

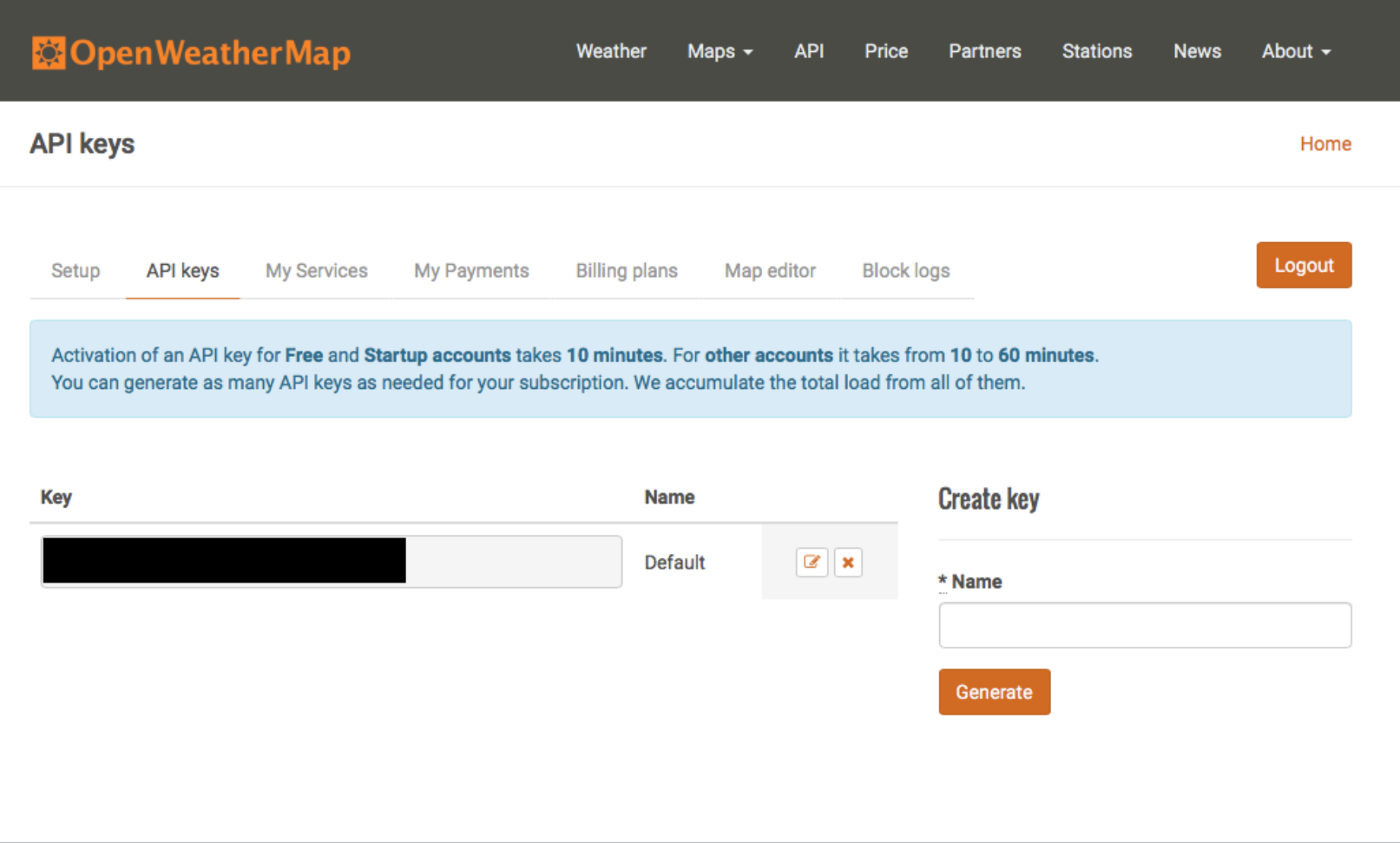
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API Intro Lab

OpenWeatherMaps API Key

- Create an account at openweathermap.org
- Go to the "API Keys" tab and record your API Key



