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Changing the IP address of a module via the TIA Portal

Operating instructions

Instructions:
Changing the IP address of a module via TIA Portal

Prerequisite:

Agile Production Simulation (APS):

- The APS is set up and ready for operation.
- The existing modules are connected in the APS network.
- The new module is connected and connected to the APS via LAN.

Local computer:

- TIA Portal v18 is installed with default settings.
- PLC project file of the module whose IP is to be changed is downloaded.
  - Github link: https://github.com/fischertechnik/Agile-Production-Simulation-24V
- The local computer is connected to the APS network.

⚠️ Sollten two modules have the same IP, an error is displayed on the PLC for one of the modules. The PLC of this module is not recognized by the APS.
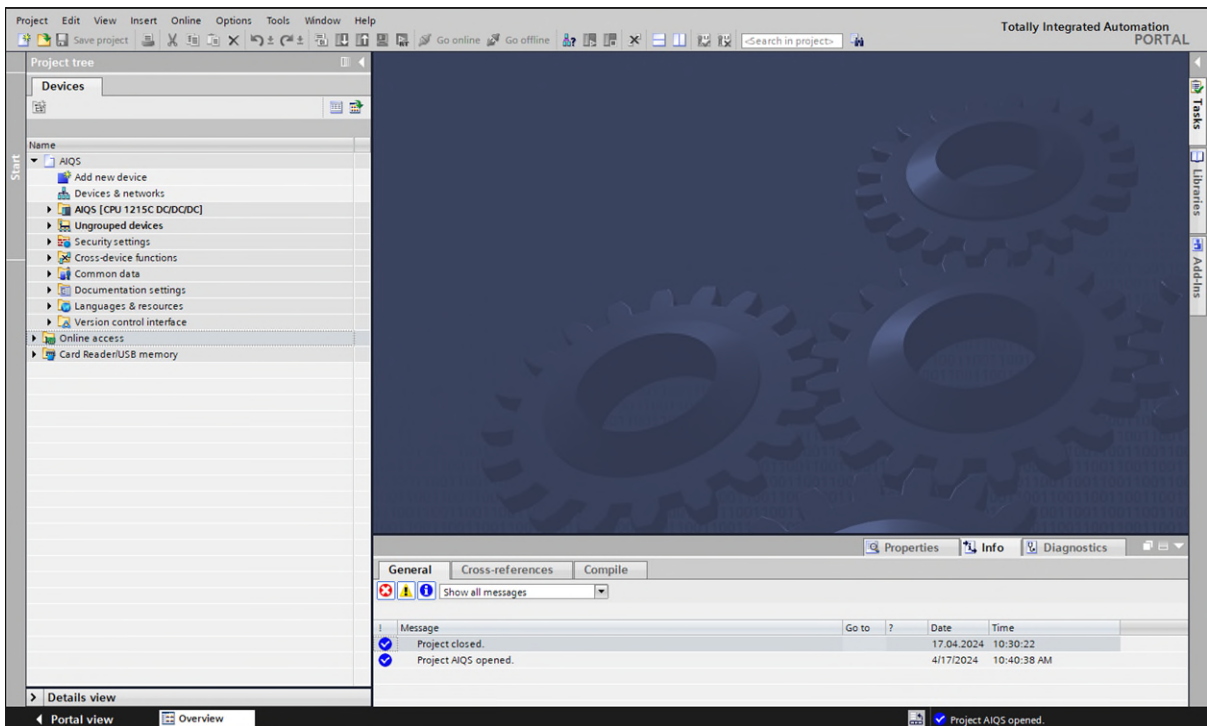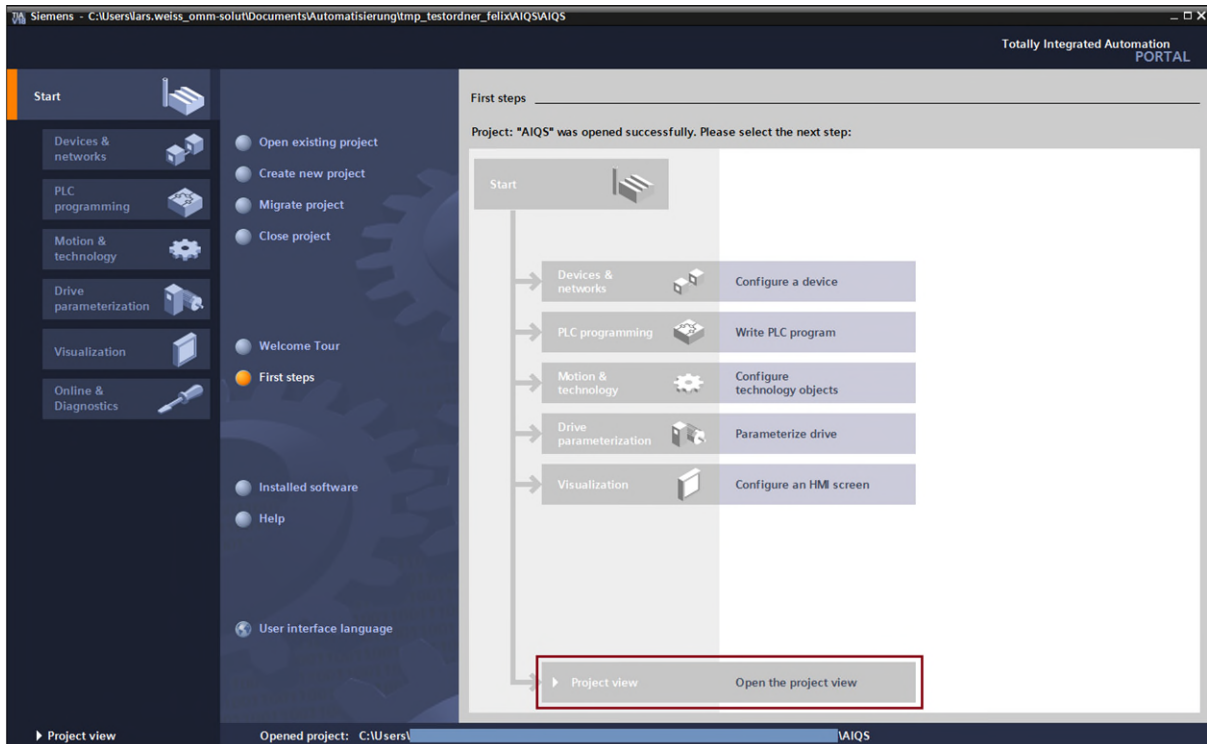
Carrying out the IP change of the PLC:

