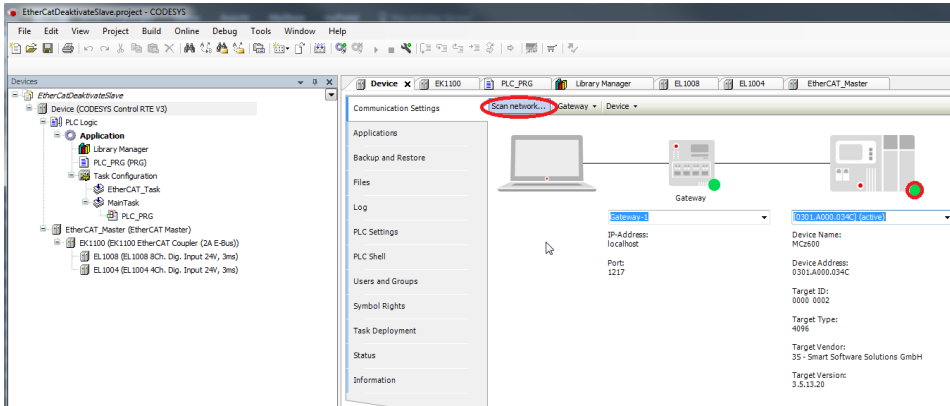
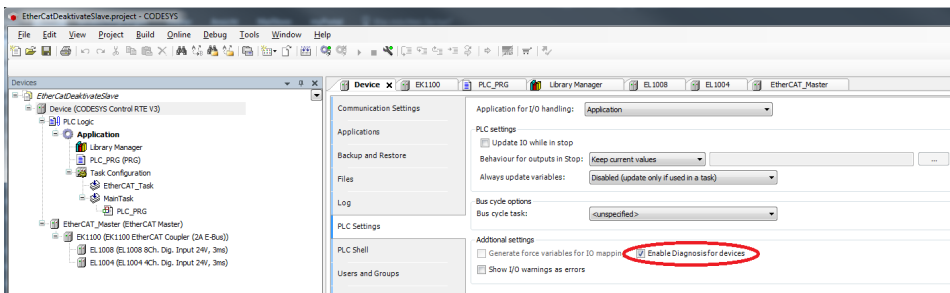


EtherCAT: Switching Off/On a Slave from the IEC Program

- Create a "Standard project" and select *CODESYS Control Win V3* as the device.
- Define the target system by means of *Network scan*.

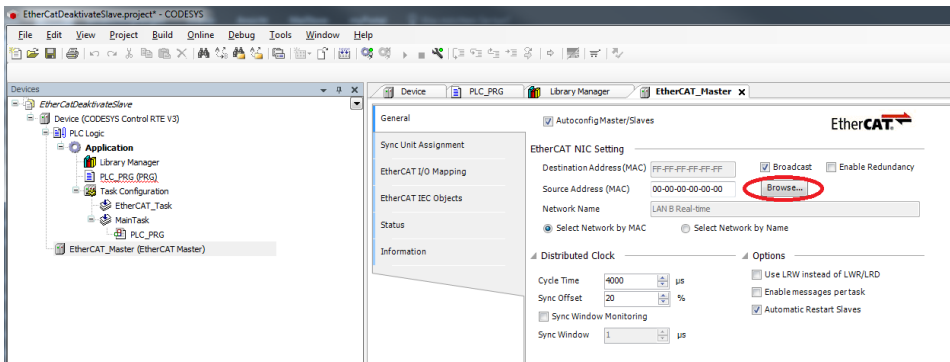


- Activate the *Diagnosis for devices*.

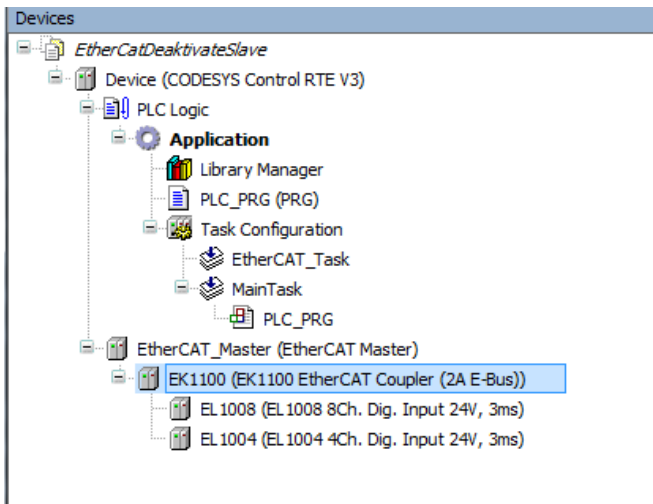


- Insert an *EtherCat Master* Ethernet adapter and specify the interface to be used.

