PressureNet Data API

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http://pressurenet.io

Cumulonimbus provides a simple API for customers to access our live stream. All communication takes place through HTTPS requests and responses. A client can make a simple HTTPS request and specify desired parameters. Our server will respond with the data that matches the set parameters.

Some technical work is required on the customer's end. Cumulonimbus is happy to assist in any way we can to enable your efficient and simple access to the data. We're aiming to make this API smoother and better, so we will soon be offering a web interface to configure and view the data and your API usage. Please email us at software@cumulonimbus.ca any feedback you have.

Request

The customer will send HTTPS requests to https://pressurenet.io/live/ with the following parameters and options. Larger requests (expected >50,000 results) should be split into multiple smaller requests either by location or time segments.

Time values are represented as the number of milliseconds since 00:00:00 Coordinated Universal Time (UTC), 1 January 1970 (Unix epoch).

Table of Parameters

Parameter	Value	Action	Comments
start_time	ms since Unix epoch	Filter by start time	
end_time	ms since Unix epoch	Filter by end time	
min_lat	latitude	Filter by latitude	-90 to 90
max_lat	latitude	Filter by latitude	-90 to 90
min_lon	longitude	Filter by longitude	-180 to 180

max_lon	longitude	Filter by longitude	-180 to 180
limit	number	Limit query results	Max. 10,000
format	json	Return data in JSON format	Default
format	xml	Return data in XML format	
api_key	API key	Authenticates user	Always required

Response

The server will respond with the following fields and values.

Field	**Value**
user_id	Unique ID of the user (hash of device ID)
latitude	Latitude of measurement
longitude	Longitude of measurement
location_accuracy	Accuracy/confidence level for location data
date_recorded	Time of measurement (milliseconds since Unix epoch)
tzoffset	User's timezone
measurement	Atmospheric pressure in millibars
reading_accuracy	Accuracy/confidence of the pressure measurement
sharing	Sharing privacy level
client_key	Unique ID of the data source client application
observation_type	'reading' could be pressure, temperature or humidity
observation_unit	Unit of 'reading'
provider	Location type: GPS, network

Sharing Levels

Everyone who contributes data to pressureNET sets a privacy/sharing setting that defines how we are allowed to distribute the data. The sharing options available to users are:

- **Nobody**
  - No data is sent from the device
- **Cumulonimbus (Us)**
  - Only Cumulonimbus will see this data; it is not available in the API
- **Us and Researchers**
  - Only Academic Researchers are allowed to access this data; it will not be returned in your API call unless we have confirmed you are a researcher.
- **Us, Researchers and Forecasters**
  - Both researchers and private forecasters are allowed to access this data
- **Public**
  - Everyone can access this data.

Example

We recommend that you set up a recurring task on a server to access our live stream. With the flexibility we provide in this API there are many methods you can use to establish the data stream on your end. Here's a simple python script that will make an API call and print the results to the screen. This can be modified to run in a cron job and save the output to a file or database.

```
# demo/example python code to make
# an API call and print results
import urllib2
data =
urllib2.urlopen('https://pressurenet.io/live/?min_lat=44.77865108875515&max_la
t=47.77865108875515&min_lon=-74.93251647949216&max_lon=-70.93251647949216&star
t_time=1351396800000&end_time=1359694800000&format=json&api_key=APIKEY')
content = data.read()
print content
```