

**INTERPRETATION IC 135-2016-28 OF  
ANSI/ASHRAE STANDARD 135-2016 BACnet® -  
A Data Communication Protocol for Building  
Automation and Control Networks**

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**Request from:** Brandon DuPrey Johnson Controls, 507 E. Michigan St, Milwaukee, WI 53219.

**Reference:** This request for interpretation refers to the requirements presented in ANSI/ASHRAE Standard 135-2016, Clause 12.56.13 Changes\_Pending.

**Background:** This is related to the changes pending property of Network port object type. The standard does not explicitly states that after some value is written for the writable properties of network port object due to which changes pending becomes true these should return the pending changes value instead of activated value. The current understanding is that, if we do a read on the property which has not been activated yet, we should get the activated value, not the pending value, unless exclusively indicated (such as for BBMD broadcast distribution table) in the standard. There is only one property “BBMD broadcast distribution table” for which explicitly it has been mentioned in the standard that “If this property has pending changes, reading this property shall return the last value written to the property, and not the current value of the BDT” which looks correct. But we do not find anything like this for any other property which leads to misunderstanding in the mind of the tester.

The standard is not clear on what should be expected on the read request for all the properties which have pending changes on it. Reading the pending value does not make any sense as there is no indication that it has not been activated yet so someone may just assume it is activated.

**12.56.13Changes\_Pending**

This property, of type BOOLEAN, indicates whether the configuration settings in the Network Port object map to the current configuration settings. A value of FALSE indicates that the configuration settings reflect the current port configuration information. A value of TRUE indicates the configuration settings have been modified but have not been activated on the port.

When a value is written to a property that requires activation, the value of the Changes\_Pending property shall automatically be set to TRUE, indicating that the current property values are not the values actively in use.

It is necessary for the client to initiate a ReinitializeDevice service request with a 'Reinitialized State of Device' of ACTIVATE\_CHANGES or WARMSTART in order to activate the currently visible configuration settings. This interaction is necessary to support atomic updating of multiple properties when modifying a network port configuration.

It is a local matter as to whether or not resetting the device by means other than a ReinitializeDevice service with a 'Reinitialized State of Device' of ACTIVATE\_CHANGES or WARMSTART discards pending changes, activates pending changes, or leaves the changes pending.

It is a local matter whether, or not, a device refuses requests to write to a Network Port object if:

Any Network Port object has pending changes,

The write request is from a device other than that which wrote the existing pending changes, and

The write would result in pending changes in any Network Port object.

When refusing such a request, the device shall return a Result (-) with an 'Error Class' of DEVICE and an 'Error Code' of CONFIGURATION\_IN\_PROGRESS.

**Interpretation:** Any device which contains the network port object with writable properties in it and changes pending property becomes true upon writing these properties, if we do a read on the property which has not been activated yet, we should get the activated value, not the pending value, unless exclusively indicated (such as for BBMD broadcast distribution table) in the standard.

**Question:** Is this Interpretation correct?

**Answer:** No

**Comments:** Properties of the Network Port object shall return the most recently written value.