COMBIVIS Studio HMI 4.0

Lesson 5

Driver & dynamic objects

You will learn in this lesson...

Goal:

- Build up a connection via:
  - CoDeSys-Driver
  - KEB DIN66019 driver (optional)
- Creating of dynamic variables

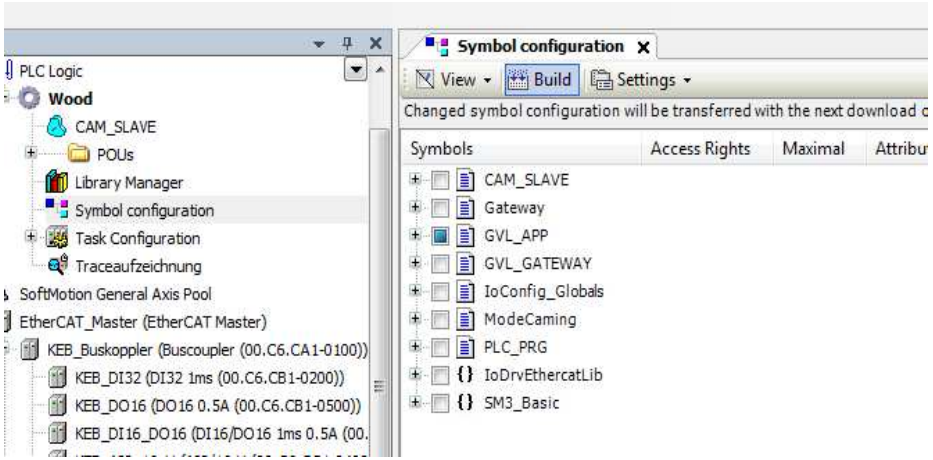
Build up a connection via CoDeSys 3S driver

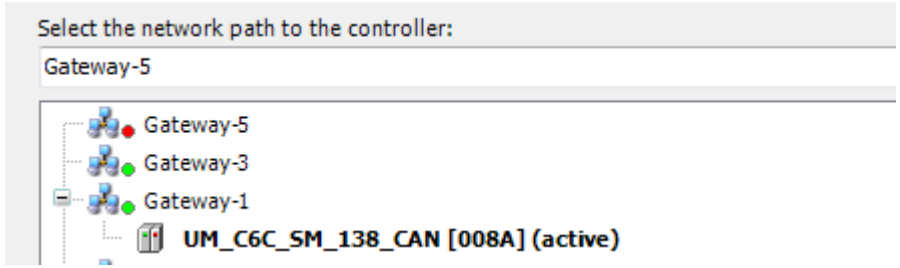
CoDeSys driver

The CoDeSys driver is for communicating between the PLC and the HMI project.

Following settings are mandatory:

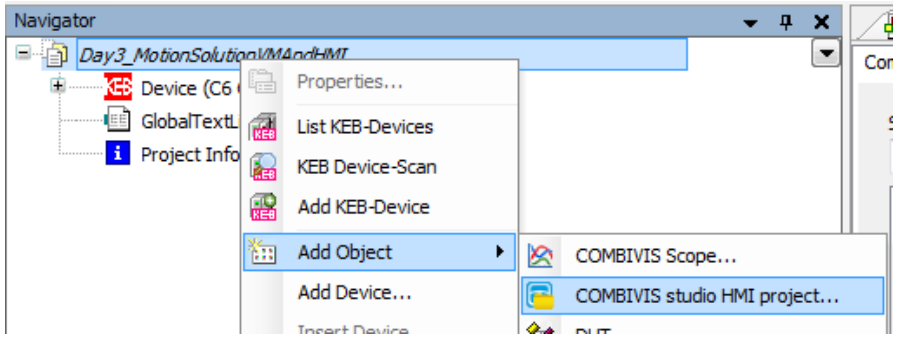
- A Symbol configuration in the RTE-Project
- At least there has to be one variable added, to build up a communication
- The path of the PLC has to be activated
- The project of the RTE has to be uploaded and started



