

1. Instruction

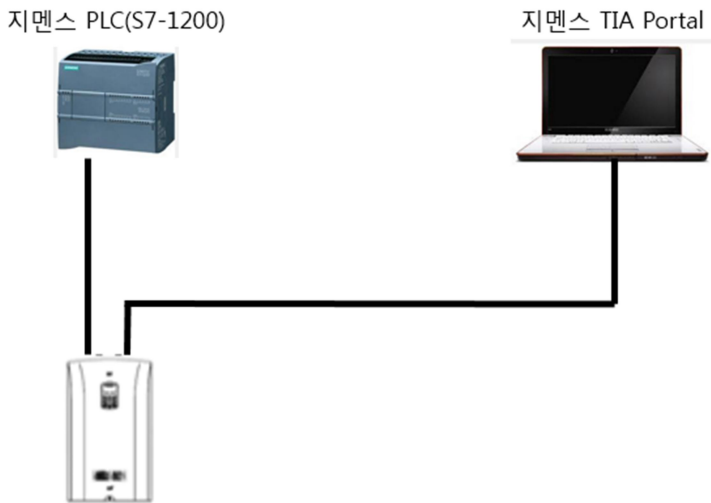
In this document, we show you how to configure 'iS7 PROFINet Option' and connect 'Siemens PLC (S7-1200)' in Siemens TIA(Totally Integrated Automation) PORTAL.

To connect 'iS7 PROFINet Option' to Siemens PLC, first you should register iS7 PROFINet Option GSDML into TIA and then assign name of 'iS7 PROFINet Option'.

After that, you can configure network of 'iS7 PROFINet Option' and 'Siemens PLC (S7-1200)' and program the PLC in TIA.

Finally, I attach a simple TIA Portal Demo project for iS7.

Network setup and profinet device name are configured as follow in this Project



	IP address	PROFINet device name
Siemens PLC (S7-1200)	192.168.0.10	plc_7
Notebook running TIA Portal V13	192.168.0.1	
iS7 with PROFINet Option	192.168.0.100	is7

The program of the project just make iS7 running at 60Hz speed when PLC starts.

I skip detailed explanation of ladder logic of PLC in the project.

We use following S/W and PLC for this demo.

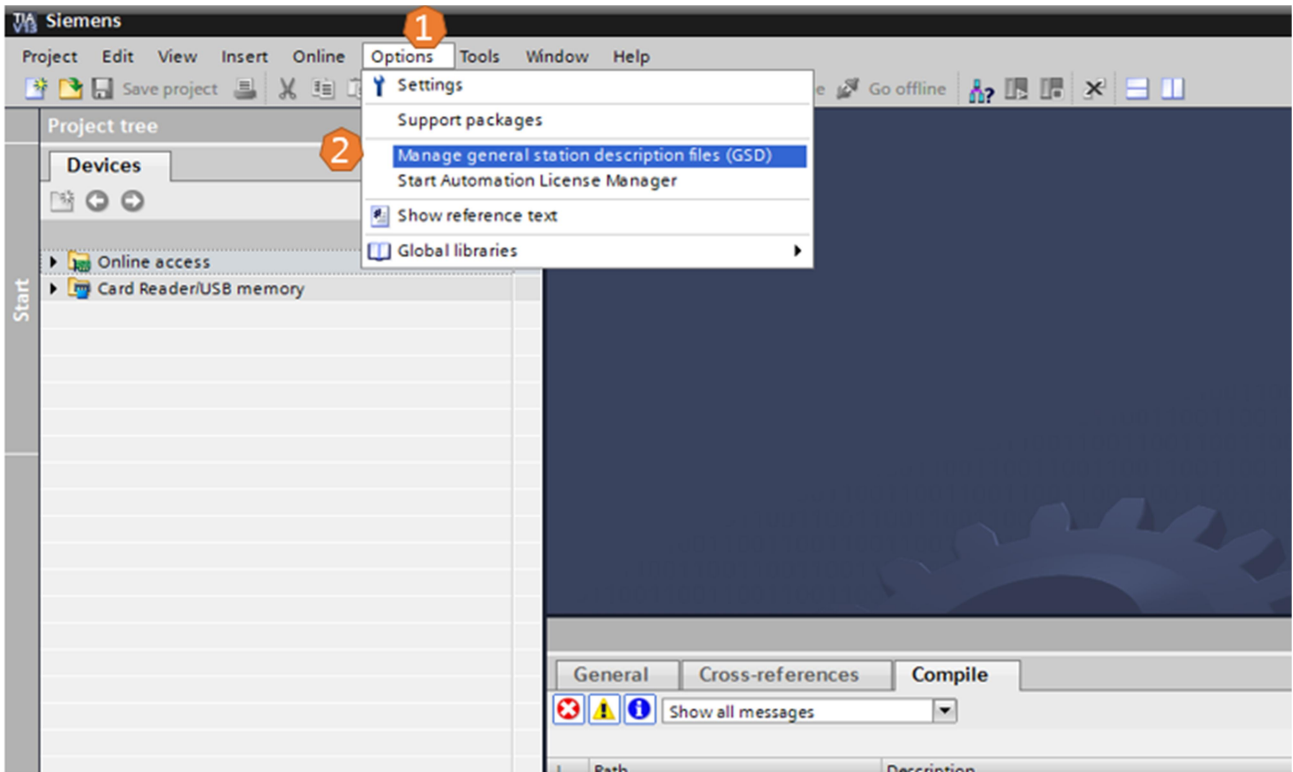
S/W : TIA V13

PLC : S7-1200 (CPU 1212C AC/DC/RLY 6ES7 212-1BE40-0xB0)

