

# RUTX09 Data to Server

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The information in this page is updated in accordance with firmware version [RUTX\\_R\\_00.07.04.5](#).

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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 which is 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, insert collection name and click the 'Add' button.

### DATA TO SERVER COLLECTIONS

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This section contains no values yet

### ADD NEW INSTANCE

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NEW COLLECTION NAME

ADD

SAVE & APPLY

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

## Advanced Sender Settings

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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 configuration.

DATA CONFIGURATION

Name

Type

Format type

Selected format will contain these values:

Time now	Local time
Firmware version	The name of the sender
ID of the sender	

[+ New data input](#)

[NEXT: COLLECTION EDIT](#)

General

Field	Value	Description
Name	string; default: <b>none</b>	Name of the data sender. Used for easier data senders management purposes only (optional).
Type	Base   GSM   <b>Mobile usage</b>   MNF info   <b>Modbus*</b>   <b>DNP3*</b>   <b>MQTT</b> ; default: <b>Base</b>	Source of the data to be sent to server.
JSON format	Json   Custom; default: <b>Json</b>	Arranges the format of the sent JSON segment.
Segment count	integer [1..10]; default: <b>1</b>	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.
<b>Data filtering</b>	All   <b>Server IP address</b>   <b>Server ID</b>   <b>Request name</b> ; default: <b>All</b>	If Data type: <b>Modbus data</b> . Choose which data this sender will send to server.
<b>Data period</b>	<b>Day</b>   <b>Week</b>   <b>Month</b> ; default: <b>Day</b>	If Data type: <b>Mobile usage</b> . Choose for which time period to send info from.
<b>Data filtering</b>	All   <b>Address</b>   <b>IP</b> ; default: <b>All</b>	If Data type: <b>DNP3</b> . Choose which data this sender will send to server.
<b>Database</b>	RAM   Flash; default: <b>RAM</b>	Database location
<b>Port</b>	integer [0..65535]; default: <b>1883</b>	Port number for connecting to MQTT.
<b>Keepalive</b>	integer [1..640]; default: <b>60</b>	MQTT Keepalive period in seconds.
<b>Topic</b>	string; default: <b>none</b>	MQTT topic to be used for publishing the data.
<b>Client ID</b>	string; default: <b>none</b>	Client ID to send with the data. If empty, a random client ID will be generated

QoS	integer [0..2]; default: <b>0</b>	MQTT Quality of Service. Allowed values: <ul style="list-style-type: none"> <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   <b>on</b> ; default: <b>off</b>	Enables the use of TLS certificates.
<b>On:</b> TLS type	Certificate based   Pre-shared key based; default: <b>Certificate based</b>	Select type of TLS.
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: 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.
Require password	off   <b>on</b> ; default: <b>off</b>	Enables use of username and password for authentication.
<b>On:</b> Username	string; default: <b>none</b>	Username used in authentication.
<b>On:</b> Password	string; default: <b>none</b>	Password used in authentication.

\* This is additional software that can be installed from the **Services** → [Package Manager](#) page.

## Collection configuration

### COLLECTION CONFIGURATION

GENERAL SETTINGS

Enable

ADVANCED SETTINGS

Format type Json

BACK: DATA CONFIGURATION

NEXT: SERVER CONFIGURATION

Field	Value	Description
Enabled	off   on; default: <b>on</b>	Enables data to server collection instance.
Format type	Json   <b>custom</b> ; default: <b>Json</b>	Data collection objects formatting.

**Format string** Default: **Instance name** Specifies custom format string

**Empty value** Default: **N/A** A string which will be placed if any value cannot be received

COLLECTION CONFIGURATION

GENERAL SETTINGS
Period

ADVANCED SETTINGS
Retry

BACK: DATA CONFIGURATION
NEXT: SERVER CONFIGURATION

Field	Value	Description
Period	Default: <b>60</b>	Interval in seconds for collecting/sending data to destination.
Retry	off   on; default: <b>off</b>	In case of a failed attempt, retry to send the same data to destination later.
<b>Retry count</b>	Default: <b>10</b>	Retry to send the same data N times
<b>Timeout</b>	Default: <b>1</b>	Timeout in second between retry attempts

### Server configuration

SERVER CONFIGURATION

Type

Server address

HTTP headers
 +

Enable secure connection

BACK: COLLECTION EDIT
SAVE & APPLY

Field	Value	Description
Type	HTTP   <b>MQTT</b> ; default: <b>HTTP</b>	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.
<b>Port</b>	integer [0..65535]; default: <b>1883</b>	Port number for connecting to MQTT.
<b>Keepalive</b>	integer [1..640]; default: <b>60</b>	MQTT Keepalive period in seconds.
<b>Topic</b>	string; default: <b>none</b>	MQTT topic to be used for publishing the data.
<b>Client ID</b>	string; default: <b>none</b>	Client ID to send with the data. If empty, a random client ID will be generated

<b>QoS</b>	integer [0..2]; default: <b>0</b>	MQTT Quality of Service. Allowed values: <ul style="list-style-type: none"> <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   <b>on</b> ; default: <b>off</b>	Enables the use of TLS certificates.
<b>On:</b> TLS type	Certificate based   Pre-shared key based; default: <b>Certificate based</b>	Select type of TLS.
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: 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.
Use credentials	off   <b>on</b> ; default: <b>off</b>	Enables use of username and password for authentication.
<b>On:</b> Username	string; default: <b>none</b>	Username used in authentication.
<b>On:</b> Password	string; default: <b>none</b>	Password used in authentication.