Step 1: Open project

1. Start TIA Portal.
2. Use "**Browse**" to select and open the PLC project file of the new module in the local file system.
3. When prompted to specify a **storage location** for the project, navigate to the desired storage location and **select** it.
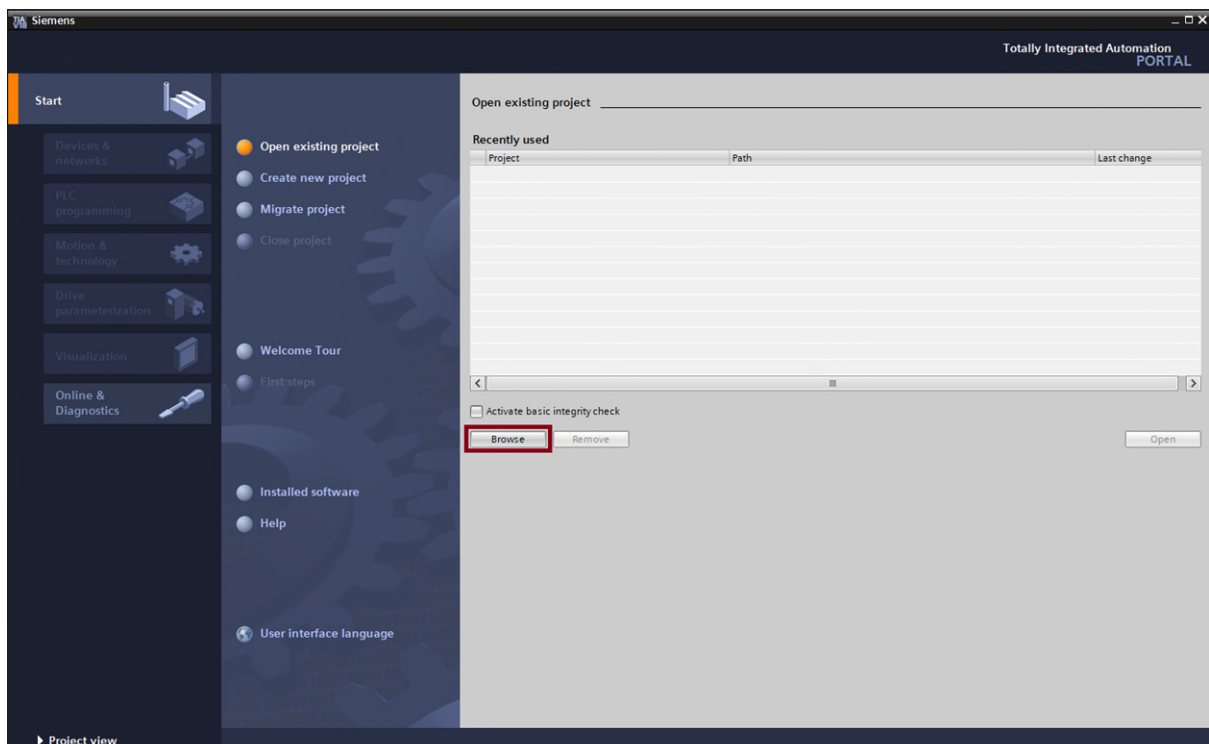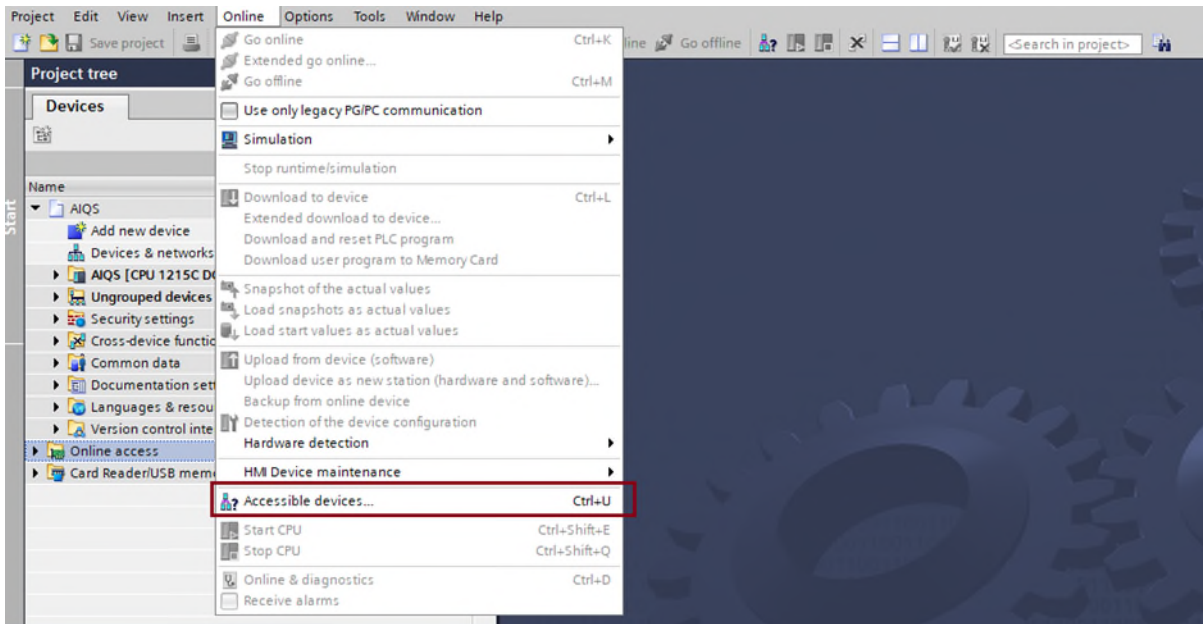
Step 2: Call up project view

1. **Open** the **project** via "**Open the project view**".

Step 2.1: Find all visible PLCs (optional)

1. Click on the "**Accessible devices**" via the "**Online**" tab.

2. **Type of the PG/PC interface** → "**Select PN/IE**".

3. **PG/PC interface** → **select** the **network controller/adapter** that is

    responsible for the connection to the APS network in the PC/laptop used.
4. Start the search by clicking on "**Start search**".
    -> After the search, all PLCs visible in the network are displayed.

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Accessible devices (top dialog)

Type of the PG/PC interface: PN/IE

PG/PC interface: Please select...

- Please select...
- Realtek USB GbE Family Controller
- Siemens PLCSIM Virtual Ethernet Adapter
- Killer Wireless-n/a/ac 1535 Wireless Network Ad...

Accessible nodes of the selected interface:

Device	Device type	Interface type	Address	MAC address

Flash LED

Start search

Online status information:

Display only error messages

Show   Cancel

Accessible devices (bottom dialog)

Type of the PG/PC interface: PN/IE

PG/PC interface: Killer Wireless-n/a/ac 1535 Wireless Network...

Accessible nodes of the selected interface:

Device	Device type	Interface type	Address	MAC address
mill	CPU 1215C DC/D...	PN/IE	192.168.0.40	4C-E7-05-1C-15-2D
drill	CPU 1215C DC/D...	PN/IE	192.168.0.50	4C-E7-05-1A-53-FC
aiqs	CPU 1215C DC/D...	PN/IE	192.168.0.70	4C-E7-05-1C-15-0C
aiqs	CPU 1215C DC/D...	PN/IE	192.168.0.71	8C-F3-19-F0-E5-4D
aiqs	CPU 1215C DC/D...	PN/IE	192.168.0.71	8C-F3-19-F0-E5-76
hbw	CPU 1215C DC/D...	PN/IE	192.168.0.80	4C-E7-05-1E-BF-ED
dps	CPU 1215C DC/D...	PN/IE	192.168.0.90	4C-E7-05-1C-15-75

Flash LED

Start search

Online status information:

Display only error messages

⚠ Found accessible device drill
ℹ Scan completed. 7 devices found.
✅ Scan and information retrieval completed.
? Retrieving device information...

