openSenseMap

Dokumentation

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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]

> [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 ↩

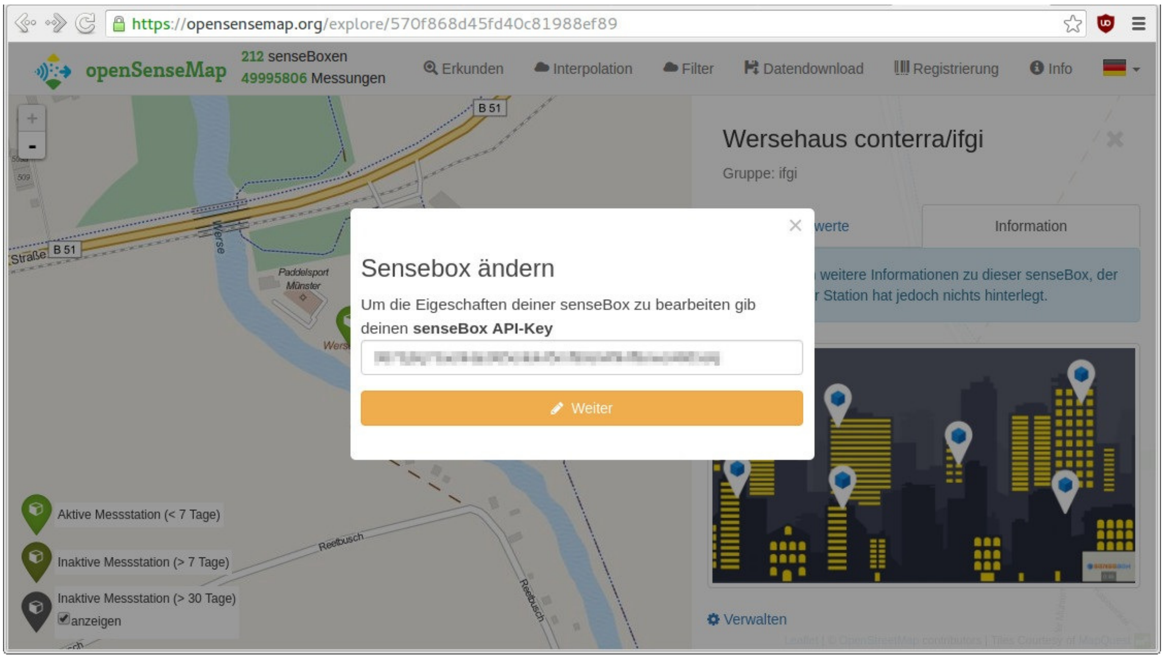
Registration on the OSeM

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.



Sensebox ändern

Um die Eigeschaften deiner senseBox zu bearbeiten gib deinen **senseBox API-Key**

[redacted]

Weiter

weitere Informationen zu dieser senseBox, der Station hat jedoch nichts hinterlegt.

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!

> [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].

> [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.

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

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