

# BACnet/IP

Wago + Exor

Wago

CoDeSys v2.3

&

BACnet Configurator



POUs

- PLC\_PRG (PRG)

```

PLC_PRG (PRG-ST)
0001 PROGRAM PLC_PRG
0002 VAR
0003   rSineAngleTest: REAL;
0004   BAV_LocalVar1: BACNET_ANALOG_VALUE;
0005   FbBACnetSchedule: FbBACnetSchedule;
0006   dwSchedulerInstance: DWORD := 0;
0007   xSchedulerRead: BOOL := TRUE;
0008   xSchedulerWrite: BOOL;
0009   typBACnetScheduleVISU: typBACnetScheduleVISU;
0010   typBACnetScheduleEntries: typBACnetScheduleEntries;
0011   bSchedulerFeedback: BYTE;
0012 END_VAR
0013
0001
0002 BAV_LocalVar1.Present_Value := BAV_LocalVar1.Present_Value + 1;
0003
0004 BAV_GlobalVar1.Present_Value := BAV_GlobalVar1.Present_Value + 1;
0005
0006
0007 IF (rSineAngleTest < 2*3.14) THEN
0008   rSineAngleTest := rSineAngleTest + 0.001;
0009 ELSE
0010   rSineAngleTest := 0;
0011 END_IF
0012 BAV_GlobalVar2.Present_Value := 100 + (100*SIN(rSineAngleTest));
0013
0014
0015 FbBACnetSchedule(
0016   dwInstance           := dwSchedulerInstance,
0017   dtActualTime         := SysRtcGetTime(TRUE),
0018   stScheduleDescription := ,
0019   iDatatype            := ,
0020   xRead                := xSchedulerRead,
0021   xWrite               := xSchedulerWrite,
0022   typBACnetScheduleVISU := typBACnetScheduleVISU,
0023   typBACnetScheduleEntries := typBACnetScheduleEntries,
0024   bFeedback            => bSchedulerFeedback);
0025
0026
0027
0028
0029
0030
0031
0032
0033

```

Code size: 47114 bytes  
Code size: 47114 bytes

```

GVL
0001 VAR_GLOBAL
0002
0003   BAV_GlobalVar1: BACNET_ANALOG_VALUE;
0004   BAV_GlobalVar2: BACNET_ANALOG_VALUE;
0005
0006 END_VAR
0007
0008
0009
0010
0011
0012
0013
0014
0015
0016
0017
0018
0019
0020
0021
0022
0023
0024
0025
0026
0027
0028
0029
0030
0031
0032
0033
0034
0035
0036
0037
0038
0039
0040
0041
0042
0043
0044
0045
0046
0047

```

CoDeSys - WagoExor\_BACnet\_Test\_Lpro

File Edit Project Insert Extras Online Window Help

Library Manager

- SysLibRtc.Lib 8.11.10 11:37:48
- BACnetAccess.Lib 21.9.17 09:01:38
- BACnet\_02.Lib 21.9.17 09:01:38**
- FoundationalLib.Lib 21.9.17 09:01:38
- SYSLIBCALLBACK.LIB 8.11.10 11:37:48

POUs

- PLC\_PRG (PRG)

POUs

- 01 Write to Priority Array
- 02 Accessing Priority Array Value
- 03 Accessing Native Object
- 04 Save Setpoint as Remanent Variables
- 05 Conversion IEC/ BACnet variable
- 06 Schedule
- Private
- Version

POUs Data typ. Visualiz. Global ...

```
Initialisation code for POU 'BACnetTimeStamp'  
Check of the parameter configuration  
Hardware-Configuration  
POU indices:256 (25%)  
Size of used data: 5960 of 1036288 bytes (0.58%)  
Size of used retain data: 0 of 12288 bytes (0.00%)  
Code size: 47114 bytes  
0 Error(s), 0 Warning(s).
```

PO Da. Vis. Re.

[ONLINE] [OV] [READ]



- Resources
- Global Variables
- GVL
- Variable\_Configuration (V)
- library BACnet\_02.lib 21.9.17 (
- library BACnetAccess.lib 21.9
- library Standard.lib 8.11.10.11
- library SYSLIBCALLBACK.LIB
- library SysLibRtc.lib 8.11.10.1
- Library Manager
- Log
- PLC - Browser
- PLC Configuration
- Sampling Trace
- Target Settings
- Task configuration
- Watch-and Recipe Manager
- Workspace

PLC Configuration

Hardware configuration

- K-Bus (\* BACnet/IP Controller \*) [FIX]
  - 0750-9999/0500-0008 8 DO Generic [VAR]
  - 0750-9999/0400-0008 8 DI Generic [VAR]
  - 0750-0455 4 AI 4-20mA s.e. [VAR]
  - 0750-0555 4 AO 4-20mA [VAR]
- Fieldbus variables [FIX]
- Flag variables [FIX]
- Modbus-Master [FIX]

Configuration

Input / Output PI allocation

| Pos. | Item Number      | Description      | PI Assignment    | Comment |
|------|------------------|------------------|------------------|---------|
| 1    | 750-9999/500-008 | 8 DO Generic     | BACnet.fieldbus3 |         |
| 2    | 750-9999/400-008 | 8 DI Generic     | BACnet.fieldbus3 |         |
| 3    | 750-455          | 4 AI 4-20mA s.e. | BACnet.fieldbus3 |         |
| 4    | 750-555          | 4 AO 4-20mA      | BACnet.fieldbus3 |         |

OK Cancel



Resources

- Global Variables
- GVL
  - Variable\_Configuration (V)
  - library BACnet\_02.lib 21.9.17 (
  - library BACnetAccess.lib 21.9
  - library Standard.lib 8.11.10.11
  - library SYSLIBCALLBACK.LIB
  - library SysLibRtc.lib 8.11.10.1
- Alarm configuration
- Library Manager
- Log
- PLC - Browser
- PLC Configuration
- Sampling Trace
- Target Settings
- Task configuration
- Watch-and-Recipe Manager
- Workspace

```

PLC_PRG (PRG-ST)
0001 PROGRAM PLC_PRG
0002 VAR
0003   rSineAngleTest: REAL;
0004   BAV_LocalVar1: BACNET_ANALOG_VALUE;
0005   FbBACnetSchedule: FbBACnetSchedule;
0006   dwSchedulerInstance: DWORD := 0;
0007   xSchedulerRead: BOOL := TRUE;
0008   xSchedulerWrite: BOOL;
0009   typBACnetScheduleVISU: typBACnetScheduleVISU;
0010   typBACnetScheduleEntries: typBACnetScheduleEntries;
0011   bSchedulerFeedback: BYTE;
0012 END_VAR
0013
0014
0015 FbBACnetSchedule(
0016   dwInstance
0017   dtActualTime
0018   stScheduleDescription
0019   iDataType
0020   xRead
0021   xWrite
0022   typBACnetScheduleVISU
0023   typBACnetScheduleEntries
0024   bFeedback
0025
0026
0027
0028
0029
0030
0031
0032
0033

```

```

GVL
0001 VAR_GLOBAL
0002
0003   BAV_GlobalVar1: BACNET_ANALOG_VALUE;
0004   BAV_GlobalVar2: BACNET_ANALOG_VALUE;
0005
0006 END_VAR
0007
0008
0009
0010
0011
0012
0013

```

Target Settings

Configuration: **WAGO\_750-631**

Target Platform | Memory Layout | General | Network functionality | Visualization

I/O-Configuration

- Configurable  Download as file
- No address check
- Support preemptive multitasking  Download symbol file  VAR\_IN\_OUT as reference
- Single task in multi-tasking  Symbol config from INI file  Initialize inputs
- Byte addressing mode  ELC Browser  Load boot project automatically
- Online Change  Trace  SoftMotion

Default OK Cancel

Code size: 47114 bytes  
Code size: 47114 bytes

The screenshot shows the CODESYS environment with the following elements:

- Menu:** File, Edit, Project, Insert, Extras, Online, Window, Help.
- Project Tree:** Shows the project structure including POUs, PLC\_PRG, and Resources.
- Main Editor:** Displays ladder logic code for a program named 'PROGRAM PLC\_PRG'. The code includes variable declarations like `rSineAngleTest: REAL;` and `BAV_GlobalVar1: BACNET_ANALOG_VALUE;`.
- Options Dialog:** A dialog box with a 'Category' list on the left. The 'Symbol configuration' category is selected. The checkbox 'Dump XML symbol table' is checked and highlighted with a red box.
- Set object attributes Dialog (Left):** A dialog box showing a tree view of the project. The 'Variable\_Configuration (VAR\_CONFIG)' object is selected.
- Set object attributes Dialog (Right):** A dialog box showing the same tree view. The 'Export variables of object' checkbox is checked and highlighted with a red box.
- Status Bar:** Shows 'Loading library' messages for various system files.

CoDeSys - WagoExor\_BACnet\_Test\_L1.pro

File Edit Project Insert Extras Online Window Help

Alt+F8 Ctrl+F8

POUs  
PLC\_PRG (PRG)

Login  
Logout  
Download  
Run  
Stop  
Reset  
Reset (cold)  
Reset (original)  
Toggle Breakpoint  
Breakpoint Dialog  
Step over  
Step in  
Single Cycle  
Write Values  
Force Values  
Release Force  
Write/Force-Dialog  
Show Call Stack...  
Display Flow Control  
Simulation Mode  
Communication Parameters...  
Sourcecode download  
Send marked text to RemoteControl Mas...  
Create boot project  
Write file to PLC  
Read file from PLC

0022 typBACnetScheduleVISU := typBACnetSch  
0023 typBACnetScheduleEntries := typBACnetSch  
0024 bFeedback => bSchedulerFe  
0025  
0026  
0027  
0028  
0029  
0030  
0031  
0032  
0033

Initialisation code for POU 'BACnetTimeStamp'  
Check of the parameter configuration  
Hardware-Configuration  
POU indices:256 (25%)  
Size of used data: 5960 of 1036288 bytes (0.58%)  
Size of used retain data: 0 of 12288 bytes (0.00%)  
Code size: 47114 bytes  
0 Error(s), 0 Warning(s).

Communication Parameters

Channels

- localhost via Tcp/Ip
- Ethernet TCP/IP
- OPC Client standard
- OPC Client standard

| Name | Value | Comment |
|------|-------|---------|
|      |       |         |

OK  
Cancel  
New ...

2

Communication Parameters: New Channel

Name TCP-Wago-Node-1

OK

3

Device

| Name              | Info              |
|-------------------|-------------------|
| Ethernet (TCP/IP) | WAGO Ethernet     |
| OPC Client        | WAGO OPC client   |
| OPC Client 2 Tags | WAGO OPC client   |
| Tcp/Ip            | 3S Tcp/Ip driver  |
| Serial (RS232)    | 3S Serial RS232   |
| Tcp/Ip (Level 2)  | 3S Tcp/Ip level 2 |

Communication Parameters

Channels

- localhost via Tcp/Ip
- Ethernet TCP/IP
- OPC Client standard
- OPC Client standard
- TCP-Wago-Node-1

Tcp/Ip

| Name               | Value         | Comment             |
|--------------------|---------------|---------------------|
| Address            | 192.168.1.136 | Address or hostname |
| Port               | 2455          |                     |
| Motorola byteorder | No            |                     |

OK  
Cancel  
New ...  
Remove  
Gateway ...  
Update

4

1



CoDeSys - WagoExor\_BACnet\_Test\_L1.pro

File Edit Project Insert Extras Online Window Help

1

POUs  
PLC\_PRG (PRG)

Login Alt+F8  
Logout Ctrl+F8  
Download  
Run F5  
Stop Shift+F8  
Reset  
Reset (cold)  
Reset (original)  
Toggle Breakpoint F9  
Breakpoint Dialog  
Step over F10  
Step in F8  
Single Cycle Ctrl+F5  
Write Values Ctrl+F7  
Force Values F7  
Release Force Shift+F7  
Write/Force-Dialog Ctrl+Shift+F7  
Show Call Stack...  
Display Flow Control

Simulation Mode  
Communication Parameters...  
Sourcecode download  
Send marked text to RemoteControl Master (e.g. as parameter)  
Create boot project  
Write file to PLC  
Read file from PLC

```
0001 VAR_GLOBAL  
0002  
0003     BAV_GlobalVar1: BACNET_ANALOG_VALUE;  
0004     BAV_GlobalVar2: BACNET_ANALOG_VALUE;  
0005  
0006 END_VAR  
0007
```

CoDeSys

? No program on the controller! Download the new program?

2 Yes No Cancel

Would you like to update the BACNet-objects on the target?

