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# Transactional Email API Approval Request

# **Business Need**

An email API is an application that allows a program to send emails automatically by communicating with the API in the backend and using the libraries the API comes with. The email API will be needed for requirements that involve sending an email. These requirements are transactional email like email verification emails for the registration component and notification emails for notifying the user of a message like a status update or an invitation. Because the program needs to send emails without conflicting with performance or sending the email to spam instead of the inbox, an email API will be needed in the program.

# The Options

**Sendgrid**<sup>1</sup>: Sendgrid is an email service many developers and marketers used for scalability and convenience of use. Sendgrid supports C#, Node.js and PHP language. The email API ensures that the user trusts that the email will be in the inbox.

**MailJet**<sup>2</sup>: MailJet is an email platform that can use an email API to send transactional email with an SMPT Relay and is considered Europe's leading email solution. C#, Node.js, and PHP language is supported<sup>3</sup>.

**SparkPost<sup>4</sup>:** Sparkpost is an email platform that sends emails to the inbox with the industry's largest data network. 40% of commercial email is delivered through SparkPost.

**Postmark**⁵: Postmark is an application email service that can deliver emails to the recipient on time in a consistent manner.

<sup>&</sup>lt;sup>1</sup> https://sendgrid.com/

<sup>&</sup>lt;sup>2</sup> https://www.mailjet.com/

<sup>&</sup>lt;sup>3</sup> https://www.mailiet.com/email-api/

<sup>4</sup> https://www.sparkpost.com/

<sup>&</sup>lt;sup>5</sup> https://postmarkapp.com/

# License

**SendGrid**<sup>6</sup>: Sendgrid uses an MIT license that grants permission, free of charge, to use SendGrid without restriction, but with the SendGrid copyright. There is no warranty, so the company is not responsible for any damages to the API.

**MailJet**<sup>7</sup>: MailJet uses an MIT license that grants permission, free of charge, to use MailJet without restrictions, except copyright is under MailJet. No warranty is supplied, so MailJet is not liable to any damages.

**SparkPost**<sup>8</sup>: SparkPost uses an MIT license that grants permission, free of charge, to use SparkPost without restriction, but under copyright. There is no warranty in the license, so the company is not liable to any damages.

**Postmark**<sup>9</sup>: Under the copyright under Wildbit, Postmark uses an MIT license that allows the user who obtained the application to use the software without restriction. Warranty is not included so the company is not liable to any damages that happen to the software.

<sup>&</sup>lt;sup>6</sup> https://github.com/sendgrid/sendgrid-csharp/blob/main/LICENSE

<sup>&</sup>lt;sup>7</sup> https://github.com/mailiet/mailiet-apiv3-php/blob/master/LICENSE

<sup>8</sup> https://github.com/SparkPost/developers.sparkpost.com/blob/master/LICENSE

<sup>9</sup> https://github.com/wildbit/postmark-cli/blob/master/LICENSE.md

# Comparisons

Pricing Plans	Free	Standard	Premier
SendGrid <sup>10</sup>	Free forever with 100 email/day.	\$14.95/month for 40,000 email/month with Free features and more	\$89.95/month for 100,000 email/month with Standard features and more
MailJet <sup>11</sup>	Free forever with 200 email/day and 6,000 email/month.	\$9.65/month for 30,000 email/month with Free features and more	\$20.95/month for 30,000 email/month with Standard features and more
SparkPost <sup>12</sup>	Unknown free plan. Limitations and trial length unknown.	\$20/month for 50,000 email/month with Free features and more	\$75/month for 100,000 email/month with Standard features and more
Postmark <sup>13</sup>	Free trial, unknown expiration date with 100 test emails/month.	\$10/month for 10,000 email/month with the standard features and an additional \$1.25 for every extra 1000 emails sent.	No premier plan.

