

# Weather Data API Documentation

## Overview

The Weather Data API provides real-time and forecasted weather information for any location worldwide. Developers can integrate this API into applications to retrieve current conditions, 7-day forecasts, and severe weather alerts.

**Base URL:** <https://api.weatherdata.io/v1/>

**Format:** JSON responses only

**Authentication:** API key required

## Authentication

All requests must include your unique API key as a query parameter:

GET /current?city=New York&apikey=YOUR\_API\_KEY

| Parameter | Type   | Description                                        |
|-----------|--------|----------------------------------------------------|
| apikey    | string | Required. Unique API key issued upon registration. |

Note: Keys are rate-limited to 60 requests per minute.

## Endpoints

### 1. Current Weather

Retrieve current weather conditions for a specified location.

**Endpoint:** /current

**Method:** GET

| Parameter | Type   | Required | Description                                |
|-----------|--------|----------|--------------------------------------------|
| city      | string | Optional | City name (e.g., 'Paris')                  |
| lat       | float  | Optional | Latitude (used with lon)                   |
| lon       | float  | Optional | Longitude (used with lat)                  |
| units     | string | Optional | "metric" or "imperial" (default: "metric") |

Sample Request

GET /current?city=London&units=metric&apikey=YOUR\_API\_KEY

Sample Response

```
{
  "location": "London, GB",
  "temperature": 18,
  "units": "C",
  "condition": "Partly Cloudy",
  "humidity": 72,
```

```
    "wind_speed": 4.5
  }
```

## 2. 7-Day Forecast

Retrieve a daily forecast for the next 7 days.

**Endpoint:** /forecast/daily

**Method:** GET

| Parameter | Type   | Required | Description            |
|-----------|--------|----------|------------------------|
| city      | string | Optional | City name              |
| lat       | float  | Optional | Latitude               |
| lon       | float  | Optional | Longitude              |
| units     | string | Optional | "metric" or "imperial" |

Sample Request

```
GET /forecast/daily?city=Tokyo&units=imperial&apikey=YOUR_API_KEY
```

Sample Response

```
{
  "location": "Tokyo, JP",
  "forecast": [
    {
      "date": "2025-09-09",
      "high": 82,
      "low": 70,
      "condition": "Rain"
    },
    {
      "date": "2025-09-10",
      "high": 84,
      "low": 69,
      "condition": "Sunny"
    }
  ]
}
```

## 3. Severe Weather Alerts

Get severe weather alerts for a location, if available.

**Endpoint:** /alerts

**Method:** GET

Sample Request

```
GET /alerts?city=Miami&apikey=YOUR_API_KEY
```

Sample Response

```
{
  "location": "Miami, US",
  "alerts": [
```

```
{
  "title": "Tropical Storm Warning",
  "description": "Winds up to 60 mph expected through Thursday.",
  "severity": "Severe",
  "effective": "2025-09-09T12:00:00Z",
  "expires": "2025-09-10T12:00:00Z"
}
]
```

## Error Codes

| Code | Meaning           | Example Cause              |
|------|-------------------|----------------------------|
| 400  | Bad Request       | Missing required parameter |
| 401  | Unauthorized      | Invalid or missing API key |
| 404  | Not Found         | Location not recognized    |
| 429  | Too Many Requests | Rate limit exceeded        |
| 500  | Server Error      | Internal API error         |

## Example Use Case

Scenario: A travel app developer wants to display the current temperature and 7-day forecast for destinations users search for.

Solution: 1. Use /current to fetch current conditions. 2. Use /forecast/daily to display upcoming weather trends. 3. Use /alerts to notify users of severe weather.