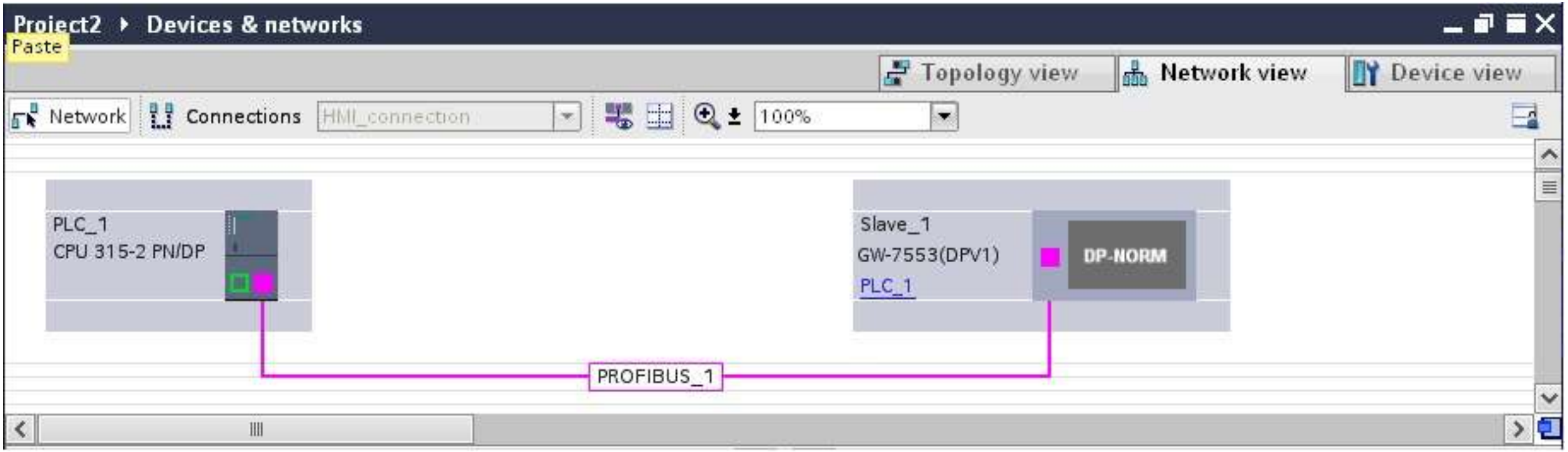
GW-7553 (Modbus RTU Master) Example for SIMATIC STEP 7(TIA Portal)

- Before Connecting
- Example 1:Reads and Writes DO module data
- Example 2:Reads DI module data
- Example 3:Reads and Writes AO module data
- Example 4:Reads AI module data

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Before connecting

- Add a PROFIBUS master system and a PROFIBUS slave (GW-7553)



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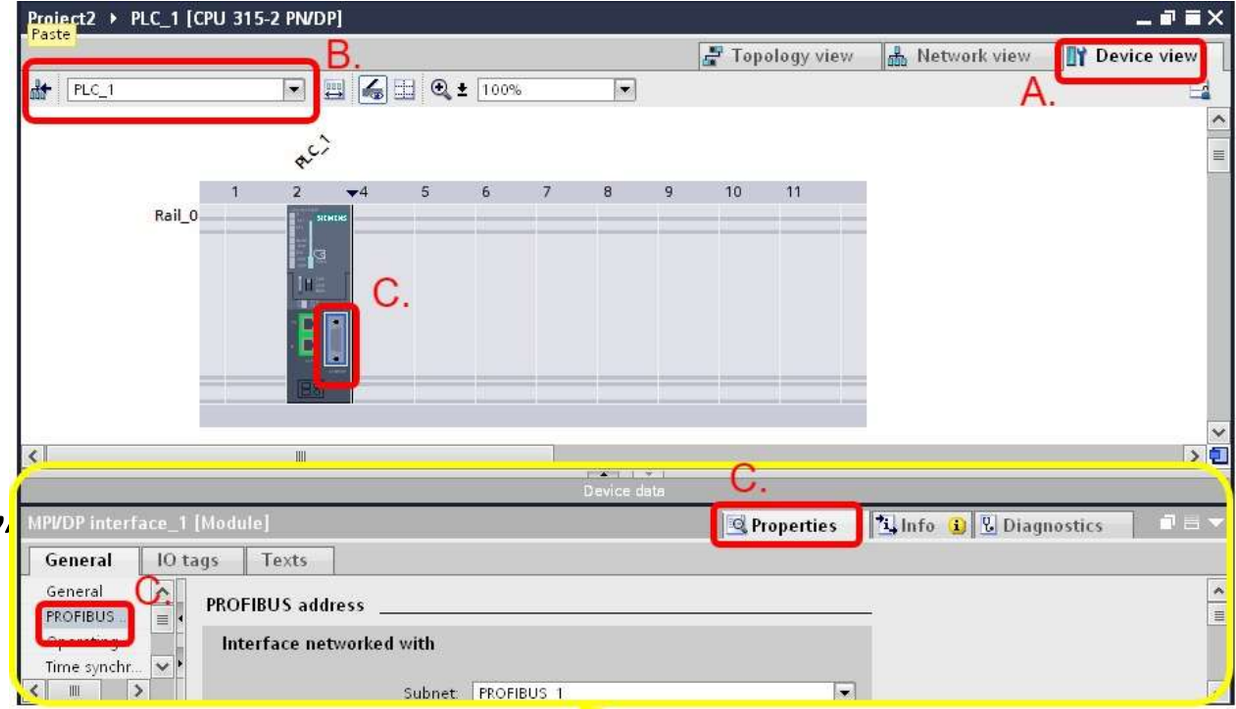
Set the address of PLC as below

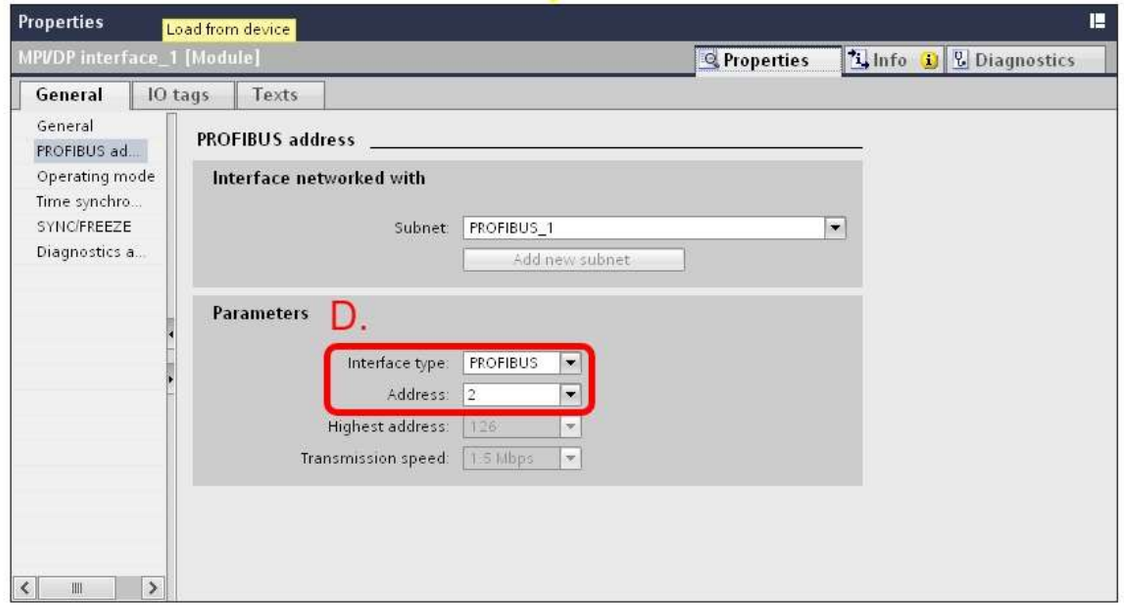
(A) Click “Device view”

(B) Select “PLC_1” (Which PLC you connect to GW-7553)

(C) Click “Properties” and “PROFIBUS address”

(D) Set “interface type”=PROFIBUS and set “Address”=2





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Set GW-7553 comport setting as below

(A) Select “Slave_1” (Select the slave which is GW-7553)

(B) Select “Properties” and “Device-specific”

(C) Set comport :