Show   Cancel

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Step 3: Open the properties of the PLC in the project

1. **Right-click** on *AIQS* and select "**Properties**...".
   a. As an alternative to *AIQS*, *DRILL*, *MILL* or *HBW* can also be entered here, depending on which PLC project file was selected.
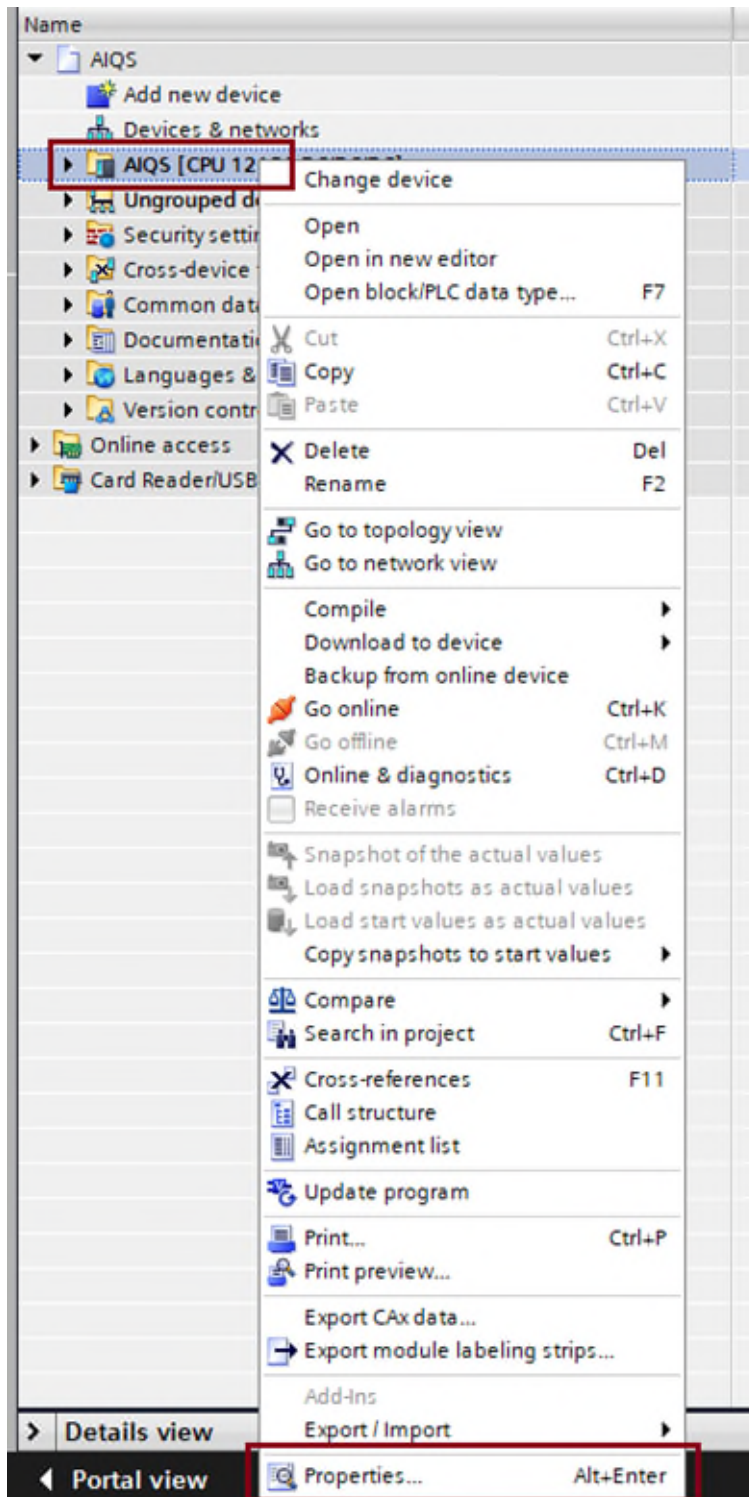
Step 4: Find Ethernet settings

1. The **IP address** of the module whose PLC project file was selected in step 1 can be found under "**PROFINET interface (X1)**" for **Ethernet addresses**.
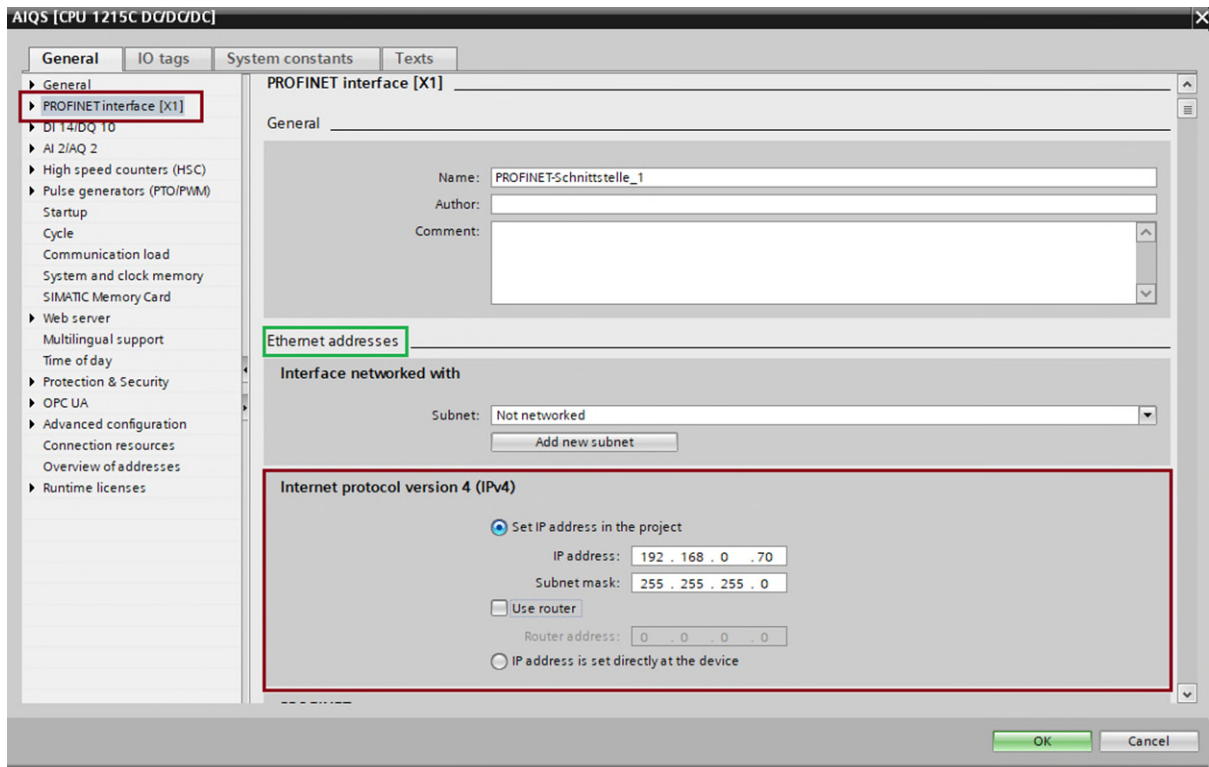
Step 5: Customize and adopt IP

