

# Current weather data

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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. Data is available in JSON, XML, or HTML format.

## Call current weather data for one location

Please remember that all Examples of API calls that listed on this page are just samples and do not have any connection to the real API service!

### By city name

Description:

You can call by city name or city name and country code. API responds with a list of results that match a searching word.

There is a possibility to receive a central district of the city/town with its own parameters (geographic coordinates/id/name) in API response. [Example](#)

API call:

`api.openweathermap.org/data/2.5/weather?q={city name}`

`api.openweathermap.org/data/2.5/weather?q={city name},{country code}`

Parameters:

**q** city name and country code divided by comma, use ISO 3166 country codes

Examples of API calls:

[api.openweathermap.org/data/2.5/weather?q=London](http://api.openweathermap.org/data/2.5/weather?q=London)

[api.openweathermap.org/data/2.5/weather?q=London,uk](http://api.openweathermap.org/data/2.5/weather?q=London,uk)

### By city ID

Description:

You can call by city ID. API responds with exact result.

List of city ID `city.list.json.gz` can be downloaded here <http://bulk.openweathermap.org/sample/>

We recommend to call API by city ID to get unambiguous result for your city.

Parameters:

**id** City ID

Examples of API calls:

[api.openweathermap.org/data/2.5/weather?id=2172797](https://api.openweathermap.org/data/2.5/weather?id=2172797)

## By geographic coordinates

API call:

[api.openweathermap.org/data/2.5/weather?lat={lat}&lon={lon}](https://api.openweathermap.org/data/2.5/weather?lat={lat}&lon={lon})

Parameters:

**lat, lon** coordinates of the location of your interest

Examples of API calls:

[api.openweathermap.org/data/2.5/weather?lat=35&lon=139](https://api.openweathermap.org/data/2.5/weather?lat=35&lon=139)

API response:

```
{ "coord": { "lon": 139, "lat": 35 },
  "weather": [
    {
      "id": 800,
      "main": "Clear",
      "description": "clear sky",
      "icon": "01n"
    }
  ],
  "base": "stations",
  "main": {
    "temp": 289.92,
    "pressure": 1009,
    "humidity": 92,
    "temp_min": 288.71,
    "temp_max": 290.93
  },
  "wind": {
    "speed": 0.47,
    "deg": 107.538
  },
  "clouds": {
    "all": 2
  },
  "dt": 1560350192,
  "sys": {
    "type": 3,
```

```
    "id": 2019346,
    "message": 0.0065,
    "country": "JP",
    "sunrise": 1560281377,
    "sunset": 1560333478
  },
  "timezone": 32400,
  "id": 1851632,
  "name": "Shuzenji",
  "cod": 200
}
```

## By ZIP code

Description:

Please note if country is not specified then the search works for USA as a default.

API call:

`api.openweathermap.org/data/2.5/weather?zip={zip code},{country code}`

Examples of API calls:

[api.openweathermap.org/data/2.5/weather?zip=94040,us](https://api.openweathermap.org/data/2.5/weather?zip=94040,us)

Parameters:

**zip** zip code

API response:

```
{
  "coord": {"lon": -122.08, "lat": 37.39},
  "weather": [
    {
      "id": 800,
      "main": "Clear",
      "description": "clear sky",
      "icon": "01d"
    }
  ],
  "base": "stations",
  "main": {
    "temp": 296.71,
    "pressure": 1013,
```

```
    "humidity": 53,  
    "temp_min": 294.82,  
    "temp_max": 298.71  
  },  
  "visibility": 16093,  
  "wind": {  
    "speed": 1.5,  
    "deg": 350  
  },  
  "clouds": {  
    "all": 1  
  },  
  "dt": 1560350645,  
  "sys": {  
    "type": 1,  
    "id": 5122,  
    "message": 0.0139,  
    "country": "US",  
    "sunrise": 1560343627,  
    "sunset": 1560396563  
  },  
  "timezone": -25200,  
  "id": 420006353,  
  "name": "Mountain View",  
  "cod": 200  
}
```

## Call current weather data for several cities

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### Cities within a rectangle zone

Description:

JSON returns the data from cities within the defined rectangle specified by the geographic coordinates.

