Module <Serial> of subsystem "Transports"

Module:	Serial
Name:	Serial Interface
Type:	Transport
Source:	tr_Serial.so
Version:	0.5.0
Author:	Roman Savochenko
Translated:	Maxim Lysenko
Description:	Provides a serial interface. It is used to data exchange via the serial interfaces of type RS232, RS485, GSM and more.
License:	GPL

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Introduction

Module of transport Serial provides support of transports based on the type of serial interfaces RS232, RS485, GSM, and others to the system. Incoming and outgoing transports are supported. To add new incoming and outgoing interfaces is possible by means of configuration of the transport subsystem in the system configurator of OpenSCADA.

1. Incoming transports

The configured and runnig incoming transport opens port of serial interface for the expectation of the requests of the clients. Each incoming interface is necessarily associated with one of the available transport protocols, to which the incoming messages are transmitted.

Configuration dialog of the incoming serial interface is depicted in Figure 1.
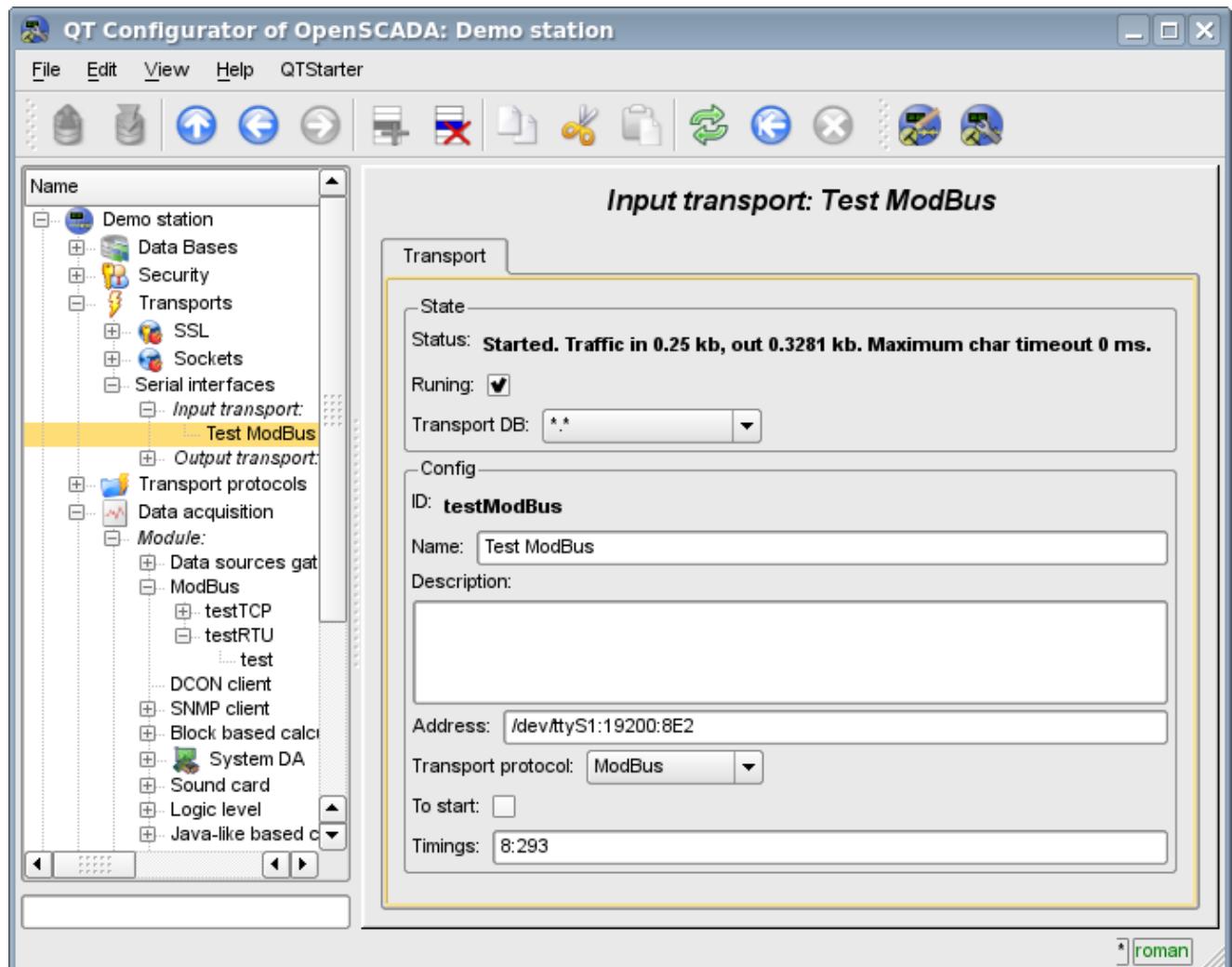
Fig.1. Configuration dialog of the incoming serial interface.

Using this dialog you can set:
- The state of transport, namely: "Status", "Running" and the name of the database, containing the configuration.
- Id, name and description of transport.
- Address of the transport in the format: *'[dev]:[spd]:[format]'*. Where:
  - *dev* — address of the serial device (/dev/ttyS0);
  - *spd* — speed of the serial devices from a number of: 300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 230400, 460800, 500000, 576000 or 921600;
  - *format* — asynchronous data format '<size><parity><stop>' (8N1, 7E1, 5O2).
- The choice of transport protocol.
- The state, in which the controller must be translated at boot: «Running».
- Time intervals of the interface in the format of string: *'[symbol]:[frm]'*. Where:
  - *symbol* — symbol time, in milliseconds. Used for control of the end of the frame;
  - *frm* — the maximum time of the frame in milliseconds. Used to limit the maximum size of the package of the request (frame).

