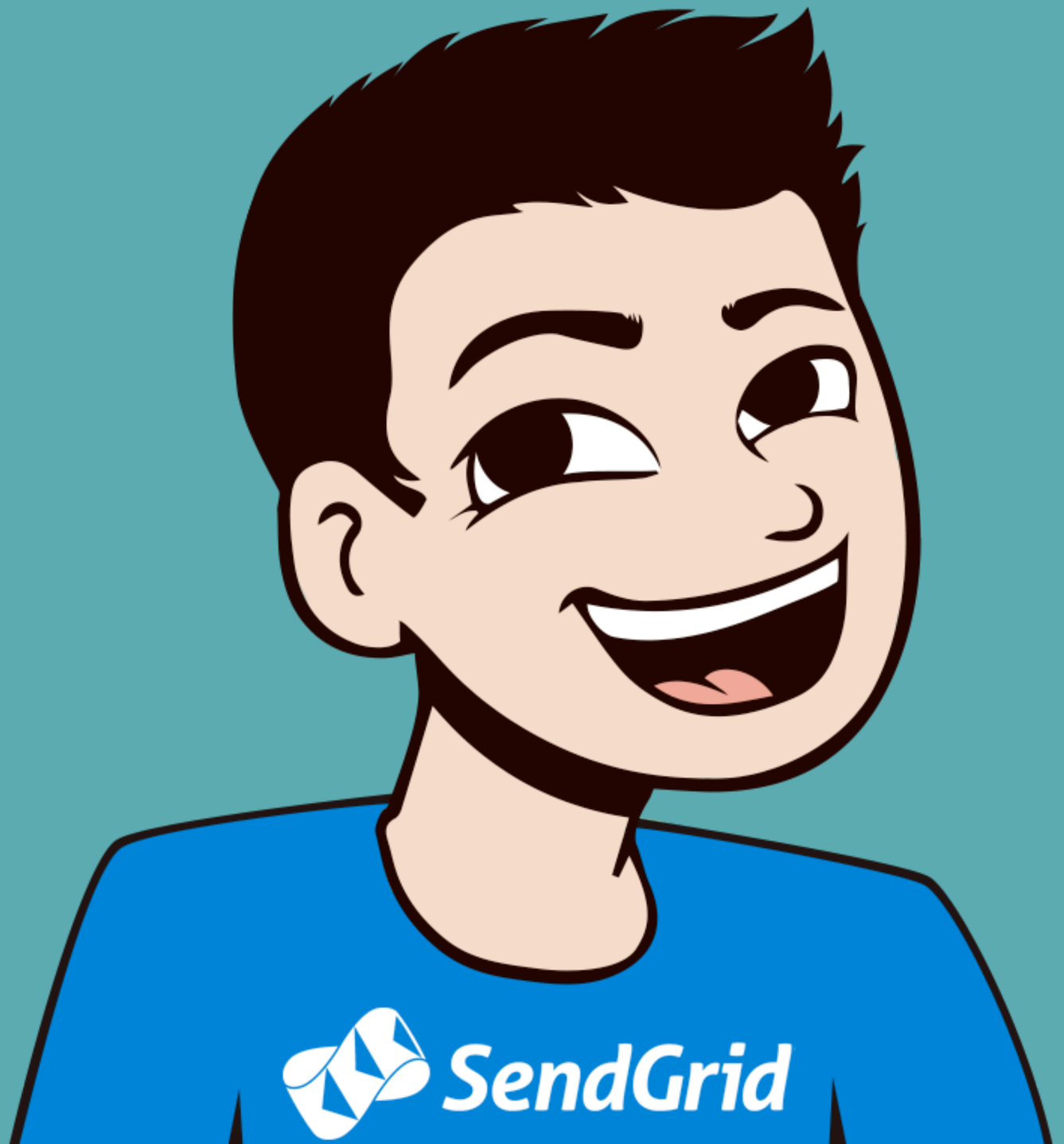
Building for Developers

Increasing the Awesome in Your Open Source or API Platform

Nick Quinlan
SendGrid Developer Evangelist

nickq.me/talks/building-for-developers

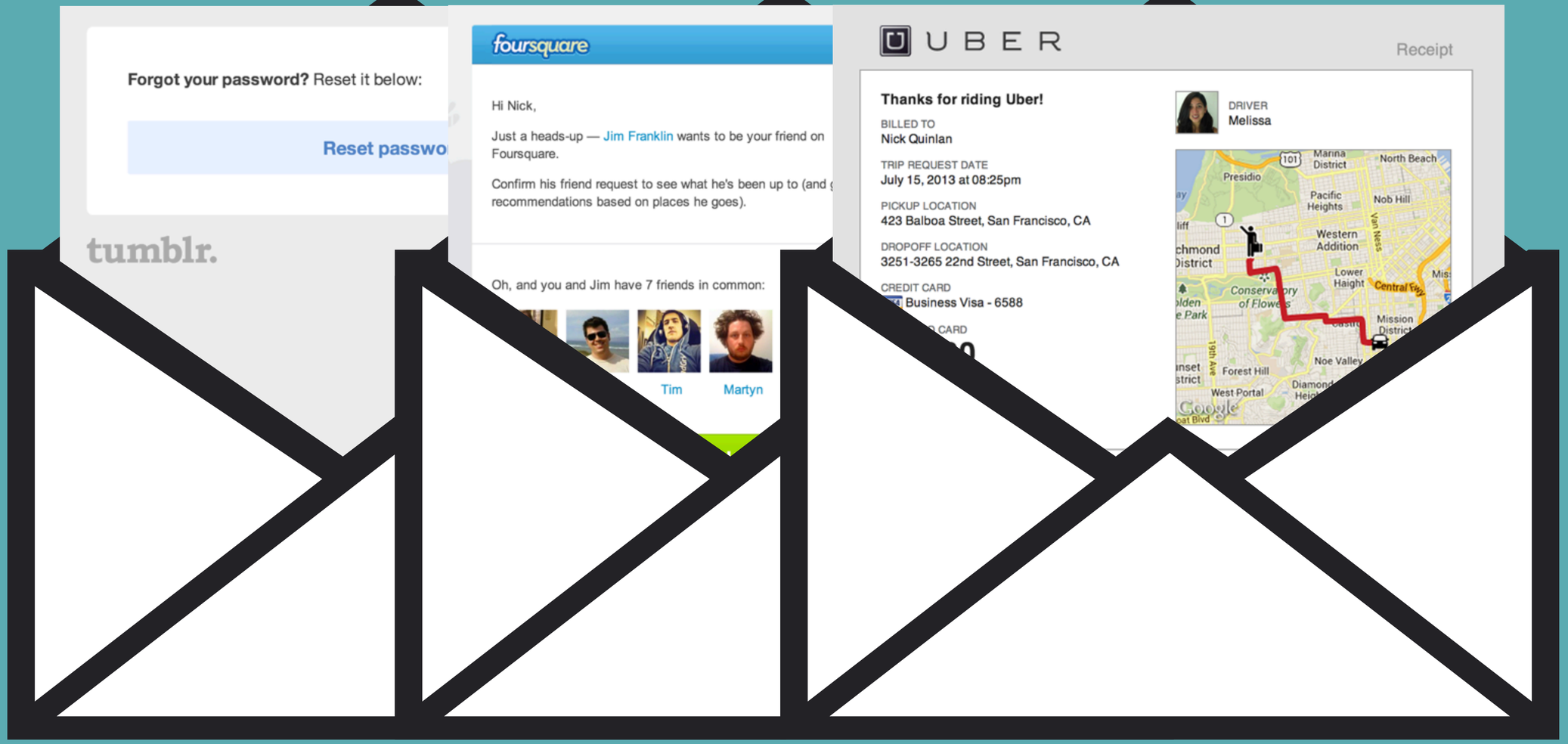


Hi, I'm **Nick**

@YayNickQ

SendGrid®

Transactional Email



Transactional Email

```
SERVER SAYS: 220 some_mailserver.net ESMTP Sendmail 8.13.8/8.13.8;
Tue, 6 May 2014 12:34:07 -0700
YOU SAY:     helo localhost.localdomain
SERVER SAYS: 250 some_mailserver..net Hello ???? [???.???.???.???]
(may be forged), pleased to meet you
```

```
POST /api/mail.send.json
Host: api.sendgrid.com

to=example@example.com&from=someone@example.com&subject=hi&text=Loo
ns%20sure%20are%20cool.
```

```
$sendgrid->send($email);
```

SendGrid

API, Docs & Client Libraries

SendGrid: API, Docs & Client Libraries

API

```
To: example@example.com
From: nick@sendgrid.com
X-SMTPAPI: { "cool": ["content", "classification"] }
Subject: Look at this cool thing
```

X-SMTPAPI:

```
{
  "to": [
    "ben@sendgrid.com",
    "joe@sendgrid.com"
  ],
  "sub": {
    "%name%": [
      "Ben",
      "Joe"
    ]
  },
  "category": [
    "Orders"
  ],
  "unique_args": {
    "orderNumber": "12345",
    "eventID": "6789"
  }
}
```

SMTPAPI (2009-Today)

- **Language** Perl, Python
- **Maintainer** Founders, Engineers
- **Practices** Innovative, Cool, Awesome

SMTPAPI (Soon)

- **Language** Go
- **Maintainer** Founders, Engineers
- **Practices** Innovative, Cool, Awesome

```
GET /api/mail.send.json?api_user=username&api_key=password
```

API (Early)

