

DEV DAYS EUROPE 2019

Building for the Builders

Stephen Whitney, Software Engineer - @whitneysteve

Romain Huet, Head of Developer Relations

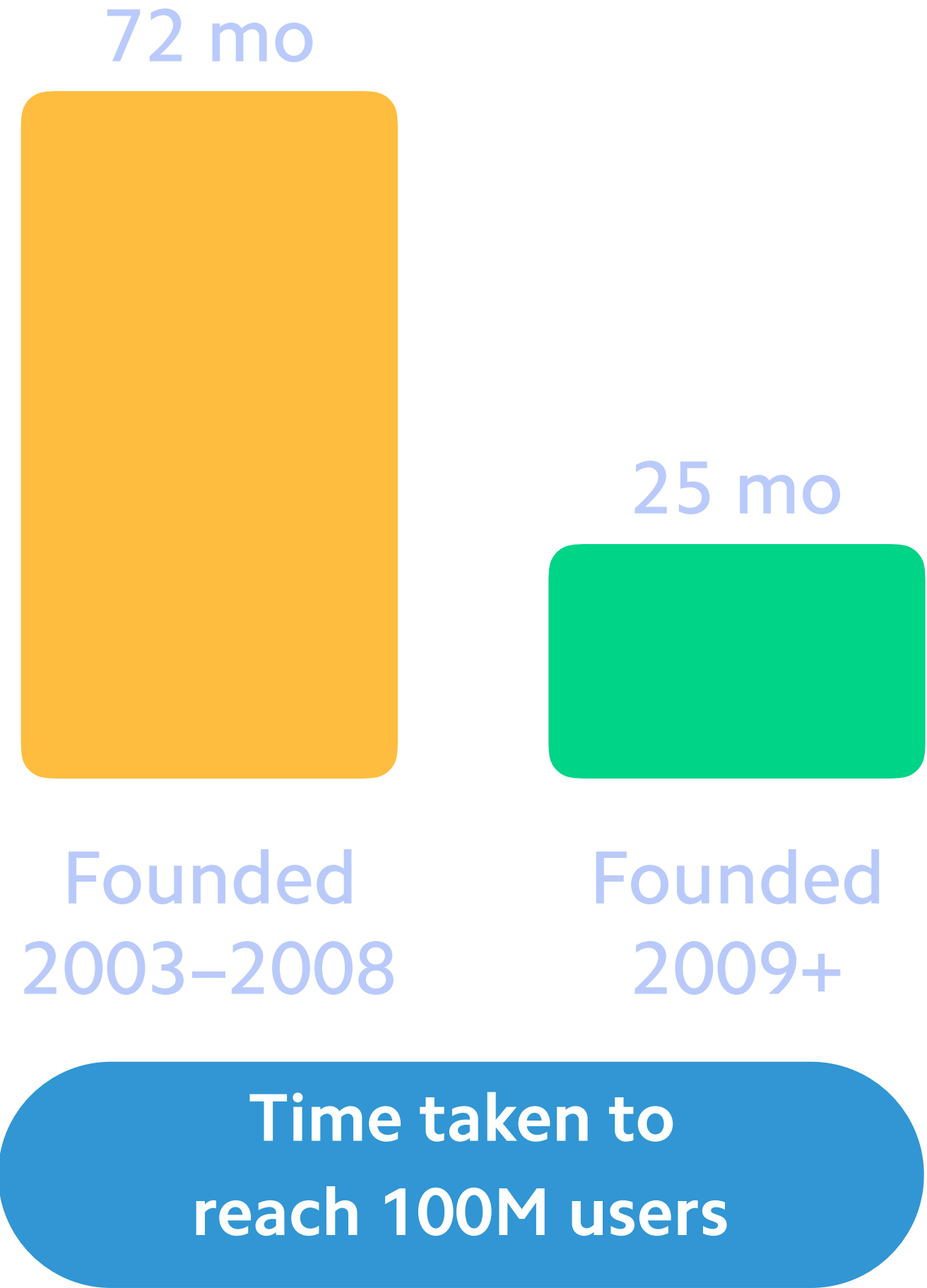
stripe

STARTUPS NOW GROW AND EXPAND GLOBALLY AT
AN UNPRECEDENTED PACE

Source: Atomico, 2015

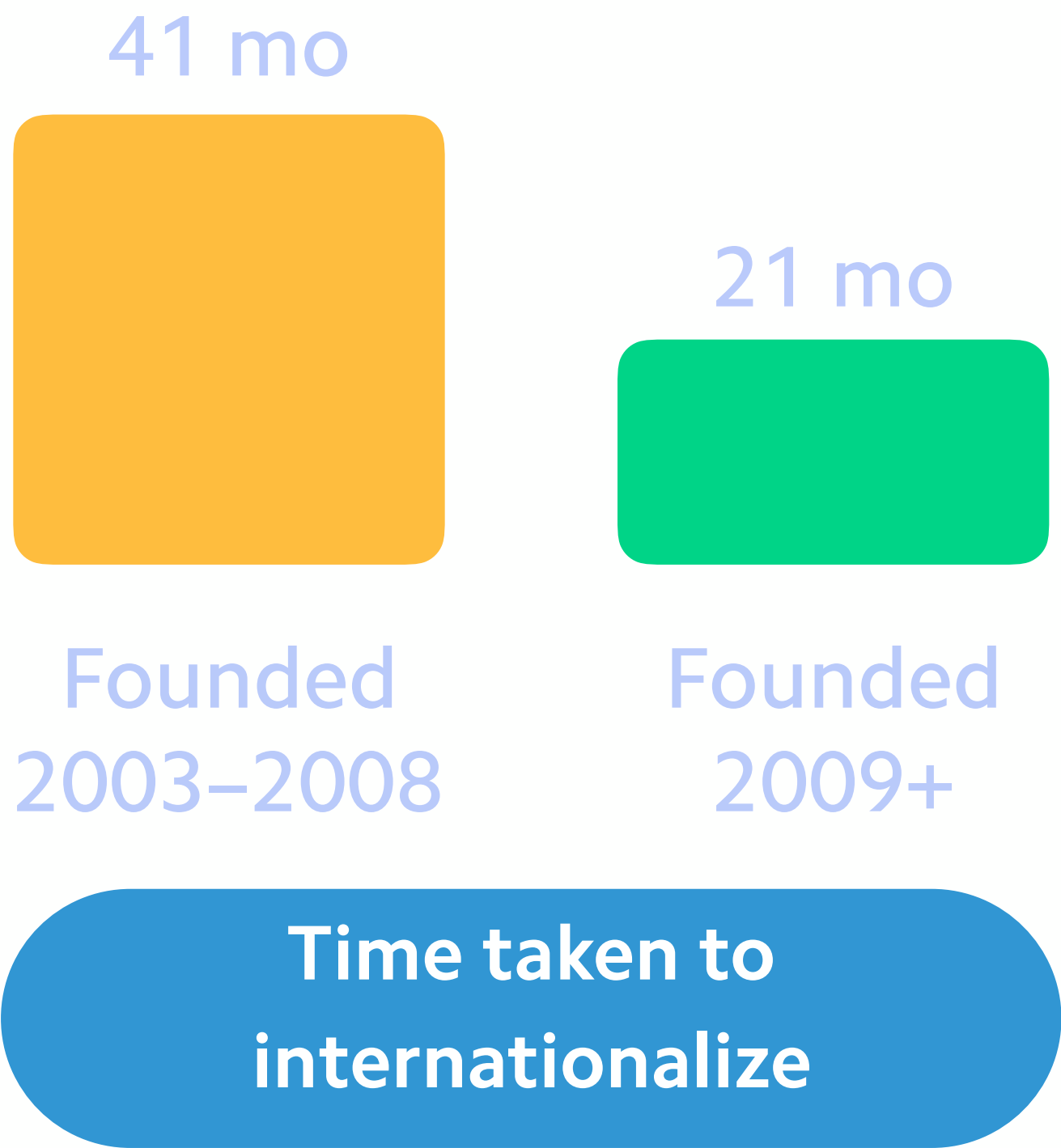
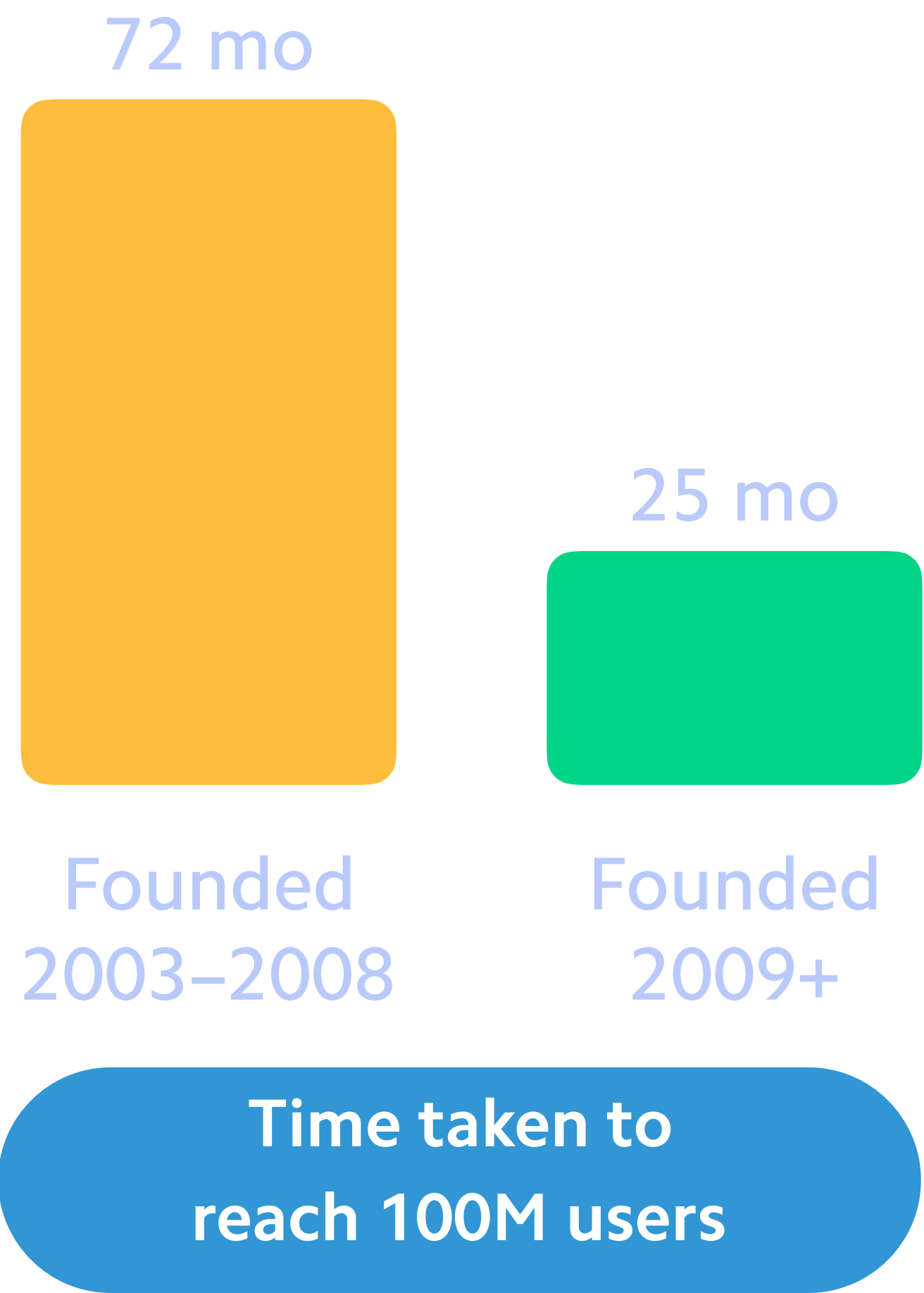
stripe