Buad rate: 115200 baud

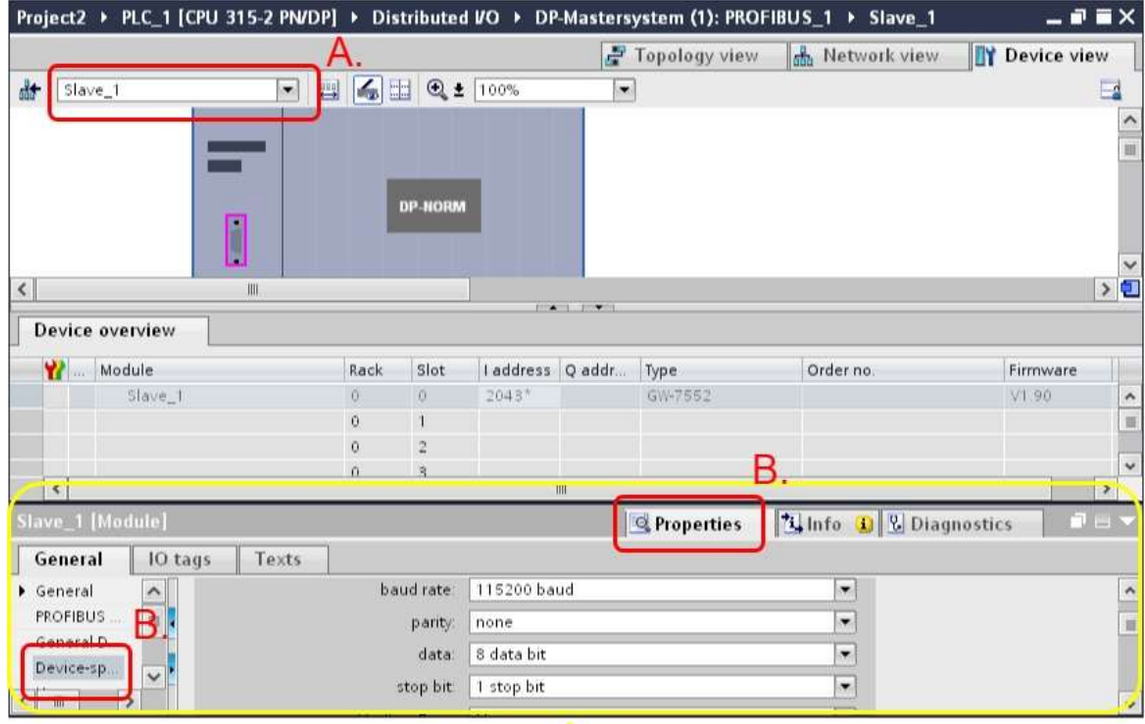
Parity: None

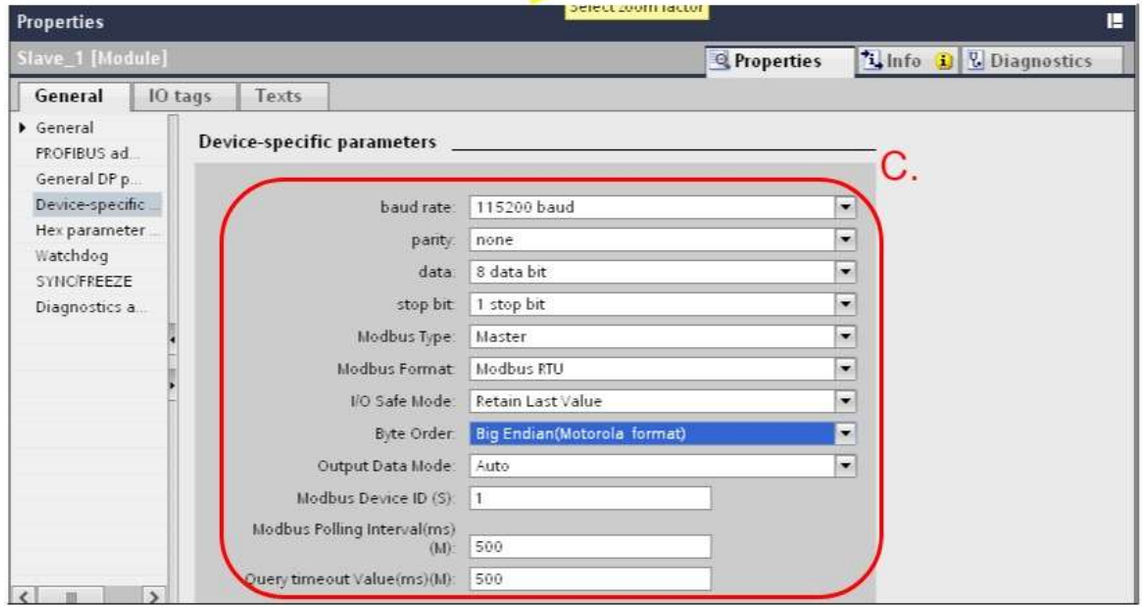
Data bit: 8

Stop bit: 1

Byte order: Big Endian

Output Data Mode: Auto



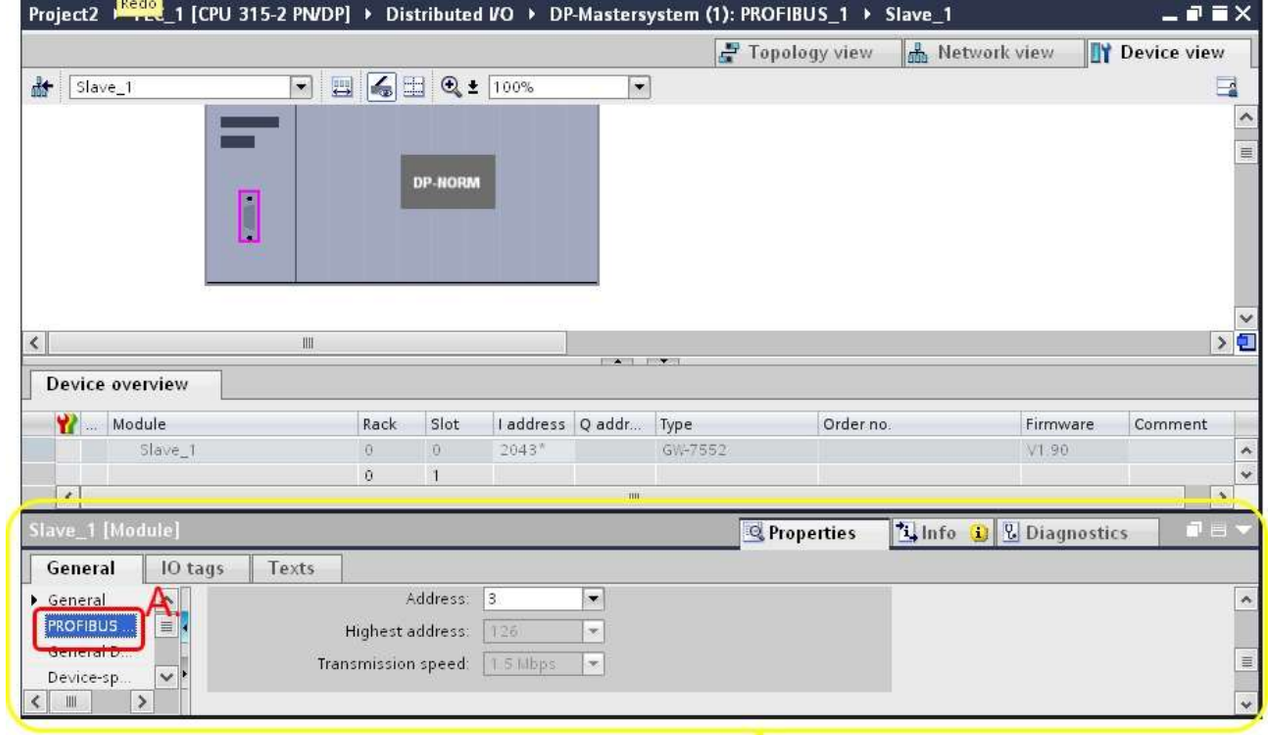


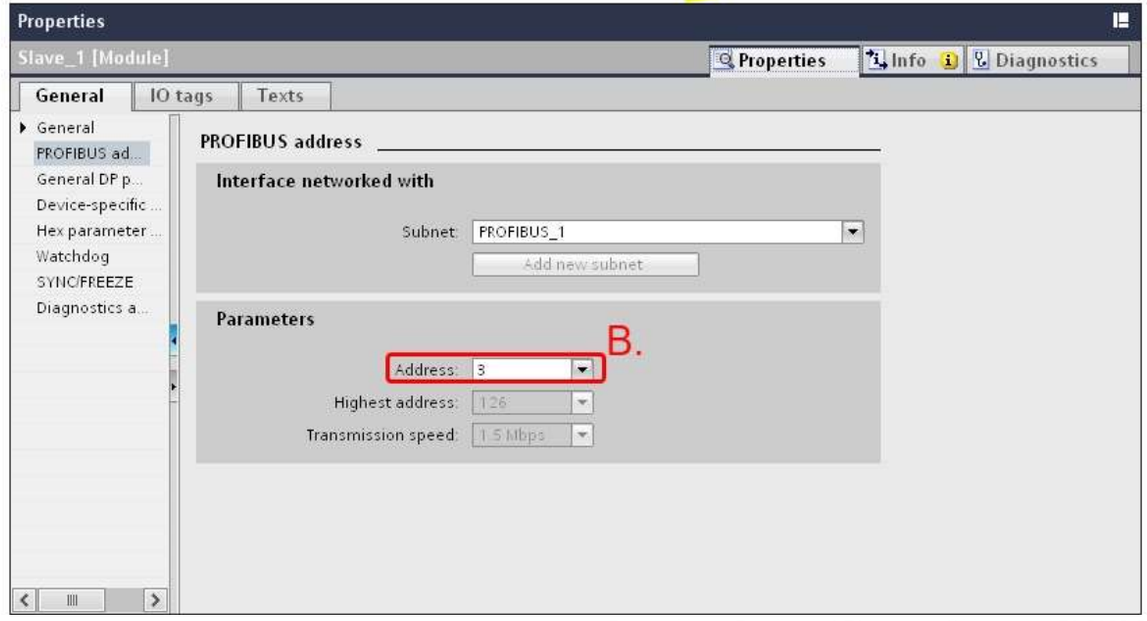
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Set the address of GW-7553 as below

(A) Click “Properties” and
“PROFIBUS address”

(B) Set “Address”=3





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Before connecting

- Make sure the switch of the GW-7553 is at Normal mode
- Refer to GW7553 user manual 2.6



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Before connecting

- Setup the address by the DIP switch to set GW-7553's address as 3 in PROFIBUS
- Refer to GW-7553 user manual 2.4

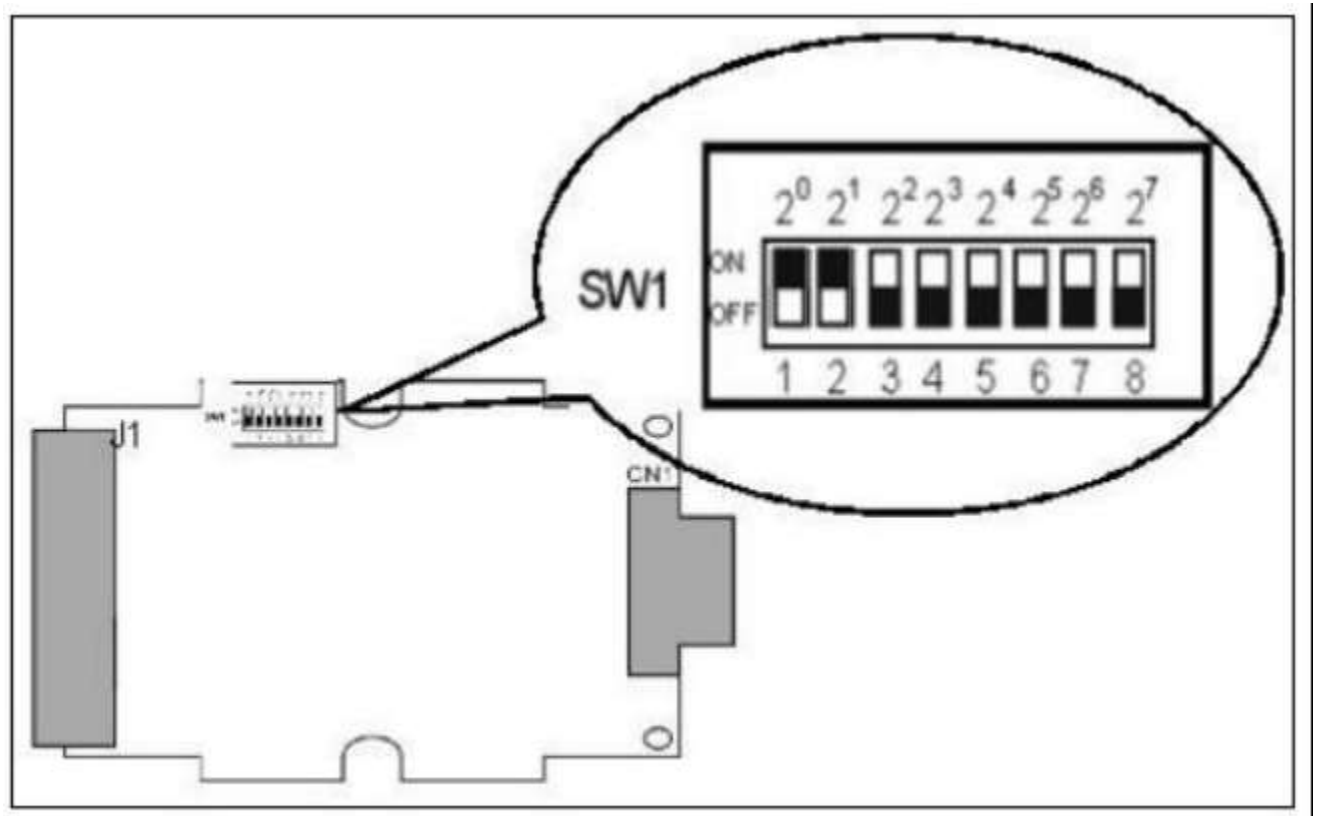


Figure 12: DIP switch

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Reads and Writes DO module data



SIMATIC PLC
PROFIBUS Address 2

PROFIBUS DP



GW-7553
PROFIBUS Address 3
Modbus RTU Master

Modbus RTU

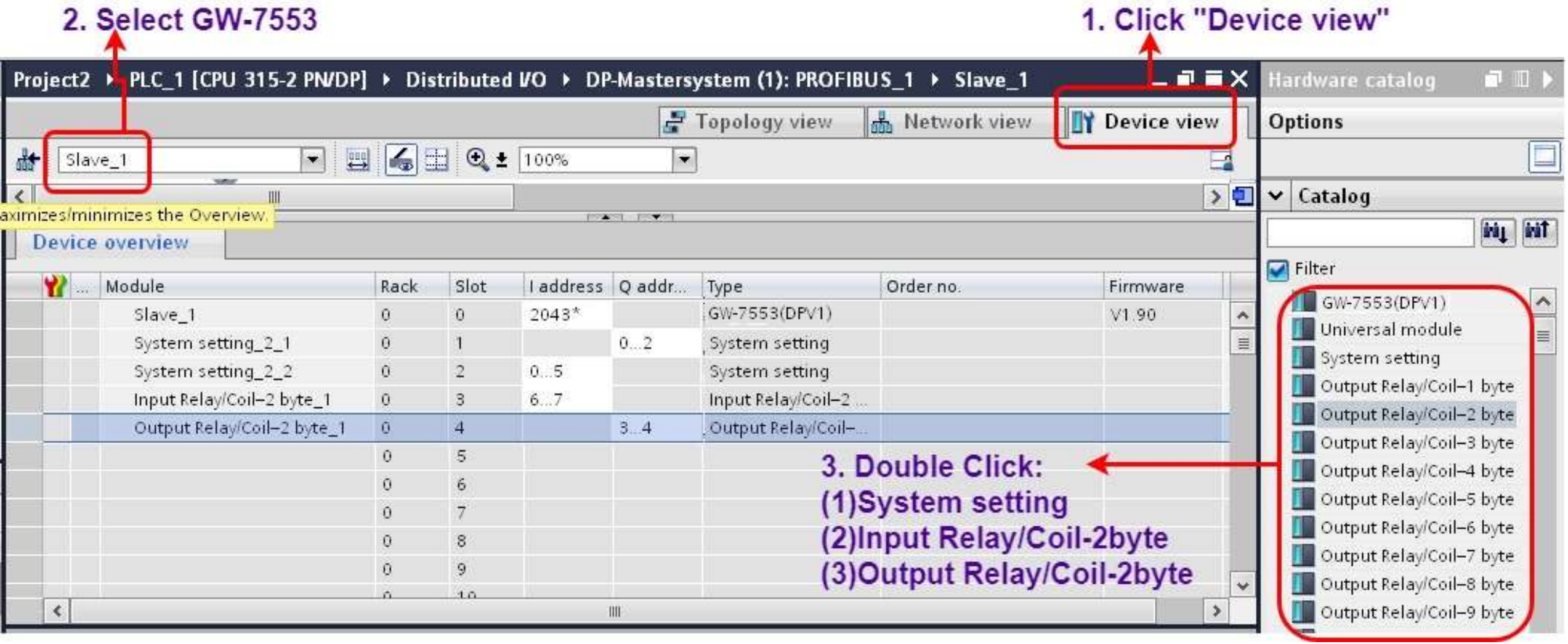


Comport Setting:
Baud Rate=1
Data Bit=8
Stop Bit=1
Parity=None

10 channel DO module
Modbus Device ID=1
Data Address=10021~10030 (20~29)
Data length=2

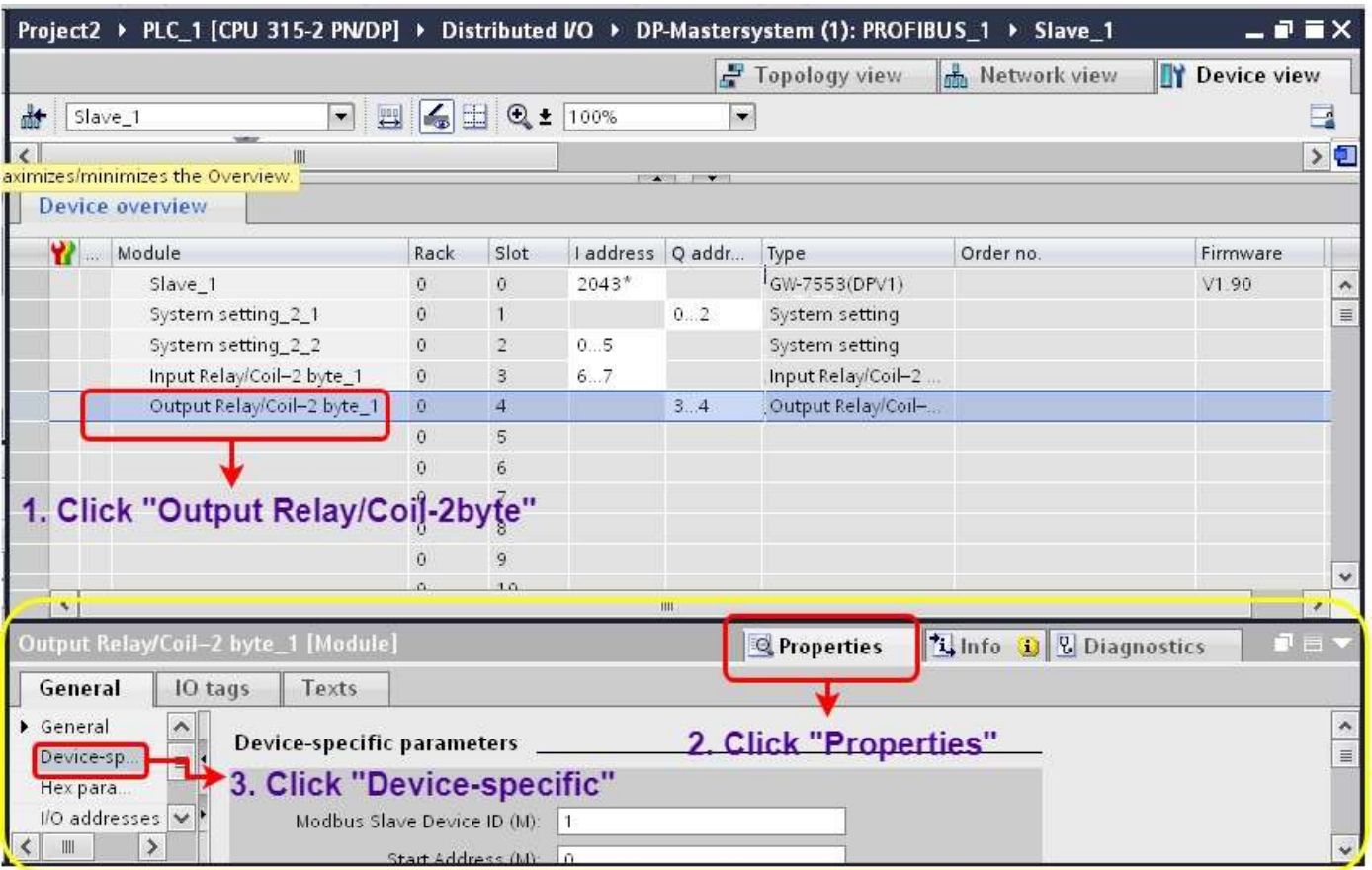
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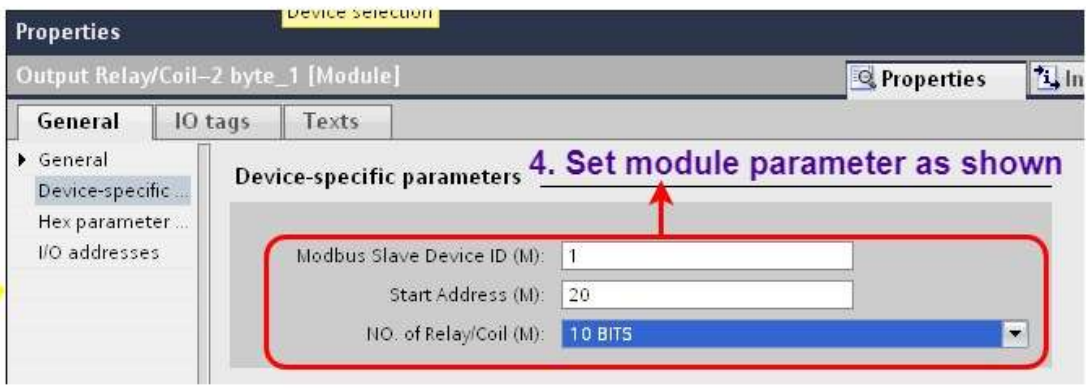
Reads and Writes DO module data