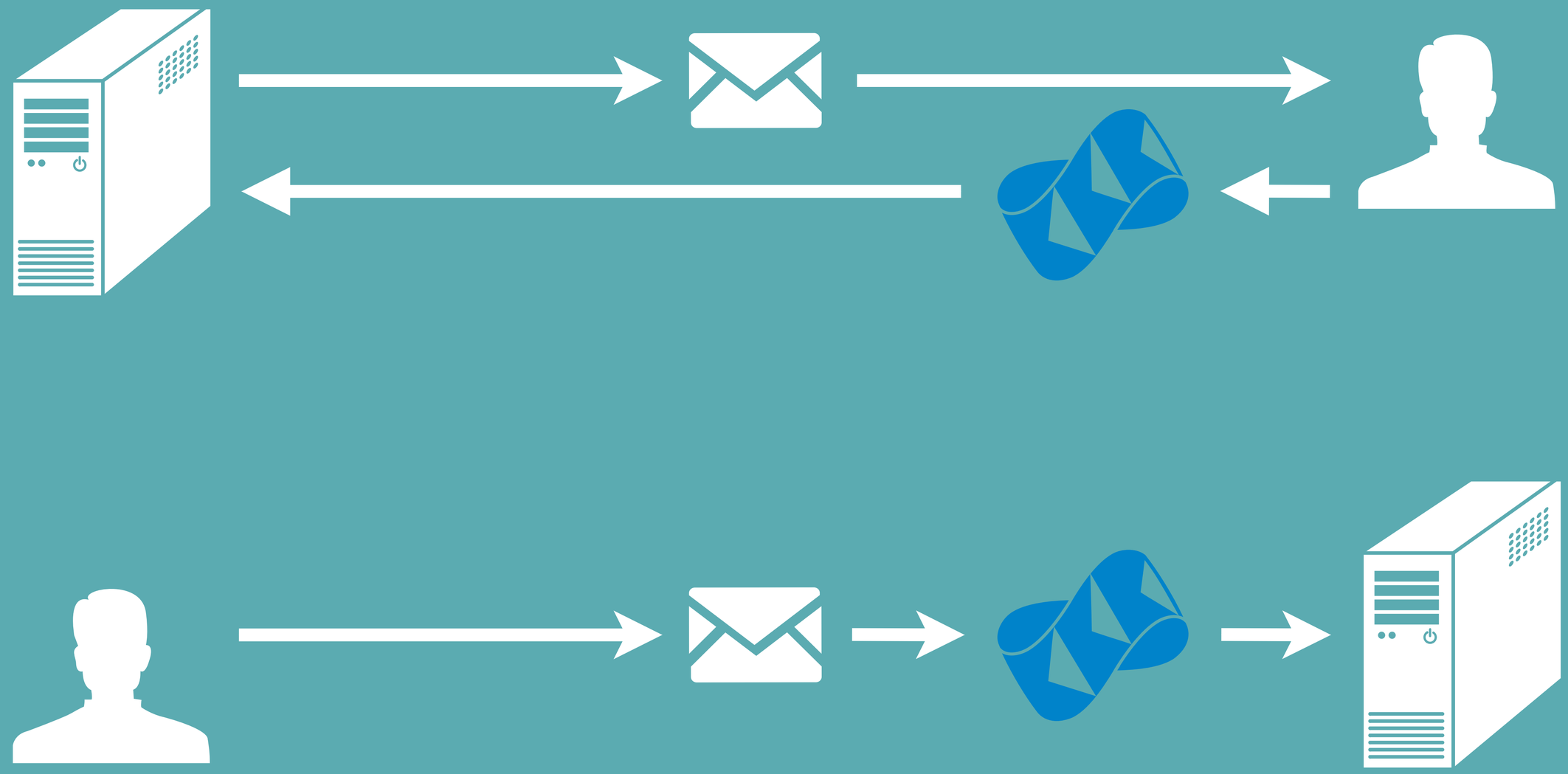
- **Language** PHP
- **Maintainer** Founders
- **Practices** Ehhh

API (Later)

- **Language** PHP & Python
- **Maintainer** Founders, Engineers
- **Practices** Ehhh

API (Now - Soon)

- **Language** Go
- **Maintainer** Founders, Engineers & Dev. Rel.
- **Practices** REST, Hypermedia



Webhooks (Early - Now)

- **Language** Python
- **Maintainer** Founders, Engineers
- **Practices** Webhook

Webhooks (Soon)

- **Language** Go
- **Maintainer** Engineers
- **Practices** Webhook!

Docs

SendGrid Wiki [SendGrid]
https://web.archive.org/web/20100208082407/http://wiki.sendgrid.com/doku.php?
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[[SendGrid Wiki]]

SENDGRID

Show pagesource Trace: » SendGrid Wiki

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Old revisions

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Table of Contents

- Welcome to the SendGrid Wiki
  - What is SendGrid?
  - User Information
  - API
  - Plugin Development

Welcome to the SendGrid Wiki

Here we have all the documentation required for you to get started using our service or start developing plugins.

What is SendGrid?

Sendgrid solves the problems companies have when sending large quantities of transactional emails. We are a simple drop in replacement email cloud service gateway that increases deliverability rate and keeps emails out of junk folders.

User Information

- Get Started – Learn how easy it is to integrate (only 3 SMTP setting changes). Sample code also available.
  - Whitelabel – For Silver Plans or higher companies can whitelabel their emails.
  - Domain Keys – For people who want to understand the details of using Domain Keys, and how this affects the display of 'on behalf of' from some ISPs / mail readers
- Features and plugins – A little overview of some of the features we provide.

API

- SMTP API – JSON header included on your outgoing emails to send multiple emails in one request, enable/disable filters, etc.
  - Categories – Associate clicks, opens, bounces, and other statistics to a category you define.
- Web API – Retrieve statistics, edit bounces/spam reports/unsubscribes, and send email.
- Event API – Receive notifications on web forms about events such as clicks, bounces, spam reports, opens, and unsubscribes.
- Parse API – Point a subdomain MX record to our server, we parse incoming emails and post attachments and body contents to your web forms. Useful to have uploads@subdomain.yourdomain.com or interact with users through email.

Plugin Development

Documentation coming soon!

Docs (2009-2010)

- **Software** DokuWiki
- **Maintainer** Founders
- **User Friendliness** Ehhh

SendGrid Documentation

https://web.archive.org/web/20120408133045/http://docs.sendgrid.com/

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SendGrid

DOCUMENTATION API WORKSHOP COMMUNITY

Ask away or enter a search term SEARCH

Documentation

Get Started

- Signing up for an account
- Getting started receiving email
- Get Started Sending Email / Integrate
- Configure DNS
- Configure Apps
- Make the most of your account

API

- Categories
- SMTP API
- Web API
- Event API
- Parse API

Documentation

- Get Started
- Delivery Metrics
- API
- API Libraries
- Apps
- Newsletter

KnowledgeBase

- Valid Passwords
- Billing Error Code
- How To: Eliminate the On Behalf Of Message
- SPF Records: Don't have more than 10 DNS lookups!
- What is Throttling?

