ScaleWebLink manual

STIMAG
weighing systems

Index

1. Introduction

ScaleWebLink is used for communication with scale via SSL encrypted REST web services. ScaleWebLink is simple way to communicate with scale that is connected to cloud using CloudScaleLink.

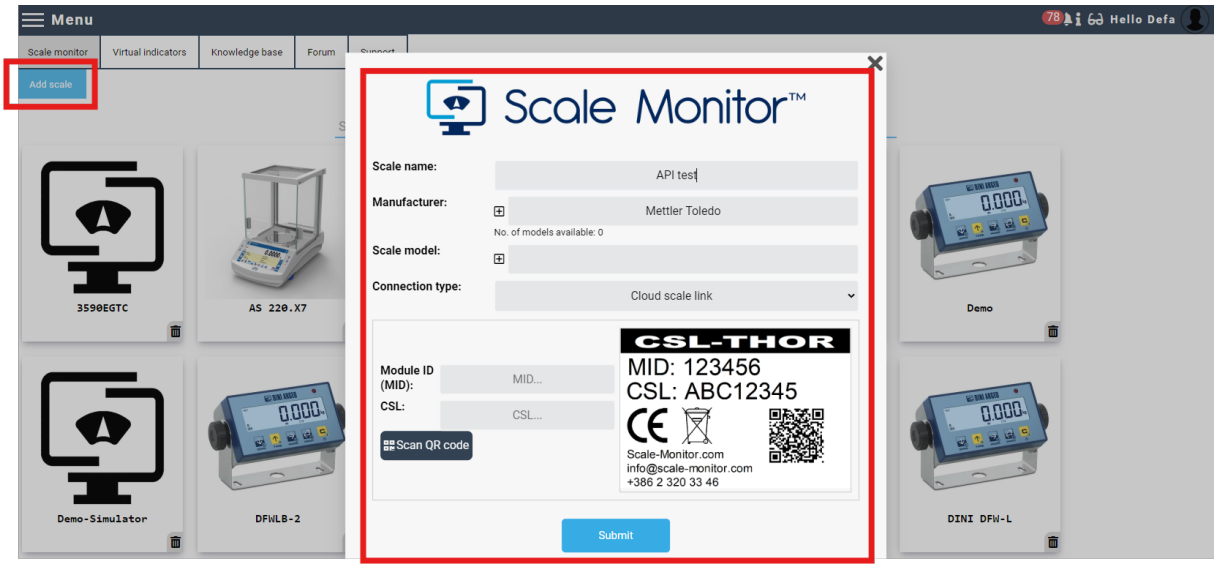
Each CloudScaleLink module has unique MID and PIN. MID and PIN represent authorization token to authorize access to scale.

2. Setup

2.1. Add scale

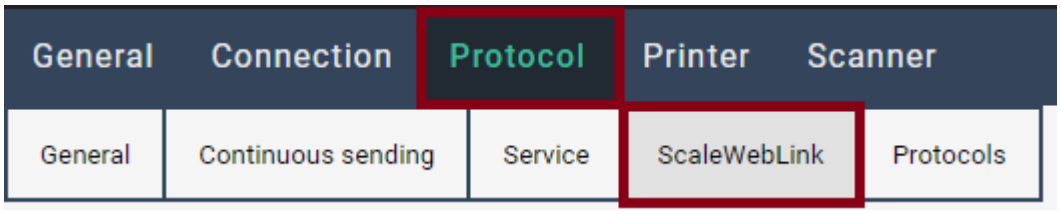
To configure ScaleWebLink you must first register at Scale Monitor. You shall do that via link provided by our partner or by accessing https://register.scale-monitor.com, if no link was provided to you.

After login you must add scale.