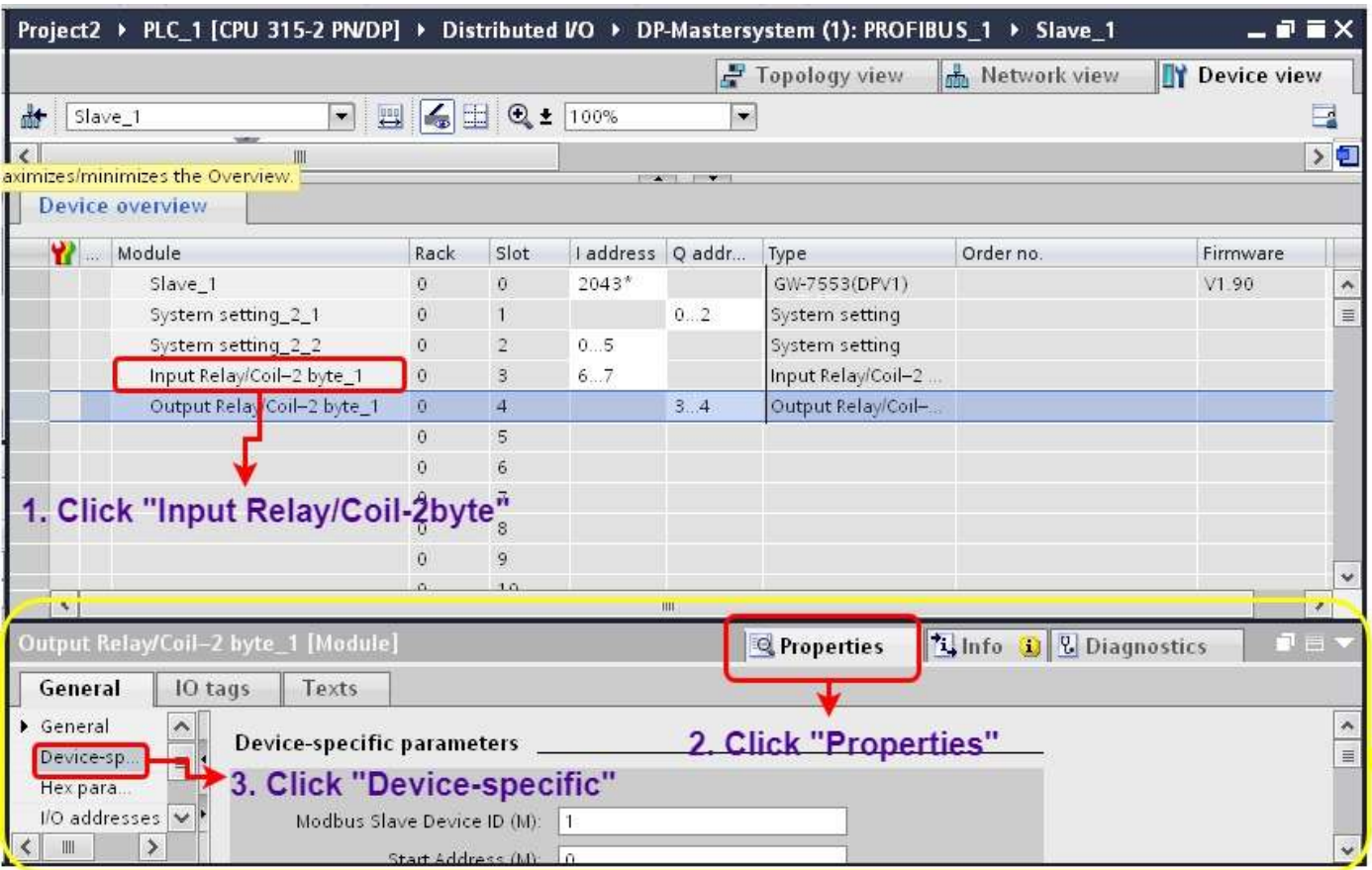
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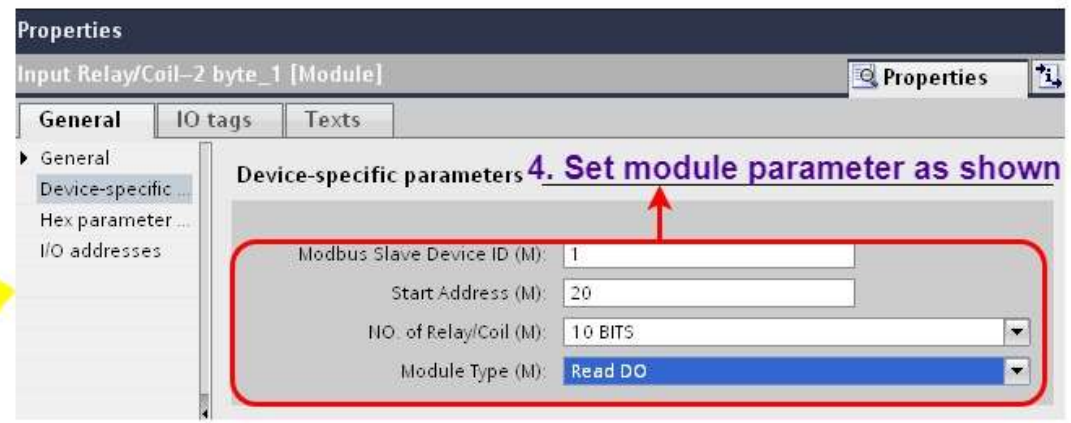
Reads and Writes DO module data





Reads and Writes DO module data





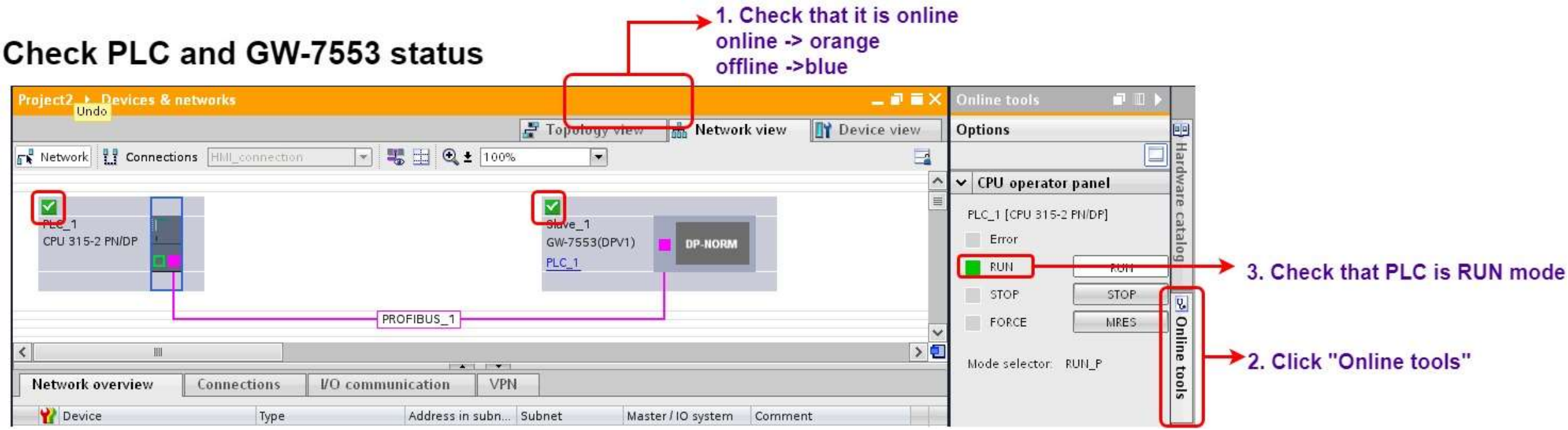
Reads and Writes DO module data



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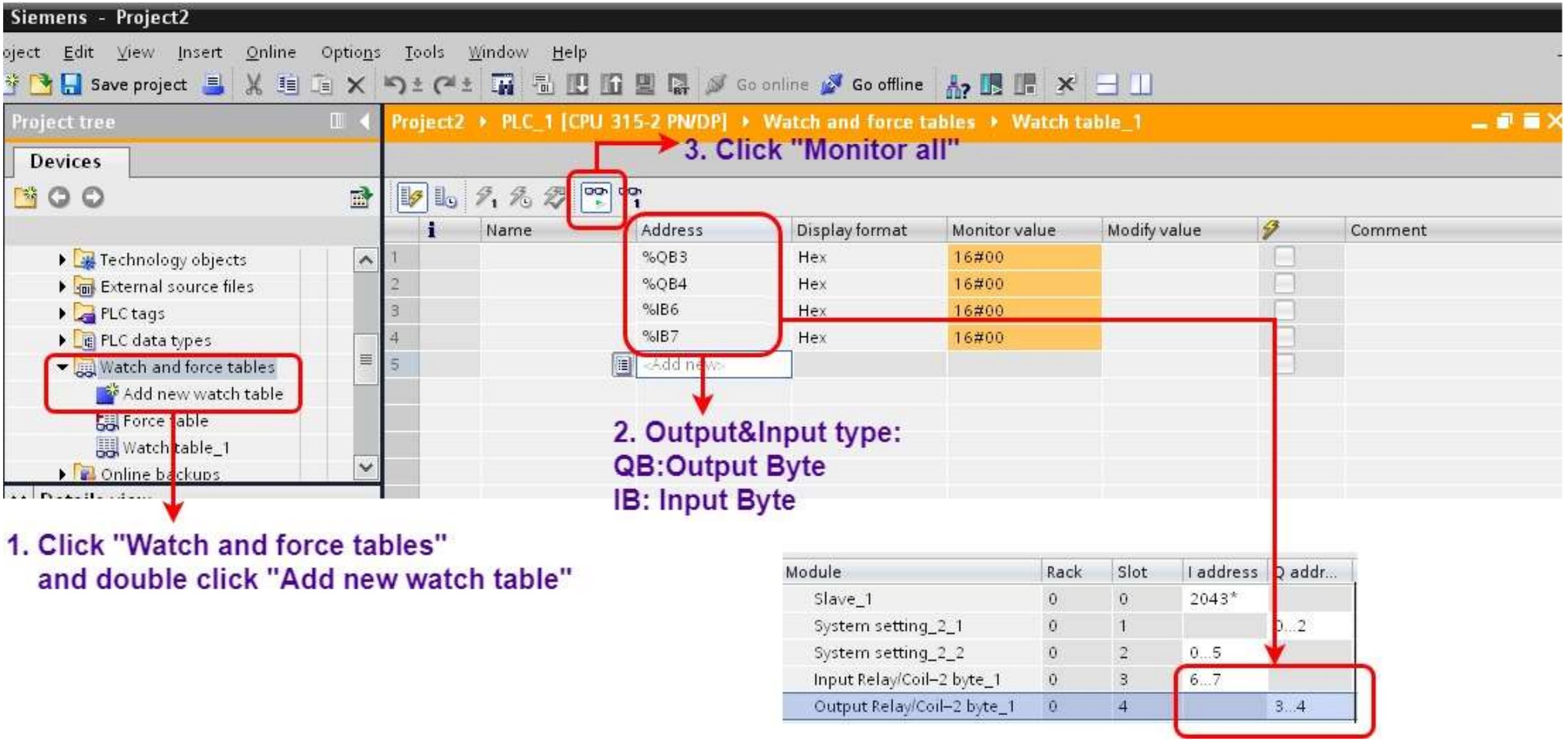
Reads and Writes DO module data

