How to Configure Modbus Client mode

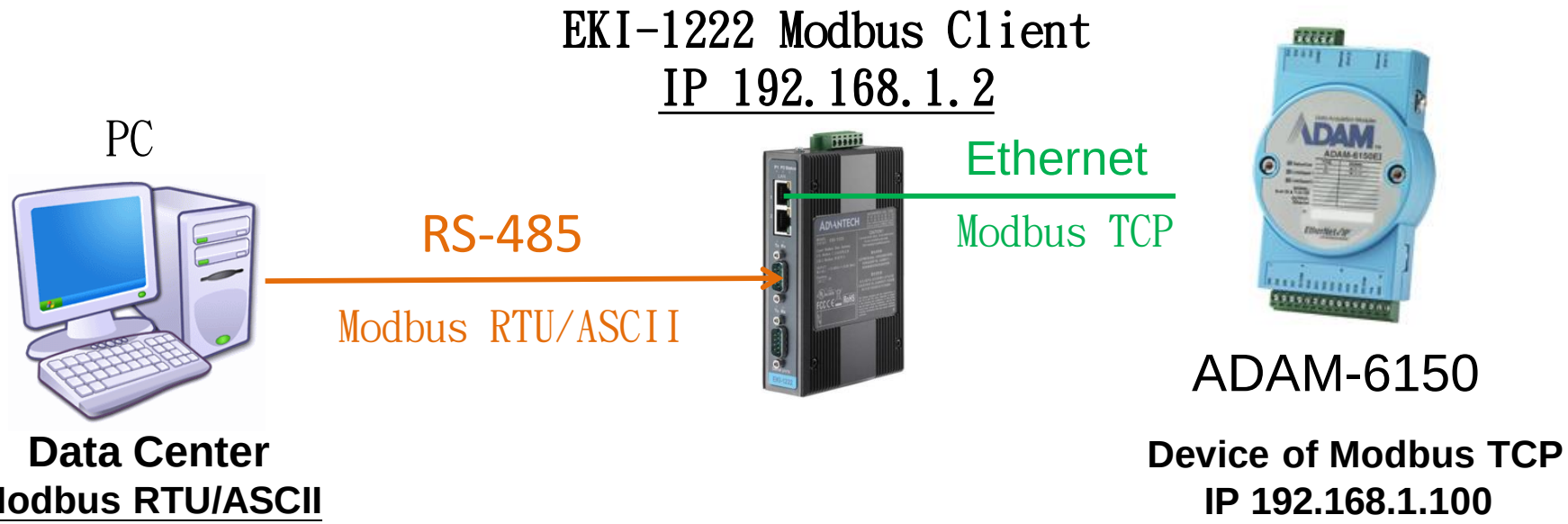
Overview

Modbus protocol is common industrial protocol. When we talk about how to communicate with Modbus serial data to Ethernet, the Modbus gateway is good solution to solve this problem.
In Modbus gateway, there are two operation mode.

First, we called Modbus Server mode, is most popular way to use this gateway. SCADA send out Modbus TCP command via gateway to get end terminal Modbus serial device status/data.

Another one we called Modbus Client mode. the polling way is opposite. SCADA send out Modbus RTU/ASCII command via gateway to get end terminal Modbus TCP device status/data.