Parameters:

**bbox** bounding box [lon-left,lat-bottom,lon-right,lat-top,zoom]

**callback** javascript functionName

**cluster** use server clustering of points. Possible values are [yes, no]

**lang** language [ru, en ... ]

Examples of API calls:

<http://api.openweathermap.org/data/2.5/box/city?bbox=12,32,15,37,10>

There is a limit of 25 square degrees for **Free** and **Startup plans**.

## Cities in cycle

Description:

JSON returns data from cities laid within definite circle that is specified by center point ('lat', 'lon') and expected number of cities ('cnt') around this point. The default number of cities is 10, the maximum is 50.

Parameters:

**lat** latitude

**lon** longitude

**callback** functionName for JSONP callback.

**cluster** use server clustering of points. Possible values are [yes, no]

**lang** language [en , ru ... ]

**cnt** number of cities around the point that should be returned

Examples of API calls:

<http://api.openweathermap.org/data/2.5/find?lat=55.5&lon=37.5&cnt=10>

## Call for several city IDs

Parameters:

**id** City ID

Examples of API calls:

<http://api.openweathermap.org/data/2.5/group?id=524901,703448,2643743&units=metric>

The limit of locations is 20.

If you request weather data for several ID, then you will get the response only in JSON format (XML and HTML formats are not available for this case).

**NOTE:** A single ID counts as a one API call! So, the above example is treated as a 3 API calls.

## Bulk downloading

Description:

We provide number of bulk files with current weather and forecasts. More information is on the [Bulk](#) page

Bulk downloading is available not for all accounts. To get more information please refer to the [price](#).

Examples of bulk files:

<http://bulk.openweathermap.org/sample/>

## Weather parameters in API response

If you do not see some of the parameters in your API response it means that these weather phenomena are just not happened for the time of measurement for the city or location chosen. Only really measured or calculated data is displayed in API response.

### JSON

Example of API response:

```
{
  "coord": {
    "lon": -122.08,
    "lat": 37.39
  },
  "weather": [
    {
      "id": 800,
      "main": "Clear",
      "description": "clear sky",
      "icon": "01d"
    }
  ],
  "base": "stations",
  "main": {
    "temp": 296.71,
    "pressure": 1013,
    "humidity": 53,
    "temp_min": 294.82,
    "temp_max": 298.71
  },
  "visibility": 16093,
```

```

"wind": {
  "speed": 1.5,
  "deg": 350
},
"clouds": {
  "all": 1
},
"dt": 1560350645,
"sys": {
  "type": 1,
  "id": 5122,
  "message": 0.0139,
  "country": "US",
  "sunrise": 1560343627,
  "sunset": 1560396563
},
"timezone": -25200,
"id": 420006353,
"name": "Mountain View",
"cod": 200
}

```

#### Parameters:

- **coord**
  - **coord.lon** City geo location, longitude
  - **coord.lat** City geo location, latitude
- **weather** (more info Weather condition codes)
  - **weather.id** Weather condition id
  - **weather.main** Group of weather parameters (Rain, Snow, Extreme etc.)
  - **weather.description** Weather condition within the group
  - **weather.icon** Weather icon id
- **base** Internal parameter
- **main**
  - **main.temp** Temperature. Unit Default: Kelvin, Metric: Celsius, Imperial: Fahrenheit.
  - **main.pressure** Atmospheric pressure (on the sea level, if there is no sea\_level or grnd\_level data), hPa
  - **main.humidity** Humidity, %
  - **main.temp\_min** Minimum temperature at the moment. This is deviation from current temp that is possible for large cities and megalopolises geographically expanded (use these parameter optionally). Unit Default: Kelvin, Metric: Celsius, Imperial: Fahrenheit.
  - **main.temp\_max** Maximum temperature at the moment. This is deviation from current temp that is possible for large cities and megalopolises geographically expanded (use these parameter optionally). Unit Default: Kelvin, Metric: Celsius, Imperial: Fahrenheit.