STARTUPS NOW GROW AND EXPAND GLOBALLY AT
AN UNPRECEDENTED PACE



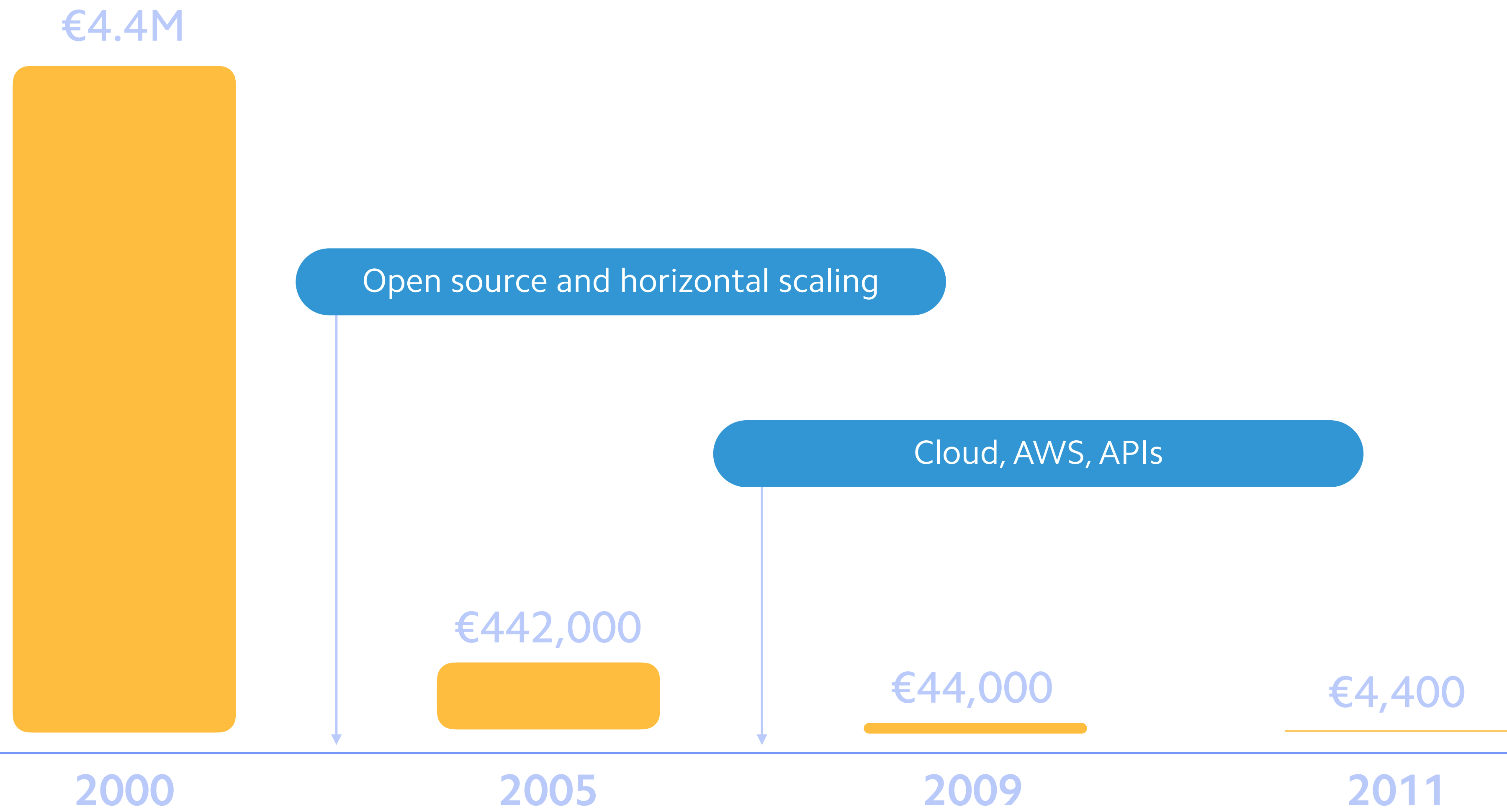
Source: Atomico, 2015

STARTUPS NOW GROW AND EXPAND GLOBALLY AT
AN UNPRECEDENTED PACE



Source: Atomico, 2015

IT USED TO COST €4.4M TO LAUNCH A STARTUP

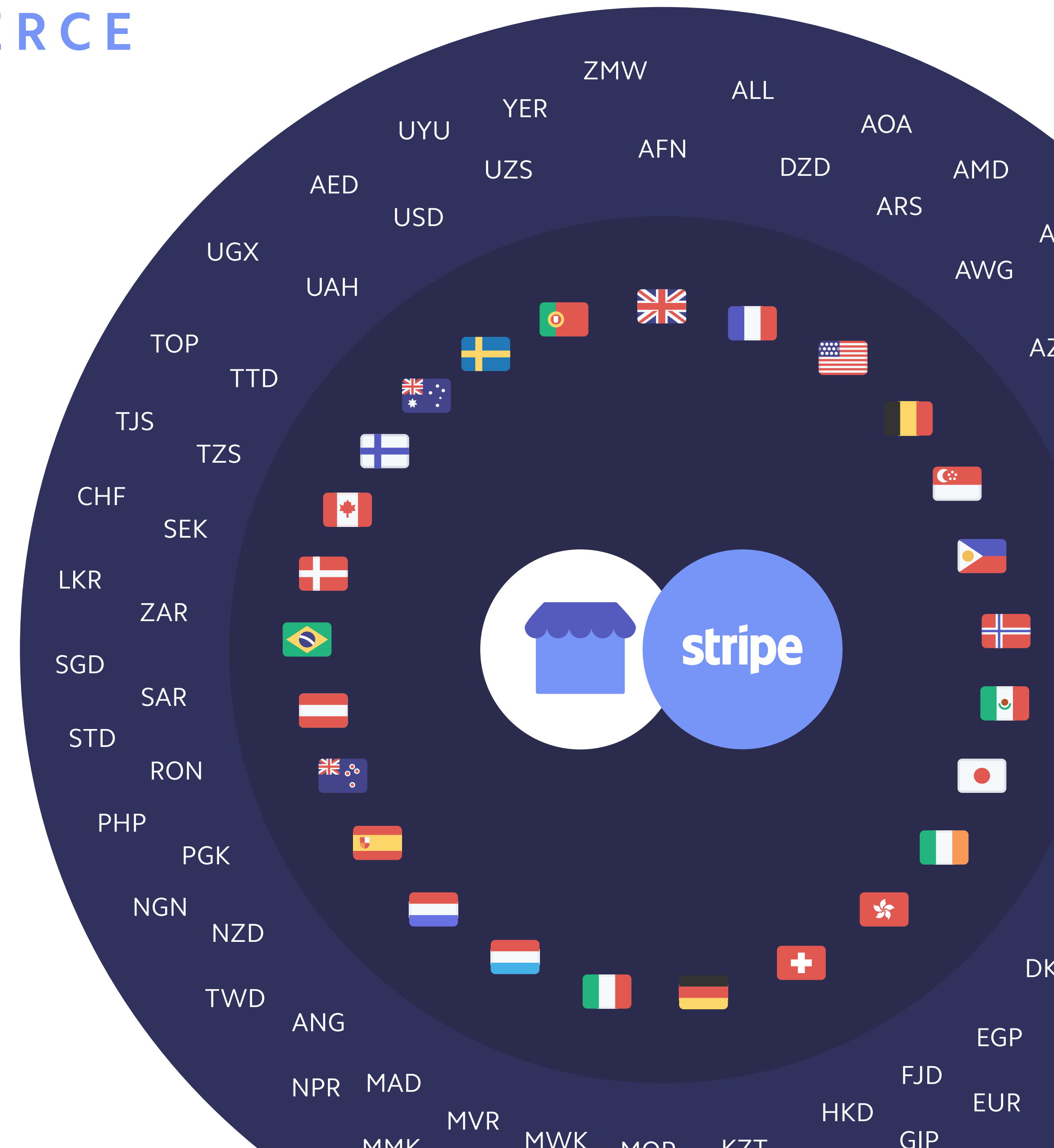


Source: CB Insights, 2015

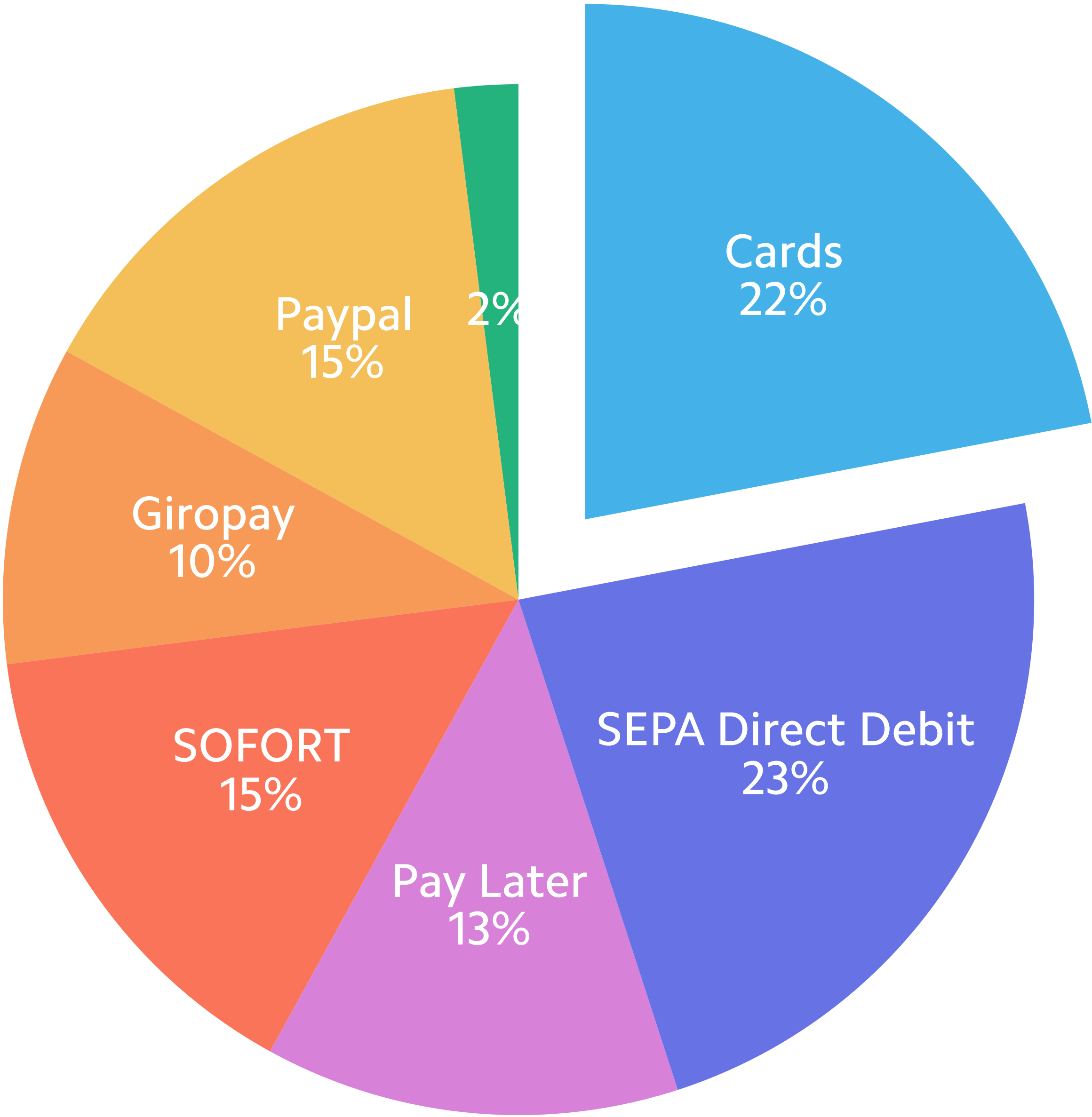
APIs are the fastest route to
building great products

ONE API FOR GLOBAL COMMERCE

- ✓ 140+ currencies
- ✓ Local payment methods
- ✓ Unified global integration



GERMANY

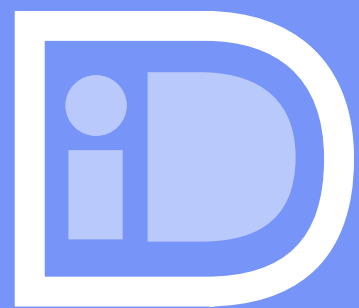


INTERNATIONAL PAYMENT METHODS

INTERNATIONAL PAYMENT METHODS



Klarna™

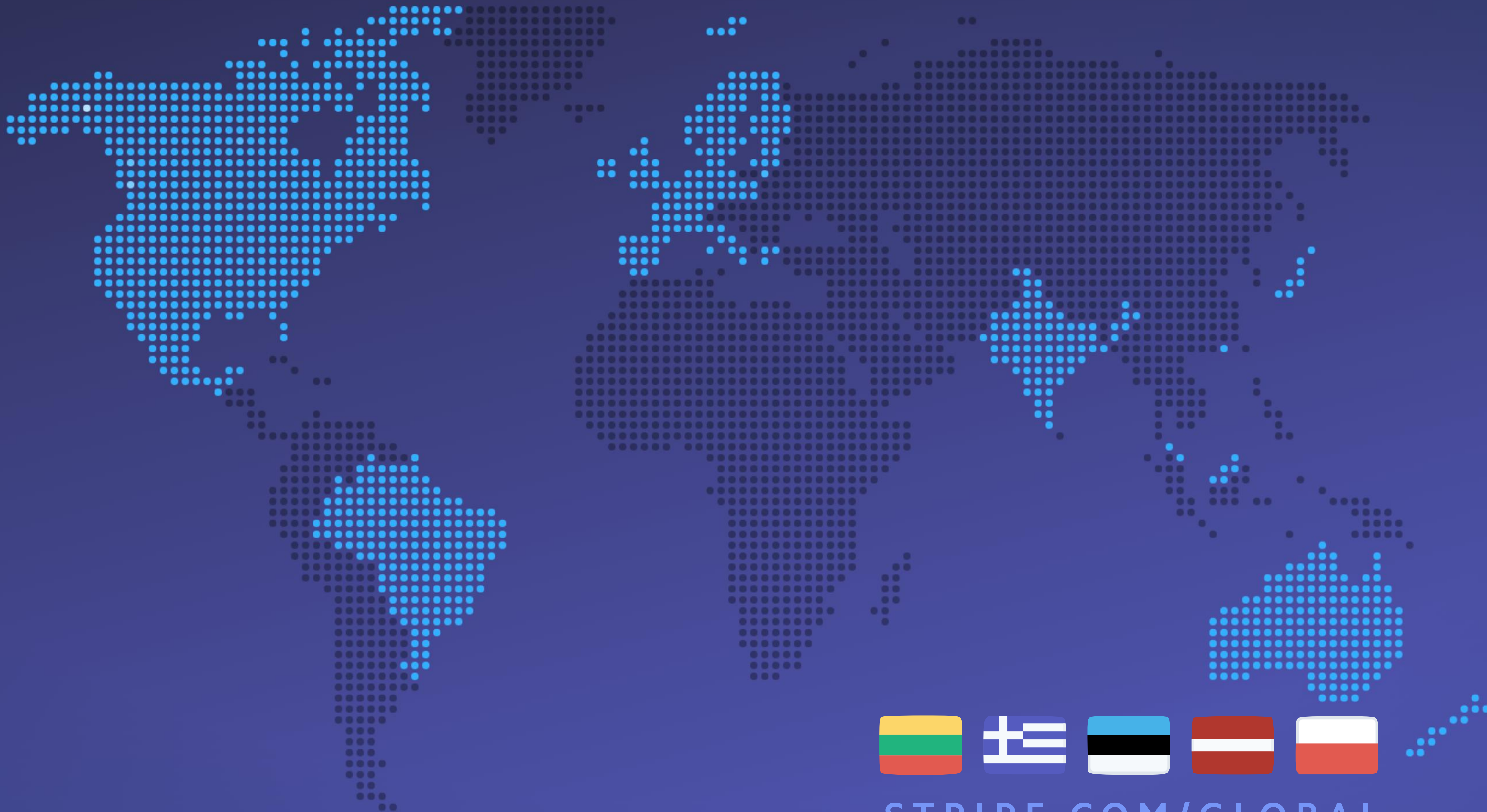


S€PA



Przelewy24

stripe



[STRIPE.COM/GLOBAL](https://stripe.com/global)