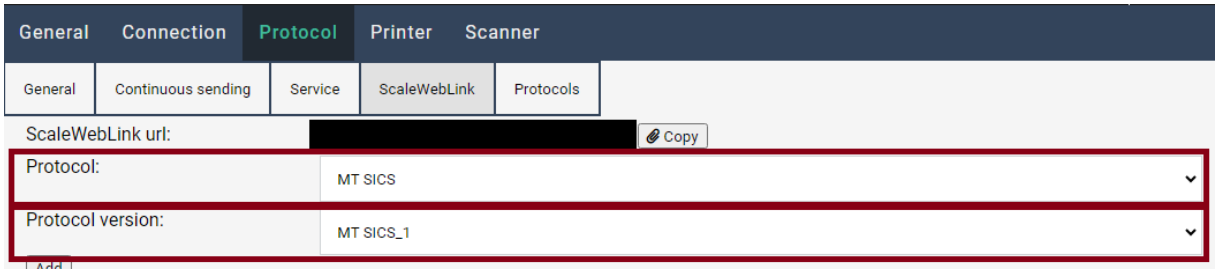
2.2. Protocol

After adding a scale, you must set up ScaleWebLink which can be found in Menu→Protocol→ ScaleWebLink.



In ScaleWebLink menu you must select Protocol and Protocol version that will be used for connected scale.

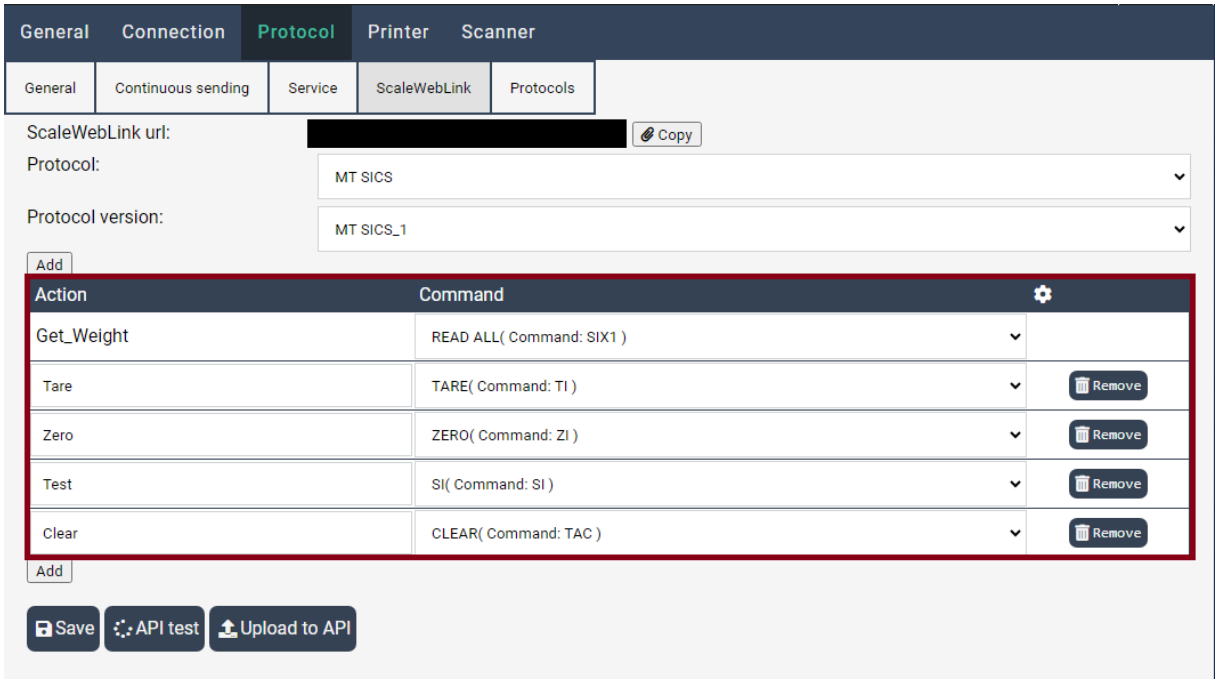
Below is example of protocol selected for Mettler Toledo scales.



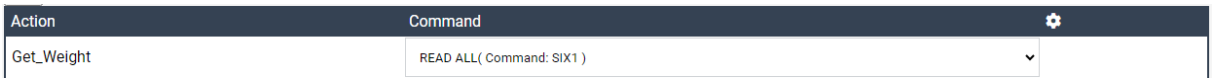
2.3. Action and command setup

After the protocol and its version have been selected the actions and commands for the ScaleWebLink can be set up.