The screenshot shows the OpenWeatherMap website's API keys management interface. At the top is a dark navigation bar with the OpenWeatherMap logo and links for Weather, Maps, API, Price, Partners, Stations, News, and About. Below this is a white header area with 'API keys' on the left and a 'Home' link on the right. A secondary navigation bar contains links for Setup, API keys (which is underlined), My Services, My Payments, Billing plans, Map editor, and Block logs, followed by an orange 'Logout' button. A light blue informational box states that API key activation for Free and Startup accounts takes 10 minutes, while for other accounts it takes 10 to 60 minutes, and that users can generate as many keys as needed. The main content area is divided into two sections. The left section, titled 'Key', shows a table with one entry: a blacked-out key, the name 'Default', and edit/delete icons. The right section, titled 'Create key', features a text input field labeled '* Name' and an orange 'Generate' button.

Key	Name	
[Redacted]	Default	[Edit] [Delete]

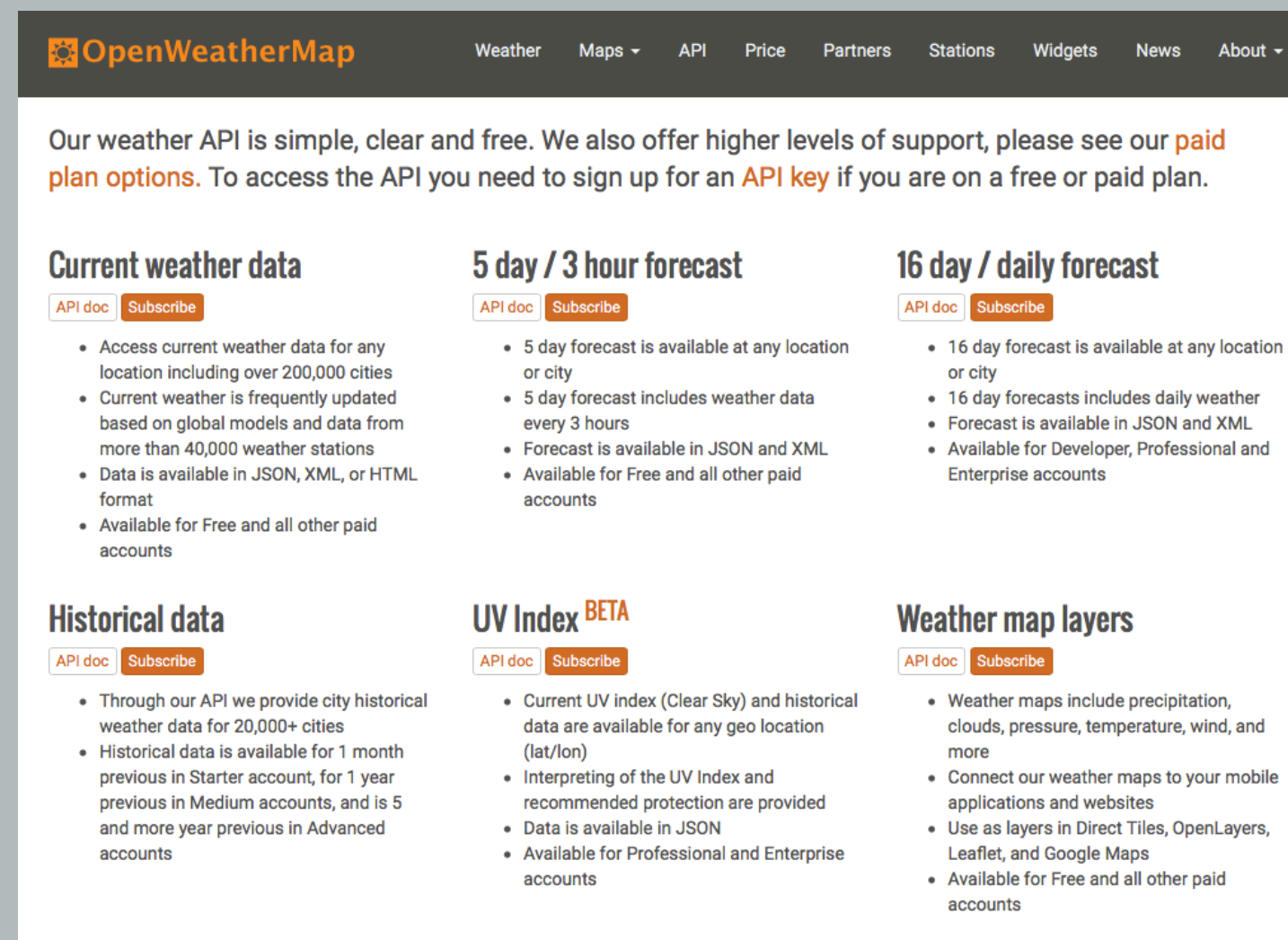
Create key

* Name

[Generate]

OpenWeatherMaps API Docs

- Go to the openweathermap.org/api page and spend some time looking over their available APIs for free accounts




The screenshot shows the OpenWeatherMap API documentation page. At the top is a dark navigation bar with the OpenWeatherMap logo and links for Weather, Maps, API, Price, Partners, Stations, Widgets, News, and About. Below the navigation bar, a paragraph states: "Our weather API is simple, clear and free. We also offer higher levels of support, please see our **paid plan options**. To access the API you need to sign up for an **API key** if you are on a free or paid plan."