Check PLC and GW-7553 status



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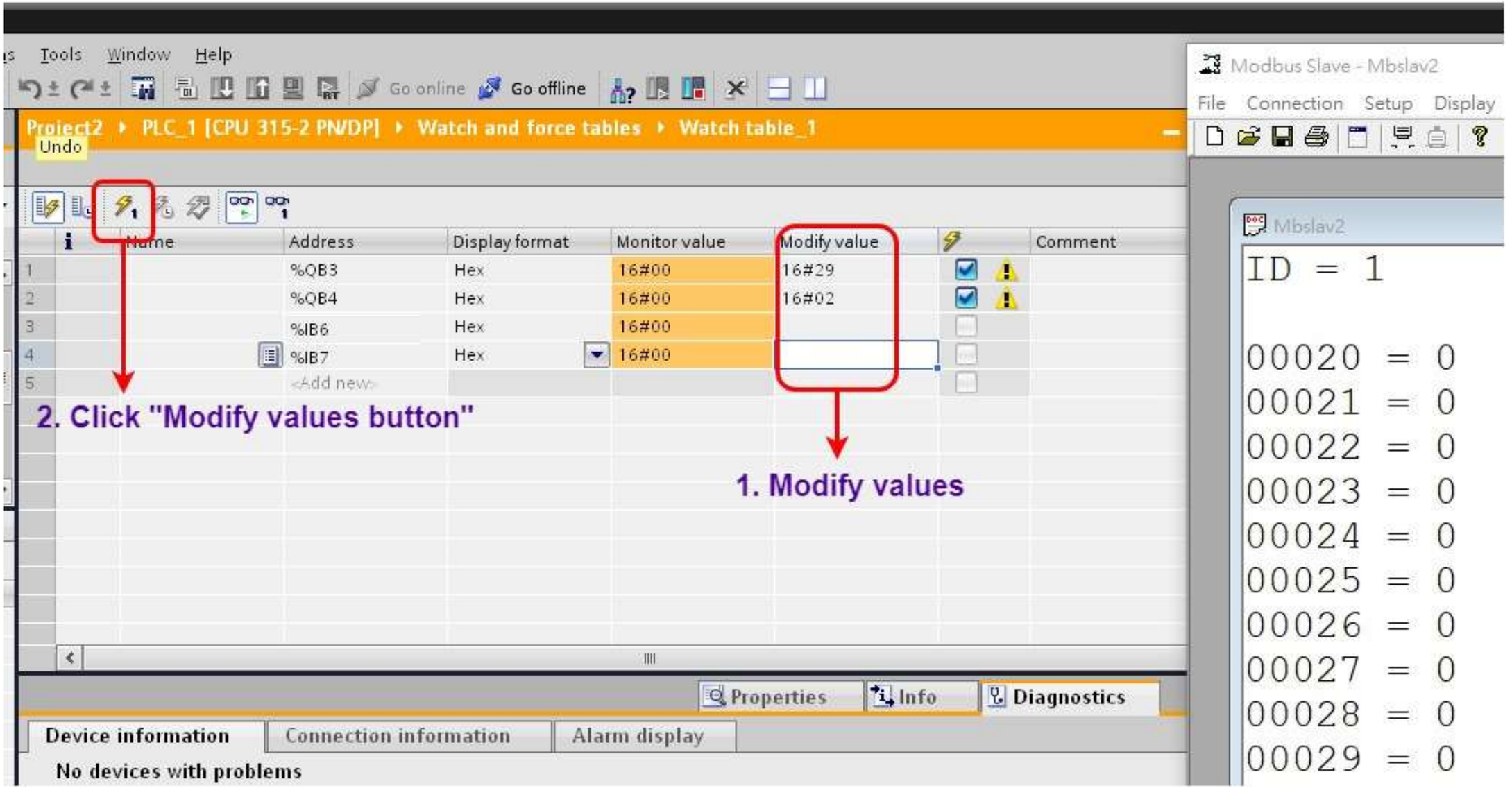
Reads and Writes DO module data



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Reads and Writes DO module data

Modify values and Send Modbus commands



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Reads and Writes DO module data

Modify values and Send Modbus commands

Address	Display format	Monitor value	Modify value		Comment
%QB3	Hex	16#29	16#29	☑ ⚠	
%QB4	Hex	16#02	16#02	☑ ⚠	
%IB6	Hex	16#29		☐	
%IB7	Hex	16#02		☐	
<Add new>				☐	

Type	Read/Write	Modbus Address	value
QB3	Write DO	20~27(00021~00028)	0x29
QB4	Write DO	28~29(00029~00030)	0x02
IB6	Read DO	20~27(00021~00028)	0x29
IB7	Read DO	28~29(00029~00030)	0x02

Properties | Info | Diagnostics

Connection information | Alarm display

ms

Mbslav2

ID = 1

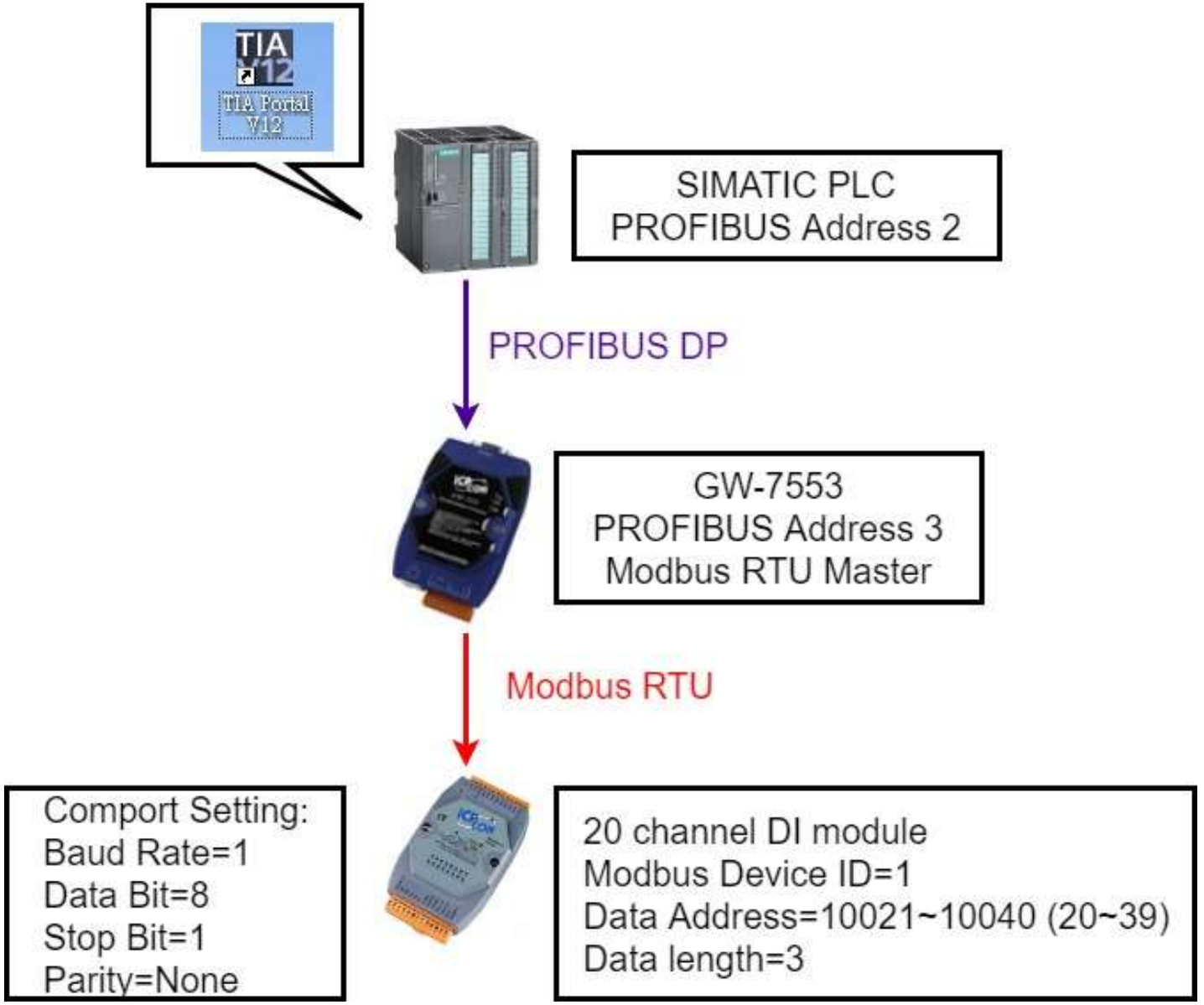
00020 = 1
00021 = 0
00022 = 0
00023 = 1 → 9

00024 = 0
00025 = 1
00026 = 0
00027 = 0 → 2

00028 = 0
00029 = 1 → 2

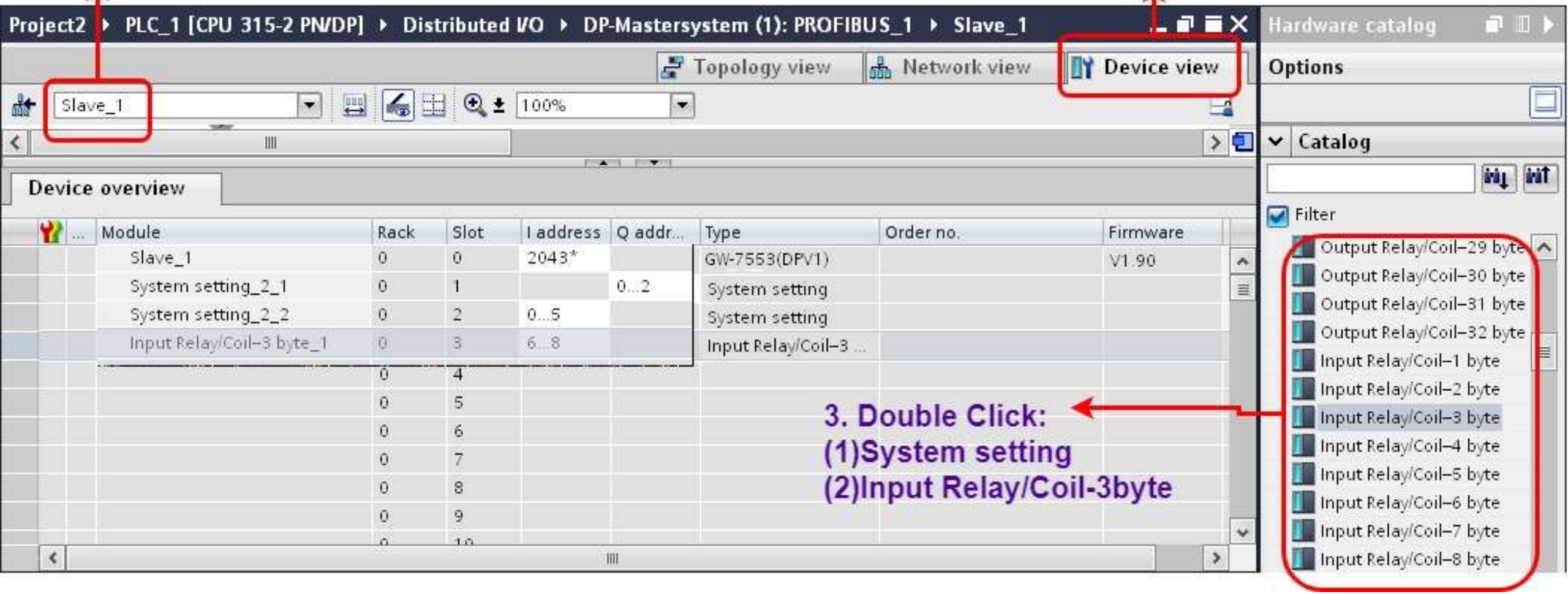
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Reads DI module data



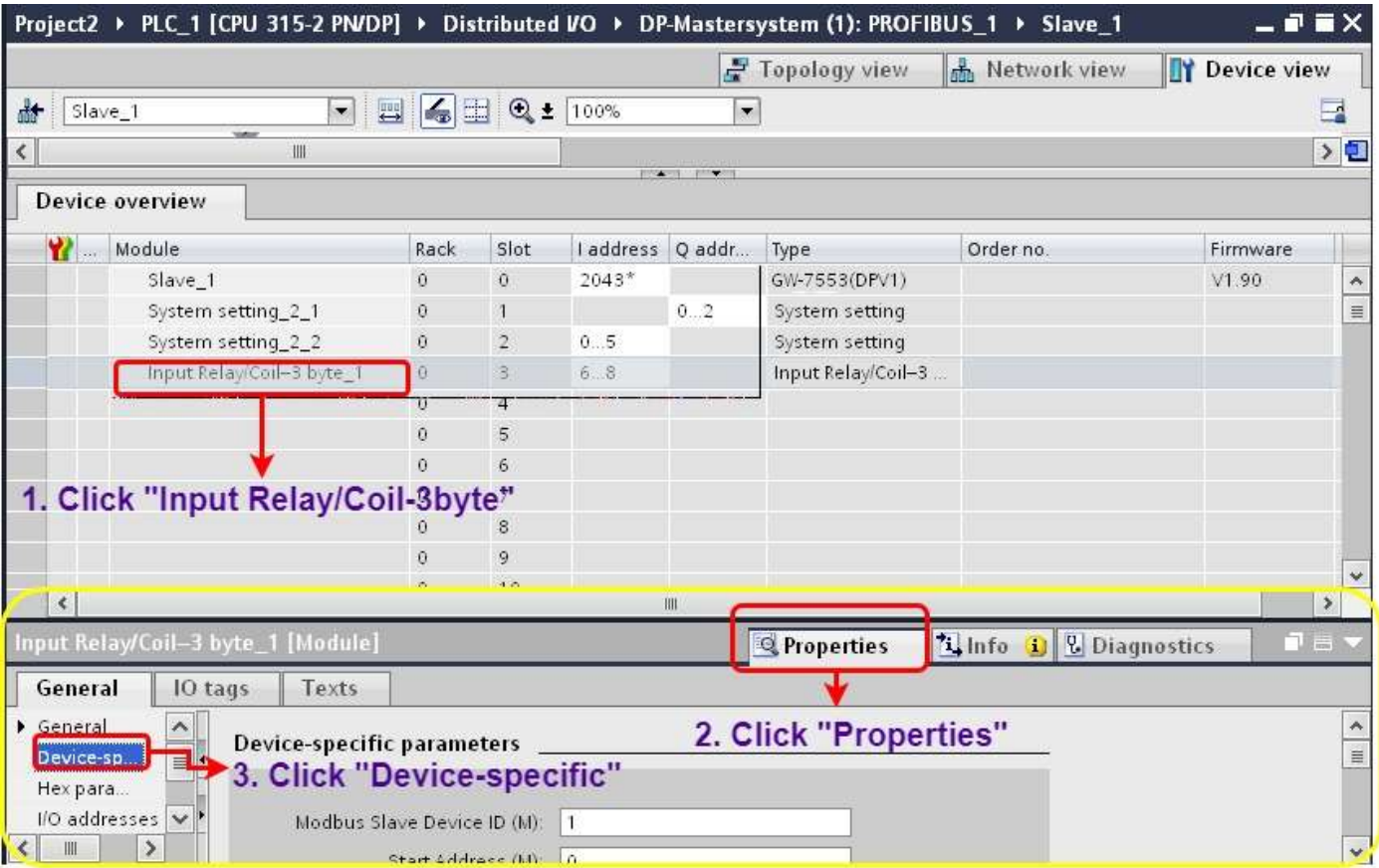
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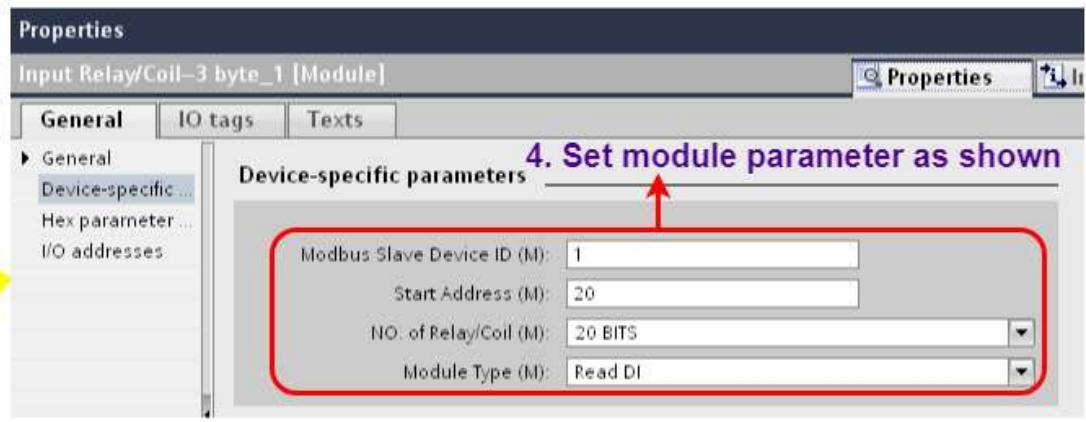
Reads DI module data



