Tibbo MODBUS Gateway Firmware testing

MODPOLL - <http://www.modbusdriver.com/modpoll.html>

DIAGSLAVE - <http://www.modbusdriver.com/diagslave.html>

1. Serial channel

Use DS device or TPS device with MODBUS Gateway firmware.

* Use standard settings for gateway, but you select serial type SLAVE\_RTU or SLAVE\_ASCII depending on DIAGSLAVE type

One serial port connected to PC over USB-COM or another COM type device.

Use *DIAGSLAVE* utility for MODBUS slave serial device simulation.

Use next settings for slave device:

* Slave ID – 1
* Type RTU and ASCII for another test
* COMX port for you USB-COM device

Use *MODPOLL* utility for MODBUS master TCP device simulation.

Use next settings for master device:

* Slave ID – 1
* Type TCP
* IP address for your gateway IP
* TCP port – 502

MODPOLL send TCP request packets to gateway and gateway send serial RTU (ASCII) request packets to DIAGSLAVE over USB-COM. Response packets from DIAGSLAVE running over gateway to MODPOLL.

1. TCP slave channel

Use DS device or TPS device with MODBUS Gateway firmware.

* Use standard settings for gateway, and add TCP slave device with your PC IP

Use *DIAGSLAVE* utility for MODBUS slave TCP device simulation.

Use next settings for slave device:

* Slave ID – 1
* Type TCP on 502 TCP port

Use *MODPOLL* utility for MODBUS master TCP device simulation.

Use next settings for master device:

* Slave ID – 1
* Type TCP
* IP address for your gateway IP
* TCP port – 502

MODPOLL send TCP request packets to gateway and gateway send TCP request packets to DIAGSLAVE. Response packets from DIAGSLAVE running over gateway to MODPOLL.

1. Routing based on slave ID test

Use DS device or TPS device with MODBUS Gateway firmware.

* Use standard settings for gateway and:
* add next rules to Routing ID settings:
  + Rule 1 – ID from: 1, ID to: 1, Shift ID: 0, Destination: Serial 1
  + Rule 2 – ID From: 2, ID to: 2, Shift ID: 0, Destination: TCP Slave device 1
* add TCP slave device with your PC IP

One serial port connected to PC over USB-COM or another COM type device.

Use *DIAGSLAVE* utility for MODBUS slave serial device simulation.

Use next settings for slave device:

* Slave ID – 1
* Type RTU
* COMX port for you USB-COM device

Use *DIAGSLAVE* utility for MODBUS slave TCP device simulation.

Use next settings for slave device:

* Slave ID – 2
* Type TCP on 502 TCP port

Use *MODPOLL* utility for MODBUS master TCP device simulation.

Use next settings for master device:

* Slave ID – 1
* Type TCP
* IP address for your gateway IP
* TCP port – 502

Use *MODPOLL* utility for MODBUS master TCP device simulation.

Use next settings for master device:

* Slave ID – 2
* Type TCP
* IP address for your gateway IP
* TCP port – 502

MODPOLL send TCP request packets to gateway and gateway route packets based on slave ID: slave 1 – send packet to serial RTU (ASCII)channel. Slave 2 – send packets to TCP slave device channel.

1. Routing based on TCP port test

Use DS device or TPS device with MODBUS Gateway firmware.

* Use standard settings for gateway and:
* add next rules to Routing Port settings:
  + Rule 1 – TCP Port: 503, Shift ID: 0, Destination: TCP Slave device 1
* add TCP slave device with your PC IP

One serial port connected to PC over USB-COM or another COM type device.

Use *DIAGSLAVE* utility for MODBUS slave serial device simulation.

Use next settings for slave device:

* Slave ID – 1
* Type RTU
* COMX port for you USB-COM device

Use *DIAGSLAVE* utility for MODBUS slave TCP device simulation.

Use next settings for slave device:

* Slave ID – 1
* Type TCP on 502 TCP port

Use *MODPOLL* utility for MODBUS master TCP device simulation.