The page is organized into six columns, each representing a different API feature. Each column has a title, a sub-header, a list of bullet points, and two buttons: "API doc" and "Subscribe".

- Current weather data**
 - Access current weather data for any location 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
 - Available for Free and all other paid accounts
- 5 day / 3 hour forecast**
 - 5 day forecast is available at any location or city
 - 5 day forecast includes weather data every 3 hours
 - Forecast is available in JSON and XML
 - Available for Free and all other paid accounts
- 16 day / daily forecast**
 - 16 day forecast is available at any location or city
 - 16 day forecasts includes daily weather
 - Forecast is available in JSON and XML
 - Available for Developer, Professional and Enterprise accounts
- Historical data**
 - Through our API we provide city historical weather data for 20,000+ cities
 - Historical data is available for 1 month previous in Starter account, for 1 year previous in Medium accounts, and is 5 and more year previous in Advanced accounts
- UV Index ^{BETA}**
 - Current UV index (Clear Sky) and historical data are available for any geo location (lat/lon)
 - Interpreting of the UV Index and recommended protection are provided
 - Data is available in JSON
 - Available for Professional and Enterprise accounts
- Weather map layers**
 - Weather maps include precipitation, clouds, pressure, temperature, wind, and more
 - Connect our weather maps to your mobile applications and websites
 - Use as layers in Direct Tiles, OpenLayers, Leaflet, and Google Maps
 - Available for Free and all other paid accounts

Current Weather Docs

- View the "Current Weather" API call

WeatherMaps ▾APIPricePartnersStationsWidgetsNewsAbout ▾

Current weather dataHome / API / Current weather

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

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.