1. The possible IP addresses vary depending on the module. Select the IP that matches your module.

Module	Address
MILL #1	opc.tcp://192.168.0.40:4840
MILL #2	opc.tcp://192.168.0.41:4840
MILL #3	opc.tcp://192.168.0.42:4840
MILL #4	opc.tcp://192.168.0.43:4840
MILL #5	opc.tcp://192.168.0.44:4840
DRILL #1	opc.tcp://192.168.0.50:4840
DRILL #2	opc.tcp://192.168.0.51:4840
DRILL #3	opc.tcp://192.168.0.52:4840
DRILL #4	opc.tcp://192.168.0.53:4840
DRILL #5	opc.tcp://192.168.0.54:4840
OVEN #1	opc.tcp://192.168.0.60:4840
OVEN #2	opc.tcp://192.168.0.61:4840
OVEN #3	opc.tcp://192.168.0.62:4840
OVEN #4	opc.tcp://192.168.0.63:4840
OVEN #5	opc.tcp://192.168.0.64:4840
AIQS #1	opc.tcp://192.168.0.70:4840
AIQS #2	opc.tcp://192.168.0.71:4840
AIQS #3	opc.tcp://192.168.0.72:4840
AIQS #4	opc.tcp://192.168.0.73:4840
AIQS #5	opc.tcp://192.168.0.74:4840
HBW #1	opc.tcp://192.168.0.80:4840
HBW #2	opc.tcp://192.168.0.81:4840
HBW #3	opc.tcp://192.168.0.82:4840
DPS (nur 1x)	opc.tcp://192.168.0.90:4840

2. Set the "**IP address**" to the value selected from the table above.
3. After the corresponding IP has been inserted, confirm by clicking the "**OK**" button to continue.
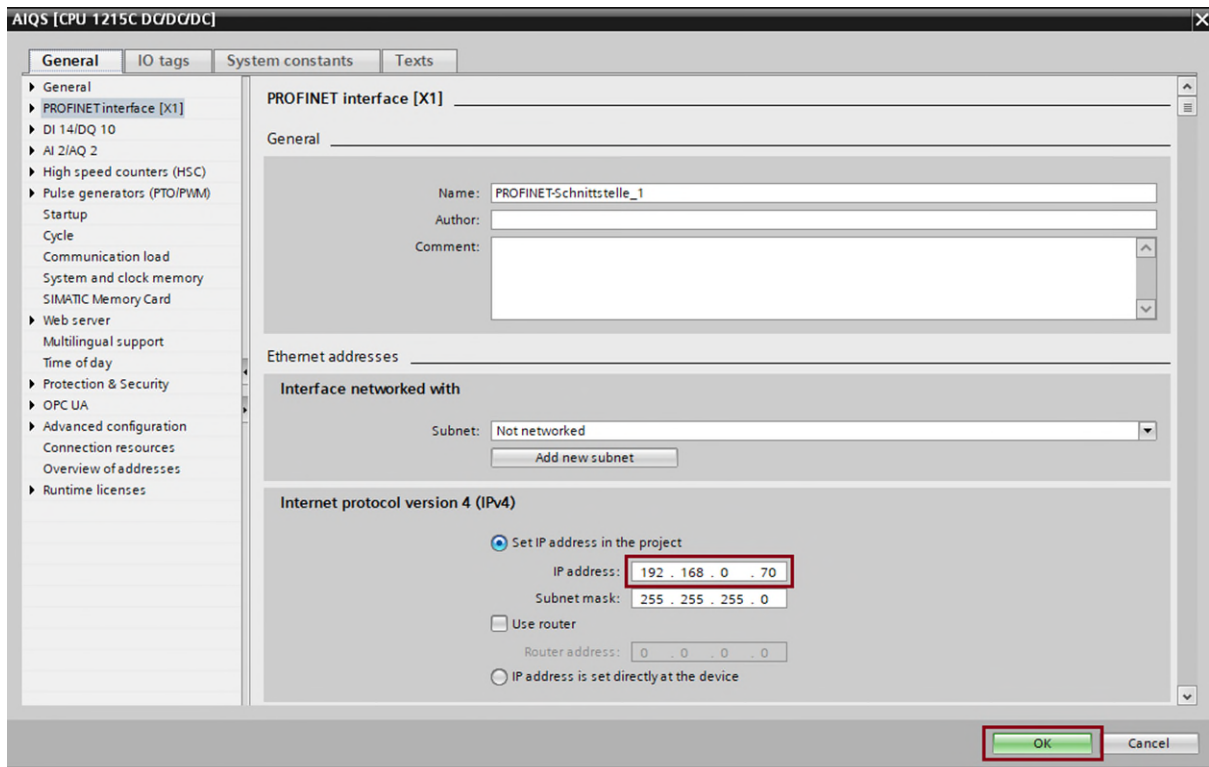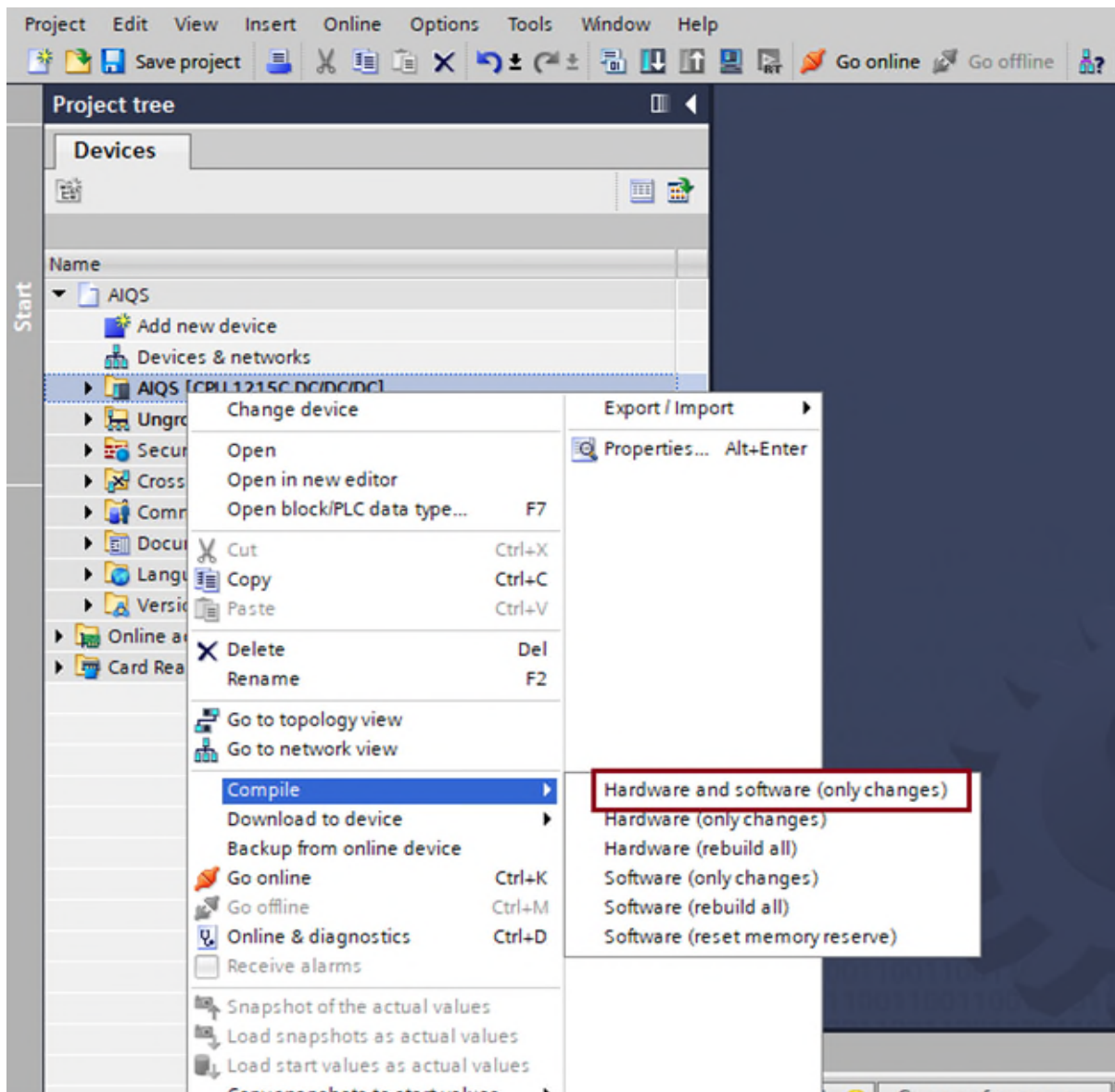
Step 5.1: Save project