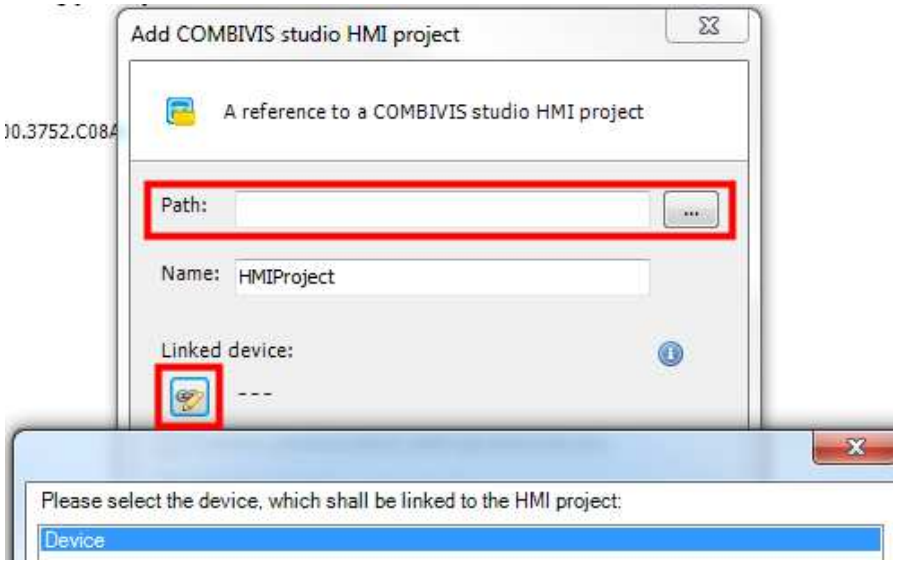


Build up a connection via CoDeSys 3S driver

- A HMI project has to be added to the COMBIVIS studio project



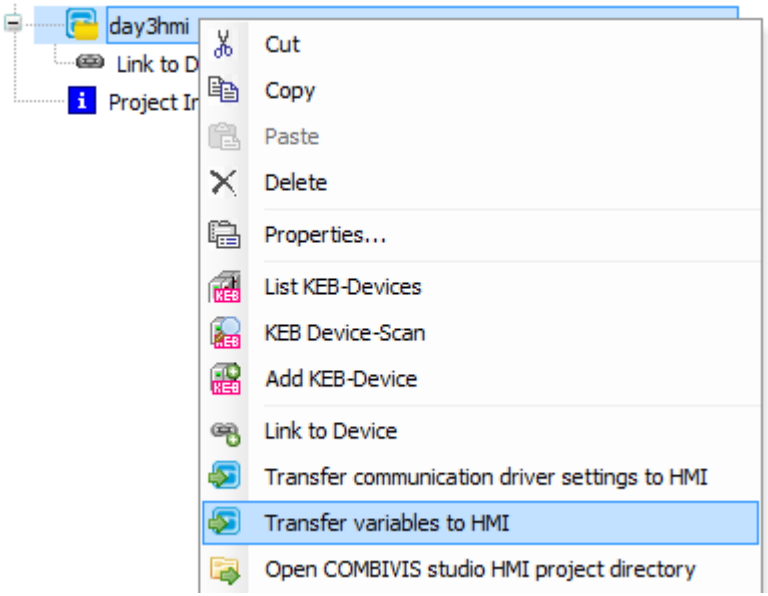
- The path of the HMI will be set



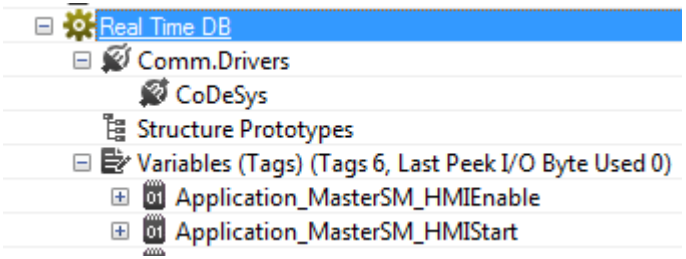
- A link to the HMI will be placed in the RTE

Build up a connection via CoDeSys 3S driver

- The driver-settings and variables can be uploaded directly to the HMI project.

