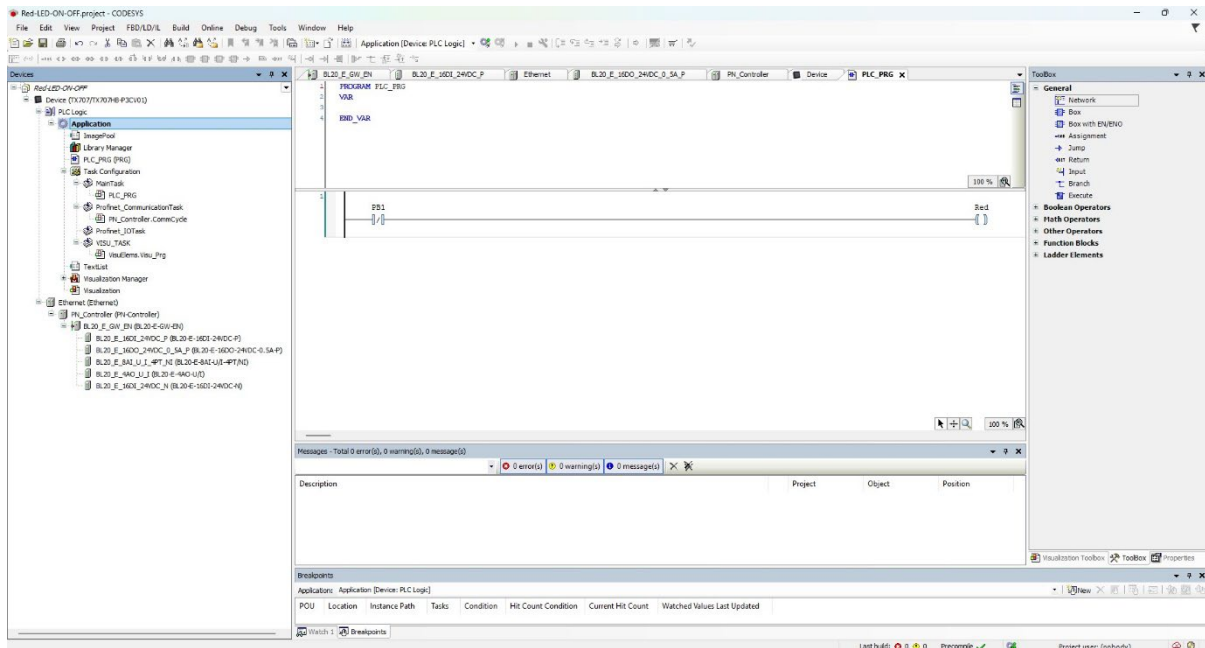# Displaying PLC Tags on Kepware Server

1. We will first create tags in the plc program.
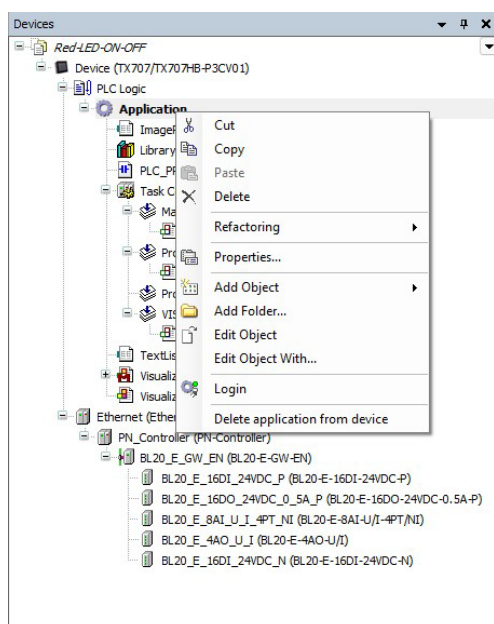
Creation of PLC Tags

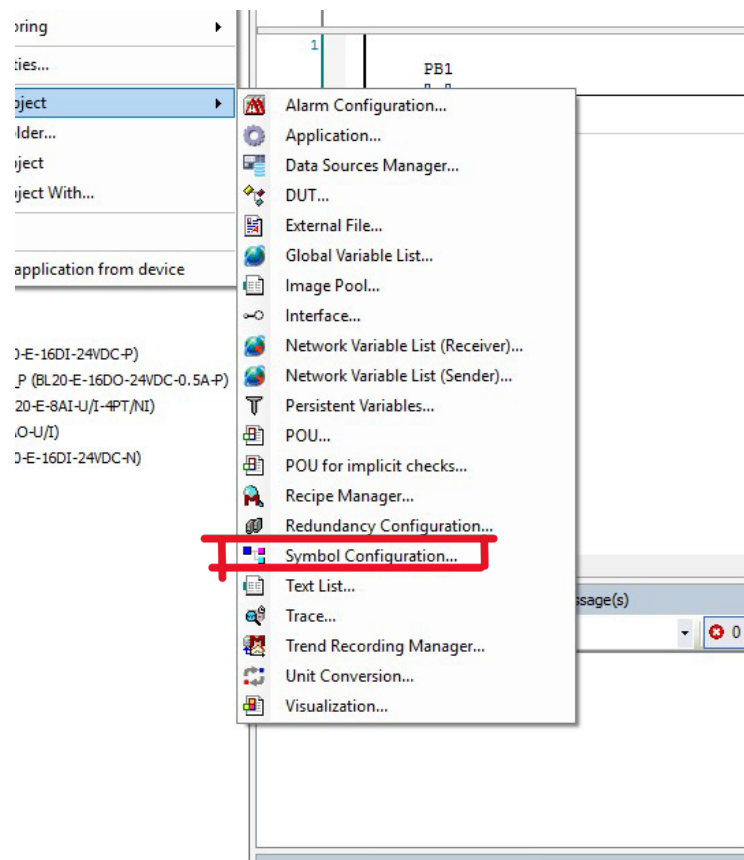1.Open **Codesys** and open the PLC program you wish to create tags.