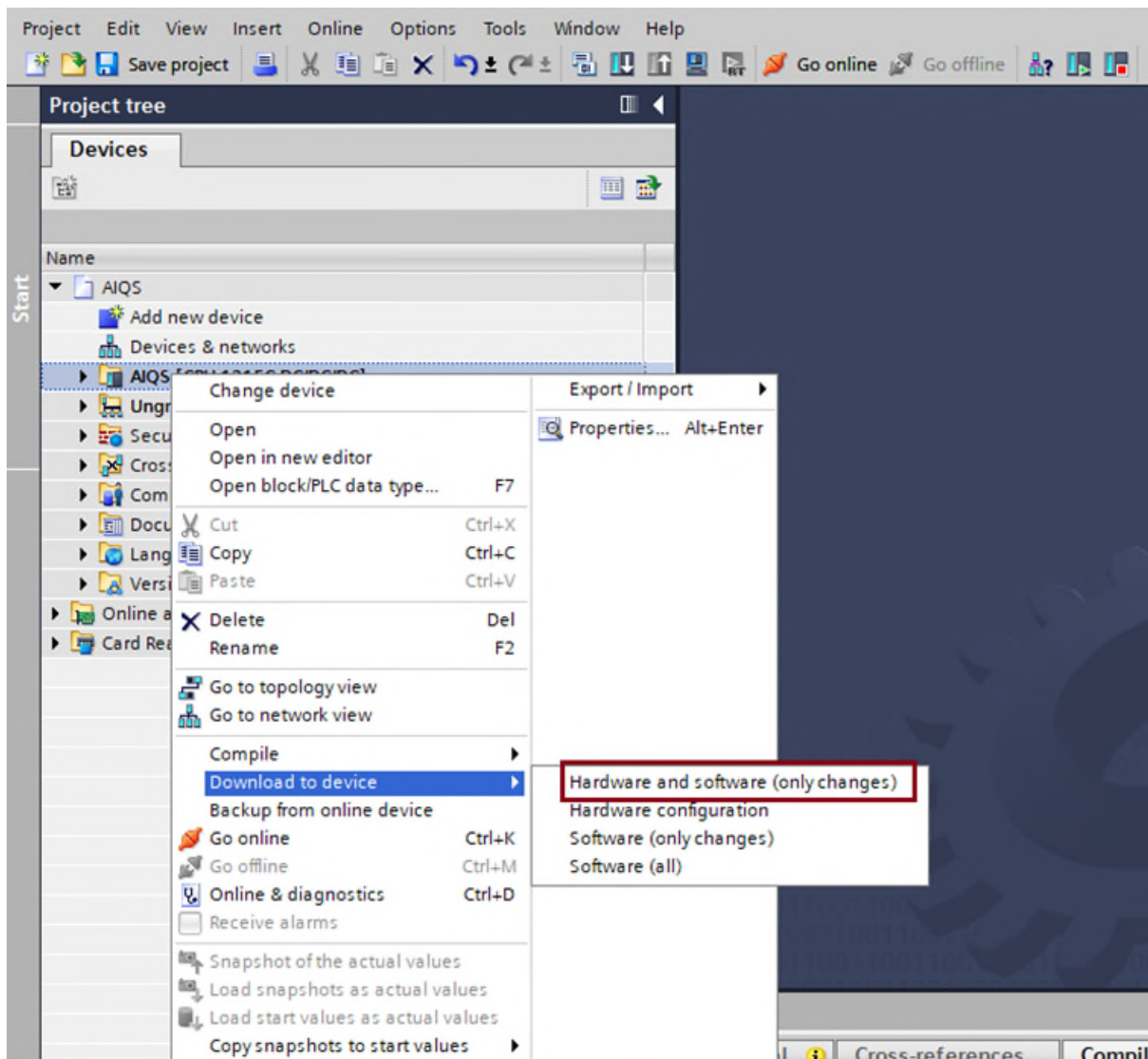1. Save the project using the "**Save project**" button.

