



BACnet Explorer | BACmove

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User Manual

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1. Presentation

BACnet® /IP client for Android, allows to discover and access devices on BACnet® networks.



2. Features

✓ Access BACnet devices on the local network (Wi-Fi) or Register as a Foreign Device to a remote network through the cellular network or Wi-Fi.

✓ Devices and their associates objects are automatically discovered on the network.

✓ Create list of objects. List allows to group objects and save them for later reading /writing access. Import / export lists.

✓ Allows to perform read and write operations on the property Present_Value for objects of the following type:

Binary Input, Binary Output, Binary Value, Analog Input, Analog Output, Analog Value, Multi-state Input, Multi-state Output and Multi-state Value.

✓ Allows to read most available properties of the BACnet objects.

✓ Support for write command Priority (selectable priority and NULL value / Relinquish Default).

✓ AtomicReadFile, download BACnet object file to the SD Card of your Android device.

✓ Configuration: UDP port, Device Id and Device Name, Who-Is device instance range, default write priority, Foreign Device.

✓ Allows to research an object or device by typing its name or instance number.

✓ Devices can be sorted by name, instance, vendor or model.

✓ Objects can be sorted by name, instance or type.

✓ Dynamic user interface with multi-pane on devices with large screen / tablets.

BIBB:

DS-RP-A

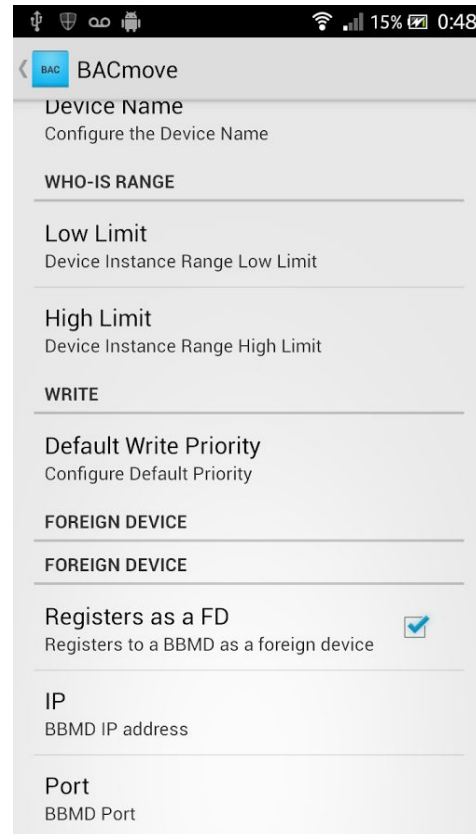
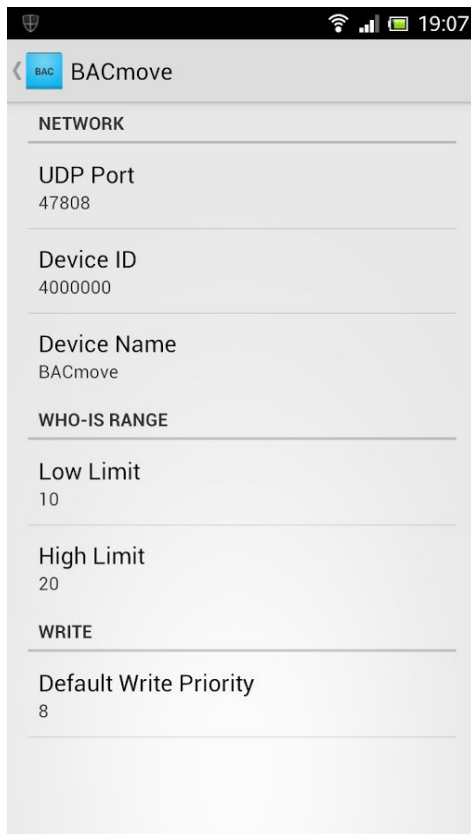
DS-RP-B

DM-DDB-A

DM-DDB-B

DS-WP-A

3. Configuration



3.1. Network

3.1.1. UDP Port

The BACnet/IP port, default value is 47808.

3.1.2. Device ID

The instance number used by the device object of the application.

3.1.3. Device Name

The name of the device object of the application.



