## TECH NOTE – PROFINET with TIA Portal

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Author: Michael Guckes
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Brief description

The ClipX measurement amplifier supports a huge variety of fieldbus interfaces. In this example the ClipX communicates with a Siemens PLC via ProfiNet. Instructions are given to create a fresh project with the Siemens Tia Portal. There is also a brief explanation of how ClipX measurement values can be monitored in the Tia Portal Software. Basic knowledge of Profinet networks and HBM amplifiers is recommended.
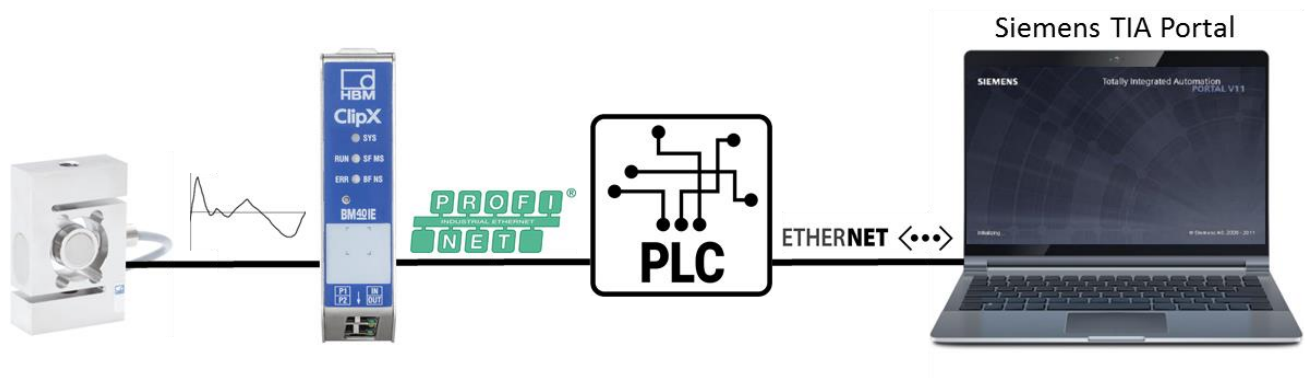