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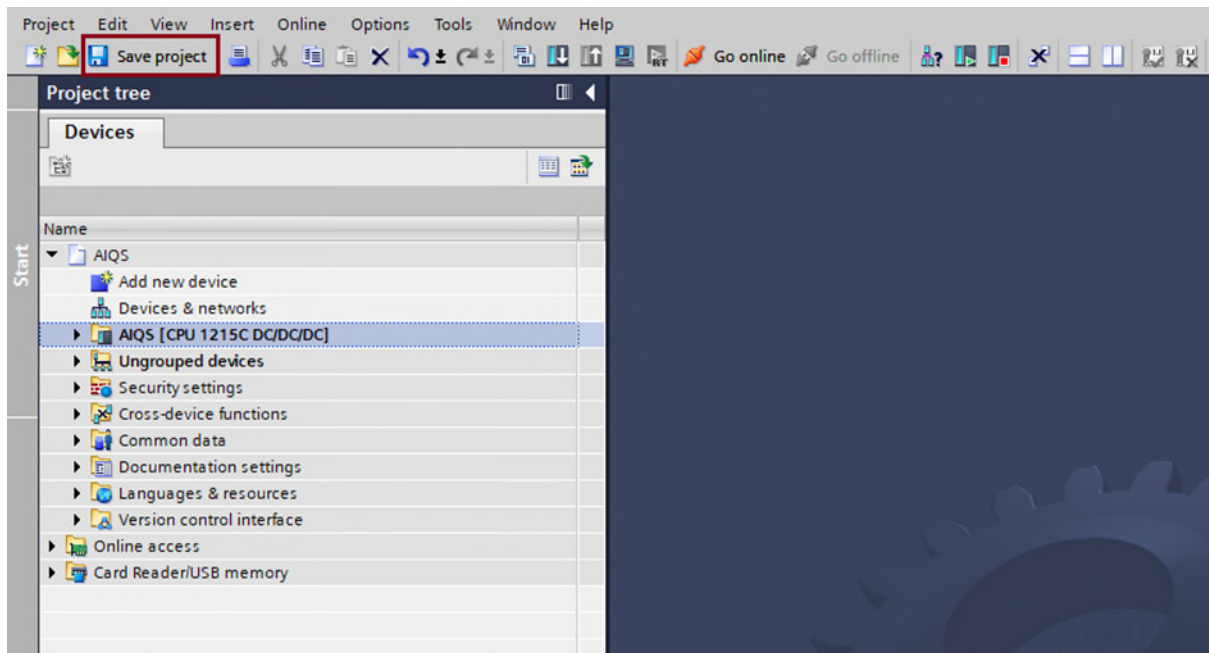
Step 6: Compile project PLC

1. **Right-click** on the module via "**Compile**" and click on "**Hardware and software (only changes)**".
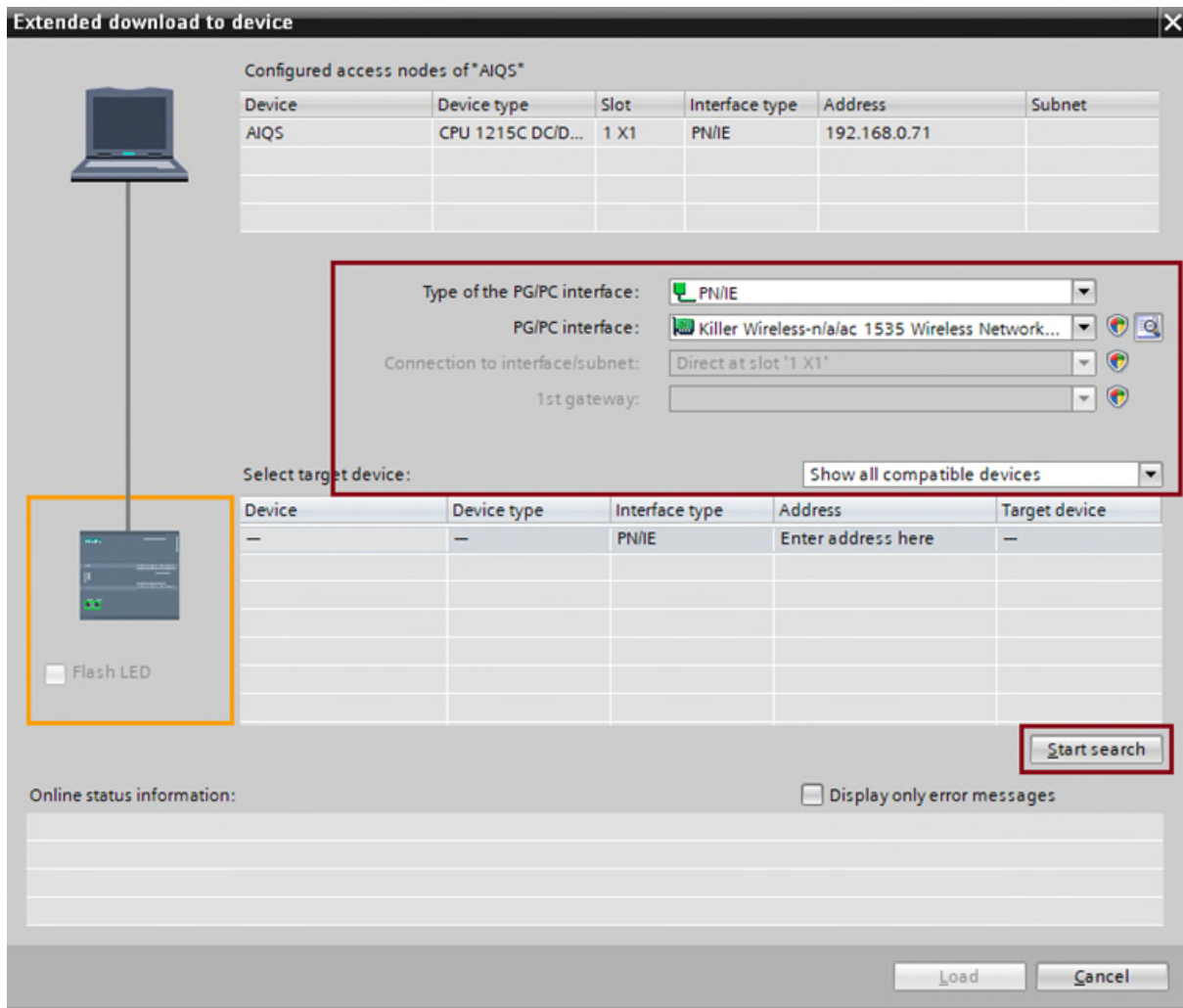
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## Step 7: Transfer the compiled project to the PLC

1. **Right-click** on the module to open the menu and select "**Hardware and software (only changes)**" via "**Download to device**".

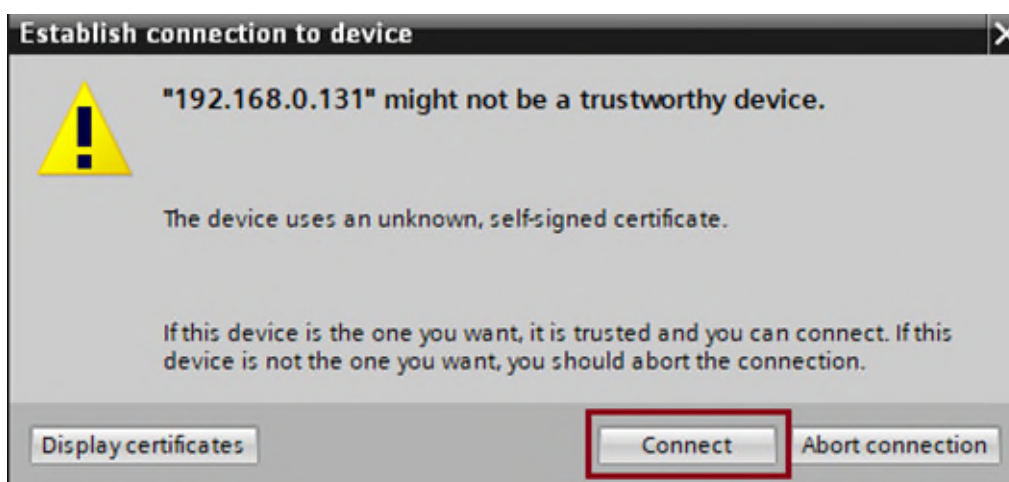2. In the new window, set the values as in **step 2.1:**

   a. **Type of the PG/PC interface** →"**Select PN/IE**".

   b. **PG/PC interface** → **select** the **network controller/adapter** that is responsible for the connection to the APS network in the PC/laptop used.

