

One Call API 3.2

By using the new OpenWeather One Call API 3.2, you receive essential weather data for a specific location by making just one call.

The One Call API provides weather data including:

- Current, daily weather
- Minute forecast for 1 hour
- Hourly forecast for 48 hours
- Hourly forecast for 24 hours
- Daily forecast for 8 days
- National weather alerts
- Historical weather data for 40+ years in the past

How to make an API call

```
https://api.openweathermap.org/data/3.0/onecall?lat={lat}&lon={lon}&exclude={part}&appid={API key}
```

Parameters:

- `lat, lon` - required - Geographical coordinates
- `appid` - required - Your unique API key, which you can find on your account page under "API key"
- `exclude` - optional - With the use of this parameter, you can choose which weather data you would like to see. This should be in the form of a comma-delimited list, no spaces.

Examples:

- Current
- Minutely
- Hourly
- Daily
- Alerts

`units` - optional - This will allow you to choose your preferred units of measurement. You can use `standard`, `metric`, and `imperial` units. If you do not indicate which units, they will be chosen by default.

`lang` - optional - you can use the `lang` parameter to receive the output in your language.

Example of an API Call

```
https://api.openweathermap.org/data/2.5/onecall?lat=33.44&lon=-94.04&exclude=hourly,daily&appid={API key}
```

Example of an API Response

```
"lat": 33.44,  
"lon": -94.04,  
"timezone": "America/Chicago",  
"timezone_offset": -21600,  
"current": {  
  "dt": 1618317040,  
  "sunrise": 1618282134,  
  "sunset": 1618333901,  
  "temp": 284.07,  
  "feels_like": 282.84,  
  "pressure": 1019,  
  "humidity": 62,  
  "dew_point": 277.08,  
  "uvi": 0.89,  
  "clouds": 0,  
  "visibility": 10000,  
  "wind_speed": 6,  
  "wind_deg": 300,  
  "weather": [  
    {  
      "id": 500,  
      "main": "Rain",  
      "description": "light rain",  
      "icon": "10d"  
    }  
  ],  
  "rain": {  
    "1h": 0.21  
  }  
},  
"minutely": [  
  {  
    "dt": 1618317060,  
    "precipitation": 0.205  
  },  
  ...  
],
```

```
"hourly": [
  {
    "dt": 1618315200,
    "temp": 282.58,
    "feels_like": 280.4,
    "pressure": 1019,
    "humidity": 68,
    "dew_point": 276.98,
    "uvi": 1.4,
    "clouds": 19,
    "visibility": 306,
    "wind_speed": 4.12,
    "wind_deg": 296,
    "wind_gust": 7.33,
    "weather": [
      {
        "id": 801,
        "main": "Clouds",
        "description": "few clouds",
        "icon": "02d"
      }
    ],
    "pop": 0
  },
  ...
]
}
"daily": [
  {
    "dt": 1618308000,
    "sunrise": 1618282134,
    "sunset": 1618333901,
    "moonrise": 1618284960,
    "moonset": 1618339740,
    "moon_phase": 0.04,
    "temp": {
      "day": 279.79,
      "min": 275.09,
      "max": 284.07,
      "night": 275.09,
      "eve": 279.21,
      "morn": 278.49
    },
    "feels_like": {
      "day": 277.59,
      "night": 276.27,
      "eve": 276.49,
      "morn": 276.27
    }
  }
]
```

```

    },
    "pressure": 1020,
    "humidity": 81,
    "dew_point": 276.77,
    "wind_speed": 3.06,
    "wind_deg": 294,
    "weather": [
      {
        "id": 500,
        "main": "Rain",
        "description": "light rain",
        "icon": "10d"
      }
    ],
    "clouds": 56,
    "pop": 0.2,
    "rain": 0.62,
    "uvi": 1.93
  },
  ...
},
"alerts": [
  {
    "sender_name": "NWS Tulsa",
    "event": "Heat Advisory",
    "start": 1597341600,
    "end": 1597366800,
    "description": "...HEAT ADVISORY REMAINS IN EFFECT FROM 1 PM THIS
AFTERNOON TO\n8 PM CDT THIS EVENING...\n* WHAT...Heat index values of 105
to 109 degrees expected.\n* WHERE...Creek, Okfuskee, Okmulgee, McIntosh,
Pittsburg,\nLatimer, Pushmataha, and Choctaw Counties.\n* WHEN...From 1 PM
to 8 PM CDT Thursday.\n* IMPACTS...The combination of hot temperatures and
high\nhumidity will combine to create a dangerous situation in which\nheat
illnesses are possible.",
    "tags": [
      "Extreme temperature value"
    ]
  },
  ...
]

```

Fields in the API response

- lat Geographical coordinates of the location (latitude)
- lon Geographical coordinates of the location (longitude)
- timezone Timezone name for the requested location

