openSenseMap

Dokumentation

Table of Contents

senseBox

openSenseMap

The openSenseMap (OSeM) is a webplatform which provides upload, visualisation and analysis of location-specific sensordata.

Stations may be registered on the platform, which host one or more Sensors on a specific location. Data up- & download is done via the restful API[1].

Features

- timeseries visualization for each phenomenon
- filtering by various parameters
- spatial interpolation
- data download with bounding box

All sensor data is available for download under the Public Domain Dedication and License 1.0[1].

openSenseMap and it's API is open source software. Sourcecode and issuetracker are located here:

- openSenseMap[2]
- openSenseMap API[3]

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[1]. See 1.6 REST API ↵

[1]. http://opendatacommons.org/licenses/pddl/summary/ ↵

[2]. https://github.com/sensebox/OpenSenseMap ↵

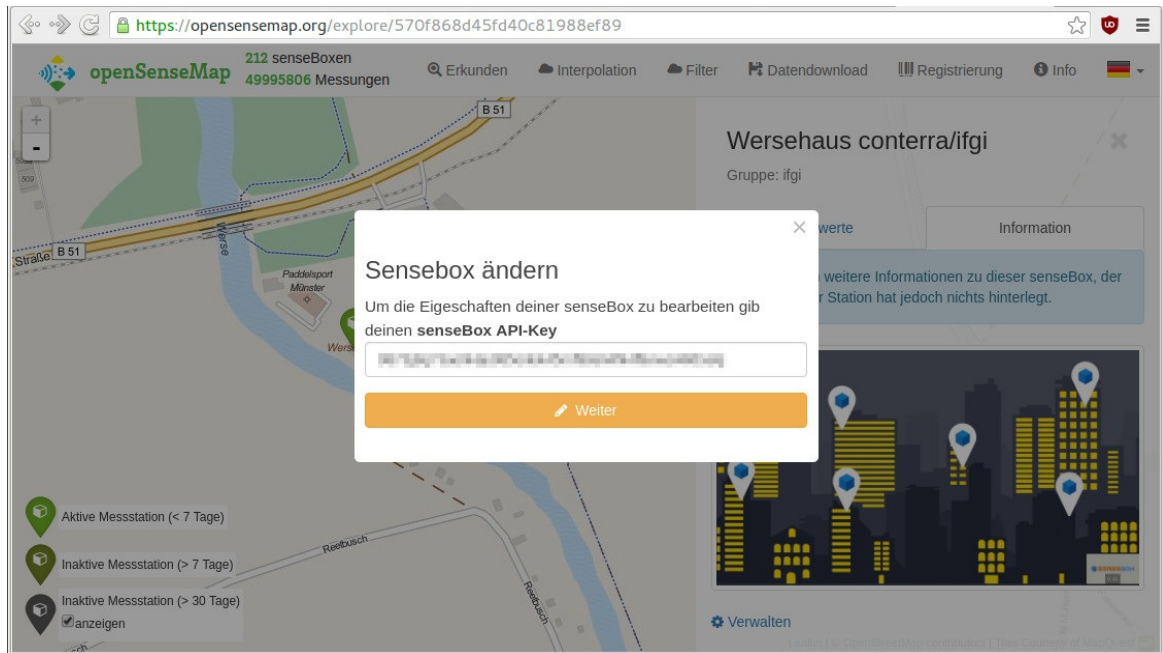[3]. https://github.com/sensebox/OpenSenseMap-API ↵

Registration on the OSeM

Modifying a station

All properties of a station may be changed after the registration.

To do this, authorization with the API-key is required, which was sent to you in the registration e-mail!

1. Select your station on the map by clicking on the marker on the map.

2. Select the tab "Info" in the sidebar and click "Manage".

3. Enter your API-key in the dialog.

4. Make your desired changes in the appearing form. You may edit metadata, geolocation, photo, as well as the stations sensor configuration.

> Hint: If you have added a new sensor and want to download the updated arduino-sketch, a page-reload after saving is required.

5. Click "save" or "cancel" in the top of the dialog to apply or discard your changes.

Deleting a station

Follow the steps under "Modifying a station"[1], then type `DELETE` in the textfield "Delete senseBox" and confirm.

> warning: All associated sensor data will be permanently deleted!

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[1]. See 1.3 Editing a station > modifying-a-station ↵

Data download

Data analysis

Filter

Interpolation

openSenseMap RESTful API

The openSenseMap provides a REST API, which can be used to query & post senseBox metadata and measurements. The endpoint is https://api.opensensemap.org/.

The API documentation can be found here[1].

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[1]. https://docs.opensensemap.org ↵

Submitting data through MQTT

The openSenseMap is able to receive measurements through its internal MQTT client. There is no openSenseMap MQTT broker, connections are made with a 13 character long client id with `osem_` as prefix.

Connection settings must be configured per senseBox.

The following settings can be made:

URL

The address of the MQTT broker. Should look like this: `mqtt://username:password@hostname.of.mqtt.broker`

Topic

The MQTT topic. Example: `home/temperatures/outside`

Messageformat

Either `json` or `csv`. Formats are documented here[1].

Decode Options

A JSON object. Allows to specify a `jsonPath` expression to specify the position of the json encoded message. Example: `{"jsonPath":"$.payload_fields"}`

Connection Options

A JSON object. Allows to configure the mqtt client. Keys `keepAlive`, `reschedulePings`, `clientId`, `username` and `password` of https://github.com/mqttjs/MQTT.js#client[2] are allowed.

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[1]. https://docs.opensensemap.org/#api-Measurements-postNewMeasurements ↵

[2]. https://github.com/mqttjs/MQTT.js#client ↵