Keep current online values

Yes (with Reset) Yes (without Reset) No

3

```
0022 typBACnetScheduleVISU := typBACnetScheduleVISU,  
0023 typBACnetScheduleEntries := typBACnetScheduleEntries,  
0024 bFeedback => bSchedulerFeedback);  
0025  
0026  
0027  
0028  
0029  
0030  
0031  
0032  
0033
```

Code size: 47114 bytes

PO Da Vis Re

CoDeSys - WagoExor\_BACnet\_Test\_L1.pro

File Edit Project Insert Extras Online Window Help

POUs  
PLC\_PRG (PRG)

Logout (Ctrl+F8)

Download  
Run (F5)  
Stop (Shift+F8)  
Reset  
Reset (cold)  
Reset (original)  
Toggle Breakpoint (F9)  
Breakpoint Dialog  
Step over (F10)  
Step in (F8)  
Single Cycle (Ctrl+F5)  
Write Values (Ctrl+F7)  
Force Values (F7)  
Release Force (Shift+F7)  
Write/Force-Dialog (Ctrl+Shift+F7)  
Show Call Stack...  
Display Flow Control  
Simulation Mode  
Communication Parameters...  
Sourcecode download  
Send marked text to RemoteControl Master (e.g. as parameter)  
Create boot project  
Write file to PLC  
Read file from PLC

```

0022 typBACnetScheduleVISU := typBACnetScheduleVISU,
0023 typBACnetScheduleEntries := typBACnetScheduleEntries,
0024 bFeedback => bSchedulerFeedback); bSchedulerFeedback = 0
0025
0026
0027
0028
0029
0030
0031
0032
0033

```

```

Present_Valu BAV_LocalVar1.Present... = 2246
r1.Present_Va BAV_GlobalVar1.Present... = 2246
rSineAngleTest = 2.24602
rSineAngleTest = 2.24602
rSineAngleTest = 2.24602
IN(rSineAngle: BAV_GlobalVar2.Present... = 178.0567 rSineAngleTes
FBACnetSchedule.bFeed... = 0
dwSchedulerInstance = 0
rInstance,
Time(TRUE),
rRead, xSchedulerRead = TRUE
rWrite, xSchedulerWrite = FALSE

```

GVL

```

0001 BAV_GlobalVar1
0002 BAV_GlobalVar2
0003
0004
0005
0006
0007
0008
0009
0010
0011
0012
0013
0014
0015
0016
0017
0018
0019
0020
0021
0022
0023
0024
0025
0026
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0028
0029
0030
0031
0032
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0034
0035
0036
0037
0038
0039
0040
0041
0042
0043
0044
0045
0046
0047

```

PO Da Vis Re

Device Pools

- Database (0)
- Import (0)
- Scan (2)
  - DEV262000 [262000]
    - Device\_0030de0a9c51 [695377]
      - Device
      - Files
      - Inputs
      - Outputs
      - Schedulers
      - Values
        - AV0: PLC\_PRG\_BAV
        - AV1: BAV\_GlobalV
        - AV2: BAV\_GlobalV

Device: Device\_0030de0a9c51

Name: Device\_0030de0a9c51

Instance Nr: 695377 Online Address: 0.192.168.1.136bac0

Configure... Monitor

Objects: 41

Context menu for Device\_0030de0a9c51:

- Configure...
- Add to Database
- Rescan selected Device(s)
- Remove...
- Device Monitor
- Services
- Import
- Export
- Device Manager

| Object Name           | Present Value | Unit | Type          | InstNr | #Props | Source  |
|-----------------------|---------------|------|---------------|--------|--------|---------|
| ALOG_INPUT_2          | 3             | ?    | Analog Input  | 2      | 10     | Generic |
| ALOG_INPUT_3          | 3             | ?    | Analog Input  | 3      | 10     | Generic |
| ALOG_INPUT_0          | 0             | ?    | Analog Input  | 0      | 10     | Generic |
| ALOG_INPUT_1          | 0             | ?    | Analog Input  | 1      | 10     | Generic |
| ALOG_OUTPUT_0         | 0             | ?    | Analog Output | 0      | 12     | Generic |
| ALOG_OUTPUT_2         | 0             | ?    | Analog Output | 2      | 12     | Generic |
| ALOG_OUTPUT_1         | 0             | ?    | Analog Output | 1      | 12     | Generic |
| ALOG_OUTPUT_3         | 0             | ?    | Analog Output | 3      | 12     | Generic |
| PLC_PRG_BAV_LocalVar1 | 13929         | ?    | Analog Value  | 0      | 11     | Generic |
| BAV_GlobalVar2        | 197.930654    | ?    | Analog Value  | 2      | 11     | Generic |
| BAV_GlobalVar1        | 13929         | ?    | Analog Value  | 1      | 11     | Generic |
| BINARY_INPUT_2        | INACTIVE      |      | Binary Input  | 2      | 9      | Generic |
| BINARY_INPUT_3        | INACTIVE      |      | Binary Input  | 3      | 9      | Generic |
| BINARY_INPUT_0        | INACTIVE      |      | Binary Input  | 0      | 9      | Generic |
| BINARY_INPUT_1        | INACTIVE      |      | Binary Input  | 1      | 9      | Generic |
| BINARY_INPUT_6        | INACTIVE      |      | Binary Input  | 6      | 9      | Generic |
| BINARY_INPUT_7        | INACTIVE      |      | Binary Input  | 7      | 9      | Generic |
| BINARY_INPUT_4        | INACTIVE      |      | Binary Input  | 4      | 9      | Generic |
| BINARY_INPUT_5        | INACTIVE      |      | Binary Input  | 5      | 9      | Generic |
| BINARY_OUTPUT_7       | INACTIVE      |      | Binary Output | 7      | 11     | Generic |
| BINARY_OUTPUT_6       | INACTIVE      |      | Binary Output | 6      | 11     | Generic |
| BINARY_OUTPUT_2       | INACTIVE      |      | Binary Output | 2      | 11     | Generic |
| BINARY_OUTPUT_1       | INACTIVE      |      | Binary Output | 1      | 11     | Generic |
| BINARY_OUTPUT_0       | INACTIVE      |      | Binary Output | 0      | 11     | Generic |
| BINARY_OUTPUT_5       | INACTIVE      |      | Binary Output | 5      | 11     | Generic |
| BINARY_OUTPUT_4       | INACTIVE      |      | Binary Output | 4      | 11     | Generic |
| BINARY_OUTPUT_3       | INACTIVE      |      | Binary Output | 3      | 11     | Generic |
| CALENDAR_0            | False         |      | Calendar      | 0      | 5      | Generic |
| Device_0030de0a9c51   | -             |      | Device        | 695377 | 39     | Native  |
| A:\etc\symxml.SYM_XML | -             |      | File          | 4      | 9      | Generic |
| A:\plc\default.prg    | -             |      | File          | 8      | 9      | Generic |
| A:\plc\default.chk    | -             |      | File          | 9      | 9      | Generic |
| NVRAM                 | -             |      | File          | 6      | 9      | Generic |
| A:\etc\timestamp.bin  | -             |      | File          | 2      | 9      | Generic |
| A:\etc\overide.xml    | -             |      | File          | 3      | 9      | Generic |
| A:\etc\bdt.bin        | -             |      | File          | 12     | 9      | Generic |
| EEPROM                | -             |      | File          | 7      | 9      | Generic |
| A:\etc\ood.tsv        | -             |      | File          | 11     | 9      | Generic |
| A:\plc\persist.dat    | -             |      | File          | 10     | 9      | Generic |
| A:\etc\persist.bin    | -             |      | File          | 5      | 9      | Generic |
| SCHEDULE_0            | <null>        |      | Schedule      | 0      | 13     | Generic |

- Database (1)
  - Device\_0030de0a9c51 [695377]
    - Import (0)
    - Scan (2)
    - DEV262000 [262000]
      - Device\_0030de0a9c51 [695377]
        - Device
          - Files
          - Inputs
          - Outputs
          - Schedulers
          - Values
            - AV0: PLC\_PRG\_BAV\_LocalVar1
            - AV1: BAV\_GlobalVar1
            - AV2: BAV\_GlobalVar2

- Configure...
- Download Configuration...
- Remove...
- Device Monitor
- Services
- Import
- Export
- Device Manager

|                              | Present Value | Unit | Type          | InstNr | #Props | Source  |
|------------------------------|---------------|------|---------------|--------|--------|---------|
| Device_0030de0a9c51 [695377] |               |      |               |        |        |         |
| PLC_PRG_BAV_LocalVar1        | 0             | ?    | Analog Value  | 0      | 11     | SYM XML |
| ANALOG_OUTPUT_2              | 0             | ?    | Analog Output | 2      | 11     | Native  |
| ANALOG_OUTPUT_1              | 0             | ?    | Analog Output | 1      | 11     | Native  |
| ANALOG_OUTPUT_3              | 0             | ?    | Analog Output | 3      | 11     | Native  |
| BAV_GlobalVar2               | 0             | ?    | Analog Value  | 2      | 11     | SYM XML |
| BAV_GlobalVar1               | 0             | ?    | Analog Value  | 1      | 11     | SYM XML |
| PLC_PRG_BAV_LocalVar1        | 0             | ?    | Analog Value  | 0      | 11     | SYM XML |
| BINARY_INPUT_2               | INACTIVE      |      | Binary Input  | 2      | 8      | Native  |
| BINARY_INPUT_3               | INACTIVE      |      | Binary Input  | 3      | 8      | Native  |
| BINARY_INPUT_0               | INACTIVE      |      | Binary Input  | 0      | 8      | Native  |
| BINARY_INPUT_1               | INACTIVE      |      | Binary Input  | 1      | 8      | Native  |
| BINARY_INPUT_6               | INACTIVE      |      | Binary Input  | 6      | 8      | Native  |
| BINARY_INPUT_7               | INACTIVE      |      | Binary Input  | 7      | 8      | Native  |
| BINARY_INPUT_4               | INACTIVE      |      | Binary Input  | 4      | 8      | Native  |
| BINARY_INPUT_5               | INACTIVE      |      | Binary Input  | 5      | 8      | Native  |
| BINARY_OUTPUT_7              | INACTIVE      |      | Binary Output | 7      | 10     | Native  |
| BINARY_OUTPUT_2              | INACTIVE      |      | Binary Output | 2      | 10     | Native  |
| BINARY_OUTPUT_1              | INACTIVE      |      | Binary Output | 1      | 10     | Native  |
| BINARY_OUTPUT_0              | INACTIVE      |      | Binary Output | 0      | 10     | Native  |
| BINARY_OUTPUT_3              | INACTIVE      |      | Binary Output | 3      | 10     | Native  |
| BINARY_OUTPUT_6              | INACTIVE      |      | Binary Output | 6      | 10     | Native  |
| BINARY_OUTPUT_5              | INACTIVE      |      | Binary Output | 5      | 10     | Native  |
| BINARY_OUTPUT_4              | INACTIVE      |      | Binary Output | 4      | 10     | Native  |
| CALENDAR_0                   | False         |      | Calendar      | 0      | 5      | Native  |
| Device_0030de0a9c51          | -             |      | Device        | 695377 | 36     | Native  |
| FILE_9                       | -             |      | File          | 9      | 9      | Native  |
| FILE_8                       | -             |      | File          | 8      | 9      | Native  |
| FILE_2                       | -             |      | File          | 2      | 9      | Native  |
| FILE_3                       | -             |      | File          | 3      | 9      | Native  |
| FILE_4                       | -             |      | File          | 4      | 9      | Native  |
| FILE_10                      | -             |      | File          | 10     | 9      | Native  |
| FILE_6                       | -             |      | File          | 6      | 9      | Native  |
| FILE_7                       | -             |      | File          | 7      | 9      | Native  |
| FILE_12                      | -             |      | File          | 12     | 9      | Native  |
| FILE_5                       | -             |      | File          | 5      | 9      | Native  |
| FILE_11                      | -             |      | File          | 11     | 9      | Native  |
| SCHEDULE_0                   | <null>        |      | Schedule      | 0      | 13     | Native  |

- Device\_0030de0a9c51 [695377] ...
  - Device
  - Files
  - Inputs
  - Outputs
  - Schedulers
    - Cal0: CALENDAR\_0
    - Cal0: SCHEDULE\_0
  - Values
  - IEC Variables
  - Node-Configuration