2. Make sure that it is **connected to the physical PLC.** Note down the **IP address** as it will be useful for establishing connection.
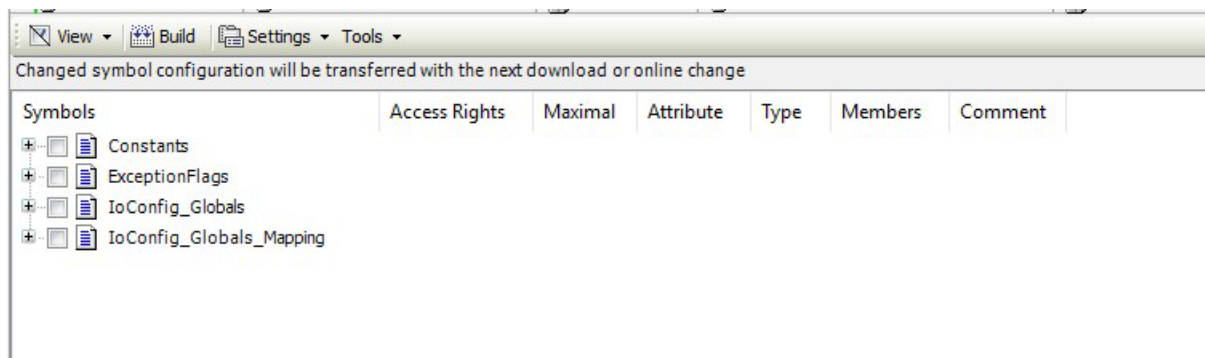
3. Right click on "**application**" and select "**Add Object**".
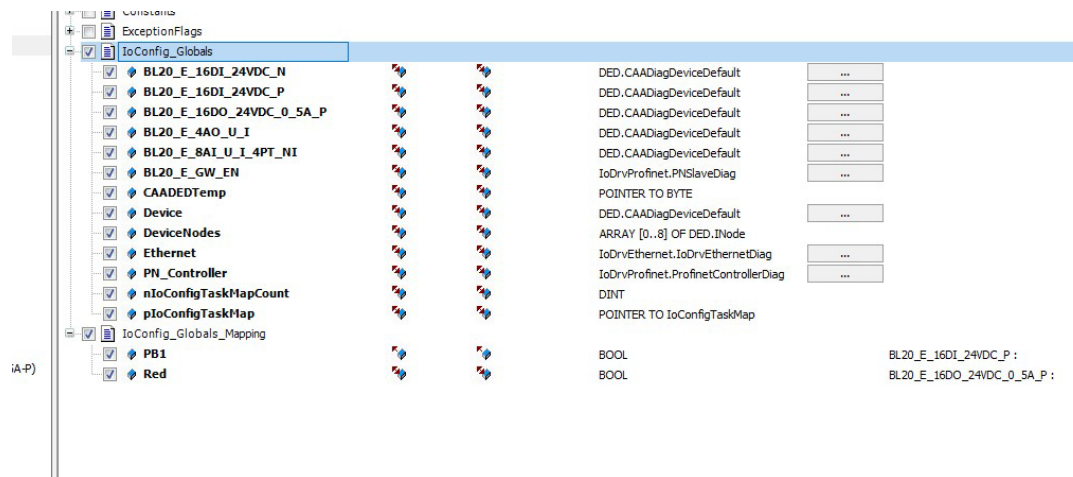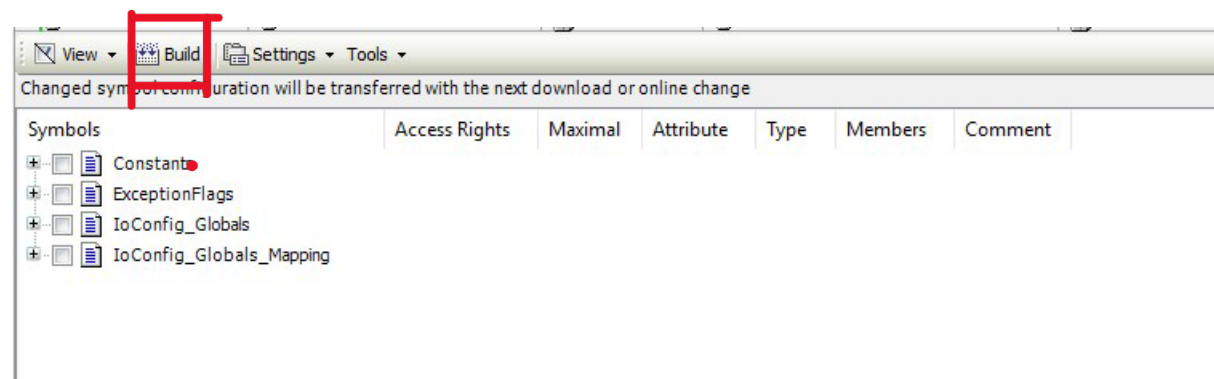