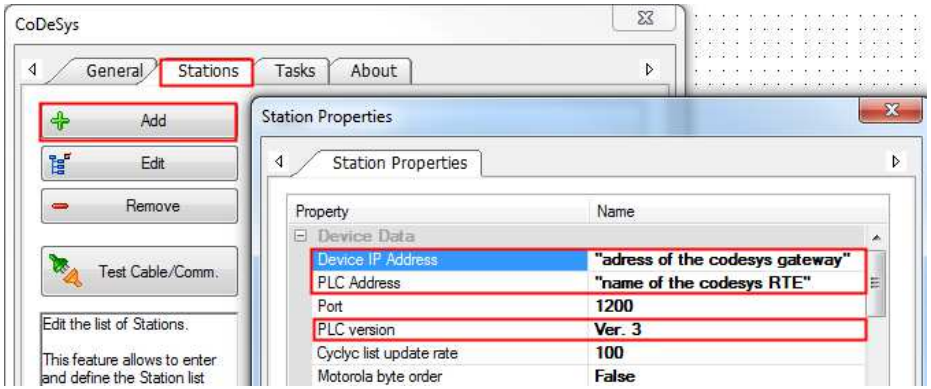


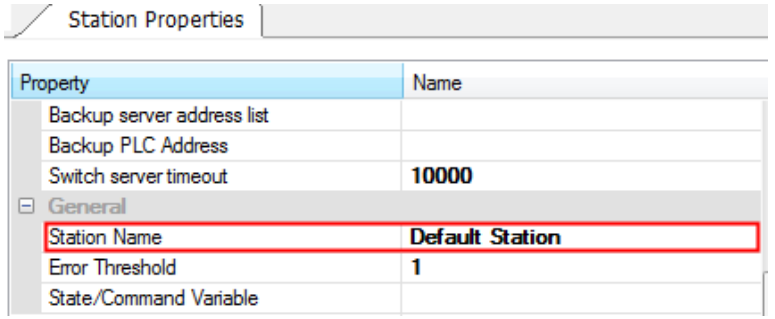
- Now COMBIVIS send and add the variables and all necessary properties of the driver to the HMI automatically.



CoDeSys driver properties

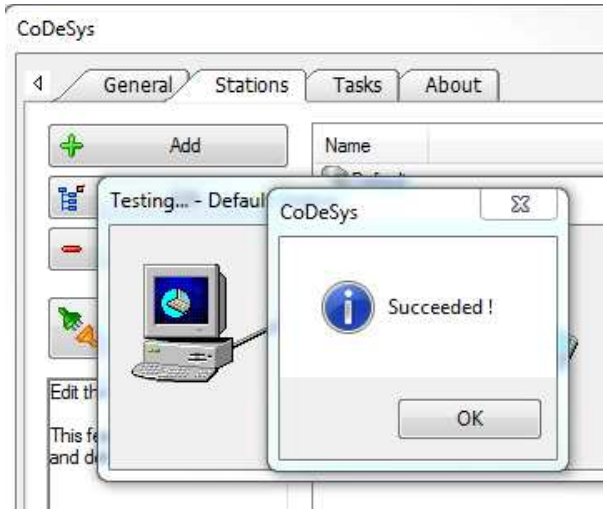
- The settings of “general” stays as default
- Add a RTE to „Stations“
- The „Device IP Address“ is the address of the used Codesys-gateway
- Insert the name of the RTE to „PLC Address“
- The internal name of the station will be placed at “General”
- Two alternative ways to import the variables:
  - Online via direct communikation
  - Offline via XML File

