All about APIs

Application Programming Interface (API)

A set of operations—with specific inputs and outputs—used for interacting with something, like a database, web service, or hardware

How do APIs work?

- Use a protocol, like HTTP

- Send an HTTP request to a URL

- Common HTTP requests: GET, POST, DELETE, and PUT

GET Request

An HTTP request type used for retrieving data from a service

POST Request

An HTTP request type used for sending data to a service

An Example API Request
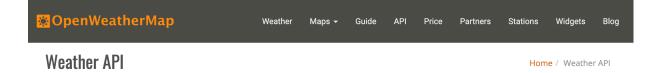
THE PROTOCOL

THE QUERY PARAMETERS

http://api.openweathermap.org/data/2.5/weather?q=boston&units=imperial

THE SERVER NAME

JSON Format

```json
{"coord":
    {"lon":-122.09,"lat":37.39},
"sys":
    {"type":3,"id":168940,"message":0.0297,"country":"US","sunrise":1427723751,"sunset":1427768967},
"weather":
    [{"id":800,"main":"Clear","description":"Sky is Clear","icon":"01n"}],
"base":"stations",
"main":
    {"temp":285.68,"humidity":74,"pressure":1016.8,"temp_min":284.82,"temp_max":286.48},
"wind":
    {"speed":0.96,"deg":285.001},
"clouds":
    {"all":0},
"dt":1427700245,
"id":0,
"name":"Mountain View",
"cod":200}
```

Documentation

Weather API

Home / Weather API

Please **sign up** and use our fast and easy-to-work weather APIs for free. Look at our **monthly subscriptions** for more options than Free account can provide you. Read **How to start** first and enjoy using our powerful weather APIs.

Current weather data

API doc   Subscribe

- Access current weather data for any location including over 200,000 cities
- Current weather is frequently updated based on global models and data from more than 40,000 weather stations
- Data is available in JSON, XML, or HTML format
- Available for Free and all other paid accounts

Hourly forecast NEW

API doc   Subscribe

- Hourly forecast is available for 4 days
- Forecast weather data for 96 timestamps
- Higher geographic accuracy
- Forecast is available in JSON and XML
- Available for Developer, Professional and Enterprise accounts
- **Free trial for all users until 1st May 2019!**

16 day / daily forecast

API doc   Subscribe

- 16 day forecast is available at any location or city
- 16 day forecast includes daily weather
- Forecast is available in JSON and XML
- Available for all paid accounts

We have combined our Weather services and **Satellite imagery** in one simple and fast **Agricultural API**. **Satellite images** (True & False color, NDVI, EVI), Weather data (Current and Forecast), Historical data, Soil temperature and moisture, Accumulated temperature and precipitation, etc.
Try it right now!

5 day / 3 hour forecast

API doc   Subscribe

- 5 day forecast is available at any location or city
- 5 day forecast includes weather data every 3 hours

Historical data

API doc   Subscribe

- Through our API we provide city historical weather data for 37,000+ cities
- Historical data is available for 1 month previous in Starter account, for 1 year

History Bulk

API doc   GET

- We have recently launched History Bulk functionality that provides weather data for 37,000+ cities.
- Historical data is available for 6 years and

openweathermap.com/api

API Key (Access Token)

A string sent along with an API request to signify an authorized user

API keys are **sensitive information**—do not expose them in your code.

AJAX

A technique for sending and receiving data from a server

AJAX success and error handlers:

- Functions that get called based on the result of your API request

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- Success handler function called when request comes back with desired data

- Error handler function called when something goes wrong with the request

Thank you