Setting up a project in TIA Portal

After starting the program, create a new project and go to the **Devices & networks** section to add a new device. Assign a name to your project and insert the PLC used (here: Simatic 300 Station) as a next step (the label is on the right side of the PLC, the firware version is on the sticker).
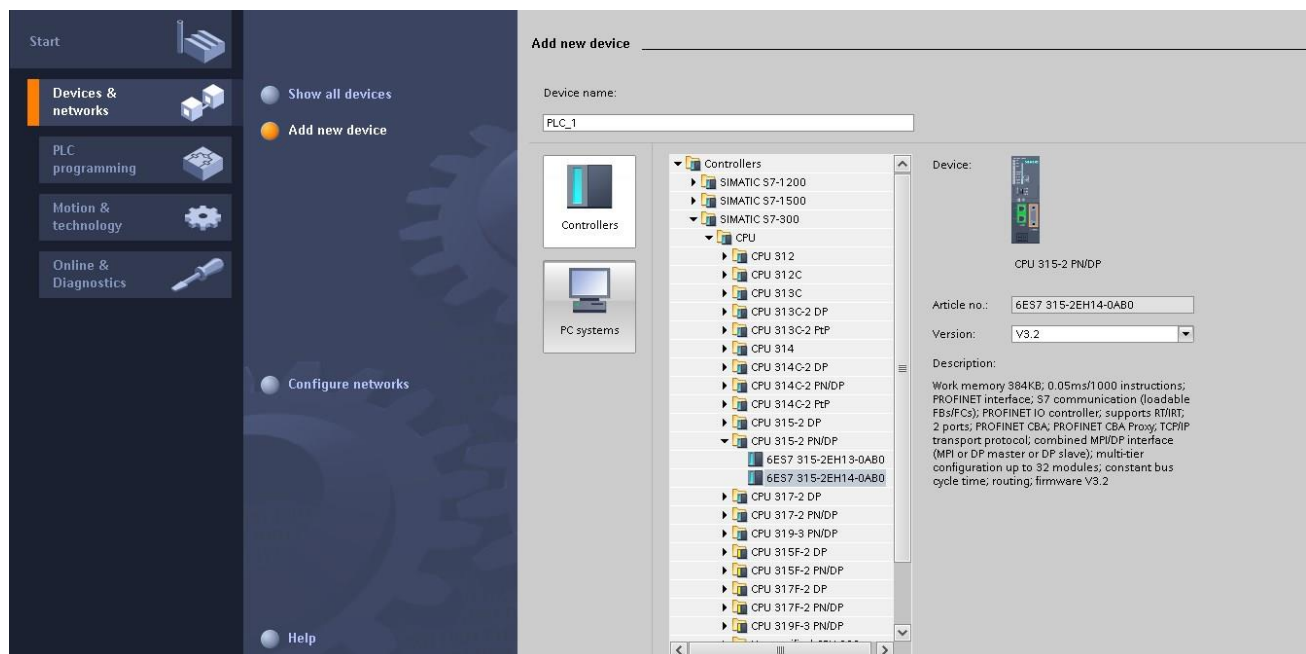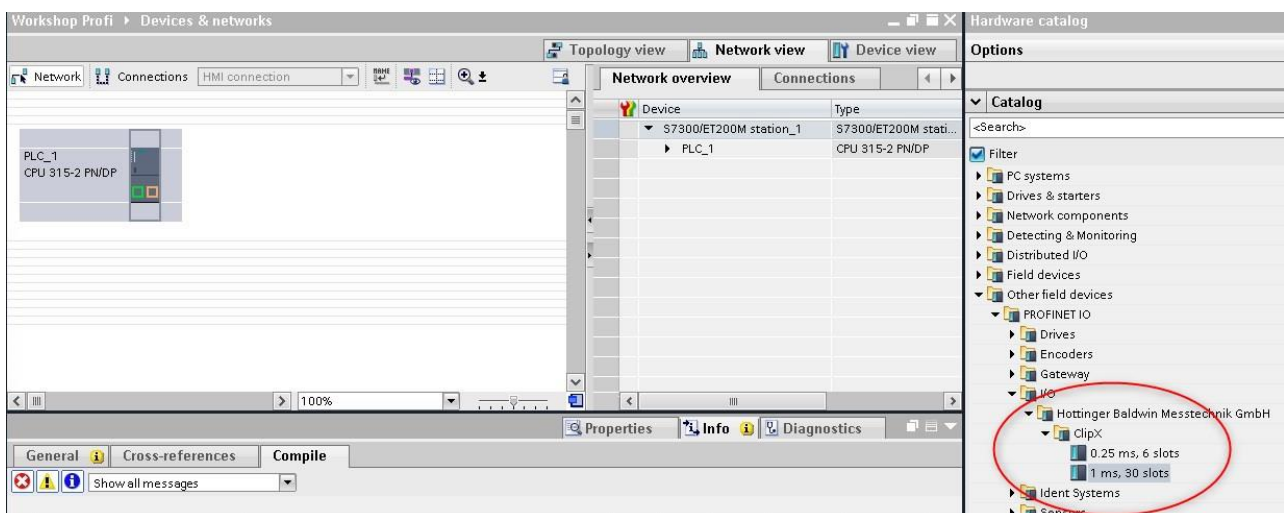