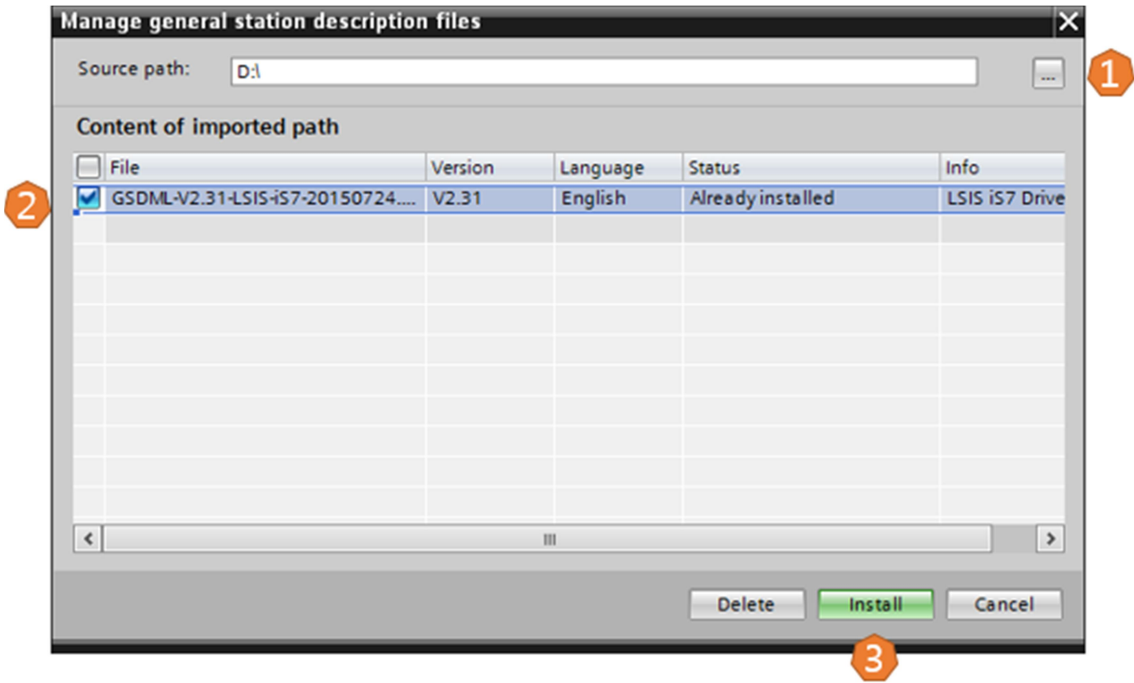
iS7 : SV0022IS7-2NOFD

2. How to register 'iS7 PROFINet Option' GSDML file to TIA Portal V13

- a) In Menu, Select Option → Manage general station description files(GSD). (① → ②)



- b) After searching the directory including a GSDML file, Selecting proper GSDML file. (① → ②)
For case of iS7, the GSDML file name seems to be GSDML-V2.31-LSIS-IS7-XXXXXXXXX.
Click "Install" button. (③)

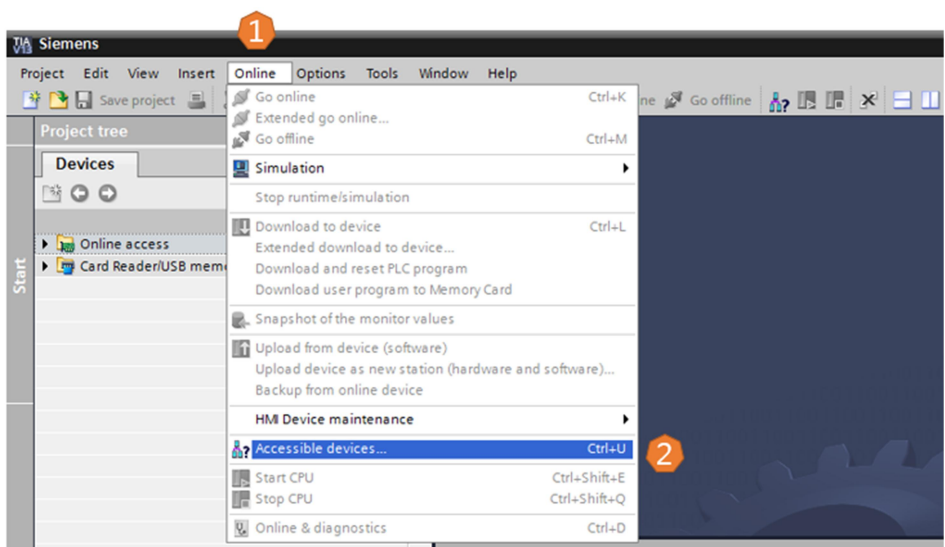


3. How to assign Device name of “iS7 PROFINet Option” in TIA Portal V13

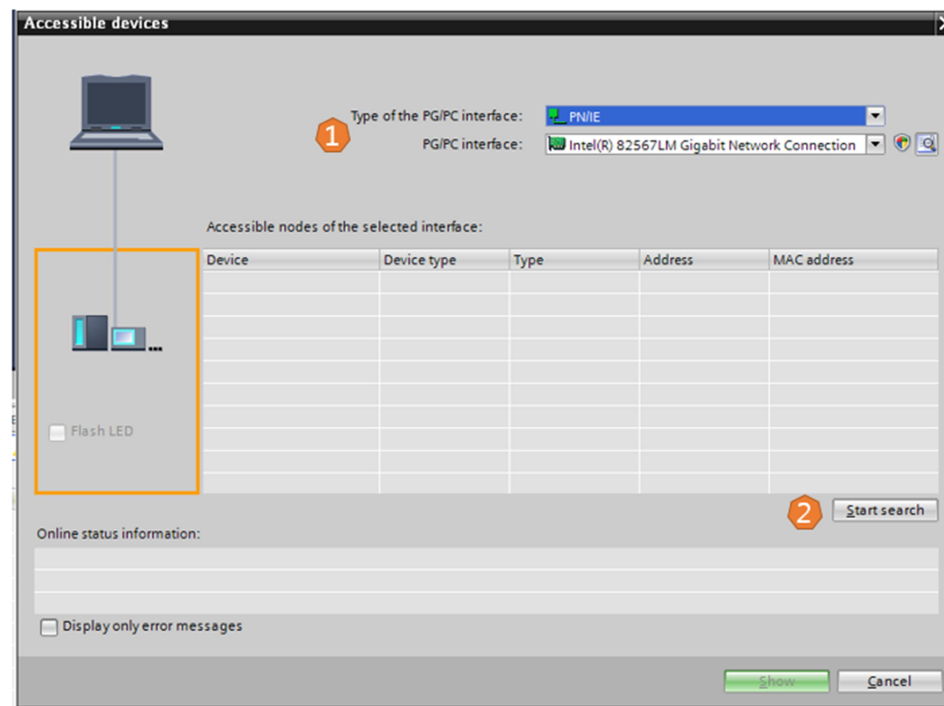
a) To go ahead, you should set up the network as follow using Ethernet cable.