- `main.sea_level` Atmospheric pressure on the sea level, hPa
  - `main.grnd_level` Atmospheric pressure on the ground level, hPa
- `wind`
  - `wind.speed` Wind speed. Unit Default: meter/sec, Metric: meter/sec, Imperial: miles/hour.
  - `wind.deg` Wind direction, degrees (meteorological)
- `clouds`
  - `clouds.all` Cloudiness, %
- `rain`
  - `rain.1h` Rain volume for the last 1 hour, mm
  - `rain.3h` Rain volume for the last 3 hours, mm
- `snow`
  - `snow.1h` Snow volume for the last 1 hour, mm
  - `snow.3h` Snow volume for the last 3 hours, mm
- `dt` Time of data calculation, unix, UTC
- `sys`
  - `sys.type` Internal parameter
  - `sys.id` Internal parameter
  - `sys.message` Internal parameter
  - `sys.country` Country code (GB, JP etc.)
  - `sys.sunrise` Sunrise time, unix, UTC
  - `sys.sunset` Sunset time, unix, UTC
- `timezone` Shift in seconds from UTC
- `id` City ID
- `name` City name
- `cod` Internal parameter

## XML

Example of API response:

```
<current>
<city id="2643743" name="London">
<coord lon="-0.13" lat="51.51"/>
<country>GB</country>
<timezone>3600</timezone>
<sun rise="2019-09-23T05:47:32" set="2019-09-23T17:58:36"/>
</city>
<temperature value="291.15" min="289.15" max="293.71" unit="kelvin"/>
<humidity value="55" unit="%"/>
<pressure value="1012" unit="hPa"/>
<wind>
<speed value="5.1" unit="m/s" name="Gentle Breeze"/>
<gusts/>
<direction value="240" code="WSW" name="West-southwest"/>
</wind>
```



```

<clouds value="40" name="scattered clouds"/>
<visibility value="10000"/>
<precipitation mode="no"/>
<weather number="521" value="shower rain" icon="09d"/>
<lastupdate value="2019-09-23T10:56:30"/>
</current>

```

Parameters:

- **city**
  - **city.id** City ID
  - **city.name** City name
  - **city.coord**
    - **city.coord.lon** City geo location, longitude
    - **city.coord.lat** City geo location, latitude
  - **city.country** Country code (GB, JP etc.)
  - **timezone** Shift in seconds from UTC
  - **city.sun**
    - **city.sun.rise** Sunrise time
    - **city.sun.set** Sunset time
- **temperature**
  - **temperature.value** Temperature
  - **temperature.min** Minimum temperature at the moment of calculation. This is deviation from 'temp' that is possible for large cities and megalopolises geographically expanded (use these parameter optionally).
  - **temperature.max** Maximum temperature at the moment of calculation. This is deviation from 'temp' that is possible for large cities and megalopolises geographically expanded (use these parameter optionally).
  - **temperature.unit** Unit of measurements. Possilbe valure is Celsius, Kelvin, Fahrenheit.
- **humidity**
  - **humidity.value** Humidity value
  - **humidity.unit** Humidity units, %
- **pressure**
  - **pressure.value** Pressure value
  - **pressure.unit** Pressure units, hPa
- **wind**
  - **wind.speed**
    - **wind.speed.value** Wind speed
    - **wind.speed.unit** Wind speed units, m/s
    - **wind.speed.name** Type of the wind
  - **wind.direction**
    - **wind.direction.value** Wind direction, degrees (meteorological)
    - **wind.direction.code** Code of the wind direction. Possilbe value is WSW, N, S etc.
    - **wind.direction.name** Full name of the wind direction.
- **clouds**
  - **clouds.value** Cloudiness
  - **clouds.name** Name of the cloudiness
- **visibility**
  - **visibility.value** Visibility, meter
- **precipitation**
  - **precipitation.value** Precipitation, mm
  - **precipitation.mode** Possible values are 'no', name of weather phenomena as 'rain', 'snow'
- **weather**
  - **weather.number** Weather condition id

- `weather.value` Weather condition name
  - `weather.icon` Weather icon id
- `lastupdate`
  - `lastupdate.value` Last time when data was updated

## List of weather condition codes

List of [weather condition codes](#) with icons (range of thunderstorm, drizzle, rain, snow, clouds, atmosphere including extreme conditions like tornado, hurricane etc.)

## Min/max temperature in current weather API and forecast API

Please, do not confuse min/max parameters in our weather APIs.