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Reads DI module data





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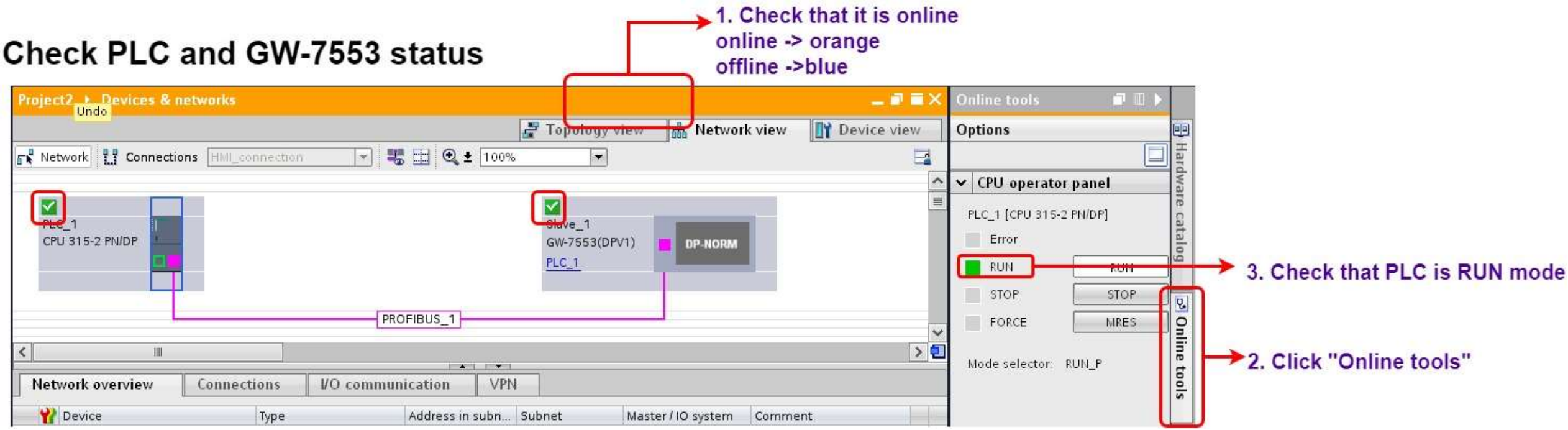
Reads DI module data



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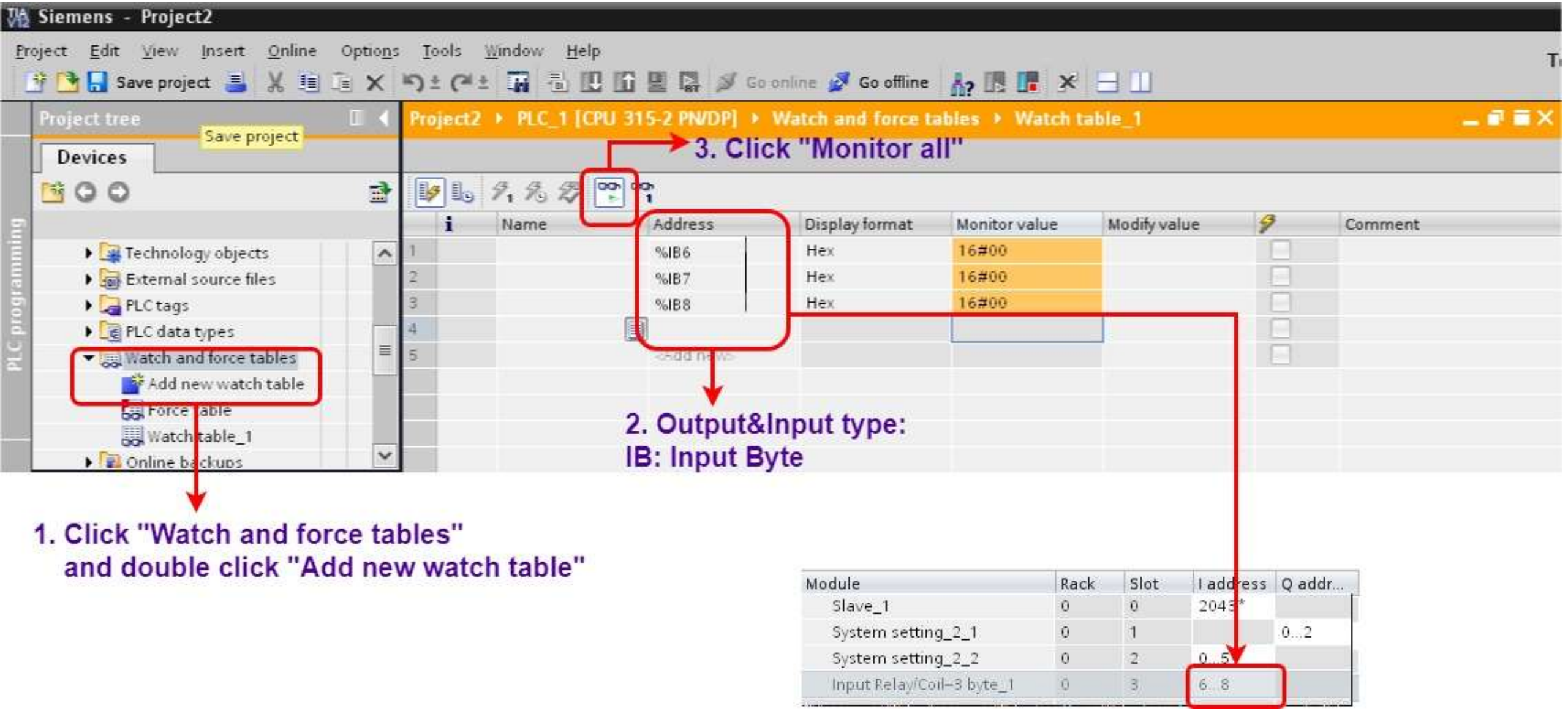
Reads and Writes DI module data

Check PLC and GW-7553 status



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Reads DI module data



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Reads DI module data

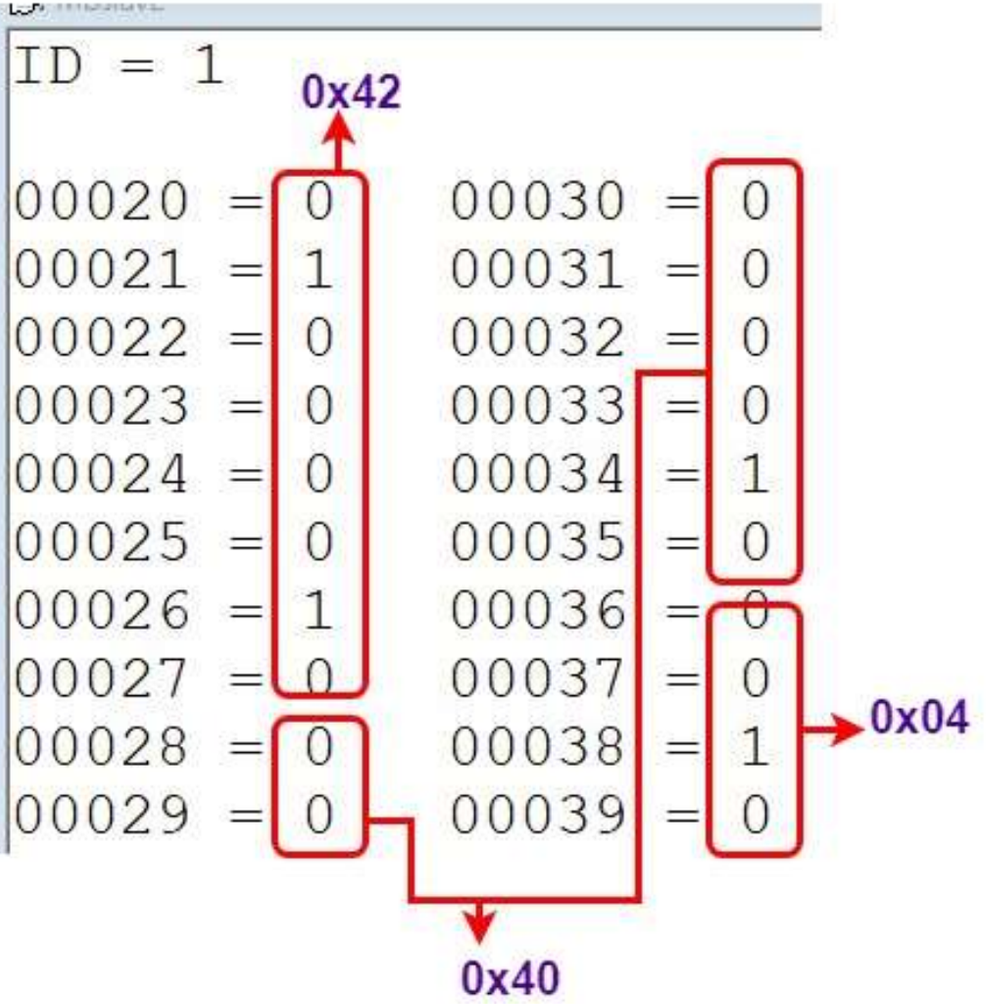
Modify values and Send Modbus commands

Address	Display format	Monitor value	Modify value		Comment
%IB6	Hex	16#42			
%IB7	Hex	16#40			
%IB8	Hex	16#04			
<Add new>					

Type	Read/Write	Modbus Address	value
IB6	Read DI	20~27(10021~10028)	0x42
IB7	Read DI	28~35(10029~10036)	0x40
IB8	Read DI	36~39(10037~10040)	0x04