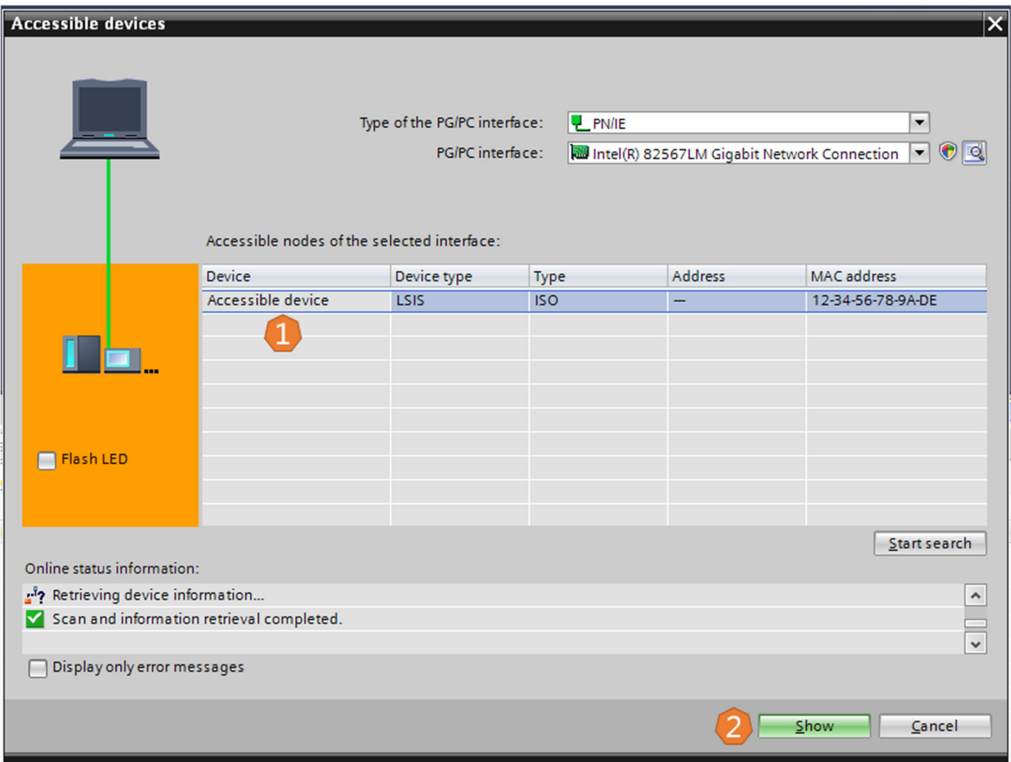
In Menu, Click Online → “Accessible devices”. (①→②)



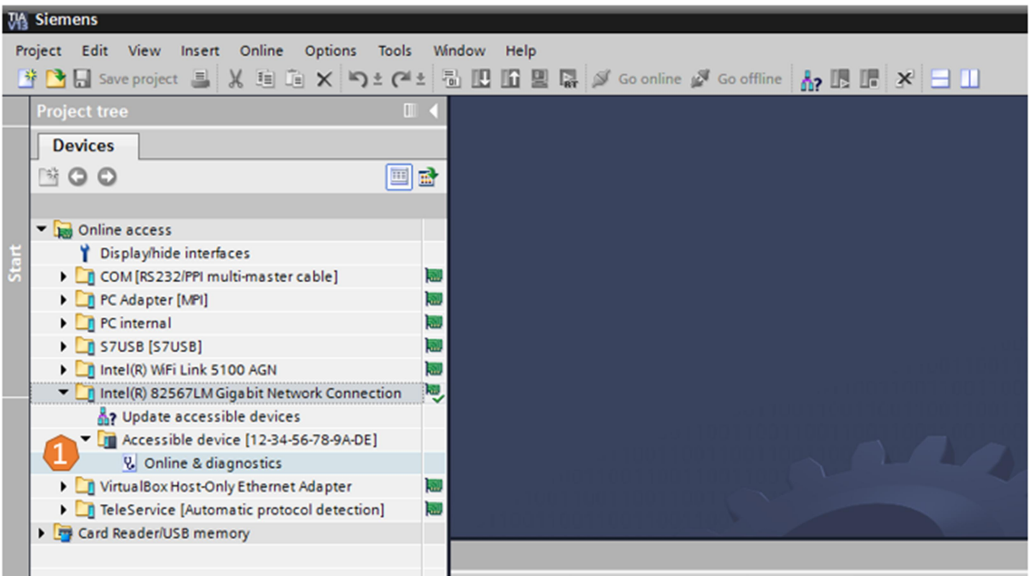
- Click "Start search" button. (②)



- c) Check if 'iS7 PROFINet Option' appears as follows .(①)
- Click "Show" button. (②)