3.2. Who-Is Range

3.2.1. Low Limit

The minimum instance number to use in the ranged Who-Is

3.2.2. High Limit

The maximum instance number to use in the ranged Who-Is.

3.3. Write

3.3.1. Default Write Priority

The default priority for the BACnet WriteProperty service.

3.4. Foreign Device

This configuration allows to configure the application as a BACnet Foreign Device.

3.4.1. Registers as a Foreign Device

Check this option to register as a foreign device using the following configuration.

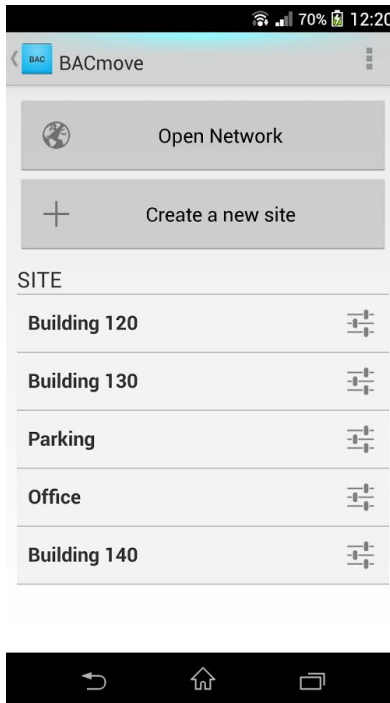
3.4.2. IP

IP address of the BACnet/IP Broadcast Management Device (BBMD).

3.4.3. Port

BACnet/IP port of the BACnet/IP Broadcast Management Device (BBMD).

4. Site



It is possible to have multiple network configurations or to use the general configuration.

4.1. Open Network

Start the BACnet communication with the general configuration.

4.2. Create a new site

Create a new network configuration.