Device: Device\_0030de0a9c51 Object: SCHEDULE\_0

Name: SCHEDULE\_0  
Type: Schedule  
Instance Nr: 0  
Source: Native

Object  Create

Supported Services  
 COV Server  
 COV Property Server  
 Alarm Generator

| Name                 | Value                              | Type                     | Opt | Acc | Mod | Internal Mappings | Client Mappings | Persistence value       |
|----------------------|------------------------------------|--------------------------|-----|-----|-----|-------------------|-----------------|-------------------------|
| DevObjProp Reference | DevObjProp Reference (1)           | DevObjProp Reference     |     | +   | ↔   |                   |                 | DevObjProp Reference () |
| [1]                  | PROP_PRESENT_VALUE, (BINARY_OUT... | Reference                |     |     |     |                   |                 | PROP_PRESENT_VALU...    |
| ObjectIdentifier     | [BINARY_OUTPUT,0]                  | ier                      |     |     |     |                   |                 | [BINARY_OUTPUT,0]       |
| InstanceNumber       | 0                                  | Type                     |     |     |     |                   |                 | 0                       |
| Type                 | BINARY_OUTPUT (4)                  | ty Identifier            |     |     |     |                   |                 | BINARY_OUTPUT (4)       |
| PropertyIdentifier   | PROP_PRESENT_VALUE (85)            | ty Identifier            |     |     |     |                   |                 | PROP_PRESENT_VALU...    |
| PropertyArrayIndex   |                                    |                          |     |     |     |                   |                 |                         |
| DeviceIdentifier     |                                    | ier                      |     |     |     |                   |                 |                         |
| Effective Period     | -----                              | ier                      |     | +   |     |                   |                 | -----                   |
| Exception Schedule   | Special Event ()                   | Special Event ()         |     | +   |     |                   |                 | Special Event ()        |
| Object Identifier    | (SCHEDULE,0)                       | ier                      |     | +   |     |                   |                 | (SCHEDULE,0)            |
| Object Name          | SCHEDULE_0                         | ier                      |     | +   |     |                   |                 | SCHEDULE_0              |
| Object Type          | SCHEDULE (17)                      | Type                     |     | +   |     |                   |                 | SCHEDULE (17)           |
| Out Of Service       |                                    | ier                      |     | +   |     |                   |                 |                         |
| Present Value        | <null>                             | Type                     |     | +   |     |                   |                 | <null>                  |
| Priority For Writing | 16                                 | ier                      |     | +   |     |                   |                 | 16                      |
| Reliability          | no_fault_detected (0)              | ity                      |     | +   |     |                   |                 | no_fault_detected (0)   |
| Schedule Default     | <null>                             | ity                      |     | +   |     |                   |                 | <null>                  |
| Status Flags         |                                    | Bit String: Status Flags |     | +   |     |                   |                 |                         |
| Weekly Schedule      | Daily Schedule (1..7)              | Array: Daily Schedule    |     | +   |     |                   |                 | Daily Schedule (1..7)   |
| [1] Monday           | Time Value ()                      | Daily Schedule           |     |     |     |                   |                 | Time Value ()           |
| [2] Tuesday          | Time Value ()                      | Daily Schedule           |     |     |     |                   |                 | Time Value ()           |
| [3] Wednesday        | Time Value ()                      | Daily Schedule           |     |     |     |                   |                 | Time Value ()           |
| [4] Thursday         | Time Value ()                      | Daily Schedule           |     |     |     |                   |                 | Time Value ()           |
| [5] Friday           | Time Value ()                      | Daily Schedule           |     |     |     |                   |                 | Time Value ()           |
| [6] Saturday         | Time Value ()                      | Daily Schedule           |     |     |     |                   |                 | Time Value ()           |
| [7] Sunday           | Time Value ()                      | Daily Schedule           |     |     |     |                   |                 | Time Value ()           |

- Rescan Object
- Add Property
- Remove Property
- Reset Value
- Add Element
- Add Elements...
- Remove Element(s)
- Move Up Element
- Move Down Element
- Copy Value
- Paste Value
- Paste Value as new
- Client Mappings...
- Internal Mappings...
- Auto-Size Columns

WAGO BACnet Configurator - WagoExor\_BACnet\_Test\_L1wbc

File Edit View Pool Device Extras Help

Device Auto Discovery Monitor Devices + Properties

Browsing & Monitoring Configure: Device\_0030de0a9c51 [695377]

Device Pools Database (1) Database Device: Device\_0030de0a9c51

Device\_0030de0a9c51

Name: Device\_0030de0a9c51

Instance Nr: 695377 Online Address: 0.192.168.1.136bac0

Description:

Device Link: Configurations \ Device\_0030de0a9c51 [695377]

Configure...

Monitor

Objects: 41

Object Name Present Value Unit Type InstNr #Props Source

EDE File Export Dialog

1 Device(s): Device\_0030de0a9c51 [695377]

General

Project Name: WagoExor\_BACnet\_Test\_1

Export Folder: C:\Users\WagoTorgeir\Dropbox (Wago Norge) ...

Encoding: ISO-8859-1

EDE Export

Version of Ref. File:

Author: Wago Norge

Limited Resources:

Export Files

EDE  State-Texts  Unit-Texts  Object-Types

Export Cancel

Wago Database XML...

ANALOG\_OUTPUT\_1

ANALOG\_OUTPUT\_3

BAV\_GlobalVar2

BAV\_GlobalVar1

PLC\_PRG.BAV\_LocalVar1

BINARY\_INPUT\_2

BINARY\_INPUT\_3

BINARY\_INPUT\_0

BINARY\_INPUT\_1

BINARY\_INPUT\_6

BINARY\_INPUT\_7

BINARY\_INPUT\_4

BINARY\_INPUT\_5

BINARY\_OUTPUT\_7

BINARY\_OUTPUT\_2

BINARY\_OUTPUT\_1

BINARY\_OUTPUT\_0

BINARY\_OUTPUT\_3

BINARY\_OUTPUT\_6

BINARY\_OUTPUT\_5

BINARY\_OUTPUT\_4

CALENDAR\_0

Device\_0030de0a9c51

Device 695377 36 Native

FILE\_9 9 9 Native

FILE\_8 8 9 Native

FILE\_2 2 9 Native

FILE\_3 3 9 Native

FILE\_4 4 9 Native

FILE\_10 10 9 Native

FILE\_6 6 9 Native

FILE\_7 7 9 Native

FILE\_12 12 9 Native

FILE\_5 5 9 Native

FILE\_11 11 9 Native

SCHEDULE\_0 <null> 0 13 Native

WagoExor\_BACnet\_Test\_1\_EDE.csv 12.11.2017 22:51 OpenOffice.org X... 4 KB

WagoExor\_BACnet\_Test\_1\_ObjTypes.csv 12.11.2017 22:51 OpenOffice.org X... 1 KB

WagoExor\_BACnet\_Test\_1\_StateTexts.csv 12.11.2017 22:51 OpenOffice.org X... 1 KB

WagoExor\_BACnet\_Test\_1\_Units.csv 12.11.2017 22:51 OpenOffice.org X... 9 KB

Device Pools Database (1)

- Device
- File
- Input
- Output
- Schedule
- Value
- Import (0)
- Scan (2)
- DEV2620
- Device\_0

Configure

- Download Configuration...
- Remove...
- Device Monitor
- Services
- Import
- Export
- Device Manager

Database Device: Device\_0030de0a9c51

Name: Device\_0030de0a9c51

Instance Nr: 695377 Online Address: 0.192.168.1.136-bac0

Description:

Configure... Monitor Objects: 41

Download Configuration

Device\_0030de0a9c51 [695377]

Options

Device Mac Address: 0:192.168.1.136-bac0

Reset device after download

Download Configuration Cancel

| Object Name         | Object Type | Object Value | Object Address | Object Status |
|---------------------|-------------|--------------|----------------|---------------|
| BINARY_INPUT_1      | INACTIVE    | Binary Input | 1 8            | Native        |
| BINARY_INPUT_6      | INACTIVE    | Binary Input | 6 8            | Native        |
| BINARY_INPUT_7      | INACTIVE    |              |                | Native        |
| BINARY_INPUT_4      | INACTIVE    |              |                | Native        |
| BINARY_INPUT_5      | INACTIVE    |              |                | Native        |
| BINARY_OUTPUT_7     | INACTIVE    |              |                | Native        |
| BINARY_OUTPUT_2     | INACTIVE    |              |                | Native        |
| BINARY_OUTPUT_1     | INACTIVE    |              |                | Native        |
| BINARY_OUTPUT_0     | INACTIVE    |              |                | Native        |
| BINARY_OUTPUT_3     | INACTIVE    |              |                | Native        |
| BINARY_OUTPUT_6     | INACTIVE    |              |                | Native        |
| BINARY_OUTPUT_5     | INACTIVE    |              |                | Native        |
| BINARY_OUTPUT_4     | INACTIVE    |              |                | Native        |
| CALENDAR_0          | False       |              |                | Native        |
| Device_0030de0a9c51 |             |              |                | Native        |
| FILE_9              |             | File         | 8 9            | Native        |
| FILE_8              |             | File         | 2 9            | Native        |
| FILE_2              |             | File         | 3 9            | Native        |
| FILE_3              |             | File         | 4 9            | Native        |
| FILE_4              |             | File         | 10 9           | Native        |
| FILE_10             |             | File         | 6 9            | Native        |
| FILE_6              |             | File         | 7 9            | Native        |
| FILE_7              |             | File         | 12 9           | Native        |
| FILE_12             |             | File         | 5 9            | Native        |
| FILE_5              |             | File         | 11 9           | Native        |
| FILE_11             |             | File         | 0 13           | Native        |
| SCHEDULE_0          | <null>      | Schedule     |                | Native        |

Task Status - Download Configuration

| Task                      | Status   | Message |
|---------------------------|----------|---------|
| DownloadConfigurationTask | RUNNING  | IDLE    |
| DownloadSymXMLFileTask    | FINISHED |         |
| DownloadOverrideFileTask  | RUNNING  |         |
| ResetDeviceTask           | WAITING  |         |

Abort Cancel Continue Download Configuration

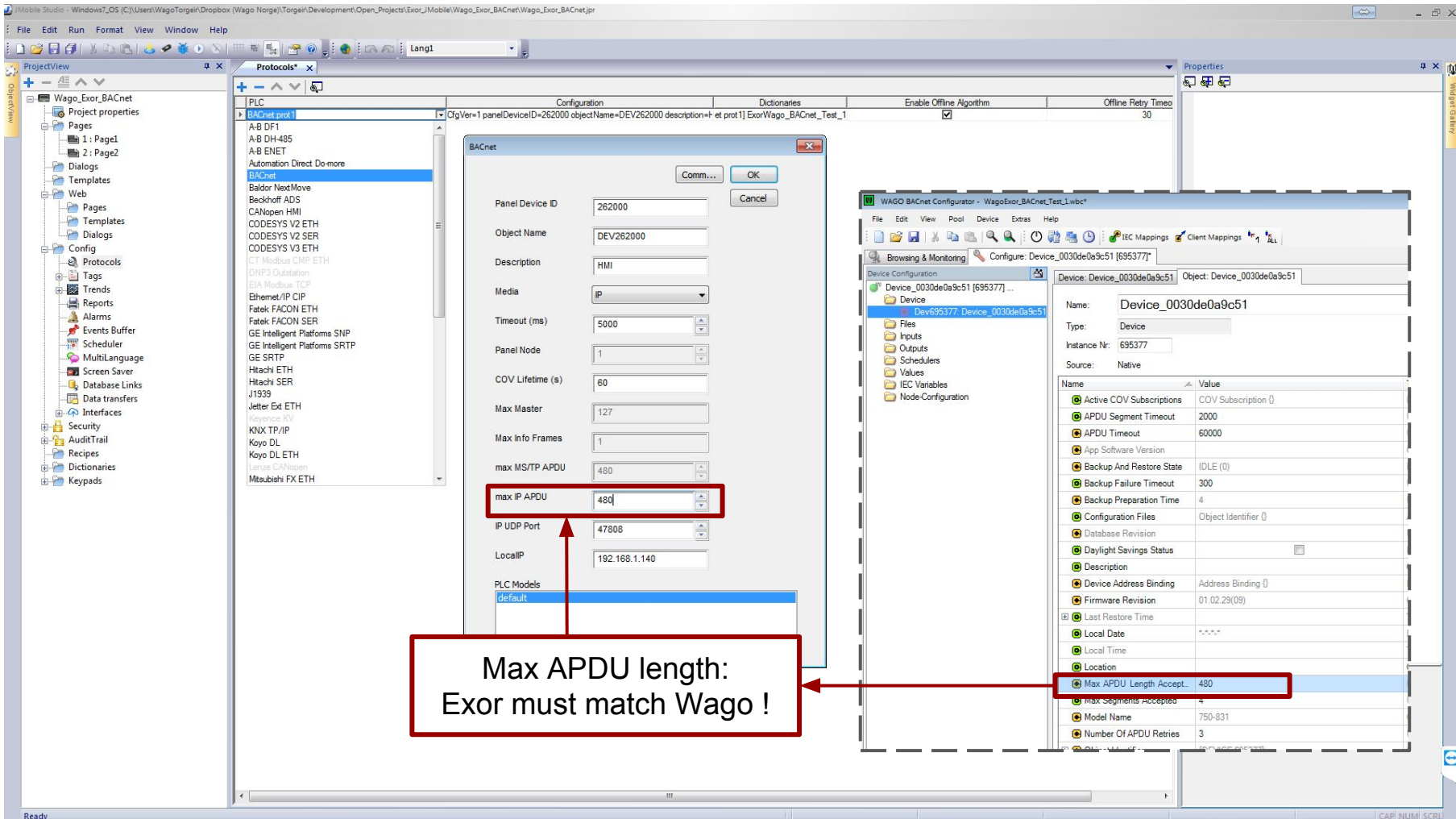
Exor

JMobile

&

BACnet Configurator





Max APDU length:  
Exor must match Wago !

Max APDU Length Accepted 480

ProjectView

- Wago\_Exor\_BACnet
  - Project Properties
  - Pages
    - 1: Page1
    - 2: Page2
  - Dialogs
  - Templates
  - Web
  - Config
  - Protocols
    - Indexed Tag Set
  - Tags
    - Trends
    - Reports
    - Alarms
    - Events Buffer
    - Scheduler
    - MultiLanguage
    - Screen Saver
    - Database Links
    - Data transfers
  - Interfaces
  - Security
  - AuditTrail
  - Recipes
  - Dictionaries
  - Keypads

Protocols\*

| Name                                   | Groups | Driver       | Address                             |
|----------------------------------------|--------|--------------|-------------------------------------|
| 695377/ANALOG_INPUT_0 [0]/Event_State  |        | BACnet.prot1 | 695377 AI 0 36-1 0 false unsignedIn |
| 695377/ANALOG_INPUT_0 [0]/Object_Ident |        | BACnet.prot1 | 695377 AI 0 75-1 0 false unsignedIn |

HMIStudio

Multiple tag importers are available for this protocol. Please select the importer type and continue.

| Version         | Type         |
|-----------------|--------------|
| BACnet EDE v1.0 | Linear       |
| BACnet EDE v1.0 | Hierarchical |

Tag Editor exported xml General

Data

- BACnet:prot1
  - Model: default
    - 695377
      - {ANALOG\_INPUT}
      - {ANALOG\_OUTPUT}
      - {ANALOG\_VALUE}
      - {BINARY\_INPUT}
      - {BINARY\_OUTPUT}
      - {CALENDAR}
      - {DEVICE}
      - {SCHEDULE}

BACnet importer - Options

The importer supports multiple schema for generating tag names. For files, you may want to use the *key name* rather than *obj name* base also want to compact your dictionary skipping some properties.

