

RTU32

Guide to Setup ModbusTCP Server In STRATON

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Create a new project. When in the STRATON main menu, click on the "Fieldbus configuration" icon. See below fig. 1

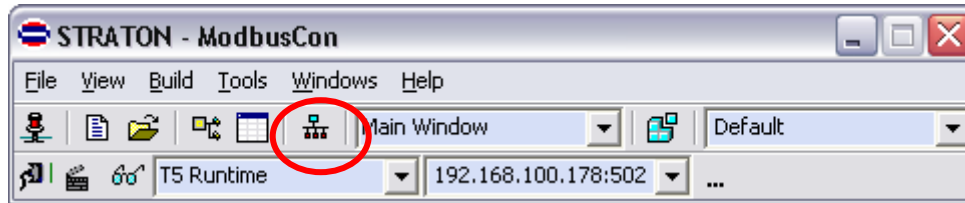


Fig.1

The "Fieldbus configuration" window will appear. Then click on the "I/O Drivers" fan. See below fig. 2

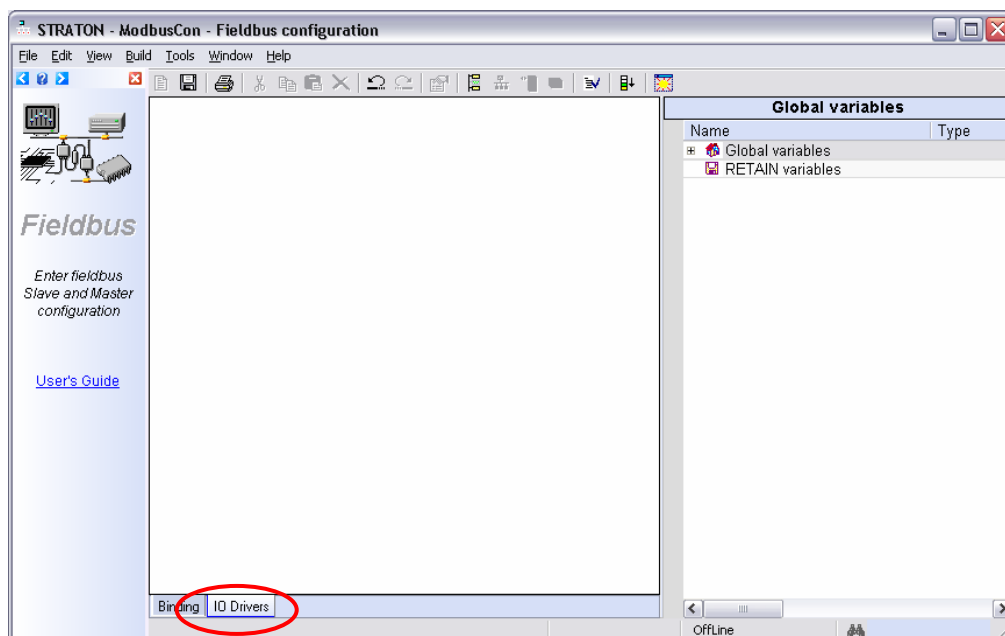


Fig. 2

Inside the "IO Drivers" window press the right mouse button and choose "Insert Configuration..."

