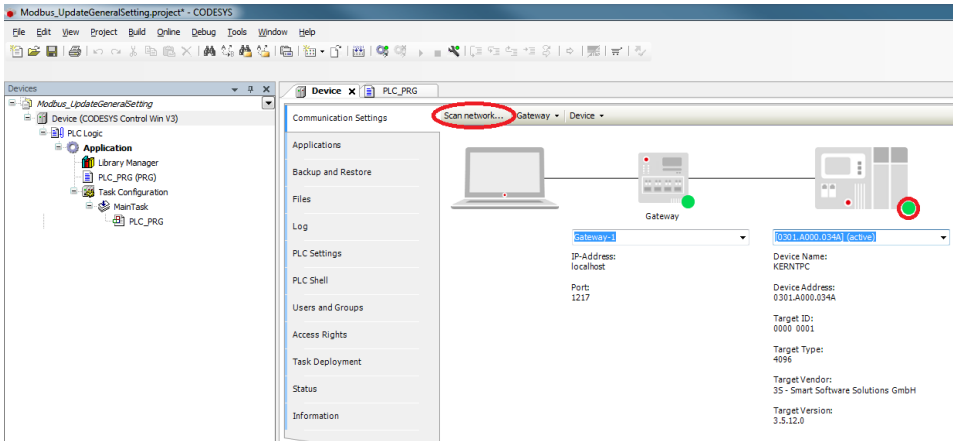


# Modbus TCP Slave: Dynamic Setting of the IP Address



The Modbus slave from the FAQ [Modbus Communication Master/Slave via Ethernet](#) is used here.

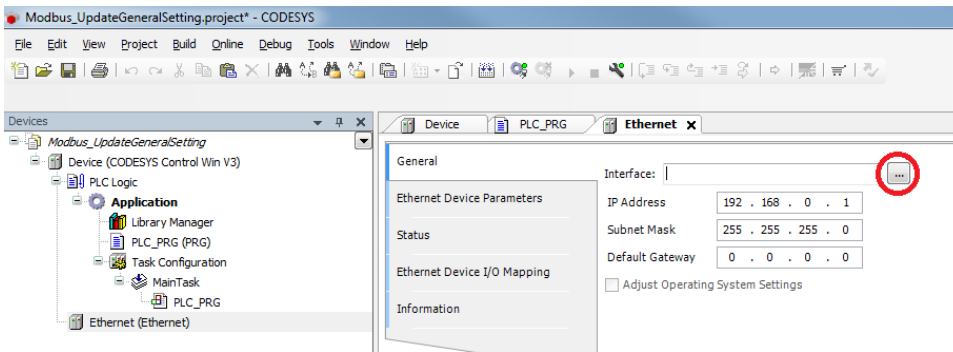
- Create a "Standard project" and select [CODESYS Control Win V3](#) as the device.
- Define the target system by means of the [Network scan](#).



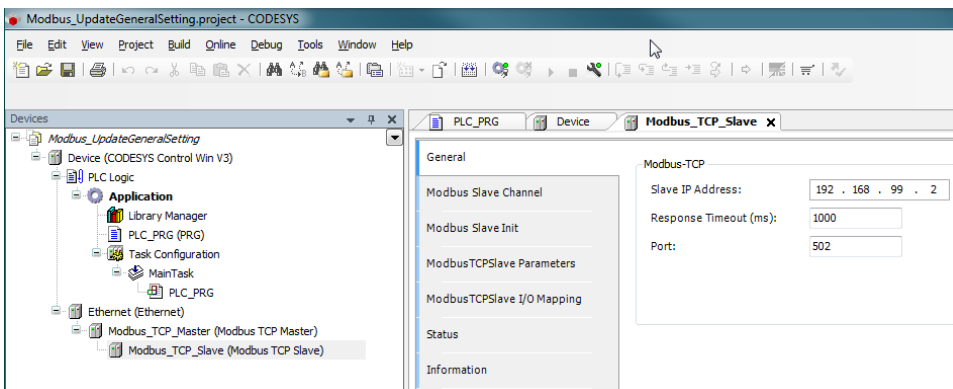
- Insert an [Ethernet](#) adapter in the device tree and specify the interface to be used.



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



- Insert a [Modbus TCP Master](#) below the [Ethernet](#) adapter in the device tree.
- Insert a [Modbus TCP Slave](#) below the [Modbus TCP Master](#) in the device tree.





Pay attention that the address is the same as for the Modbus Slave Device.

- Adapt the POU `PLC_PRG` as follows:

#### Declaration

```
VAR
    xUpdate      :   BOOL;
    sIp          :   STRING;
    udiResult    :   UDINT;
    abyNewIp     :   ARRAY [0..3] OF BYTE := [192,168,99,198]; // Insert here the correct IP-
Address of the Modbus_Slave_Device
END_VAR
```

#### Implementa- tion

```
sIp := IoDrvEthernet.IPARRAY_TO_IPSTRING(Modbus_TCP_Slave.ComSettings.ipAddress);
Modbus_TCP_Slave.xConfirmError := FALSE;

IF xUpdate THEN
    xUpdate := FALSE;
    udiResult := Modbus_TCP_Slave.UpdateCommunicationSettings(ipAddress := abyNewIp, uiPort :=
502);
    Modbus_TCP_Slave.xConfirmError := TRUE;
END_IF
```

- After starting the project, a connection cannot be established.

Expression	Type	Value	Prepared value
xUpdate	BOOL	FALSE	
sIp	STRING	192.168.99.198	
udiResult	UDINT	0	
abyNewIp	ARRAY [0..3] OF BYTE		
abyNewIp[0]	BYTE	192	
abyNewIp[1]	BYTE	168	
abyNewIp[2]	BYTE	99	
abyNewIp[3]	BYTE	198	

- Set the variable `xUpdate` to `TRUE` so that the new IP address is passed.

Expression	Type	Value	Prepared value
xUpdate	BOOL	TRUE	
sIp	STRING	192.168.99.198	
udiResult	UDINT	0	
abyNewIp	ARRAY [0..3] OF BYTE		
abyNewIp[0]	BYTE	192	
abyNewIp[1]	BYTE	168	
abyNewIp[2]	BYTE	99	
abyNewIp[3]	BYTE	198	



Resetting to an invalid IP address is not possible.  
The Modbus component has to be deactivated first.  
This is done by means of the "Enable" property, which is available only after activating the device diagnostics.

