## **RUT260 Data to Server**

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The information in this page is updated in accordance with firmware version **RUT2M R 00.07.08**.

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## **Summary**

The **Data to Server** feature provides you with the possibility to set up data senders that collect data from various sources and periodically send it to remote servers.

If you're having trouble finding this page or some of the parameters described here on your device's WebUI, you should **turn on "Advanced WebUI" mode**. You can do that by clicking the "Advanced" button, located at the top of the WebUI.



### **Data Senders**

A **Data Sender** is an instance that gathers and periodically sends collected data to a specified server. The Data Senders list is empty by default so, in order to begin configuration you must add a new data sender first. To add a new data sender, click the 'Add' button.



After this you should be redirected to the newly added data sender's configuration page.

#### Sender Settings

Refer to the table below for descriptions on data sender configuration fields.

**Note**: these tables have coloring schemes to indicate which fields can be seen with different



## General

Field	Value	Description
Name	string; default: <b>none</b>	Name of the data sender. Used for easier data senders management purposes only (optional).
Туре	Base   GSM   Lua script   Mobile usage MNF info Modbus*   Modbus Alarms  Wifi scanner*  DNP3*  MQTT   OPC UA  DLMS*; default: Base	Source of the data to be sent to server.
Format type	Json   Custom; default: <b>Json</b>	Arranges the format of the sent JSON segment.
Format string	string; default: <b>none</b>	Specifies custom format string.
Empty value	string; default: <b>N/A</b>	A string which will be placed if any value cannot be received.
Delimeter	string (Maximum length of value is 1 bytes); default: <b>N/A</b>	Specifies delimiters for multiple data segments.
Segment count	integer [164]; default: 1	Max segment count in one JSON string sent to server.
Send as object	off   on; default: <b>off</b>	When turned on, sends JSON segment as object and not as an array element.
Data filtering	All   Server ID   Alarm ID   Register number; default: All	If Data type: Modbus alarms data. Choose which data this sender will send to server.
Data filtering	All   Server IP address   Server ID   Request name; default: <b>All</b>	If Data type: Modbus data. Choose which data this sender will send to server.
Data filtering	All   Name   MAC address   Signal strength; default: <b>All</b>	If Data type: Wifi scanner. Choose which data this sender will send to server.
Data period	Day   Week   Month; default: Day	: If Data type: Mobile usage. Choose for which time period to send info from.
Current	off   on; default: off	If Data type: Mobile usage.
Data filtering	All   Name; default: All	If Data type: DLMS. Choose which data this sender will send to server.
Invert file	off   on; default: off	If Data type: DLMS. Inverts filter condition.
Data filtering	All   Address   IP; default: All	If Data type: DNP3. Choose which data this sender will send to server.
Database	RAM   Flash; default: <b>RAM</b>	Database location
Data filtering	All   Name ; default: All	If Data type: OPC UA. Choose which data this sender will send to server.
Server address	Default: <b>empty</b>	Hostname or ip address of the broker to connect to.