3. In addition, "**Show all compatible devices**" must be selected.

4. Start the search with the "**Start search**" button.

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Extended download to device

Configured access nodes of "AIQS"

Device	Device type	Slot	Interface type	Address	Subnet
AIQS	CPU 1215C DC/D...	1 X1	PN/IE	192.168.0.71	

Type of the PG/PC interface: PN/IE

PG/PC interface: Killer Wireless-n/a/ac 1535 Wireless Network...

Connection to interface/subnet: Direct at slot '1 X1'

1st gateway:

Select target device: Show all compatible devices

Device	Device type	Interface type	Address	Target device
—	—	PN/IE	Enter address here	—

☐ Flash LED

Start search

Online status information: ☐ Display only error messages

Load | Cancel

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5. **Select** the **PLC to be overwritten** (orange) whose IP address is to be changed.
   a. The PLC must control the module that corresponds to the loaded project (green).
   b. The IP address in the orange box is overwritten with the one in the green box
6. Once the appropriate PLC has been selected, press the "**Load**" button to continue.

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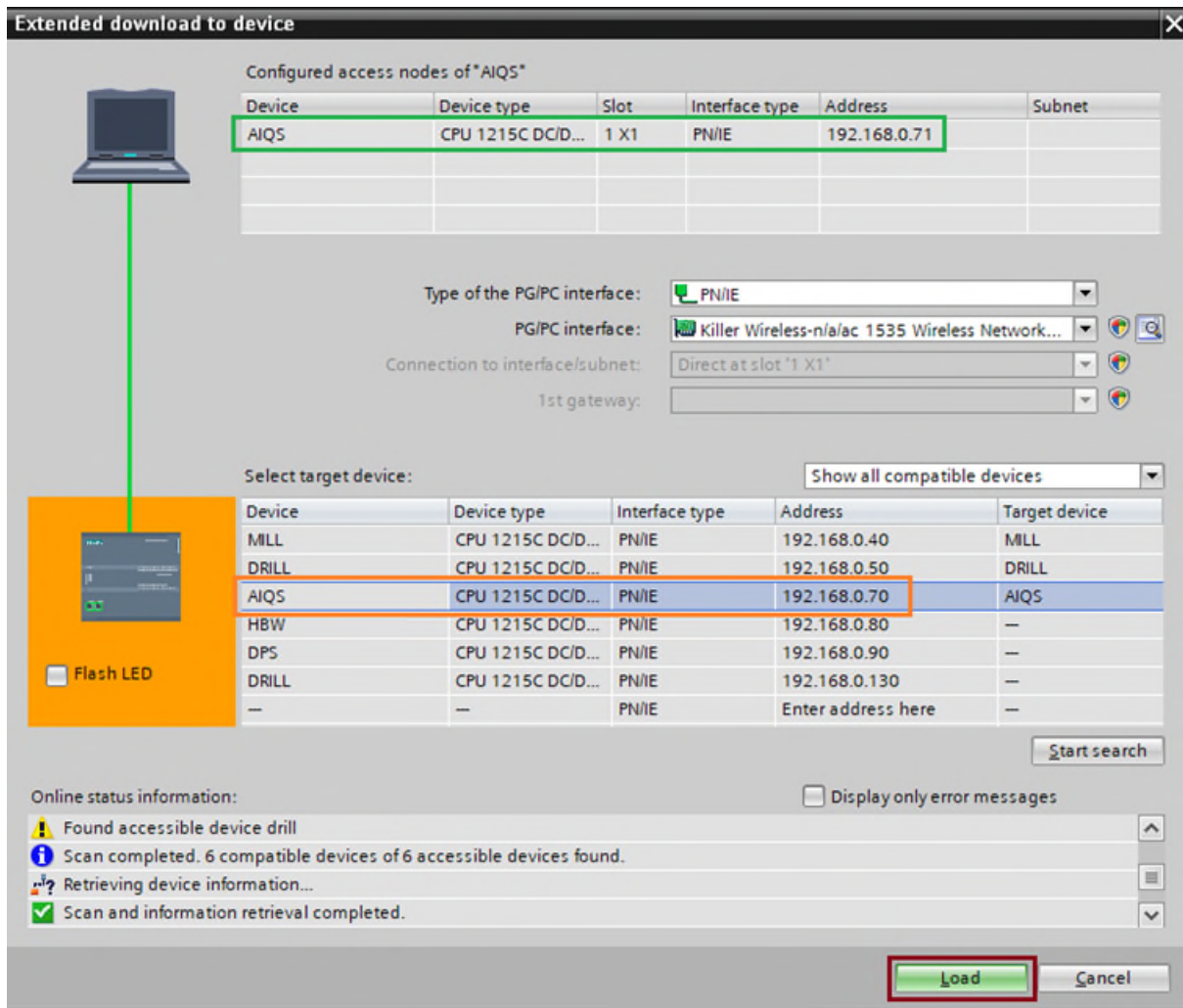
7. When the PLC is connected to this TIA Portal for the first time, the following window appears, press "**connect**" to continue.

8. When the "**Load Preview**" window appears, change the "**Stop modules**" field from "**no action**" to "**stop**", then you can press "**Load**" to continue.