If a target system has not been defined yet, then the error message "Gateway not configured" is displayed.



- Insert a slave below the *EtherCat Master* or scan the bus.



- Edit the `PLC_PRG` POU as follows:

Declaration

```

VAR
    xDisable      : BOOL;
    xEnable       : BOOL;
    xReconfigure  : BOOL;
    itfNodeSlave  : DED.INode;
    fbReconfigure : DED.Reconfigure;
    eState        : IoDrvEthercatLib.ETC_SLAVE_STATE;
END_VAR

```

Implementation

```

itfNodeSlave := EK1100;

IF xDisable THEN
    xDisable := FALSE;
    itfNodeSlave.Enable := FALSE;
    xReconfigure := TRUE;
END_IF

IF xEnable THEN
    xEnable := FALSE;
    itfNodeSlave.Enable := TRUE;
    xReconfigure := TRUE;
END_IF

fbReconfigure(xExecute := xReconfigure, itfNode := EtherCAT_Master);

IF fbReconfigure.xDone THEN
    xReconfigure := FALSE;
END_IF

EK1100(); // Necessary for the status to be updated
eState := EK1100.wState;

```

- Start the project and test the functionality by deactivating and activating the slave.

Devices: EtherCAT_DeactivateSlave

Device: [connected] (CODESYS Control RTE V3)

PLC Logic

- Application [run]
 - Library Manager
 - PLC_PRG (PRG)
 - Task Configuration
 - EtherCAT_Task
 - MainTask
 - PLC_PRG
- EtherCAT_Master (EtherCAT Master)
 - EK1100 (EK1100 EtherCAT Coupler (2A E-Bus))
 - EL1008 (EL1008 8Ch. Dig. Input 24V, 3ms)
 - EL1004 (EL1004 4Ch. Dig. Input 24V, 3ms)

Device: Application.PLC_PRG

Expression	Type	Value	Prepared value
xDisable	BOOL	FALSE	
xEnable	BOOL	FALSE	
xReconfigure	BOOL	FALSE	
itfNodeSlave	DED.Inode	16#89743134	
fbReconfigure	DED.Reconfigure		
eState	ETC_SLAVE_STATE	0	

```

1 itfNodeSlave := EK1100;
2
3 IF xDisable FALSE THEN
4   xDisable FALSE := FALSE;
5   itfNodeSlave.Enable := FALSE;
6   xReconfigure FALSE := TRUE;
7 END_IF
8
9 IF xEnable FALSE THEN
10  xEnable FALSE := FALSE;
11  itfNodeSlave.Enable := TRUE;
12  xReconfigure FALSE := TRUE;
13 END_IF
14
15 fbReconfigure(xExecute FALSE := xReconfigure FALSE itfNode := EtherCAT_Master);
16
17 IF fbReconfigure.xDone FALSE THEN
18  xReconfigure FALSE := FALSE;
19 END_IF
20
21 EK1100(); // Necessary for the status to be updated
22 eState 0 := EK1100.wState 0 RETURN
  
```

Devices: EtherCAT_DeactivateSlave

Device: [connected] (CODESYS Control RTE V3)

PLC Logic

- Application [run]
 - Library Manager
 - PLC_PRG (PRG)
 - Task Configuration
 - EtherCAT_Task
 - MainTask
 - PLC_PRG
- EtherCAT_Master (EtherCAT Master)
 - EK1100 (EK1100 EtherCAT Coupler (2A E-Bus))
 - EL1008 (EL1008 8Ch. Dig. Input 24V, 3ms)
 - EL1004 (EL1004 4Ch. Dig. Input 24V, 3ms)

Device: Application.PLC_PRG

Expression	Type	Value	Prepared value
xDisable	BOOL	FALSE	
xEnable	BOOL	FALSE	
xReconfigure	BOOL	FALSE	
itfNodeSlave	DED.Inode	16#89743134	
fbReconfigure	DED.Reconfigure		
eState	ETC_SLAVE_STATE	0	

```

1 itfNodeSlave := EK1100;
2
3 IF xDisable FALSE THEN
4   xDisable FALSE := FALSE;
5   itfNodeSlave.Enable := FALSE;
6   xReconfigure FALSE := TRUE;
7 END_IF
8
9 IF xEnable FALSE THEN
10  xEnable FALSE := FALSE;
11  itfNodeSlave.Enable := TRUE;
12  xReconfigure FALSE := TRUE;
13 END_IF
14
15 fbReconfigure(xExecute FALSE := xReconfigure FALSE itfNode := EtherCAT_Master);
16
17 IF fbReconfigure.xDone FALSE THEN
18  xReconfigure FALSE := FALSE;
19 END_IF
20
21 EK1100(); // Necessary for the status to be updated
22 eState 0 := EK1100.wState 0 RETURN
  
```