After the project has been created, go to the **Network view** - the PLC should now be visible there.
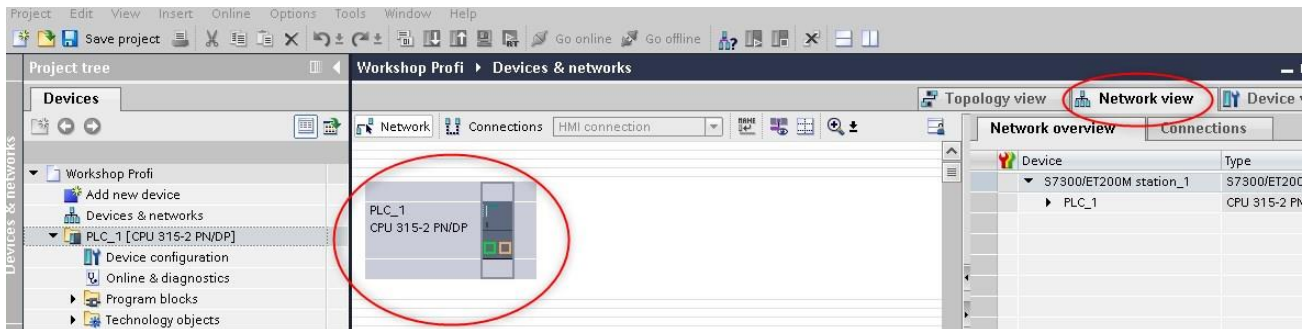
First install the GSDML-file of the ClipX. You can find the GSDML-File for the ClipX on the HBM website.
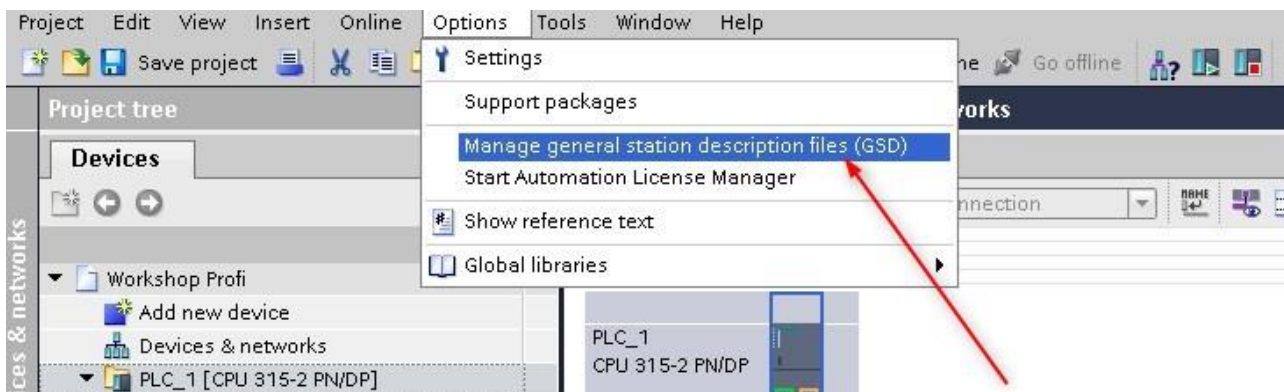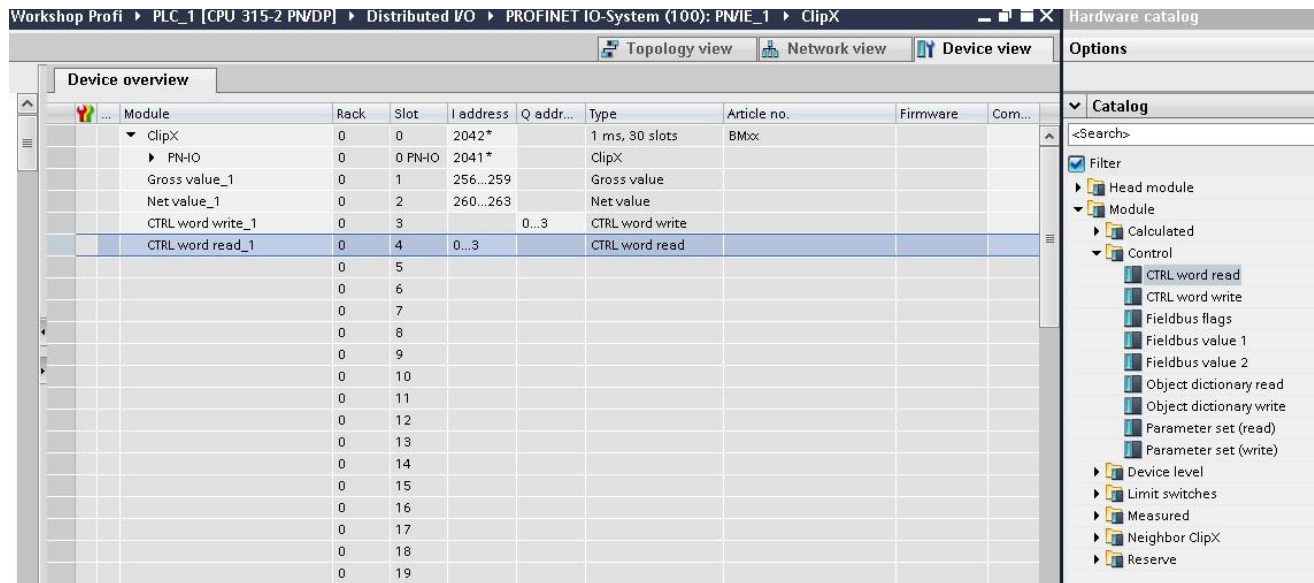