- In **Current weather API**, [Hourly forecast API](#) and [5 day / 3 hour forecast API](#) - **temp\_min** and **temp\_max** are optional parameters mean min / max temperature in the city at the current moment to see deviation from current temp just for your reference. For large cities and megalopolises geographically expanded it might be applicable. In most cases both **temp\_min** and **temp\_max** parameters have the same volume as 'temp'. Please, use **temp\_min** and **temp\_max** parameters in current weather API optionally.
- In [16 Day forecast](#) - **min** and **max** mean maximum and minimum temperature in the day.

Example of current weather API response:

```
"main":{
  "temp":306.15, //current temperature
  "pressure":1013,
  "humidity":44,
  "temp_min":306, //min current temperature in the city
  "temp_max":306 //max current temperature in the city
},
```

For comparison look at example of daily forecast weather API response:

```
"dt":1406080800,
"temp":{
  "day":297.77, //daily averaged temperature
  "min":293.52, //daily min temperature
  "max":297.77, //daily max temperature
  "night":293.52, //night temperature
  "eve":297.77, //evening temperature
```

```
"morn":297.77}, //morning temperature
```

## Other features

### Format

Description:

JSON format is used by default. To get data in XML or HTML formats just set up mode = xml or html.

Parameters:

mode - possible values are xml and html. If mode parameter is empty the format is JSON by default.

Examples of API calls:

JSON [api.openweathermap.org/data/2.5/weather?q=London](https://api.openweathermap.org/data/2.5/weather?q=London)

XML [api.openweathermap.org/data/2.5/weather?q=London&mode=xml](https://api.openweathermap.org/data/2.5/weather?q=London&mode=xml)

HTML [api.openweathermap.org/data/2.5/weather?q=London&mode=html](https://api.openweathermap.org/data/2.5/weather?q=London&mode=html)

### Units format

Description:

Standard, metric, and imperial units are available.

Parameters:

**units** metric, imperial. When you do not use units parameter, format is Standard by default.

Temperature is available in Fahrenheit, Celsius and Kelvin units.

- For temperature in Fahrenheit use units=imperial
- For temperature in Celsius use units=metric
- Temperature in Kelvin is used by default, no need to use units parameter in API call

List of all API parameters with units [openweathermap.org/weather-data](https://openweathermap.org/weather-data)

Examples of API calls:

standard [api.openweathermap.org/data/2.5/find?q=London](https://api.openweathermap.org/data/2.5/find?q=London)

metric [api.openweathermap.org/data/2.5/find?q=London&units=metric](https://api.openweathermap.org/data/2.5/find?q=London&units=metric)

imperial [api.openweathermap.org/data/2.5/find?q=London&units=imperial](https://api.openweathermap.org/data/2.5/find?q=London&units=imperial)

### Multilingual support

Description:

You can use lang parameter to get the output in your language. We support the following languages that you can use with the corresponded lang values:

Arabic - ar, Bulgarian - bg, Catalan - ca, Czech - cz, German - de, Greek - el, English - en, Persian (Farsi) - fa, Finnish - fi, French - fr, Galician - gl, Croatian - hr, Hungarian - hu, Italian - it, Japanese - ja,

Korean - kr, Latvian - la, Lithuanian - lt, Macedonian - mk, Dutch - nl, Polish - pl, Portuguese - pt, Romanian - ro, Russian - ru, Swedish - se, Slovak - sk, Slovenian - sl, Spanish - es, Turkish - tr, Ukrainian - ua, Vietnamese - vi, Chinese Simplified - zh\_cn, Chinese Traditional - zh\_tw.

NOTE: Translation is only applied for the "description" field.

API call:

<http://api.openweathermap.org/data/2.5/forecast/daily?id=524901&lang={lang}>

Parameters:

**lang** language code

Examples of API calls:

[http://api.openweathermap.org/data/2.5/forecast/daily?id=524901&lang=zh\\_cn](http://api.openweathermap.org/data/2.5/forecast/daily?id=524901&lang=zh_cn)

## Call back function for JavaScript code

Description:

To use JavaScript code you can transfer callback functionName to JSONP callback.

Examples of API calls:

[api.openweathermap.org/data/2.5/weather?q=London,uk&callback=test](http://api.openweathermap.org/data/2.5/weather?q=London,uk&callback=test)