

# OpenWeatherMap API



OpenWeather

Full Stack Web Development

# Example API: OpenWeatherMap

- Popular Weather API
- Register to get at API Key
- Query weather based on location / lat,lng

The screenshot shows the OpenWeatherMap website's API documentation for current weather data. The header includes the OpenWeather logo, a search bar, and navigation links: Weather in your city, Guide, API, Dashboard, Pricing, Maps, Our Initiatives, Partners, Blog, Marketplace (highlighted), Sign in, and Support. The main heading is 'Current weather data' with a breadcrumb trail: Home / API / Current weather. The main content area describes the API's capabilities and provides a section for 'Call current weather data' with a sub-section 'How to make an API call'. Below this, an 'API call' box contains the URL: `api.openweathermap.org/data/2.5/weather?lat={lat}&lon={lon}&appid={API key}`. A right sidebar lists various features and links, including 'Call current weather data', 'How to make an API call', 'Bulk downloading', 'Weather fields in API response', 'JSON', 'XML', 'List of condition codes', 'Min/max temperature in current weather API and forecast API', 'Other features', 'Geocoding API', 'Built-in geocoding', 'Built-in API request by city name', 'Built-in API request by city ID', 'Built-in API request by ZIP code', 'Format', 'Units of measurement', 'Multilingual support', and 'Call back function for JavaScript code'.

OpenWeather

Weather in your city Guide API Dashboard Pricing Maps Our Initiatives Partners Blog Marketplace Sign in Support

## Current weather data

Home / API / Current weather

Access current weather data for any location on Earth including over 200,000 cities! We collect and process weather data from different sources such as global and local weather models, satellites, radars and a vast network of weather stations. Data is available in JSON, XML, or HTML format.

### Call current weather data

#### How to make an API call

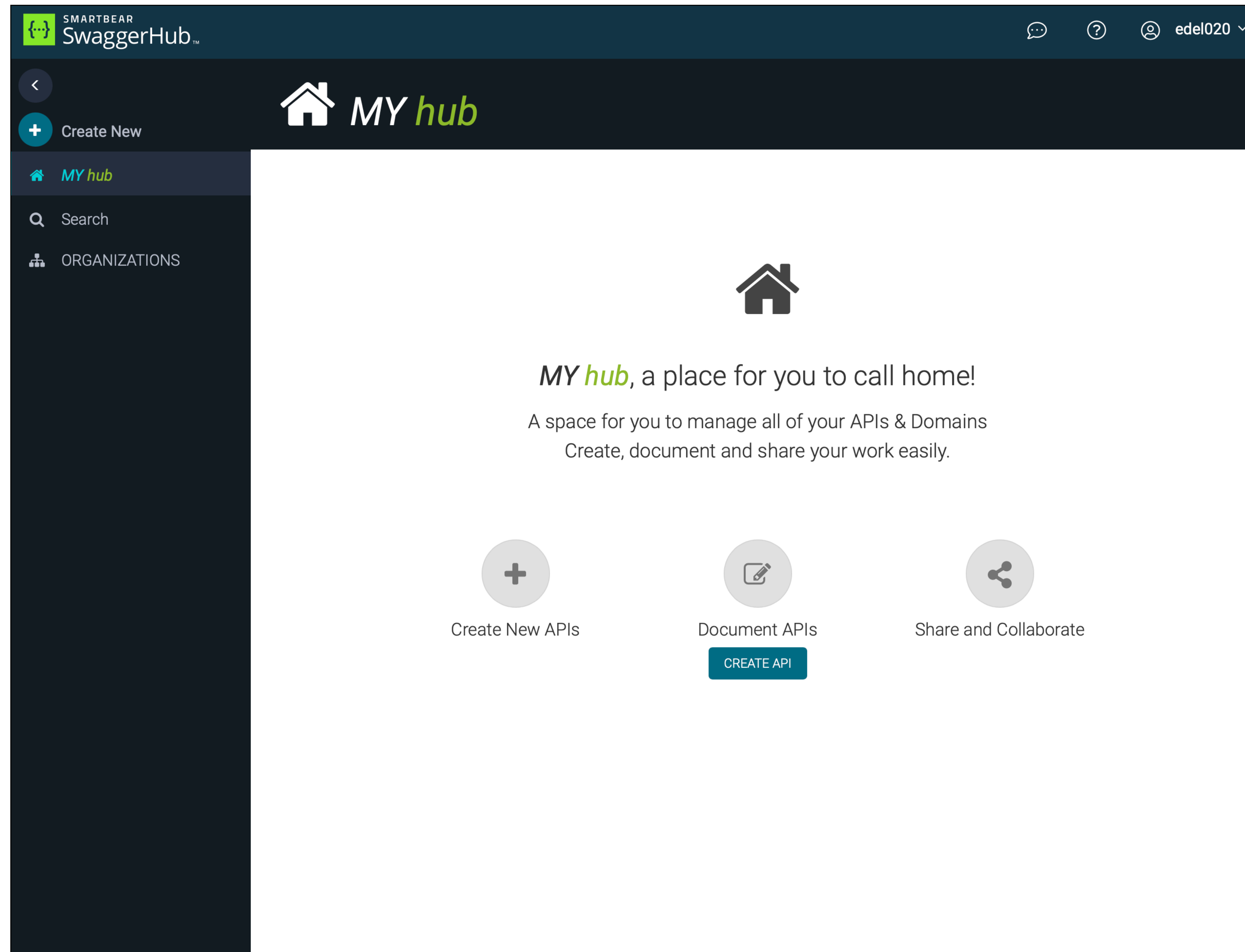
API call

```
api.openweathermap.org/data/2.5/weather?lat={lat}&lon={lon}&appid={API key}
```

