

BACnet/IP Gateways



FAQ for GW-5492 and GW-5493

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1. How to manipulate GW-549x via ICDT BACnet Pioneer?

ICDT BACnet Pioneer is a free BACnet software and developed by ICDT Tech. Co. Ltd. The following example is how to switch on the DO[0] and read DI[0] back on the ICPDAS M-7055D, a Modbus/RTU Slave, connected to GW-5492 via ICDT BACnet Pioneer, and you can test GW-5493 in the similar way.

(1) Install the ICDT BACnet Pioneer

<http://www.icdt.com.tw/main/index.php/2013-07-09-05-16-50/2013-07-18-14-43-35/file/24-bacnetpioneerv1001>

Refer to the ICDT website for the details: <http://www.icdt.com.tw>

(2) M-7055D Setup as follows, DO.PWR wire to **Power Supply +24VDC**, GND to **Power Supply Ground**, and DO0 to DI0. Power up M-7055D and GW-5492 which LAN1 connects to the internet.

(3) GW-5492 is configured that **BO0** is mapping to DO0 of M-7055D and **BI0** is mapping to DI0 of M-7055D

The screenshot shows the configuration window for device M-7055D. The 'Point' table is as follows:

ID	Address	Count	Type	Type Define	Sampling(ms)	TimeOut(ms)	ScaleFactor	Intercept	Low	Hi	Read/Write	Del
DI0	0	1	DISCRETE INPUT	BIT	1000	7000	1	0			Read	Del
DO0	0	1	COIL	BIT	1000	7000	1	0			Write	Del

The screenshot shows the 'Mapping' configuration for Object Type BinaryInput. The BACnet Object Mapping table is as follows:

Object Identifier	Device	Point	Index	Object Name	COV Increment	COVPeriod(sec)	Unit	Relinquish De
BI0	M-7055D	DI0	0	BI0	0	0	NO UNITS	0

The screenshot shows the 'Mapping' configuration for Object Type BinaryOutput. The BACnet Object Mapping table is as follows:

Object Identifier	Device	Point	Index	Object Name	COV Increment	COVPeriod(sec)	Unit	Relinquish De
BO0	M-7055D	DO0	0	BO0	0	0	NO UNITS	0

Refer to the websites for details:

GW-549x :


http://www.icpdas.com/root/product/solutions/industrial_communication/fieldbus/bacnet_ip/gateway/gw-5492.html

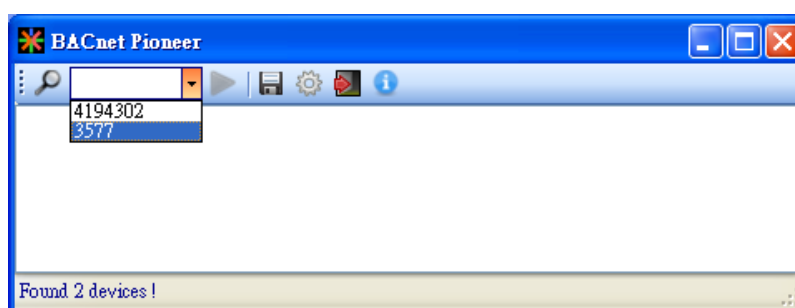
ftp://ftp.icpdas.com.tw/pub/cd/fieldbus_cd/bacnet/gateway/gw-5493/manual

M-7055D :

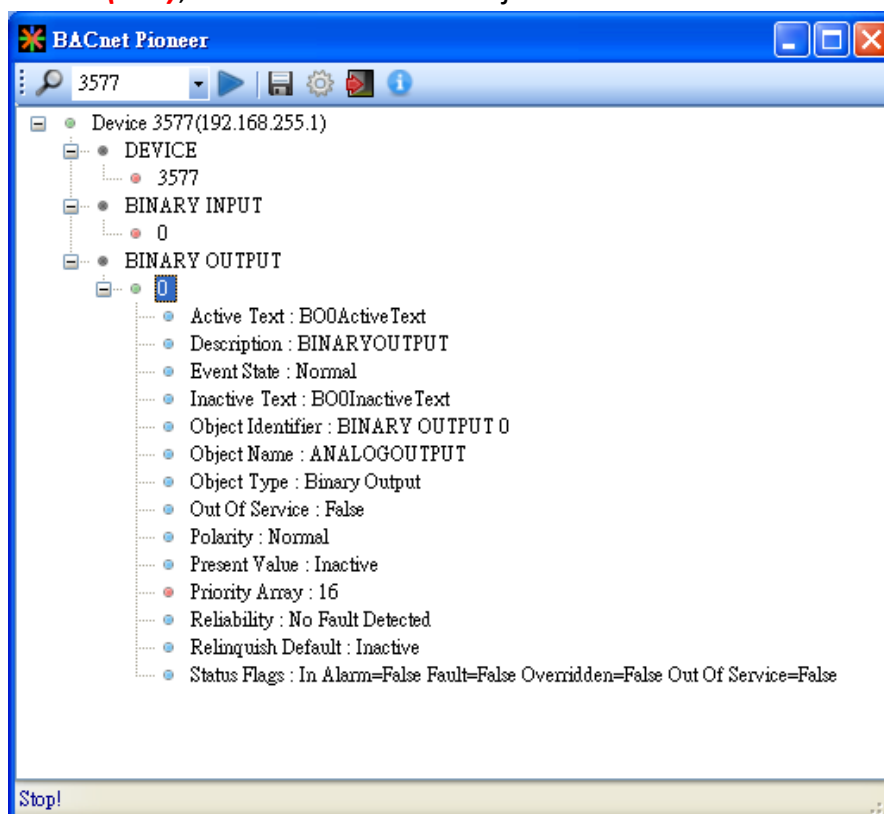
http://www.icpdas.com/root/product/solutions/remote_io/rs-485/i-7000_m-7000/i-7055.html