Topology of Modbus Client Mode

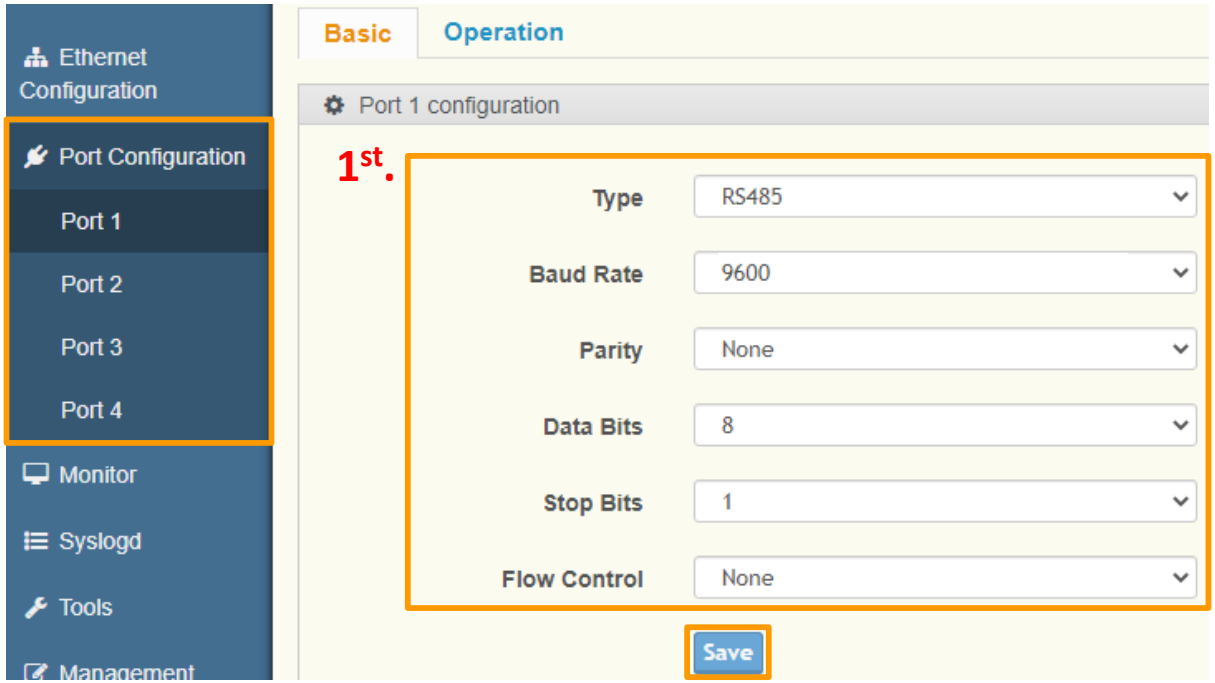


The behavior of Modbus gateway which translates the data format of Modbus from RTU/ASCII to TCP, that we calls “Client Mode”

Configure Modbus Client Mode (1/3)

- Use WebGUI to connect to the Modbus GW. In this example it is with IP 192.168.1.2.

1st. To Configure the "Basic" part first, then "Save" it



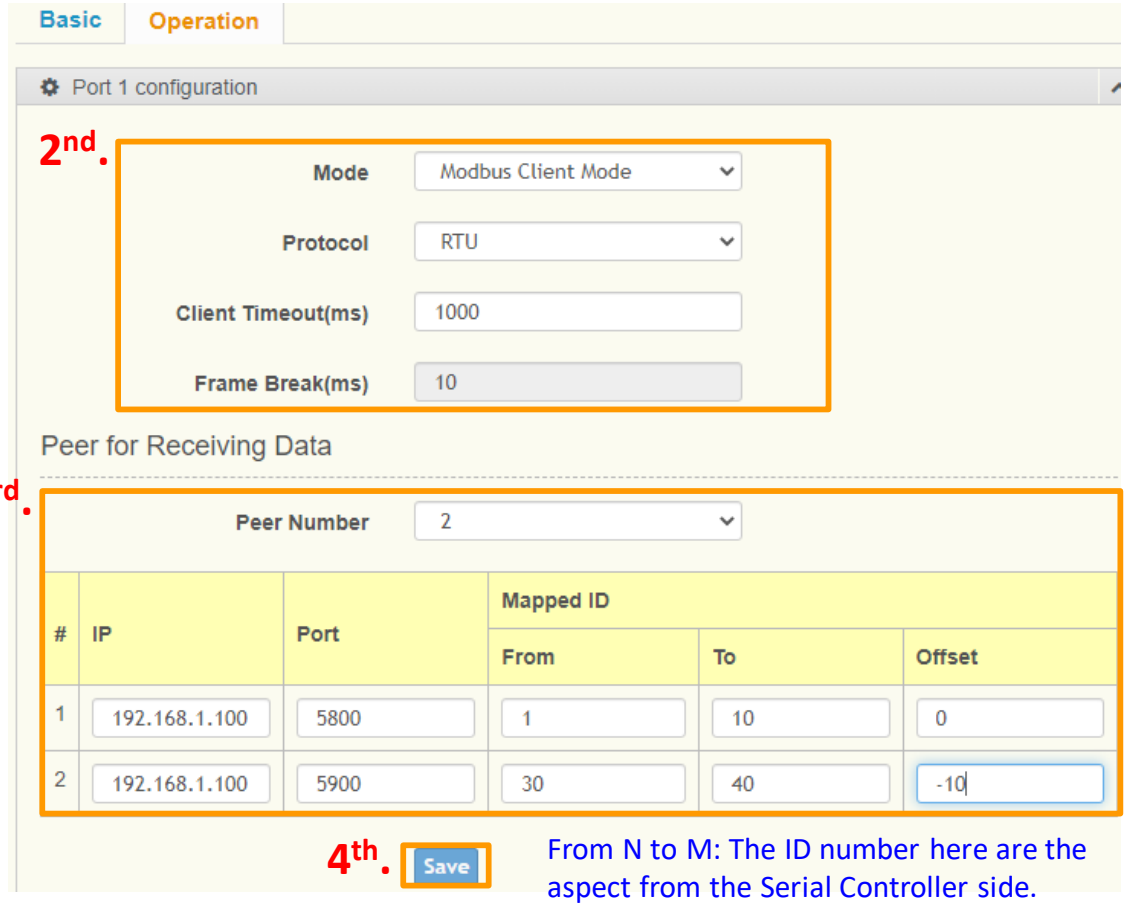
Configure Modbus Client Mode (2/3)