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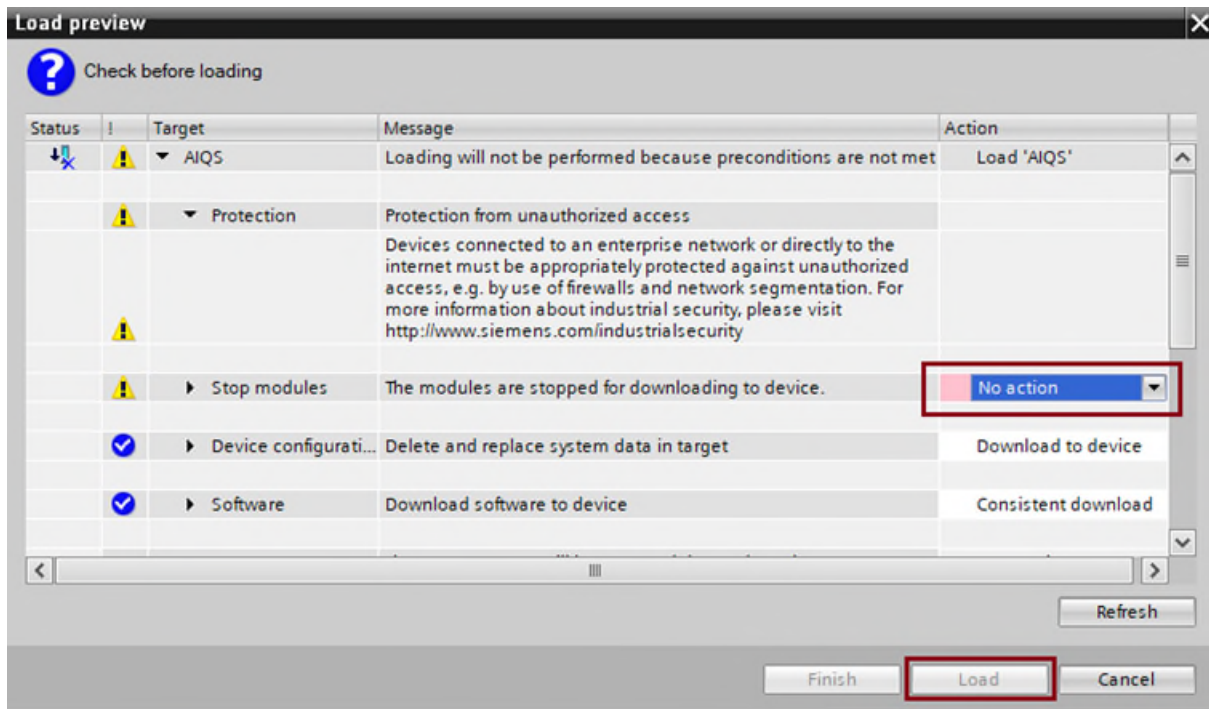
9. After the charging process has been successfully completed, ensure that the module is restarted.
10. Finish the step by clicking on "**Finish**".
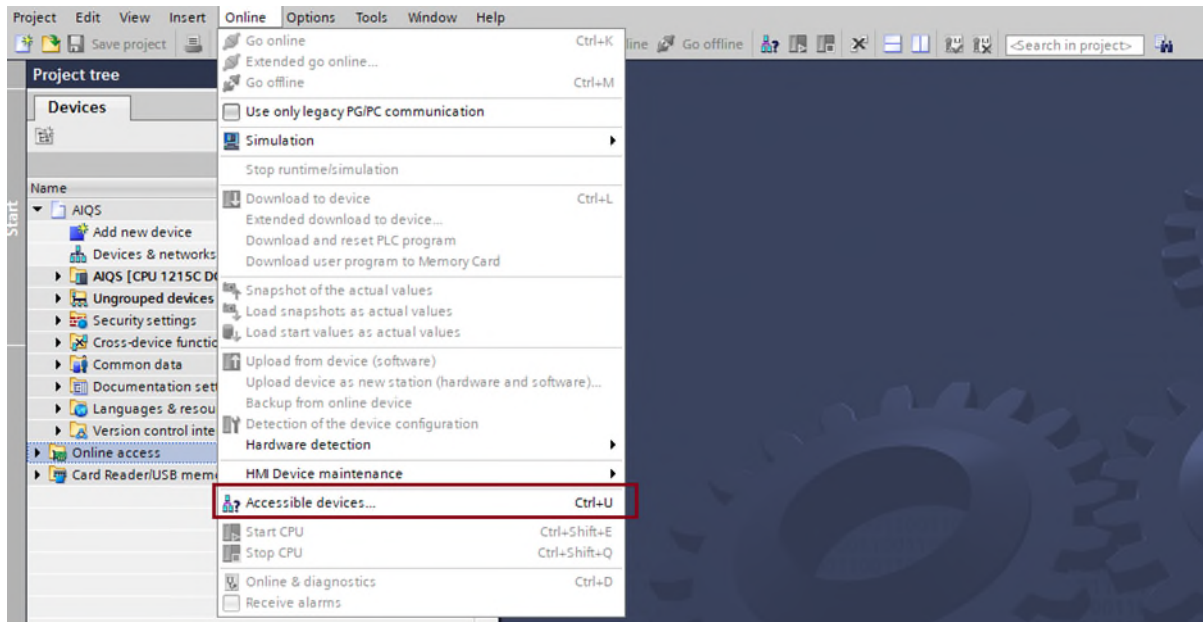
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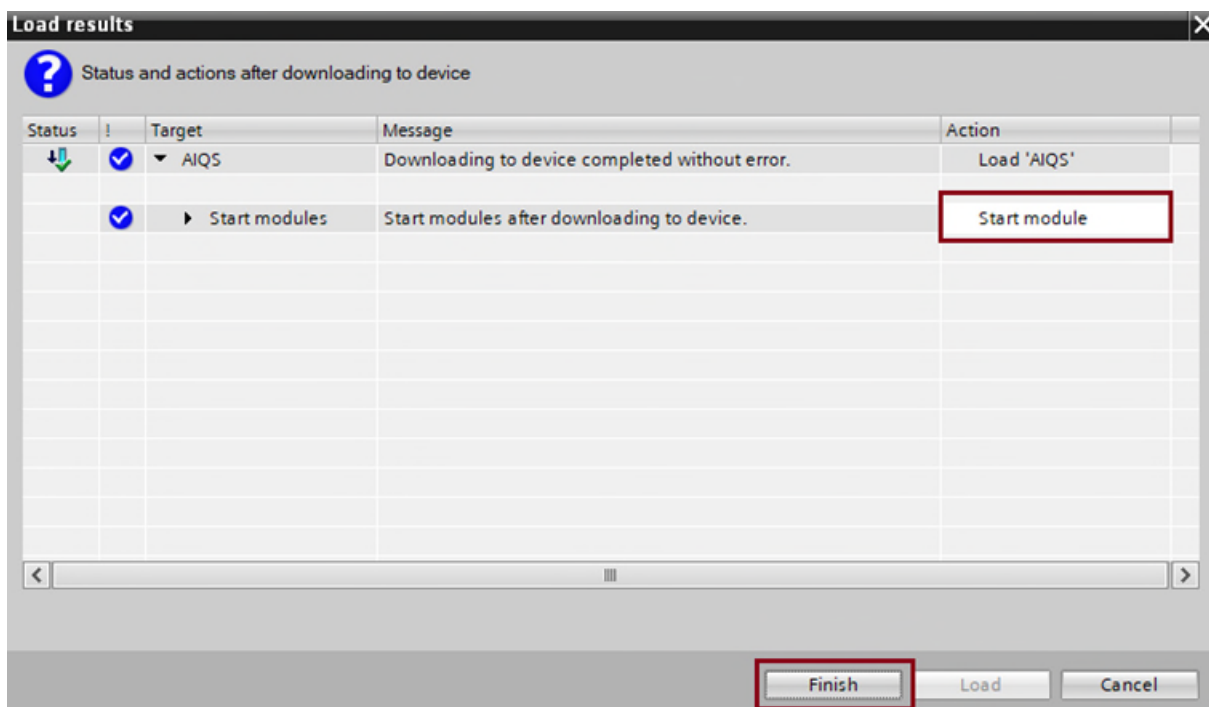
Step 8: Checking the IP address

Is the PLC in the network and is it displayed with the new IP address?
Perform **step 2.1** again:

1. Click on the "**Accessible devices**" via the "**Online**" tab.

2. **Type of the PG/PC interface** → "**Select PN/IE**".

3. **PG/PC interface** → **select** the **network controller/adapter** that is

    responsible for the connection to the APS network in the PC/laptop used.

4. Start the search by clicking on "**Start search**".
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