4.Choose **Symbol Configuration** and then add.

5.You would see a **list of tags** which are being used in the PLC program.

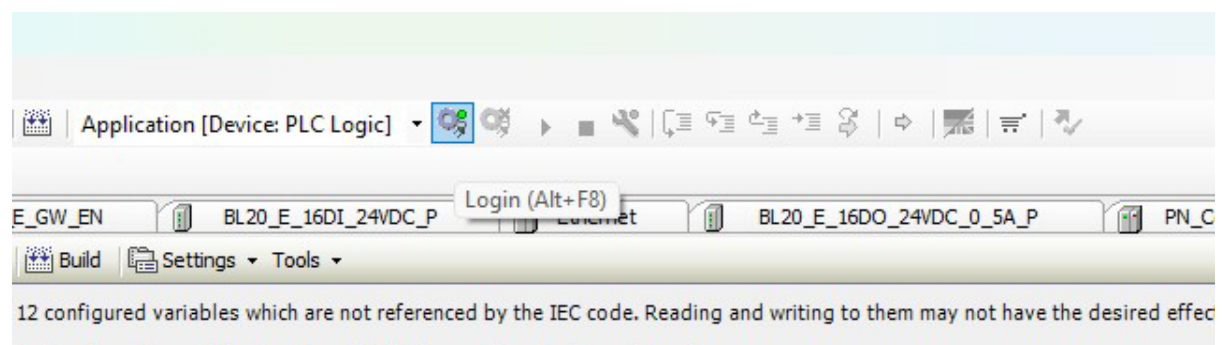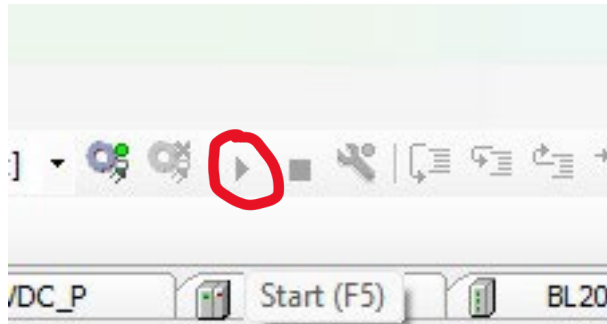6.**Tick the required tags** you need to be shown on thingworx.