Call current weather data  
How to make an API call  
Bulk downloading  
Weather fields in API response  
JSON  
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Built-in API request by ZIP code  
Format  
Units of measurement  
Multilingual support  
Call back function for JavaScript code

# SwaggerHub

- Searchable API Registry



# Swagger/OpenAPI Specification

- A specification of OpenweathermapAPI has been created and uploaded to SwaggerHub

SMARTBEAR  
SwaggerHub™

open-weather\_map\_api 2.5.1

Export

Info

Tags

Servers

Search

Current Weather Data ^

GET /weather

Schemas ^

SCHEMA 200

SCHEMA Coord

SCHEMA Weather

SCHEMA Main

SCHEMA Wind

SCHEMA Clouds

SCHEMA Rain

SCHEMA Snow

SCHEMA Sys

1 openapi: 3.0.1

2 info:

3 title: OpenWeatherMap API

4 description: 'Get current weather, daily forecast for 16 days, and 3-hourly forecast 5 days for your city. Helpful stats, graphics, and this day in history charts are available for your reference. Interactive maps show precipitation, clouds, pressure, wind around your location stations. Data is available in JSON, XML, or HTML format. \*\*Note\*\*: This sample Swagger file covers the `current` endpoint only from the OpenWeatherMap API. <br/><br/> \*\*Note\*\*: All parameters are optional, but you must select at least one parameter. Calling the API by city ID (using the `id` parameter) will provide the most precise location results.'

5 version: "2.5.1"

6 termsOfService: https://openweathermap.org/terms

7 contact:

8 name: OpenWeatherMap API

9 url: https://openweathermap.org/api

10 #email: some\_email@gmail.com

11 license:

12 name: "CC Attribution-ShareAlike 4.0 (CC BY-SA 4.0)"

13 url: https://openweathermap.org/price

14 servers:

15 - url: http://api.openweathermap.org/data/2.5/

16 tags:

17 - name: Current Weather Data

18 description: "Get current weather details"

19 paths:

20 /weather:

21 get:

22 tags:

23 - Current Weather Data

24 summary: "Call current weather data for one location"

25 description: "Access current weather data for any location on Earth including over 200,000 cities! Current weather is frequently updated based on global models and data from more than 40,000 weather stations."

26 operationId: CurrentWeatherData

27 parameters:

28 - name: q

29 in: query

30 description: "\*\*City name\*\*. \*Example: London\*. You can call by city name, or by city name and country code. The API responds with a list of results that match a searching word. For the query value, type the city name and optionally the country code divided by comma; use ISO 3166 country codes."