In the table below the protocol and version settings there are 2 columns: Action (this is used to identify the action that the ScaleWebLink will execute) and Command (this is the command ScaleWebLink will send to the scale).



There is already a preset action (Get_Weight) this action cannot be changed but it can have a selected command for it to send to the scale.



New actions can be easily added by clicking on the “Add” button, this will add a row to the actions table, a custom action can be entered and a command that will be sent with it.

Example:

Protocol - MT SICS; Command – Tare scale (T)

Action	Command
Tare	T

3. Getting data

3.1. POST structure

ScaleWebLink requires module data (MID – Module ID and PIN – Module PIN) to identify the module and the action that will be used.

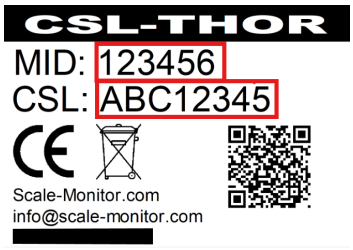
To accomplish this the data must be posted to the API in a JSON object, with the following parameters:

- MID (This is the module ID)
- PIN (This is the module PIN)
- Action (The action “Get_Weight” or any custom action created by the user in step 1.2.)

Example:

{"mid":"yourMID","pin":"yourCSLPIN","action":"Get_Weight"}

MID and PIN (CSL) can be found on the label of the module:



In case of virtual CloudScaleLink MID and PIN will be provided via email.

3.2. Response structure

The ScaleWebLink will respond with a JSON object.

Example:


```
{
        "error": 0,
        "errorCode": null,
        "errorMsg": "",
        "scaleResponse": "SIX1 S 0 N R R 0 0 0 1 P     0.068     0.000     0.068 kg",
        "dateTime": "Wed, 04 Sep 2024 11:07:51 GMT",
        "weightData": {
                "net": 0,
                "gross": 0.068,
                "tare": 0.068,
                "unit": "kg",
                "stability": 1,
                "expectedResponseStatus": null,
                "expectedResponseMsg": null
        }
}
```

Parameters:

Parameter	Description
error	If value is 0 then there is no error; if value is 1 then an error has occurred
errorCode	A code for the error that occurred, detailed descriptions can be found in the error codes table
errorMsg	A short message describing the error
scaleResponse	The string received from the scale as a response to the sent command
dateTime	The UTC date and time of when the action was executed
weightData	Relevant data for weight received from the scale

Weight data:

Parameter	Description
net	Net weight received from scale; null if no data was received
gross	Gross weight received from scale; null if no data was received
tare	Tare value received from scale; null if no data was received
unit	The unit received from the scale; null if no data was received
stability	Stability status of the scale; null – no data was received; 0 – scale not stable; 1 – scale stable
expectedResponseStatus	Returns if the value of the response is ok; null – not set; 0 - not ok; 1 - ok
expectedResponseMsg	Returns the message set with the corresponding command in the protocol settings.