Do you want to continue?

Tag name generation schema

- use object name (default)
- use key name

Import filter

- skip importing properties with ASHRAE conformance code opti
- import all

Use *default* settings if you are unsure.

OK

BACnet importer - Select a file to open for EDE

Organize New folder

| Name                           | Date modified    | Type                | Size |
|--------------------------------|------------------|---------------------|------|
| Old                            | 05.11.2017 14:29 | File folder         |      |
| Orig                           | 13.10.2017 18:34 | File folder         |      |
| WagoExor_BACnet_Test_1_EDE.csv | 12.11.2017 22:51 | OpenOffice.org X... | 4 KB |

BACnet importer - Select a file to open for Object-Types

Organize New folder

| Name                                | Date modified    | Type                | Size |
|-------------------------------------|------------------|---------------------|------|
| Old                                 | 05.11.2017 14:29 | File folder         |      |
| Orig                                | 13.10.2017 18:34 | File folder         |      |
| WagoExor_BACnet_Test_1_EDE.csv      | 12.11.2017 22:51 | OpenOffice.org X... | 4 KB |
| WagoExor_BACnet_Test_1_ObjTypes.csv | 12.11.2017 22:51 | OpenOffice.org X... | 1 KB |

BACnet importer - Select a file to open for State-Texts

Organize New folder

| Name                                  | Date modified    | Type                | Size |
|---------------------------------------|------------------|---------------------|------|
| Old                                   | 05.11.2017 14:29 | File folder         |      |
| Orig                                  | 13.10.2017 18:34 | File folder         |      |
| WagoExor_BACnet_Test_1_EDE.csv        | 12.11.2017 22:51 | OpenOffice.org X... | 4 KB |
| WagoExor_BACnet_Test_1_ObjTypes.csv   | 12.11.2017 22:51 | OpenOffice.org X... | 1 KB |
| WagoExor_BACnet_Test_1_StateTexts.csv | 12.11.2017 22:51 | OpenOffice.org X... | 1 KB |

BACnet importer - Select a file to open for Unit-Texts

Organize New folder

| Name                                  | Date modified    | Type                | Size |
|---------------------------------------|------------------|---------------------|------|
| Old                                   | 05.11.2017 14:29 | File folder         |      |
| Orig                                  | 13.10.2017 18:34 | File folder         |      |
| WagoExor_BACnet_Test_1_EDE.csv        | 12.11.2017 22:51 | OpenOffice.org X... | 4 KB |
| WagoExor_BACnet_Test_1_ObjTypes.csv   | 12.11.2017 22:51 | OpenOffice.org X... | 1 KB |
| WagoExor_BACnet_Test_1_StateTexts.csv | 12.11.2017 22:51 | OpenOffice.org X... | 1 KB |
| WagoExor_BACnet_Test_1_Units.csv      | 12.11.2017 22:51 | OpenOffice.org X... | 9 KB |

BACnet importer - I...

268 Tags added

OK

ProjectView

- Wago\_Exor\_BACnet
  - Project Properties
  - Pages
    - 1: Page1
    - 2: Page2
  - Dialogs
  - Templates
  - Web
    - Pages
    - Templates
    - Dialogs
  - Config
    - Protocols
    - Tags
      - Trends
      - Reports
      - Alarms
      - Events Buffer
      - Scheduler
      - Multilingual
      - Screen Saver
      - Database Links
      - Data transfers
    - Interfaces
    - Security
    - Audit Trail
    - Recipes
    - Dictionaries
    - Keypads

Protocols Tags\* x

BACnet prot.1

| Name                                                  | PLC Tag Name                                               | Groups | Driver        | Address /                                     |
|-------------------------------------------------------|------------------------------------------------------------|--------|---------------|-----------------------------------------------|
| 695377/Device_0030de0a3c51 [695377]/system_status     | BACnet prot.1 uid0:695377/Device_0030de0a3c51 [695377]/S   |        | BACnet prot.1 | 695377 DEV 695377 112-1 0 false unsignedInt   |
| 695377/Device_0030de0a3c51 [695377]/Vendor_Identifier | BACnet prot.1 uid0:695377/Device_0030de0a3c51 [695377]/V   |        | BACnet prot.1 | 695377 DEV 695377 120-1 0 false unsignedSho   |
| 695377/Device_0030de0a3c51 [695377]/Vendor_Name       | BACnet prot.1 uid0:695377/Device_0030de0a3c51 [695377]/V   |        | BACnet prot.1 | 695377 DEV 695377 121-1 0 false string [64]   |
| 695377/SCHEDULE_0 [0]/Description                     | BACnet prot.1 uid0:695377/SCHEDULE_0 [0]/Description       |        | BACnet prot.1 | 695377 Schedule 0 28-1 0 false string [64]    |
| 695377/SCHEDULE_0 [0]/Effective_Period                | BACnet prot.1 uid0:695377/SCHEDULE_0 [0]/Effective_Period  |        | BACnet prot.1 | 695377 Schedule 0 32-1 0 false jsonDateRange  |
| 695377/SCHEDULE_0 [0]/Exception_Schedule              | BACnet prot.1 uid0:695377/SCHEDULE_0 [0]/Exception_Schec   |        | BACnet prot.1 | 695377 Schedule 0 38-1 0 false jsonExceptionS |
| 695377/SCHEDULE_0 [0]/Object_Identifier               | BACnet prot.1 uid0:695377/SCHEDULE_0 [0]/Object_Identifier |        | BACnet prot.1 | 695377 Schedule 0 75-1 0 false unsignedInt    |
| 695377/SCHEDULE_0 [0]/Object_Name                     | BACnet prot.1 uid0:695377/SCHEDULE_0 [0]/Object_Name       |        | BACnet prot.1 | 695377 Schedule 0 77-1 0 false string [64]    |
| 695377/SCHEDULE_0 [0]/Object_Type                     | BACnet prot.1 uid0:695377/SCHEDULE_0 [0]/Object_Type       |        | BACnet prot.1 | 695377 Schedule 0 79-1 0 false unsignedInt    |
| 695377/SCHEDULE_0 [0]/Out_Of_Service                  | BACnet prot.1 uid0:695377/SCHEDULE_0 [0]/Out_Of_Service    |        | BACnet prot.1 | 695377 Schedule 0 81-1 0 false boolean        |
| 695377/SCHEDULE_0 [0]/Present_Value                   | BACnet prot.1 uid0:695377/SCHEDULE_0 [0]/Present_Value     |        | BACnet prot.1 | 695377 Schedule 0 85-1 0 false double         |
| 695377/SCHEDULE_0 [0]/Schedule_Default                | BACnet prot.1 uid0:695377/SCHEDULE_0 [0]/Schedule_Defaul   |        | BACnet prot.1 | 695377 Schedule 0 174-1 0 false jsonAnyType   |
| 695377/SCHEDULE_0 [0]/Weekly_Schedule                 | BACnet prot.1 uid0:695377/SCHEDULE_0 [0]/Weekly_Schedul    |        | BACnet prot.1 | 695377 Schedule 0 123-1 0 false jsonWeeklySc  |

Properties

| Property                                                              | Value |
|-----------------------------------------------------------------------|-------|
| <i>Too many items selected.<br/>Can only show one item at a time.</i> |       |

Recursive Search Filter by: Data

Data Type

- BACnet prot.1
  - Model: default
    - [ANALOG\_INPUT]
      - [ANALOG\_INPUT\_0 [0]]
        - Event\_State Struct: AnalogInput
        - Object\_Identifier BACnetEventState
        - Object\_Name BACnetObjectIdentifier
        - Object\_Type CharacterString
        - Out\_Of\_Service BACnetObjectType
        - Present\_Value BOOLEAN
        - Status\_Flags REAL
        - Units BACnetStatusFlags
      - [ANALOG\_INPUT\_1 [1]]
        - Event\_State Struct: AnalogInput
        - Object\_Identifier BACnetEventState
        - Object\_Name BACnetObjectIdentifier
        - Object\_Type CharacterString
        - Out\_Of\_Service BACnetObjectType
        - Present\_Value BOOLEAN
        - Status\_Flags REAL
        - Units BACnetStatusFlags
      - [ANALOG\_INPUT\_2 [2]]
        - Event\_State Struct: AnalogInput
        - Object\_Identifier BACnetEventState
        - Object\_Name BACnetObjectIdentifier
        - Object\_Type CharacterString
        - Out\_Of\_Service BACnetObjectType
        - Present\_Value BOOLEAN
        - Status\_Flags REAL
        - Units BACnetStatusFlags
      - [ANALOG\_INPUT\_3 [3]]
        - Event\_State Struct: AnalogInput
        - Object\_Identifier BACnetEventState
        - Object\_Name BACnetObjectIdentifier
        - Object\_Type CharacterString
        - Out\_Of\_Service BACnetObjectType
        - Present\_Value BOOLEAN
        - Status\_Flags REAL
        - Units BACnetStatusFlags

ProjectView

- Wago\_Exor\_BACnet
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    - Screen Saver
    - Database Links
    - Data transfers
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    - AuditTrail
  - Recipes
  - Dictionaries
  - Keypads

