BACnet Protocol Implementation Conformance Statement

Date: 23.02.2023
Vendor Name: NETxAutomation Software GmbH
Product Name: NETx BMS Platform
Product Model Number: NETx BMS Platform
Application Software Version: 4.3.1000 Firmware Revision: 4.0.28 BACnet Protocol Revision: 22

Product Description:
The aim of the NETx BMS Platform is to solve the problem that arises when heterogeneous building automation systems are used. To achieve this, the NETx BMS Platform collects data and information from the field level of the building automation system using different fieldbus technologies. In NETx BMS Platform this data can originate from KNX, Modbus, or BACnet networks. In addition, connections to other systems like Fidelio/Opera, Protel, JSON or to foreign systems that already provide an OPC connection are possible.
Once the data is available within the BMS Platform, management clients can access the data through the provided management interfaces. The NETx BMS Platform provides integrated Visualization clients, to Web-based BMS Visualization clients as well as to any other third-party client.

BACnet Standardized Device Profiles Supported (Annex L):

- ☐ BACnet Cross-Domain Advanced Operator Workstation (B-XAWS)
- ☐ BACnet Advanced Operator Workstation (B-AWS)
- ☐ BACnet Operator Workstation (B-OWS)
- ☐ BACnet Operator Display (B-OD)
- ☐ BACnet Advanced Lighting Workstations (B-ALWS)
- ☐ BACnet Lighting Operator Display (B-LOD)
- ☐ BACnet Advanced Life Safety Workstation (B-ALSWS)
- ☐ BACnet Life Safety Workstation (B-LSWS)
- ☐ BACnet Life Safety Annunciator Panel (B-LSAP)
- ☐ BACnet Advanced Access Control Workstation (B-AACWS)
- ☐ BACnet Access Control Workstation (B-ACWS)
- ☐ BACnet Access Control Security Display (B-ACSD)
- ☐ BACnet Advanced Elevator Workstation (B-AEWS)
- ☐ BACnet Elevator Workstation (B-EWS)
- ☐ BACnet Elevator Display (B-ED)
- ☐ BACnet Advanced Lighting Control Station (B-ALCS)
- ☐ BACnet Lighting Control Station (B-LCS)
- ☐ BACnet Building Controller (B-BC)
- ☐ BACnet Advanced Application Controller (B-AAC)
- ☒ BACnet Application Specific Controller (B-ASC)
- ☐ BACnet Smart Actuator (B-SA)
- ☐ BACnet Smart Sensor (B-SS)
- ☐ BACnet Lighting Supervisor (B-LS)
- ☐ BACnet Lighting Device (B-LD)
- ☐ BACnet Advanced Life Safety Controller (B-ALSC)
- ☐ BACnet Life Safety Controller (B-LSC)
- ☐ BACnet Advanced Access Control Controller (B-AACC)
- ☐ BACnet Access Control Controller (B-ACC)
- ☐ BACnet Advanced Elevator Controller (B-AEC)
- ☐ BACnet Elevator Controller (B-EC)

☐ BACnet Elevator Monitor (B-EM)
☐ BACnet Router (B-RTR)
☒ BACnet Gateway (B-GW)
☐ BACnet Broadcast Management Device (B-BBMD)
☐ BACnet Access Control Door Controller (B-ACDC)
☐ BACnet Access Control Credential Reader (B-ACCR)
☐ BACnet Secure Connect Hub (B-SCHUB)

☐ BACnet General (B-GENERAL)

BACnet Interoperability Building Blocks Supported (Annex K):
Data Sharing-ReadProperty-A (DS-RP-A)
Data Sharing-ReadProperty-B (DS-RP-B)
Data Sharing-ReadPropertyMultiple-A (DS-RPM-A)
Data Sharing-ReadPropertyMultiple-B (DS-RPM-B)
Data Sharing-WriteProperty-A (DS-WP-A)
Data Sharing-WriteProperty-B (DS-WP-B)
Data Sharing-WritePropertyMultiple-A (DS-WPM-A)
Data Sharing-WritePropertyMultiple-B (DS-WPM-B)
Data Sharing-COV-A (DS-COV-A)
Data Sharing-COV-B (DS-COV-B)
Device Management-Dynamic Device Binding-A (DM-DDB-A)
Device Management-Dynamic Device Binding-B (DM-DDB-B)
Device Management-Dynamic Object Binding-A (DM-DOB-A)
Device Management-Dynamic Object Binding-B (DM-DOB-B)
Device Management - Device Communication Control – B (DM-DCC-B)
Device Management - Reinitialize Device – B (DM-RD-B)
Gateway - Embedded Objects – B (GW-EO-B)

Segmentation Capability:

☐Able to transmit segmented messages Window Size _____
☐Able to receive segmented messages Window Size _____

Standard Object Types Supported:

An object type is supported if it may be present in the device. For each standard Object Type supported provide the following data:

1) Whether objects of this type are dynamically creatable using the CreateObject service
2) Whether objects of this type are dynamically deletable using the DeleteObject service
3) List of the optional properties supported
4) List of all properties that are writable where not otherwise required by this standard
5) List of all properties that are conditionally writable where not otherwise required by this standard
6) List of proprietary properties and for each its property identifier, datatype, and meaning
7) List of any property range restrictions

Accumulator
List of optional properties supported: Description, Device_Type, Reliability, Prescale, Value_Change_Time, Value_Before_Change, Value_Set, Logging_Record, Logging_Object, Pulse_Rate, Profile_Name
List of optional properties supported: Description

Analog Input
List of optional properties supported: Description, Device_Type, Reliability, COV_Increment
List of optional writable properties: Description, Out_Of_Service, COV_Increment, Units

Analog Output

List of optional properties supported: Description, Device_Type, Reliability, COV_Increment
List of optional writable properties: Description, Out_Of_Service, COV_Increment, Units

Analog Value
List of optional properties supported: Description, Reliability, Priority_Array, Relinquish_Default, COV_Increment, Current_Command_Priority
List of optional writable properties: Description, Out_Of_Service, COV_Increment, Units

Binary Input
List of optional properties supported: Description, Device_Type, Reliability, Inactive_Text, Active_Text
List of optional writable properties: Description, Out_Of_Service, Inactive_Text, Active_Text

Binary Output
List of optional properties supported: Description, Device_Type, Reliability, Inactive_Text, Active_Text
List of optional writable properties: Description, Out_Of_Service, Inactive_Text, Active_Text

Binary Value
List of optional properties supported: Description, Reliability, Priority_Array, Relinquish_Default, Inactive_Text, Active_Text, Current_Command_Priority
List of optional writable properties: Description, Out_Of_Service, Inactive_Text, Active_Text

Multistate Input
List of optional properties supported: Description, Device_Type, Reliability, State_Text
List of optional writable properties: Description, Out_Of_Service

Multistate Output
List of optional properties supported: Description, Device_Type, Reliability, State_Text
List of optional writable properties: Description, Out_Of_Service

Multistate Value
List of optional properties supported: Description, Device_Type, Reliability, State_Text, Priority_Array, Relinquish_Default, Current_Command_Priority
List of optional writable properties: Description, Out_Of_Service

Pulse Converter
List of optional properties supported: Description, Input_Reference, Reliability, COV_Increment, COV_Period, Profile_Name
List of optional writable properties: Description

Device
List of optional properties supported: Location, Description, Local_Time, Local_Date, UTC_Offset
List of optional writable properties: Description

Life Safety Zone
List of optional properties supported: Description, Device_Type, Profile_Name
List of optional writable properties: Description

Life Safety Point
List of optional properties supported: Description, Device_Type, Profile_Name
List of optional writable properties: Description

Schedule
List of optional properties supported: Description, Profile_Name
List of optional writable properties: Description

CharacterString Value
List of optional properties supported: Description, Event_State, Reliability, Out_Of_Service, Priority_Array, Relinquish_Default, Current_Command_Priority
List of optional writable properties: Description, Present_Value, Out_Of_Service

DateTime Value
List of optional properties supported: Description, Event_State, Reliability, Out_Of_Service, Priority_Array, Relinquish_Default, Is_UTC, Current_Command_Priority
List of optional writable properties: Description, Present_Value, Out_Of_Service

Date Value
List of optional properties supported: Description, Event_State, Reliability, Out_Of_Service, Priority_Array, Relinquish_Default, Current_Command_Priority
List of optional writable properties: Description, Present_Value, Out_Of_Service

Time Value
List of optional properties supported: Description, Event_State, Reliability, Out_Of_Service, Priority_Array, Relinquish_Default, Current_Command_Priority
List of optional writable properties: Description, Present_Value, Out_Of_Service

Large Analog Value
List of optional properties supported: Description, Event_State, Reliability, Out_Of_Service, Priority_Array, Relinquish_Default, COV_Increment, Current_Command_Priority
List of optional writable properties: Description, Present_Value, Out_Of_Service, COV_Increment

Integer Value
List of optional properties supported: Description, Event_State, Reliability, Out_Of_Service, Priority_Array, Relinquish_Default, COV_Increment, Current_Command_Priority
List of optional writable properties: Description, Present_Value, Out_Of_Service, COV_Increment