After that the ClipX should be found in the hardware catalog. Simply add it to the configuration by double-clicking it.

Both devices should now be visible in the network view. Connect them physically by linking the green dots
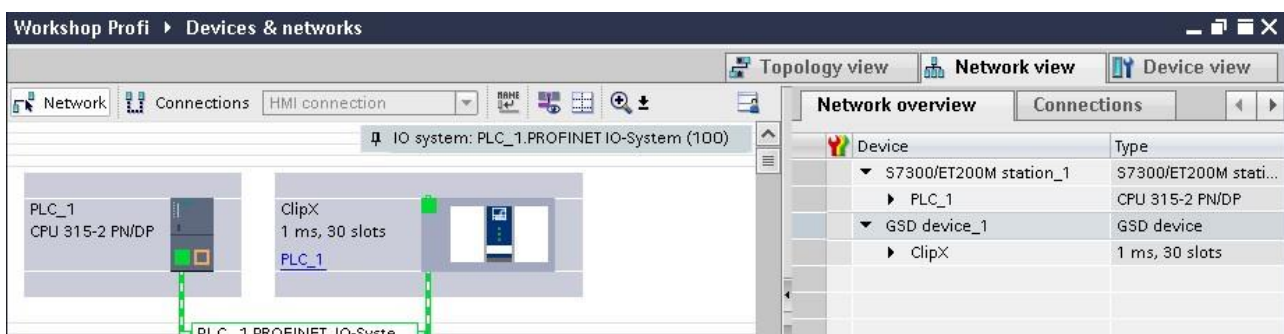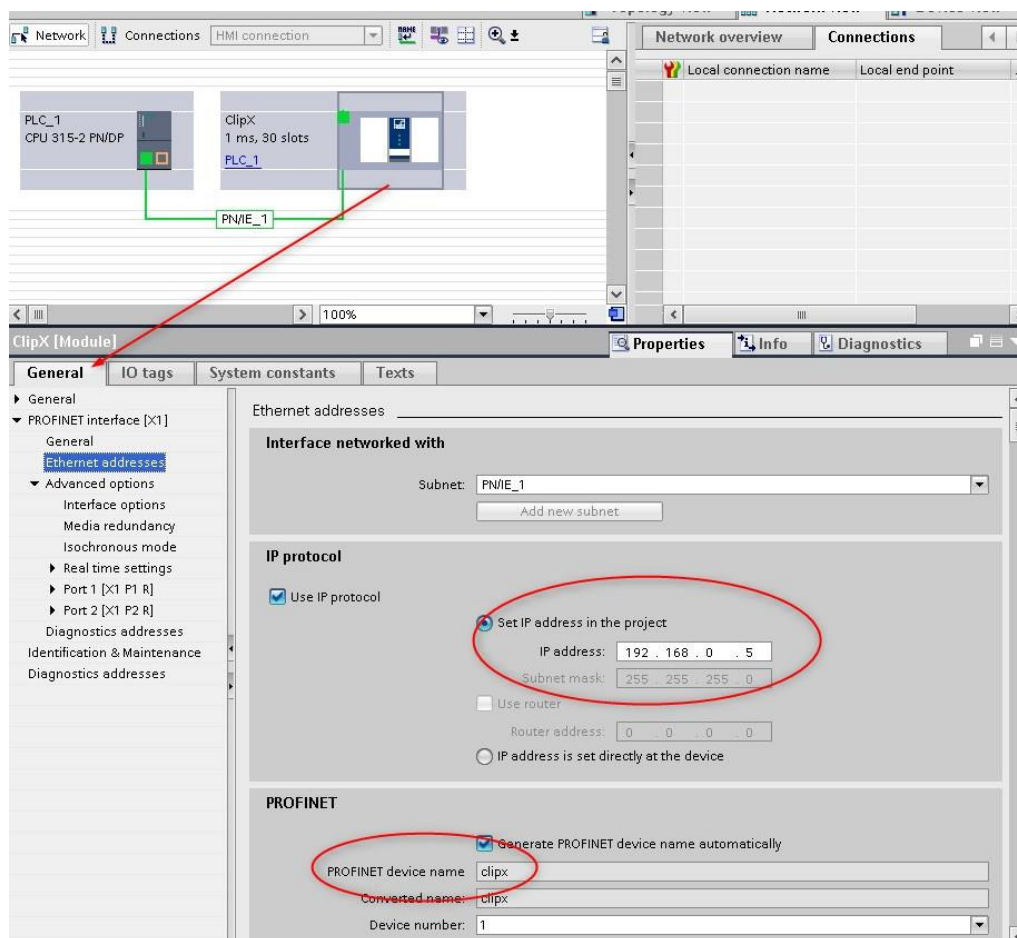
Then go to the device view of ClipX and insert the required entries from the catalog, e.g. Gross Value, Net Value and so on. Adjust the slave to your needs.