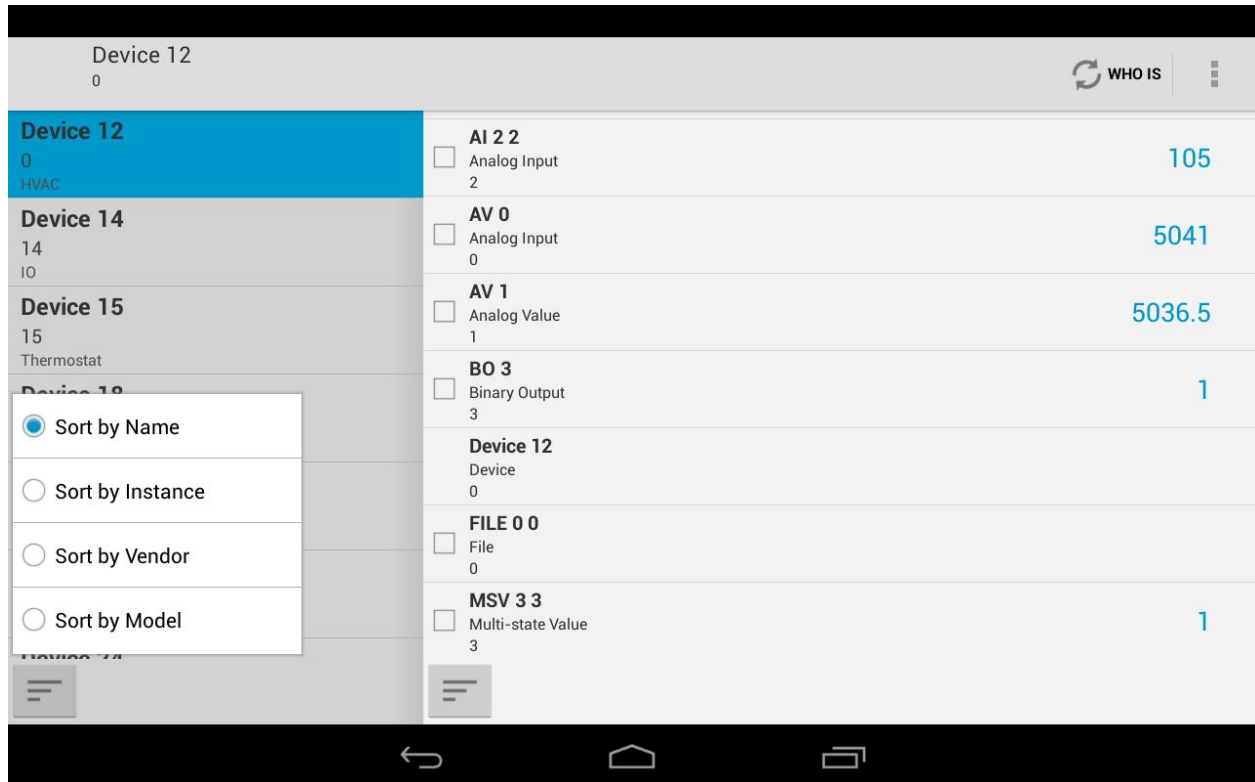
4.3. Site

List of the sites.

4.4. Configuration button

Open the configuration for a site

5. Device List



This window allows to discover and displays the BACnet devices on the network.

5.1. Who-Is

Press this button to send a ranged Who-Is with the configured range.
When BACnet device answer with I-Am they are added to the device list.

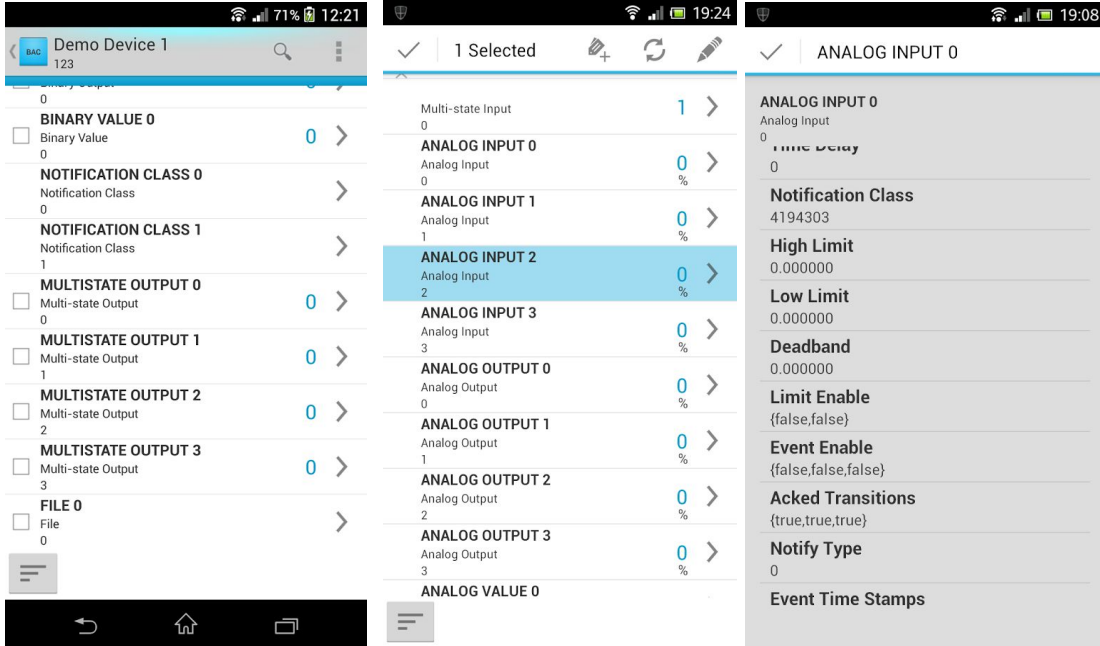
5.2. Device List

This list displays the discovered BACnet devices.

5.3. Sort

Press the sort button to sort the devices list by name, instance number, vendor or model.

6. Object List



This window displays the objects of the selected device.

6.1. Search

Press the search button to research an object by its name or instance number.

6.2. Checkbox

Press the checkbox, to enable the object contextual menu at the top.

6.2.1. Add to list

Press this button to add the selected object to a list.

6.2.2. Refresh

Press this button to read the current Present Value of the selected object on the network.

6.2.3. Write

Press this button to modify the object Present Value.