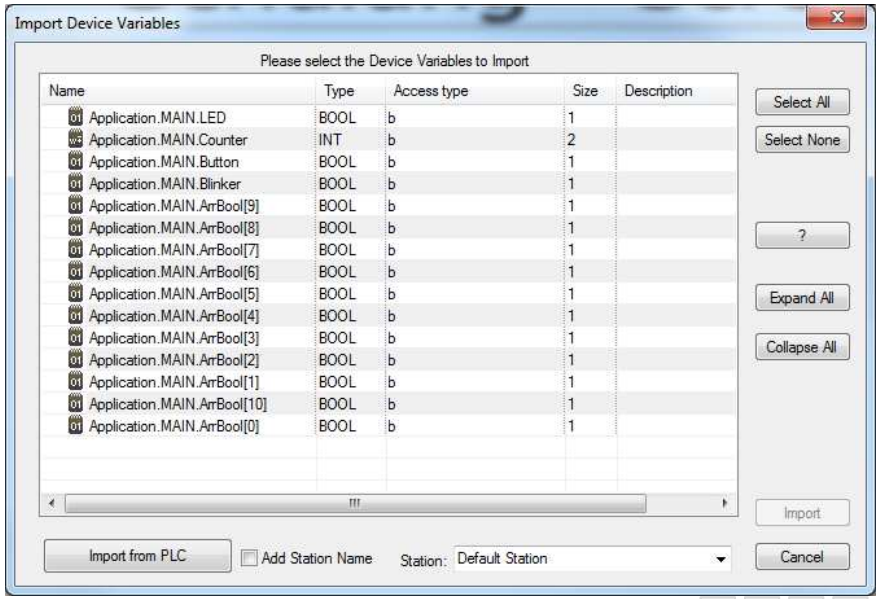




CoDeSys driver – Online

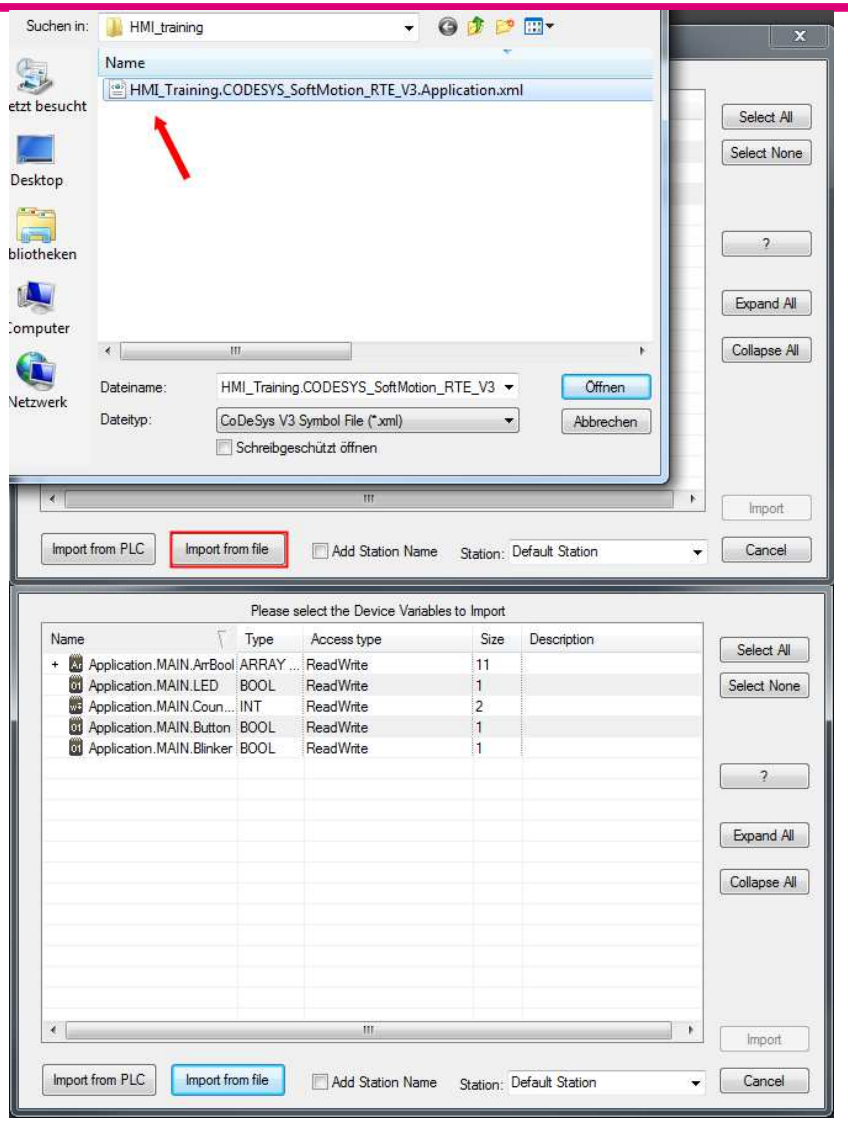
- The RTE has to be started (the project must contain a Symbol configuration with at least one variable inside)
- Test the connection with “Test Cable/Comm”
- Add variables via right click on „Variables“ and “Import from PLC database…”
- Select and import the needed variables