<http://ftp.icpdas.com/pub/cd/8000cd/napdos/7000/manual/7000dio.pdf>

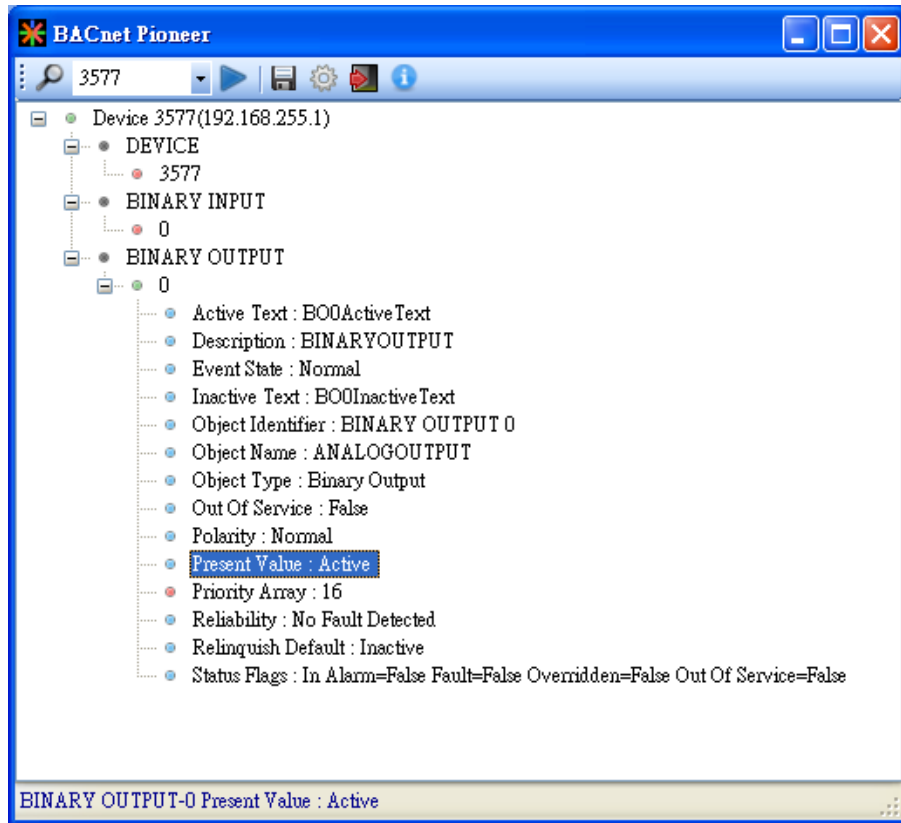
- (4) Execute  to get the Device ID/Instance of your computer and GW-5492 (default 3577). Choose **3577**,



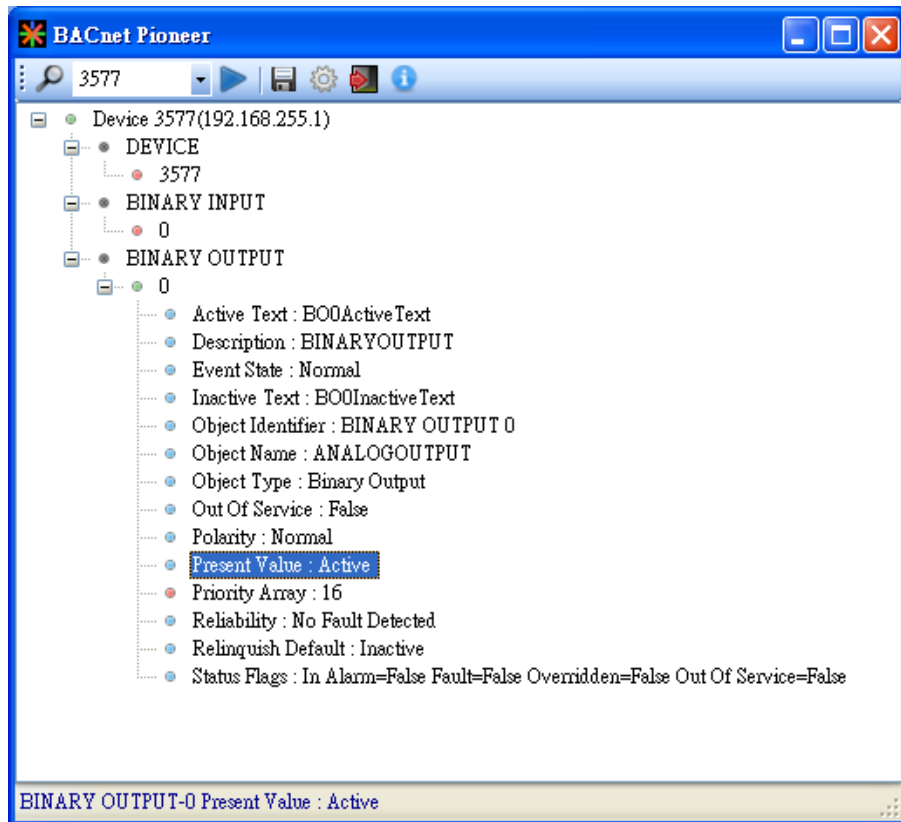
- (5) Click on **Device 3577(.....)**, and it will scan the objects of GW-5492.



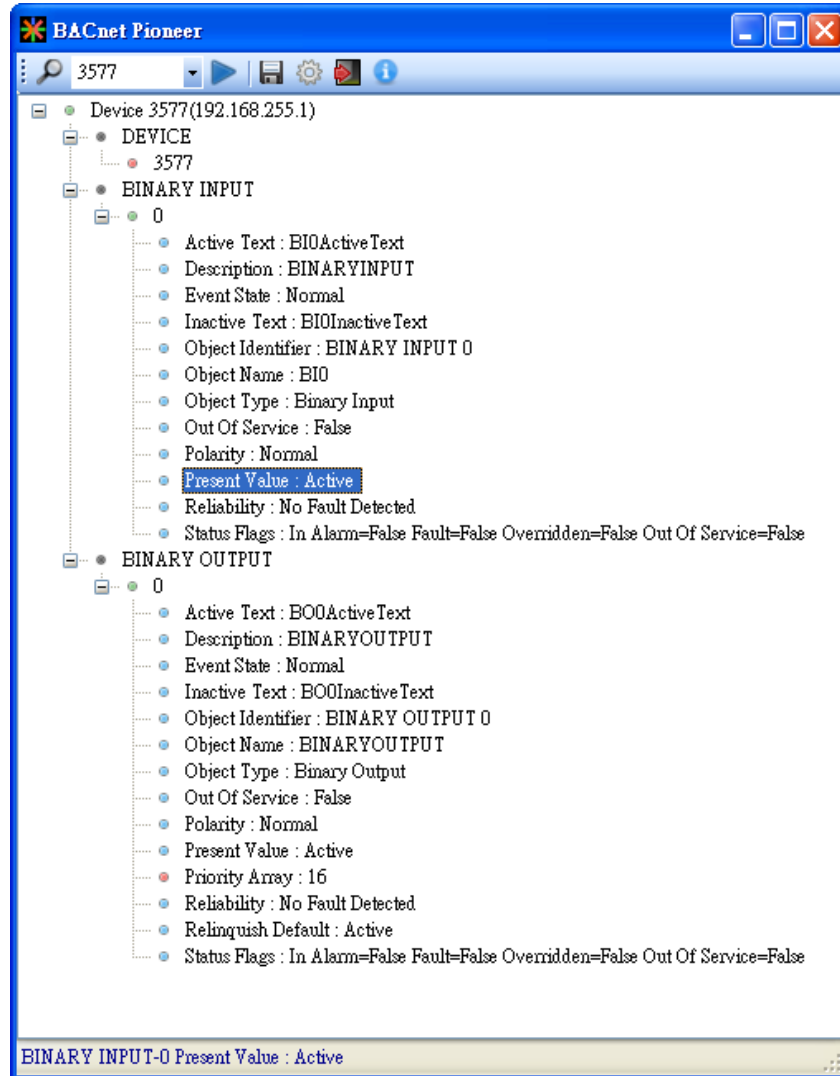
- (6) Click on **BINARY OUTPUT**→**0**, and it will scan the properties and values of **BO0**. Notice **Out Of Service** is **False**.