See below fig. 3

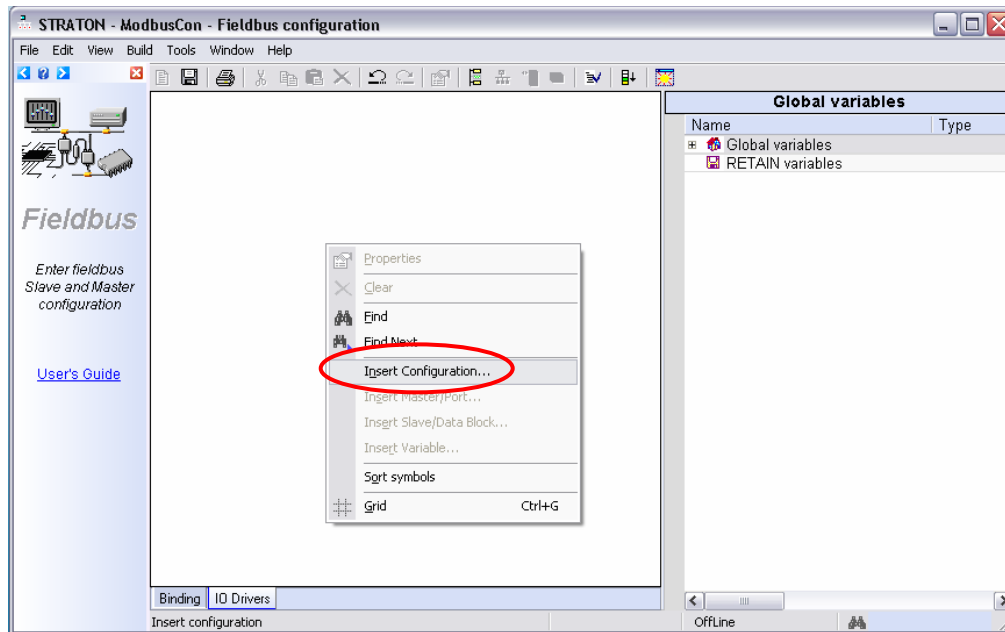


Fig. 3

Here you can choose what kind of Modbus configuration you wish to setup. Choose the "MODBUS Slave protocol" and press "OK". See below fig. 4

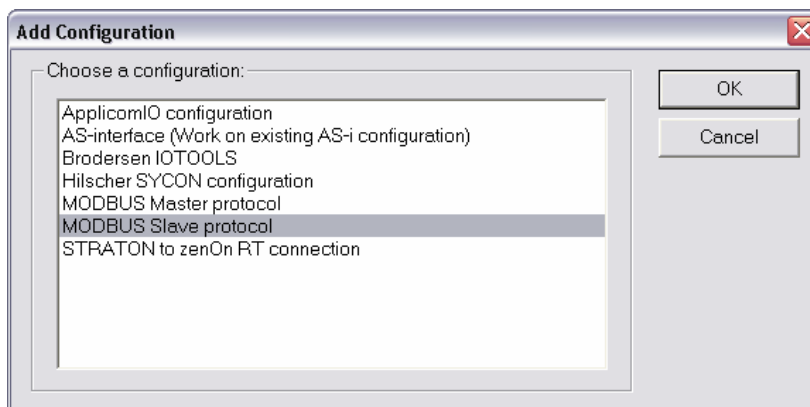


Fig. 4

Right-click on the "Server - Slave number=1" field and choose "Insert Slave/Data Block". See below fig. 5

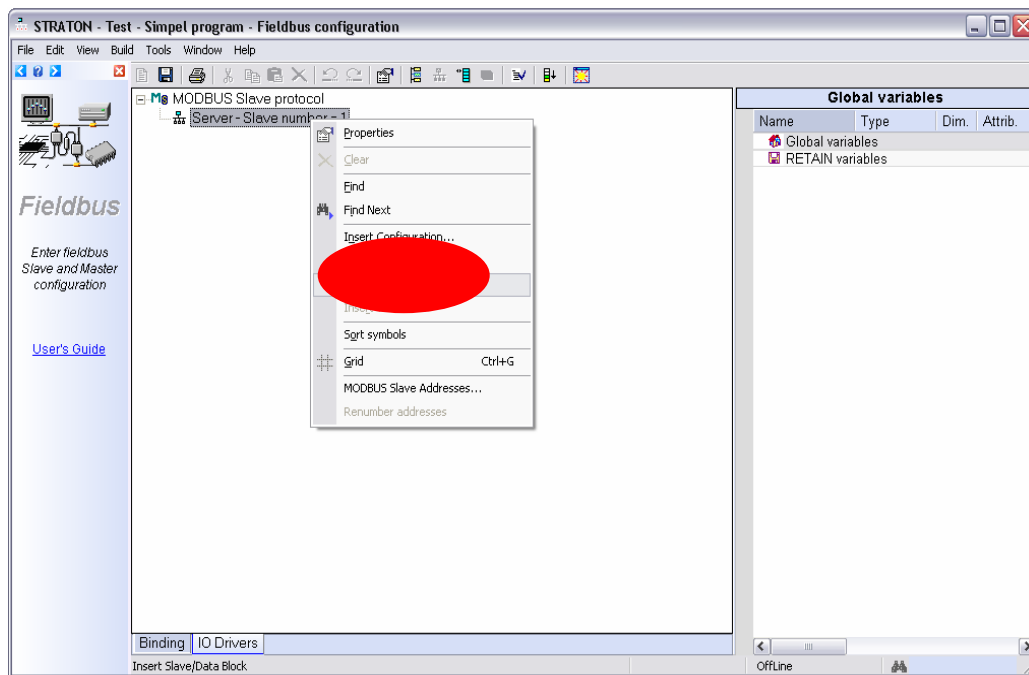


Fig. 5

When "Insert Slave/Data Block..." chosen, the following window will appear. See below fig. 6