CoDeSys driver – Offline

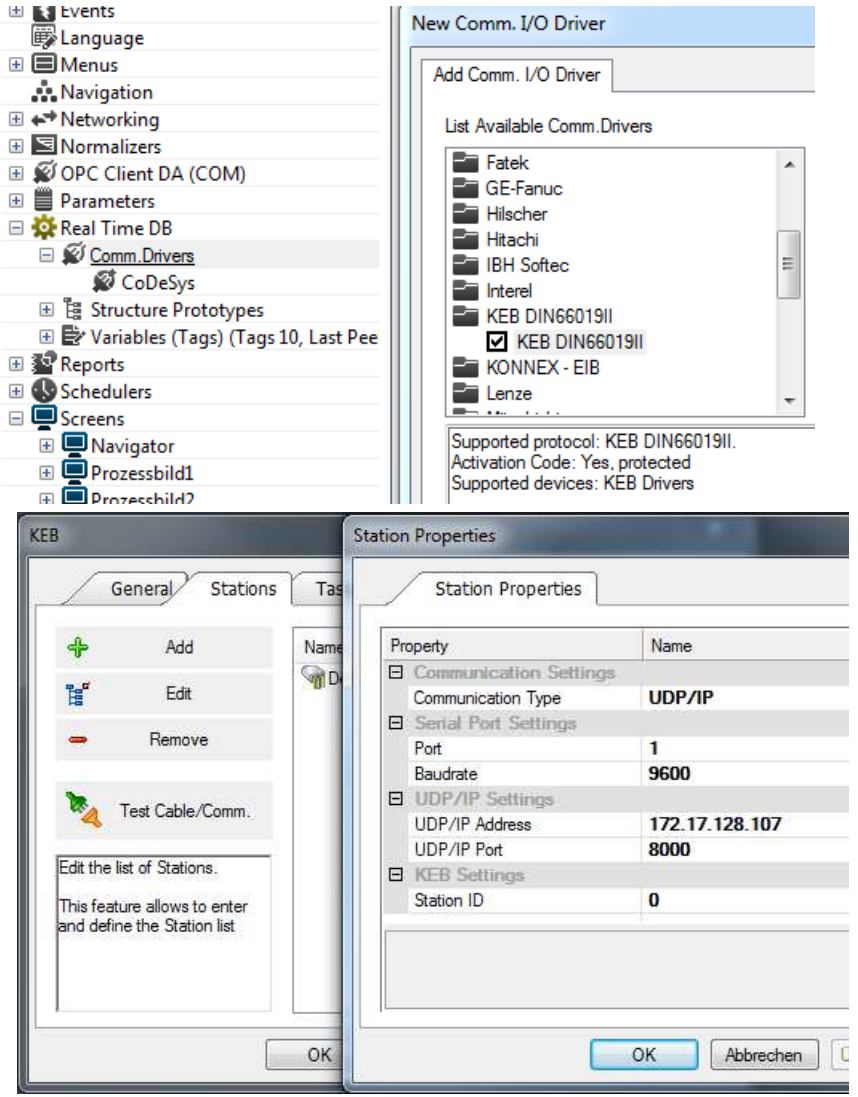
- Open the import screen
- Click on “Import from file”
- The XML-file contains the selected variables of the symbol configuration (will be generated by the compiler automatically)
- Import the variables with the button „Import“



Build up a connection via KEB DIN66019 driver

The KEB DIN66019 driver supports serial and TCP/IP communikation between a KEB controller and drives.

