

The zencontrol BACnet implementation has been designed to expose several features over BACnet making integration simpler and easier. The current implementation supports the following features:

- Emergency Device support, which reports:
  - Lamp failure
  - Battery Failure
  - Communication/DALI Failure
  - Lamp state (True - On, False - Off)
  - Product GTIN
  - Product Serial number
  - Device location
  - DALI Address
  - Rated Duration of the Emergency light
  
- Room Support, which reports:
  - Occupancy State (True - Occupied, False - Unoccupied)
  - Room Light Level (255 - Multiple states, 1-254 = Arc level of the device, 0 - Off)
  - Scene state (Current Scene (0-15) or 255 if no current scene)
  - Room Name (or Group Name)
  
- Support for COV (Change of Value) subscriptions which send efficient notifications to subscribed clients when the following variables change:
  - Room Occupancy state
  - Room Light Level
  
- Alarm Notification are supported for failure states on Emergency devices.

To make identification of objects easier, the Zencontrol BACnet implementation automatically maps logical room names, locations, and floors directly to the labels of the BACnet objects. This ensures quick cross-referencing with building plans.

As of Controller Version v0.007.019, all proprietary properties have been mapped to standard Binary Inputs, Binary Values, Analog Values and CharacterString Values. This should make integration quicker and easier. Please refer to the PICS document for mapping and property ranges.

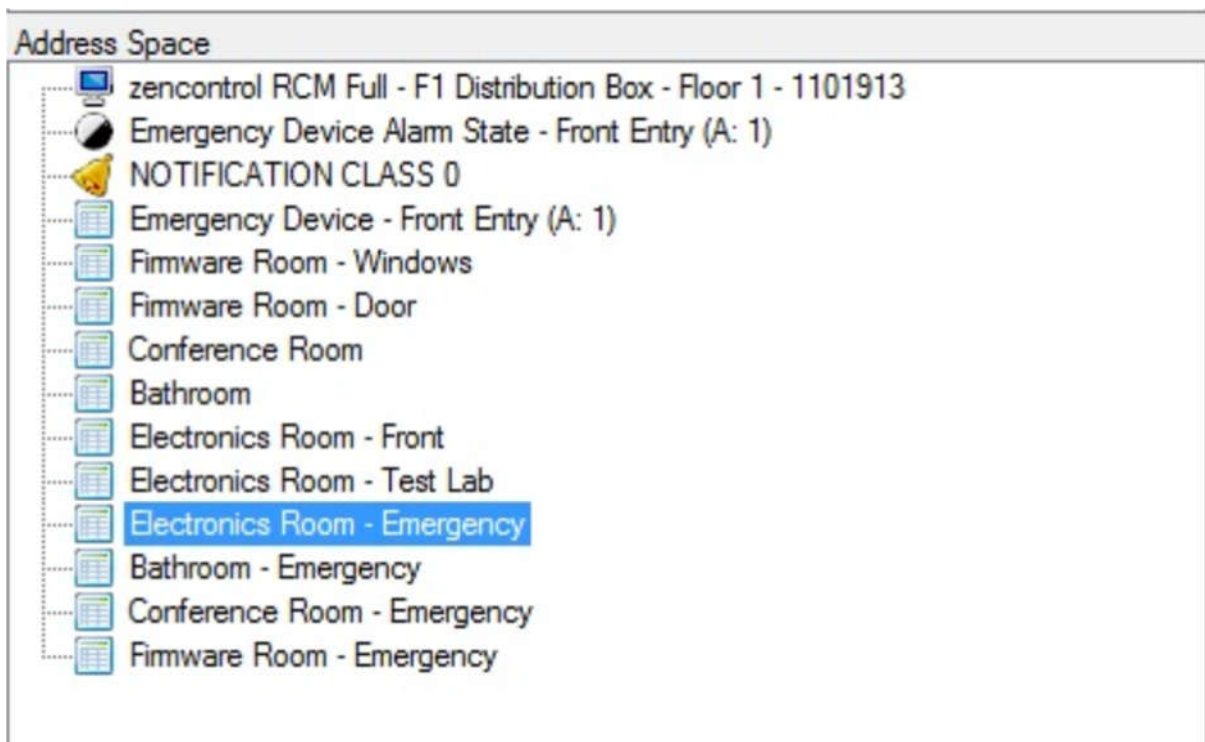
In previous versions, Fault conditions of the Emergency Devices were exposed as Binary Values and Alarms were sent in the event of a failure. This behaviour has been migrated to Binary Inputs. Please ensure any existing BMS integration is updated as required.