- Operation Page Setting

2nd. Mode: Modbus Client Mode;
Protocol: "RTU/ASCII" type;
Client Timeout: time interval waiting for end device to response.

3rd. Peer for Receiving Data:
Number of TCP device to query. <Up to 16 >
Peer IP:
IP of target TCP device.
Port: Target TCP port.
Mapping ID:
Range of Server ID.

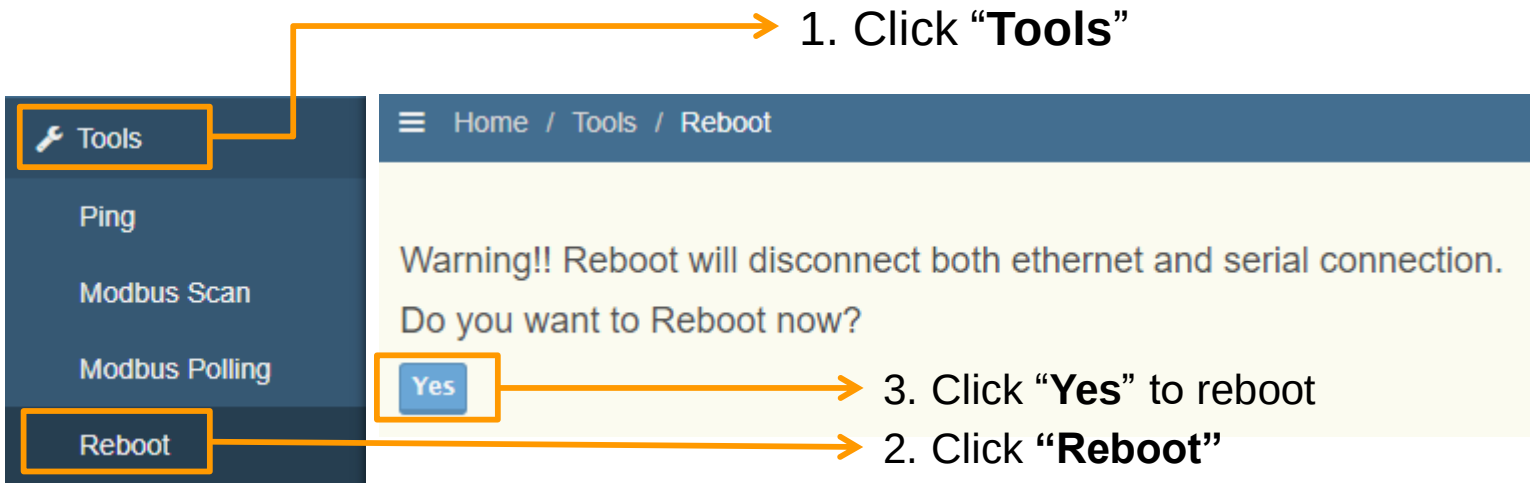
4th. Save: Save the changes.