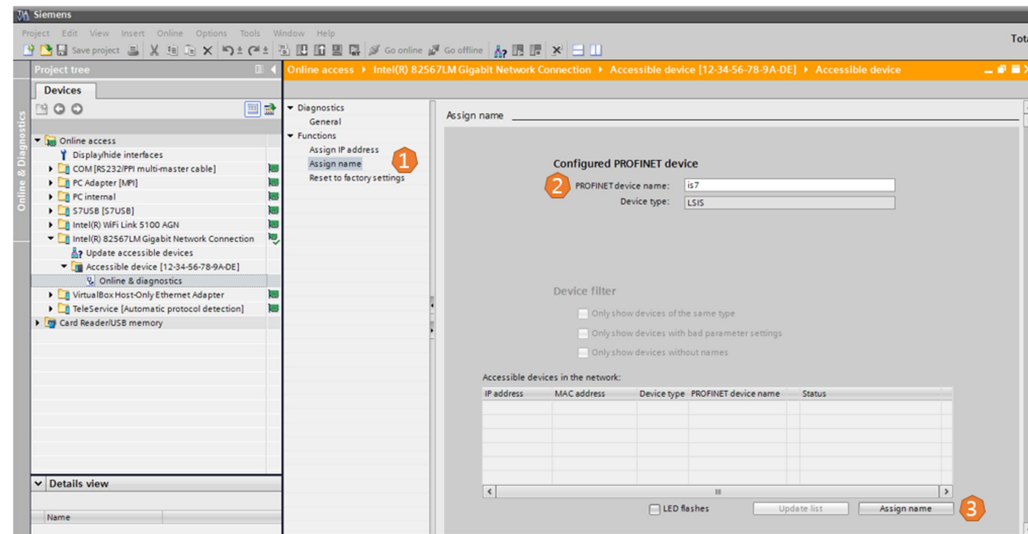


- d)
- Double click "Online * diagnostics" in "Project tree". (①)



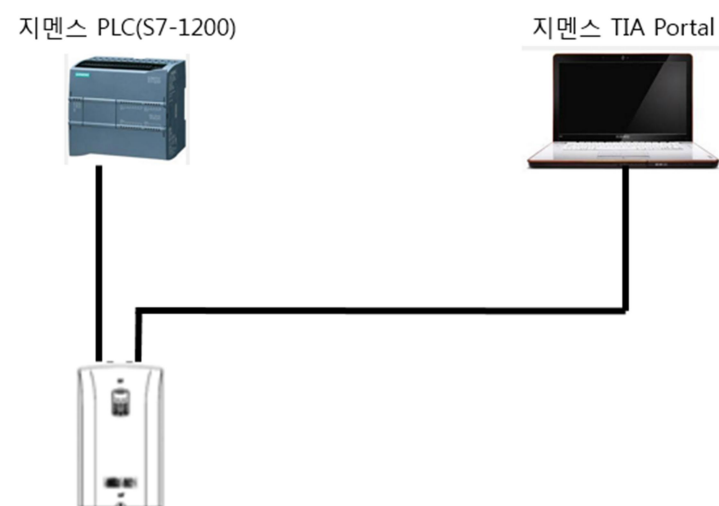
e) Click "Assign names". (①)

After enter name, click "Assign name" button. (②→③)

