

BACnet PICS

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1. BACnet Advanced Operator Workstation

Date:	December 19th, 2018
Vendor Name:	Johnson Controls, Inc.
Product Name:	C-CURE BMS
Product Model Number:	C-CURE BMS 11.2
Application Software Version:	1.0
Firmware Revision:	11.2
BACnet Protocol Revision:	12 (135-2010)

1.1. Product Description

C-CURE BMS is a SCADA Software that can act as a **BACnet Advanced Operator Workstation (B-AWS)**. C-CURE BMS is able to communicate with BACnet devices via BACnet/IP.

1.2. BACnet Standardized Device Profile

- BACnet Advanced Operator Workstation (B-AWS)
- BACnet Operator Workstation (B-OWS)
- BACnet Operator Display (B-OD)
- BACnet Building Controller (B-BC)
- BACnet Advanced Application Controller (B-AAC)
- BACnet Application Specific Controller (B-ASC)
- BACnet Smart Sensor (B-SS)
- BACnet Smart Actuator (B-SA)

1.3. BACnet Interoperability Building Blocks Supported

<p>Data Sharing</p>	<p>ReadProperty-A ReadProperty-B ReadPropertyMultiple-A WriteProperty-A WriteProperty-B WritePropertyMultiple-A View-A Advanced View-A Modify-A Advanced Modify-A COV-A COVP-A</p>	<p>DS-RP-A DS-RP-B DS-RPM-A DS-WP-A DS-WP-B DS-WPM-A DS-V-A DS-AV-A DS-M-A DS-AM-A DS-COV-A DS-COVP-A</p>
<p>Device & Network Management</p>	<p>Dynamic Device Binding-A Dynamic Device Binding-B Dynamic Object Binding-B Automatic Network Mapping-A Automatic Device Mapping-A DeviceCommunicationControl-A Object Creation and Deletion-A ReinitializeDevice-A Backup and Restore-A List Manipulation-A List Manipulation-B Time Synchronization-A UTC Time Synchronization-A Manual Time Synchronization-A Automatic Time Synchronization-A</p>	<p>DM-DDB-A DM-DDB-B DM-DOB-B DM-ANM-A DM-ADM-A DM-DCC-A DM-OCD-A DM-RD-A DM-BR-A DM-LM-A DM-LM-B DM-TS-A DM-UTC-A DM-MTS-A DM-ATS-A</p>
<p>Event & Alarm</p>	<p>Notification-A ACK-A Alarm Summary-A Enrollment Summary-A Information-A Alarm Summary View-A View and Modify-A Advanced View and Modify-A View Notifications-A Advanced View Notifications-A Event Log View-A Event Log View and Modify-A</p>	<p>AE-N-A AE-ACK-A AE-ASUM-A¹ AE-ESUM-A¹ AE-INFO-A¹ AE-AS-A AE-VM-A AE-AVM-A AE-VN-A AE-AVN-A AE-ELV-A AE-ELVM-A</p>
<p>Scheduling</p>	<p>Scheduling-A View and Modify-A Advanced View and Modify-A</p>	<p>SCHED-A² SCHED-VM-A SCHED-AVM-A</p>

Trending	Viewing-A	T-V-A
	Viewing and Modifying Trends-A	T-VMT-A ³
	Viewing and Modifying Multiple Values-A	T-VMMV-A ³
	Advanced View and Modify-A	T-AVM-A
	Automated Trend Retrieval-A	T-ATR-A
	Automated Multiple Value Retrieval-A	T-AMVR-A
	Archival-A	T-A-A

¹ Deprecated, contained in Alarm Summary View-A (AE-AS-A)

² Deprecated, contained in View and Modify-A (SCHED-VM-A)

³ Deprecated

1.4. Segmentation Capability

- Segmented requests supported Window Size: Configurable
- Segmented responses supported Window Size: Configurable

1.5. Standard Object Types Supported

- C-CURE BMS *as* BACnet server

Object Type	Object Type Supported	Dynamically Creatable and Deletable	Optional Properties Supported	Proprietary Properties
Device	Yes	No	Location Description Max_Segments_Accepted Local_Time Local_Date UTC_Offset Daylight_Savings_Status APDU_Segment_Timeout Time_Synchronization_Recipients UTC_Time_Synchronization_Recipients Time_Synchronization_Interval Align_Intervals Interval_Offset	-

- C-CURE BMS as BACnet client

The following description defines all objects that C-CURE BMS is able to read as a BACnet client. That doesn't mean these objects may be present in C-CURE BMS.