- `timezone_offset` Shift in seconds from UTC
- **current** **Current weather data API response**
 - `current.dt` Current time, Unix, UTC
 - `current.sunrise` Sunrise time, Unix, UTC
 - `current.sunset` Sunset time, Unix, UTC
 - `current.temp` Temperature. Units - default: kelvin, metric: Celsius, imperial: Fahrenheit. [How to change units used](#)
 - `current.feels_like` Temperature. This temperature parameter accounts for the human perception of weather. Units – default: kelvin, metric: Celsius, imperial: Fahrenheit.
 - `current.pressure` Atmospheric pressure on the sea level, hPa
 - `current.humidity` Humidity, %
 - `current.dew_point` Atmospheric temperature (varying according to pressure and humidity) below which water droplets begin to condense and dew can form. Units – default: kelvin, metric: Celsius, imperial: Fahrenheit.
 - `current.clouds` Cloudiness, %
 - `current.uvi` Current UV index
 - `current.visibility` Average visibility, metres. The maximum value of the visibility is 10km
 - `current.wind_speed` Wind speed. Wind speed. Units – default: metre/sec, metric: metre/sec, imperial: miles/hour. [How to change units used](#)
 - `current.wind_gust` (where available) Wind gust. Units – default: metre/sec, metric: metre/sec, imperial: miles/hour. [How to change units used](#)
 - `current.wind_deg` Wind direction, degrees (meteorological)
 - `current.rain`
 - `current.rain.1h` (where available) Rain volume for last hour, mm
 - `current.snow`
 - `current.snow.1h` (where available) Snow volume for last hour, mm
 - `current.weather`
 - `current.weather.id` [Weather condition id](#)
 - `current.weather.main` Group of weather parameters (Rain, Snow, Extreme etc.)
 - `current.weather.description` Weather condition within the group ([full list of weather conditions](#)). Get the output in [your language](#)
 - `current.weather.icon` Weather icon id. [How to get icons](#)
- **minutely** **Minute forecast weather data API response**
 - `minutely.dt` Time of the forecasted data, unix, UTC
 - `minutely.precipitation` Precipitation volume, mm
- **hourly** **Hourly forecast weather data API response**
 - `hourly.dt` Time of the forecasted data, Unix, UTC

- hourly.temp Temperature. Units – default: kelvin, metric: Celsius, imperial: Fahrenheit. [How to change units used](#)
- hourly.feels_like Temperature. This accounts for the human perception of weather. Units – default: kelvin, metric: Celsius, imperial: Fahrenheit.
- hourly.pressure Atmospheric pressure on the sea level, hPa
- hourly.humidity Humidity, %
- hourly.dew_point Atmospheric temperature (varying according to pressure and humidity) below which water droplets begin to condense and dew can form. Units – default: kelvin, metric: Celsius, imperial: Fahrenheit.
- hourly.uvi UV index
- hourly.clouds Cloudiness, %
- hourly.visibility Average visibility, metres. The maximum value of the visibility is 10km
- hourly.wind_speed Wind speed. Units – default: metre/sec, metric: metre/sec, imperial: miles/hour. [How to change units used](#)
- hourly.wind_gust (where available) Wind gust. Units – default: metre/sec, metric: metre/sec, imperial: miles/hour. [How to change units used](#)
- hourly.wind_deg Wind direction, degrees (meteorological)
- hourly.pop Probability of precipitation. The values of the parameter vary between 0 and 1, where 0 is equal to 0%, 1 is equal to 100%
- hourly.rain
 - hourly.rain.1h (where available) Rain volume for last hour, mm
- hourly.snow
 - hourly.snow.1h (where available) Snow volume for last hour, mm
- hourly.weather
 - hourly.weather.id [Weather condition id](#)
 - hourly.weather.main Group of weather parameters (Rain, Snow, Extreme etc.)
 - hourly.weather.description Weather condition within the group ([full list of weather conditions](#)). Get the output in [your language](#)
 - hourly.weather.icon Weather icon id. [How to get icons](#)
- **daily Daily forecast weather data API response**
 - daily.dt Time of the forecasted data, Unix, UTC
 - daily.sunrise Sunrise time, Unix, UTC
 - daily.sunset Sunset time, Unix, UTC
 - daily.moonrise The time of when the moon rises for this day, Unix, UTC
 - daily.moonset The time of when the moon sets for this day, Unix, UTC
 - daily.moon_phase Moon phase. 0 and 1 are 'new moon', 0.25 is 'first quarter moon', 0.5 is 'full moon' and 0.75 is 'last quarter moon'. The

periods in between are called 'waxing crescent', 'waxing gibous', 'waning gibous', and 'waning crescent', respectively.