SMTP Relay	How it's Supported
SendGrid <sup>14</sup>	SMTP API is used for SMTP relay and for changing the settings of the SMTP relay.
MailJet <sup>15</sup>	SMTP configuration can be applied through the server and the supported ports. The free server is integrated to any system.
SparkPost <sup>16</sup>	Will need to use an existing email service like Gmail and apply SparkPost's SMTP server to a new email account that's verified.
Postmark <sup>17</sup>	Copy the credentials used for the SMTP service into a configuration file used for Postmark.

https://sendgrid.com/pricing/
 https://www.mailjet.com/pricing/
 https://www.sparkpost.com/pricing/
 https://postmarkapp.com/pricing
 https://sendgrid.com/solutions/email-api/smtp-service/
 https://www.mailjet.com/feature/smtp-relay/
 https://www.sparkpost.com/blog/setup-sparkpost-smtp-relay/
 https://postmarkapp.com/smtp-service

API Abilities	Languages Supported	Performance Monitoring?	Misc.
SendGrid	Node.js, Ruby, Python, PHP, Java, C#, Go <sup>18</sup>	No	Email activity history in the past month and send email like transactional email.
MailJet	PHP, Ruby, Python, C#, Java, Node.js, Go	Yes	Personalize email with custom templates, manage traffic going inbound, and send email like transactional email.
SparkPost	Node.js, C#, Python, Java, PHP, Go <sup>19</sup>	Yes	Manipulate given templates, create messages through email, and nearly every feature can be invoked via SMTP.
Postmark <sup>20</sup>	PHP, Node.js, .Net, Ruby, Python, Java, C#	Yes	Migration support, template management, bounce detection, signature support.

Customization	Customization Options
SendGrid	Templates are supplied, or can be created.
MailJet	Full customization that can be personalized.
SparkPost	Templates supplied that can be manipulated.
Postmark <sup>21</sup>	Pre-made templates that can be modified and saved.

<sup>18</sup> https://sendgrid.com/solutions/email-api/
19 https://www.sparkpost.com/features/email-api-integration/
20 https://postmarkapp.com/email-api
21 https://postmarkapp.com/email-templates

<u>Statistics</u>	Used by These Top Teams	Misc.
SendGrid	Uber, Spotify, Airbnb, Yelp, Glassdoor, Instacart	80,000 paying customers use this service and the service sends more than 70 billion emails every month.
MailJet	KIA, Microsoft, American Express, The Body Shop, DHL	130,000 companies in 150 countries use this daily.
SparkPost	Pinterest, Twitter, Zillow, Adobe, The New York Times, Intercom, MailChimp, Booking.com	Delivered 40% of all commercial email, or 4 to 5 trillion annually.
Postmark	Ikea, Minecraft (Mojang), Unicef, Asana, IPassword, Litmus, Livestream, Moz, LiveChat	3.49 seconds average to deliver to Gmail, 7.65 seconds average to deliver to Hotmail, 6.85 seconds to deliver to Yahoo.

Privacy	Privacy Policy
SendGrid <sup>22</sup>	Developer becomes aware of the personal information being collected and is given information before making a decision.
MailJet	Personal information is protected and stored in data centers with the Google Cloud Platform <sup>23</sup> . Privacy policy states personal and non-personal data is collected for services and IP requests <sup>24</sup> .
SparkPost	Privacy is protected <sup>25</sup> . Privacy policy is used for users who use SparkPost services with the right to do anything as long as the Customer talks about it directly <sup>26</sup> .
Postmark	Priority is given to protect the information sent to Postmark <sup>27</sup> . Information needs to be provided to be provided services and uses Google Analytics to collect some information <sup>28</sup> .