4. Error codes

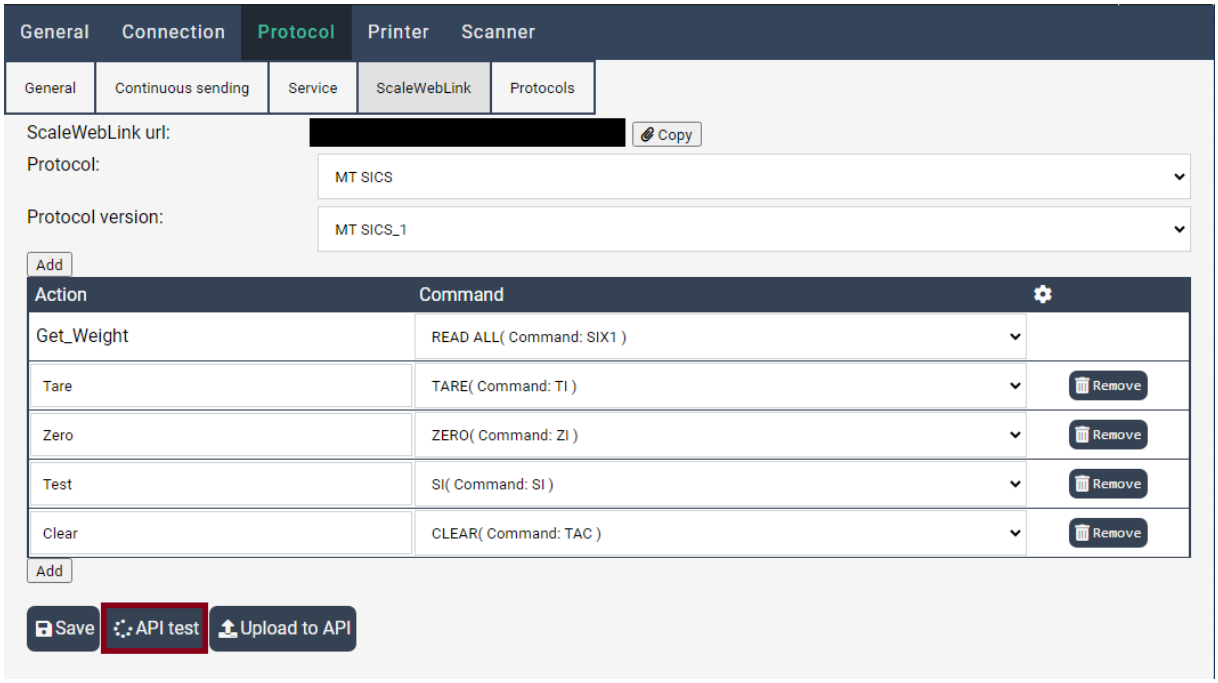
If an error occurred while getting the response for the sent action then an error code will be sent with the response, in the below table there are detailed descriptions of the possible error codes.

Error code	Description
ERR01	The post data required to perform an action was not provided or was not in a valid JSON format
ERR02	Module ID (MID) was not provided in the received parameters

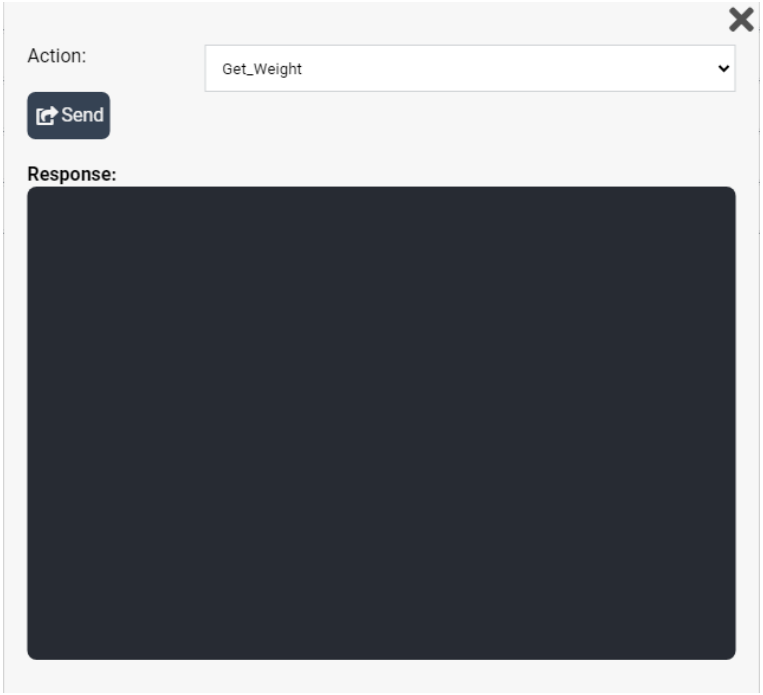
ERR03	Module PIN was not provided in the received parameters
ERR04	An action was not provided in the received parameters
ERR05	The provided action could not be found in the list of saved actions, make sure to check the action is valid
ERR06	No scale monitor found connected to the received topic, make sure the topic is valid
ERR07	Command data not found, make sure a valid command is selected for the received action
ERR08	Command data is missing the command string, check the provided protocol and make sure the selected command has a valid “command” property
ERR09	Service not available, someone else is communicating with the scale connected to the entered MID and PIN at this time
ERR10	Timed out; no response received in the allotted time frame, make sure the scale is connected.