Protocols Tags\* x

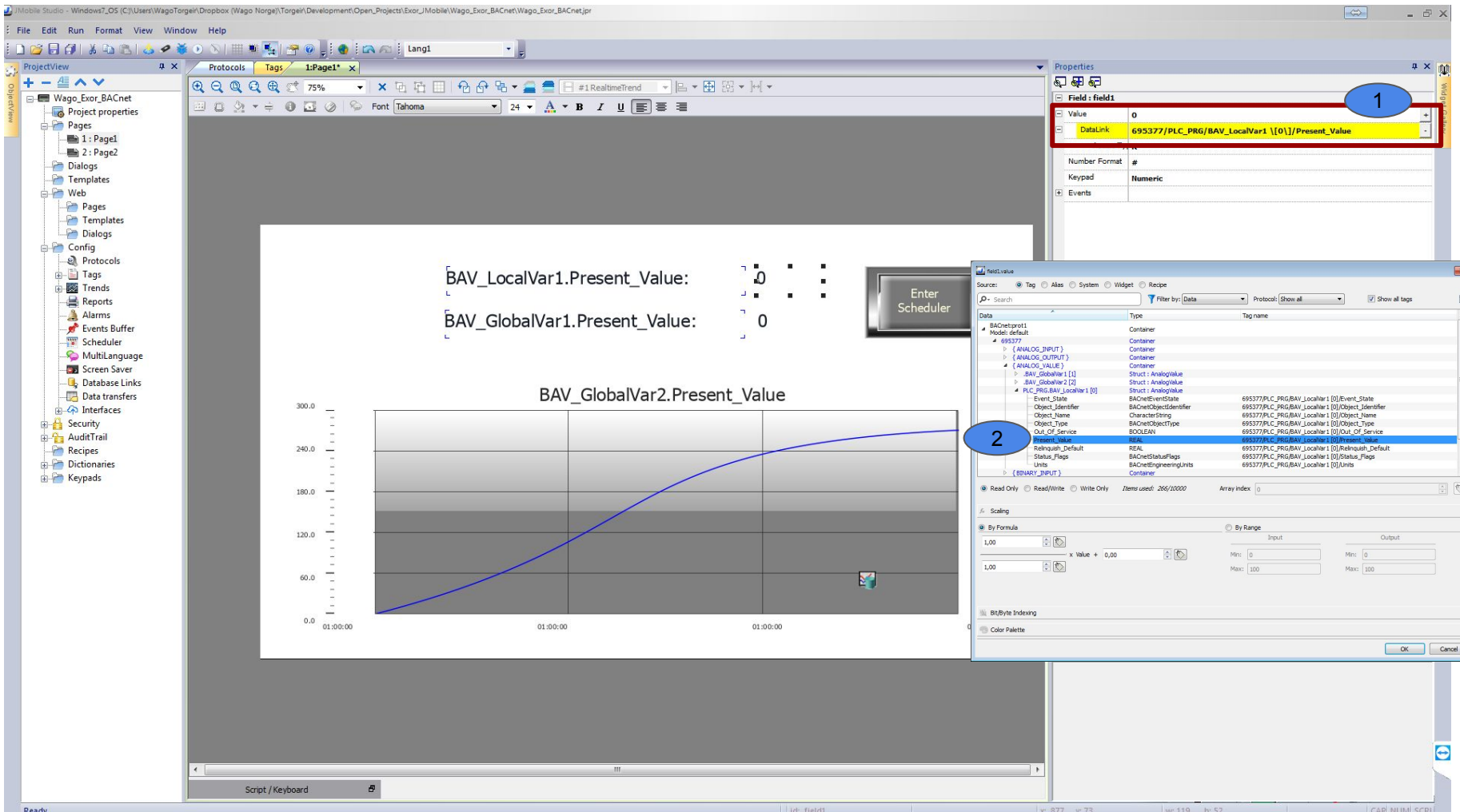
BACnet prot.1

| Address                                          | Encoding | Comment | Rate   | R/W | Active | Simul     |
|--------------------------------------------------|----------|---------|--------|-----|--------|-----------|
| 77 DEV 695377 12-1 0 false string [64]           | UTF-8    |         | 500    | R   | false  | Variables |
| 77 DEV 695377 155-1 0 false unsignedInt          |          |         | 500    | R   | false  | Variables |
| 77 DEV 695377 44-1 0 false string [64]           | UTF-8    |         | 500    | R   | false  | Variables |
| 77 DEV 695377 62-1 0 false unsignedInt           |          |         | 500    | R   | false  | Variables |
| 77 DEV 695377 70-1 0 false string [64]           | UTF-8    |         | 500    | R   | false  | Variables |
| 77 DEV 695377 73-1 0 false unsignedInt           |          |         | 500    | R   | false  | Variables |
| 77 DEV 695377 75-1 0 false unsignedInt           |          |         | 500    | R   | false  | Variables |
| 77 DEV 695377 77-1 0 false string [64]           | UTF-8    |         | 500    | R   | false  | Variables |
| 77 DEV 695377 79-1 0 false unsignedInt           |          |         | 500    | R   | false  | Variables |
| 77 DEV 695377 96-1 0 false boolean [24]          |          |         | 500    | R   | false  | Variables |
| 77 DEV 695377 139-1 0 false unsignedInt          |          |         | 500    | R   | false  | Variables |
| 77 DEV 695377 97-1 0 false boolean [39]          |          |         | 500    | R   | false  | Variables |
| 77 DEV 695377 98-1 0 false unsignedInt           |          |         | 500    | R   | false  | Variables |
| 77 DEV 695377 107-1 0 false unsignedInt          |          |         | 500    | R   | false  | Variables |
| 77 DEV 695377 112-1 0 false unsignedInt          |          |         | 500    | R   | false  | Variables |
| 77 DEV 695377 120-1 0 false unsignedShort        |          |         | 500    | R   | false  | Variables |
| 77 DEV 695377 121-1 0 false string [64]          | UTF-8    |         | 500    | R   | false  | Variables |
| 77 Schedule 0 28-1 0 false string [64]           | UTF-8    |         | 500    | R   | false  | Variables |
| 77 Schedule 0 32-1 0 false jsonDateRange         |          |         | Manual | R   | false  | Variables |
| 77 Schedule 0 38-1 0 false jsonExceptionSchedule |          |         | Manual | R   | false  | Variables |
| 77 Schedule 0 75-1 0 false unsignedInt           |          |         | 500    | R   | false  | Variables |
| 77 Schedule 0 77-1 0 false string [64]           |          |         | 500    | R   | false  | Variables |
| 77 Schedule 0 79-1 0 false unsignedInt           | UTF-8    |         | 500    | R   | false  | Variables |
| 77 Schedule 0 81-1 0 false boolean               |          |         | 500    | R   | false  | Variables |
| 77 Schedule 0 85-1 0 false double                |          |         | Manual | R   | false  | Variables |
| 77 Schedule 0 174-1 0 false jsonAnyType          |          |         | Manual | R   | false  | Variables |
| 77 Schedule 0 123-1 0 false jsonWeeklySchedule   |          |         | Manual | R/W | false  | Variables |

Recursive Search Filter by: Data

| Data                            | Type                                |
|---------------------------------|-------------------------------------|
| Number_Of_APDU_Retries          | Unsigned                            |
| Object_Identifier               | BACnetObjectIdentifier              |
| Object_Name                     | CharacterString                     |
| Object_Type                     | BACnetObjectType                    |
| Protocol_Object_Types_Supported | BACnetObjectTypesSupported          |
| Protocol_Revision               | Unsigned                            |
| Protocol_Services_Supported     | BACnetServicesSupported             |
| Protocol_Version                | Unsigned                            |
| Segmentation_Supported          | BACnetSegmentation                  |
| System_Status                   | BACnetDeviceStatus                  |
| Vendor_Identifier               | Unsigned16                          |
| Vendor_Name                     | CharacterString                     |
| └ ( SCHEDULE_0 )                | Container                           |
| └ SCHEDULE_0 [0]                | Object : Schedule                   |
| └ Description                   | CharacterString                     |
| └ Effective_Period              | BACnetDateRange                     |
| └ Exception_Schedule            | BACnetARRAY[8]ofBACnetSpecialEvent  |
| └ Object_Identifier             | BACnetObjectIdentifier              |
| └ Object_Name                   | CharacterString                     |
| └ Object_Type                   | BACnetObjectType                    |
| └ Out_Of_Service                | BOOLEAN                             |
| └ Present_Value                 | Double                              |
| └ Schedule_Revision             | Unsigned                            |
| └ Weekly_Schedule               | BACnetARRAY[7]ofBACnetDailySchedule |

| Property                | Value                                               |
|-------------------------|-----------------------------------------------------|
| Tag name                | 695377/SCHEDULE_0 [0]/Weekly_Schedule               |
| Device id               | 695377                                              |
| Object instance         | 0                                                   |
| Object name             | SCHEDULE_0                                          |
| Property ASHRAE conf... | R                                                   |
| Property name           | Weekly_Schedule                                     |
| Property code           | 123                                                 |
| R/W                     | R                                                   |
| BACnet type             | BACnetARRAY[7]ofBACnetDailySchedule                 |
| Data type               | jsonWeeklySchedule                                  |
| Tag URI                 | 695377/Schedule?0?123?-1?0?false?jsonWeeklySchedule |
| Dictionary name         | [BACnet prot.1] WagoExor_BACnet_Test_1_EDE          |



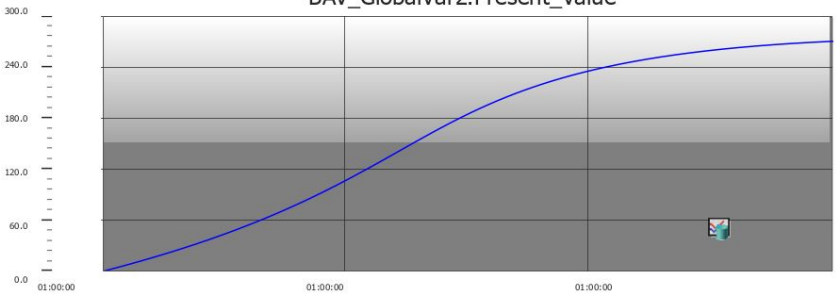
1

2

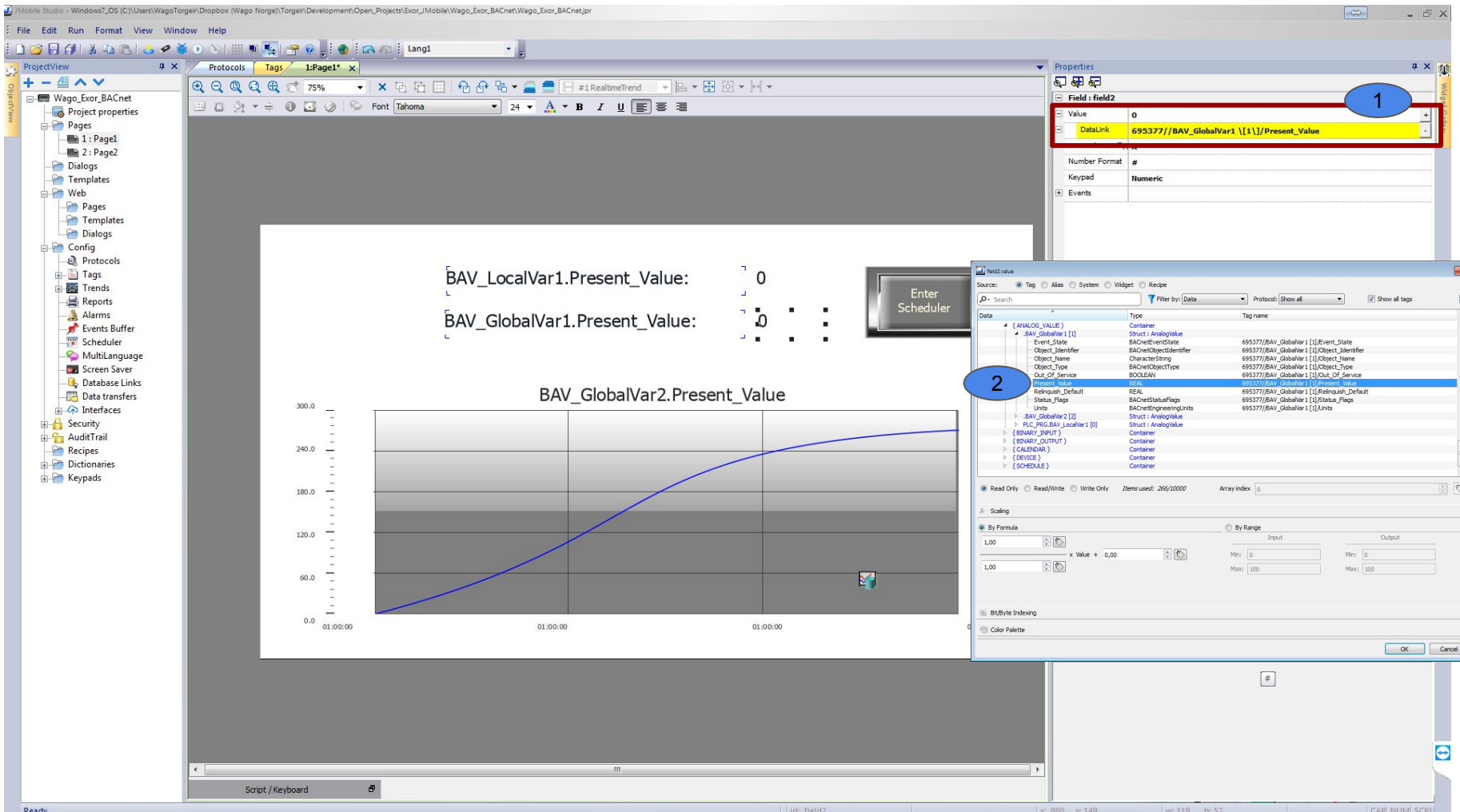
BAV\_LocalVar1.Present\_Value: 0  
BAV\_GlobalVar1.Present\_Value: 0

Enter Scheduler

BAV\_GlobalVar2.Present\_Value



Read Value dialog box showing a tree view of BACnet objects. The selected object is 'Present\_Value' (REAL) with tag name '695377/PLC\_PRG/BAV\_LocalVar1.[0]]/Present\_Value'. The dialog includes options for Read Only, Read/Write, Write Only, and Scaling (By Formula or By Range).



Mobile Studio - Windows\_OS (C:\Users\WagoTorgein\Dropbox (Wago Norge)\Torgein\Development\Open\_Projects\Exor\_Mobile\Wago\_Exor\_BACnet\Wago\_Exor\_BACnet.jr

File Edit Run Format View Window Help

Lang1

ProjectView

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    - Screen Saver
    - Database Links
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    - Security
    - AuditTrail
    - Recipes
    - Dictionaries
    - Keypads

Protocols Tags 1:Page1\* x

#1 RealtimeTrend

Font Tahoma 24

BAV\_LocalVar1.Present\_Value: 0

BAV\_GlobalVar1.Present\_Value: 0

Enter Scheduler

BAV\_GlobalVar2.Present\_Value

Properties

Trend : RealtimeTrend

- Num Curves: 1
- Page Duration: 1 min
- Y Page Size: 300
- Starting position: Right
- Behavior
- X Labels: 4
- Y Labels: 6
- Background Image: true
- Grid
- Cursor
- X Scale
- Y Scale
- Curve 1
  - Curve 1 Value: 0
  - DataLink: 695377//BAV\_GlobalVar2 [2]//Present\_Value

1

Trends/ConfigureTrend

Source: Tag Alias System Widget Recipe

Filter by: Data Protocol: Show all Show all tags

| Data                      | Type                   | Tag name                                      |
|---------------------------|------------------------|-----------------------------------------------|
| BACnetprot1               | Container              |                                               |
| Model: default            | Container              |                                               |
| 695377                    | Container              |                                               |
| [ ANALOG_INPUT ]          | Container              |                                               |
| [ ANALOG_OUTPUT ]         | Container              |                                               |
| [ ANALOG_VALUE ]          | Container              |                                               |
| BAV_GlobalVar1 [1]        | Struct: AnalogValue    |                                               |
| BAV_GlobalVar1 [2]        | Struct: AnalogValue    |                                               |
| Event_State               | BACnetEventState       | 695377//BAV_GlobalVar2 [2]//Event_State       |
| Object_Identifier         | BACnetObjectIdentifier | 695377//BAV_GlobalVar2 [2]//Object_Identifier |
| Object_Name               | CharacterString        | 695377//BAV_GlobalVar2 [2]//Object_Name       |
| Object_Type               | BACnetObjectType       | 695377//BAV_GlobalVar2 [2]//Object_Type       |
| Out_Of_Service            | BOOL                   | 695377//BAV_GlobalVar2 [2]//Out_Of_Service    |
| Present_Value             | REAL                   | 695377//BAV_GlobalVar2 [2]//Present_Value     |
| Reinquiry_Default         | REAL                   | 695377//BAV_GlobalVar2 [2]//Reinquiry_Default |
| Status_Flags              | BACnetStatusFlags      | 695377//BAV_GlobalVar2 [2]//Status_Flags      |
| Units                     | BACnetEngineeringUnits | 695377//BAV_GlobalVar2 [2]//Units             |
| PLC_PRG_BAV_LocalVar1 [0] | Container              |                                               |
| [ RETRY_DEFAULT ]         | Container              |                                               |

