HOW-TO GUIDE

HOW TO USE THIRD-PARTY BLOCKS IN THE PLACE OF GLOBALS

"3rd party blocks" can be used instead of Globals in **Cylon BACnet** controllers, but some customers experienced difficulties with network traffic when replacing Globals directly. This document describes how to use 3rd party blocks in the most efficient way.

INTRODUCTION

What are "3rd Party blocks"?

The 3rd Party blocks provide a mechanism for reading and writing values from and to a separate BACnet device directly in a Strategy. The same mechanism can also be used to access BACnet objects within the local Strategy if required.

There are two separate types of 3rd Party block – one that is used to move data to and from analog Strategy block connections and one that is used to move data to and from binary Strategy block connections.

Both types of 3rd Party block can access the same BACnet data, which is automatically converted to the appropriate data type as the data is pulled from or pushed to the network.

What is the difference between 3rd Party blocks and Globals?

Globals read and write point values on a schedule (Comms Controller service period) whether the point values change or not. 3rd Party blocks can read at regular intervals in the same way, or they can write only when the point value changes.

Globals are implemented in strategies in 2 parts – a Source global block and a Destination global block. A single 3rd Party block can read from or to a point in a strategy on another controller, to a point within the current strategy, or to any BACnet property on any other BACnet device.

Note: An important feature of the change-of-value 3rd-party block approach, compared with Globals is that only one strategy needs to be downloaded in order to implement this approach, or to implement any change to it.

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Using 3rd Party blocks efficiently

Unlike Globals, 3rd Party blocks can send data whenever a point value changes. This means that network traffic can be reduced by placing the 3rd Party block in the source strategy rather than the destination strategy.

For example, a binary value representing occupancy can be sent from the strategy that contains the schedule to a strategy where the value is required, when the value changes – which is likely to be no more than twice per day.

As another example, if an analog value representing outside air temperature is being sent between strategies, the 3rd Party block can be set to send data only when the value changes more than a specified amount – which, if the Change-Of-Value (COV) level is properly set, could be significantly less often than a specified polling schedule.

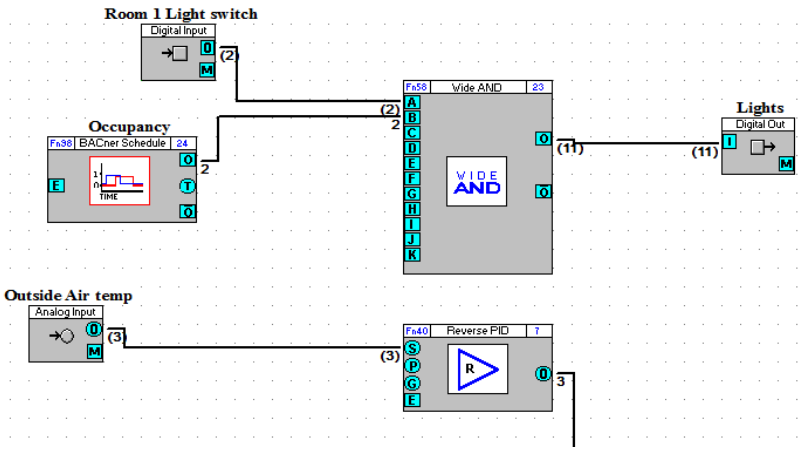
The latter example is illustrated on the following pages.

Note: While polling on larger networks is never recommended, on small or very lightly loaded networks polling can be used without a significant reduction in performance, and with a large interval could potentially reduce network traffic.

SCHEDULED POLLING

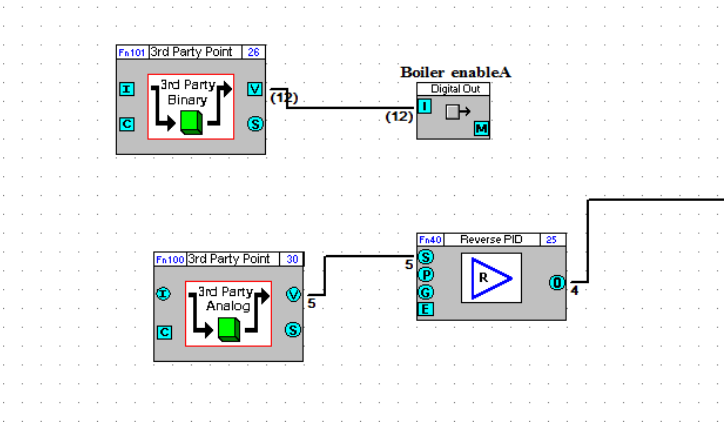
This scenario causes continuous network traffic **and should be avoided** :