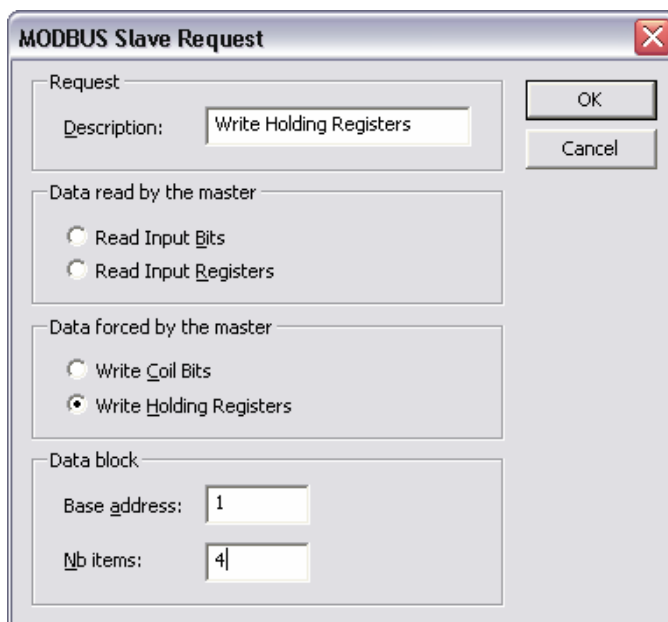
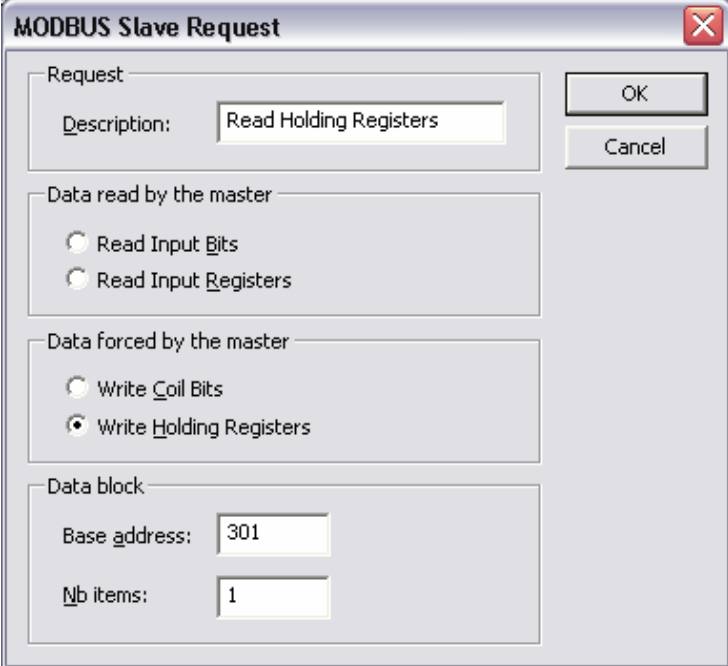


Fig. 6

We now write a description of the data-block and choose "Write Holding Registers". The base address is "1" and the number of items equals the number of registers we wish to write in. In this case "4".

By repeating the above procedure we can now add a new data-block for reading the holding registers. See below fig. 7



The image shows a Windows-style dialog box titled "MODBUS Slave Request". It has a standard close button (X) in the top right corner. The dialog is divided into several sections. The first section, labeled "Request", contains a "Description:" label followed by a text box containing "Read Holding Registers". To the right of this section are "OK" and "Cancel" buttons. Below this is a section labeled "Data read by the master" containing two radio buttons: "Read Input Bits" and "Read Input Registers", both of which are unselected. The next section is labeled "Data forced by the master" and contains two radio buttons: "Write Coil Bits" (unselected) and "Write Holding Registers" (selected). The final section is labeled "Data block" and contains two text boxes: "Base address:" with the value "301" and "Nb items:" with the value "1".

Fig. 7

Note that STRATON does not yet have a radio-button for "Read Holding Registers" and we therefore choose an alternative solution. By selecting the "Write Holding Registers" and choosing the read registers. This lack will hopefully be corrected in feature versions.