2

Read Only Read/Write Write Only Items used: 266/20000 Array index: 0

Scaling

By Formula:  $x \text{ value} + 0,00$

By Range

Input: 1,00 Output: 1,00

Min: 0 Max: 100

Min: 0 Max: 100

BitByte Indexing Color Palette

OK Cancel

Script / Keyboard

Ready

jd: RealtimeTrend

x: -108 y: 280

w: 1411 h: 467

CAP1 NUM SCRL

ProjectView

- Wago\_Exor\_BACnet
  - Project properties
  - Pages
    - 1: Page1
    - 2: Page2
  - Dialogs
  - Templates
  - Web
    - Pages
    - Templates
    - Dialogs
  - Config
    - Protocols
    - Tags
    - Trends
    - Reports
    - Alarms
    - Events Buffer
    - Scheduler
    - MultiLanguage
    - Screen Saver
    - Database Links
    - Data transfers
  - Interfaces
  - Security
  - AuditTrail
  - Recipes
  - Dictionaries
  - Keypads

Protocols Tags 1:Page1 2:Page2\*

#1BACNSched

Page2 > BACNSched > BACNSched.rightWeekBtn

Default Value: 99999

|       | MON | TUE | WED | THU | FRI | SAT | SUN |
|-------|-----|-----|-----|-----|-----|-----|-----|
| 00:00 |     |     |     |     |     |     |     |
| 04:00 |     |     |     |     |     |     |     |
| 08:00 |     |     |     |     |     |     |     |
| 12:00 |     |     |     |     |     |     |     |
| 16:00 |     |     |     |     |     |     |     |
| 20:00 |     |     |     |     |     |     |     |

< 06/11/2017 - 12/11/2017 >

New Clear All Refresh

Properties

BACNScheduler : BACNSched.scheduler

|                      |                                         |
|----------------------|-----------------------------------------|
| Date Shown           | 1509922800                              |
| Value-color-text map |                                         |
| BACNet Properties    |                                         |
| Weekly_Schedule      |                                         |
| DataLink             | 695377/SCHEDULE_0 \[0\]/Weekly_Schedule |
| Access Type          | R/W                                     |
| Exception_Schedule   |                                         |
| Type                 | Enum(Bin/MState)                        |
| BACNet Cal. Ref 0    |                                         |
| BACNet Cal. Ref 1    |                                         |
| Graphic              |                                         |
| Header               |                                         |
| Text                 |                                         |

BACNSched.scheduler-weeklySchedule

Source: Tag Alias System Widget Recipe

Filter by: Data Protocol: Show all Show all tags

| Data               | Type                                | Tag name                                |
|--------------------|-------------------------------------|-----------------------------------------|
| { ANALOG_OUTPUT }  | Container                           |                                         |
| { ANALOG_VALUE }   | Container                           |                                         |
| { BINARY_INPUT }   | Container                           |                                         |
| { BINARY_OUTPUT }  | Container                           |                                         |
| { CALENDAR }       | Container                           |                                         |
| { DEVICE }         | Container                           |                                         |
| { SCHEDULE }       | Container                           |                                         |
| * SCHEDULE_0 [0]   | Object: Schedule                    |                                         |
| Description        | CharacterString                     | 695377/SCHEDULE_0 [0]Description        |
| Effective_Period   | BACnetDateRange                     | 695377/SCHEDULE_0 [0]Effective_Period   |
| Exception_Schedule | BACnetBINARYInputBACnetSpecialEvent | 695377/SCHEDULE_0 [0]Exception_Schedule |
| Object_Identifier  | BACnetObjectIdentifier              | 695377/SCHEDULE_0 [0]Object_Identifier  |
| Object_Name        | CharacterString                     | 695377/SCHEDULE_0 [0]Object_Name        |
| Object_Type        | BACnetObjectType                    | 695377/SCHEDULE_0 [0]Object_Type        |
| Out_Of_Service     | BOOLEAN                             | 695377/SCHEDULE_0 [0]Out_Of_Service     |
| Present_Value      | DOUBLE                              | 695377/SCHEDULE_0 [0]Present_Value      |
| Schedule_Default   | Any                                 | 695377/SCHEDULE_0 [0]Schedule_Default   |
| Weekly_Schedule    | BACnetARRAY1ofBACnetDailySchedule   | 695377/SCHEDULE_0 [0]Weekly_Schedule    |

Read On Read/Write Write Only Items used: 266/10000 Array index: 0

Scaling

By Formula By Range

1,00 x Value + 0,00 Min: 0 Max: 100

Input Output

Min: 0 Max: 100

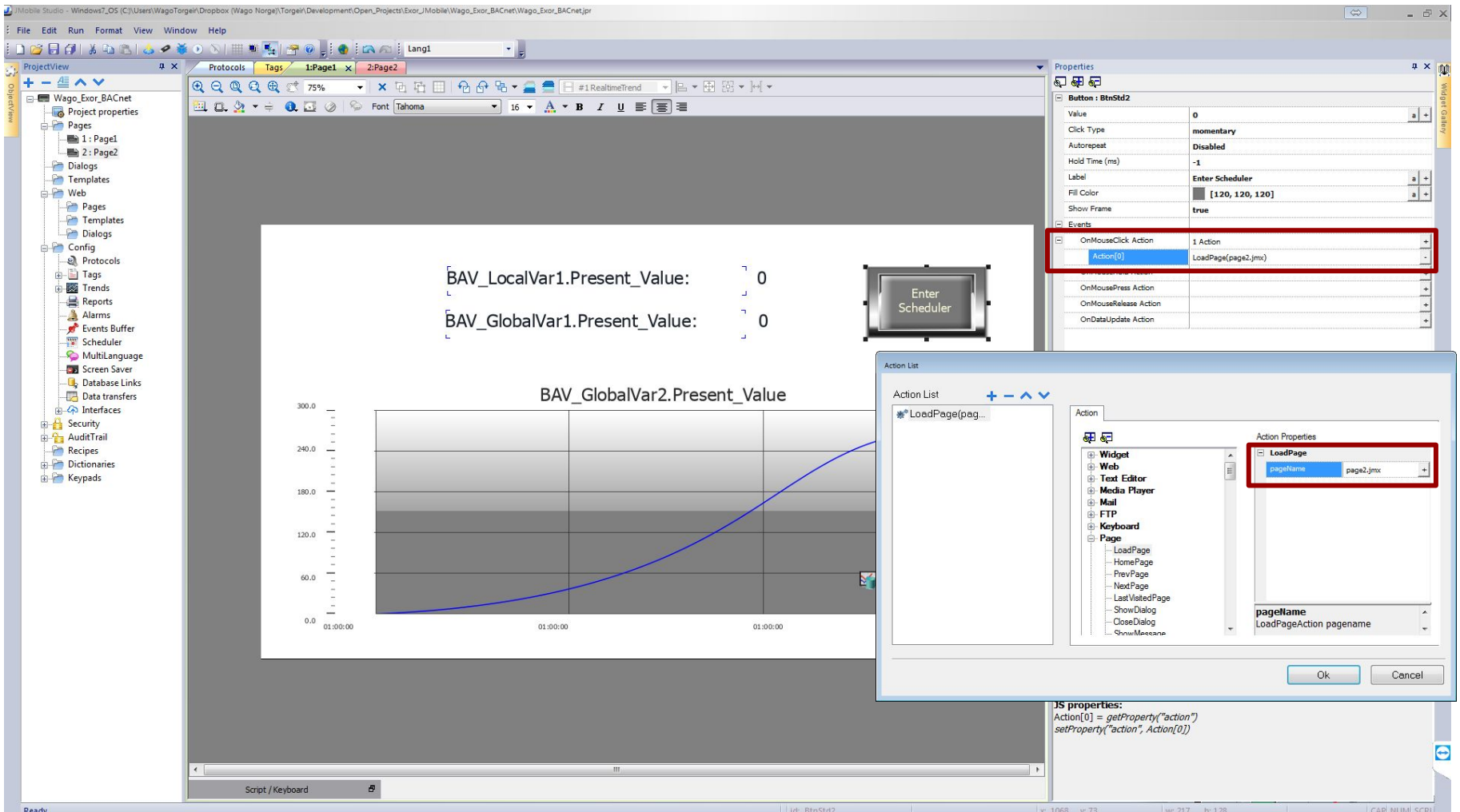
Min: 0 Max: 100

BitByte Indexing

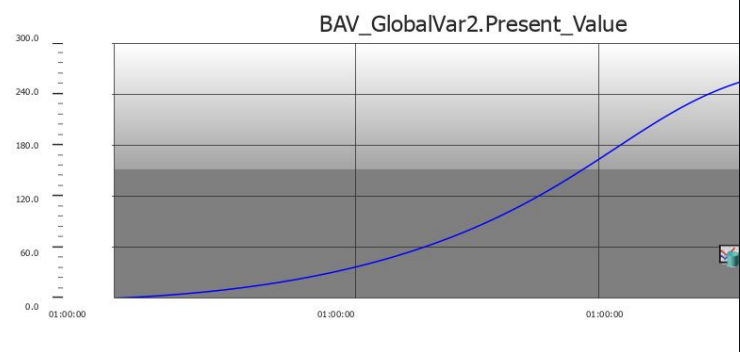
Color Palette

OK Cancel





BAV\_LocalVar1.Present\_Value: 0  
BAV\_GlobalVar1.Present\_Value: 0



| Button : BtnStd2      |                     |
|-----------------------|---------------------|
| Value                 | 0                   |
| Click Type            | momentary           |
| Autorepeat            | Disabled            |
| Hold Time (ms)        | -1                  |
| Label                 | Enter Scheduler     |
| Fill Color            | [120, 120, 120]     |
| Show Frame            | true                |
| Events                |                     |
| OnMouseClicked Action | 1 Action            |
| Action[0]             | LoadPage(page2.jmx) |
| OnMousePress Action   |                     |
| OnMouseRelease Action |                     |
| OnDataUpdate Action   |                     |

Action List

LoadPage(page2.jmx)

Action Properties

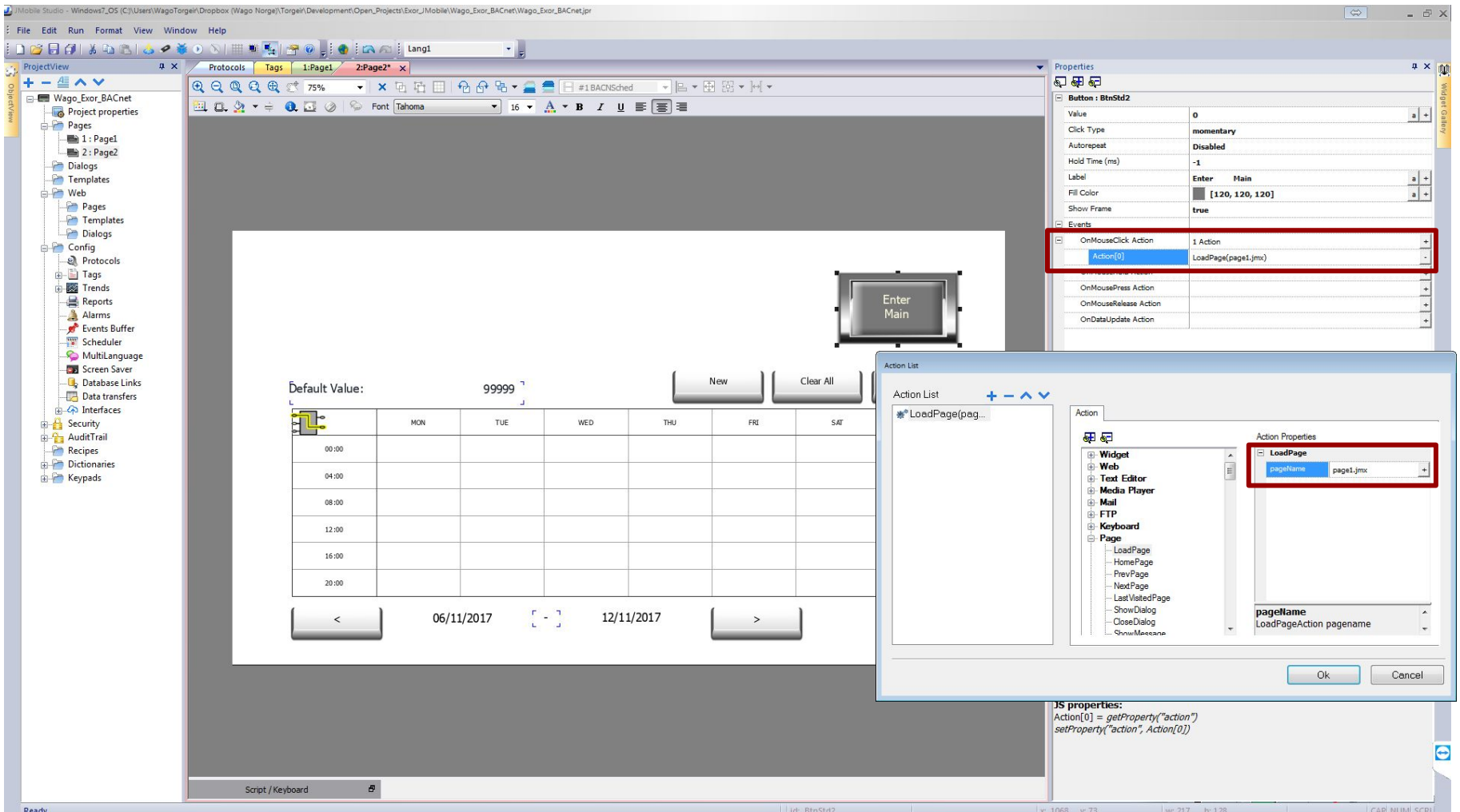
LoadPage

pageName: page2.jmx

pageName: LoadPageAction.pageName

Ok Cancel

```
JS properties:  
Action[0] = getProperty("action")  
setProperty("action", Action[0])
```



