
python-openhab Documentation

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This library allows for easily accessing the openHAB REST API. A number of features are implemented but not all, this is work in progress.

CHAPTER 1

Requirements

- python 2.7.x / 3.5
- python :: dateutil
- python :: requests

CHAPTER 2

Note on openHAB1:

Make sure to use the 1.x branch for openHAB1.x!

Example usage of the library:

```
from openhab import openHAB

base_url = 'http://localhost:8080/rest'
openhab = openHAB(base_url)

# fetch all items
items = openhab.fetch_all_items()

sunset = items.get('Sunset')
print(sunset.state)
```

Contents:

API Documentation

openHAB

class `openhab.openhab.openHAB` (*base_url*, *username=None*, *password=None*, *http_auth=None*)
openHAB REST API client

Parameters

- **base_url** (*str*) – The openHAB REST URL, e.g. `http://example.com/rest`
- **username** (*str*, *optional*) – A optional username, used in conjunction with a optional provided password, in case openHAB requires authentication.
- **password** (*str*, *optional*) – A optional password, used in conjunction with a optional provided username, in case openHAB requires authentication.
- **http_auth** (*AuthBase*, *optional*) – An alternative to username/password pair, is to specify a custom http authentication object of type `requests.auth.AuthBase`.

Returns openHAB class instance.

Return type *openHAB*

fetch_all_items ()

Returns all items defined in openHAB except for group-items

Returns Returns a dict with item names as key and item class instances as value.

Return type dict

get_item (*name*)

Returns an item with its state and type as fetched from openHAB

Parameters **name** (*str*) – The name of the item to fetch from openHAB.

Returns A corresponding Item class instance with the state of the requested item.

Return type *Item*

get_item_raw (*name*)

Private method for fetching a json configuration of an item.

Parameters **name** (*str*) – The item name to be fetched.

Returns A JSON decoded dict.

Return type dict

json_to_item (*json_data*)

This method takes as argument the RAW (JSON decoded) response for an openHAB item. It checks of what type the item is and returns a class instance of the specific item filled with the item's state.

Parameters **json_data** (*dict*) – The JSON decoded data as returned by the openHAB server.

Returns A corresponding Item class instance with the state of the item.

Return type *Item*

req_get (*uri_path*)

Helper method for initiating a HTTP GET request. Besides doing the actual request, it also checks the return value and returns the resulting decoded JSON data.

Parameters **uri_path** (*str*) – The path to be used in the GET request.

Returns Returns a dict containing the data returned by the openHAB REST server.

Return type dict

req_post (*uri_path*, *data=None*)

Helper method for initiating a HTTP POST request. Besides doing the actual request, it also checks the return value and returns the resulting decoded JSON data.

Parameters

- **uri_path** (*str*) – The path to be used in the POST request.
- **data** (*dict*, *optional*) – A optional dict with data to be submitted as part of the POST request.

Returns No data is returned.

Return type None

req_put (*uri_path*, *data=None*)

Helper method for initiating a HTTP PUT request. Besides doing the actual request, it also checks the return value and returns the resulting decoded JSON data.

Parameters

- **uri_path** (*str*) – The path to be used in the PUT request.
- **data** (*dict*, *optional*) – A optional dict with data to be submitted as part of the PUT request.

Returns No data is returned.

Return type None

Items

class `openhab.items.ContactItem` (*openhab*, *json_data*)

Contact item type

Parameters

- **openhab** (*openHAB*) – openHAB object.
- **json_data** (*dic*) – A dict converted from the JSON data returned by the openHAB server.

closed ()

Set the state of the contact item to CLOSED

open ()

Set the state of the contact item to OPEN

class `openhab.items.DateTimeItem` (*openhab*, *json_data*)

DateTime item type

Parameters

- **openhab** (*openHAB*) – openHAB object.
- **json_data** (*dic*) – A dict converted from the JSON data returned by the openHAB server.

class `openhab.items.Item` (*openhab*, *json_data*)

Base item class

Parameters

- **openhab** (*openHAB*) – openHAB object.
- **json_data** (*dic*) – A dict converted from the JSON data returned by the openHAB server.

command (*value*)

Sends the given value as command to the event bus.

Parameters **value** (*object*) – The value to send as command to the event bus. The type of the value depends on the item type and is checked accordingly.

init_from_json (*json_data*)

Initialize this object from a json configuration as fetched from openHAB

Parameters **json_data** (*dict*) – A dict converted from the JSON data returned by the openHAB server.

state

The state property represents the current state of the item. The state is automatically refreshed from openHAB on reading it. Updating the value via this property send an update to the event bus.

update (*value*)

Updates the state of an item.

Parameters **value** (*object*) – The value to update the item with. The type of the value depends on the item type and is checked accordingly.

class `openhab.items.NumberItem` (*openhab*, *json_data*)

NumberItem item type

Parameters

- **openhab** (`openHAB`) – openHAB object.
- **json_data** (*dic*) – A dict converted from the JSON data returned by the openHAB server.

class `openhab.items.SwitchItem` (*openhab*, *json_data*)

SwitchItem item type

Parameters

- **openhab** (`openHAB`) – openHAB object.
- **json_data** (*dic*) – A dict converted from the JSON data returned by the openHAB server.

off ()

Set the state of the switch to OFF

on ()

Set the state of the switch to ON

Types

class `openhab.types.CommandType`

Base command type class

classmethod **validate** (*value*)

Value validation method. As this is the base class which should not be used directly, we throw a `NotImplementedError` exception.

Parameters **value** (*Object*) – The value to validate. The type of the value depends on the item type and is checked accordingly.

Raises `NotImplementedError` – Raises `NotImplementedError` as the base class should never be used directly.

class `openhab.types.DateTimeType`

DateTimeType type class

classmethod **validate** (*value*)

Value validation method. Valid values are any of type `datetime.datetime`.

Parameters **value** (*datetime.datetime*) – The value to validate.

Raises `ValueError` – Raises `ValueError` if an invalid value has been specified.

class `openhab.types.DecimalType`

DecimalType type class

classmethod validate (*value*)

Value validation method. Valid values are any of type float or int.

Parameters **value** (*float*) – The value to validate.

Raises `ValueError` – Raises `ValueError` if an invalid value has been specified.

class `openhab.types.IncreaseDecreaseType`

IncreaseDecreaseType type class

classmethod validate (*value*)

Value validation method. Valid values are INCREASE and DECREASE.

Parameters **value** (*str*) – The value to validate.

Raises `ValueError` – Raises `ValueError` if an invalid value has been specified.

class `openhab.types.OnOffType`

OnOffType type class

classmethod validate (*value*)

Value validation method. Valid values are ON and OFF.

Parameters **value** (*str*) – The value to validate.

Raises `ValueError` – Raises `ValueError` if an invalid value has been specified.

class `openhab.types.OpenCloseType`

OpenCloseType type class

classmethod validate (*value*)

Value validation method. Valid values are OPEN and CLOSED.

Parameters **value** (*str*) – The value to validate.

Raises `ValueError` – Raises `ValueError` if an invalid value has been specified.

class `openhab.types.PercentType`

PercentType type class

classmethod validate (*value*)

Value validation method. Valid values are any of type float or int and must be greater or equal to 0 and smaller or equal to 100.

Parameters **value** (*float*) – The value to validate.

Raises `ValueError` – Raises `ValueError` if an invalid value has been specified.

class `openhab.types.StringType`

StringType type class

classmethod validate (*value*)

Value validation method. Valid values are any of type string.

Parameters **value** (*str*) – The value to validate.

Raises `ValueError` – Raises `ValueError` if an invalid value has been specified.

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