Port	integer [065535]; default: <b>1883</b>	Port number for connecting to MQTT.
Keepalive	integer [1640]; default: <b>60</b>	MQTT Keepalive period in seconds.
Topic	string; default: <b>none</b>	MQTT topic to be used for publishing the data.
Client ID	string; default: <b>none</b>	Client ID to send with the data. If empty, a random client ID will be generated
QoS	integer [02]; default: <b>0</b>	MQTT Quality of Service. Allowed values:  • 0 - when we prefer that the message will not arrive at all rather than arrive twice,  • 1 - when we want the message to arrive at least once but don't care if it arrives twice (or more),  • 2 - when we want the message to arrive exactly once. A higher QoS value means a slower transfer.
Enable secure connection	off   on; default: off	Enables the use of TLS certificates.
On: TLS type	Certificate based   Pre- shared key based; default: <b>Certificate based</b>	Select type of TLS.
Certificate based: Allow insecure connection	off   on; default: <b>off</b>	Allow not verifying server authentication.
Certificate based: Certificate files from device	off   on; default: <b>off</b>	Specify where the certificates will be used from.
Certificate based: CA File	.ca file; default: <b>none</b>	<b>Certificate authority</b> is an entity that issues digital certificates. A digital certificate certifies the ownership of a public key by the named subject of the certificate.
Certificate based: Client certificate	.crt file; default: <b>none</b>	Certificate file is a type of digital certificate that is used by client systems to make authenticated requests to a remote server. If client certificate is not needed, leave both client certificate and client key fields empty.
Certificate based: CLient private Key	.key file; default: <b>none</b>	File containing private key for this client. This file needs to be not encrypted.
Pre-shared key based: Pre-Shared-Key	string; default: <b>none</b>	The pre-shared-key in hex format with no leading "0x".
Pre-shared key based: Identity	string; default: <b>none</b>	The identity of this client. May be used as the username depending on the server settings.
Username	string; default: <b>none</b>	Username used in authentication.
Require password	on   off; default: <b>off</b>	Enables password for authentication.
Password	string; default: <b>none</b>	Password used in authentication.

<sup>\*</sup> This is additional software that can be installed from the  $\mathbf{System} \to \mathbf{\underline{Package\ Manager}}$  page.

#### **Collection settings**



Field	Value	Description
Enabled	off   on; default: <b>on</b>	Enables data to server collection instance.
Format type	JSON   custom; default: <b>JSON</b>	Data collection objects formatting.
Format string	Default: Instance name	Specifies custom format string
Empty value	Default: <b>N/A</b>	A string which will be placed if any value cannot be received
Period	Default: <b>60</b>	Interval in seconds for collecting/sending data to destination.
Retry	off   on; default: off	In case of a failed attempt, retry to send the same data to destination later.
Retry count	Default: 10	Retry to send the same data N times
Timeout	Default: 1	Timeout in second between retry attempts

# **Server configuration**



Field	Value	Description
Туре	HTTP   MQTT; default: HTTP	Interval in seconds for collecting/sending data to destination.
Server address	Default: <b>empty</b>	Hostname or IP address of the broker to connect to.
HTTP headers	Default: <b>empty</b>	Allows to add custom headers to the HTTP requests.
Enable secure connection	on   off; default: <b>off</b>	Enables the use of TLS certificates.
Port	integer [065535]; default: <b>1883</b>	Port number for connecting to MQTT.
Keepalive	integer [1640]; default: <b>60</b>	MQTT Keepalive period in seconds.
Topic	string; default: <b>none</b>	MQTT topic to be used for publishing the data.
Client ID	string; default: <b>none</b>	Client ID to send with the data. If empty, a random client ID will be generated
QoS	integer [02]; default: <b>0</b>	<ul> <li>MQTT Quality of Service. Allowed values:</li> <li>0 - when we prefer that the message will not arrive at all rather than arrive twice,</li> <li>1 - when we want the message to arrive at least once but don't care if it arrives twice (or more),</li> <li>2 - when we want the message to arrive exactly once. A higher QoS value means a slower transfer.</li> </ul>
Enable secure connection	off   on; default: off	Enables the use of TLS certificates.
Allow insecure connection	off   on; default: <b>off</b>	Allow not verifying server authentication.
Certificate files from device	off   on; default: <b>off</b>	Specify where the certificates will be used from.

Certificate authority file	.ca file; default: <b>none</b>	<b>Certificate authority</b> is an entity that issues digital certificates. A digital certificate certifies the ownership of a public key by the named subject of the certificate.
Client Certificate	.crt file; default: <b>none</b>	Certificate file is a type of digital certificate that is used by client systems to make authenticated requests to a remote server. If client certificate is not needed, leave both client certificate and client key fields empty.
Client Private Keyfile	.key file; default: <b>none</b>	File containing private key for this client. This file needs to be not encrypted.
Use credentials	off   on; default: <b>off</b>	Enables use of username and password for authentication.
On: Username	string; default: <b>none</b>	Username used in authentication.
On: Password	string; default: <b>none</b>	Password used in authentication.