7.Click "**build**".

8. The required tags will be usually in "IO_config_global_mapping".

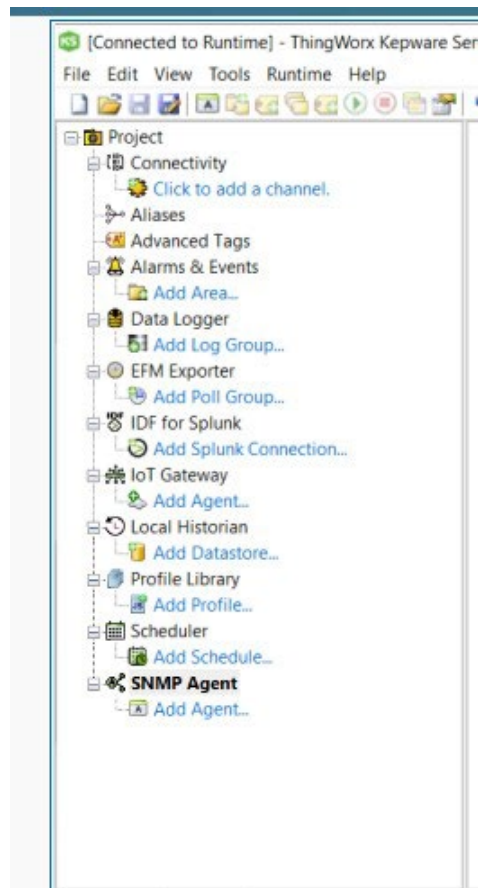9.Once the program is built, click **"Login"** and **"Start"**.
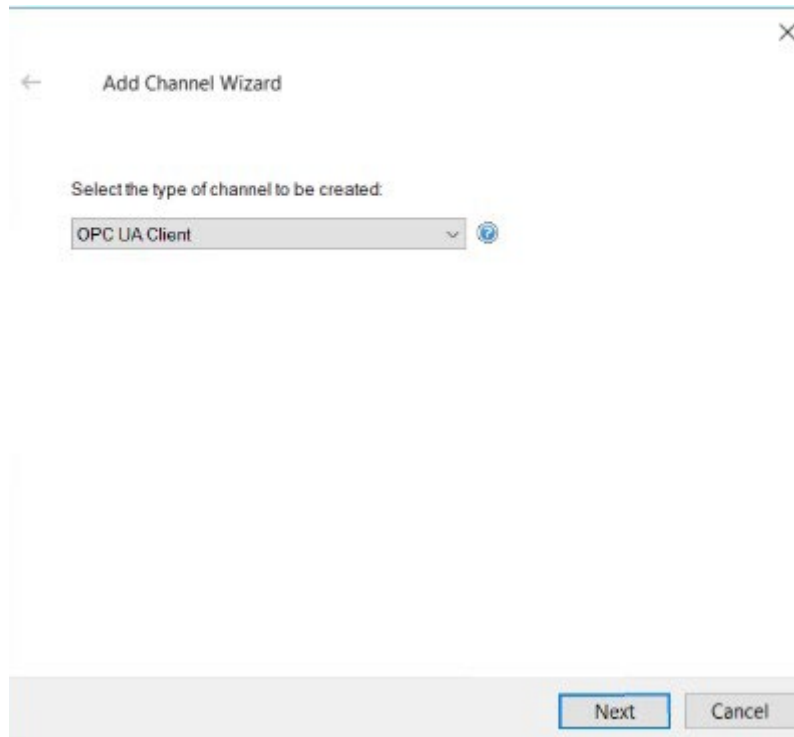
10. Make sure that PLC is actively connected to Codesys while doing all the tasks.