Object Type	Object Type Supported	Dynamically Creatable and Deletable	Optional Properties Supported	Proprietary Properties
Access-credential	Yes	Yes	All	Yes ¹
Access-door	Yes	Yes	All	Yes ¹
Access-point	Yes	Yes	All	Yes ¹
Access-rights	Yes	Yes	All	Yes ¹
Access-user	Yes	Yes	All	Yes ¹
Access-zone	Yes	Yes	All	Yes ¹
Accumulator	Yes	Yes	All	Yes ¹
Analog-input	Yes	Yes	All	Yes ¹
Analog-output	Yes	Yes	All	Yes ¹
Analog-value	Yes	Yes	All	Yes ¹
Averaging	Yes	Yes	All	Yes ¹
Binary-input	Yes	Yes	All	Yes ¹
Binary-output	Yes	Yes	All	Yes ¹
Binary-value	Yes	Yes	All	Yes ¹
Bitstring-value	Yes	Yes	All	Yes ¹
Calendar	Yes	Yes	All	Yes ¹
Characterstring-value	Yes	Yes	All	Yes ¹
Command	Yes	Yes	All	Yes ¹
Credential-data-input	Yes	Yes	All	Yes ¹
Date-pattern-value	Yes	Yes	All	Yes ¹
Date-value	Yes	Yes	All	Yes ¹
Datetime-pattern-value	Yes	Yes	All	Yes ¹
Datetime-value	Yes	Yes	All	Yes ¹

Object Type	Object Type Supported	Dynamically Creatable and Deletable	Optional Properties Supported	Proprietary Properties
Device	Yes	No	All	Yes ¹
Event-enrollment	Yes	Yes	All	Yes ¹
Event-log	Yes	Yes	All	Yes ¹
File	Yes	Yes	All	Yes ¹
Global-group	Yes	Yes	All	Yes ¹
Group	Yes	Yes	All	Yes ¹
Integer-value	Yes	Yes	All	Yes ¹
Large-analog-value	Yes	Yes	All	Yes ¹
Life-safety-point	Yes	Yes	All	Yes ¹
Life-safety-zone	Yes	Yes	All	Yes ¹
Load-control	Yes	Yes	All	Yes ¹
Loop	Yes	Yes	All	Yes ¹
Multi-state-input	Yes	Yes	All	Yes ¹
Multi-state-output	Yes	Yes	All	Yes ¹
Multi-state-value	Yes	Yes	All	Yes ¹
Network-security	Yes	Yes	All	Yes ¹
Notification-class	Yes	Yes	All	Yes ¹
Octetstring-value	Yes	Yes	All	Yes ¹
Positive-integer-value	Yes	Yes	All	Yes ¹
Program	Yes	Yes	All	Yes ¹
Pulse-converter	Yes	Yes	All	Yes ¹
Schedule	Yes	Yes	All	Yes ¹
Structured-view	Yes	Yes	All	Yes ¹
Trend-log	Yes	Yes	All	Yes ¹
Trend-log-Multiple	Yes	Yes	All	Yes ¹
Time-pattern-value	Yes	Yes	All	Yes ¹

Object Type	Object Type Supported	Dynamically Creatable and Deletable	Optional Properties Supported	Proprietary Properties
Time-value	Yes	Yes	All	Yes ¹

¹ Proprietary properties are supported if based on one of the primitive datatypes.

1.6. Data Link layer Options

- BACnet IP, (Annex J)
- BACnet IP, (Annex J), Foreign Device
- ISO 8802-3, Ethernet (Clause 7)
- ANSI/ATA 878.1, 2.5 Mb. ARCNET (Clause 8)
- ANSI/ATA 878.1, RS-485 ARCNET (Clause 8), baud rate(s) _____
- MS/TP master (Clause 9), baud rate(s): _____
- MS/TP slave (Clause 9), baud rate(s): _____
- Point-To-Point, EIA 232 (Clause 10), baud rate(s): _____
- Point-To-Point, modem, (Clause 10), baud rate(s): _____
- LonTalk, (Clause 11), medium: _____
- BACnet/Zigbee (Annex O): _____
- Other: _____

1.7. 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

1.8. Networking Options

- Router, Clause 6 - List all routing configurations, e.g., ARCNET-Ethernet, Ethernet-MS/TP, etc.
- Annex H, BACnet Tunneling Router over IP
- BACnet/IP Broadcast Management Device (BBMD)
 - Does the BBMD support registrations by Foreign Devices? Yes No
 - Does the BBMD support network address translation? Yes No

1.9. Character Sets Supported

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

- ANSI X3.4
- IBM™/Microsoft™ DBCS
- ISO 8859-1
- ISO 10646 (UCS-2)
- ISO 10646 (UCS-4)
- JIS X 0208 (JIS C 6226)
- ISO 10646 (UTF-8)

1.10. Network Security Options

- Non-secure Device - is capable of operating without BACnet Network Security
- Secure Device - is capable of using BACnet Network Security (NS-SD BIBB)
 - Multiple Application-Specific Keys
 - Supports encryption (NS-ED BIBB)
 - Key Server (NS-KS BIBB)