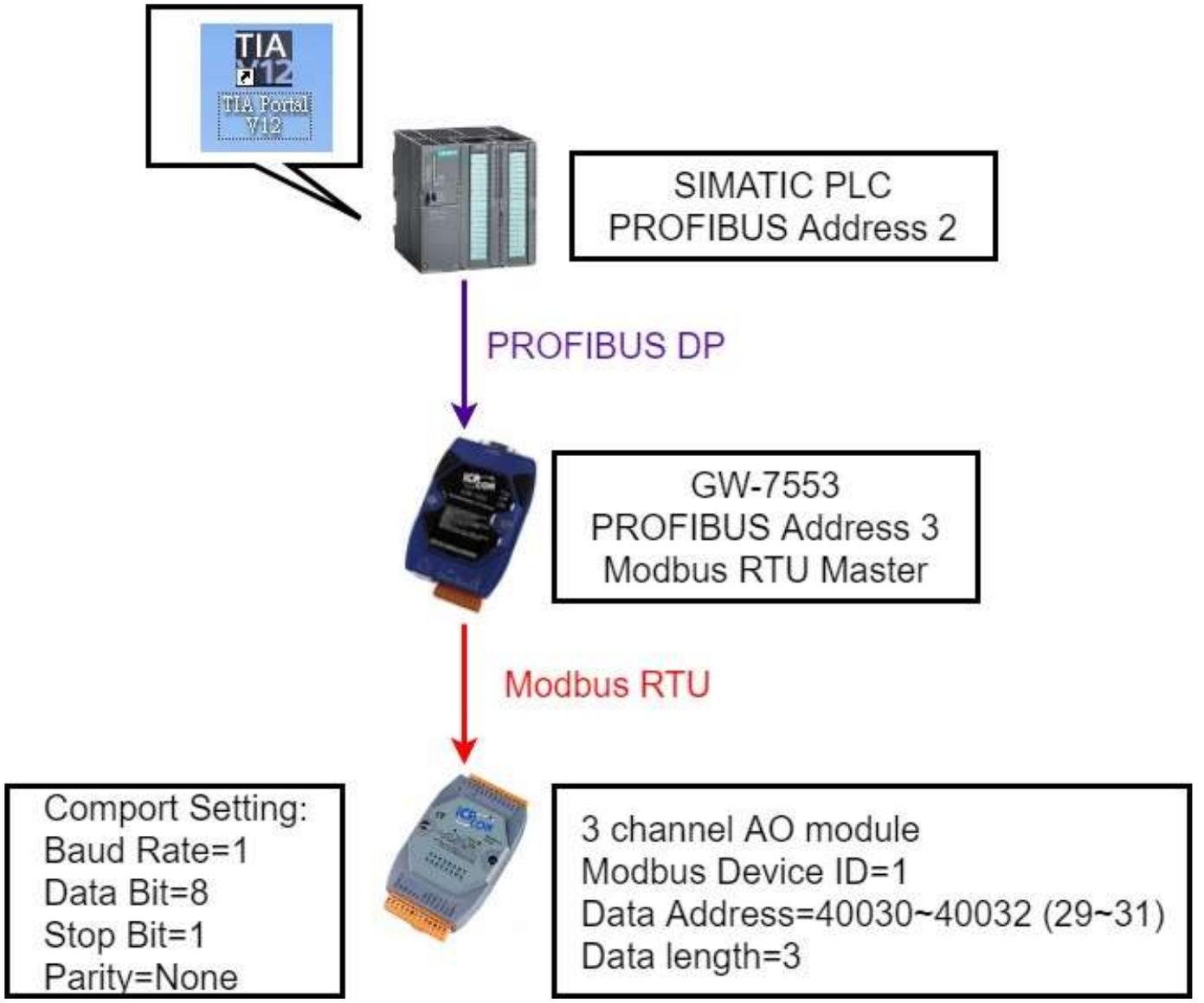
Properties | Info | Diagnostics

Connection information | Alarm display



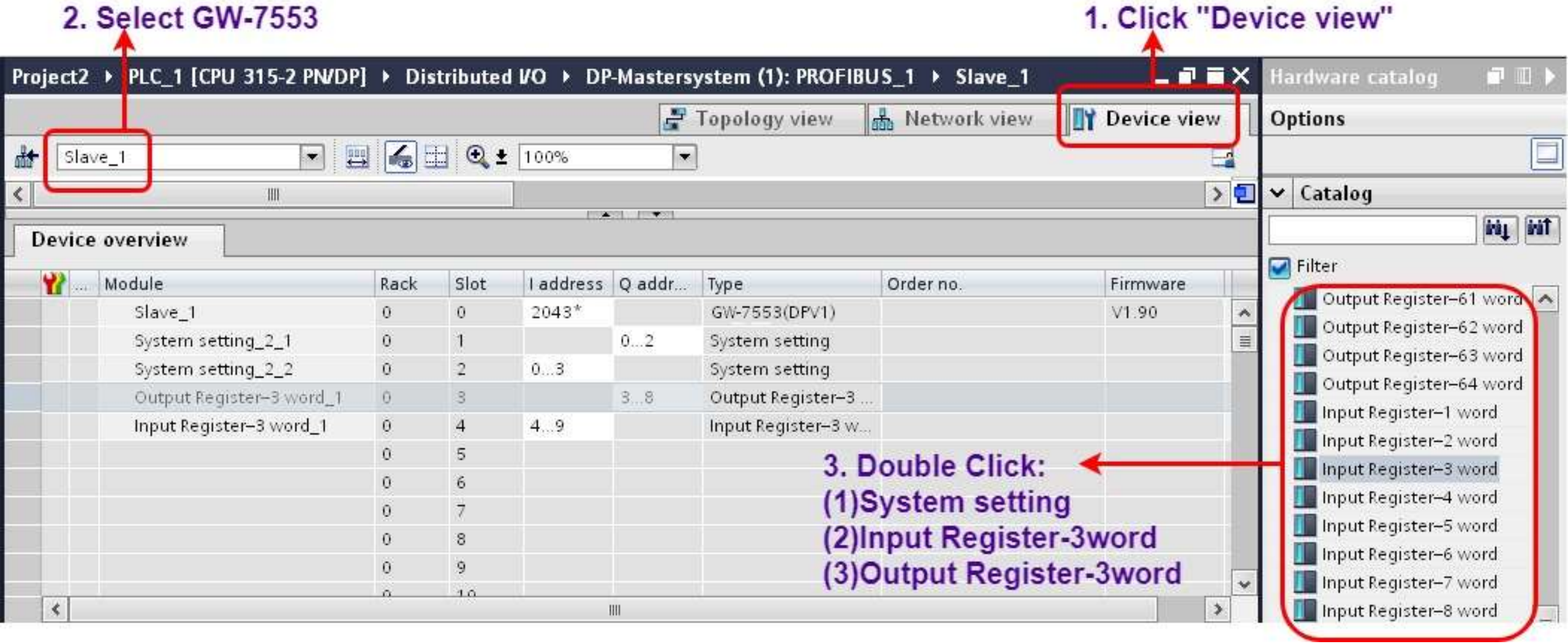
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Reads and Writes AO module data



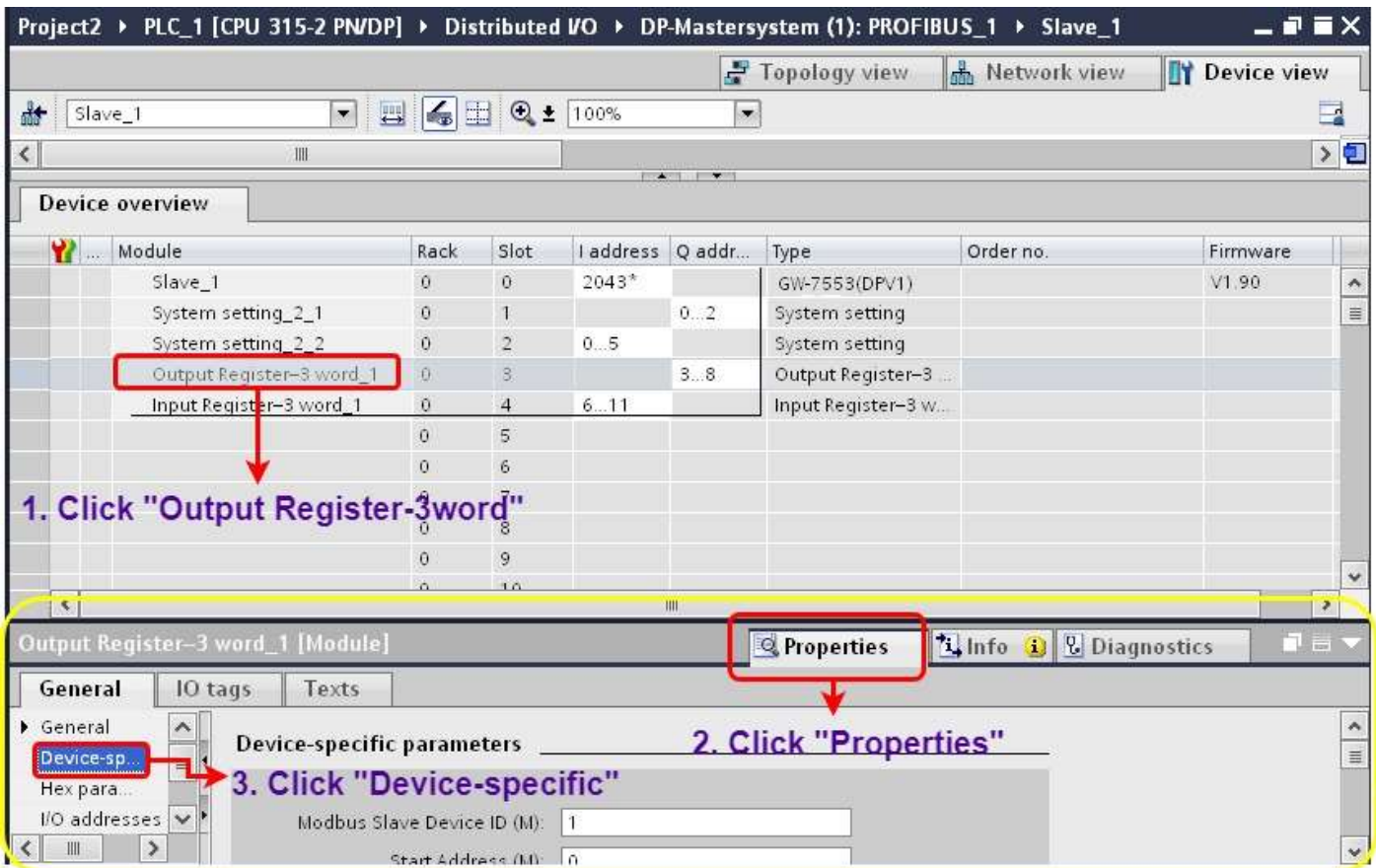
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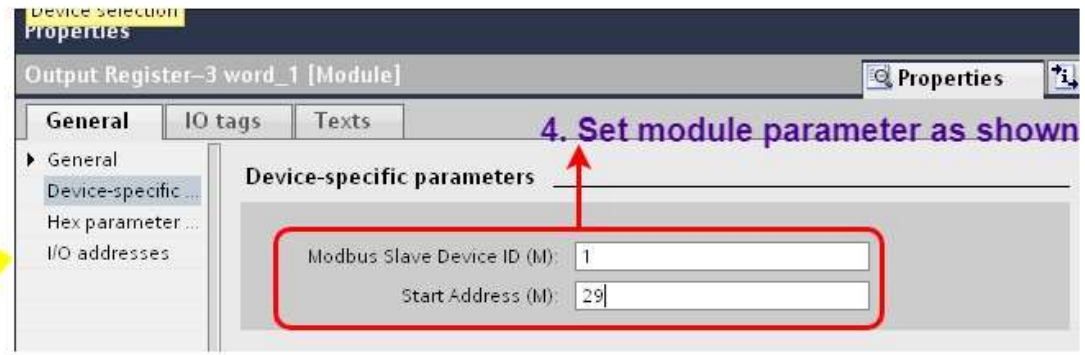
Reads and Writes AO module data



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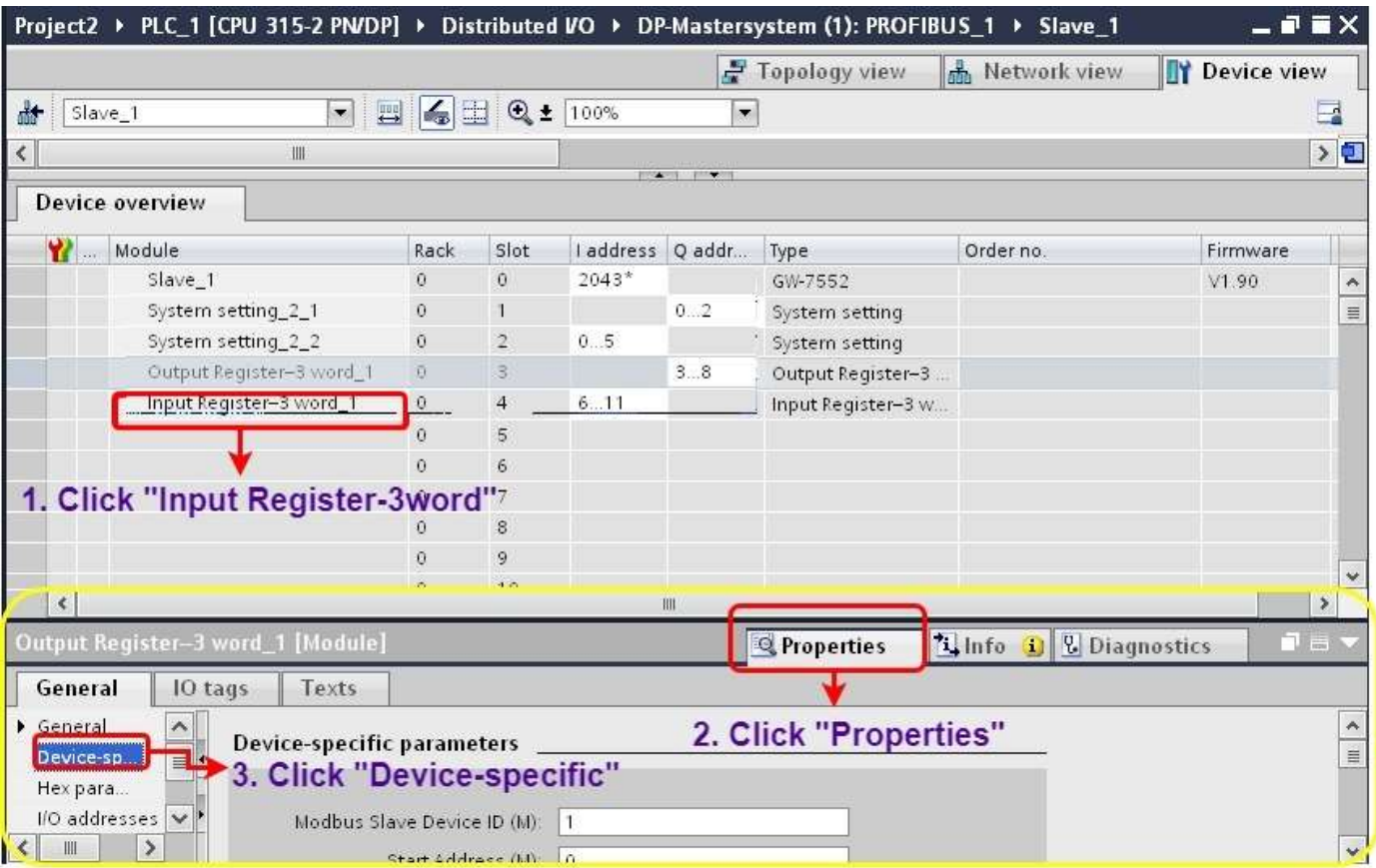
Reads and Writes AO module data

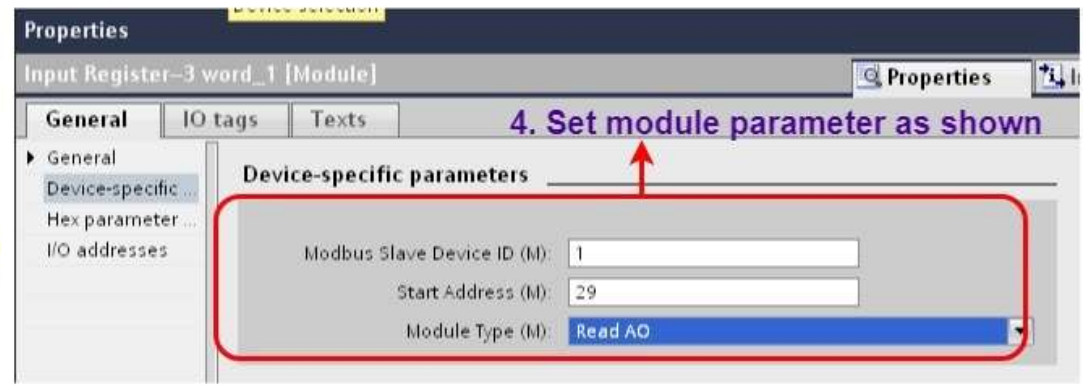




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Reads and Writes AO module data