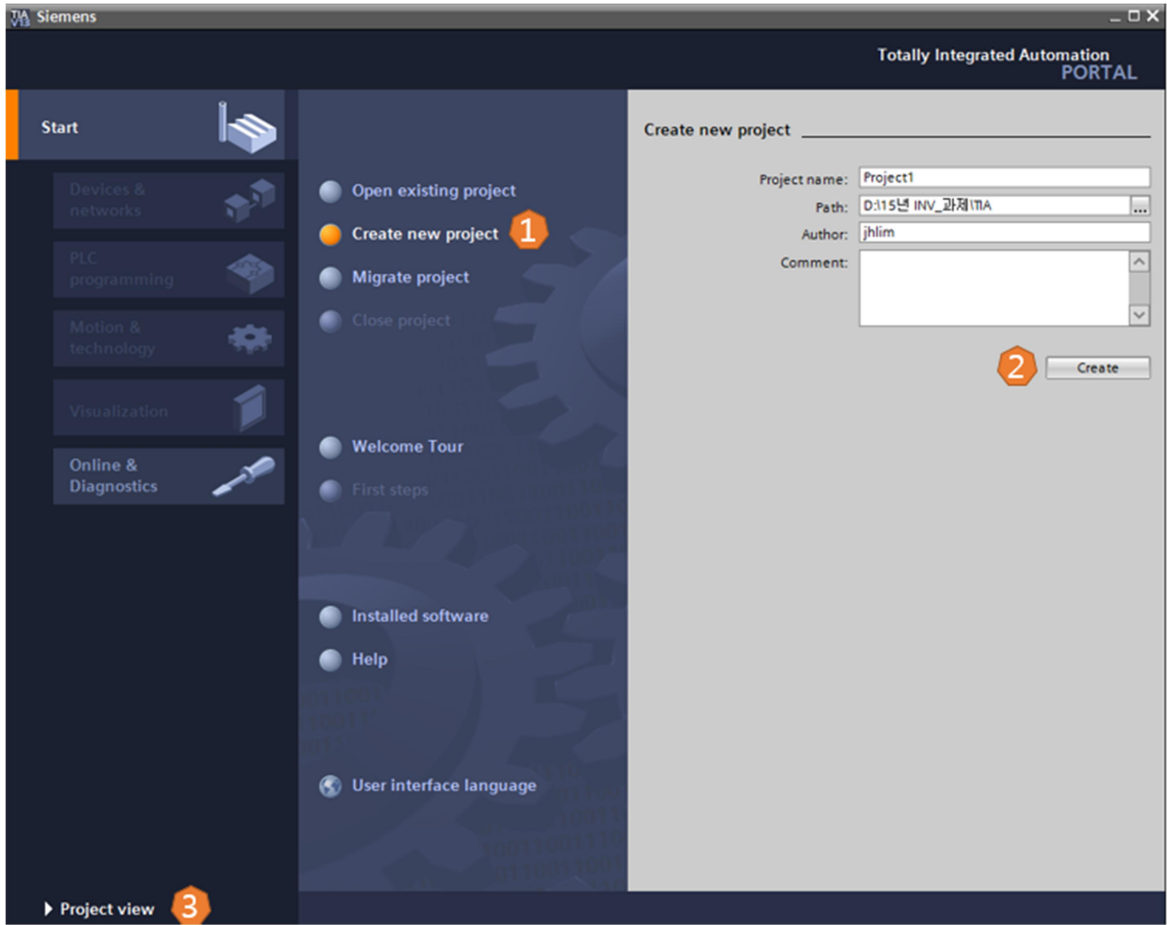


4. Example for how to connect Siemens PLC(S7-1200) with iS7 PROFINet Option in TIA Portal V13.

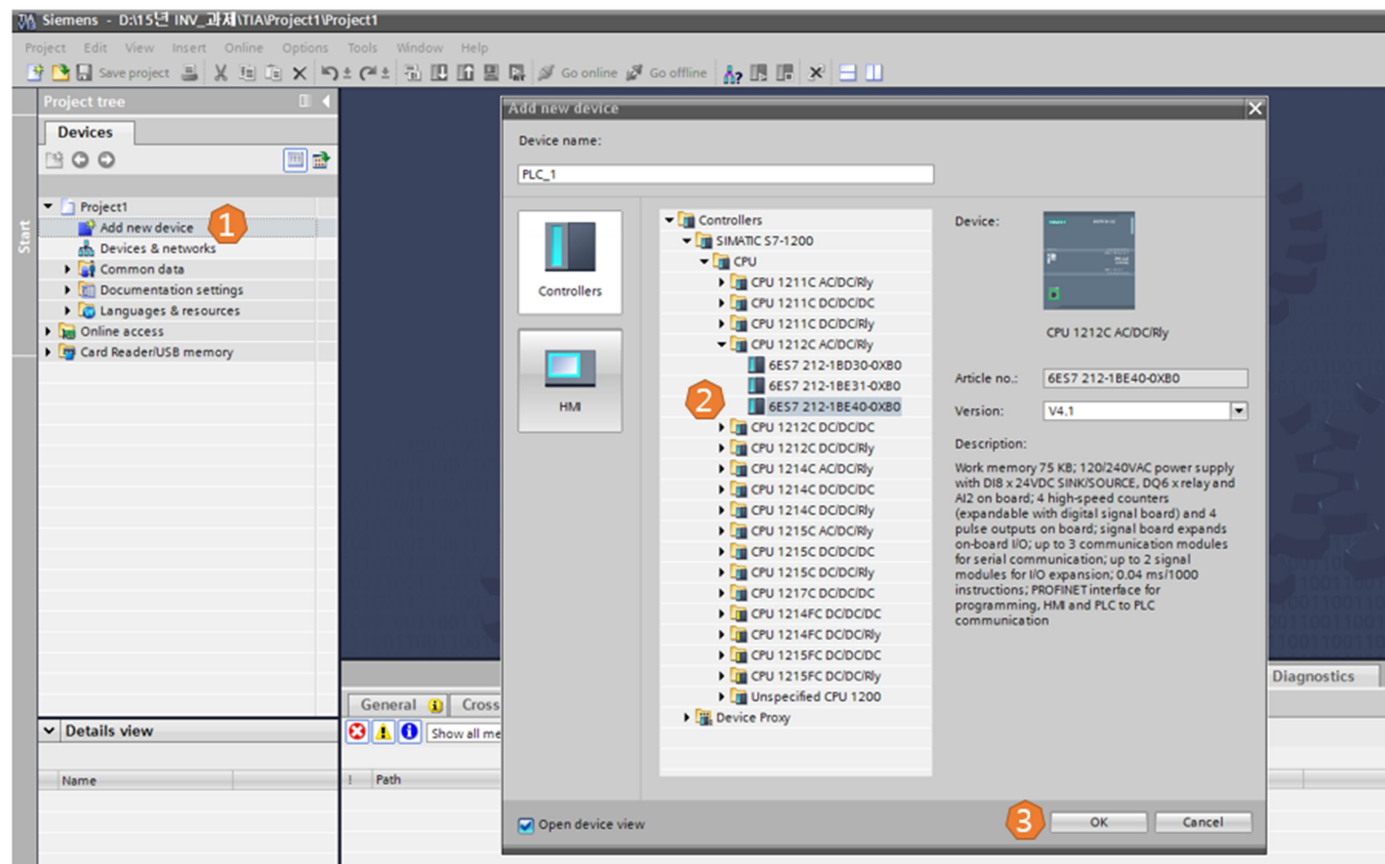
a) To go ahead, you should set up the network as follow using Ethernet cable.



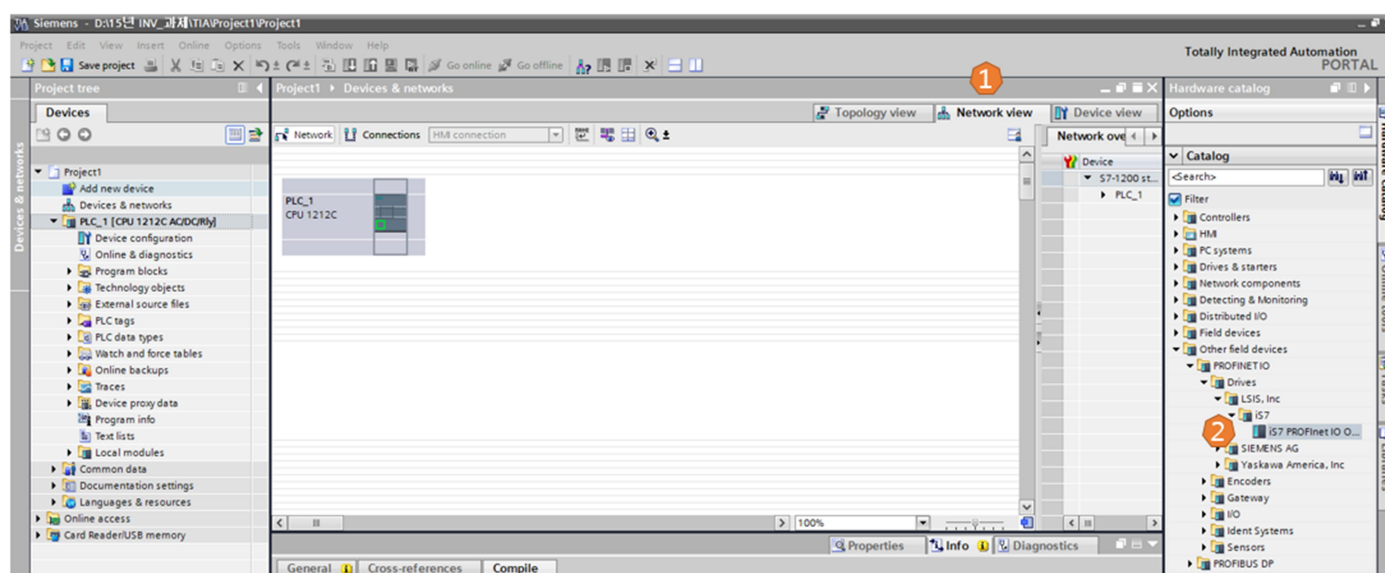
- b) After selecting "Create new project1", click "Create" button. (①→②)
Click "Project view". (③)



c) In "Project tree", after clicking "Add new device", choose PLC type.(①→②→③)