File Edit View  
Download To Target... Ctrl+D

ProjectView  
Web Project Settings...  
Start Simulator  
Stop Simulator  
Templates  
Web  
Pages  
Templates  
Dialogs  
Config  
Protocols  
Tags  
Trends  
Reports  
Alarms  
Events Buffer  
Scheduler  
MultiLanguage  
Screen Saver  
Database Links  
Data transfers  
Interfaces  
Security  
AuditTrail  
Recipes  
Dictionaries  
Keypads

Download to Target

Ready to download

192.168.1.140

Download Close

Advanced

- Download only changes
- Binary format
- Delete runtime dynamic files
- Download Web Project

Download to Target

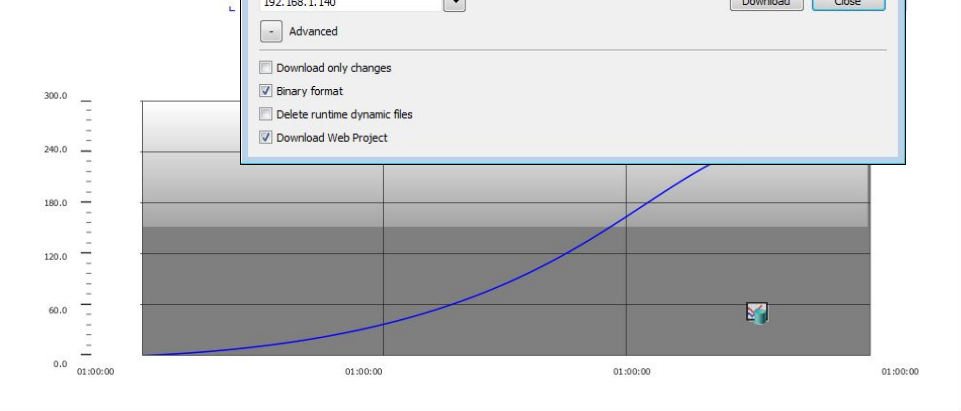
Download completed

192.168.1.140

Download Close

Advanced

- Download only changes
- Binary format
- Delete runtime dynamic files
- Download Web Project



Properties

Page : Page1

|            |                 |
|------------|-----------------|
| Width      | 1366            |
| Height     | 768             |
| Background | [255, 255, 255] |
| Template   | none            |

Events

|                     |  |
|---------------------|--|
| OnActivate Action   |  |
| OnDeactivate Action |  |
| OnWheel Action      |  |

Device Pools

- Database (1)
  - Device\_0030de0a9c51 [695377] ...
    - Device
    - Files
    - Inputs
    - Outputs
    - Schedulers
    - Values
- Import (0)
- Scan (2)
  - DEV262000 [262000]
    - Device
      - Dev262000 DEV262000
      - Device\_0030de0a9c51 [695377]

Scan Device: DEV262000 Object: DEV262000

Name: DEV262000  
 Type: Device  
 Instance Nr: 262000  
 Source: Native

Show Values  
 Monitored Values  
 Edited Values  
 Commit Values Clear

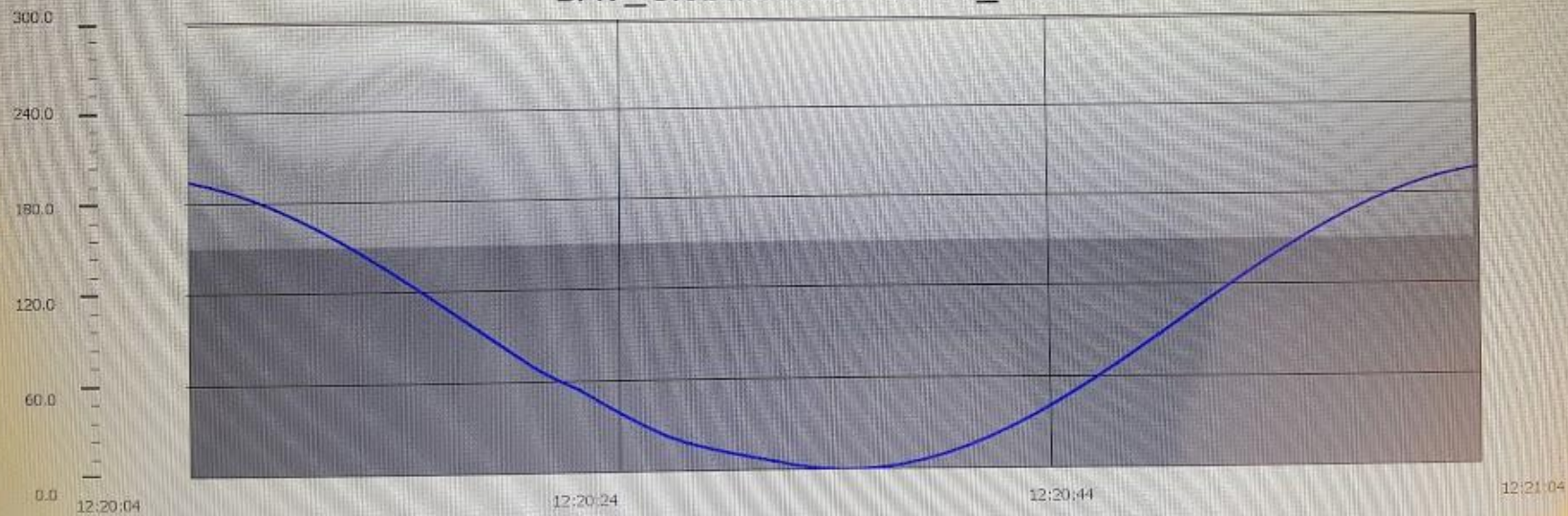
| Name                    | Value                                   | Type                           | Opt | Priority | Status |
|-------------------------|-----------------------------------------|--------------------------------|-----|----------|--------|
| Active COV Subscri...   | COV Subscription (0)                    | List: COV Subscription         |     |          |        |
| APDU Timeout            | 5000                                    | Unsigned                       |     |          |        |
| App Software Version    | 1.0                                     | CharString                     |     |          |        |
| Database Revision       | 2                                       | Unsigned                       |     |          |        |
| Daylight Savings Sta... |                                         | Bool                           |     |          |        |
| Description             | HMI                                     | CharString                     |     |          |        |
| Device Address Bind...  | Address Binding (1)                     | List: Address Binding          |     |          |        |
| [1]                     | {DEVICE:695377} / 0.192.168.1.136-ba... | Address Binding                |     |          |        |
| Address                 | 0.192.168.1.136-bac0                    | Address                        |     |          |        |
| MacAddress              | COA80188BAC0                            | Octet String                   |     |          |        |
| Network Number          | 0                                       | Unsigned                       |     |          |        |
| ObjectID                | {DEVICE:695377}                         | Object Identifier              |     |          |        |
| InstanceNumber          | 695377                                  | Unsigned                       |     |          |        |
| Type                    | DEVICE (8)                              | Enum: Object Type              |     |          |        |
| Firmware Revision       | 0.7.1                                   | CharString                     |     |          |        |
| Local Date              | Sunday, November 12, 2017               | Date                           |     |          |        |
| Local Time              | 23:15:47.19                             | Time                           |     |          |        |
| Location                | Not set                                 | CharString                     |     |          |        |
| Max APDU Length A...    | 480                                     | Unsigned                       |     | 0: None  |        |
| Model Name              | UniOP Series 500 HMI                    | CharString                     |     |          |        |
| Number Of APDU R...     | 3                                       | Unsigned                       |     |          |        |
| Object Identifier       | {DEVICE:262000}                         | Object Identifier              |     |          |        |
| Object List             | Object Identifier (1)                   | Array: Object Identifier       |     |          |        |
| [1]                     | {DEVICE:262000}                         | Object Identifier              |     |          |        |
| InstanceNumber          | 262000                                  | Unsigned                       |     |          |        |
| Type                    | DEVICE (8)                              | Enum: Object Type              |     |          |        |
| Object Name             | DEV262000                               | CharString                     |     |          |        |
| Object Type             | DEVICE (8)                              | Enum: Object Type              |     |          |        |
| Prot Objects Suppo...   | DEVICE                                  | Bit String: Types supported    |     |          |        |
| Prot Services Suppo...  | READ_PROPERTY, READ_PROPERT...          | Bit String: Services suppor... |     |          |        |
| Prot Version            | 1                                       | Unsigned                       |     |          |        |
| Protocol Revision       | 10                                      | Unsigned                       |     |          |        |
| Segmentation Supp...    | NO_SEGMENTATION (3)                     | Enum: Segmentation Sup...      |     |          |        |
| System Status           | OPERATIONAL (0)                         | Enum: Device Status            |     |          |        |
| UTC Offset              | 0                                       | Signed                         |     |          |        |
| Vendor Identifier       | 262                                     | Unsigned                       |     |          |        |

BAV\_LocalVar1.Present\_Value: 5024480

BAV\_GlobalVar1.Present\_Value: 5025432



BAV\_GlobalVar2.Present\_Value



Enter  
Main

New

Clear All

Refresh

Default Value:

1

|       | MON |                             | FRI | SAT | SUN |
|-------|-----|-----------------------------|-----|-----|-----|
|       |     | <b>Select type of event</b> |     |     |     |
| 00:00 |     | <b>Weekly</b>               |     |     |     |
| 04:00 |     | Monday                      |     |     |     |
| 08:00 |     | <b>Weekly</b>               |     |     |     |
| 12:00 |     |                             |     |     |     |
| 16:00 |     |                             |     |     |     |
| 20:00 |     |                             |     |     |     |

<

06/11/2017

-

12/11/2017

>

Enter Main

Default Value:

1

New

Clear All

Refresh

|       | MON   | Event Type: Weekly | FRI | SAT | SUN |
|-------|-------|--------------------|-----|-----|-----|
| 00:00 |       |                    |     |     |     |
| 04:00 |       |                    |     |     |     |
| 08:00 | 07:00 |                    |     |     |     |
| 12:00 |       |                    |     |     |     |
| 16:00 |       |                    |     |     |     |
| 20:00 |       |                    |     |     |     |

Event Type: Weekly

From 07:00

Value 1

AM PM

Cancel Prev OK

<

06/11/2017

-

12/11/2017

>

Enter  
Main

Default Value:

1

New

Clear All

Refresh

|       | MON | TUE | WED | THU | FRI | SAT | SUN |
|-------|-----|-----|-----|-----|-----|-----|-----|
| 00:00 |     |     |     |     |     |     |     |
| 04:00 |     |     |     |     |     |     |     |
| 08:00 |     |     |     |     |     |     |     |
| 12:00 |     |     |     |     |     |     |     |
| 16:00 |     |     |     |     |     |     |     |
| 20:00 |     |     |     |     |     |     |     |

Event Type: Weekly

From 17:00

Value null

Cancel Prev OK

<

06/11/2017

-

12/11/2017

>



Enter  
Main

Default Value:

1

New

Clear All

Refresh

|       | MON           | TUE | WED | THU | FRI | SAT | SUN |
|-------|---------------|-----|-----|-----|-----|-----|-----|
| 00:00 |               |     |     |     |     |     |     |
| 04:00 |               |     |     |     |     |     |     |
| 08:00 | 16 09:00<br>1 |     |     |     |     |     |     |
| 12:00 |               |     |     |     |     |     |     |
| 16:00 |               |     |     |     |     |     |     |
| 20:00 |               |     |     |     |     |     |     |

<

06/11/2017

-

12/11/2017

>

Device Pools

- Database (0)
- Import (0)
- Scan (2)
  - DEV262000 [262000]
    - Device\_0030de0a9c51 [695377]
      - Device
      - Files
      - Inputs
      - Outputs
      - Schedulers
        - Cal0: CALENDAR\_0
        - Sch0: SCHEDULE\_0
      - Values