Building for the Builders

17 hours

AVERAGE TIME SPENT BY A DEVELOPER EACH WEEK
ON LEGACY SYSTEMS OR BAD CODE

Source: Harris Poll 2018

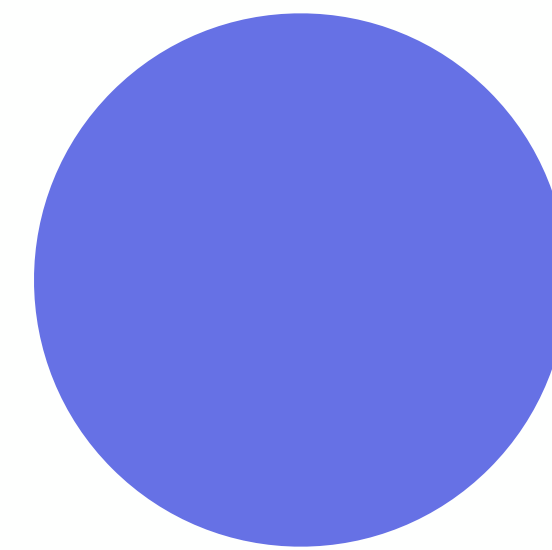
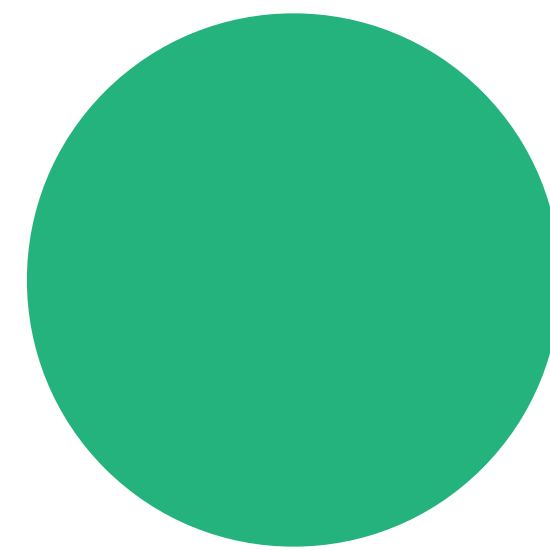
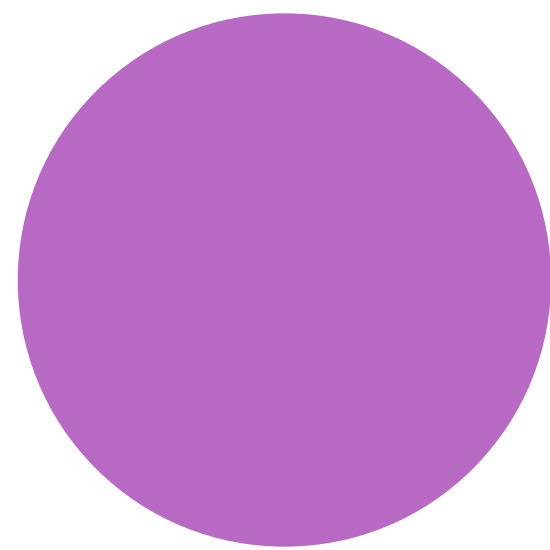
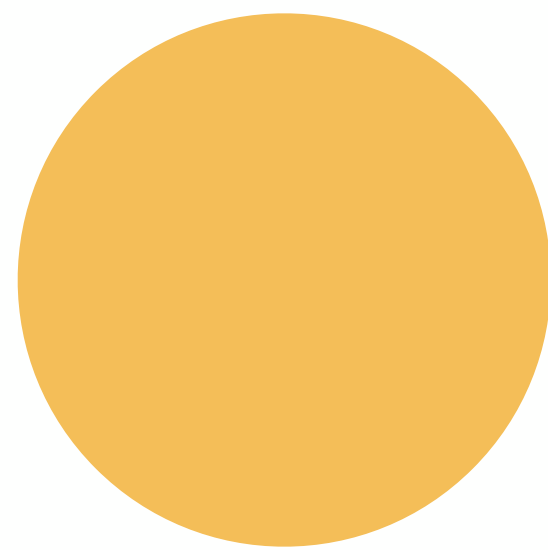
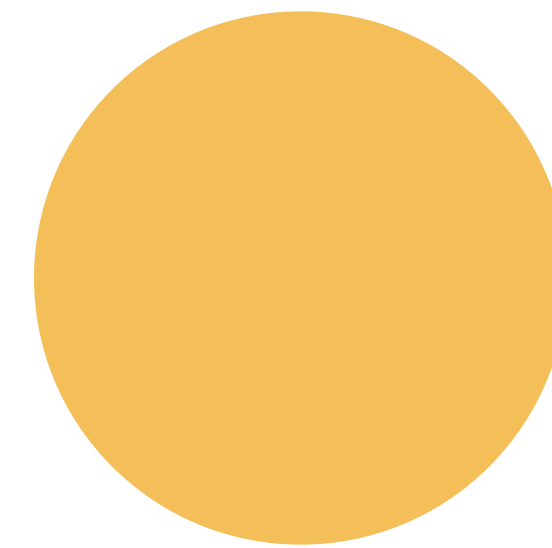
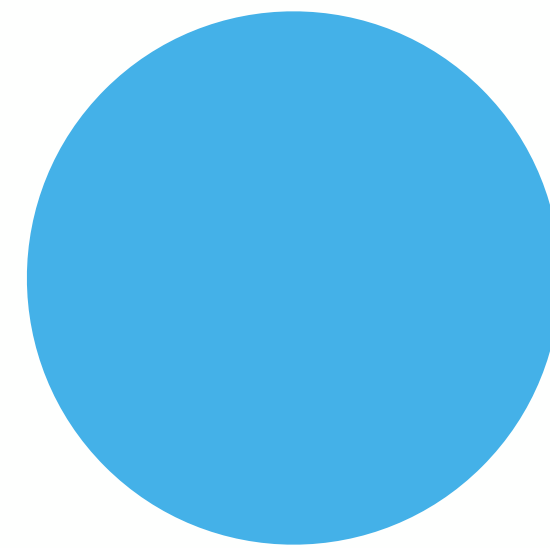
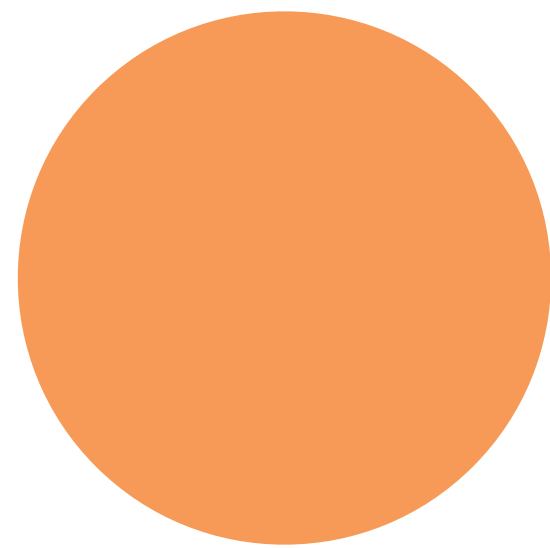
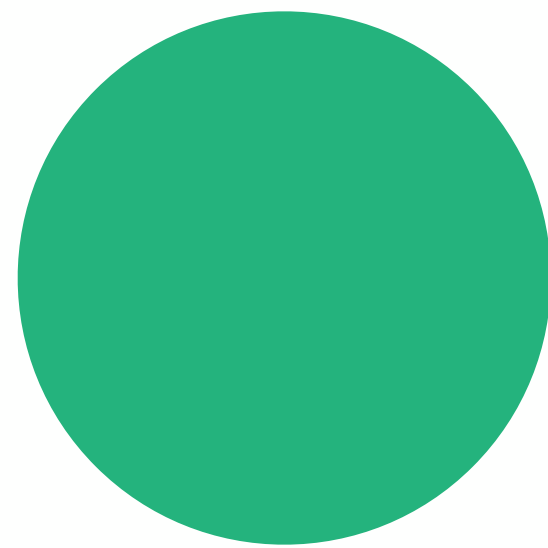
stripe

1,000,000+

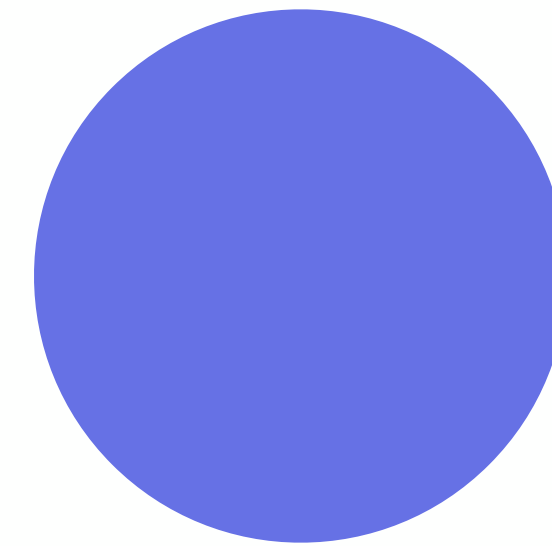
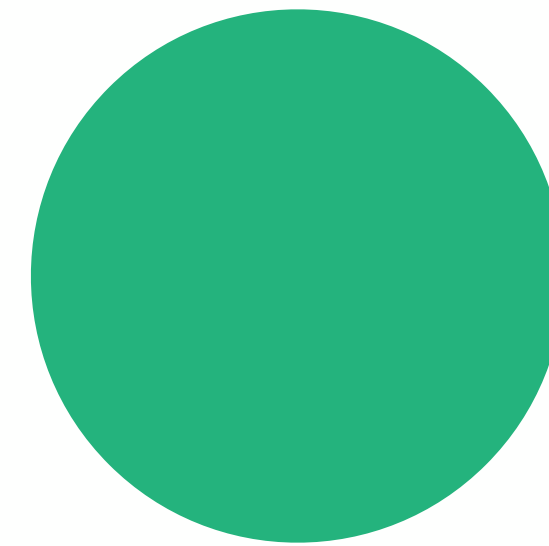
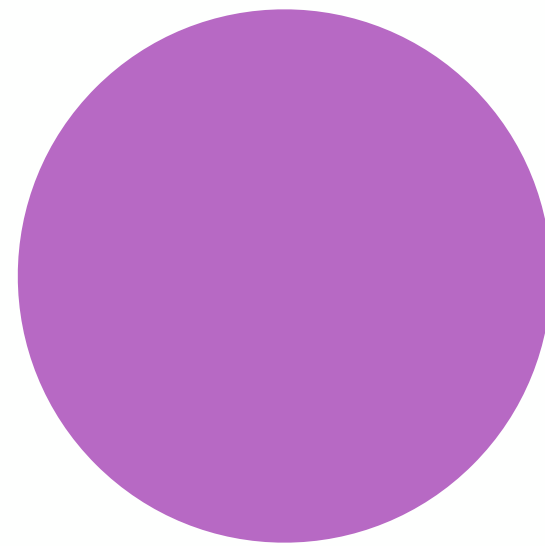
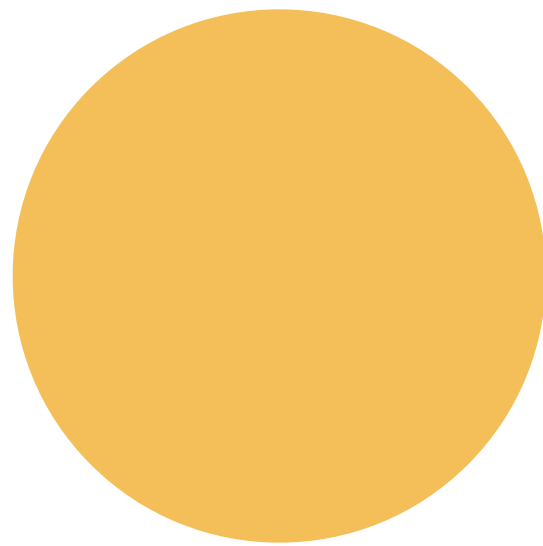
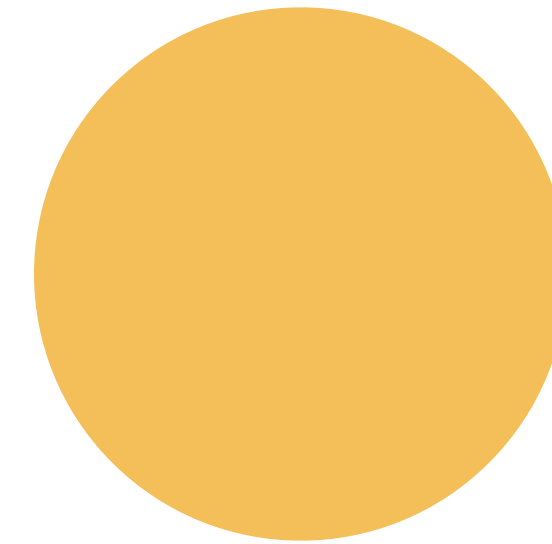
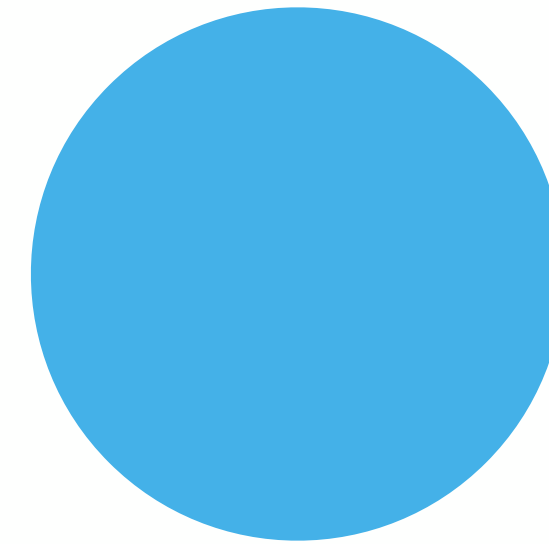
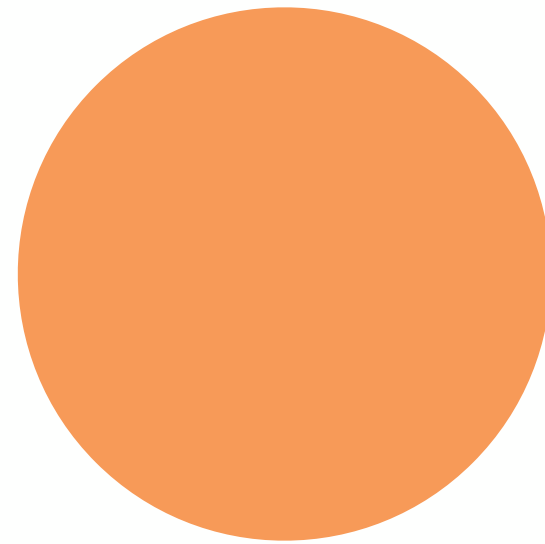
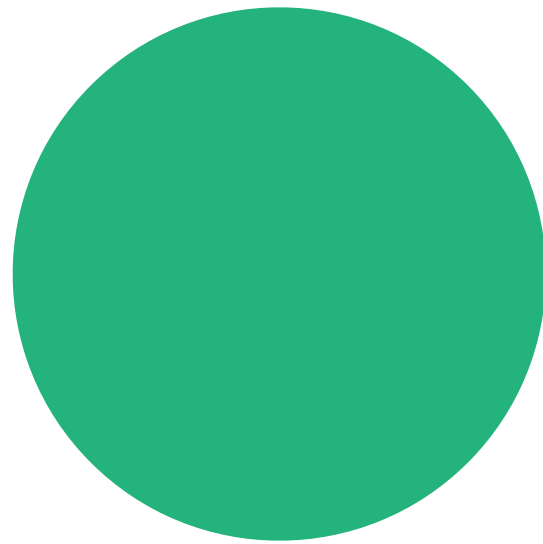
BUSINESSES

PRINCIPLES OF A GREAT DEVELOPER EXPERIENCE

PRINCIPLES OF A GREAT DEVELOPER EXPERIENCE



PRINCIPLES OF A GREAT DEVELOPER EXPERIENCE



PRINCIPLES OF A GREAT DEVELOPER EXPERIENCE

Aligned
incentives with
developers

If developers start using your
API en masse,
will that be good for your
core business?