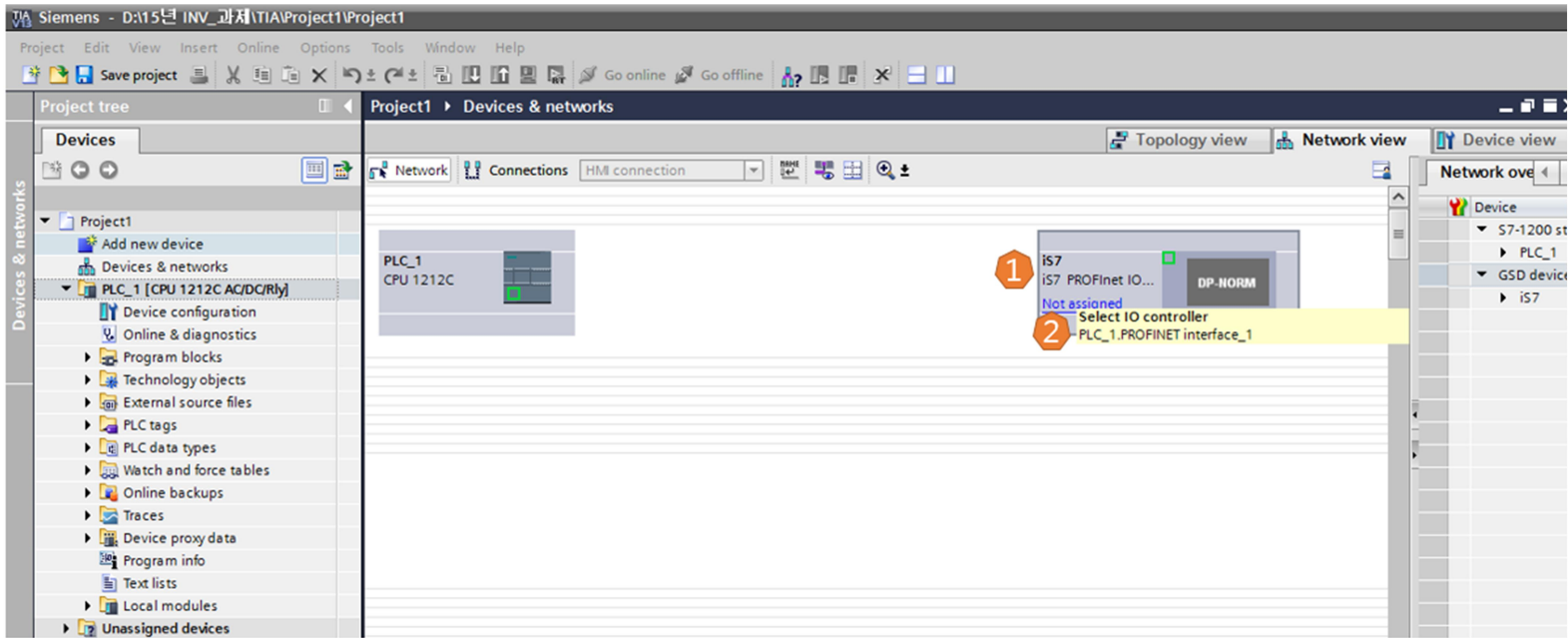


d) After selecting "Network view" tab, select "iS7 PROFINet IO Option Module" in "Hardware catalog". (①→②)

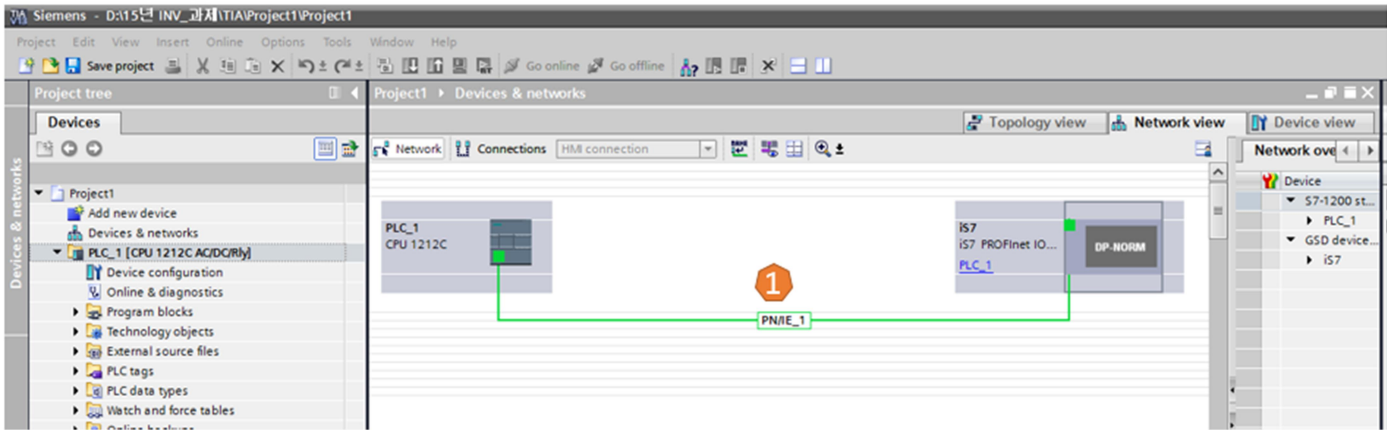


e) Dragging the selected "iS7 PROFINet IO Option Module" into main window (①)

