iSMA Modbus Tunnel 1.0

The iSMA Modbus Tunnel service opens a Modbus TCP/IP tunnel between a Niagara controller and PC, which enables managing iSMA devices connected via RS485 to the Niagara controller by using the dedicated iSMA software:

- FCU Updater, or
- iSMA Configurator.

One or more iSMA Modbus Tunnel modules can be added under services in the Niagara Station. Each Tunnel can be connected with one COM port at a time. The COM port must not be occupied by any driver, while using the iSMA Modbus Tunnel.

iSMA Modbus Tunnel opens a communication tunnel on the user-specified TCP port. There can be only one TCP socket opened at a time.

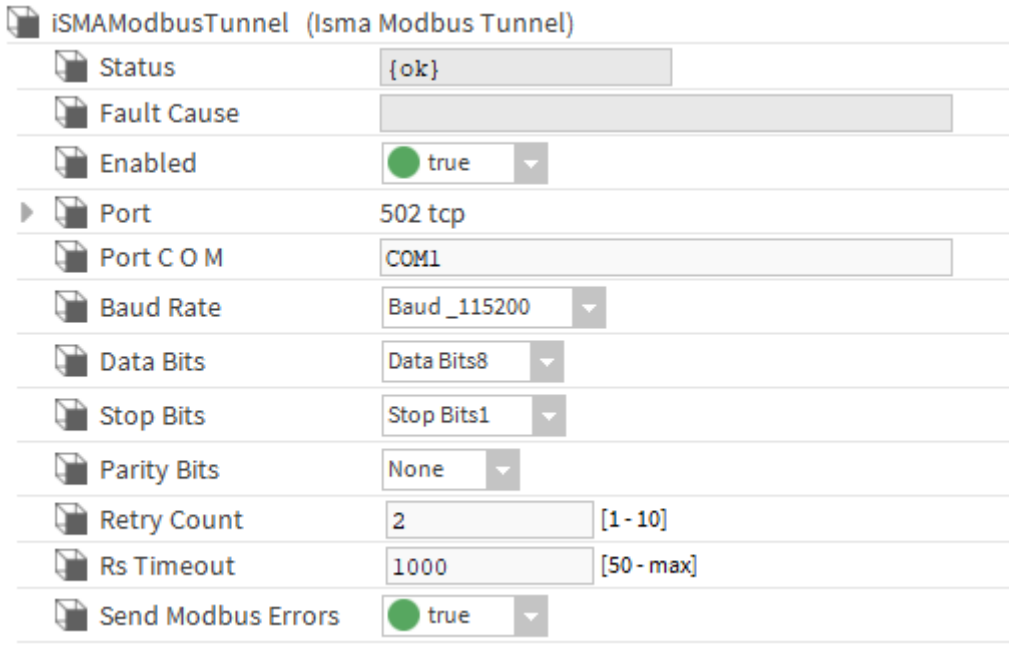

Figure 1. iSMA Modbus Tunnel properties

Properties of the iSMA Modbus Tunnel:

Name	Default Value	Description
Status	{ok}	Read-only
Fault Cause		Read-only; Options = "Could not open COM port; Could not open socket; Disabled; Duplicated Address; Duplicated COM Port; Invalid IP Address; Invalid Port" (details below)
Enabled	true	
Port	502 TCP	Read-only; The Port component, displays a value on which the component supports incoming connections. The Port component has the following slots: Public server port - Default value 502; Range = "1-65535" IP Protocol - Read-only
Port COM	COM1	Serial port, which the component sends data to
Baud rate	Baud_115200	Range = "2400, 4800, 9600, 19200, 38400, 57600, 76800, 115200"
Data Bits	DataBits8	Range = "DataBits7, DataBits8"
Stop Bits	StopBits1	Range = "StopBits1, StopBits2"
Parity Bits	None	Range = "None, Even, Odd"
Retry Count	2	Retries for serial transmission; Min = 1, Max = 10
Rs Timeout	1000 [ms]	Timeout for serial transmission; Min = 50 [ms]
Send Modbus Errors	true	If enabled, the component sends back the Modbus error to TCP if there was a timeout or no response on Serial. Modbus error, which is sent, is "Gateway Target Device Failed to Respond" - https://www.simplymodbus.ca/exceptions.htm

Table 1. iSMA Modbus Tunnel properties

Fault Causes of the iSMA Modbus Tunnel:

Fault Cause	Description
Could not open COM port	COM port could not be opened - either the PortNotFoundException, PortDeniedException, or Exception occurred (for example, the port is occupied by a driver)
Could not open socket	There was a problem with creating an instance of the ServerSocket (for example, the selected TCP port might be in use)
Disabled	The Enabled slot has a false value
Duplicated COM Port	There already exists the iSMAModbusTunnel instance with the same COM port
Invalid Port	Chosen COM port does not exist in the device

Table 2. iSMA Modbus Tunnel fault causes