Network Working Group
Request for Comments: 2616
Obsoletes: 2068
Category: Standards Track

R. Fielding
UC Irvine
J. Gettys
Compaq/W3C
J. Mogul
Compaq
H. Frystyk
W3C/MIT
L. Masinter
Xerox
P. Leach
Microsoft
T. Berners-Le
W3C/M
June 19

HTTP

Hypertext Transfer Protocol -- HTTP/1.1

Status of this Memo

This document specifies an Internet standards track protocol for the Internet community, and requests discussion and suggestions for improvements. Please refer to the current edition of the "Internet Official Protocol Standards" (STD 1) for the standardization and status of this protocol. Distribution of this memo is unlimited.

Copyright Notice

Copyright (C) The Internet Society (1999). All Rights Reserved.



Network Working Group
Request for Comments: 2616
Obsoletes: 2068
Category: Standards Track

R. Fielding
UC Irvine
J. Gettys
Compaq/W3C
J. Mogul
Compaq
H. Frystyk
W3C/MIT
L. Masinter
Xerox
P. Leach
Microsoft
T. Berners-Lee
W3C/MIT
June 19

Hypertext Transfer Protocol -- HTTP/1.1

Status of this Memo

This document specifies an Internet standards track protocol for the Internet community, and requests discussion and suggestions for improvements. Please refer to the current edition of the "Internet Official Protocol Standards" (STD 1) for the standardization and status of this protocol. Distribution of this memo is unlimited.

Copyright Notice

Copyright (C) The Internet Society (1999). All Rights Reserved.

404 Not Found

The requested resource could not be found but may be available again in the future.



Network Working Group
Request for Comments: 2616
Obsoletes: 2068
Category: Standards Track

R. Fielding
UC Irvine
J. Gettys
Compaq/W3C
J. Mogul
Compaq
H. Frystyk
W3C/MIT
L. Masinter
Xerox
P. Leach
Microsoft
T. Berners-Le
W3C/M
June 19

Hypertext Transfer Protocol -- HTTP/1.1

Status of this Memo

This document specifies an Internet standards track protocol for the Internet community, and requests discussion and suggestions for improvements. Please refer to the current edition of the "Internet Official Protocol Standards" (STD 1) for the standardization and status of this protocol. Distribution of this memo is unlimited.

Copyright Notice

Copyright (C) The Internet Society (1999). All Rights Reserved.

403 Forbidden

The request was a valid request, but the server is refusing to respond to it.



Network Working Group
Request for Comments: 2616
Obsoletes: 2068
Category: Standards Track

R. Fielding
UC Irvine
J. Gettys
Compaq/W3C
J. Mogul
Compaq
H. Frystyk
W3C/MIT
L. Masinter
Xerox
P. Leach
Microsoft
T. Berners-Le
W3C/M
June 19

402

Hypertext Transfer Protocol -- HTTP/1.1

Status of this Memo

This document specifies an Internet standards track protocol for the Internet community, and requests discussion and suggestions for improvements. Please refer to the current edition of the "Internet Official Protocol Standards" (STD 1) for the standardization and status of this protocol. Distribution of this memo is unlimited.

Copyright Notice

Copyright (C) The Internet Society (1999). All Rights Reserved.



Network Working Group
Request for Comments: 2616
Obsoletes: 2068
Category: Standards Track

R. Fielding
UC Irvine
J. Gettys
Compaq/W3C
J. Mogul
Compaq
H. Frystyk
W3C/MIT
L. Masinter
Xerox
P. Leach
Microsoft
T. Berners-Le
W3C/M
June 19

Hypertext Transfer Protocol -- HTTP/1.1

Status of this Memo

This document specifies an Internet standards track protocol for the Internet community, and requests discussion and suggestions for improvements. Please refer to the current edition of the "Internet Official Protocol Standards" (STD 1) for the standardization and status of this protocol. Distribution of this memo is unlimited.

Copyright Notice

Copyright (C) The Internet Society (1999). All Rights Reserved.

402 Payment Required

Reserved for future use.



Website Payments
Standard Integration
Guide

payment-integration-guide.pdf

Portable Document Format (PDF)

466 Pages

The screenshot shows the Merchants Solutions website. The header includes a navigation bar with 'Home' and 'Contact us' links, and a phone number '1-800-486-3214'. Below the header is a banner with the company logo and 'Established in 1934!'. A sidebar on the left lists categories for finding solutions (Grocery, Pizza & Delivery, Restaurant & Bar, Quick Service & Fast Food, Specialty Retail, Electronic Cash Registers) and products (Hardware, Software, Supplies, Solution Bundles). The main content area features a 'Contact Us' section with a form. The form includes fields for 'Your name', 'Company', 'Address 1', 'Address 2', 'City', 'State', 'Zip Code', 'Phone Number', 'E-Mail Address', and 'Primary Market Interest' (a dropdown menu). A 'Your Comments / Questions' text area is at the bottom. A testimonial quote from D. Neil Bremer, Executive Director of the Elmhurst Art Museum, is also visible.

Home | Contact us | 1-800-486-3214

Merchants Solutions
Established in 1934!

Testimonials | Online Store | About Us | Contact Us | Client Extranet

Contact Us

Find solutions for...

- Grocery
- Pizza & Delivery
- Restaurant & Bar
- Quick Service & Fast Food
- Specialty Retail
- Electronic Cash Registers

Browse Products

- Hardware
- Software
- Supplies
- Solution Bundles

"... we have enjoyed our relationship with Merchants Solutions and the attention you've paid to our installation and training."

We appreciate the high level of service and would heartily recommend Merchants to any other potential customers."

D. Neil Bremer, Executive Director
Elmhurst Art Museum

Home | News | Events | Testimonials

Merchants Solutions
4422 Roosevelt Road
Hillside, IL 60162-2078
tel 708-449-6650
Toll Free 800-486-3214
fax 708-449-1432

Use the form below to contact Merchants Solutions with your comments, questions or information request:

Your name

Company

Address 1

Address 2

City

State

Zip Code

Phone Number

E-Mail Address

Primary Market Interest

Your Comments / Questions


```
1 // Require the Stripe library with a test secret key.
2 const stripe = require('stripe')
3 ('sk_test_BQokikJOvBiI2HlWgH4oIfQ2');
4
5 // Create a payment from a test card token.
6 const charge = await stripe.charges.create({
7   amount: 1000,
8   currency: 'eur',
9   source: 'tok_visa',
10  description: 'My First Payment',
11 });
```

ATLAS



ATLAS



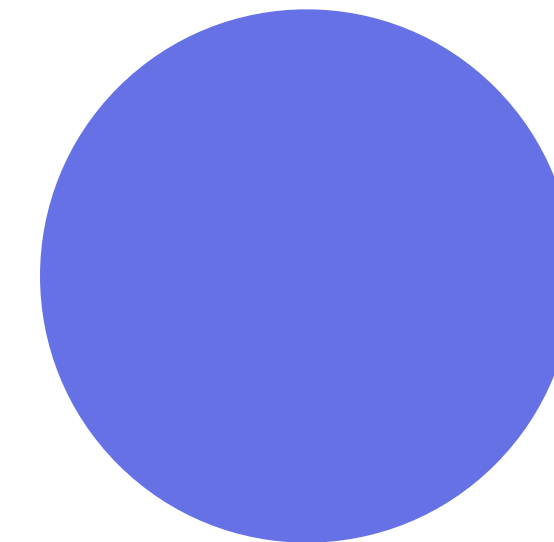
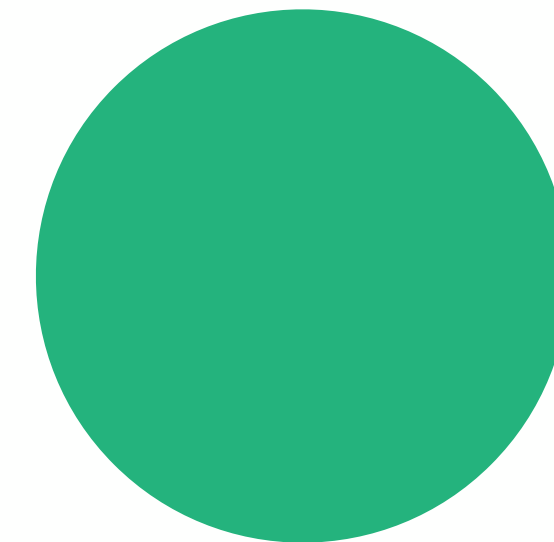
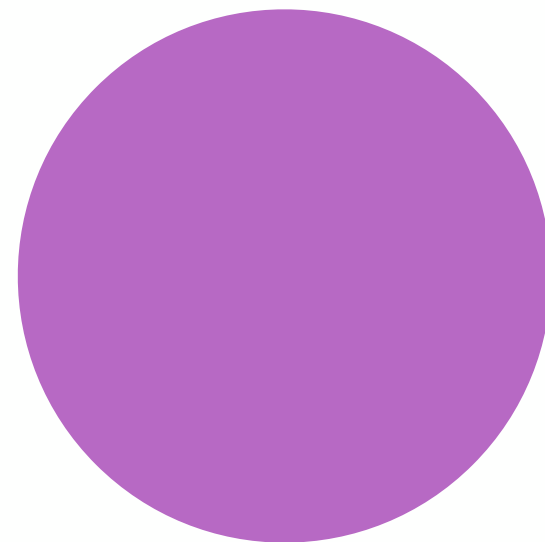
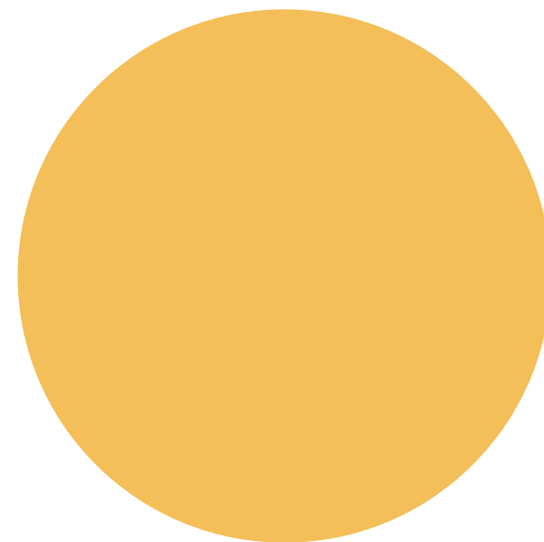
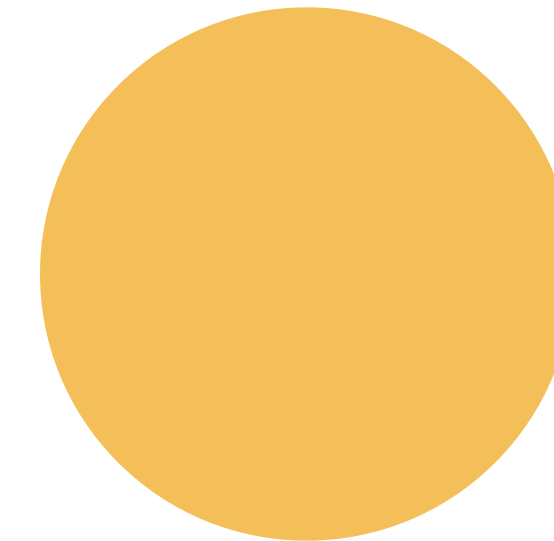
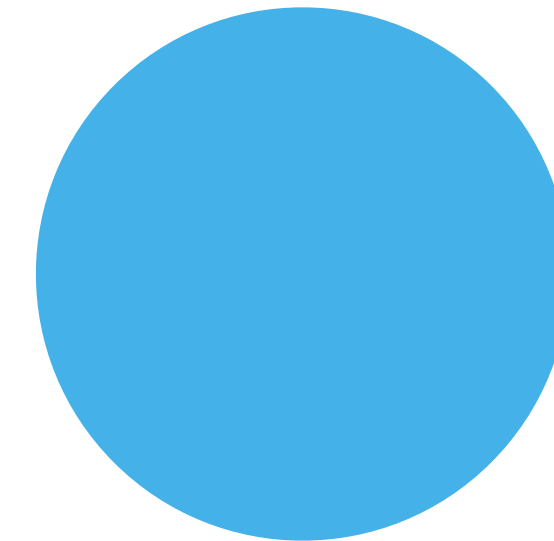
PRINCIPLES OF A GREAT DEVELOPER EXPERIENCE

Aligned
incentives with
developers

PRINCIPLES OF A GREAT DEVELOPER EXPERIENCE

Aligned
incentives with
developers

Engaging and
speedy on-ramp
to get started



Payments for developers

Stripe makes it easy to start accepting credit cards on the web today.