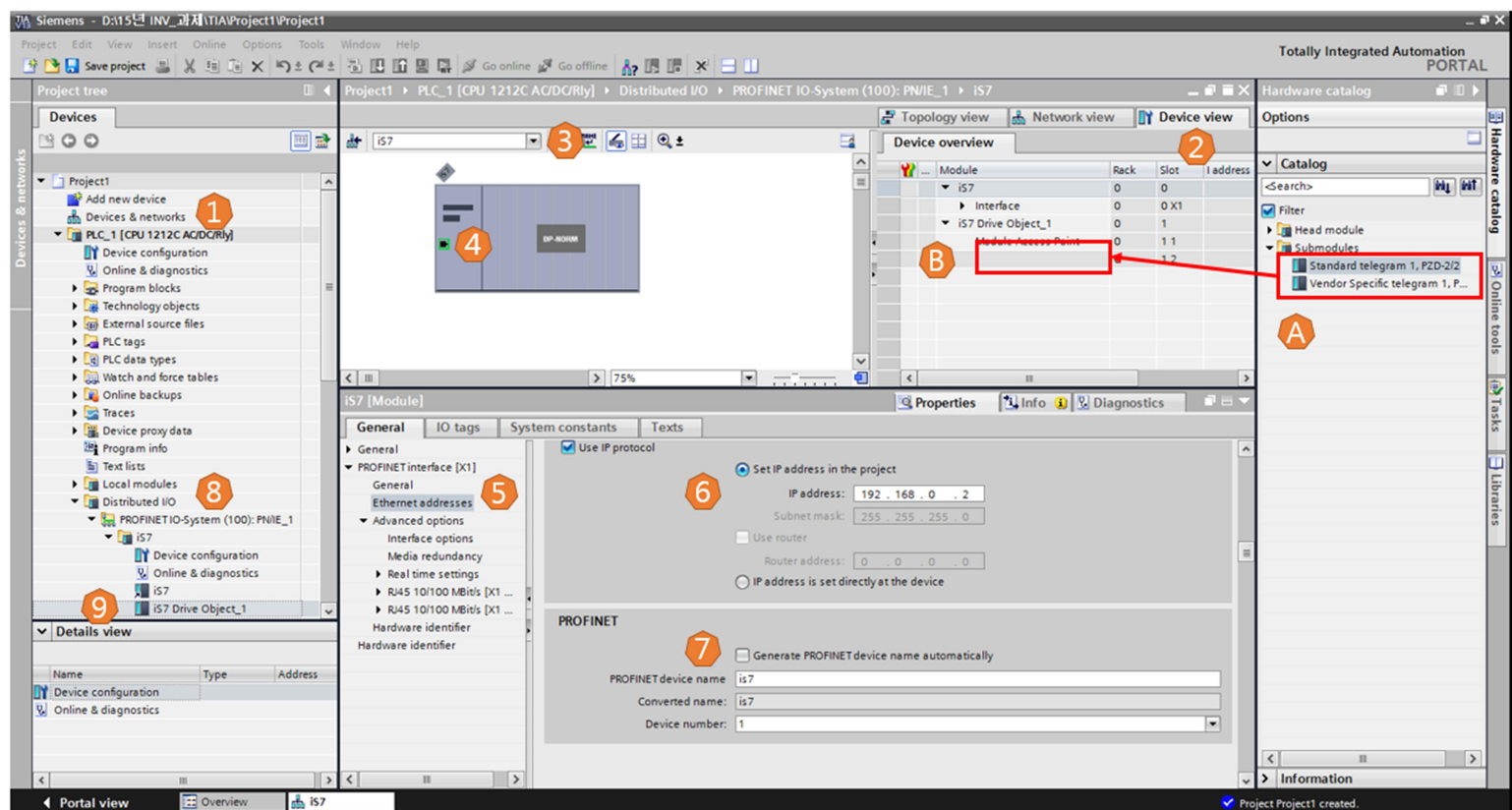
click "Not assigned" to assign PLC to iS7 PROFINet Option. (②)



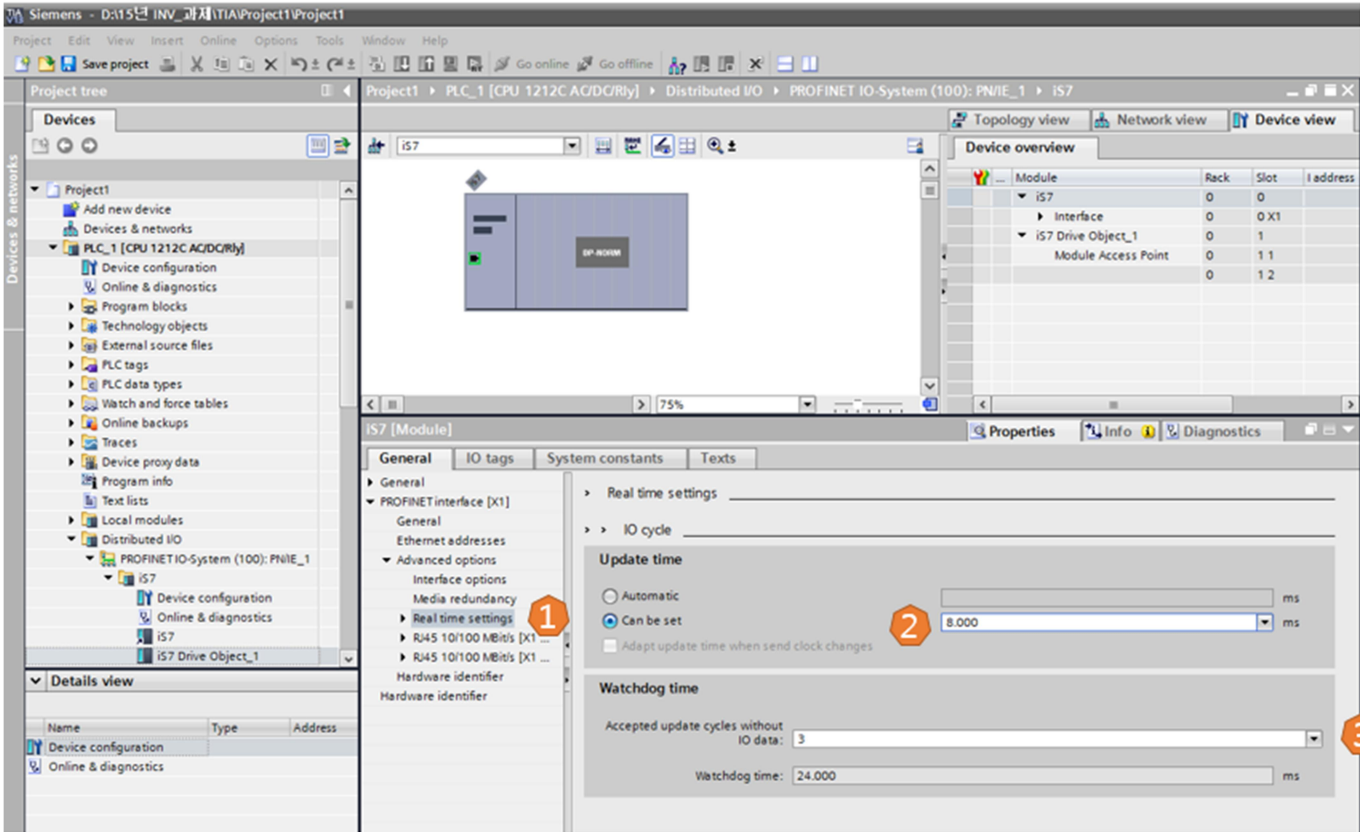
f) Check if connect is established as follows (①)



