

# Quantified Planet API

## Overview

The Quantified Planet service is designed to store sensor data and to allow for queries on sensor data over specific times and areas.

To get an API token (also called API keys), which must be used in all API requests, go to either <http://quantifiedplanet.org/> or <https://api.quantifiedplanet.org> and register as a user. You will then be able to go to either dashboard -> settings (for quantifiedplanet.org) or to the 'Your Page' tab (for api.quantifiedplanet.org) to see your API token.

All data in quantified planet is associated with a device and a user. A device can be an atmospheric quality sensor in downtown New York, or it can be a mobile Lawn Mower from Husqvarna, or anything in between.

A list of the publicly available APIs can be found at <https://api.quantifiedplanet.org> together with instructions on how to construct the calls and sample JSON output expected.

## Example of usage

If you have a sensor (or just want to test the API) you can send your own sensor data using the xmit endpoint.

<https://api.quantifiedplanet.org/api/?target=xmit&metric=temperature&value=1&lat=1&long=1&alt=1&dtype=iOS7&dmodel=iPhone&daddress=abcdef1234567890&type='Rural'&status='Active'&name='foobar'&code='17'&level='1'&stage='pilot'&tags='projectX'&apitoken=xxxxyyyyyzzzzz>

Note that the API is designed to work for a large number of vendors and have a lot of parameters which are not crucial but can be helpful for certain edge-cases. The parameters which are essential is metric,value,lat,long,dtype,dmodel and daddress.

The last three parameters defines the device, and it will upon a first successful xmit be associated with the user whose API token was used to send the request. Due to storage optimization, it can take up to a couple of minutes for the device to show under the user.

There are several ways to read the data you just submitted, but the most simple is to query the device. You will get the device id back as a result of the xmit request, but it is simple to construct it manually if needed, since it is merely dtype+'\_'+dmodel+'\_'+address.

To query data from the device you can do the following:

<https://api.quantifiedplanet.org/api/?target=getAllMetricValuesForDevice&metric=temperature&deviceid=abcdef1234567890&apitoken=xxxxyyyyyzzzz&start=2017-03-14T13:39:18.764Z&end=2017-03-17T13:39:18.764Z>

Note that this, and most other API endpoints allow to narrow down the search for results between a start and an end time. If these are omitted, the system will assume you meant the last 24 hours.

## Cities

Many API calls are geographic in nature, and while it is possible to do a query for a specific lat/long bounding box, a number of cities have been defined as mnemonic shorthand for common boxes. The cities also define places where quantified planet continually load environmental data from external systems and makes them available through the same API as everything else.

To get a list of cities, you can make the API call:

<https://api.quantifiedplanet.org/api/?target=getCities&apitoken=xxxxyyyyyzzzz>

You can then use a city name to get all temperature data (truncated to last 1000 entries) for a city by the following call:

<https://api.quantifiedplanet.org/api/?target=getAllMetricValuesForCity&city=San&20Francisco&metric=temperature&apitoken=xxxxyyyyyzzzz&start=2017-03-14T13:39:18.764Z&end=2017-03-17T13:39:18.764Z>

## Graphing and plotting libraries

Here are some resources which might be useful when making things with the data available:

<https://blog.sicara.com/compare-best-javascript-chart-libraries-2017-89fbe8cb112d>  
<https://www.slant.co/topics/3890/~javascript-charting-libraries>

<http://www.webchick.net/node/132> (Plotting data on google mapos directly from google sheets)  
<https://developers.google.com/chart/interactive/docs/gallery/map>

## List of common metric names

(omit quotation marks in API calls):

"temperature"  
"humidity"  
"rain\_60min"  
"rain\_24h"  
"rain\_live"  
"rain\_timeutc"  
"wind\_strength"  
"wind\_angle"  
"gust\_strength"  
"gust\_angle"  
:"wind\_timeutc"  
"pressure"  
"h"  
"no2"  
"p"  
"pm10"  
"t"  
"pm25"  
"o3"  
"co"  
"so2"  
"uvi"  
"r"  
"w"  
"d"  
"wd"  
"light\_value"  
"solarinsolation"  
"airpressure"  
"windspeed"  
"winddirection"  
"rainfall"  
"nox"  
"level"

"leveldownstream"

"tapping"

"flow"

"sound\_value"

"light"

"sound"

"uv"

"earthquake"

"Air\_quality"