- (7) Double Click on the item **Present Value**, and set BO0 to **Active**.



- (8) Click on **BINARY INPUT**→**0**→**Present Value**, and check the status of BIO is **Active**.
- Notice **Out Of Service** is **False**
 - In the ICDT Pioneer, the data will be updated while you click and stay on the item.



2. How to manipulate GW-549x via BACnet VTS?

This part is The following example is how to switch on the DO[0] and read DI[0] back on ICPDAS M-7055D, a Modbus/RTU Slave, connected to GW-5492 via Visual Test Shell (VTS), and you can test GW-5493 with Modbus/TCP Slave in the similar way.

(1) Get Visual Test Shell (VTS). Refer to the websites,

<http://vts.sourceforge.net/> or <http://sourceforge.net/projects/vts>

(2) M-7055D Setup as follows, DO.PWR wire to **Power Supply +24VDC**, GND to **Power Supply Ground**, and DO0 to DI0. Power up M-7055D and GW-5492 which LAN1 connects to the internet.

(3) GW-5492 is configured that **BO0** is mapping to DO0 of M-7055D and **BI0** is mapping to DI0 of M-7055D

Modbus

ID: M-7055D Type: TCP

Communication

TCP Address: Port: COM1 Unit:

Point

ID	Address	Count	Type	Type Define	Sampling(ms)	TimeOut(ms)	ScaleFactor	Intercept	Low	Hi	Read/Write	Del
DI0	0	1	DISCRETE INPUT	BIT	1000	7000	1	0			Read	Del
DO0	0	1	COIL	BIT	1000	7000	1	0			Write	Del

Save Delete

Mapping

Object Type: BinaryInput Save

BACnet Object Mapping

Object Identifier	Device	Point	Index	Object Name	COV Increment	COVPeriod(sec)	Unit	Relinquish De
BI0	M-7055D	DI0	0	BI0	0	0	NO UNITS	0

Mapping

Object Type: BinaryOutput Save

BACnet Object Mapping

Object Identifier	Device	Point	Index	Object Name	COV Increment	COVPeriod(sec)	Unit	Relinquish De
BO0	M-7055D	DO0	0	BO0	0	0	NO UNITS	0

Refer to the websites for details:

GW-549x :


http://www.icpdas.com/root/product/solutions/industrial_communication/fieldbus/bacnet_ip/gateway/gw-5492.html

ftp://ftp.icpdas.com.tw/pub/cd/fieldbus_cd/bacnet/gateway/gw-5493/manual

M-7055D :

http://www.icpdas.com/root/product/solutions/remote_io/rs-485/i-7000_m-7000/i-7055.html

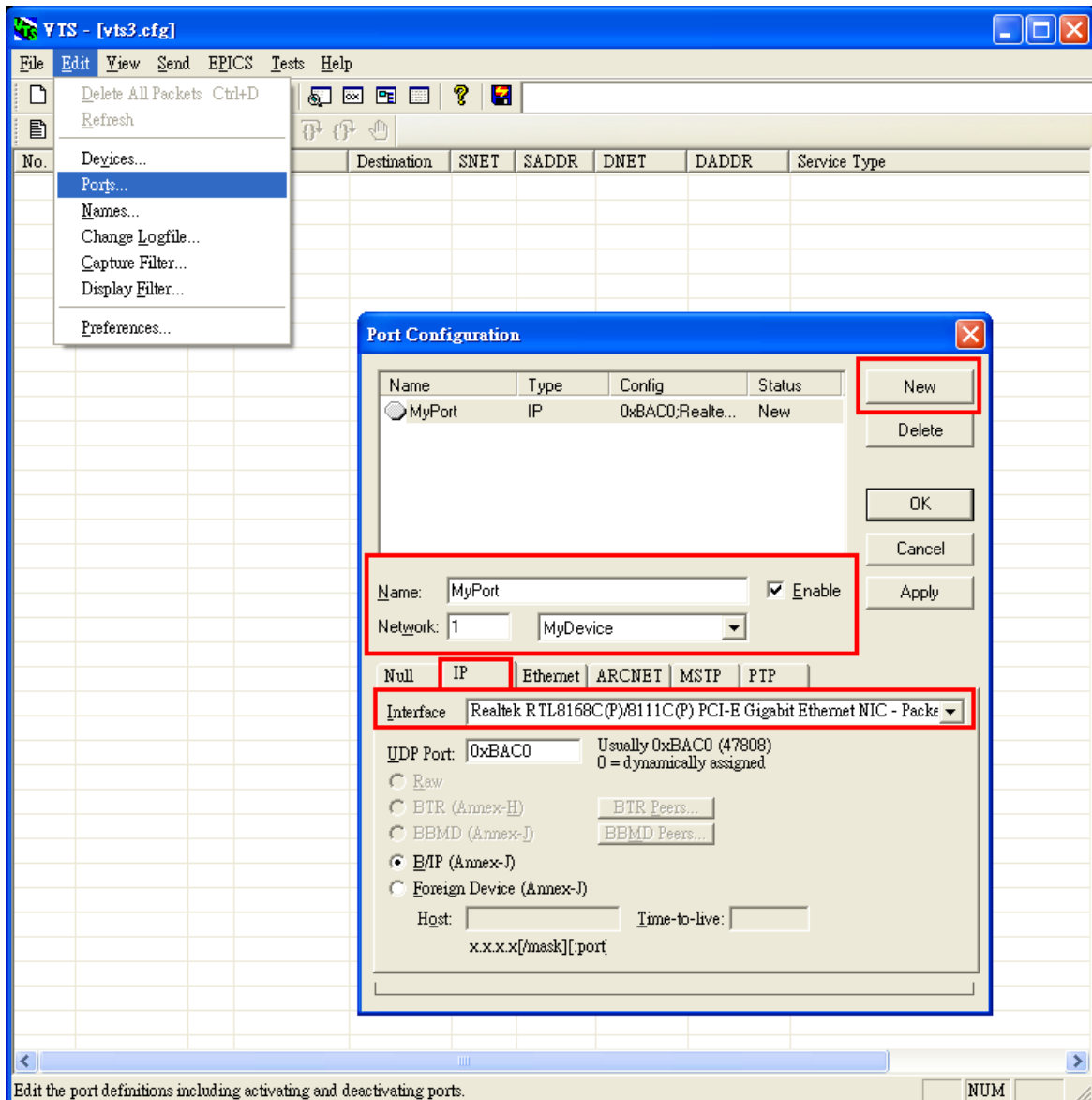
<http://ftp.icpdas.com/pub/cd/8000cd/napdos/7000/manual/7000dio.pdf>

(4) Execute  VTS.exe
Visual Test Shell for BACnet . If you've configured the Devices, Ports and Names in VTS, you can jump to step(8).

