowledgement is sent.

Mode	LED Status	Visual
Firmware download	Green blinks every 200 ms	
No application**	Red, Green, Yellow blinks every 1 sec	
Broken sensor Short circuit	Red Permanent ON	
AutoMac	Green blinks every 2 seconds	
No Valid Mac	Yellow Permanent ON	
Un Ack Alarm	Yellow blinks every 2 seconds	
Normal operation	Green LED Permanent ON	
Communication error	Red LED Blinks every 200 ms	
** While performing setpoint balancing using the VAV mobile application; LED pattern changes from static green to red, green, yellow cycles (which indicates the controller is empty).		

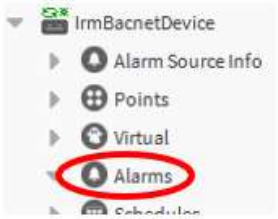
One way to avoid this is to <u>not</u> issue alarms or events on BACnet objects. Set the Event Detection Enabled property to False to deactivate alarm and event notification on an object.



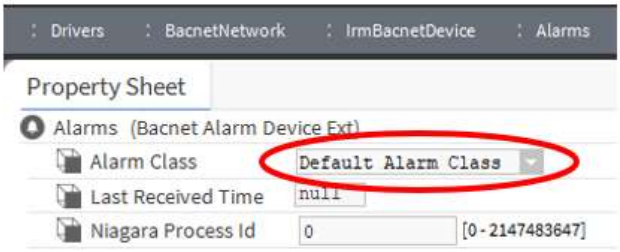
The other option is to configure Niagara for BACnet alarm routing. Alarms and events will be routed to the AlarmService and the LED will return to normal (green) operation when the alarms or events have been notified in the Niagara Alarm Console.

These are the configuration steps required for alarm routing:

1) Open the Property Sheet view of the Alarms object located beneath the IRM Bacnet Device.



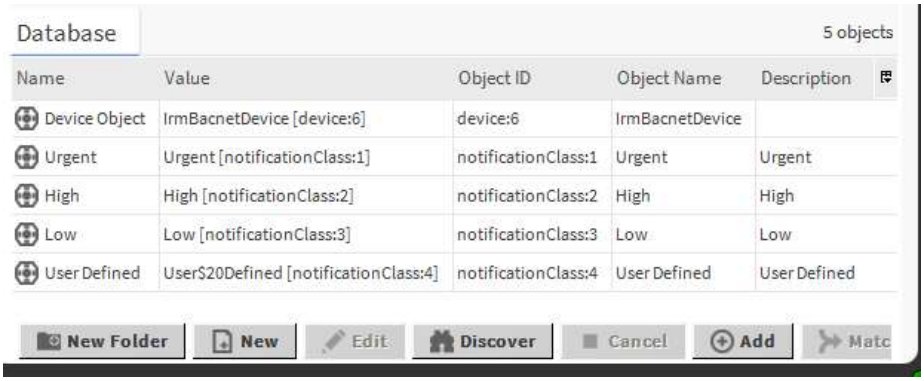
2) Controller alarms will be routed to the alarm class defined in the *Alarms* property sheet.



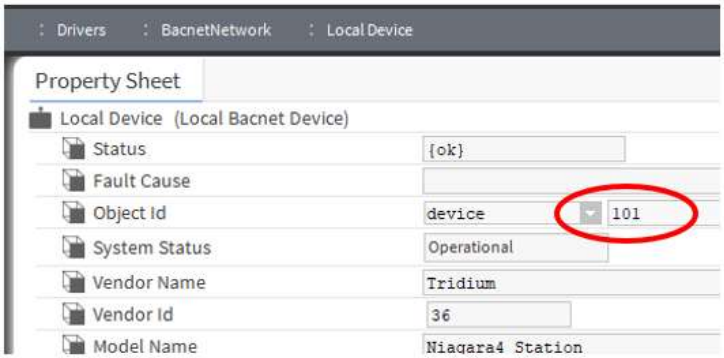
3) Right click the Config object located beneath the IRM Bacnet Device to open its Bacnet Config Manager view.

4) Click the *Discover* button.

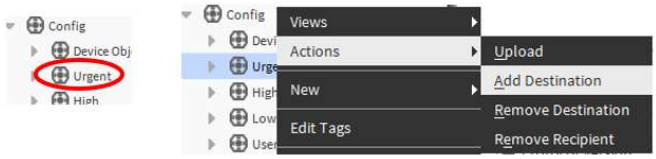
5) Locate the *Urgent*, *High*, *Low*, and *User Defined* notification class objects in the discovered list, then add them to the Database pane.



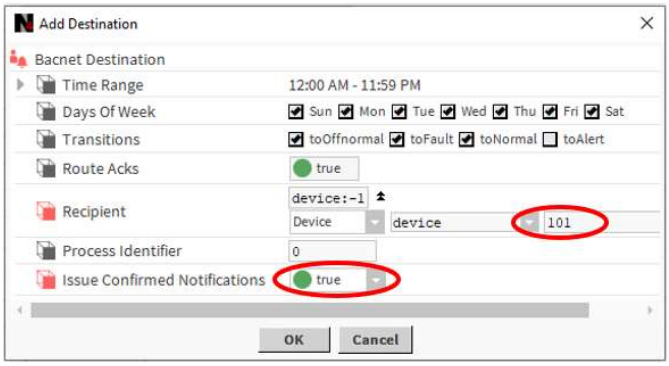
6) Determine the Object ID assigned to the LocalDevice in the BacnetNetwork.



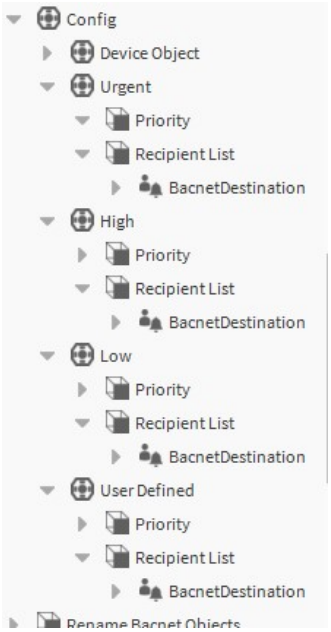
7) Right-click the *Urgent* object appearing in the Nav Tree, then select Actions-Add Destination.



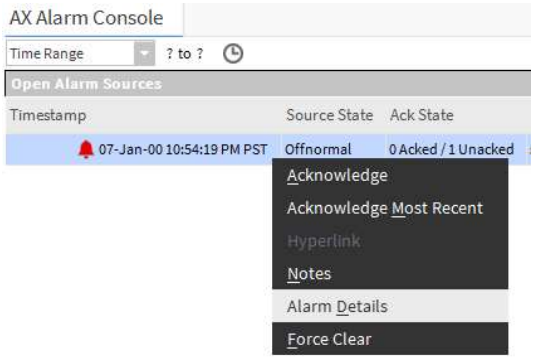
8) Configure the Destination properties:
   a. *Recipient* = same value as the *LocalDevice* Object ID
   b. *Issued Confirmed Notifications* = True



9) Repeat steps 5 through 8 for *High*, *Low*, and *User Defined* in the Nav Tree.
10) Verify that a *BacnetDestination* was created in the *RecipientList* of *Urgent*, *High*, *Low*, and *User Defined*.



11) When a BACnet object's alarm is routed to the alarm service the Source will be the name of the device. To locate the BACnet object within the device that raise the alarm, right-click the alarm record in the alarm console and select Alarm Details.



12) The Object ID displayed in the Alarm Record dialog will indicate the originating application object.