Example View of BACnet controllers on a Network.



*Note the name format is "Controller Name - Floor - Controller location"*

Example View of Controller Objects.



*Note the Room names and locations are all shown.*

Example view of a Room (or Group):

Bacnet Property	
513 - Proprietary	False
514 - Proprietary	120
515 - Proprietary	13
516 - Proprietary	0
Cov Increment	0
Description	Electronics Room - Emergency
Object Identifier	129:6
Object Name	Electronics Room - Emergency
Object Type	129 :

*Notes on Properties:*

Object Type/Object Identifier: Unique BACnet identification information for this Room Object

Cov Increment: A property required by BACnet for COV functionality.

Room Occupation State (P513): Whether this room is currently occupied. In this case, the room is not occupied.

Room Light Level (P514): The reported Arc Level of lights in this room, where 0 is off, 254 is maximum and 255 indicates multiple different Arc levels. This property is writeable. In this case, the room is at Arc Level 120.

Current Scene (P515): The currently active scene for the Room, from 0 - 15. A value of 255 indicates no active scene. Scenes are pre-configured light levels saved for quick recall. This property is writeable.

Sensor Inhibit Time (P516): Whether a Sensor Inhibit condition is currently active on this room. If set, Motion and Lux Sensors will be prevented from automatically changing the Room state. 0 indicates no inhibit state, through to a maximum value of 86400 seconds (1 day). This time decrements and will disable itself when reaching 0.

Example view of an Emergency Device:

BacnetProperty	
512 - Proprietary	1.1.1
514 - Proprietary	1
515 - Proprietary	False
516 - Proprietary	False
517 - Proprietary	False
518 - Proprietary	False
519 - Proprietary	0x87DD08081B3
520 - Proprietary	0x40000000
521 - Proprietary	0xFFFFFFFF
522 - Proprietary	0xFFFFFFFFFFFF0
524 - Proprietary	90
525 - Proprietary	0
526 - Proprietary	8
Acked Transitions	011
Description	Emergency Device - Front Entry (A: 1)
Event State	0 : Normal
▶ Event Time Stamps	Object[] Array
Notification Class	0
▶ Object Identifier	OBJECT_PROPRIETARY_MIN:0
Object Name	Emergency Device - Front Entry (A: 1)
Object Type	128 : Object Proprietary Min
Time Delay	0

*Notes on Properties:*

Object Type/Object Identifier: Unique BACnet identification information for this Emergency Device object.

Notification Class/Event State/Acked Transitions: BACnet internal variables used for Alarm Notification.

Fitting Number (P512): A unique fitting number, used for cross referencing with building plans and device catalogs.

DALI Address (P514): The DALI address of the fitting.

Battery Failure Status (P515): Whether the Emergency device reports a battery failure condition.

Lamp Failure Status (P516): Whether the Emergency device reports a lamp failure condition.

Lamp On Status (P517): Whether the Emergency device reports its lamp is on.

Communication Failure Status (P518): Whether the Controller reports a failure condition communicating with the emergency device.

Product GTIN (P519): The manufacturer GTIN of the Emergency Device.

Product Serial Number (P520): The Serial Number of the the Emergency Device.

OEM GTIN (P521): The optional OEM GTIN of the Emergency Device.

OEM Serial Number (P522): The optional OEM Serial Number of the Emergency Device.

Rated Duration (P524): The rated test duration for a pass result on this Emergency Device.

DALI Failure Status (P525): The raw DALI failure status of the Emergency Device. See P515-P518 for descriptive statuses.

DALI Emergency Status (P526): The raw DALI emergency status of the Emergency Device. See P515-P518 for descriptive statuses.