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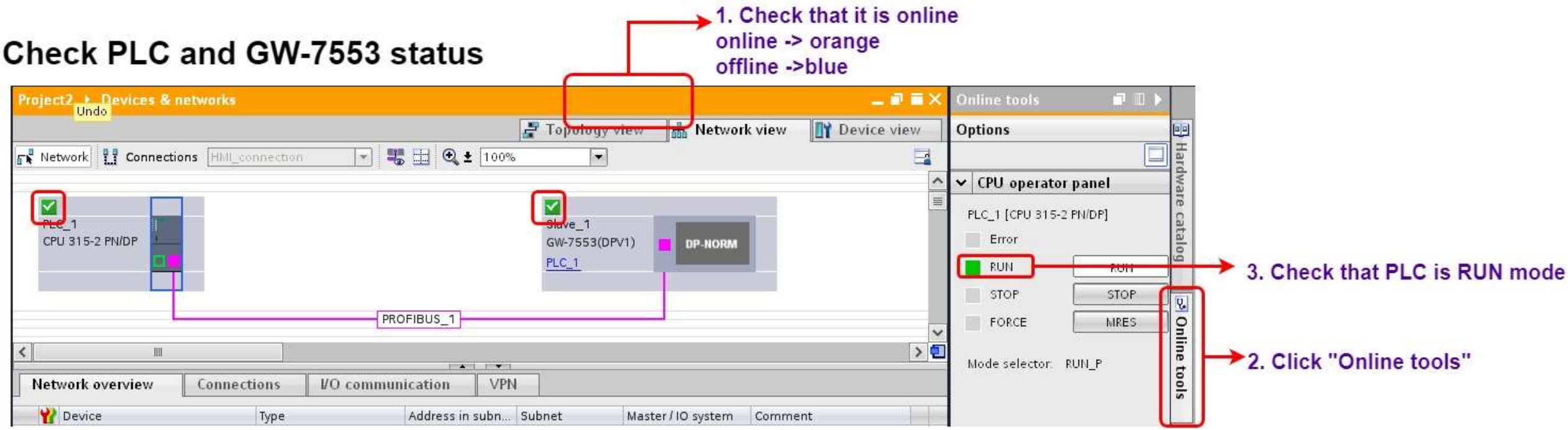
Reads and Writes AO module data



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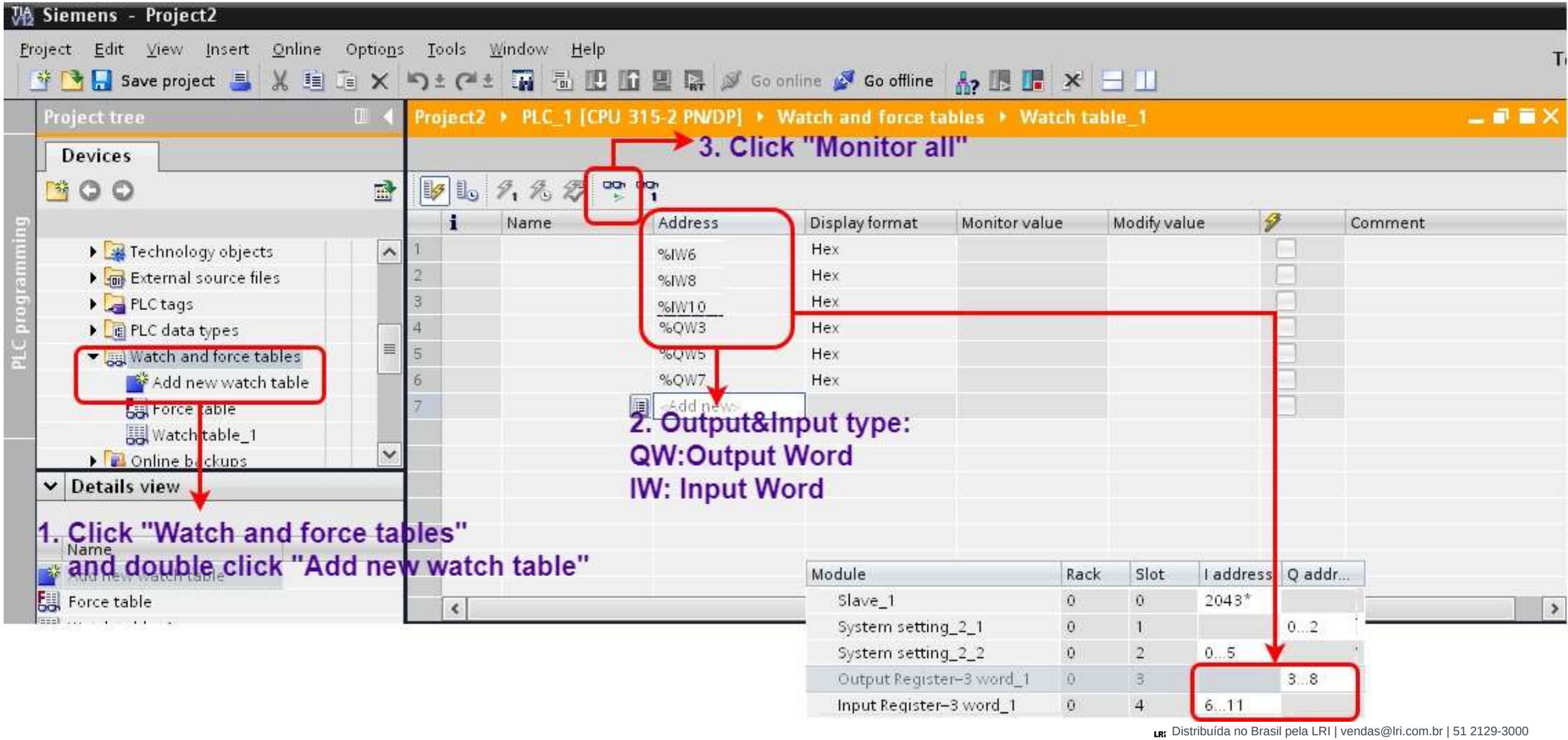
Reads and Writes AO module data

Check PLC and GW-7553 status



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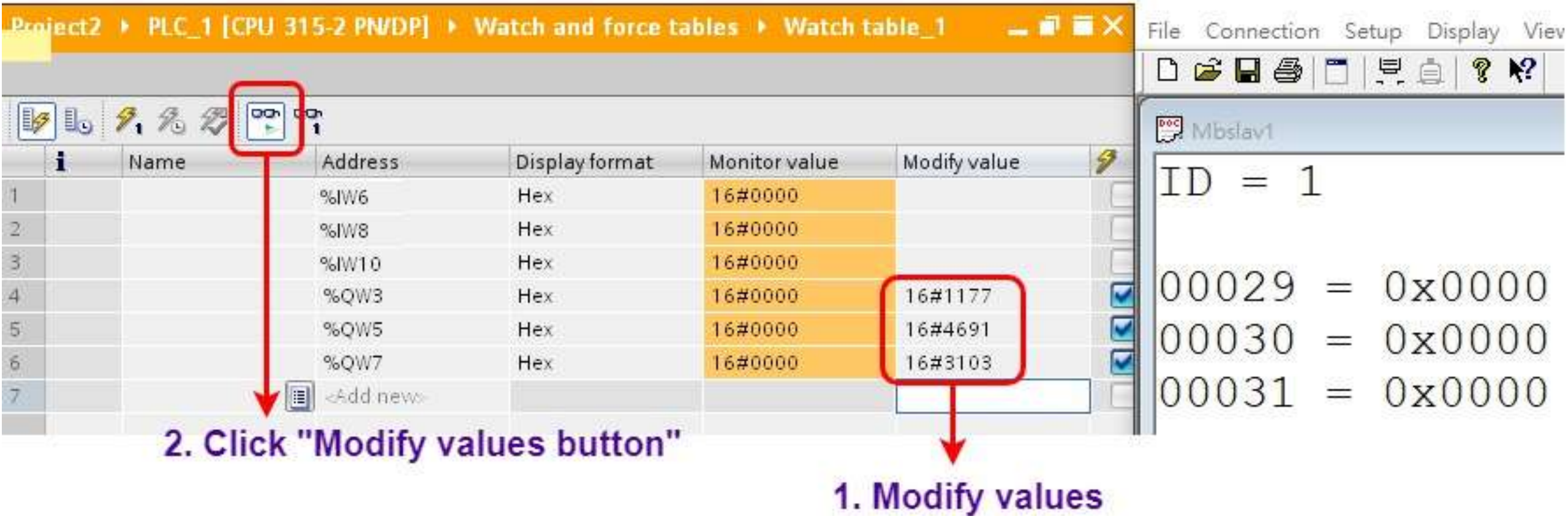
Reads and Writes AO module data



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Reads and Writes AO module data

Modify values and Send Modbus commands



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Reads and Writes AO module data

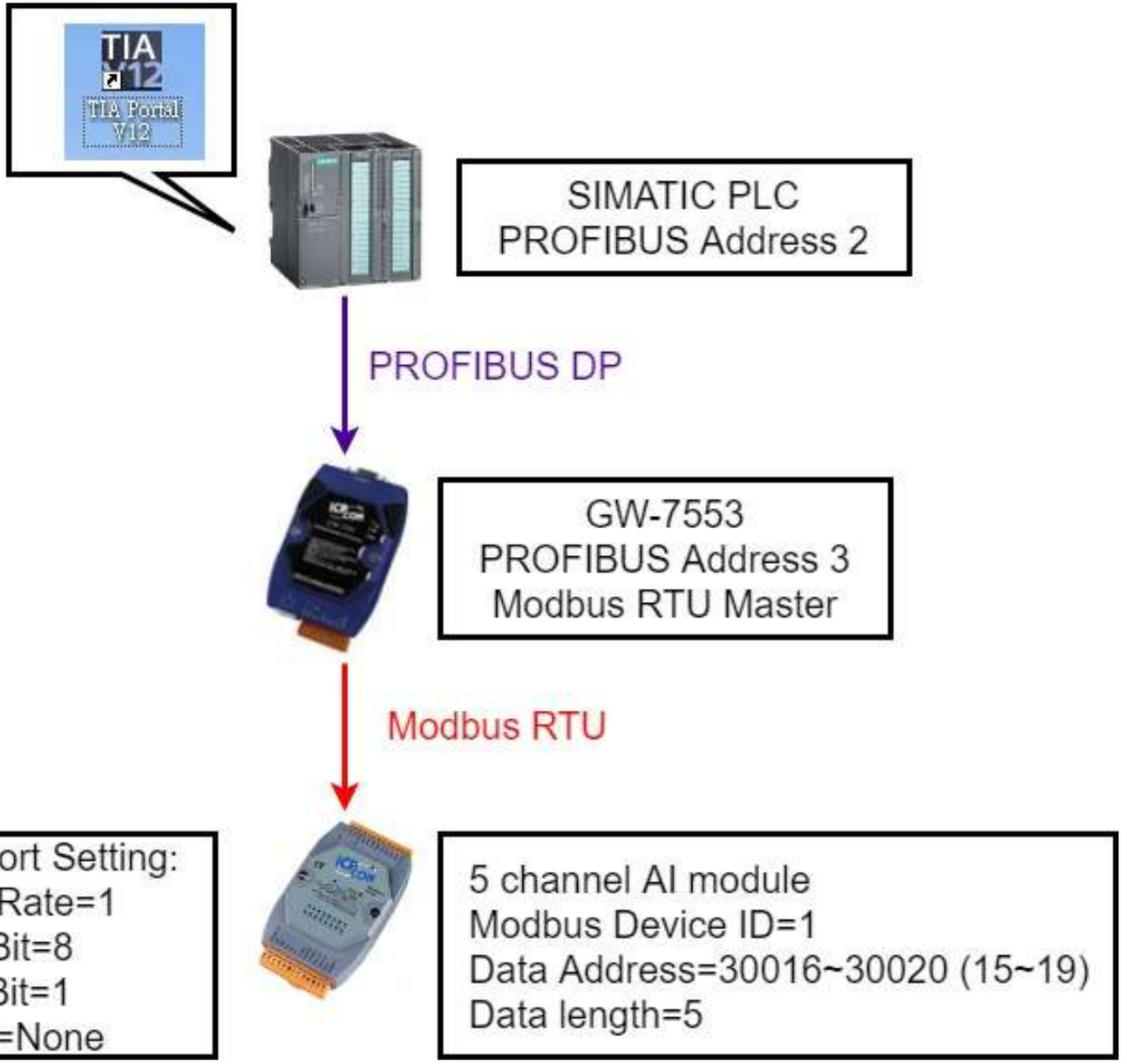
Modify values and Send Modbus commands



Type	Read/Write	Modbus Address	value
IW6	Read AO	29(40030)	0x1177
IW8	Read AO	30(40031)	0x4691
IW10	Read AO	31(40032)	0x3103
QW3	Write AO	29(40030)	0x1177
QW5	Write AO	30(40031)	0x4691
QW7	Write AO	31(40032)	0x3103

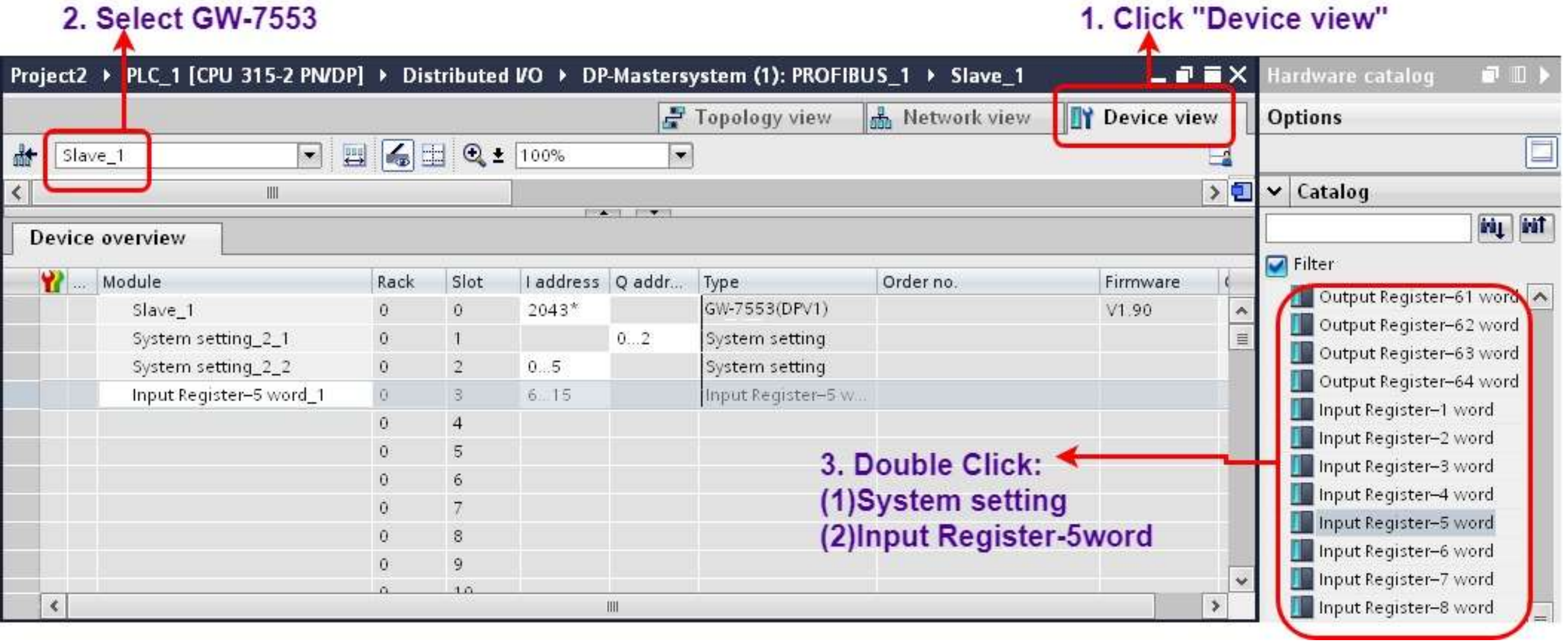
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Reads AI module data