31 schema:

32 type: string

33

34 - name: id

35 in: query

36 description: "\*\*City ID\*\*. \*Example: `2172797`\*. You can call by city ID. API responds with exact result. The List of city

Read Only

OpenWeatherMap API

2.5.1 OAS3

Get current weather, daily forecast for 16 days, and 3-hourly forecast 5 days for your city. Helpful stats, graphics, and this day in history charts are available for your reference. Interactive maps show precipitation, clouds, pressure, wind around your location stations. Data is available in JSON, XML, or HTML format. **Note:** This sample Swagger file covers the **current** endpoint only from the OpenWeatherMap API.

**Note:** All parameters are optional, but you must select at least one parameter. Calling the API by city ID (using the **id** parameter) will provide the most precise location results.

[Terms of service](#)

[OpenWeatherMap API - Website](#)

[CC Attribution-ShareAlike 4.0 \(CC BY-SA 4.0\)](#)

[API Documentation](#)

Servers

http://api.openweathermap.org/d... Authorize

Current Weather Data Get current weather details

GET /weather Call current weather data for one location

Schemas

Successful response >

Coord >

Weather >

Last Saved: 8:22:38 pm - Apr 7, 2018 VALID



# Authorize OpenWeahterMap

- Enter Key from OpenWeatherMapAPI developer account

The screenshot displays the SwaggerHub interface for the 'open-weather\_map\_api' version 2.5.1. The 'Available authorizations' dialog box is open, prompting the user to enter an API key. The dialog contains the following information:

- app\_id (apiKey)** ←
- API key to authorize requests. If you don't have an OpenWeatherMap API key, use `fd4698c940c6d1da602a70ac34f0b147`.
- Name: `appid`
- In: `query`
- Value:

Buttons for 'Authorize' and 'Close' are visible at the bottom of the dialog. The background shows the API's endpoints, including the `/weather` endpoint with a 'GET' method and a description: 'Call current weather data for one location'.

Try it

Servers  Authorize

## Current Weather Data

Get current weather details

**GET** **/weather** Call current weather data for one location

Access current weather data for any location on Earth including over 200,000 cities! Current weather is frequently updated based on global models and data from more than 40,000 weather stations.

Parameters Try it out

- Directly invoke the API from Swagger Hub

Parameters Cancel

Name	Description
<b>q</b> <b>string</b> (query)	<b>City name.</b> Example: London. You can call by city name, or by city name and country code. The API responds with a list of results that match a searching word. For the query value, type the city name and optionally the country code divided by comma; use ISO 3166 country codes.
<input type="text" value="q"/>	
<b>id</b> <b>string</b> (query)	<b>City ID.</b> Example: 2172797. You can call by city ID. API responds with exact result. The List of city IDs can be downloaded <a href="#">here</a> . You can include multiple cities in parameter — just separate them by commas. The limit of locations is 20. Note: A single ID counts as a one API call. So, if you have city IDs. it's treated as 3 API calls.
<input type="text" value="id"/>	
<b>lat</b>	<b>Latitude.</b> Example: 35. The latitude coordinate of the location of your interest. Must use with <b>lon</b> .

# Results

- Response rendered in the hub page

Snippets

cURL (bash)

cURL (PowerShell)

cURL (CMD)

```
curl -X 'GET' \
  'http://api.openweathermap.org/data/2.5/weather?q=tramore&zip=94040%2Cus&units=imperial&lang=en&mode=json&appid=82838cdf0b52ab77211fba680160ceee'
-H 'accept: application/json'
```

Request URL

```
http://api.openweathermap.org/data/2.5/weather?
q=tramore&zip=94040%2Cus&units=imperial&lang=en&mode=json&appid=82838cdf0b52ab77211fba680160ceee
```

Server response

Code

Details

200

Response body

```
{
  "deg": 27.3,
  "gust": 14,
},
"rain": {
  "1h": 0.24
},
"clouds": {
  "all": 75
},
"dt": 1644090320,
"sys": {
  "type": 2,
  "id": 2002640,
  "country": "IE",
  "sunrise": 1644048169,
  "sunset": 1644081743
},
"timezone": 0,
"id": 2961120,
"name": "Tramore",
"cod": 200
}
```