Enable the ProfiNet connection

For the correct communication between the Master and Slave two things are mandatory: The IP-address and the station name. Those two have to be exactly the same in the device and in the software. So take the time to double-check the network settings.
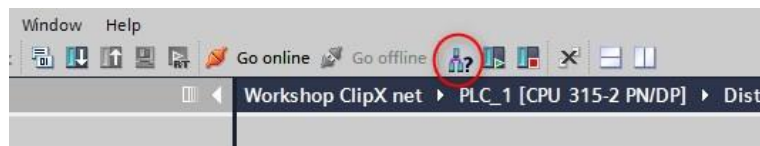

As next step open the web GUI of ClipX and activate the ProfiNet interface and enter the network settings.
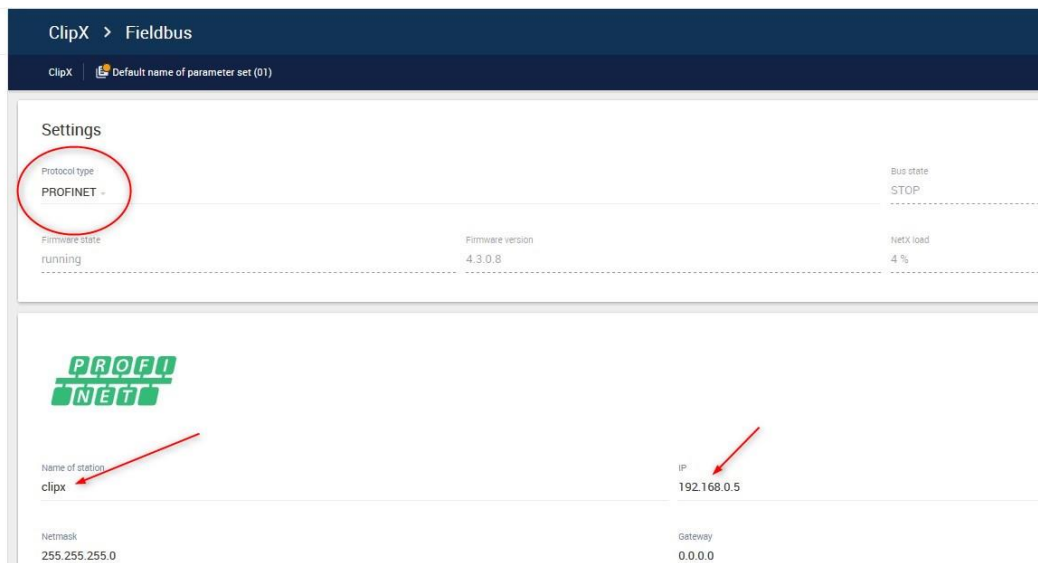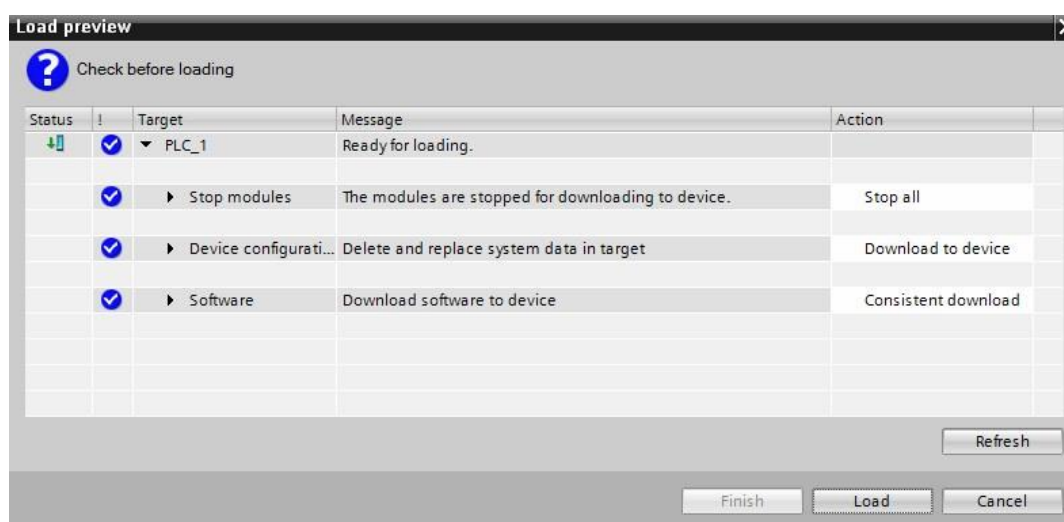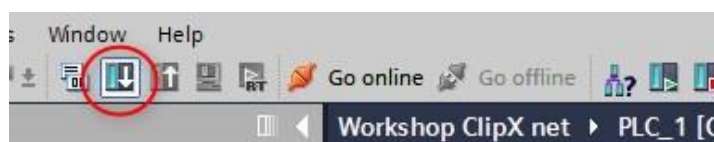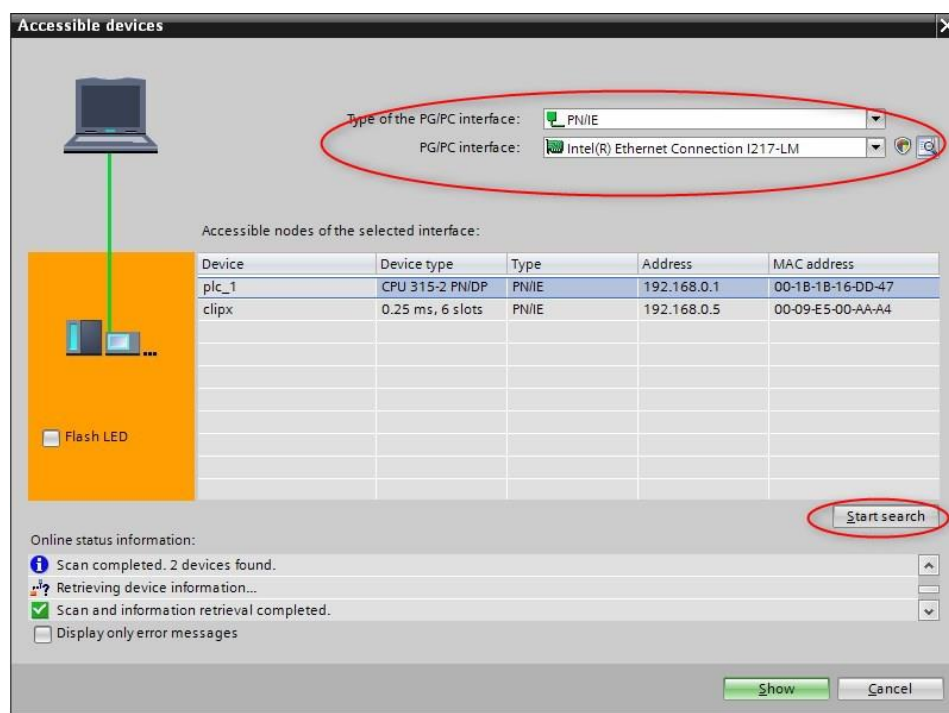