Get Started with Stripe



Why you'll love using Stripe



Full-stack payments

You don't need a merchant account or gateway. Stripe handles everything, including storing cards, subscriptions, and direct payouts to your bank account.

Stripe.js lets you build your own payment forms while still avoiding PCI requirements.

An API that gets out of your way

It's so easy, we've embedded a bunch of examples right here. Copy some of these requests into your terminal and check out what happens.

With wrappers in Ruby, PHP, Python and more, you can get started in minutes. [Learn more](#)

```
$ curl https://api.stripe.com/v1/charges \
-u vtUQeOtUnYr7PGCLQ96U14zqpDUO4s0E: \
-d amount=400 \
-d currency=usd \
-d "description=Charge for site@stripe.com" \
-d "card[number]=4242424242424242" \
-d "card[exp_month]=12" \
-d "card[exp_year]=2012" \
-d "card[cvc]=123"
```

Create a new charge using curl



DEVELOPERS FIRST

We believe that payments is a problem rooted in code, not finance. We obsessively seek out elegant, composable abstractions that enable robust, scalable, flexible integrations. Because we eliminate needless complexity and extraneous details, you can get up and running with Stripe in just a couple of minutes.

```
1  const stripe = require('stripe')('sk_test_BQokikJOvBiI2HlWgH4oIfQ2');
2
3  // Create your first payment from a test card.
4  const charge = await stripe.charges.create({
5    amount: 2000,
6    currency: 'usd',
7    source: {
8      number: '4242424242424242',
9      cvc: '123',
10     exp_month: 12,
11     exp_year: 2018
12   }
13 });
```

 [Payments](#)

 [Customers](#)

 [Subscriptions](#)

 [Reporting](#)

[Full API reference →](#)

[Home](#)

[Payments](#)

[Subscriptions](#)

[Connect](#)

[Relay](#)

[Radar](#)

[Account](#)

[Development](#)

[API Reference](#)

Documentation

Welcome to Stripe! Get familiar with the Stripe products and explore their features:

Try Now

Try the Stripe API in seconds. Create your first customer, charge, and more by following the steps below.

- 1 Card
- 2 Customer
- 3 Charge
- 4 Plan
- 5 Subscription
- 6 Success!

As a first step, credit card information is sent directly to Stripe, ensuring sensitive data never hits your servers. The code below creates a *token* with Stripe.js for the test card 4242 4242 4242 4242.

```
1 Stripe.card.createToken({
2   number: '4242424242424242',
3   exp_month: 12,
4   exp_year: 2017,
5   cvc: '123'
6 }, function(status, response) {
7   // response.id is the card token.
8 });
```

Number	4242 4242 4242 4242		
Expiry	12 / 17	CVC	123
<div>Submit</div>			

Usage: Click "Submit" to create a token with Stripe.js.

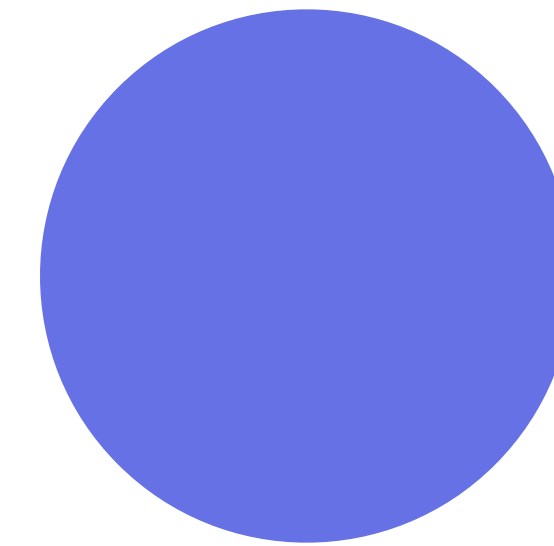
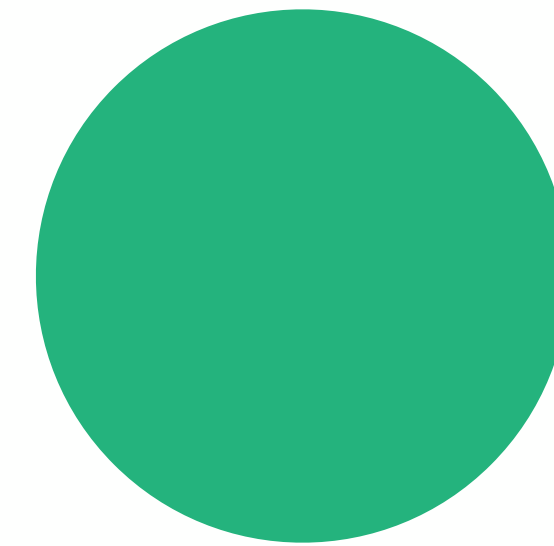
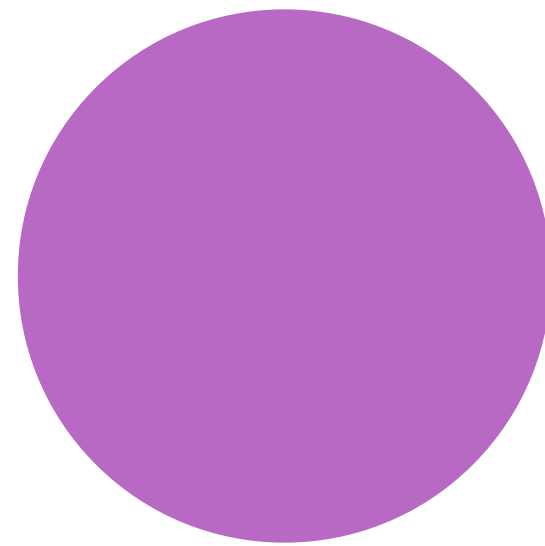
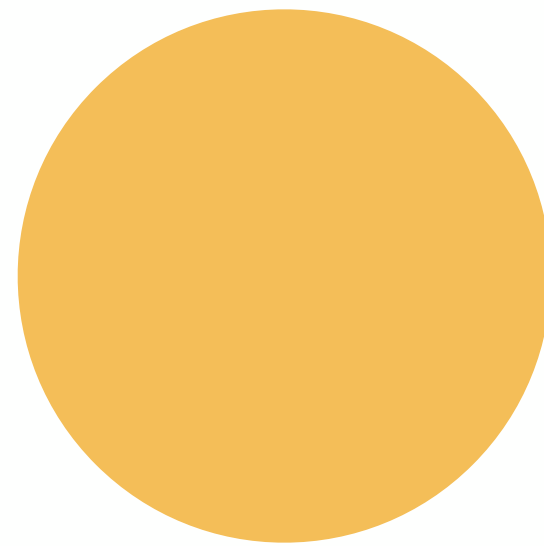
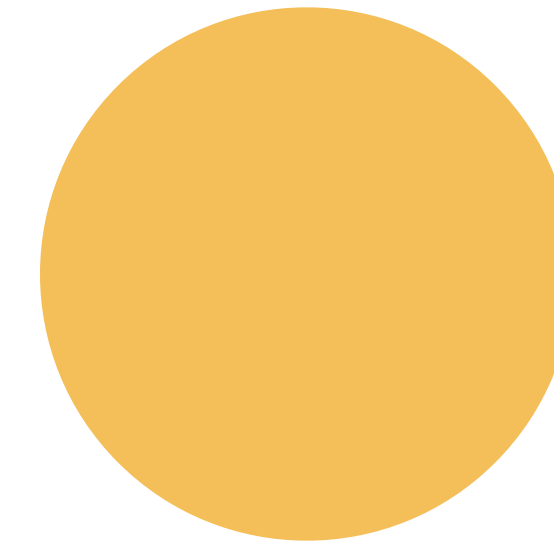
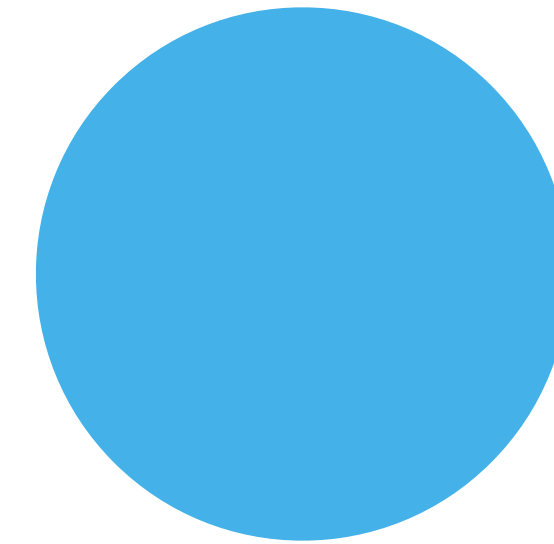
Getting Started

Stripe helps you create any type of payments flow—from e-commerce to recurring billing and everything in

PRINCIPLES OF A GREAT DEVELOPER EXPERIENCE

Aligned
incentives with
developers

Engaging and
speedy on-ramp
to get started



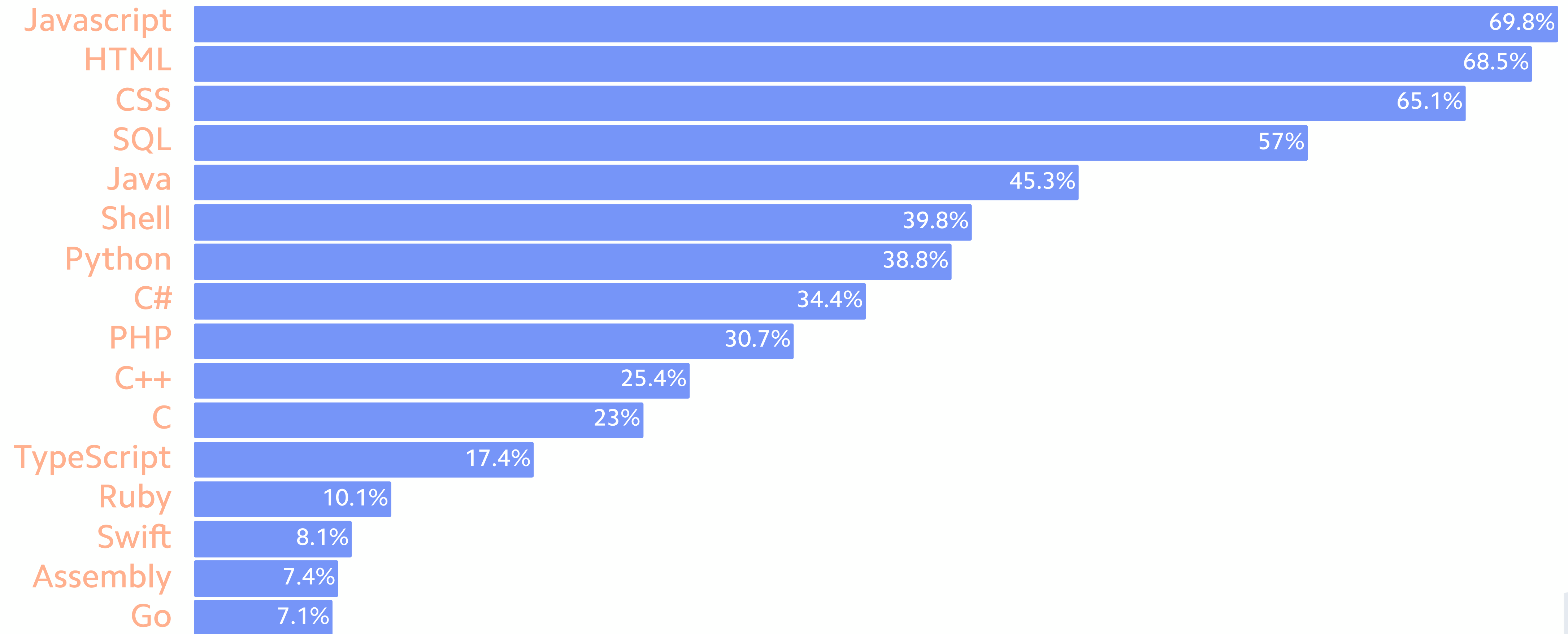
PRINCIPLES OF A GREAT DEVELOPER EXPERIENCE

Aligned
incentives with
developers

Engaging and
speedy on-ramp
to get started

SDKs for many
programming
languages

PROGRAMMING LANGUAGES



Source: StackOverflow 2018 Developer Survey

react-stripe-elements

build passing npm v3.0.0

React components for Stripe.js and Stripe Elements

This project is a thin React wrapper around [Stripe.js](#) and [Stripe Elements](#). It allows you to add Elements to any React app, and manages the state and lifecycle of Elements for you.

The [Stripe.js / Stripe Elements API reference](#) goes into more detail on the various customization options for Elements (e.g. styles, fonts).