- Add the KEB DIN66019 driver via „Comm. Drivers“
- Add the drives to„Stations“
- Choose the communication type (UDP/IP or serial)
- Insert the communication-settings
- Test the communication via „Test Cable/Comm.“



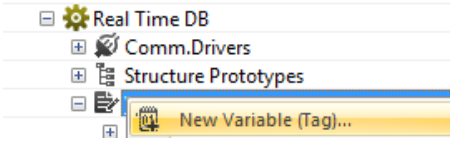
Create dynamic variables

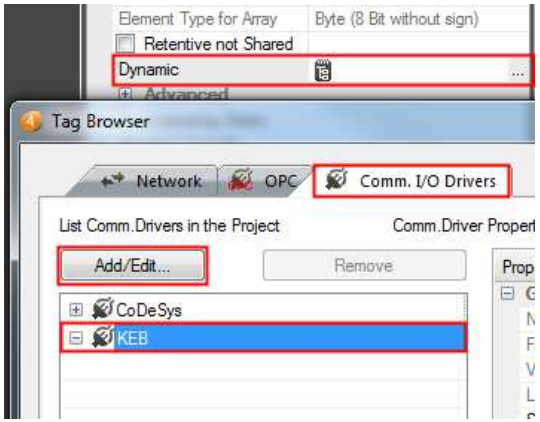
Properties of variables:

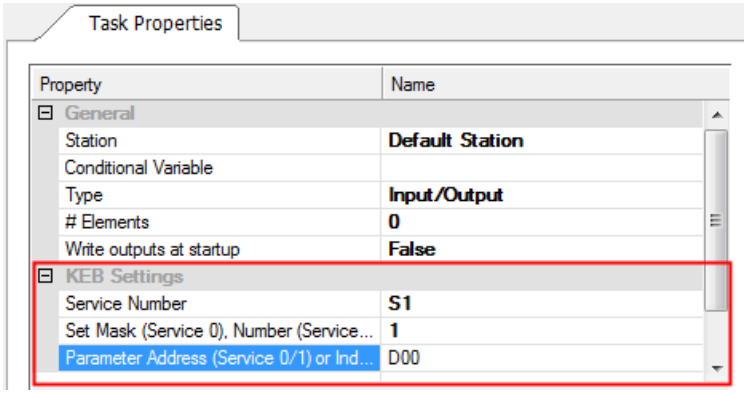
- Left-click on “Dynamic”
- Select via„Comm. I/O Drivers“ the added drivers
- Change the setting wiht „Add/Edit“

- Choose the drive (station)
- Add the„service number“, „set mask“ and „parameter address“ in HEX

Tipp: Details of the supported service can be looked up at the help files of the used device.







Practice

1. Create a RTE project which generates a sawtooth- („**Sawtooth**“, Word)- and sinus-vaule („**Sinus**“, LReal) after the **Start** (Bool).

   Note: Set the cycletime to 20 msec

```
IF Start THEN
    Sawtooth := Sawtooth + 1;
    IF Sawtooth >= 750 THEN
        Sawtooth := 0;
    END_IF
    Sinus := SIN(INT_TO_REAL(Sawtooth)/60);
END_IF
```

2. Upload the settings and variables of the RTE to the HMI project

3. Create a new screen („**Screen2**“) and link the variables to two E/A-Display–Objects.

   a. If necessary add a button to switch the screens

4. Upload and start the project to/on the PLC and HMI

COMBIVIS Studio HMI 4.0

- ✓ Lesson 5

..go on with lesson 6 – Trend, Embedded Object & Alarm