Community

CONTACT SUPPORT

Docs (2010-2012)

- **Software** WordPress
- **Maintainer** Developers/Technical Writer
- **User Friendliness** Ehhh

Docs Home - SendGrid Do

https://web.archive.org/web/20130805084136/http://sendgrid.com/docs/

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SendGrid

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  - Billing and Account Changes
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  - Reconfirmation Email Campaigns
  - Sending Practices and Limitations
  - SMTP Ports
  - What is Throttling?
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    - Ruby on Rails
    - Symfony
    - Zend
  - Mail Clients

Documentation / Docs Home

Getting Started With SendGrid

Overview

Find out more about what SendGrid does and how it can help solve your email deliverability problems.

What is SendGrid?

Integrate

Add email capability to your application, whether it's WordPress, Ruby on Rails, Drupal, Codeigniter, and more.

Start Sending Email

Code Examples

Code for common use cases in a variety of languages to help you get going on your project.

Show Me the Code

Reference

SMTP API

Learn how to use SendGrid's SMTP API to customize how your email is sent.

SMTP API Reference

Web API

Send email and interact with SendGrid over HTTP using the Web API.

Web API Reference

API Workshop

Try out SendGrid's API directly from your browser.

Test Drive the API

Docs (2012-2013)

- **Software** Jekyll
- **Maintainer** Developer Relations
- **User Friendliness** Getting Better

Getting Started - SendGrid

https://sendgrid.com/docs/index.html

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Sign In

SendGrid

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Getting Started With SendGrid

Overview

Integrate

Code Examples

Reference

Web API

SMTP API

Webhooks

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Docs (2013-Now)

- **Software** Jekyll
- **Maintainer** Developer Relations (Docs Developer)
- **User Friendliness** Yay!

Docs (2013-Now)

- **Cheat Codes for Good Documentation**
  http://sendgrid.com/blog/cheat-codes-for-good-documentation/
- **Creating Sustainable Documentation with Jekyll**
  http://sendgrid.com/blog/creating-sustainable-documentation-with-jekyll/

Client Libraries

Client Libraries (2009-2012)

- **Languages** null
- **Maintainer** null
- **Stability** null

Client Libraries (2012-2013)

- **Languages** PHP, Node.js, Python
- **Maintainer** Engineering
- **Stability** Ehhh

Client Libraries (2013-Now)

- **Languages** PHP, Node.js, Python, C#, Java, Perl, Objective-C, Go, APEX, Ruby
- **Maintainer** Developer Relations
- **Stability** ★ ★ ★ ★ ½

Developer Experience

Developer Experience

0 To **Hello World**

Getting Started Guides

Sinatra

www.sinatrarb.com

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Fork me on GitHub

Sinatra

- README
- DOCUMENTATION
- CONTRIBUTE
- CODE
- CREW
- ABOUT

Put this in your pipe

```
require 'sinatra'

get '/hi' do
  "Hello World!"
end
```

and smoke it

```
$ gem install sinatra
$ ruby hi.rb
== Sinatra has taken the stage ..
>> Listening on 0.0.0.0:4567
```

Parse

https://parse.com

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Parse

Products | Customers | Pricing | Docs | Help | Blog | Nick Quinlan

The complete mobile app platform

Focus on creating unique & engaging apps on any platform. We take care of everything else your app needs, from the core of your app to analytics and push notifications.

Use the Dashboard to manage your apps | Access Dashboard | For Android, iOS, Unity, JavaScript & more

Everything you need to create

Quick Start | Parse

https://parse.com/apps/quickstart#parse_data/mobile/ios/native/new

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Set up the SDK

Install the SDK

Follow App Dev

1 Download & unzip the Project

Make sure you are using the latest version of Xcode (v5.0+) and targeting iOS 5.0 or higher.

Download the blank Xcode project

2 Add the SDK to your app

Before continuing, select your Parse app from the menu at the right. These steps are for your "**Follow App Dev**" app.

Open up the `ParseStarterProjectAppDelegate.m` file and uncomment and edit the first line in `application:didFinishLaunchingWithOptions:` to be like so:

```
[Parse setApplicationId:@"YY5ui9Ew3XkEU5EbG1N5UPyYHInobWktteVlPxdD"
            clientKey:@"GntAbsMibVfHGDvxOEdVoJsDaqZlFGCwmJ3rUZbx"];
```

3 Compile and run

Test the SDK

First make sure to include our SDK libraries from your `ParseStarterProjectViewController.h` file:

Quick Start | Parse

https://parse.com/apps/quickstart#parse_data/mobile/ios/native/new

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Test the SDK

First make sure to include our SDK libraries from your `ParseStarterProjectViewController.h` file:

```
#import <Parse/Parse.h>
```

Then copy and paste this code into your app, for example in the `viewDidLoad` method of `ParseStarterProjectViewController.m`:

```
PFObject *testObject = [PFObject objectWithClassName:@"TestObject"];
testObject[@"foo"] = @"bar";
[testObject saveInBackground];
```

Run your app. A new object of class `TestObject` will be sent to the Parse Cloud and saved. When you're ready, click the button below to test if your data was sent.