Positive Integer Value
List of optional properties supported: Description, Event_State, Reliability, Out_Of_Service, Priority_Array, Relinquish_Default, COV_Increment, Current_Command_Priority
List of optional writable properties: Description, Present_Value, Out_Of_Service, COV_Increment

Network Port
List of optional properties supported: Description, MAC_Address, APDU_Length, Link_Speed, Network_Interface_Name, BACnet_IP_Mode, IP_Address, BACnet_IP_UDP_Port, IP_Subnet_Mask, IP_Default_Gaetway, IP_DNS_Server, IP_DHCP_Enable, IP_DHCP_Server, FD_BBMD_Address, FD_Subscription_Lifetime

List of optional writable properties: Description Out_Of_Service, BACnet_IP_Mode, FD_BBMD_Address, FD_Subscription_Lifetime

BACnet Data Link Layer Options:

☐ ARCNET (ATA 878.1), 2.5 Mb. (Clause 8)
☐ ARCNET (ATA 878.1), EIA-485 (Clause 8), baud rate(s) _____
☒ BACnet IP, (Annex J)
☐ BACnet IP, (Annex J), BACnet Broadcast Management Device (BBMD)
☐ BACnet IP, (Annex J), Network Address Translation (NAT Traversal)
☐ BACnet IPv6, (Annex U)
☐ BACnet IPv6, (Annex U), BACnet Broadcast Management Device (BBMD)
☐ BACnet/ZigBee (Annex O) _____
☐ Ethernet, ISO 8802-3 (Clause 7)
☐ LonTalk, ISO/IEC 14908.1 (Clause 11), medium: _____

☐ MS/TP master (Clause 9)
- ☐ Master ☐ Slave
- ☐ Non-isolated transceiver ☐ Isolated transceiver
- ☐ Local 47K ohms bias resistors ☐ None ☐ Other: _____
- Transceiver unit loading: ☐ 1 ☐ ½ ☐ ¼ ☐ ⅛
- Data rates: ☐ 9600 ☐ 19200 ☐ 38400 ☐ 57600 ☐ 76800 ☐ 115200

☐ Point-To-Point, EIA 232 (Clause 10), baud rate(s):_____
☐ Point-To-Point, modem, (Clause 10), baud rate(s): _____
☐ BACnet Secure Connect (Annex AB)
- ☐ BACnet Secure Connect Node
  If direct connections are supported:
  Maximum number of simultaneous direct connections initiated: _____
  Maximum number of simultaneous direct connections accepted: _____
- ☐ BACnet Secure Connect Hub Function
  Maximum number of simultaneous hub connections accepted: _____
- ☐ HTTPS Proxy Support
  List the types of HTTPS proxies supported: _____
- ☐ Additional cipher suites supported beyond those required for TLS V1.3
  The additional cipher suites supported using the cipher suite names as of the TLS Cipher Suite Registry at IANA (See RFC 8446):

  _____
  _____
- ☐ Additional Transport Layer Security versions other than V1.3 supported
  The TLS versions other than V1.3 that are supported, including the supported cipher suites for the version beyond those required, using the cipher suite names as defined by the TLS version supported:

  _____
  _____
- ☐ Generates private keys internally, and provides matching certificate signing requests.
- ☐ DNS host name resolution supported (RFC 1123)
- ☐ mDNS host name resolution supported (RFC 6762)

☐ Other:

Device Address Binding:

Is static device binding supported? (This is currently necessary for two-way communication with MS/TP slaves and certain other devices.) ☒ Yes ☐ No

Networking Options:

☐ Router, Clause 6 - List all routing configurations, e.g., ARCNET-Ethernet, Ethernet-MS/TP, etc.
☐ Annex H, BACnet Tunneling Router over IP

Character Sets Supported:

Indicating support for multiple character sets does not imply that they can all be supported simultaneously.

☒ ISO 10646 (UTF-8)	☐ IBM™/Microsoft™ DBCS	☐ ISO 8859-1
☐ ISO 10646 (UCS-2)	☐ ISO 10646 (UCS-4)	☐ JIS X 0208

Gateway Options:

If this product is a communication gateway, describe the types of non-BACnet equipment/network(s) that the gateway supports:
NETx BMS Platform provides following interfaces to non-BACnet systems:

- KNX
- Modbus
- SNMP
- OPC DA
- OPC UA
- MQTT
- Fidelio/Opera
- Protel
- Infor
- charPMS
- VingCard
- Kaba
- Salto
- REST Web Services

A full list of all available interfaces can be found at https://www.netxautomation.com

If this product is a communication gateway which presents a network of virtual BACnet devices, a separate PICS shall be provided that describes the functionality of the virtual BACnet devices. That PICS shall describe a superset of the functionality of all types of virtual BACnet devices that can be presented by the gateway.