Table of Contents

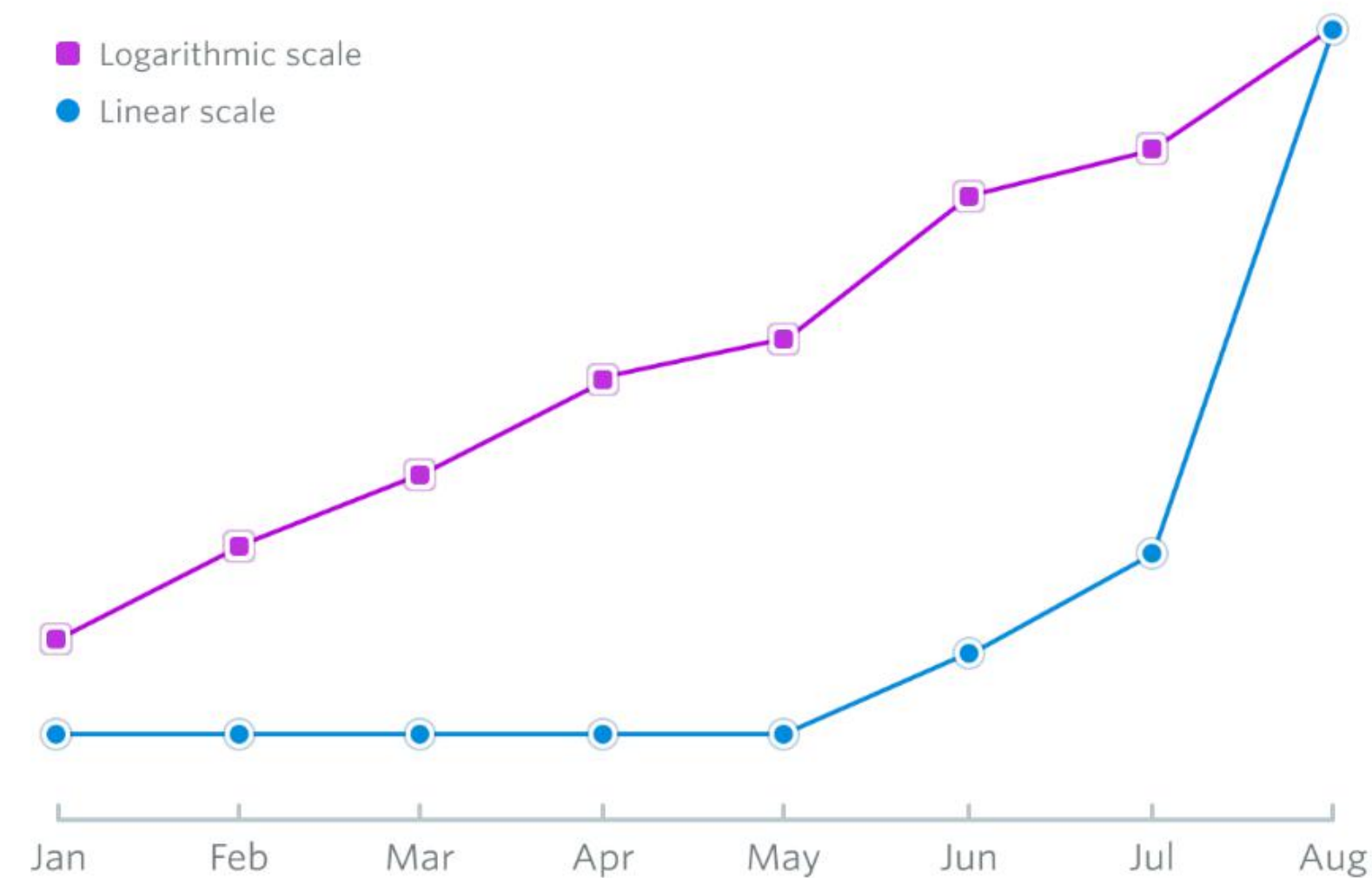
- [Demo](#)
- [Installation](#)
 - First, install `react-stripe-elements`.
 - Then, load Stripe.js in your application:
- [Getting started](#)
 - The Stripe context (`StripeProvider`)
 - Element groups (`Elements`)
 - Setting up your payment form (`injectStripe`)
 - Using individual `*Element` components



Official Go support

[Cosmin Nicolaescu](#) on September 23, 2014

We're fans of Go (both the [language](#) and the [game](#)) here at Stripe, and it seems we're not the only ones. In recent months, we've seen Go's popularity rise amongst our users and more generally in the open-source community, so we decided to add an official [Stripe library for Go](#).



Requests made to Stripe using Go in 2014





Backwards-compatible API upgrades

Fine-grained account activity webhooks

Idempotent API requests

GET and POST request logs

Android and iOS SDKs

Auto-tokenizing JavaScript libraries

OAuth support

Flexible REST API endpoints

Live documentation integrating account data

Connect app platform

GraphQL support

stripe



Use simple, unambiguous language.

- `Customer.description`
- `Customer.mnemonic`

Prefer enums to booleans in the API

They're typically more extensible and descriptive.

- `Card.status={active, inactive, canceled}`
- `Card.canceled={true, false}`

Avoid payment-industry jargon.

- `card.number = "4242424242424242"`
- `card.pan = "4242424242424242"`

PRINCIPLES OF A GREAT DEVELOPER EXPERIENCE

Aligned
incentives with
developers

Engaging and
speedy on-ramp
to get started

SDKs for many
programming
languages

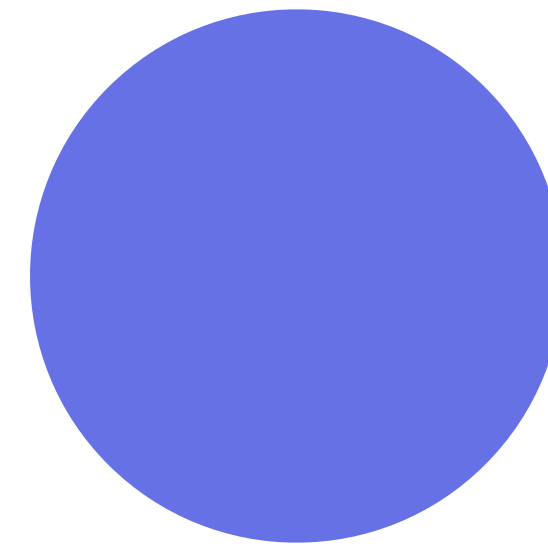
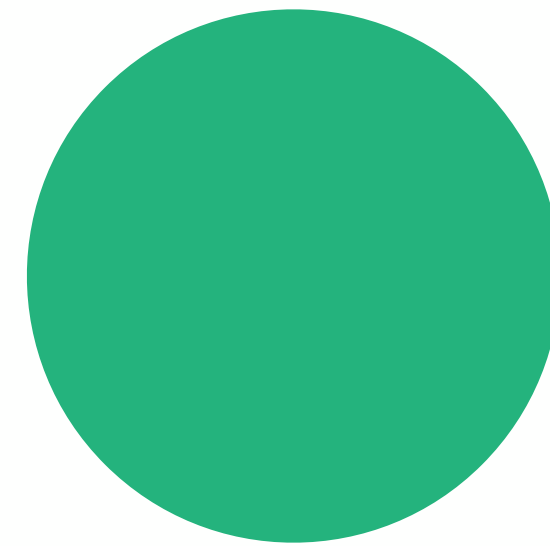
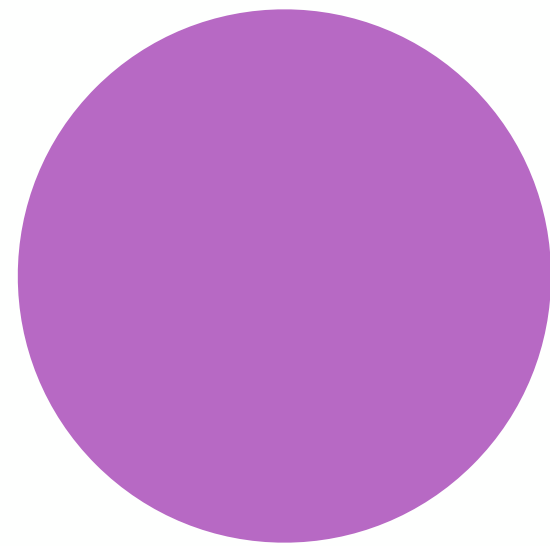
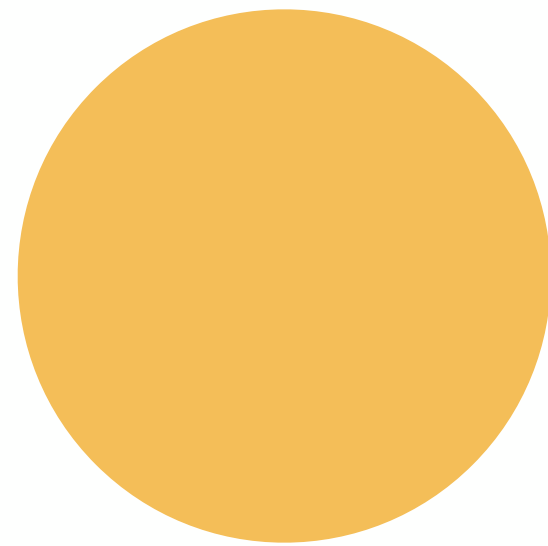
PRINCIPLES OF A GREAT DEVELOPER EXPERIENCE

Aligned
incentives with
developers

Engaging and
speedy on-ramp
to get started

SDKs for many
programming
languages

Dynamic and
personalized
documentation





API Reference

The Stripe API is organized around **REST**. Our API has predictable resource-oriented URLs, accepts **form-encoded** request bodies, returns **JSON-encoded** responses, and uses standard HTTP response codes, authentication, and verbs.

You can use the Stripe API in test mode, which does not affect your live data or interact with the banking networks. The API key you use to authenticate the request determines whether the request is live mode or test mode.

The Stripe API differs for every account as we release new versions and tailor functionality. Log in to see docs customized to your version of the API, with your test key and data.

Subscribe to Stripe's API announce mailing list for updates.

Was this section helpful? [Yes](#) [No](#)

Authentication

The Stripe API uses **API keys** to authenticate requests. You can view and manage your API keys in the Stripe Dashboard.

Test mode secret keys have the prefix `sk_test_` and live mode secret keys have the prefix `sk_live_`. Alternatively, you can use restricted API keys for granular

NOT A DEVELOPER?

Use apps from our [partners](#) to get started with Stripe and to do more with your Stripe account—no code required.

BASE URL

`https://api.stripe.com`

CLIENT LIBRARIES



Ruby



Python



PHP



Java



Node.js



Go



.NET

By default, the Stripe API Docs demonstrate using `curl` to interact with the API over HTTP. Select one of our official [client libraries](#) to see examples in code.

AUTHENTICATED REQUEST

Select library

```
1 $ curl https://api.stripe.com/v1/charges \  
2   -u sk_test_4eC39HqLyjWDarjtT1zdp7dc: \  
3 # The colon prevents curl from asking for a password.
```

stripe API

Find anything

Introduction

Authentication

Errors

Expanding Objects

Idempotent Requests

Metadata

Pagination

Request IDs

Versioning

CORE RESOURCES

Balance

Charges

Customers

Customer Tax IDs

Disputes

Events

Files

File Links

PaymentIntents

Payouts

Products

Refunds

Tokens

PAYMENT METHODS

API Reference

The Stripe API is organized around **REST**. Our API has predictable resource-oriented URLs, accepts **form-encoded** request bodies, returns **JSON-encoded** responses, and uses standard HTTP response codes, authentication, and verbs.

You can use the Stripe API in test mode, which does not affect your live data or interact with the banking networks. The API key you use to authenticate the request determines whether the request is live mode or test mode.

The Stripe API differs for every account as we release new versions and tailor functionality. Log in to see docs customized to your version of the API, with your test key and data.

Subscribe to Stripe's API announce mailing list for updates.

Was this section helpful? Yes No

Authentication

The Stripe API uses **API keys** to authenticate requests. You can view and manage your API keys in the Stripe Dashboard.

Test mode secret keys have the prefix `sk_test_` and live mode secret keys have the prefix `sk_live_`. Alternatively, you can use restricted API keys for granular

NOT A DEVELOPER?

Use apps from our **partners** to get started with Stripe and to do more with your Stripe account—no code required.

BASE URL

https://api.stripe.com

CLIENT LIBRARIES

Ruby

Python

PHP

Java

Node.js

Go

.NET

By default, the Stripe API Docs demonstrate using curl to interact with the API over HTTP. Select one of our official **client libraries** to see examples in code.

AUTHENTICATED REQUEST

Select library

```
1 $ curl https://api.stripe.com/v1/charges \  
2   -u sk_test_4eC39HqLyjWDarjtT1zdp7dc: \  
3 # The colon prevents curl from asking for a password.
```


stripe API

Find anything

CHECKOUT

Sessions

BILLING

Coupons

Discounts

Invoices

Invoice Items

Tax Rates

Credit Notes

Products

Plans

Subscriptions

Subscription Items

Subscription Schedules

Subscription Schedule Revisions

Usage Records

CONNECT

Accounts

The account object

Create an account

Retrieve account

Update an account

Delete an account

Reject an account

List all connected accounts

The login link object

RETRIEVE ACCOUNT

Retrieves the details of an account.

ARGUMENTS

account

optional

The identifier of the account to retrieve. If none is provided, the account associated with the API key is returned.

RETURNS

Returns an account object.

GET /v1/accounts/:id

cURL

1 \$ curl https://api.stripe.com/v1/accounts/acct_1EVcUTIFxM2x4bhl \

2 -u sk_test_r4tJVTEWG0JB4mJXPNMT5a6k00azV69NLW:

3

4 # Or, to retrieve details of your account:

5 \$ curl https://api.stripe.com/v1/account \

6 -u sk_test_r4tJVTEWG0JB4mJXPNMT5a6k00azV69NLW:

RESPONSE

```
{
  "id": "acct_1EVcUTIFxM2x4bhl",
  "object": "account",
  "business_profile": {
    "mcc": "5734",
    "name": null,
    "product_description": "I make great software for low, low prices!",
    "support_address": null,
    "support_email": null,
    "support_phone": "+35311234567",
    "support_url": null,
    "url": "https://twitter.com/whitneysteve"
  },
  "business_type": "individual",
  "charges_enabled": true,
  "country": "IE",
  "created": 1556794213,
  "default_currency": "eur",
  "details_submitted": true,
  "email": "swhitney+testadmin@stripe.com",
  "external_accounts": {
    "object": "list",
    "data": [
      {
        "id": "ba_1EVcVpIFxM2x4bhlwxgNfMTn",
        "object": "bank_account",
        "account": "acct_1EVcUTIFxM2x4bhl",
        "account_holder_name": null,
        "account_holder_type": null,
        "bank_name": "AIB BANK",
        "country": "IE"
      }
    ]
  }
}
```

stripe API

Find anything

CHECKOUT

Sessions

BILLING

Coupons

Discounts

Invoices

Invoice Items

Tax Rates

Credit Notes

Products

Plans

Subscriptions

Subscription Items

Subscription Schedules

Subscription Schedule Revisions

Usage Records

CONNECT

Accounts

The account object

Create an account

Retrieve account

Update an account

Delete an account

Reject an account

List all connected accounts

The login link object

RETRIEVE ACCOUNT

Retrieves the details of an account.

ARGUMENTS

account

optional

The identifier of the account to retrieve. If none is provided, the account associated with the API key is returned.

RETURNS

Returns an account object.