Test

What's next?

- Add push notifications
- Start recording analytics

Start using the Dashboard

Usage Guides

nquinlan/barke

GitHub, Inc. [US] https://github.com/nquinlan/barke

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barke

A simple node library for Embarke, built off SendGrid's node library.

build passing npm module 0.1.0

Installation

To install simply use npm.

```
npm install barke
```

Usage

This library may be used just as SendGrid's Node library, however it further implements Embarke's API options:

```
var barke = require("barke")("your_embarke_username", "your_embarke_password");
barke.send({
  to:             "example@example.com",
  from:           "other@example.com",
  subject:        "Hello World",
  text:           "My first email through Embarke.",
  embarkeapi:     {
    sendDate:     new Date(),
    maxSendHours: 24,
```

Usage

This library may be used just as SendGrid's Node library, however it further implements Embarke's API options:

```
var barke = require("barke")("your_embarke_username", "your_embarke_password");
barke.send({
  to:             "example@example.com",
  from:           "other@example.com",
  subject:        "Hello World",
  text:           "My first email through Embarke.",
  embarkeapi:     {
    sendDate:     new Date(),
    maxSendHours: 24,
    campaignId:   "My Campaign",
    mailAccount:  "esp-account-username",
    tags:         ["My custom tag1", "My tag 2"]
  }
}, function(err, json) {
  if (err) { return console.error(err); }
  console.log(json);
});
```

Email

Email helps you more powerfully prepare your message to be sent, it is built off SendGrid's Email Object.

To get started create an Email object where params is a javascript object. You can pass in as much or as little to `params` as you want.

```
var barke = require("barke")(api_user, api_key);
var email = new barke.Email(params);
```

Interactive Docs

CoffeeScript

coffeescript.org

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CoffeeScript

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```
alert "Hello CoffeeScript!"
```

```
alert("Hello CoffeeScript!");
```

Run

Link

CoffeeScript is a little language that compiles into JavaScript. Underneath that awkward Java-like patina, JavaScript has always had a gorgeous heart. CoffeeScript is an attempt to expose the good parts of JavaScript in a simple way.

The golden rule of CoffeeScript is: *"It's just JavaScript"*. The code compiles one-to-one into the equivalent JS, and there is no interpretation at runtime. You can use any existing JavaScript library seamlessly from CoffeeScript (and vice-versa). The compiled output is readable and pretty-printed, will work in every JavaScript runtime, and tends to run as fast or faster than the equivalent handwritten JavaScript.

Latest Version: 1.7.1

```
sudo npm install -g coffee-script
```

Overview

CoffeeScript on the left, compiled JavaScript output on the right.

```
# Assignment:
number   = 42
opposite = true

# Conditions:
number = -42 if opposite

# Functions:
square = (x) -> x * x

# Arrays:
list = [1, 2, 3, 4, 5]

# Objects:
math =
  root:   Math.sqrt
  square: square
```

```
var cubes, list, math, num, number, opposite, race, square,
  __slice = [].slice;

number = 42;

opposite = true;

if (opposite) {
  number = -42;
}

square = function(x) {
  return x * x;
};

list = [1, 2, 3, 4, 5];
```

BeatsMusic I/O Docs

https://developer.beatsmusic.com/io-docs

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PLAYLISTS

GET **COLLECTION** /api/playlists

Get the specified public playlists in Beats Music, as well as any private playlists belonging to the user represented by the access token. Playlists may be requested as a "Collection" (all or many) or as a "Lookup" (one specific) by ID.

Parameter	Value	Type	Description
ids	pl1452910277!	string	An array of playlist IDs.
order_by	name asc	string	Indicates how the results set should be sorted.
limit	20	string	Specifies the maximum number of records to retrieve.
offset	0	string	Integer offset into results, 0 based. Defaults to 0.

Try It!

GET **LOOKUP** /api/playlists/:playlist_id

Developer Experience

Ease of Use

Write Convenience Functions

```
other_function() === foo('cool')