<sup>22</sup> https://www.twilio.com/legal/privacy
23 https://www.mailjet.com/security-privacy/
24 https://www.mailjet.com/privacy-policy/
25 https://www.sparkpost.com/security-and-privacy/
26 https://www.sparkpost.com/policies/privacy/
27 https://postmarkapp.com/security
28 https://wildbit.com/privacy-policy

<u>Security</u>	Security Approach
SendGrid <sup>29</sup>	Data in transit encrypted with TLS. Data centers have SOC2 Type 2 reports with physical security protection applied.
MailJet	ISO 27001 certified and GDPR supported. Customer data is protected from unauthorized access.
SparkPost	API calls use HTTPS and are SSL/TLS encrypted for email encryption.
Postmark	TLS encryption is used to protect data and emails. The data centers are the ServerCenter, which is SOC2 Type 2, and AWS, Amazon Web Services, with an infrastructure that has strong guards to protect privacy <sup>30</sup> . Two-factor authentication is supported for the application.

# **Pros and Cons**

#### SendGrid:

#### Pros

- Used by the likes of Uber and Yelp.
- Protects data, organized methodically, and supports control access for security purposes.
- Reliable since it sends about 70 billion emails a month.
- Extensive documentation.

### Cons<sup>31</sup>

- Requires a physical address for every email sent.
- Hard to expand on due to expensive options.
- No custom templates.

#### MailJet:

#### **Pros**

- Far cheaper price options for paid plans, which will make it easier to expand our capacity in the future, should we need to prepare for increased traffic before we receive increased revenue.
- Used by the likes of Microsoft and American Express.
- Custom templates supplied for personalized emails.
- Email can be monitored to see if it's opened or not.

#### Cons<sup>32</sup>

- Outdated Documentation
- Established to have highly unreliable servers.

<sup>&</sup>lt;sup>29</sup> https://sendgrid.com/policies/security/

<sup>30</sup> https://postmarkapp.com/eu-privacy#security-and-privacy

<sup>31</sup> https://www.mailjet.com/sendgrid/

<sup>32</sup> https://www.trustpilot.com/review/mailjet.com?stars=1&utm\_medium=trustbox&utm\_source=Slider

- Established to have lack of reliable support.
- Established to have slow service.
- Less use than alternatives so reliability is not clear.

#### **SparkPost:**

#### Pros

- Used by the likes of Twitter and Pinterest.
- Large and reliable email sender.
- Keep track of and enhance performance in email programs given by SparkPost.

#### Cons

- Requires a finished domain.
- Unknown free trial plan.
- Expensive paid plan that's more expensive than SendGrid.
- Lack of templates and design choices<sup>33</sup>.

#### Postmark:

#### Pros

- Quick delivery to recipient.
- Cheap options that can be expanded easily if more emails need to be sent in a short amount of time.
- User-Friendly code and application.
- Monitor servers of Postmark.

#### Cons

• Unknown free trial plan.

• Small free trial plan with how many emails can be sent out.

• No premier plan.

<sup>33</sup> https://www.mailjet.com/sparkpost/

# Discussion

The discussion was that most of the emails that the program needed to send was the transactional email due to verification email. All four options were a part of a list that lists the best email APIs for transactional email that are free<sup>34</sup>. SparkPost and PostMark had an unknown free trial plan, while the other two options did have a known free plan. Sparkpost also required a domain that was completed and not in construction. MailJet is the cheaper alternative so it's the easiest to expand on if we need to send more emails as the audience grows. MailJet also supports the use of personalized email. MailJet was also established to have servers that are not reliable to use and had outdated documentation. SendGrid has more documentation and is used by top companies that use transactional email. Sendgrid also required more information to be needed when making an account, including a physical address.

# Verdict

#### **Postmark**

The process of applying to use an email API was not smooth. The outdated documentation of MailJet and the unreliable servers made it hard to use it reliably. SendGrid required information we did not have yet for it to be used. SparkPost required a completed domain when this domain was still in construction. Postmark may have the worst free trial plan, but it is the cheapest in terms of being able to expand on it. We also decided that it was easy to set up this API and the documentation and code works with the current code without any bugs.

Because of issues brought up and the problems we faced, the group has decided to use Postmark as our email API.

<sup>34</sup> https://metabox.io/free-transactional-email-services/