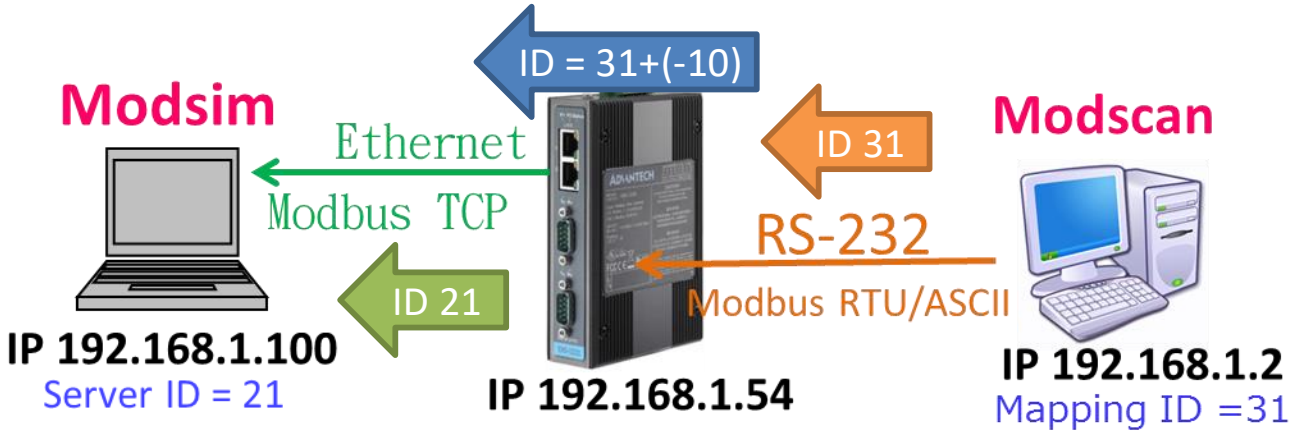
From N to M: The ID number here are the aspect from the Serial Controller side. Actual ID after translated to Modbus/TCP will be added with the Offset.

Configure Modbus Client Mode (3/3)