another_function() === foo('awesome')
```

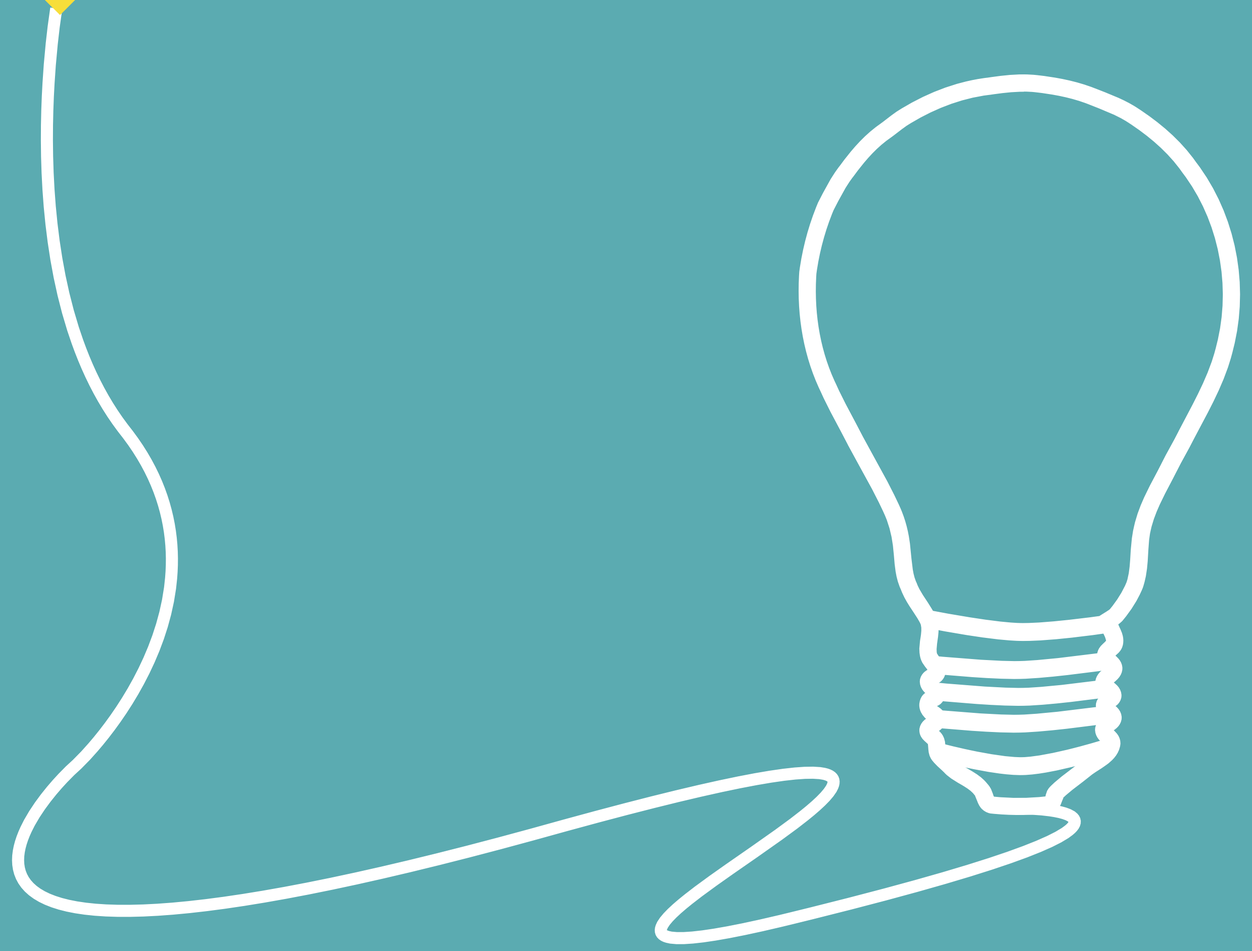
```
$.get('http://example.com') ===
$.ajax('http://example.com', {'method': 'get'});

$.post('http://example.com') ===
$.ajax('http://example.com', {'method': 'post'});
```

Adapt for Users

```
print variable
# "undefined"
function()
# true
print variable
# "Hello!"
```

```php
echo $post->title;
// ""
the_post();
// true
echo $post->title;
// "Hello!"
```

Loosely Follow Best Practices



PHP Library