(5) Click on Edit(Devices..., set the Name to MyDevice, Instance to 1111, and push OK.

(6) Click on **Edit** → **Ports...**, push **New** button and configure as follows,

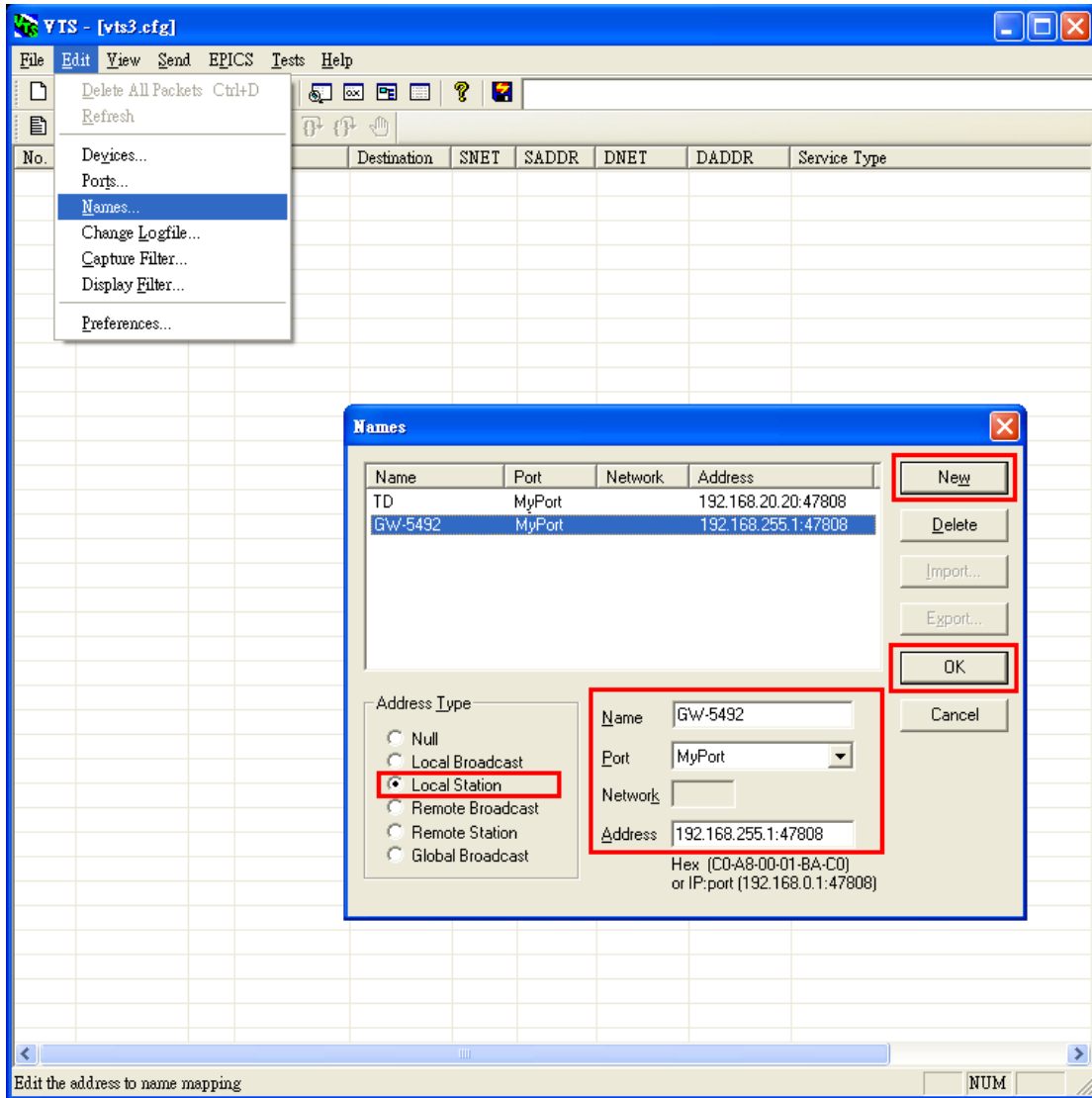
- Name set to **MyPort**. Check on **Enable**
- Network set to **1**. Choose **MyDevice**
- On **IP** Page, **Interface** choose one network device which can communicate with GW-5492
- Push **OK** or **Apply** to continue



(7) Click **Edit**→**Names...** , Push **New** button and the configuration as follows,

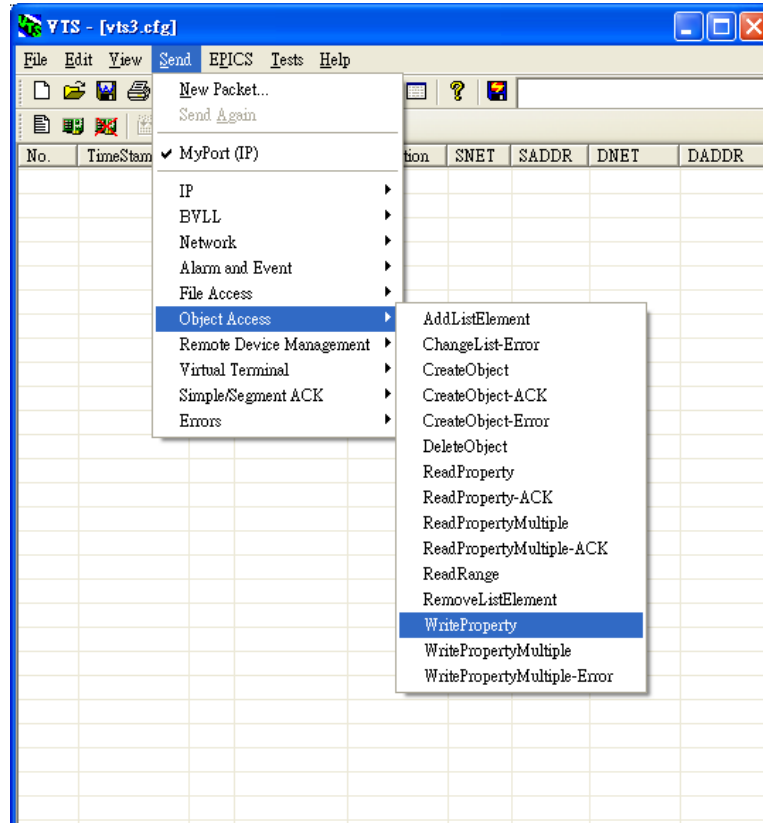
- Address Type choose **Local Station**
- Name is **GW-5492**
- Port choose **MyPort**
- Address set the IP of GW-5492: **192.168.255.1:47808 (GW-5492's default setting)**
- Push **OK** and continue

Notice: TD is for your computer, and do not remove it.