Configuring Kepware Server

1. Follow the document "Connecting_Turck_PLC_to_Kepware_Server" to connect to the remote server PC.

2. Open "**ThingWorx Kepware Server 6 Configuration**".

3.File -> New. (This will create new project).

4. Click on "**Click to add a channel**" under connectivity.

5. Select "**OPC UA client**" from drop down. Click next.

6. Name the channel. In our case, "**Turck PLC**". Click next.

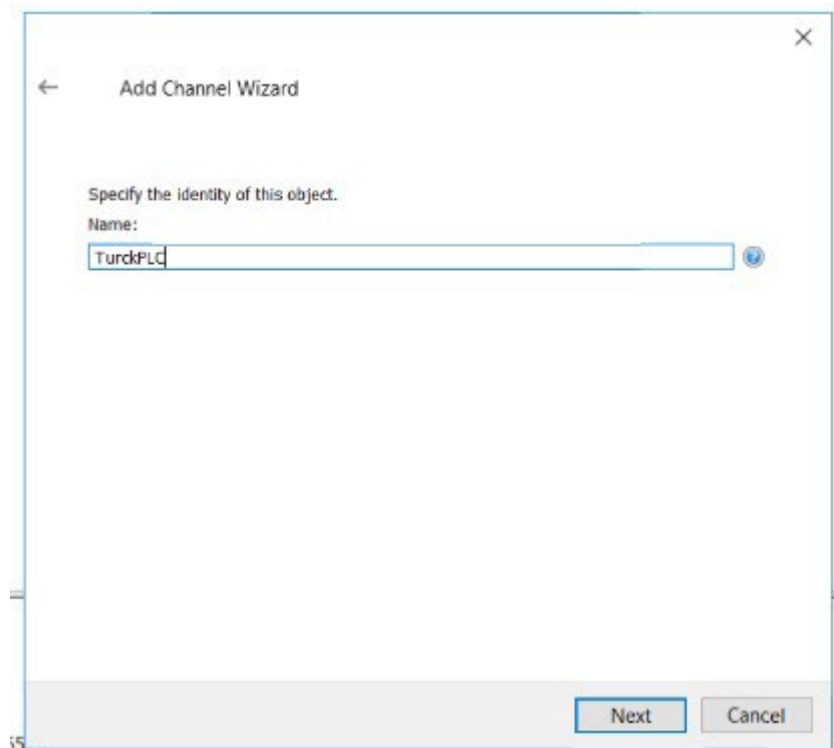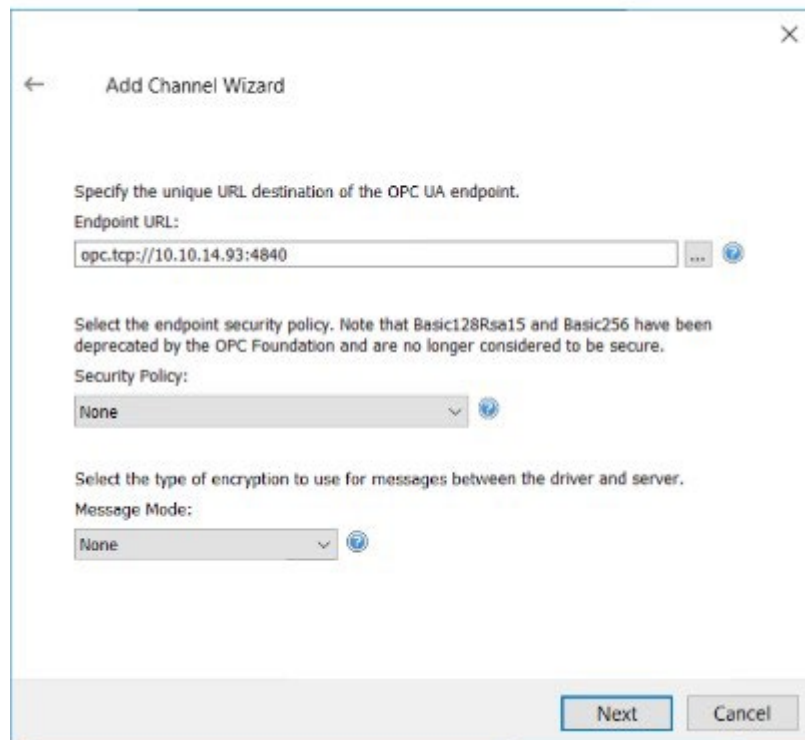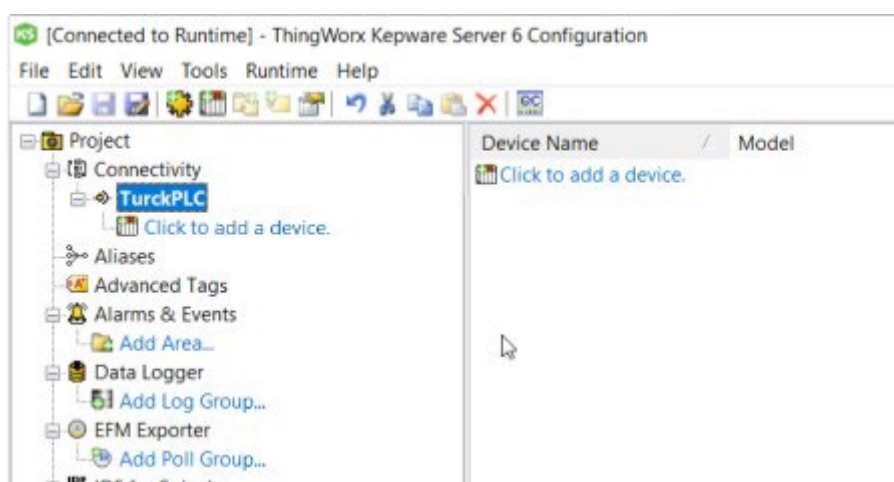7. Click "Next".