```
$ composer require "sendgrid/sendgrid" -v 2.1.1
```

Preferred Method

```
sendgrid-php.zip
```

Solution

```
$ composer install
$ zip -r sendgrid-php.zip sendgrid-php
```

Developer Experience

Consistency

Maintain Consistent Responses

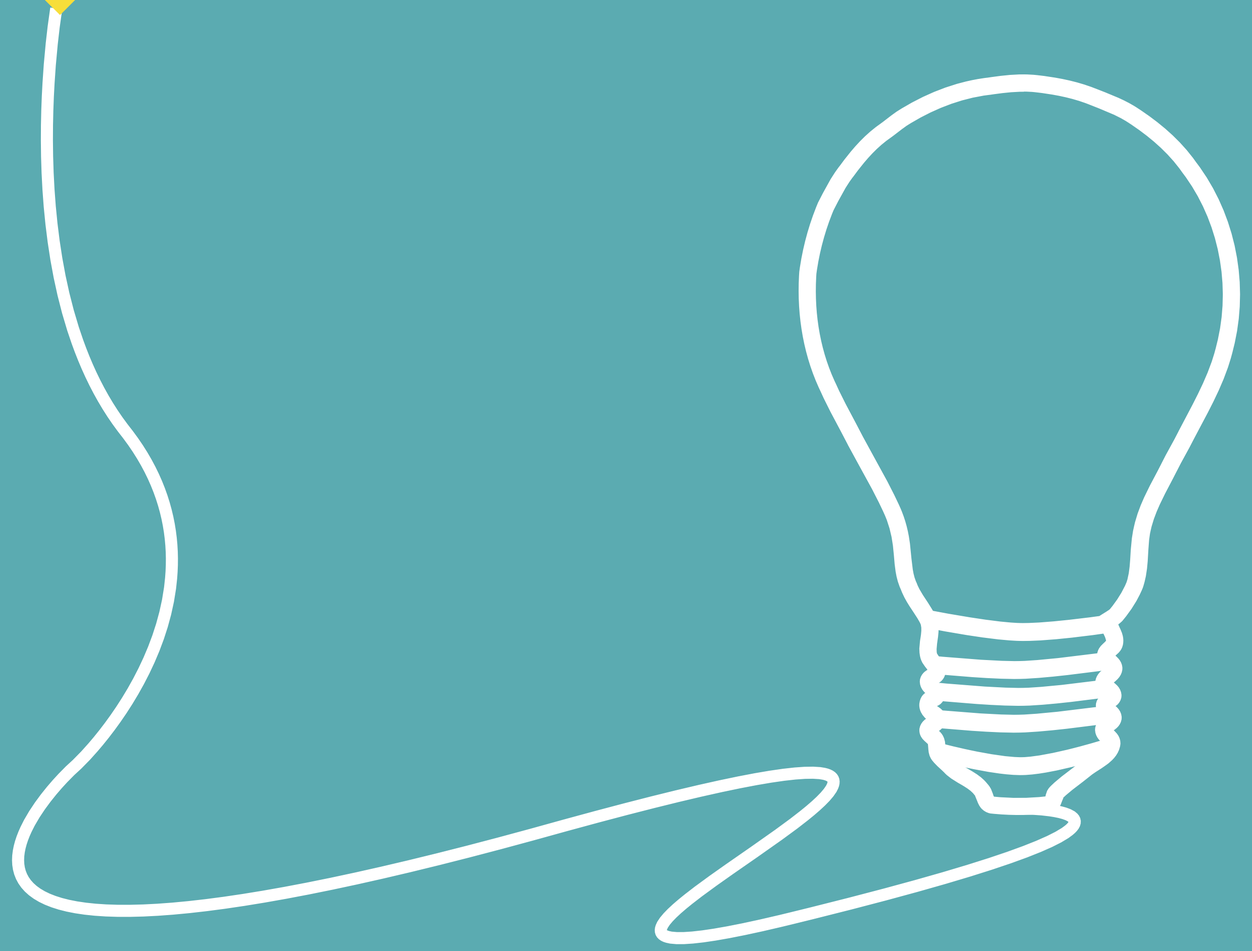
GET /v1/about.json
200 { "error" : "Unauthenticated." }