GET /v1/accounts/:id

cURL

1

\$ curl https://api.stripe.com/v1/accounts/acct_1EVcUTIFxM2x4bhl \

2

-u sk_test_r4tJVTEWG0JB4mJXPNMT5a6k00azV69NLW:

3

4

Or, to retrieve details of your account:

5

\$ curl https://api.stripe.com/v1/account \

6

-u sk_test_r4tJVTEWG0JB4mJXPNMT5a6k00azV69NLW:

RESPONSE

{

"id": "acct_1EVcUTIFxM2x4bhl",

"object": "account",

"business_profile": {

"mcc": "5734",

"name": null,

"product_description": "I make great software for low, low prices!",

"support_address": null,

"support_email": null,

"support_phone": "+35311234567",

"support_url": null,

"url": "https://twitter.com/whitneysteve"

},

"business_type": "individual",

"charges_enabled": true,

"country": "IE",

"created": 1556794213,

"default_currency": "eur",

"details_submitted": true,

"email": "swhitney+testadmin@stripe.com",

"external_accounts": {

"object": "list",

"data": [

{

"id": "ba_1EVcVpIFxM2x4bhlwxgNfMTn",

"object": "bank_account",

"account": "acct_1EVcUTIFxM2x4bhl",

"account_holder_name": null,

"account_holder_type": null,

"bank_name": "AIB BANK",

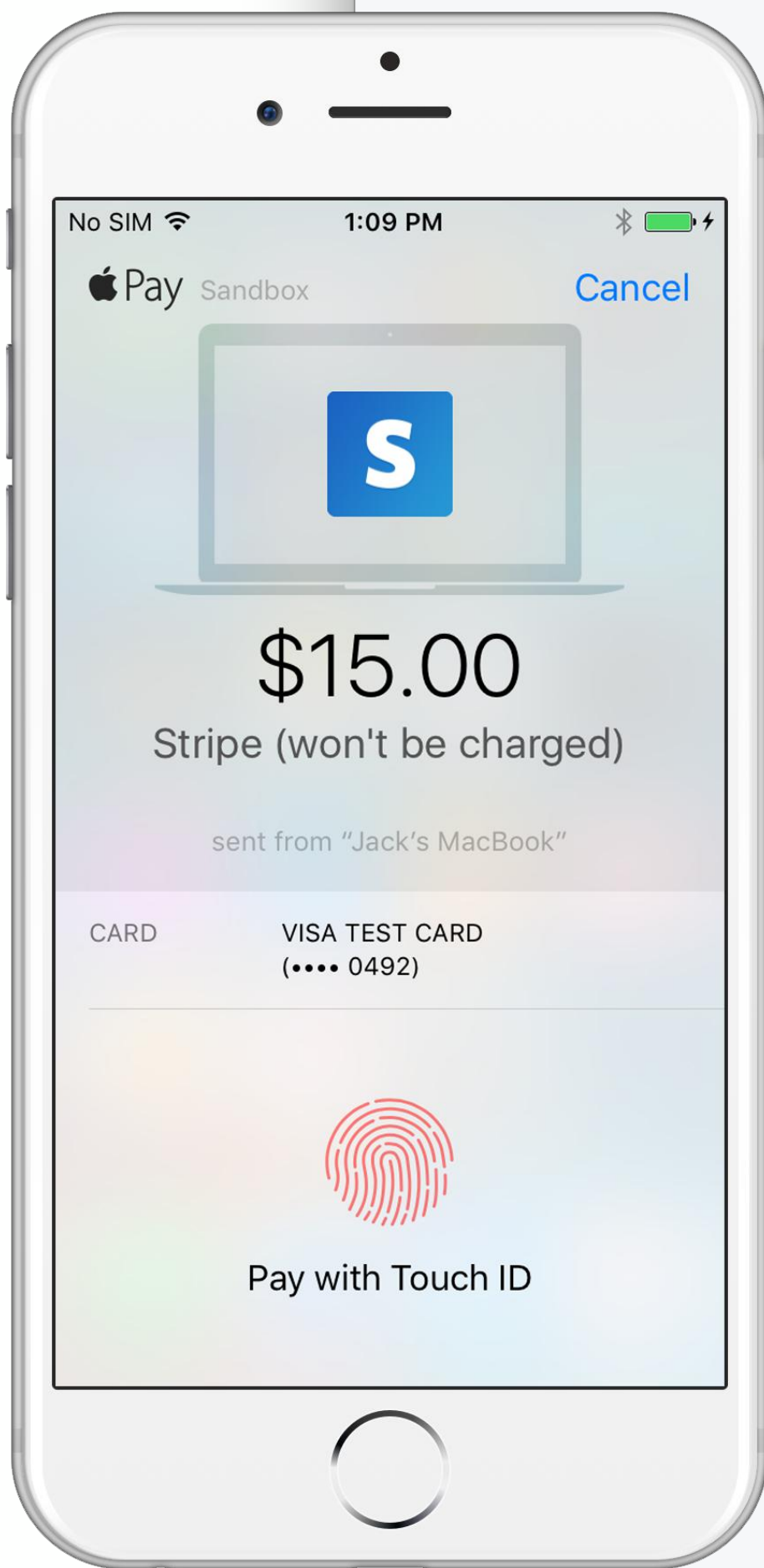
"country": "IE"

}

]

}

stripe



stripe docs

Home

Payments

COLLECTING PAYMENT DETAILS

Checkout

Stripe.js

iOS

Android

CHARGES

Creating Charges

Declines & Failed Payments

Disputes

PRODUCTS & ORDERS

Orders

Tax Integrations

Shipping Integrations

OTHER PAYMENT METHODS

ACH

Apple Pay

Apple Pay in Apps

Apple Pay on the Web

Alipay

Bitcoin

Testing

Subscriptions

Stripe, Inc

Support

Sign in

Apple Pay

Cancel

CARD

VISA TEST CARD (**** 0492)

SHIPPING

1 INFINITE LOOP
CUPERTINO CA 95014

METHOD

GROUND SHIPPING
ARRIVES 5-7 BUSINESS DAYS

1 WIDGET

US\$10.00

SHIPPING

US\$5.00

PAY STRIPE (WON'T BE CHARGED)

US\$15.00

Confirm on Jack's iPhone

Try it out!

You can see what it's like right here on this page! Don't worry, your card won't be charged.

Apple Pay

Getting Started

To test your integration, you'll need an iOS device running iOS 10. If you'd like to test it on your Mac as well, you'll also need a Mac running macOS Sierra. As noted above, though, the integration process is identical across both environments, so you may not need to test it in both configurations.

Apple Merchant Validation

Apple's documentation for Apple Pay on the Web describes their process of "merchant validation", which Stripe handles for you behind the scenes. As such, when using Apple Pay on the

stripe api

INTRODUCTION

Introduction

TOPICS

Authentication

Errors

Expanding Objects

Idempotent Requests

Metadata

Pagination

Request IDs

Versioning

CORE RESOURCES

Balance

Charges

[The charge object](#)

Create a charge

Retrieve a charge

Update a charge

Capture a charge

List all charges

Customers

Disputes

Events

The charge object

ATTRIBUTES

id	—
string	
object	—
string, value is "charge"	
amount	A positive integer in the smallest currency unit (e.g., 100 cents to charge \$1.00 or 100 to charge ¥100, a 0-decimal currency) representing how much to charge. The minimum amount is \$0.50 US or equivalent in charge currency .
positive integer or zero	
amount_refunded	Amount in cents refunded (can be less than the amount attribute on the charge if a partial refund was issued).
positive integer or zero	
application	ID of the Connect application that created the charge.
string	<div>Expandable</div>
application_fee	The application fee (if any) for the charge. See the Connect documentation for details.
string	<div>Expandable</div>

curl

Example

DOCUMENTING AT SOURCE

```
class ChargeAPIResource < AbstractAPIResource
  required :amount, Integer
  required :currency, String

  document :amount, 'A positive integer in the ...'
  document :currency, 'Three-letter ISO currency ...'
end
```



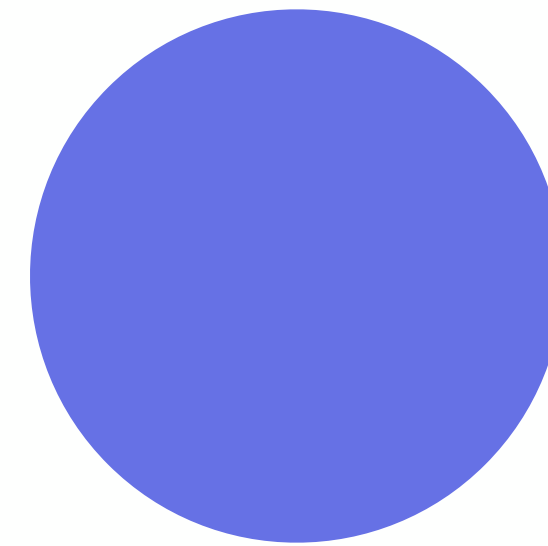
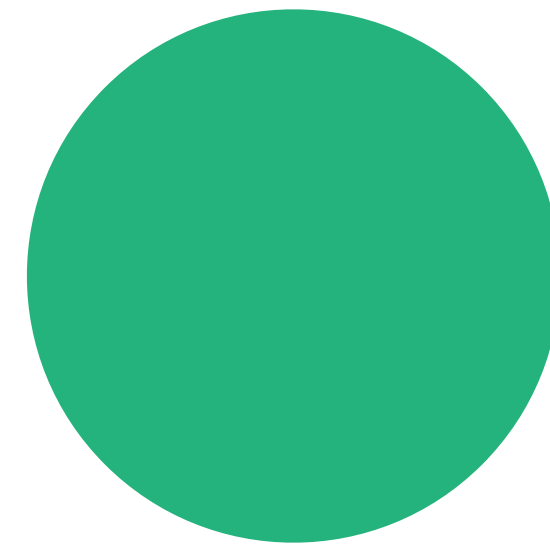
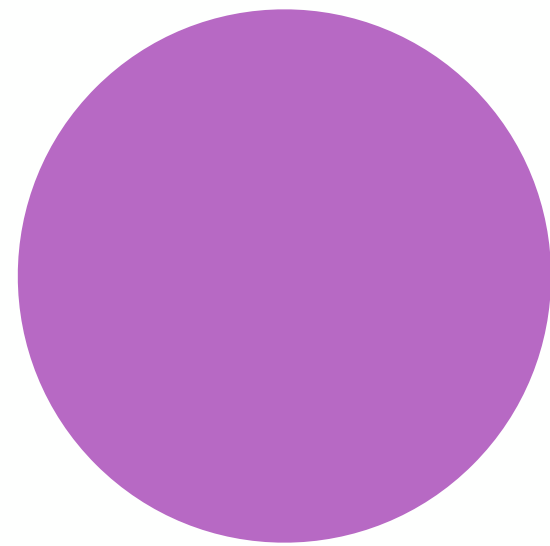
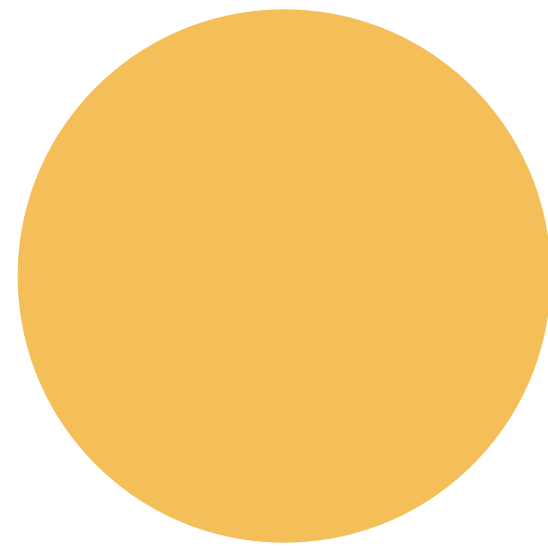
PRINCIPLES OF A GREAT DEVELOPER EXPERIENCE

Aligned
incentives with
developers

Engaging and
speedy on-ramp
to get started

SDKs for many
programming
languages

Dynamic and
personalized
documentation



PRINCIPLES OF A GREAT DEVELOPER EXPERIENCE

Aligned
incentives with
developers

Engaging and
speedy on-ramp
to get started

SDKs for many
programming
languages

Dynamic and
personalized
documentation

Useful design
for error codes
and messages

ADVANCED ERROR MESSAGES

ADVANCED ERROR MESSAGES

```
>> Stripe::Customer.create
```

```
Stripe::AuthenticationError: No API key provided.  
Set your API key using "Stripe.api_key = <API-KEY>".  
You can generate API keys from the Stripe web interface.  
See https://stripe.com/api for details, or email  
support@stripe.com if you have any questions.
```

ADVANCED ERROR MESSAGES

```
>> Stripe.api_key = "BQokikJ0vBiI2HlWgH4oIfQ2"  
>> Stripe::Charge.retrieve("ch_17S0e5QQ2exd2S")
```

```
Stripe::InvalidRequestError: (Status 404)  
No such charge: ch_17S0e5QQ2exd2S; a similar  
object exists in live mode, but a test mode key  
was used to make this request.
```

Stephen's Shop

Home

Payments

Balance

Customers

Radar

Billing

Connect

Orders

Developers

API keys

Webhooks

Events

Logs

Viewing test data

Settings

Search...

Feedback about this page?