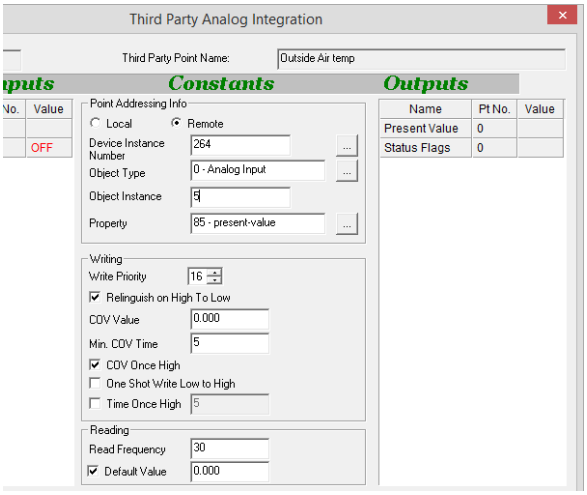
Source Source Strategy

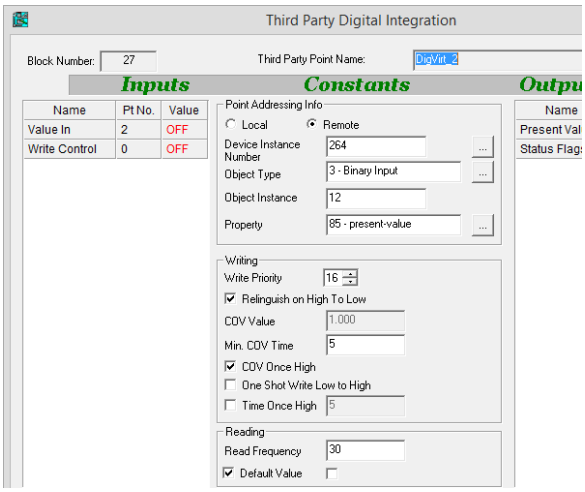


Destination Strategy

(3rd Party blocks polling remote data at regular intervals)