GET /v1/profile.json
301 { "error" : "Unauthenticated." }

GET /v1/me.json
301 { "error" : "Must provide API Key" }

GET /v1/user.json
301 <h1>Error</h1><p>Unauthenticated.</h1>

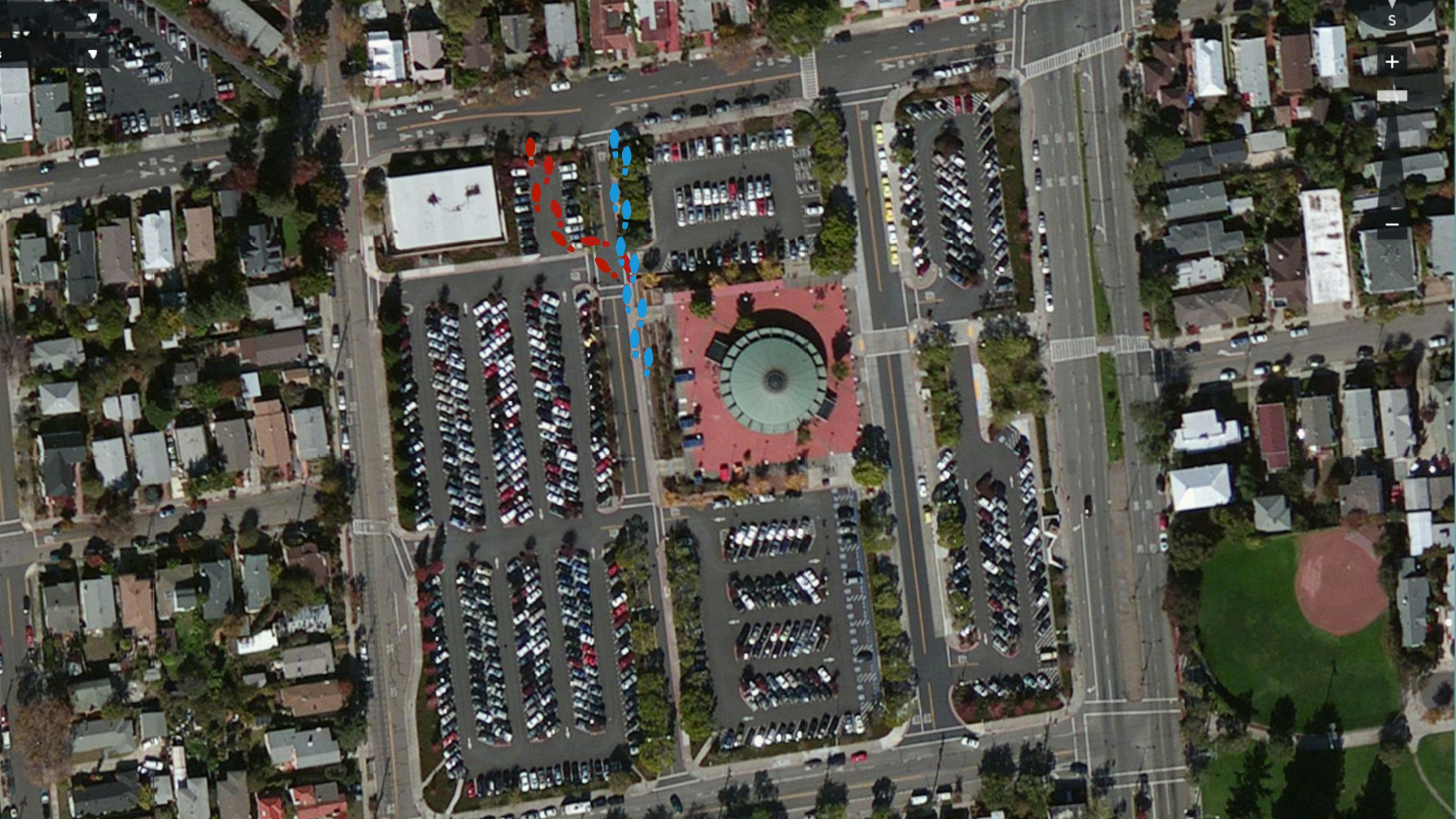
Maintain Consistent Voice



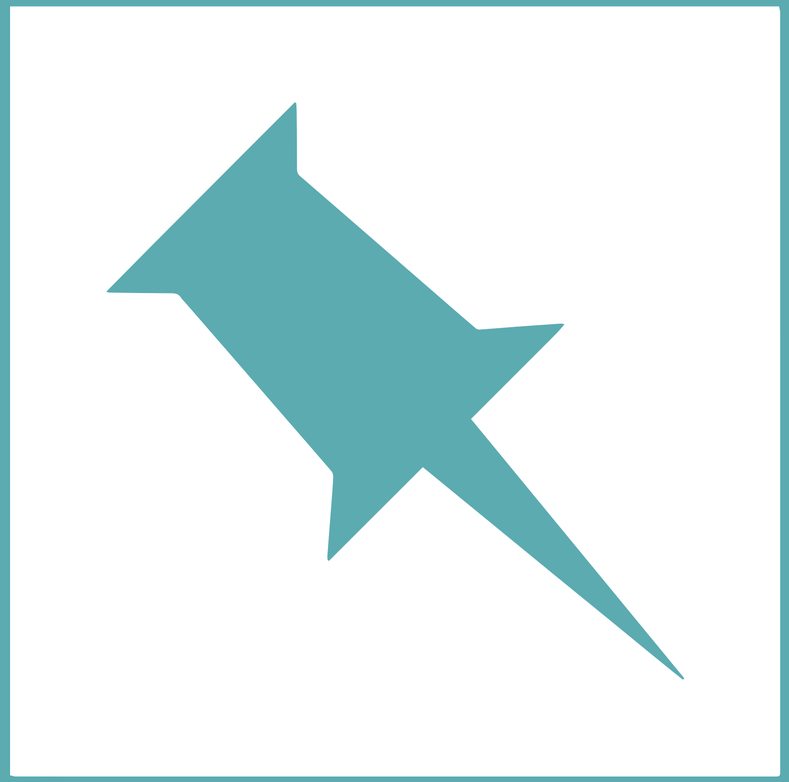
```
strlen()
strpos()