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

api.openweathermap.org/data/2.5/weather?q=London,uk

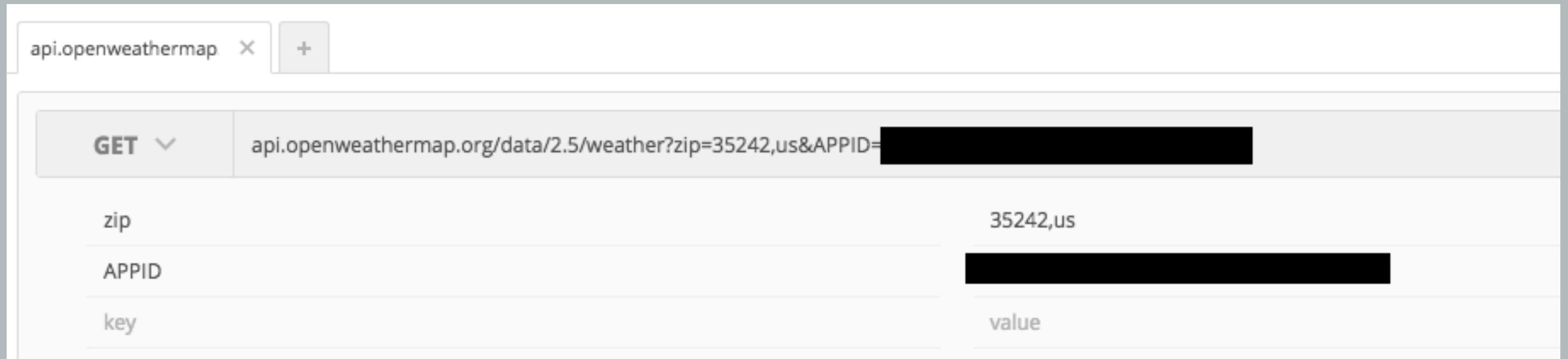
By city ID

Description:

- Call current weather data for one location
 - By city name
 - By city ID
 - By geographic coordinates
 - By ZIP code
- Call current weather data for several cities
 - Cities within a rectangle zone
 - Cities in cycle
 - Call for several city IDs
- Bulk downloading
- Parameters of API respond
 - JSON
 - XML
 - List of condition codes
 - Min/max temperature in current weather API and forecast API
- Other features
 - Format
 - Search accuracy
 - Units format
 - Multilingual support
 - Call back function for JavaScript code

Postman GET Request

- Open Postman and create a new tab if one isn't open
- Enter the request URL into the URL box in Postman
- Add a parameter called APPID and set it to your API Key that you recorded earlier
- Add another parameter called zip and set the value to "<YOUR ZIP CODE>,us"
- Send the request by clicking the "Send" button