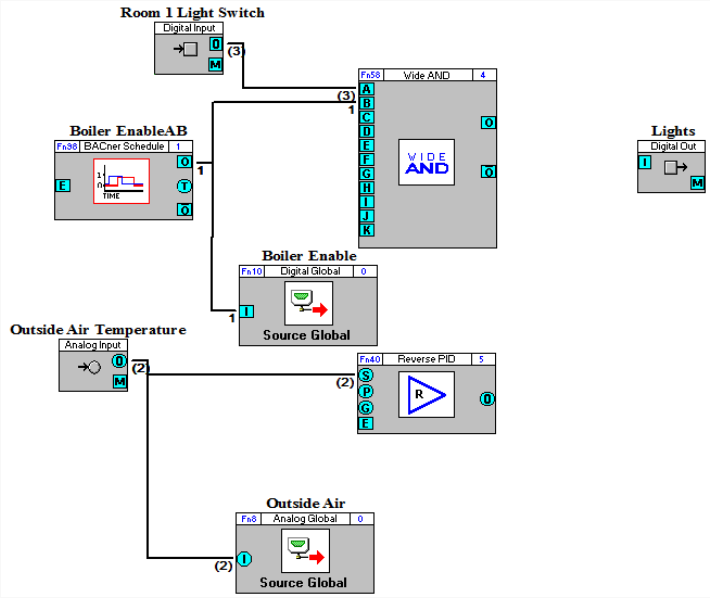




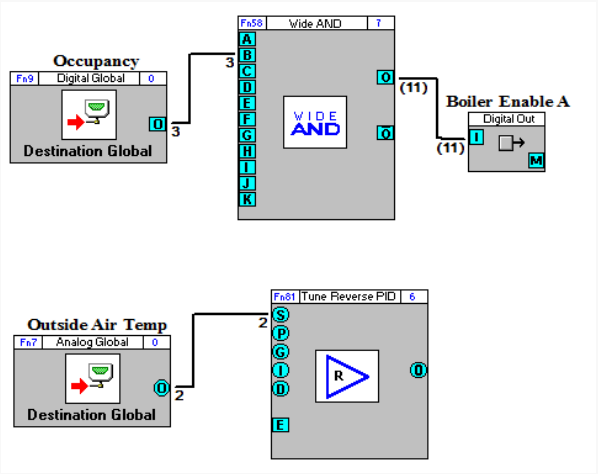


Note: The scheduled polling scenario is equivalent to the traditional Global method for transferring data, shown below:

Source Source Strategy



Destination Strategy

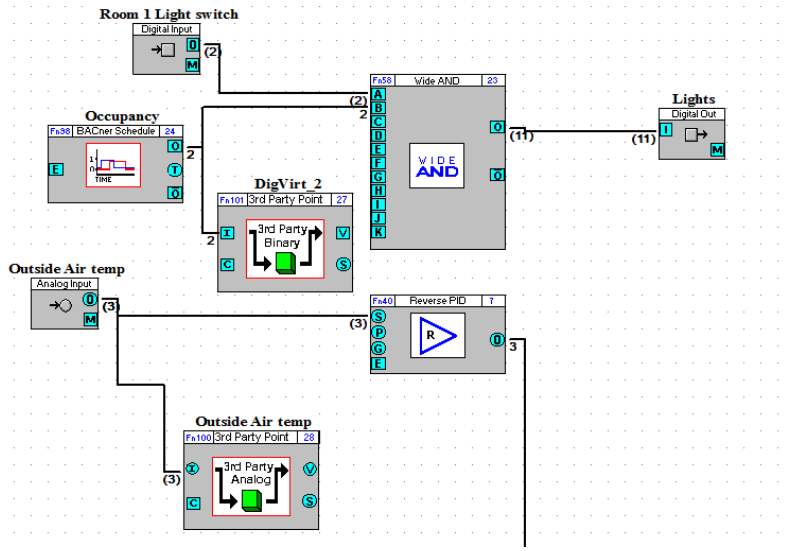


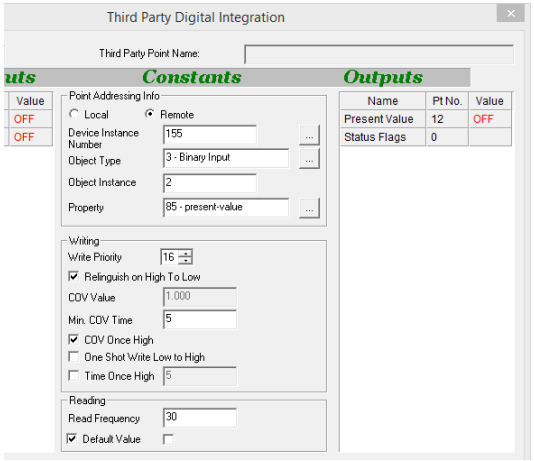
TRANSMITTING DATA FROM SOURCE

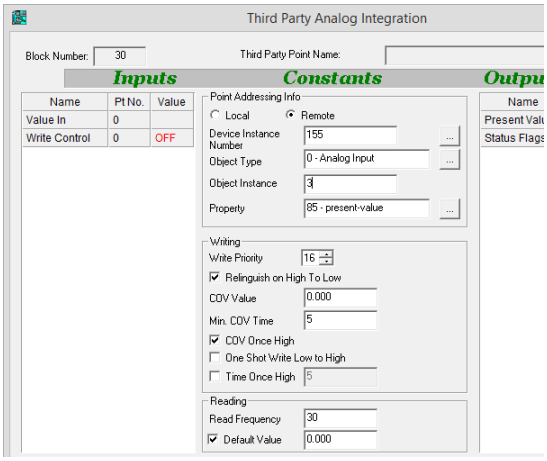
To avoid scheduled polling, send values when they change, so that network traffic is caused only when the digital point changes state, or the analog value changes by a defined amount:

Source Source Strategy

(3rd Party blocks transmitting on Change Of Value (COV))







Destination Strategy