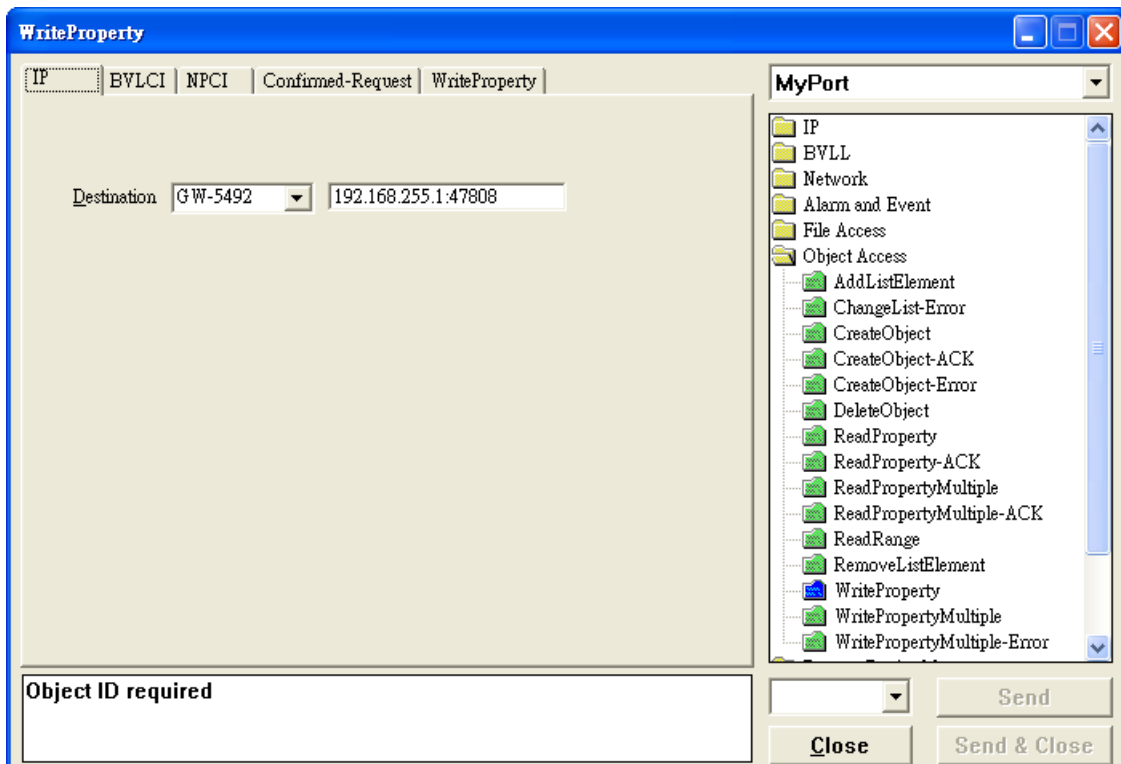


Activate DOO

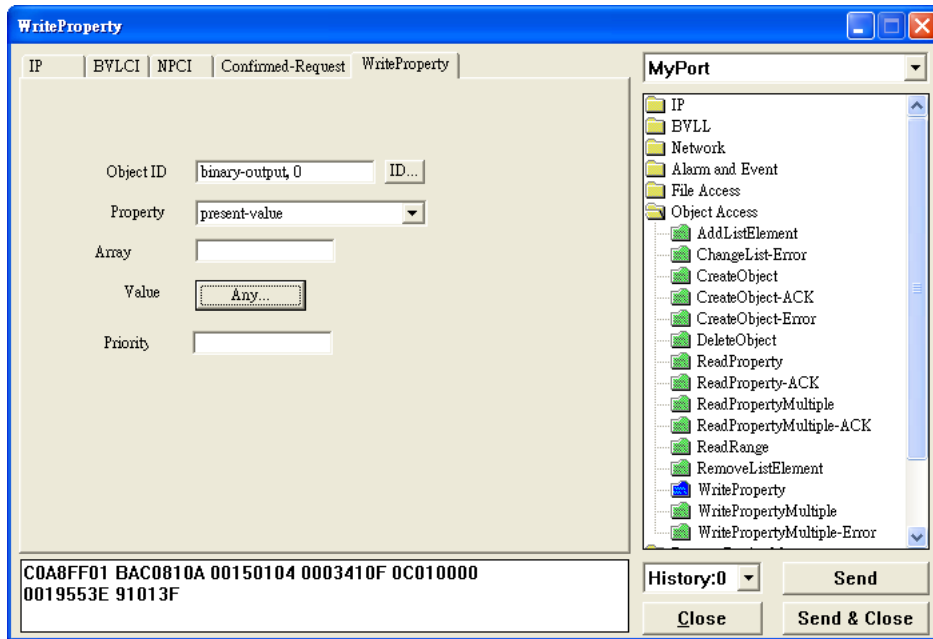
(8) Click on **Send**→**Object Access**→**WriteProperty**, and WriteProperty window shows up.



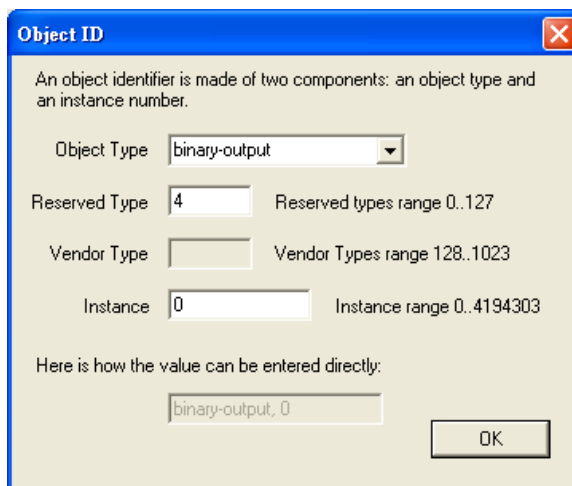
(9) WriteProperty → **IP** Page : Destination chooses **GW-5492**



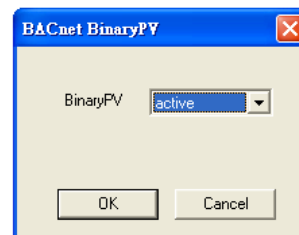
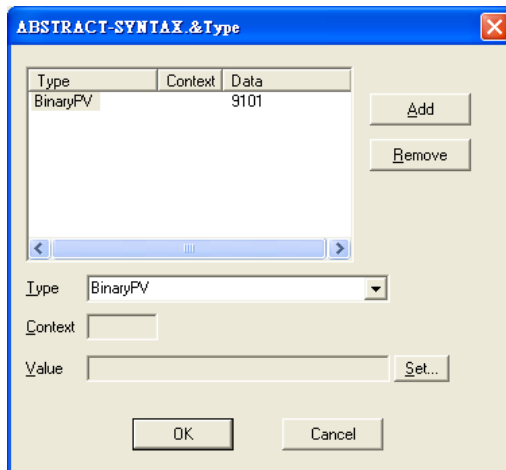
(10) WriteProperty → **WriteProperty** Page, set **binary-output, 0, present-value, BinaryPV(active)**, and push **Send & Close** button. The steps are described as follows,