6.3. Right Chevron

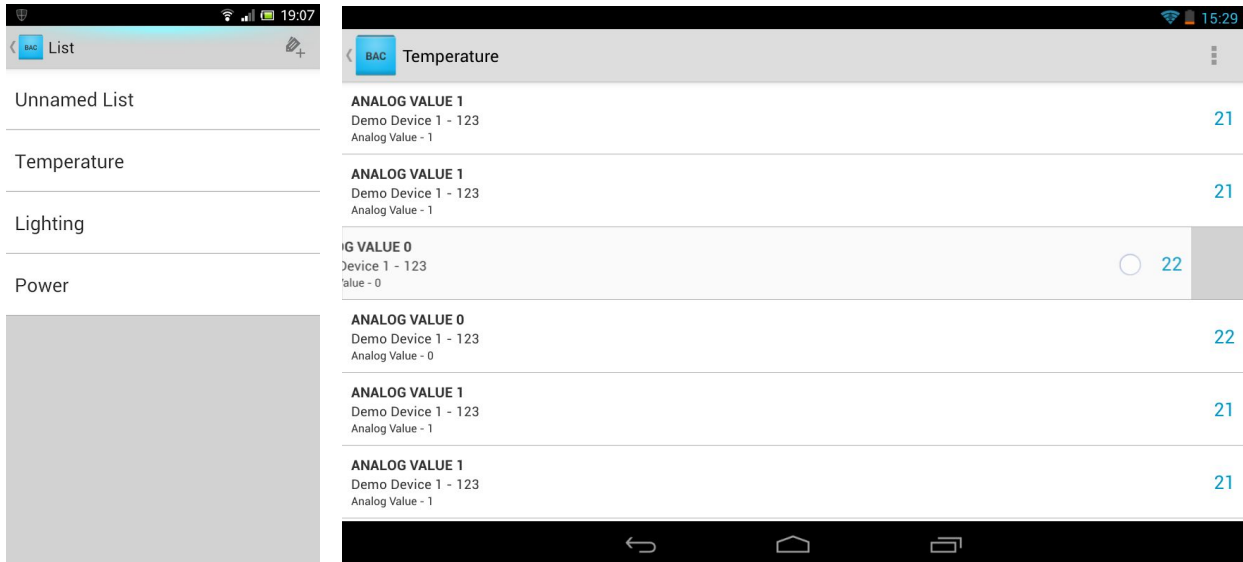
Press the chevron at the right of an object to display most of its properties.

6.4. Sort

Press this button to sort the objects.

7. List

List allows to access and displays side by side objects of different devices.



7.1. Create a list

Press this button to create a new list.

7.2. Remove object from list

Slide an object to the left to remove it from the list.

8. List Export Format

Lists are exported in two JSON files device.json and list.json.

JSON, is a text-based open standard designed for human-readable data interchange.

More information about JSON can be found on this website: <http://www.json.org>.

Free online JSON editor: <http://www.jsoneditoronline.org>.

Those files are packaged inside a .ZIP file for easy transfer and import.

8.1. device.json

This file defines the BACnet devices available in the lists. The list.json refers to this file to identify the BACnet devices.

```
{
  "device":[
    {
      "instance":123,
      "name":"Demo-Device-1"
    },
    {
      "instance":124,
      "name":"Demo-Device-2"
    }
  ]
}
```

8.2. list.json

This file defines the lists and the objects present in each list.

The value device refer to the device index in the device.json file.

property_identifier and array_index are not used in the current version and should be 85 and -1 respectively.

object_type available values:

- 0 Analog Input
- 1 Analog Output
- 2 Analog Value
- 3 Binary Input
- 4 Binary Output

- 5 Binary Value
- 13 Multi State Value
- 14 Multi State Output
- 19 Multi State Value

```
{
  "label":[
    {
      "name":"Demo-List-1",
      "entry":[
        {
          "object_type":0,
          "object_name":"ANALOG INPUT 0",
          "device":0,
          "property_identifrier":85,
          "object_instance":0,
          "array_index":-1
        },
        {
          "object_type":0,
          "object_name":"ANALOG INPUT 0",
          "device":1,
          "property_identifrier":85,
          "object_instance":1,
          "array_index":-1
        }
      ]
    },
    {
      "name":"Demo-List-2",
      "entry":[
        {
          "object_type":3,
          "object_name":"BINARY INPUT 0",
          "device":0,
          "property_identifrier":85,
          "object_instance":0,
          "array_index":-1
        }
      ]
    }
  ]
}
```

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