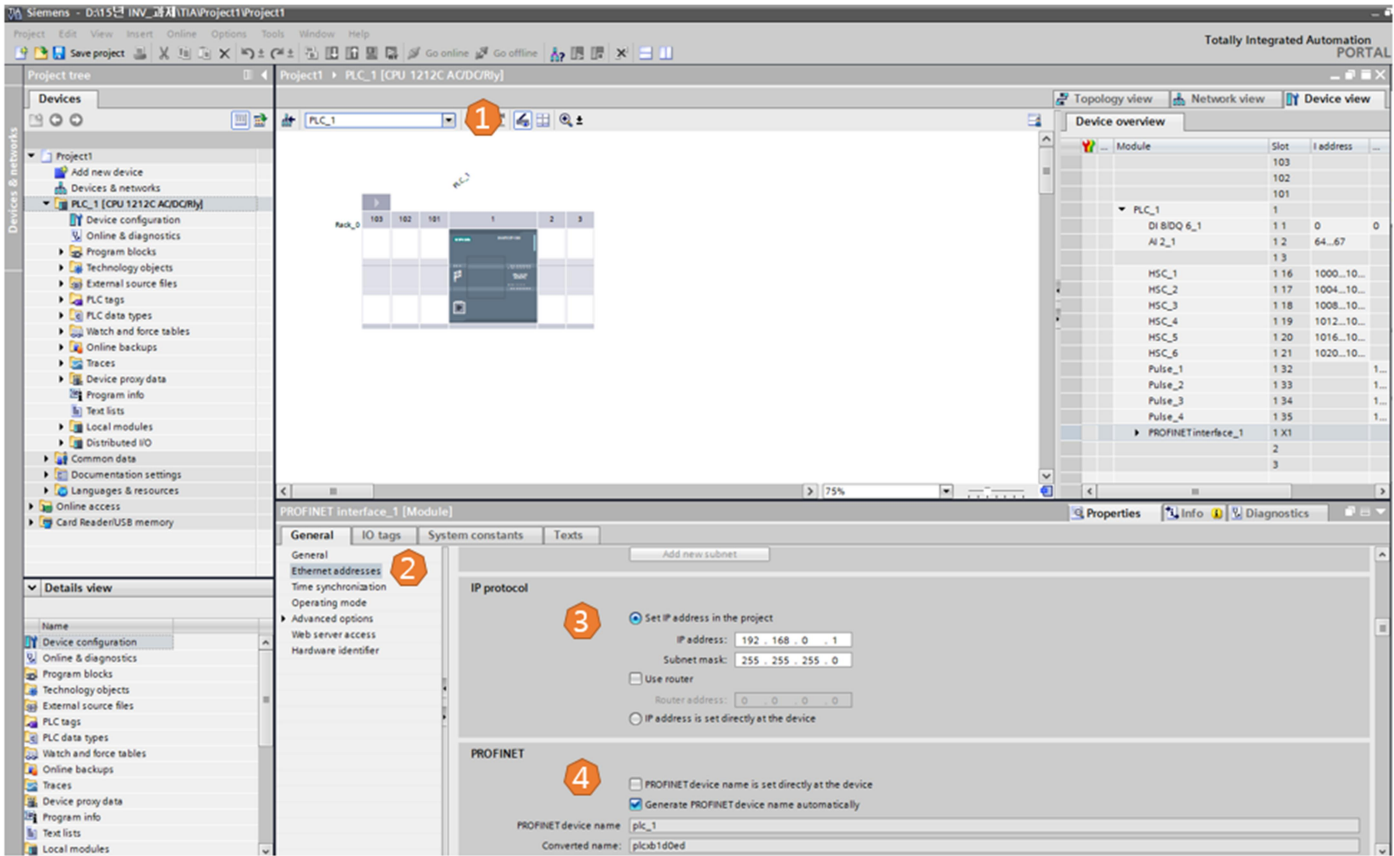
- g) Select PLC_1 in "Project tree" window. (①)
- Click "Device view" tab. (②)
- In list window, select "iS7". (③)
- Click green box(Ethernet port). (④)
- Select "Ethernet addresses".(⑤)
- Input IP information and Device Name . (⑥, ⑦)
- Select "iS7 Drive Object_1" in "Project tree" window.(⑧→⑨)
- In "Hardware catalog" window, After select Telegram , Drag it into the place marked as red box. (a→b)
- In this demo, you use Standard telegram 1 as Telegram
- Please refer to user manual of "iS7 PROFINet Option" for detailed information of supported Telegrams.



h) Click "Real time settings" and choose , "Update time" and "Watchdog Time". (①→②→③)



i) After select PLC_1, assign IP and Device name. (①→②→③→④)



- j) Click PLC_1 in "Project tree" and click right button on mouse. (①)
Invoke "Compile" and "Download to device" sequentially. (②)