5. Testing

To test the actions and/or scale connection the “API test” can be used. The “API test” can be accessed under ScaleWebLink settings (Protocol -> ScaleWebLink), using the “API test” button at the bottom of the page.



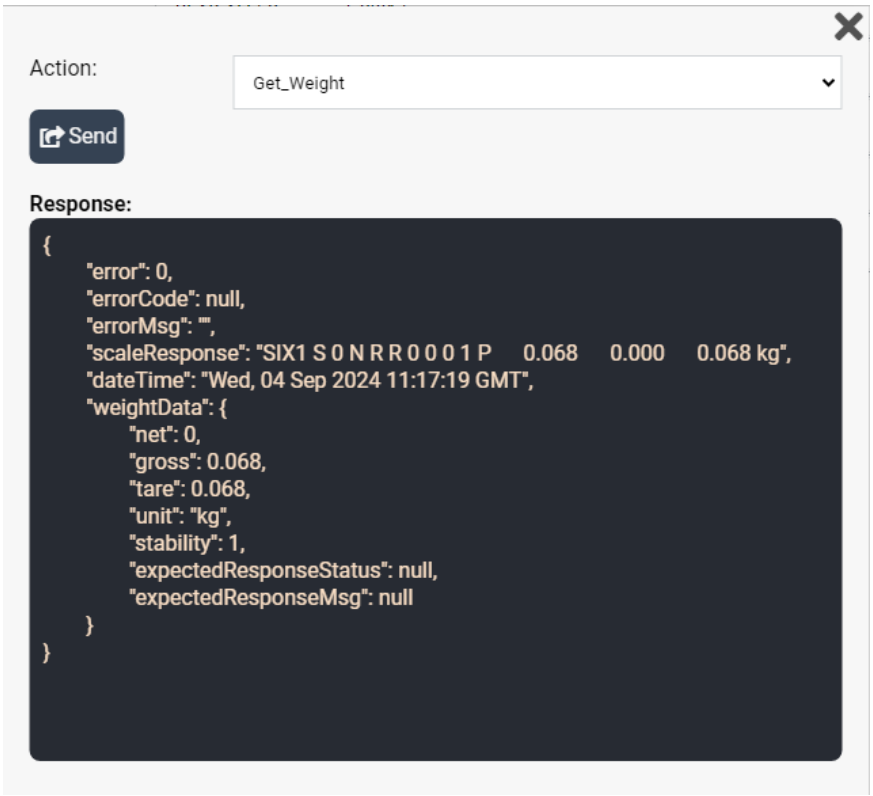
Clicking the “API test” button will open a new window, with the option to select an action, a button to send the action and a response display window.



In this example the following settings have been used:

Protocol: MT SICS
Version: MT SICS_1
Action: Get_Weight (Set to send SIX1 command)

After sending the action this was the received response:



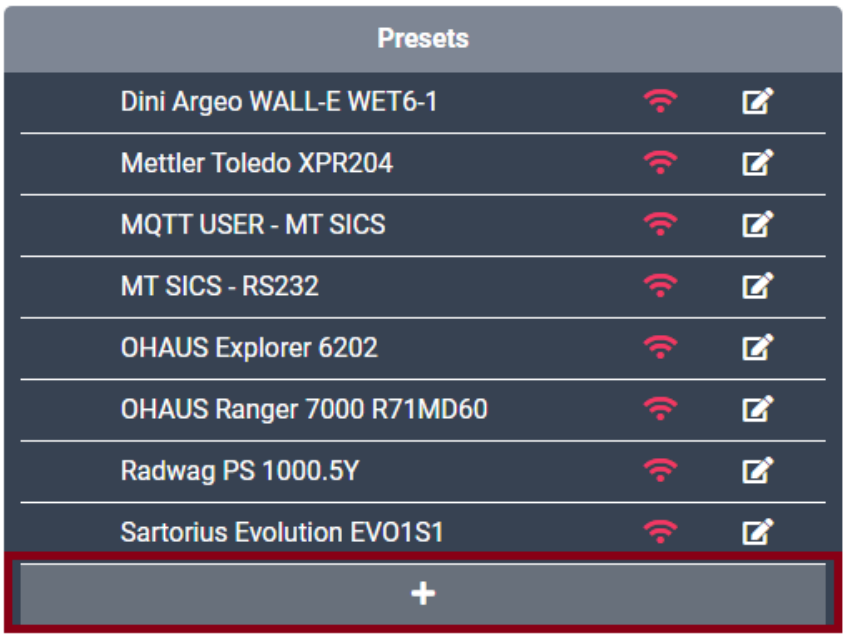
6. Simulator

By using Scale Monitor simulator you can simulate scale and test API without having physical scale.

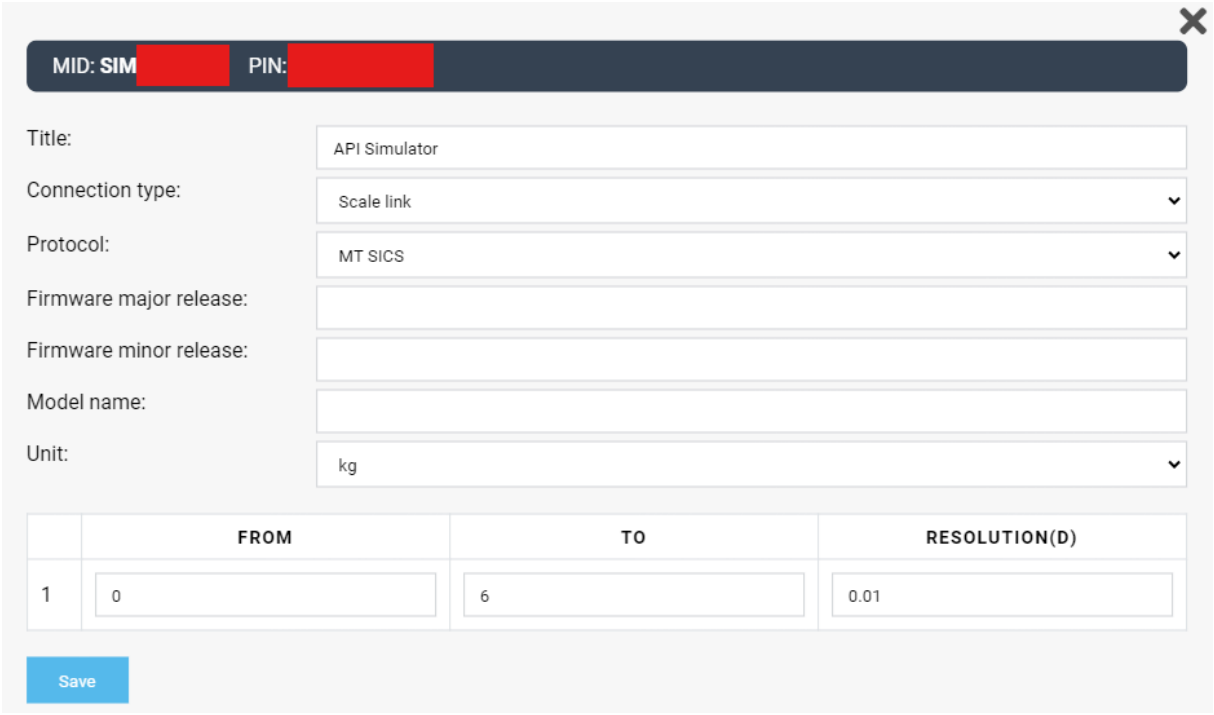
6.1. Create simulator

To create a new simulator first open the menu in the top left corner, then navigate to the “Scale simulation” tab.

Clicking on the plus icon in the “Presets” tab will open a window for creating a new simulator.



After entering all the desired data set the “Connection type” to “Scale link” and click the “Save” button. After the Simulator is saved it will generate its MID and PIN and display it at the top.



The new simulator will be added to the "Presets" window.

Clicking on the added simulator will connect it to the cloud, it can now be accessed with its MID and PIN .

7. Contact information

For any additional information or technical support, you can contact us at:

support@scale-monitor.com