We now have to add the necessary variables. By right-clicking on the "Global variables" field at the right side of the screen, we can add a variable. See below fig. 8

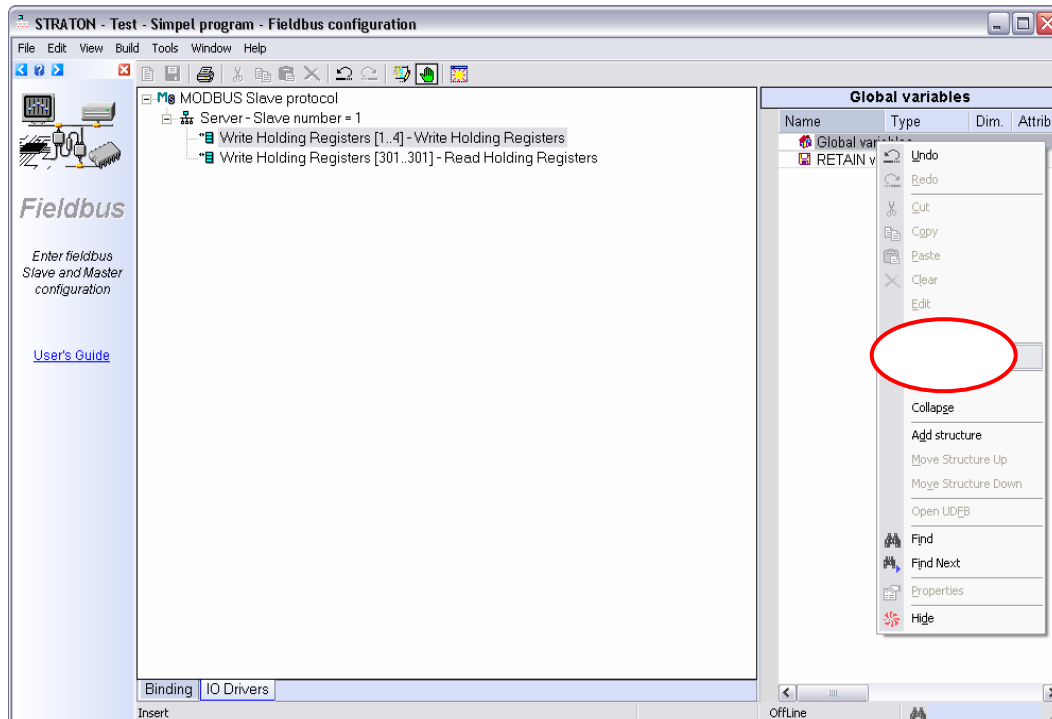


Fig. 8

You will now add a variable called "NewVar" under the "Global variables" field. By clicking twice on the "NewVar" field you can rename the variable. By clicking twice on the "NewVar" line, under "Type" you can change the type of the variable, in this case to "WORD". See below fig. 9

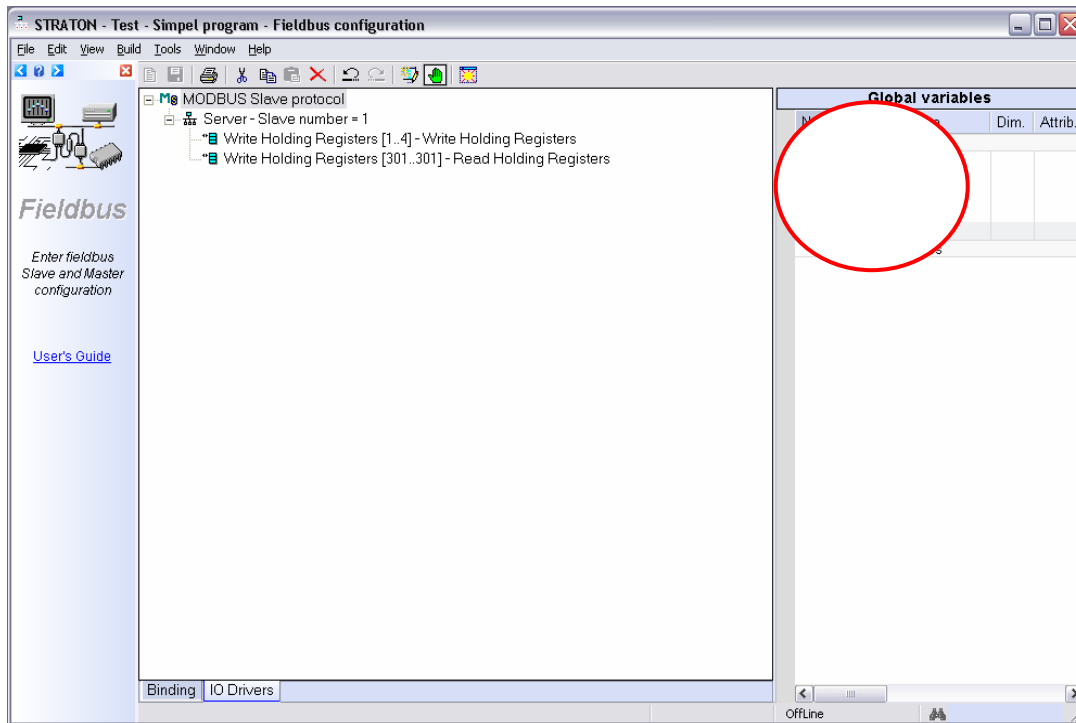


Fig. 9

We can now drag and drop the variables one by one, from the "Global variables" field to the desired data-block. In this case "StationNb", "Status", "DIN" and "AI" should be placed under "Write Holding Registers[1-4]" (Read Holding Registers). And variable "DOUT" should be placed under "Write Holding Registers[301-301]". Note that the "Modbus Slave Variable" window will appear for every variable we drag and drop. We then have to insert the "Offset" parameters for the variable. See fig 10.