Use next settings for master device:

* Slave ID – 1
* Type TCP
* IP address for your gateway IP
* TCP port – 502

Use *MODPOLL* utility for MODBUS master TCP device simulation.

Use next settings for master device:

* Slave ID – 1
* Type TCP
* IP address for your gateway IP
* TCP port – 503

MODPOLL send TCP request packets to gateway and gateway route packets based on TCP port: Packets received over TCP port 503 – send to TCP slave device channel.

1. Shift ID test

Use DS device or TPS device with MODBUS Gateway firmware.

* Use standard settings for gateway and:
* add next rules to Routing ID settings:
  + Rule 1 – ID from: 1, ID to: 1, Shift ID: 0, Destination: Serial 1
  + Rule 2 – ID From: 2, ID to: 2, Shift ID: -1, Destination: TCP Slave device 1
* add TCP slave device with your PC IP

One serial port connected to PC over USB-COM or another COM type device.

Use *DIAGSLAVE* utility for MODBUS slave serial device simulation.

Use next settings for slave device:

* Slave ID – 1
* Type RTU
* COMX port for you USB-COM device

Use *DIAGSLAVE* utility for MODBUS slave TCP device simulation.

Use next settings for slave device:

* Slave ID – 1
* Type TCP on 502 TCP port

Use *MODPOLL* utility for MODBUS master TCP device simulation.

Use next settings for master device:

* Slave ID – 1
* Type TCP
* IP address for your gateway IP
* TCP port – 502

Use *MODPOLL* utility for MODBUS master TCP device simulation.

Use next settings for master device:

* Slave ID – 2
* Type TCP
* IP address for your gateway IP
* TCP port – 502

MODPOLL send TCP request packets to gateway and gateway route packets based on slave ID: slave 1 – send packet to serial RTU (ASCII)channel and ID not shifted. Slave 2 – send packets to TCP slave device channel and shifted ID -1.

1. Master serial test

Use DS device or TPS device with MODBUS Gateway firmware.

* Use standard settings for gateway and:
* add next rules to Routing ID settings:
  + Rule 1 – ID from: 1, ID to: 1, Shift ID: 0, Destination: Serial 2
  + Rule 2 – ID From: 2, ID to: 2, Shift ID: 0, Destination: TCP Slave device 1
* add TCP slave device with your PC IP

Two serial port connected to PC over USB-COM or another COM type device.

* First serial channel – set type to MASTER RTU or ASCII
* Second serial channel – set type to SLAVE RTU or ASCII

Use *DIAGSLAVE* utility for MODBUS slave serial device simulation connected to second serial channel.

Use next settings for slave device:

* Slave ID – 1
* Type RTU or ASCII
* COMX port for you USB-COM device

Use *DIAGSLAVE* utility for MODBUS slave TCP device simulation.

Use next settings for slave device:

* Slave ID – 2
* Type TCP on 502 TCP port

Use *MODPOLL* utility for MODBUS master serial device simulation.

Use next settings for master device:

* Slave ID – 1
* Type RTU or ASCII
* Select COMX port for your USB-COM device connected to first serial channel

Use *MODPOLL* utility for MODBUS master serial device simulation.

Use next settings for master device:

* Slave ID – 2
* Type RTU or ASCII
* Select COMX port for your USB-COM device connected to first serial channel

Use *MODPOLL* utility for MODBUS master TCP device simulation.

Use next settings for master device:

* Slave ID – 1
* Type TCP
* IP address for your gateway IP
* TCP port – 502

Use *MODPOLL* utility for MODBUS master TCP device simulation.

Use next settings for master device:

* Slave ID – 2
* Type TCP
* IP address for your gateway IP
* TCP port – 502

MODPOLL send TCP and serial RTU(ASCII)request packets to gateway and gateway route packets based on slave ID: slave 1 – send packet to serial RTU (ASCII)channel. Slave 2 – send packets to TCP slave device channel.