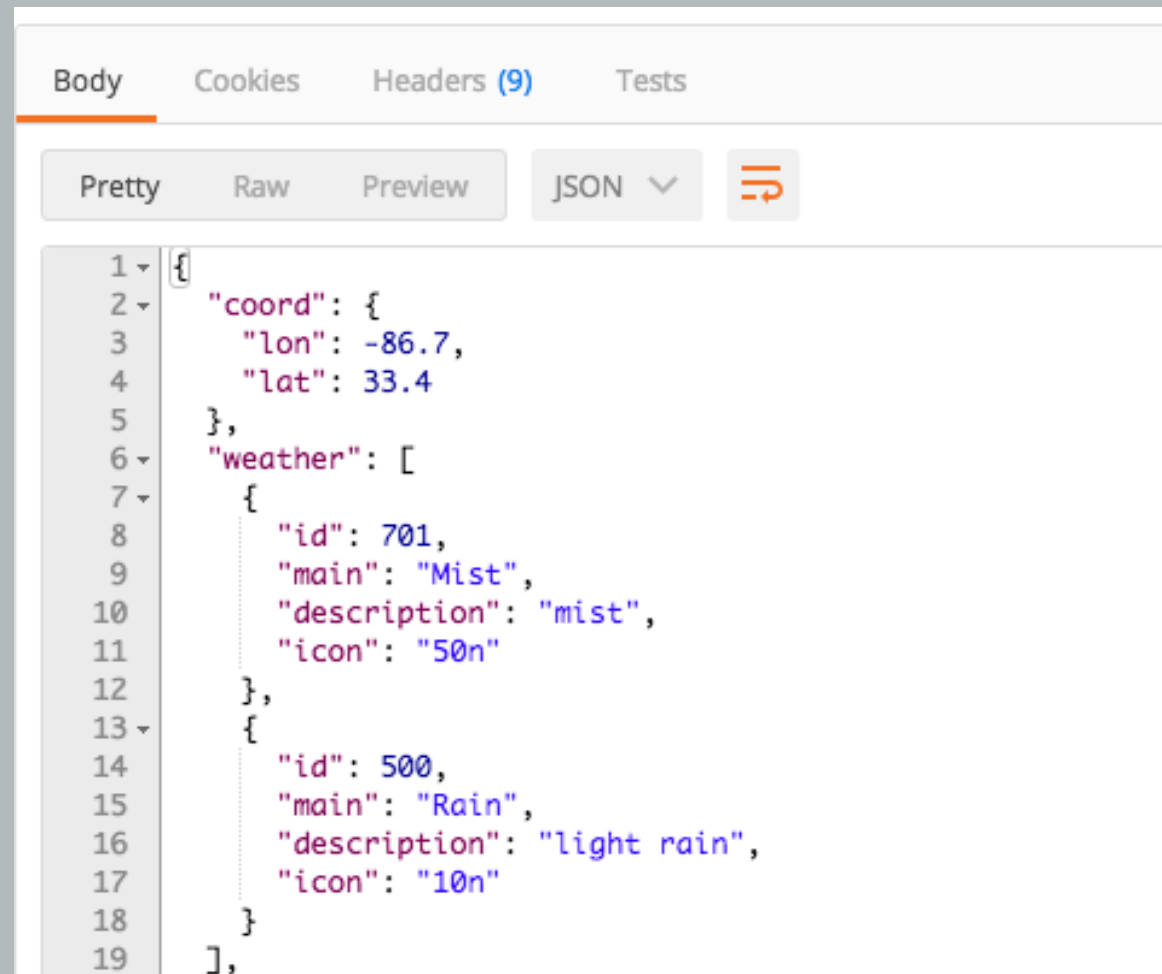


The screenshot shows the Postman application window. At the top, there is a tab labeled 'api.openweathermap' with a close button (X) and a plus sign (+) to add more tabs. Below the tab bar, the request method is set to 'GET' with a dropdown arrow. The URL is 'api.openweathermap.org/data/2.5/weather?zip=35242,us&APPID=' followed by a blacked-out API key. Below the URL bar, there is a table for query parameters:

zip	35242,us
APPID	[Redacted]
key	value

Postman GET Response

- Check your results in the results window
- Look at the body tab, make sure you are set to "Pretty" mode w/ JSON selected as the response type



The screenshot shows the Postman interface with the 'Body' tab selected. The response is displayed in 'Pretty' mode, showing a JSON object with 'coord' and 'weather' fields. The 'weather' field is an array of two objects, each containing 'id', 'main', 'description', and 'icon' properties. The first object represents 'Mist' and the second represents 'Rain'.

```
1 {  
2   "coord": {  
3     "lon": -86.7,  
4     "lat": 33.4  
5   },  
6   "weather": [  
7     {  
8       "id": 701,  
9       "main": "Mist",  
10      "description": "mist",  
11      "icon": "50n"  
12    },  
13    {  
14      "id": 500,  
15      "main": "Rain",  
16      "description": "light rain",  
17      "icon": "10n"  
18    }  
19  ],  
}
```

Decoding the Response

- Does the response make sense?
- Are they returning a single object or an array with this request?
- Using the docs, see if you can decode some of the response
- Post your decoded response (in localized human readable form) to the Spark room. (bonus, also post your JSON response as a code block using Markup)

Bonus

- Try some other search parameters with the "Current Weather" API
- Try at least one other API available to the free tier

Part 2, Post a Message to Spark

- Go to developer.ciscospark.com
- Click on documentation
- On the left hand side click the Rooms API Reference
- Click the GET method
- Make sure the Test toggle is turned on
- Click the "Run" button

Posting a Message to Spark, First Collect the desired RoomId

- In the right hand side of the panel you should see 200/success and a JSON Response
- Is this an object or array response?
- Scroll through your list of Spark Rooms and find the "TekLinks Coding Camp Q1 2017" room
- Record the id. This is the RoomId

Post via the Messages API

- On the left hand side click on the Messages API Reference
- Click on the POST method
- Paste the recorded RoomId into the "roomId" field
- Notice how it builds your JSON request object as you fill in the parameters to the form
- Enter some valid Markdown text in the "markdown" field to enthusiastically let us know you successfully posted a message to Spark
 - Tip - Click the M in the Spark client to get a Markdown cheat sheet for Spark
- Click the Run button
- Did your message post to the Spark room?