Fig. 10

The variables should be dragged and dropped in the same order as they have been added under the "Global variables" field. "StationNb" should be assigned offset "0", "Status" offset "1", "DIN" offset "2" and "AI" offset "3".

Note that "DOUT" is also assigned offset "0", as it is dragged and dropped under a new data-block.

The final project should look something like fig. 11

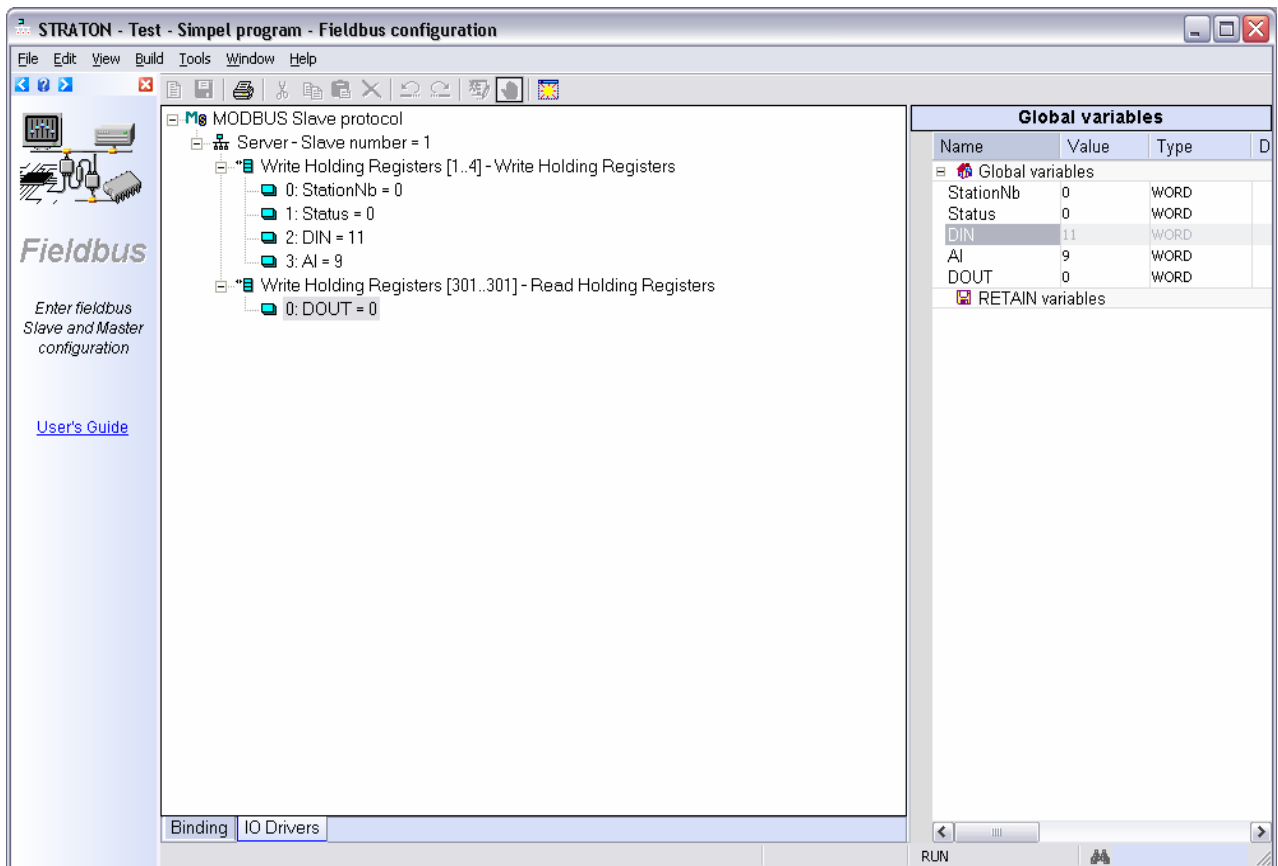


Fig. 11