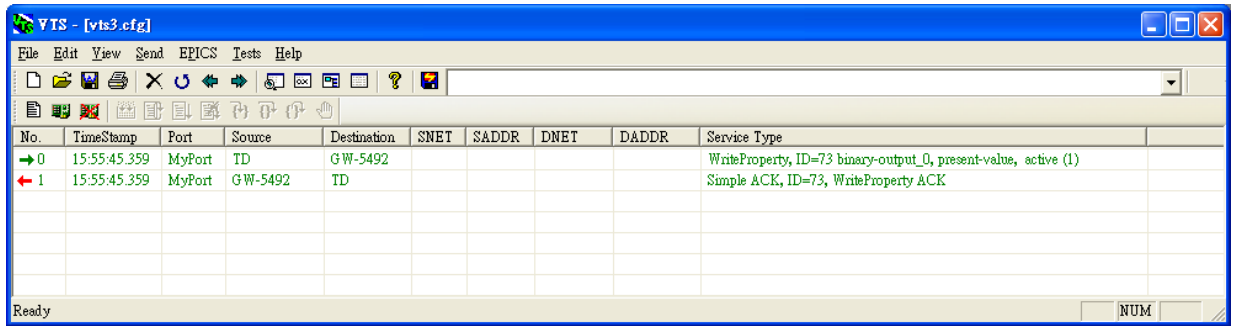
- Object ID: Push **ID...** button, and choose **binary-output**, and instance is **0** while **BO0**.



- Property choose **Present-Value**
- Value: Push **Any...** button, and a window shows up. Choose **BinaryPV** and push **Set...** and set **active**.

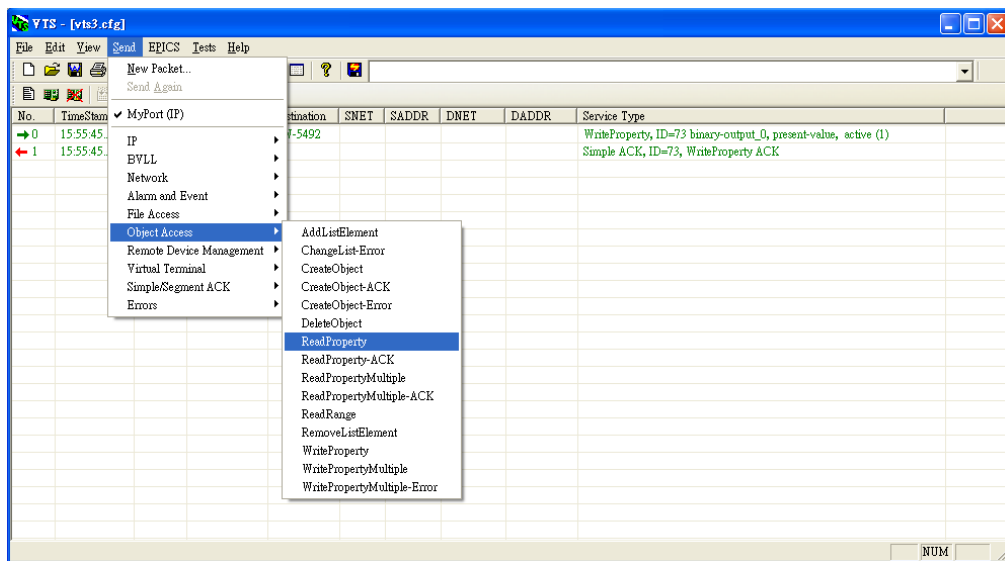


- Push **Send & Close** button, and VTS will show the transmit packets and receive the GW-5492 feedback one.

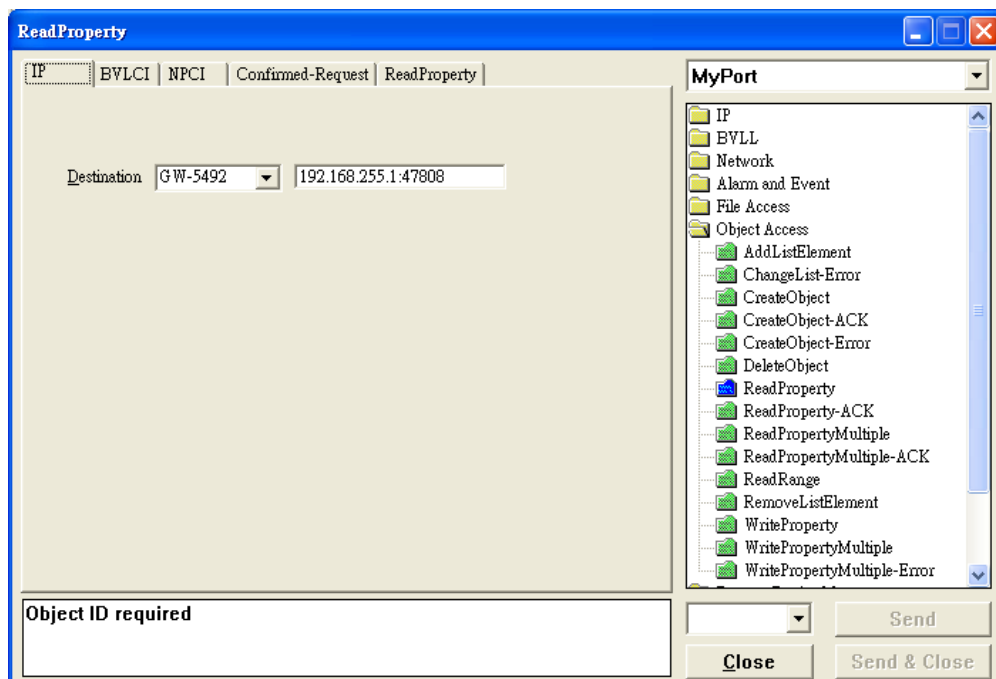


Get DIO status (**Active**)