2. Outgoing transports

Configured and running outgoing transport opens port of the serial interface for the sending the requests through it.

Main tab of the configuration page of outgoing serial interface is shown in Fig.2.
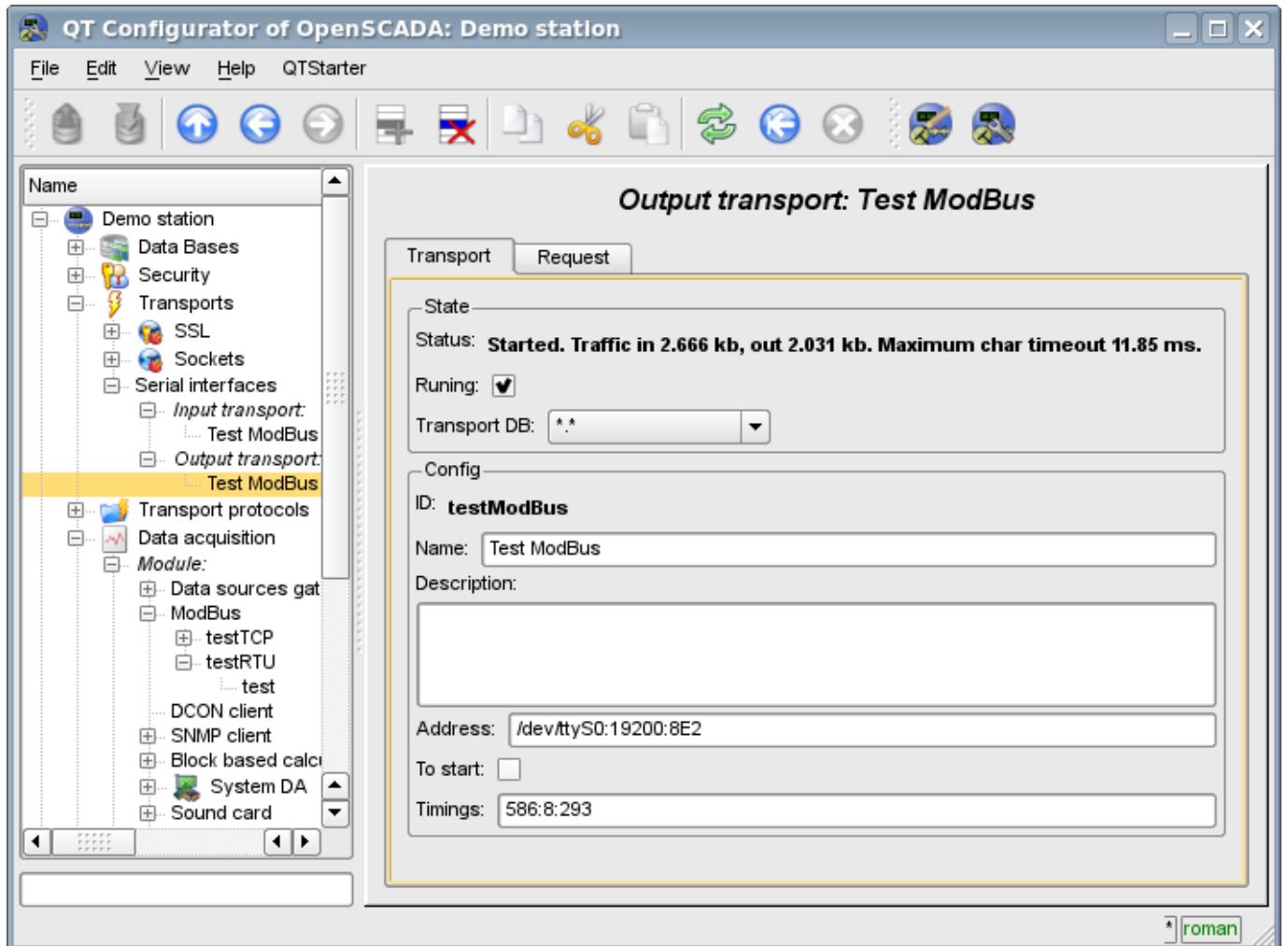
Fig.2. Main tab of the configuration page of outgoing serial interface.

Using this dialog you can set:
- The state of transport, namely: "Status", "Running" and the name of the database, containing the configuration.
- Id, name and description of transport.
- Address of the transport in the format: *'[dev]:[spd]:[format]'*. Where:
  - *dev* — address of the serial device (/dev/ttyS0);
  - *spd* — speed of the serial devices from a number of: 300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 230400, 460800, 500000, 576000 or 921600;
  - *format* — asynchronous data format '<size><parity><stop>' (8N1, 7E1, 5O2).
- The state, in which the controller must be translated at boot: «Running».
- Time intervals of the interface in the format of string: *'{conn]:[symbol]:[frm]'*. Where:
  - *conn* — waiting time of the connection i.e. response from the remote device.
  - *symbol* — symbol time, in milliseconds. Used for control of the end of the frame;
  - *frm* — the maximum time of the frame in milliseconds. Used to limit the maximum size of the package of the request (frame).