8. Replace "opc.tcp://localhost:49320" with "**opc.tcp://10.10.14.93:4840**". Select Security Policy – **None** (Drop down menu). Note: 10.10.14.93 is ip address of our PLC which we have set as per "Smart Manufacturing Kit – Installation.docx".

9. Click "Next", "Next", "Next" and "Finish".

10. Click to "**Click add a device**" under "Turck PLC".

11. Give name "TX707" which is PLC model number.

12. Click "Next" until you get "**Select Import Item**" window.

13. Expand DeviceSet -> Turck/ARM/WinCE TV -> Resources -> Application -> GlobalVars -> IoConfig_Global_Mapping. You can see now the tags created in CODESYS. E.g. PB1, Red.

14. Select both tags and click on **"Add Items"**.

15. Click "Ok".

16. Click "Next" and click "Finish"

17. Expand **DeviceSet -> Turck/ARM/WinCE TV -> Resources -> Application -> GlobalVars -> IoConfig_Global_Mapping** under project tree and click on "IoConfig_Global_Mapping" or click on "Quick Client" button, TurckPLC.TX707.Deviceset. You can see real time values of tags created. 6

Select Items to Import

Browsing

Leaf filter: `^`

- opc.tcp://10.10.14.93:4840
  - DeviceSet
    - Turck/ARM/WinCE TV
      - Resources
  - **Server**

[Add items >>]

[Add branches >>]

[<< Remove items]

Import Items

☐ Import as Default Data Type

[OK] [Cancel] [Help]