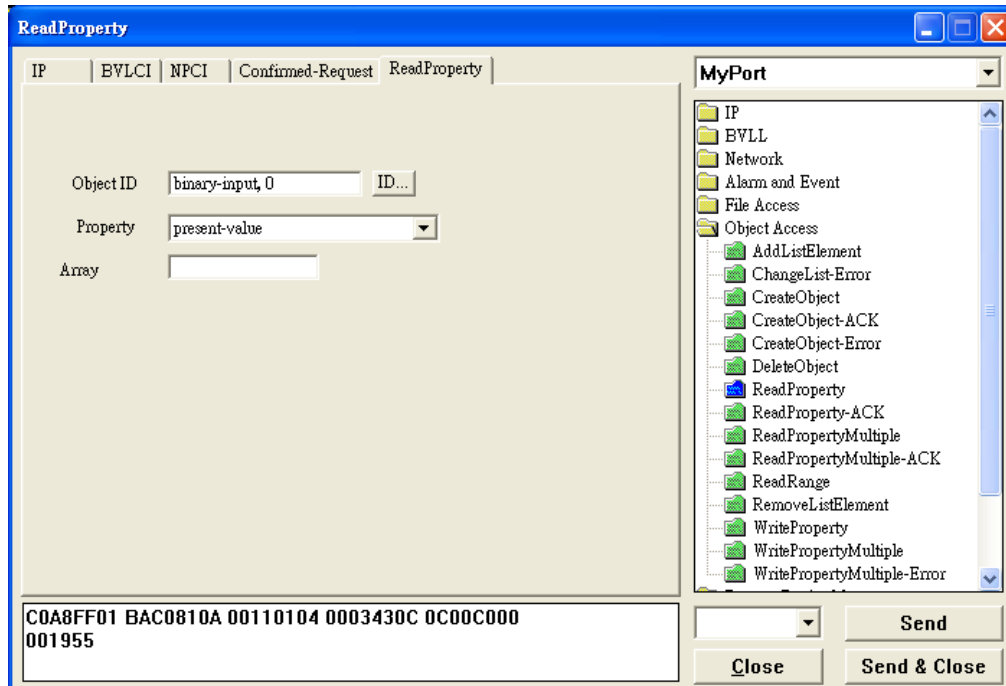
- (11) Click **Send** → **Object Access** → **ReadProperty**, and ReadProperty window will show up.



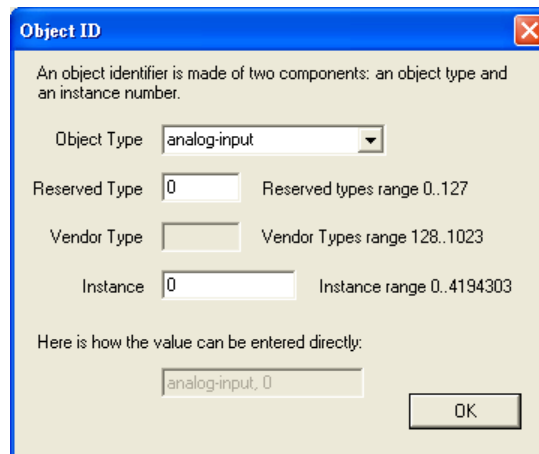
- (12) ReadProperty → **IP** Page: Destination chooses **GW-5492**



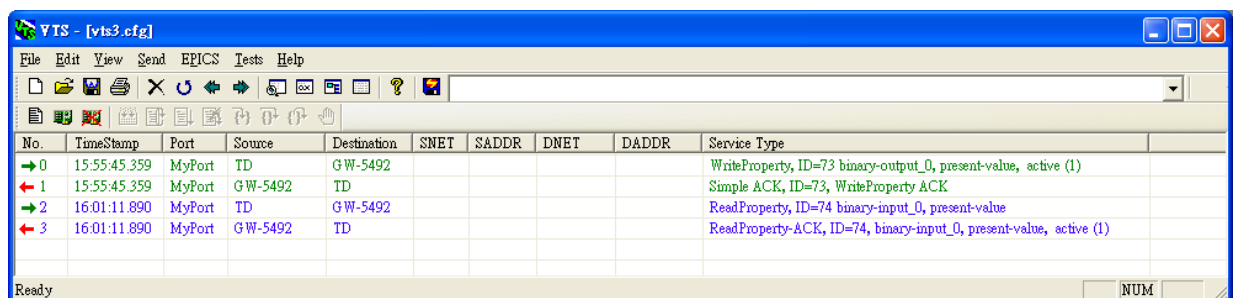
- (13) ReadProperty → **ReadProperty** Page, set **binary-input, 0, present-value**, and push **Send & Close** button. The steps are described as follows,



- Object ID: Push **ID...** button and choose **binary-input**, and instance is **0** while BOO.



- Property: choose **Present-Value**
- Push **Send & Close** button, and VTS transmits packet and you can confirm that GW-5492's DI0 is **Active**.



3. How to reset the login account and password of the GW-5492 and

GW-5493?(2023/02/11, Johney)

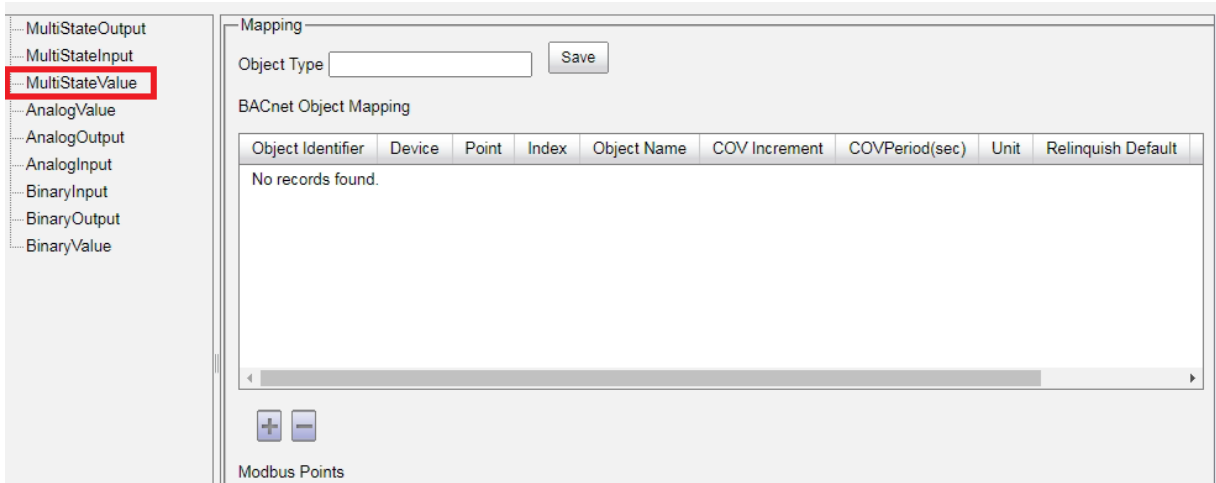
Please try to follow the steps below:

- (1) Set rotary switch as 8
- (2) Connect COM3 TxD and RxD together
- (3) Reset your device
- (4) After 3 minutes, it will restore as factory default setting.
- (5) Please turn rotary switch as 0 and power on again.

4. What is the reason why I turn BACnet button start and it will come to

stop state of the GW-5492?(2023/04/15, Johney)

The GW-5492 and GW-5493 do not support BACnet "MultiStateValue" object. If you use the objects in your configuration, it will make bacnet state come "start" state to "stop" state. Please use BACnet object "AV" or "AI" or "AO" instead.

