

**INTERPRETATION IC 135-2024-14 OF
ANSI/ASHRAE STANDARD 135-2024 BACnet® -
A Data Communication Protocol for Building
Automation and Control Networks**

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Reference: 12.11.41

Background:

12.11.41 Time_Of_Device_Restart This property, of type BACnetTimeStamp, is the time at which the device was last restarted.

See Clause 19.3 for a description of the restart procedure.

Footnote for this property: 10 These properties are required if the device supports the restart procedure as described in Clause 19.3.

19.3 Device Restart Procedure When a BACnet device restarts, there are a number of different configuration items that can be lost. For example, a device need not remember which devices have subscribed to receive change-of-value notifications or to which values they have subscribed. For this reason, other devices may be interested in determining when a device has restarted. This section outlines how a device may interoperably indicate that it has restarted. When a device is powered on, when it restarts due to a ReinitializeDevice service (ACTIVATE_CHANGES, COLDSTART or WARMSTART), or when it restarts for some other reason, the device shall transmit an UnconfirmedCOVNotification request.

The 'Subscriber Process Identifier' parameter shall be 0, the 'Monitored Object Identifier' parameter shall reference the Device object, the 'Time Remaining' parameter shall be 0, and the 'List of Values' parameter shall contain three values, the System_Status, the Time_Of_Device_Restart, and the Last_Restart_Reason properties of the Device object. The device shall transmit this message after the complete power-up or restart sequence has been completed so that the system-status value is accurate. The device shall send the restart notification to each recipient in the Restart_Notification_Recipients property of the Device object. MS/TP subordinate nodes are not able to support this procedure, although they may support the Time_Of_Device_Restart and Last_Restart_Reason properties. K.5.20 BIBB - Device Management-Restart-B (DM-R-B) The B device informs the A device(s) each time it restarts. BACnet Service Initiate Execute UnconfirmedCOVNotification x Devices claiming conformance to DM-R-B shall support the Last_Restart_Reason, Restart_Notification_Recipients, and Time_Of_Device_Restart properties of the Device object.

Problem: Clause 19.3 describes a procedure for sending a device restart notification and the contents that shall be included in the notification. This includes the value of the Device object's Time_Of_Device_Restart property. Clause 12.11.41 describes this property and mentions that it represents "the time at which the device was last restarted". However, Clause 12.11.41 does not indicate what value shall be recorded in this property if the device has never restarted or if the device is not capable of keeping track of the current time. For example, devices may support only a software clock and may not be able to maintain an accurate date and time

through a power cycle. The standard allows for these devices to support the Time_Of_Device_Restart property, as well as the Device Restart Procedure outlined in Clause 19.3. The BACnet standard should state hardware requirements in Clause 19.3 if Time_Of_Device_Restart property timestamp data MUST be accurate. Clause 19.3 does mention accuracy of the system-status parameter but not the timestamp parameter. The accuracy of this value may be dependent on receiving a BACnet Time Synchronization message to get an accurate time.

Interpretation 1: The Time_Of_Device_Restart property in the device object must be a specified date and time, however, the value is a local matter if time is unknown.

Question: Is this Interpretation correct?

Answer: YES

Comment: Clause 12.1.7 makes this requirement for a specified date time