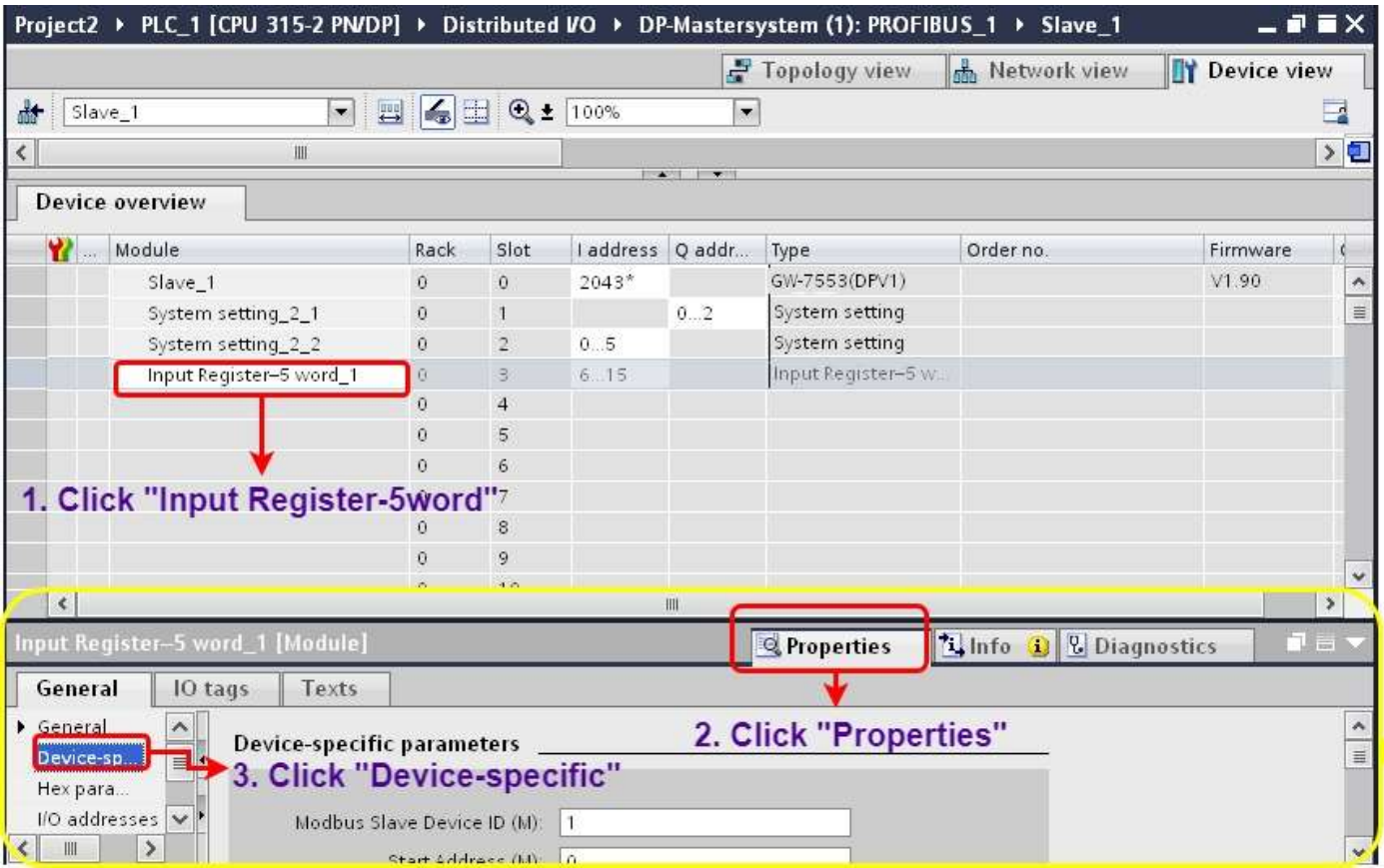
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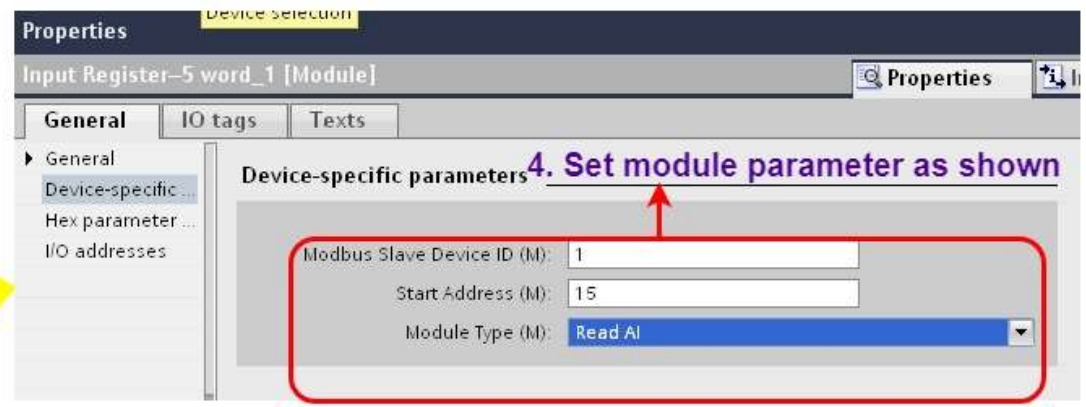
Reads AI module data



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Reads AI module data





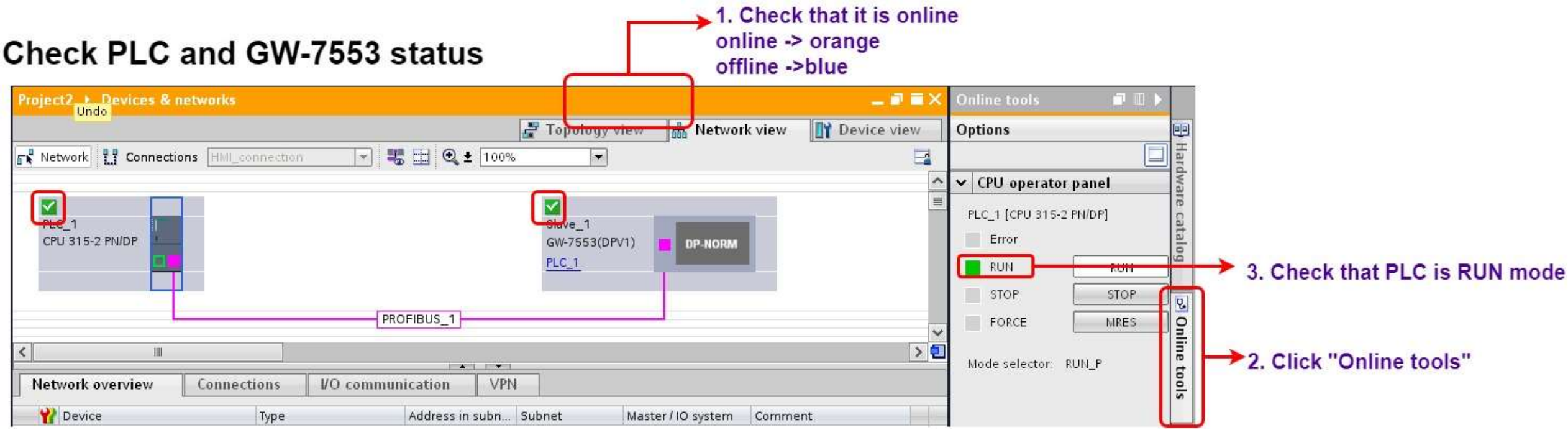
Reads AI module data



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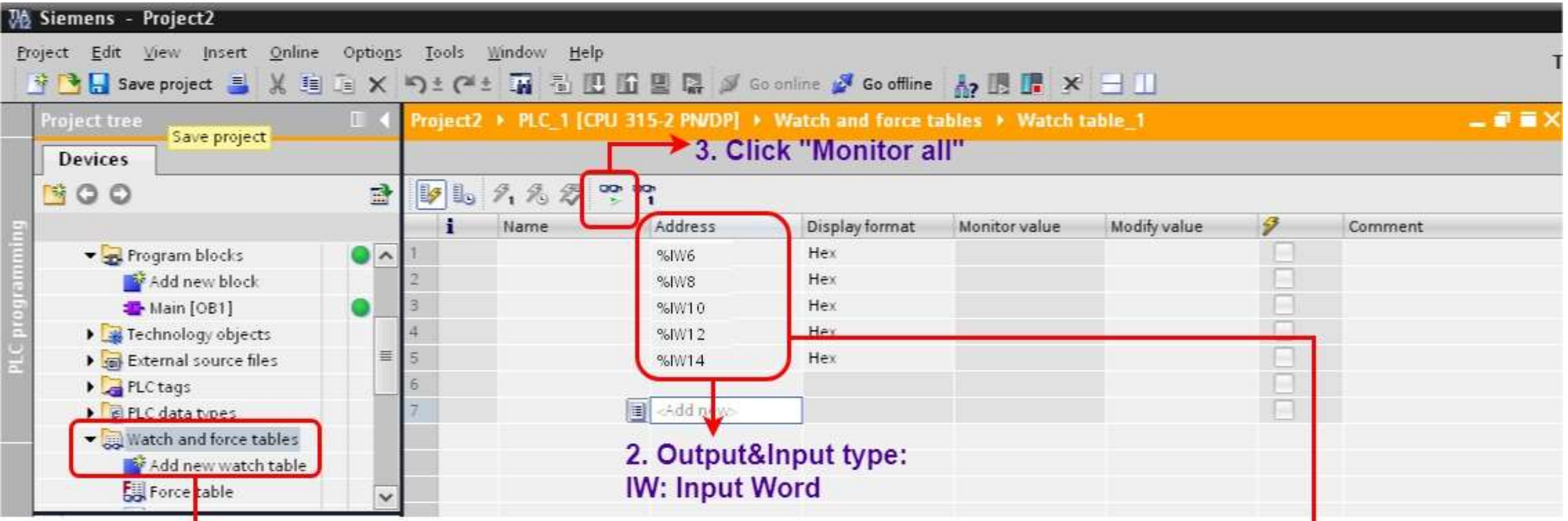
Reads AI module data

Check PLC and GW-7553 status



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Reads AI module data

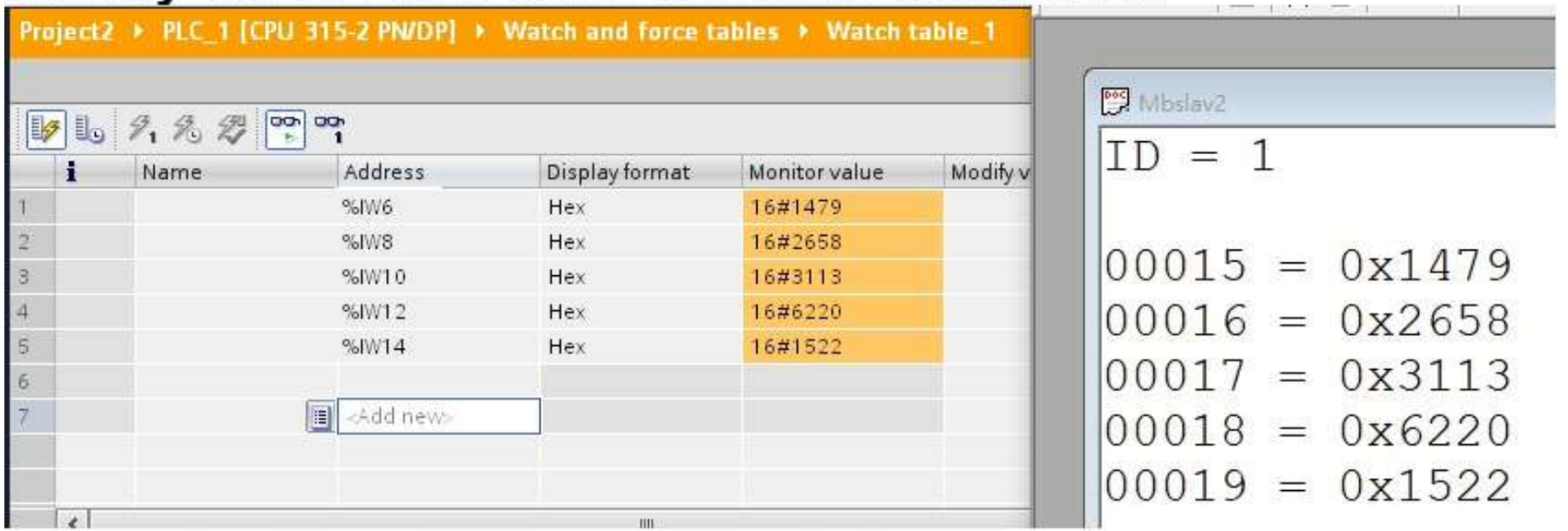


Module	Rack	Slot	I address
Slave_1	0	0	2048*
System setting_2_1	0	1	
System setting_2_2	0	2	0...
Input Register-5 word_1	0	3	6...15

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Reads AI module data

Modify values and Send Modbus commands



Type	Read/Write	Modbus Address	value
IW6	Read AI	15(30016)	0x1479
IW8	Read AI	16(30017)	0x2658
IW10	Read AI	17(30018)	0x3113
IW12	Read AI	18(30019)	0x6220
IW14	Read AI	19(30020)	0x1522

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