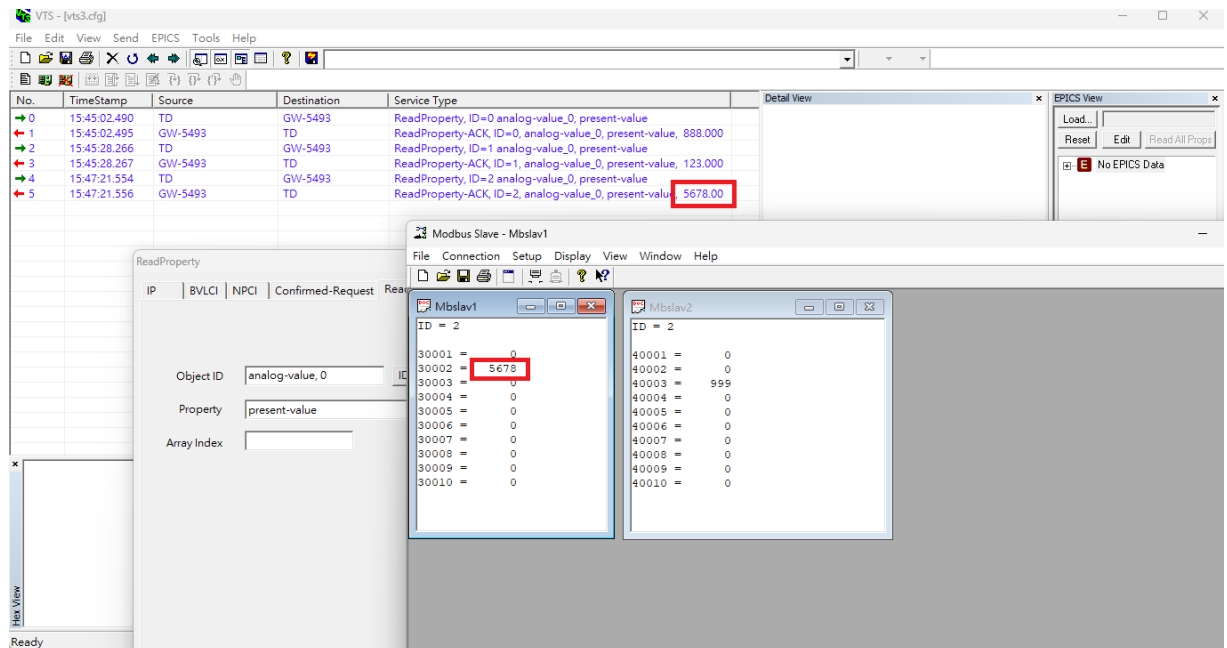


5. The GW-5492 and GW-5493 can not be found by Yabe software. How to

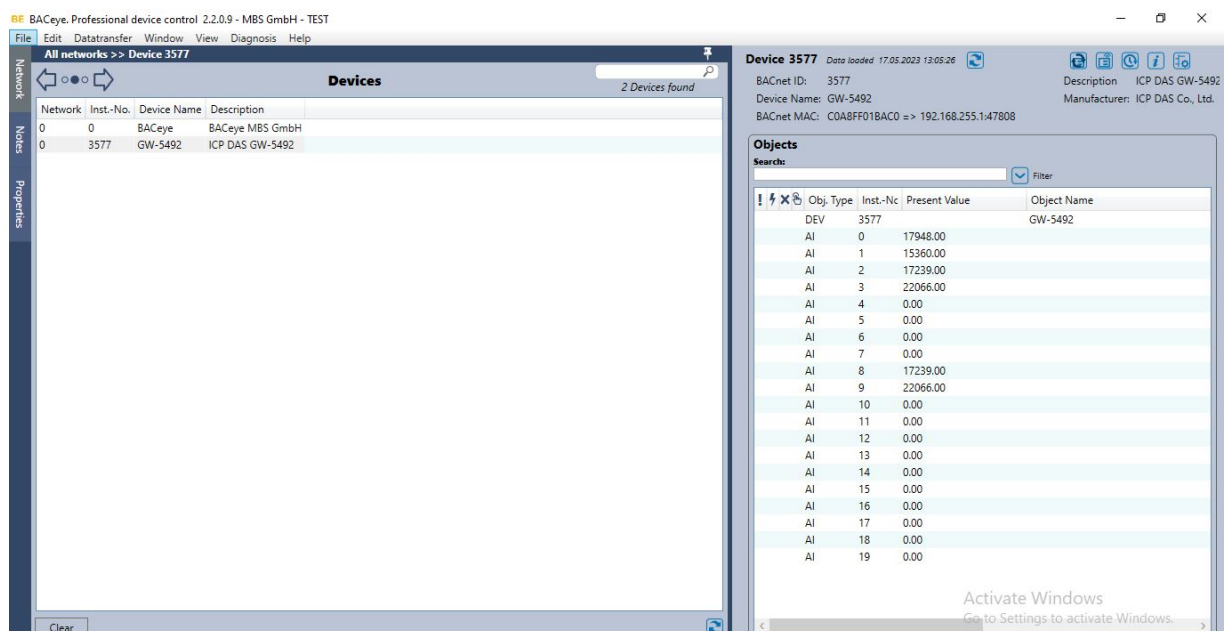
solve that?(2023/05/22, Johney)

The Yabe software will send “Who-Is” request to search the BACnet devices. Because the GW-5492 and GW-5493 will not reply to the “Who-is” request, the Yabe software can not find them. The user can use VTS or Baceye software instead. These two softwares can be configured with the target IP of the BACnet device. These softwares will communicate with the BACnet device directly.

Here shows the VTS software.



Here shows the Baceye software



6. The GW-5492 and GW-5493 have problem with that one modbus

register maps two BACnet objects. How to solve that?(2023/06/19,

Johney)

The GW-5492 and GW-5493 do not support duplicate mapping modbus register. One modbus register mapped to two or more BACnet object is illegal. That one modbus register will be confused when multiple BACnet objects write back regularly.

The screenshot shows the 'GW-5492 Utility' software interface. The main window is titled 'Modbus/BACnet Mapping'. On the left is a navigation tree with options: MultiStateOutput, MultiStateInput, MultiStateValue, AnalogValue, AnalogOutput, AnalogInput (highlighted), BinaryInput, BinaryOutput, and BinaryValue. The main area is divided into two sections:

Mapping

Object Type: Save

BACnet Object Mapping

Object Identifier	Device	Point	Index	Object Name	COV Increment	COVPeriod(sec)	Unit	Relinquish Def
AI10	MOO2	A02	0	AI10	0	0	NO UNITS	0
AI11	MOO2	A02	1	AI11	0	0	NO UNITS	0
AI12	MOO2	A02	2	AI12	0	0	NO UNITS	0
AI13	MOO2	A02	3	AI13	0	0	NO UNITS	0

Below the table are '+' and '-' icons.

Modbus Points

Device	Point	Index	Address	Write	MappedType
MOO2	A00	0	0	FALSE	ANALOGINPUT
MOO2	A00	1	0	FALSE	ANALOGINPUT
MOO2	A00	2	0	FALSE	ANALOGINPUT
MOO2	A00	3	0	FALSE	ANALOGINPUT