str_split()
str_replace()
```

Developer Experience Team

Community


S

Adapt To Community



- **The Fans Are All Right**
  https://blog.pinboard.in/2011/10/the_fans_are_all_right/

Establish Norms

Be Positive

Be Grateful

elbuo8/contribot

GitHub, Inc. [US] https://github.com/elbuo8/contribot

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README.md

Download ZIP

ContriBot

ContriBot is a cool little tool for those whom wish to be grateful for their Open Source contributors. @SendGrid has several libraries where awesome people submit fixes and we have decided to award them with patches!

In order to automate the process of sending stuff, I built a bot which will verify every time a merge has been applied to master. The bot will later collect the users data and post it in all the desired backends (basecamp, trello, lob, email).

README.md code correctic ×

GitHub, Inc. [US] https://github.com/sendgrid/sendgrid-nodejs/pull/129

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nquinlan closed this 7 hours ago

nquinlan merged commit `c4cda4a` into `sendgrid:master` from `matiaslarsson:patch-1` 7 hours ago Revert

elbuo8 commented 7 hours ago Collaborator

Thanks for contributing to SendGrid Open Source! We think it's awesome when community members contribute to our projects and want to celebrate that.

The following link will ask you to authenticate with Github (so we can verify your identity), it will then ask for a little bit more information and we'll then send you a thanks for contributing.

Click Here to Continue »

Once again, thank you!

Write | Preview | Parsed as Markdown | Edit in fullscreen

Leave a comment

Attach images by dragging & dropping, selecting them, or pasting from the clipboard.

ProTip Add comments to specific lines under Files changed.

Comment

Unsubscribe

You're receiving notifications because you modified the open/close state.

3 participants

Lock pull request

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Why?

- Product Feedback
- Gain Advocates

Controversies

Controversies

Hypermedia

```
{
  "data":
    [
      {
        "id":"85835",
        "gen":"Gavia",
        "sp":"immer",
        "en":"Great Northern Loon"
      }
    ],
  "link":
    {
      "next":"https://api.loons.com/?limit=1&offset=2",
      "prev":"https://api.loons.com/?limit=1&offset=0",
      "curr":"https://api.loons.com/?limit=1&offset=1"
    }
}
```

https://api.example.com/discover

- https://api.example.com/about
- https://api.example.com/things
- https://api.example.com/and
- https://api.example.com/places

Yay!

- APIs are harder to break and more maintainable.
- Since the client is the same across all APIs, APIs will be easier to use.
- Web browsers don’t need to know a site before they browse it, today’s APIs do.

Nah...

- APIs are harder to use and test without a client.
- Web browsers are a monolithic client that is driven by a human.
- Didn’t SOAP do that?

Controversies

API Libraries

Yay!

- They make your users life easier.
- In a way it shows you care.

Nah...

- They make *your* life hell.
- If you're good enough your community will make them for you.

Building for Developers

Increasing the Awesome in Your Open Source or API Platform

Nick Quinlan
SendGrid Developer Evangelist