Download

Response headers

```
access-control-allow-credentials: true
access-control-allow-methods: GET,POST
access-control-allow-origin: *
cache-control: no-cache
content-encoding: gzip
content-type: application/json; charset=utf-8
date: Sat,05 Feb 2022 19:45:20 GMT
etag: W/"1eb-4roe6FaYX5IxiNrHG1zgwZl4Ghs"
expires: -1
status: 200 OK
x-cache-key: /data/2.5/weather?lang=en&mode=json&q=tramore&units=imperial&zip=94040%2cus
```

Request duration

```
394 ms
```

# OpenWeatherMap Schema

- Yaml Specification of the API

Paths

Definitions

```
swagger: '2.0'
info:
  description: |
    This is the Open Weather Map API modified by Roland
    [Learn about OpenWeatherMap](http://www.openweathermap.org)
    NOTE: You will need to create an account with OpenWeatherMap and create an API key.
  version: 1.0.0
  title: OpenWeatherMap
  termsOfService: 'http://openweathermap.org/terms'
  contact:
    name: apiteam@swagger.io
host: api.openweathermap.org
basePath: /data/2.5
schemes:
  - http
produces:
  - application/json
paths:
  /weather: ...
definitions:
  Forecast: ...
  Coord: ...
  Weather: ...
  Main: ...
  Wind: ...
  Clouds: ...
  Sys: ...
  Error: ...
```



## /weather path

```
paths:
  /weather:
    get:
      summary: Get current weather
      description: >
        The Weather endpoint returns information about the weather for a given
        location based on parameters

        like geo location, city, zipcode.
      parameters:
        - name: lat
          in: query
          description: Latitude component of location.
          required: false
          type: number
          format: double
        - name: lon
          in: query
          description: Longitude component of location.
          required: false
          type: number
          format: double
        - name: q
          in: query
          description: 'City name and country code divided by a comma. e.g. Oxford,OH'
          required: false
          type: string
        - name: id
          in: query
          description: >-
            city id's. List can be found at
            http://bulk.openweathermap.org/sample/
          required: false
          type: number
          format: int64
        - name: appid
          in: query
          description: OAuth ID
          required: true
          type: string
      responses:
        '200':
          description: An array of weather forecasts from different cities.
          schema:
            $ref: '#/definitions/Forecast'
        '404':
          description: 'City not found, incorrect coordinates.'
      default:
        description: Unexpected error
        schema:
          $ref: '#/definitions/Error'
```

## Definitions - Forecast

```
definitions:
  Forecast:
    type: object
    properties:
      coord:
        $ref: '#/definitions/Coord'
      weather:
        type: array
        items:
          $ref: '#/definitions/Weather'
      base:
        type: string
        description: Internal Parameter
      main:
        $ref: '#/definitions/Main'
      wind:
        $ref: '#/definitions/Wind'
      clouds:
        $ref: '#/definitions/Clouds'
      dt:
        type: string
        description: 'Time of data calculation, unic, UTC'
      sys:
        $ref: '#/definitions/Sys'
      id:
        type: integer
        format: int64
        description: City ID
      name:
        type: string
        description: City Name
      cod:
        type: integer
        format: int32
        description: Internal parameter
```

## Definitions - Conditions

```
Coord:
  type: object
  properties:
    lat:
      type: number
      format: float
      description: Latitude of location
    lon:
      type: number
      format: float
      description: Longitude of location
Weather:
  type: object
  properties:
    id:
      type: integer
      format: int32
      description: Weather condition id
    main:
      type: string
      description: 'Group of weather parameters (Rain, Snow, Extreme, etc.)'
    description:
      type: string
      description: Weather condition within the group
    icon:
      type: string
      description: Weather icon id (Icons are .png files)
Main: ...
Wind:
  type: object
  properties:
    speed:
      type: number
      format: float
      description: 'Wind speed. Default: meter/sec, Metric: meter/sec, Imperial: miles/hr'
    deg:
      type: integer
      format: int32
      description: 'Wind direction, degrees(meteorological)'
Clouds:
  type: object
  properties:
    all:
      type: integer
      format: int32
```



Create New



MY *hub*



Search



ORGANIZATIONS



skyscanner



CLEAR ALL



Sort by: Best Match ▾

Spec ▾

Type ▾

Visibility ▾

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Owner ▾

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[Travels API](#)

This is a simple travels API

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Transport flight api

API



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API de AISS Cream, aplicación web con la que crear tus viajes.

API



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# OpenWeatherMap API



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