Scan Device: Device\_0030de0a9c51 Object: SCHEDULE\_0

Name: SCHEDULE\_0

Type: Schedule

Instance Nr: 0

Source: Generic

Show Values

Monitored Values

Edited Values

Commit Values Clear

| Name                  | Value                    | Type                       | Opt | Priority | Status |
|-----------------------|--------------------------|----------------------------|-----|----------|--------|
| DevObjProp Referen... | DevObjProp Reference (1) | List: DevObjProp Reference |     |          |        |
| Effective Period      | ---- / ----              | Date Range                 |     |          |        |
| Exception Schedule    | Special Event (0)        | Array: Special Event       |     |          |        |
| Object Identifier     | [SCHEDULE.0]             | Object Identifier          |     |          |        |
| Object Name           | SCHEDULE_0               | CharString                 |     |          |        |
| Object Type           | SCHEDULE (17)            | Enum: Object Type          |     |          |        |
| Out Of Service        | <input type="checkbox"/> | Bool                       |     |          |        |
| Present Value         | 1                        | ENUMERATION                |     |          |        |
| Priority For Writing  | 16                       | Unsigned                   |     |          |        |
| Reliability           | no_fault_detected (0)    | Enum: Reliability          |     |          |        |
| Schedule Default      | <null>                   | Null                       |     |          |        |
| Status Flags          |                          | Bit String: Status Flags   |     |          |        |
| Weekly Schedule       | Daily Schedule (1..7)    | Array: Daily Schedule      |     |          |        |
| [1] Monday            | Time Value (1..2)        | Daily Schedule             |     |          |        |
| [1]                   | 07:00:00 / 1             | Time Value                 |     |          |        |
| Value                 | 1                        | ENUMERATION                |     |          |        |
| Value                 | 1                        | GENERIC_ENUM               |     |          |        |
| Time                  | 07:00:00                 | Time                       |     |          |        |
| [2]                   | 17:00:00 / <null>        | Time Value                 |     |          |        |
| Value                 | <null>                   | Null                       |     |          |        |
| Time                  | 17:00:00                 | Time                       |     |          |        |
| [2] Tuesday           | Time Value (0)           | Daily Schedule             |     |          |        |
| [3] Wednesday         | Time Value (0)           | Daily Schedule             |     |          |        |
| [4] Thursday          | Time Value (0)           | Daily Schedule             |     |          |        |
| [5] Friday            | Time Value (0)           | Daily Schedule             |     |          |        |
| [6] Saturday          | Time Value (0)           | Daily Schedule             |     |          |        |
| [7] Sunday            | Time Value (0)           | Daily Schedule             |     |          |        |

Resources

- Global Variables
- GVL
- Variable\_Configuration (V)
- library BACnet\_02.lib 21.9.17
- library BACnetAccess.lib 21.9
- library Standard.lib 8.11.10.11
- library SYSLIBCALLBACK.LIE
- library SysLibRtc.lib 8.11.10.1
- Alarm configuration
- Log Manager
- Log
- PLC - Browser
- PLC Configuration
- Sampling Trace
- Target Settings
- Task configuration
- Watch-and Recipe Manager
- Workspace

```
PLC_PRG (PRG-ST)
0001 rSineAngleTest = 1.480013
0002 BAV_LocalVar1
0003   --Object_Identifier
0004   --Object_Name = 'PLC_PRG_BAV_LocalVar1'
0005   --Object_Type = BACnet_analog_value
0006   --Present_Value = 14036
0007   --Priority_Array
0008   --Status_Flags
0009   --Out_Of_Service = FALSE
0010   FBACnetSchedule
0011     dwSchedulerInstance = 0
0012     xSchedulerRead = TRUE
0013     xSchedulerWrite = FALSE
0014     typBACnetScheduleVTSU
0015     typBACnetScheduleEntries
0016     .artodTime
0017       --.artodTime[1]
0018       .artodTime[1][1] = TOD#07:00
0019       .artodTime[1][2] = TOD#17:00
0020       .artodTime[1][3] = TOD#00:00
0021       .artodTime[1][4] = TOD#00:00
0022       .artodTime[1][5] = TOD#00:00
0023       .artodTime[1][6] = TOD#00:00
0024     .artodTime[2]
0025     .artodTime[3]
0026     .artodTime[4]
0027     .artodTime[5]
0028     .artodTime[6]
0029     .artodTime[7]
0030     .arrValue
0031     --.arrValue[1]
0032     .arrValue[1][1] = 1
0033     .arrValue[1][2] = 0
0034     .arrValue[1][3] = 0
0035     .arrValue[1][4] = 0
0036     .arrValue[1][5] = 0
0037     .arrValue[1][6] = 0
0038     .arrValue[2]
0039     .arrValue[3]
0040     .arrValue[4]
0041     .arrValue[5]
0042     .arrValue[6]
0043     .arrValue[7]
0044     .arrValue
0045     --.arrValue[1]
0046     .arrValue[1][1] = TRUE
0047     .arrValue[1][2] = FALSE
0048     .arrValue[1][3] = FALSE
0049     .arrValue[1][4] = FALSE
0050     .arrValue[1][5] = FALSE
0051     .arrValue[1][6] = FALSE
0052     .arrValue[3]
0053     .arrValue[4]
0054     ...
0055
0001 BAV_LocalVar1.Present_Value := BAV_LocalVar1
0002
0003
```

```
GVL
0001 BAV_GlobalVar1
0002   --Object_Identifier
0003   --Object_Name = 'BAV_GlobalVar1'
0004   --Object_Type = BACnet_analog_value
0005   --Present_Value = 14041
0006   --Priority_Array
0007   --Status_Flags
0008   --Out_Of_Service = FALSE
0009   BAV_GlobalVar2
0010   --Object_Identifier
0011   --Object_Name = 'BAV_GlobalVar2'
0012   --Object_Type = BACnet_analog_value
0013   --Present_Value = 199.5882
0014   --Priority_Array
0015   --Status_Flags
0016   --Out_Of_Service = FALSE
0017
0018
0019
0020
0021
0022
0023
0024
0025
0026
0027
0028
0029
0030
0031
0032
0033
0034
0035
0036
0037
0038
0039
0040
0041
0042
0043
0044
0045
0046
0047
0048
0049
0050
0051
0052
0053
0054
0055
```

PLC Configuration

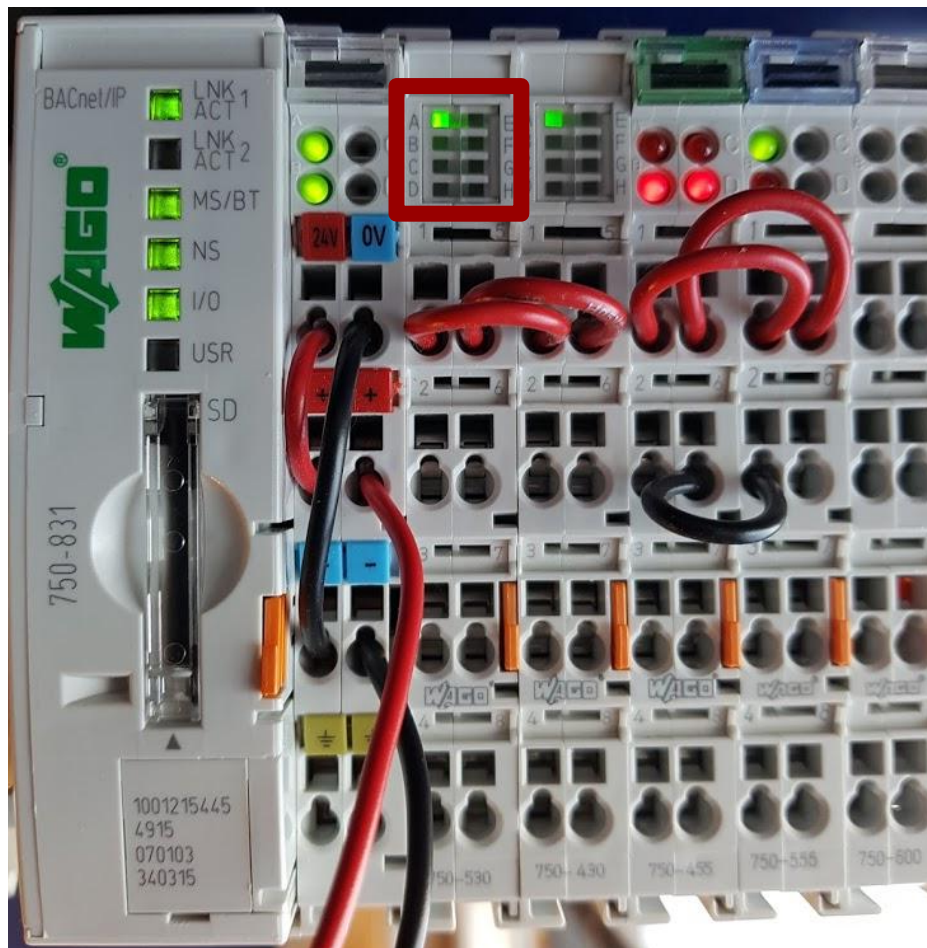
Hardware configuration

- K-Bus (\* BACnet/IP Controller \*) [FIX]
- 0750-9999/0500-0008 8 DO Generic[VAR]
- AT %QX4.0: BOOL: (\* Ch\_1 Digital output \*) [CHANNEL (Q)]
- AT %QX4.1: BOOL: (\* Ch\_2 Digital output \*) [CHANNEL (Q)]
- AT %QX4.2: BOOL: (\* Ch\_3 Digital output \*) [CHANNEL (Q)]
- AT %QX4.3: BOOL: (\* Ch\_4 Digital output \*) [CHANNEL (Q)]
- AT %QX4.4: BOOL: (\* Ch\_5 Digital output \*) [CHANNEL (Q)]
- AT %QX4.5: BOOL: (\* Ch\_6 Digital output \*) [CHANNEL (Q)]
- AT %QX4.6: BOOL: (\* Ch\_7 Digital output \*) [CHANNEL (Q)]
- AT %QX4.7: BOOL: (\* Ch\_8 Digital output \*) [CHANNEL (Q)]
- 0750-9999/0400-0008 8 DI Generic[VAR]
- AT %IX4.0: BOOL: (\* Ch\_1 Digital input \*) [CHANNEL (I)]
- AT %IX4.1: BOOL: (\* Ch\_2 Digital input \*) [CHANNEL (I)]
- AT %IX4.2: BOOL: (\* Ch\_3 Digital input \*) [CHANNEL (I)]
- AT %IX4.3: BOOL: (\* Ch\_4 Digital input \*) [CHANNEL (I)]
- AT %IX4.4: BOOL: (\* Ch\_5 Digital input \*) [CHANNEL (I)]
- AT %IX4.5: BOOL: (\* Ch\_6 Digital input \*) [CHANNEL (I)]
- AT %IX4.6: BOOL: (\* Ch\_7 Digital input \*) [CHANNEL (I)]
- AT %IX4.7: BOOL: (\* Ch\_8 Digital input \*) [CHANNEL (I)]
- 0750-0455 4 AI 4-20mA s.e.[VAR]
- AT %IW0: WORD: (\* Ch\_1 Input word \*) [CHANNEL (I)] = 0
- AT %IW1: WORD: (\* Ch\_2 Input word \*) [CHANNEL (I)] = 0
- AT %IW2: WORD: (\* Ch\_3 Input word \*) [CHANNEL (I)] = 3
- AT %IW3: WORD: (\* Ch\_4 Input word \*) [CHANNEL (I)] = 3
- 0750-0555 4 AO 4-20mA[VAR]
- AT %QW0: WORD: (\* Ch\_1 Analog output \*) [CHANNEL (Q)] = 0
- AT %QW1: WORD: (\* Ch\_2 Analog output \*) [CHANNEL (Q)] = 0
- AT %QW2: WORD: (\* Ch\_3 Analog output \*) [CHANNEL (Q)] = 0
- AT %QW3: WORD: (\* Ch\_4 Analog output \*) [CHANNEL (Q)] = 0

Fieldbus variables [FIX]

Flag variables [FIX]

Modbus-Master [FIX]



# Wireshark Packet Sniffer Tool

The screenshot shows the Wireshark interface with a packet list on the left and a packet details pane on the right. The packet list shows a series of packets from 192.168.1.136 to 192.168.1.140. The selected packet (No. 666) is a 'Confirmed-REQ' packet of type 'readPropertyMultiple[169]'. The details pane shows the structure of this packet, including 'Service Chosen: readPropertyMultiple (14)', 'ObjectIdentifier: analog-value, 1', and 'Context Tag: 0'. The packet bytes are shown at the bottom, starting with '0030 de 0a 9c 51 00 30 d5 04 6f de 03 00 45 00'.

The screenshot shows the Wireshark interface with a packet list on the left and a packet details pane on the right. The packet list shows a series of packets from 192.168.1.136 to 192.168.1.140. The selected packet (No. 924) is a 'Confirmed-REQ' packet of type 'writeProperty[171]'. The details pane shows the structure of this packet, including 'Service Chosen: writeProperty (15)', 'ObjectIdentifier: schedule, 0', and 'Property Identifier: weekly-schedule (123)'. The packet bytes are shown at the bottom, starting with '0030 de 0a 9c 51 00 30 d5 04 6f de 03 00 45 00'.