- daily.temp Units – default: kelvin, metric: Celsius, imperial: Fahrenheit.
How to change units used
 - daily.temp.morn Morning temperature.
 - daily.temp.day Day temperature.
 - daily.temp.eve Evening temperature.
 - daily.temp.night Night temperature.
 - daily.temp.min Min daily temperature.
 - daily.temp.max Max daily temperature.
- daily.feels_like This accounts for the human perception of weather. Units – default: kelvin, metric: Celsius, imperial: Fahrenheit. **How to change units used**
 - daily.feels_like.morn Morning temperature.
 - daily.feels_like.day Day temperature.
 - daily.feels_like.eve Evening temperature.
 - daily.feels_like.night Night temperature.
- daily.pressure Atmospheric pressure on the sea level, hPa
- daily.humidity Humidity, %
- daily.dew_point Atmospheric temperature (varying according to pressure and humidity) below which water droplets begin to condense and dew can form. Units – default: kelvin, metric: Celsius, imperial: Fahrenheit.
- daily.wind_speed Wind speed. Units – default: metre/sec, metric: metre/sec, imperial: miles/hour. **How to change units used**
- daily.wind_gust (where available) Wind gust. Units – default: metre/sec, metric: metre/sec, imperial: miles/hour. **How to change units used**
- daily.wind_deg Wind direction, degrees (meteorological)
- daily.clouds Cloudiness, %
- daily.uvi The maximum value of UV index for the day
- daily.pop Probability of precipitation. The values of the parameter vary between 0 and 1, where 0 is equal to 0%, 1 is equal to 100%
- daily.rain (where available) Precipitation volume, mm
- daily.snow (where available) Snow volume, mm
- daily.weather
 - daily.weather.id **Weather condition id**
 - daily.weather.main Group of weather parameters (Rain, Snow, Extreme etc.)
 - daily.weather.description Weather condition within the group (**full list of weather conditions**). Get the output in **your language**
 - daily.weather.icon Weather icon id. **How to get icons**

- alerts **National weather alerts data from major national weather warning systems**
 - alerts.sender_name Name of the alert source. Please read here the [full list of alert sources](#)
 - alerts.event Alert event name
 - alerts.start Date and time of the start of the alert, Unix, UTC
 - alerts.end Date and time of the end of the alert, Unix, UTC
 - alerts.description Description of the alert
 - alerts.tags Type of severe weather

List of weather condition codes

- List of [weather condition codes](#) with corresponding icons (range of thunderstorm, lighting, rain, snow, clouds, and extreme conditions like tornado, hurricane, tsunami, and more).

Other Features

Units of measurement

API Call

```
http://api.openweathermap.org/data/2.5/onecall?lat={lat}&lon={lon}&units={units}
```

Parameters

units - optional - This will allow you to choose your preferred units of measurement. You can use standard, metric, and imperial units. If you do not indicate which units, they will be chosen by default.

Temperature is available in Fahrenheit, Celsius, and Kelvin units.

Wind speed is available in miles/hour and meter/second.

- For temperature in Fahrenheit and wind speed in miles/hour, use units=imperial
- For temperature in Celsius and wind speed in meter/second, use units=metric
- Temperature in Kelvin and wind speed in meter/second is used by default, so there is no need to use the units parameter in the API call if you want this

Standard (default, Temperature in Kelvin and wind speed in meter/second)

```
api.openweathermap.org/data/2.5/onecall?lat=30.489772&lon=-99.771335
```

Metric (Temperature in Celsius and wind speed in meter/second)

```
api.openweathermap.org/data/2.5/onecall?lat=30.489772&lon=-99.771335&
units=metric
```

Imperial (Temperature in Fahrenheit and wind speed in miles/hours)

```
api.openweathermap.org/data/2.5/onecall?lat=30.489772&lon=-99.771335&
units=imperial
```

Multilingual support

You can use lang parameter to get the output in your language. The contents will be translated to your chosen language.

API call

```
http://api.openweathermap.org/data/2.5/onecall?lat={lat}&lon={lon}&lang={lang}
```

Parameters

lang - optional - you can use the lang parameter to receive the output in your language.

OpenWeather One Call API 3.2 supports the following languages:

- af Afrikaans
- al Albanian
- ar Arabic
- az Azerbaijani
- bg Bulgarian
- ca Catalan
- cz Czech
- da Danish
- de German
- el Greek
- en English
- eu Basque

- fa Persian (Farsi)
- fi Finnish
- fr French
- gl Galician
- he Hebrew
- hi Hindi
- hr Croatian
- hu Hungarian
- id Indonesian
- it Italian
- ja Japanese
- kr Korean
- la Latvian
- lt Lithuanian
- mk Macedonian
- no Norwegian
- nl Dutch
- pl Polish
- pt Portuguese
- pt_br Português Brasil
- ro Romanian
- ru Russian
- sv, se Swedish
- sk Slovak
- sl Slovenian
- sp, es Spanish
- sr Serbian
- th Thai
- tr Turkish
- ua, uk Ukrainian
- vi Vietnamese
- zh_cn Chinese Simplified
- zh_tw Chinese Traditional
- zu Zulu