Now save and compile the project. After that, download the compiled project to the PLC.
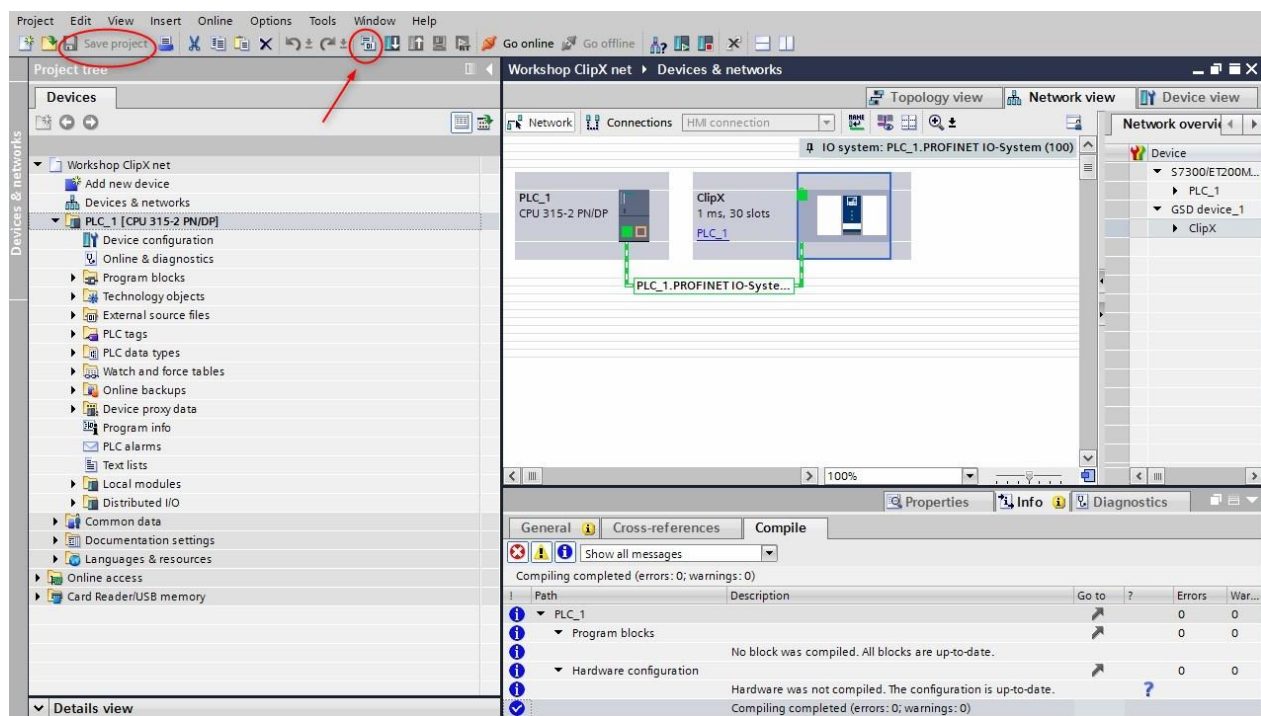
Check and update the PG/PC communication interface and download the configuration into the PLC.

After the download the PLC should run and the LEDs should be green. Just check now if the measurement values come in we have to add a new watch table and assign the hardware addresses to it

To read the value we need the addresses from the Hardware-Config (You can find the mapping in the device view of the ClipX e.g. **256** for the Gross Value in this example.

Type in the **PID256** into the Watch table, go online, activate the expand mode and activate the monitoring.
PI means Peripheral Input and **B** -> Byte, **W** -> Word(16 Bit), **D** -> Double Word(32Bit).
Double Word is necessary for the **Floating Point Format**.
The exact length and format could be found in the manual of ClipX

The result looks like…

And in the web browser

Disclaimer

These examples are for illustrative purposes only. They cannot be used as the basis for any warranty or liability claims.

Disclaimer