3. After modified the configuration, EKI need to reboot and run the new setting

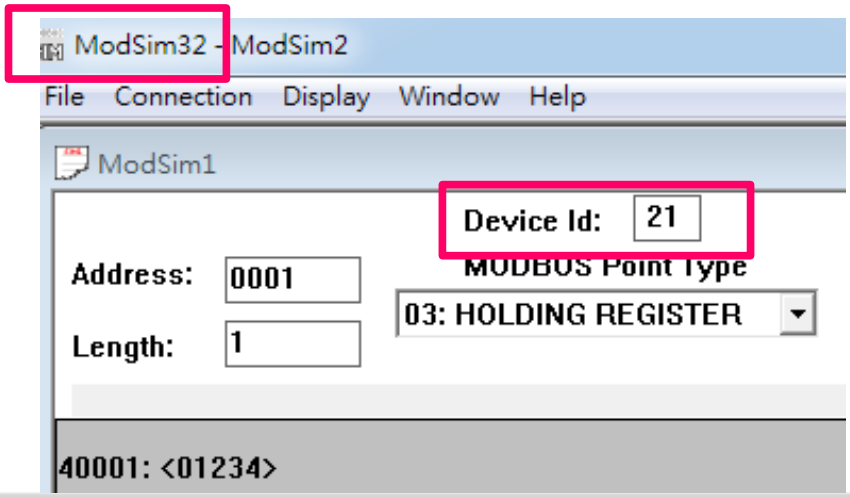


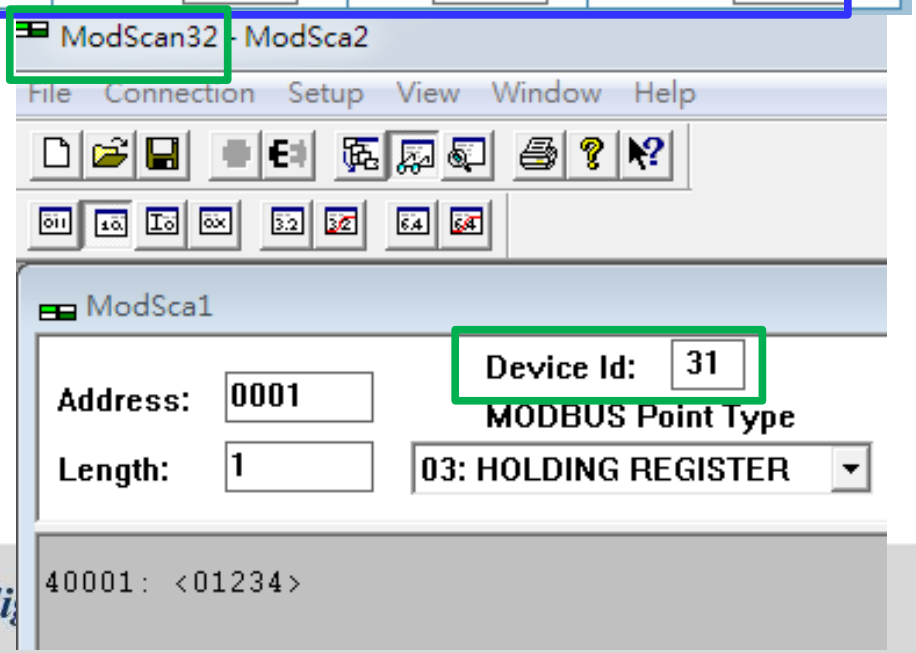
Modbus Client Mode



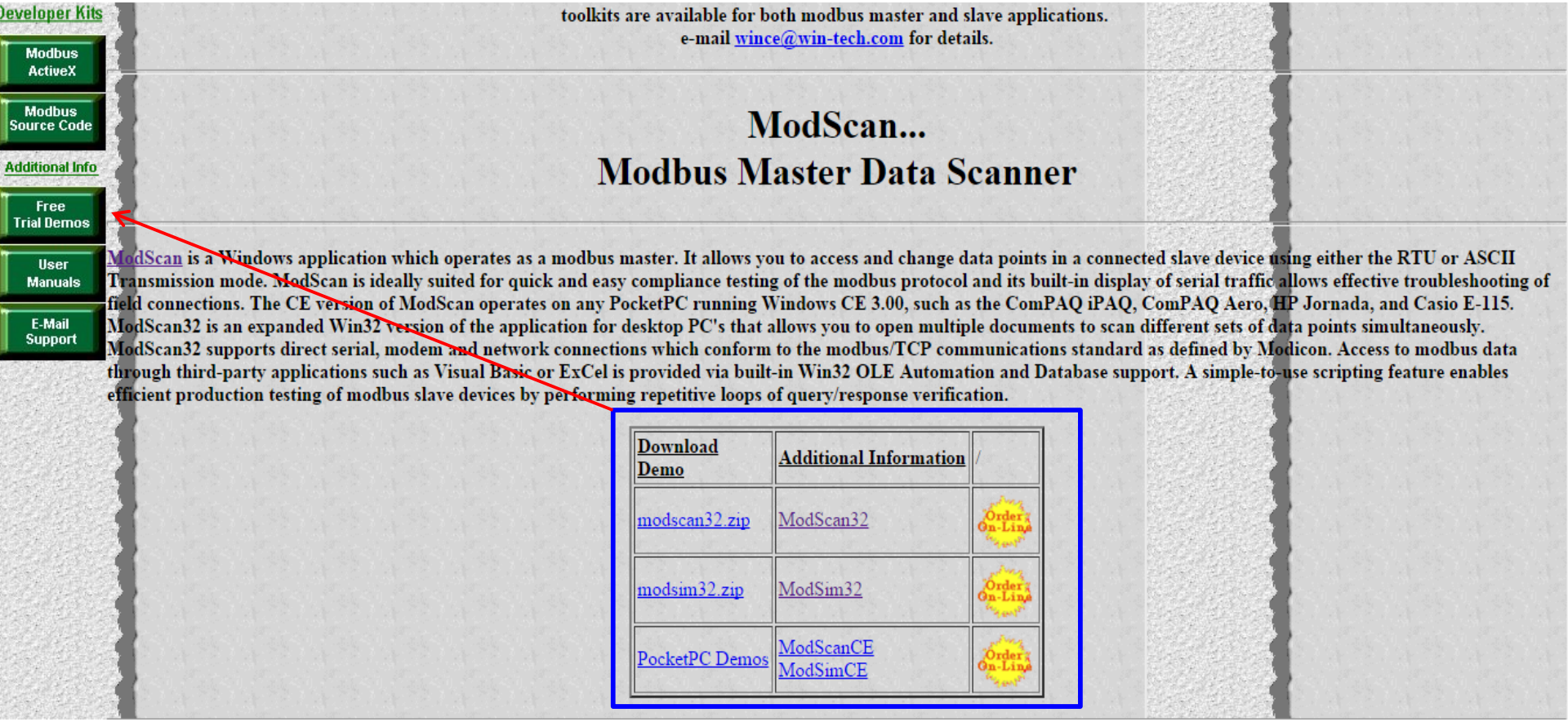
Client on Serial side thinks it is asking Server ID **31**.
Adding the offset -10, the Server ID it is asking after translated to Modbus/TCP will be **21**.

Peer Number	2								
1	IP	192.168.1.100	Port	5800	Mapping ID	From	1	To	10	Offset	0
2	IP	192.168.1.100	Port	5900	Mapping ID	From	30	To	40	Offset	-10





Reference: Modscan/modsim tool



http://www.win-tech.com/html/modbus1.htm


Enabling an Intelligent Planet