TEST DATA

POST /v1/charges

2019/05/02 13:16:11

Summary

Time

2019/05/02 13:16:11

Method

POST

URL

/v1/charges

Status

200

Version

[2019-03-14 \(latest\)](#)

Request POST body

```
1  {
2    "amount": "2000",
3    "currency": "eur",
4    "source": "tok_mastercard",
5  }
```

Response body

```
1  {
2    "id": "ch_1EVdpfIFxM2x4bhLLSELWHS",
3    "object": "charge",
4    "amount": 2000,
5    "amount_refunded": 0,
```

stripe

PRINCIPLES OF A GREAT DEVELOPER EXPERIENCE

Aligned
incentives with
developers

Engaging and
speedy on-ramp
to get started

SDKs for many
programming
languages

Dynamic and
personalized
documentation

Useful design
for error codes
and messages

PRINCIPLES OF A GREAT DEVELOPER EXPERIENCE

Aligned
incentives with
developers

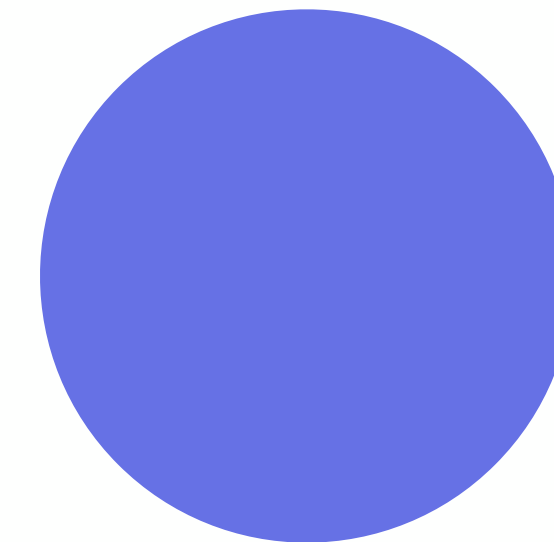
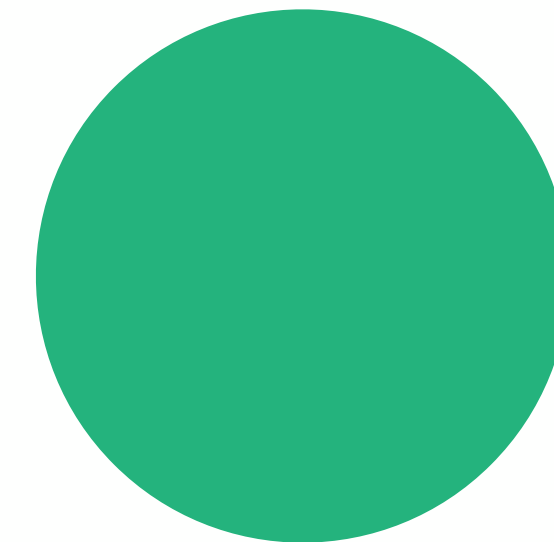
Engaging and
speedy on-ramp
to get started

SDKs for many
programming
languages


Dynamic and
personalized
documentation

Useful design
for error codes
and messages

Reliability,
transparency,
and support




PROVIDING TECHNICAL GUIDANCE



Chat with us

The current wait time is about 3 minutes


Start a chat



Have us call you

The current wait time is about 3 minutes


Talk to us



Send us an email


The current response time is one business day

Send email



24x7 support over email, phone, or chat

Can't find your answer? Get in touch with our team—we're here to help. [Contact us](#) ▶



Technical questions on IRC

Got any technical questions? Our developers hang out in [#stripe](#) on [freenode](#).



[stripe-payments]



Log In

Sign Up

Home

PUBLIC

 Stack Overflow

Tags

Users

Jobs

Teams
Q&A for work



Questions tagged [stripe-payments]

Ask Question

Stripe-payments refers to the libraries and API produced by the "Stripe" company for payment processing.

[Learn more...](#) [Top users](#) [Synonyms \(3\)](#)

5,648 questions

Info

Newest

Frequent

Active

Unanswered

178

votes

[cURL error 60: SSL certificate: unable to get local issuer certificate](#)

I use WAMP on a local development environment and am trying to charge a card but get the error I ...

php

ssl

curl

wamp


stripe-payments

17

answers

Apr 23 '15 at 11:54

Featured on Meta

 [Announcing the arrival of Valued Associate #679: Cesar Manara](#)

Related Tags

php × 1066

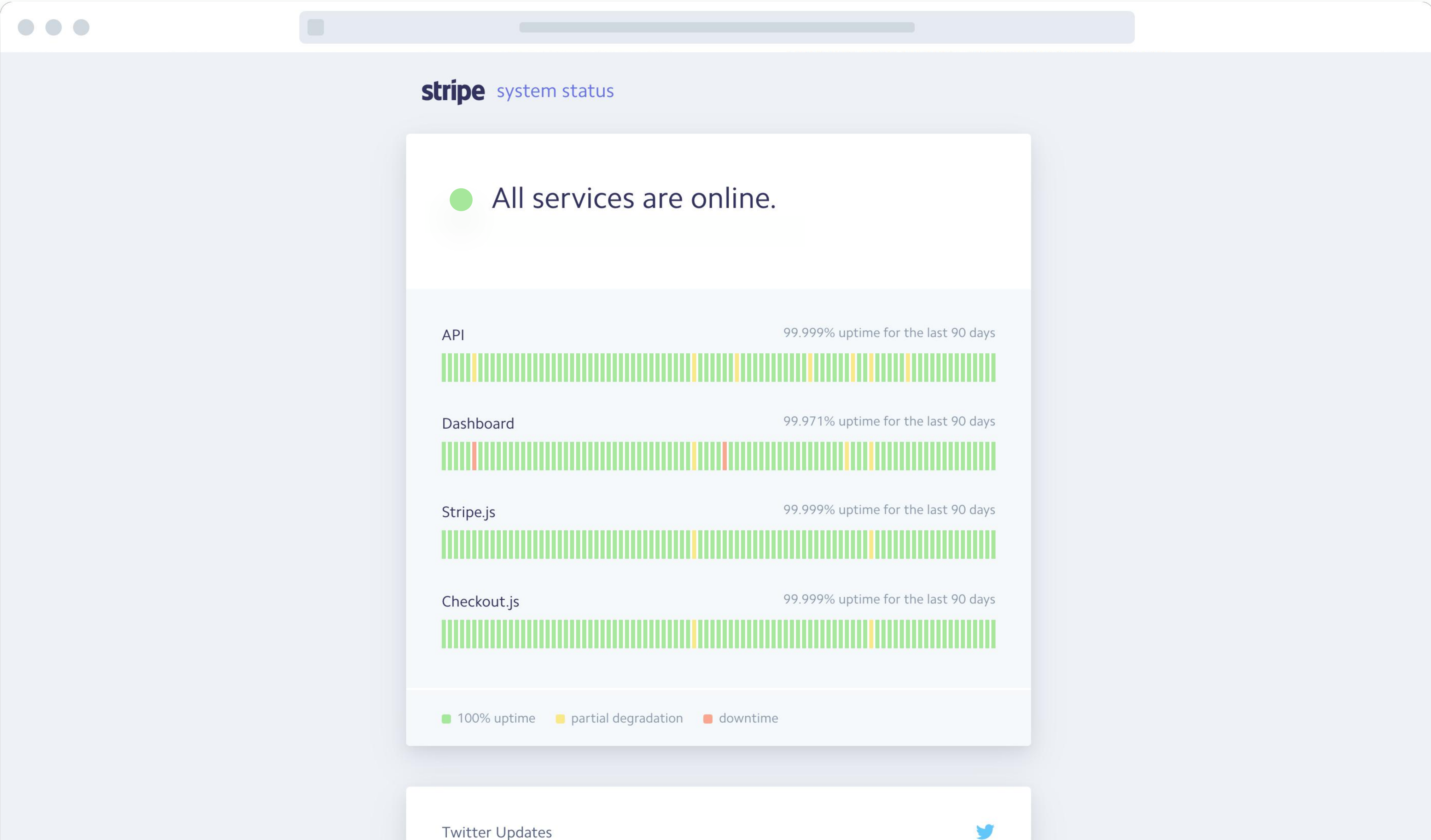
javascript × 877

ruby-on-rails × 814

node.js × 397

stripe

TRANSPARENCY IS PARAMOUNT



PRINCIPLES OF A GREAT DEVELOPER EXPERIENCE

Aligned
incentives with
developers

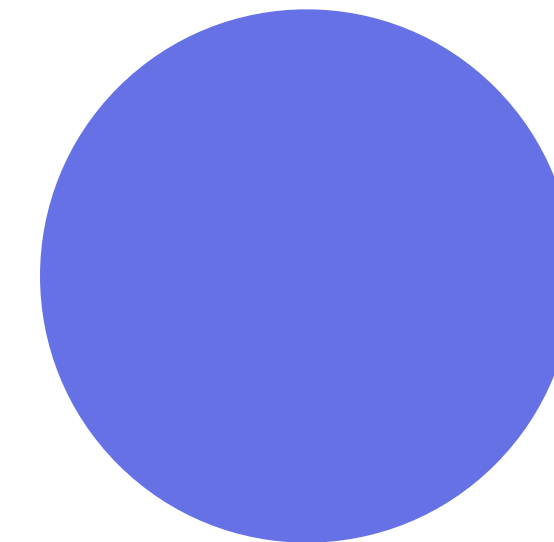
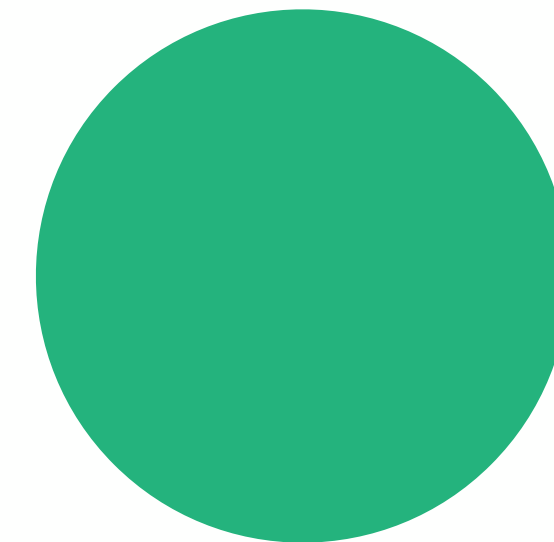
Engaging and
speedy on-ramp
to get started

SDKs for many
programming
languages

Dynamic and
personalized
documentation

Useful design
for error codes
and messages

Reliability,
transparency,
and support



PRINCIPLES OF A GREAT DEVELOPER EXPERIENCE

Aligned
incentives with
developers

Engaging and
speedy on-ramp
to get started

SDKs for many
programming
languages

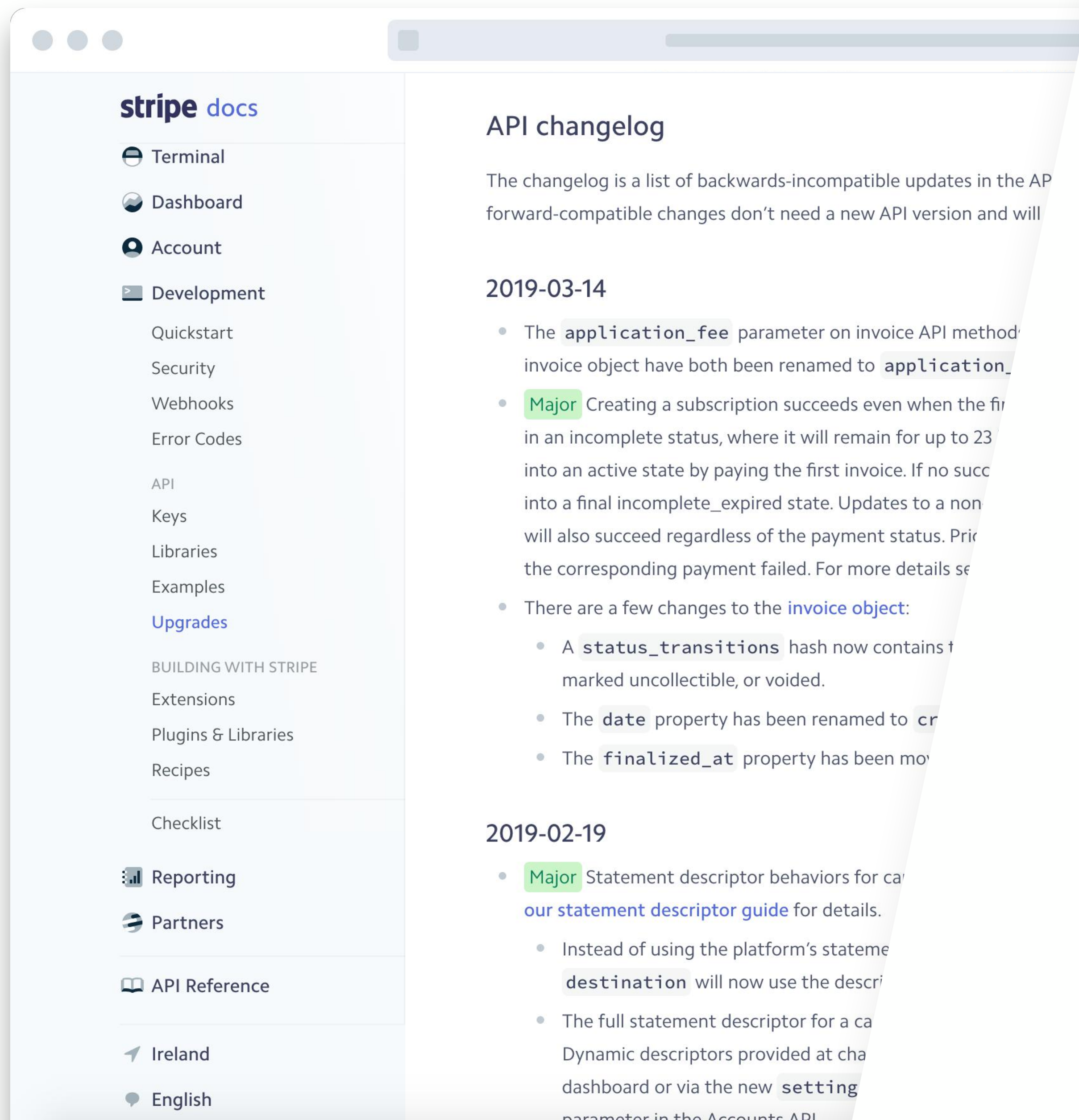
Dynamic and
personalized
documentation

Useful design
for error codes
and messages

Reliability,
transparency,
and support

Backwards-
compatible API
updates

Avoid Breaking Changes



API changelog

The changelog is a list of backwards-incompatible updates in the API. Forward-compatible changes don't need a new API version and will

2019-03-14

- The `application_fee` parameter on invoice API methods and the `application_fee` property on the invoice object have both been renamed to `application_fee_amount`.
- Major** Creating a subscription succeeds even when the first invoice is in an incomplete status, where it will remain for up to 23 hours before transitioning into an active state by paying the first invoice. If no successful payment is received, the subscription will transition into a final incomplete_expired state. Updates to a non-active subscription will also succeed regardless of the payment status. Prior to this update, the corresponding payment failed. For more details see [this blog post](#).
- There are a few changes to the [invoice object](#):
 - A `status_transitions` hash now contains information about when a subscription is marked uncollectible, or voided.
 - The `date` property has been renamed to `created`.
 - The `finalized_at` property has been moved to the `metadata` field.

2019-02-19

- Major** Statement descriptor behaviors for card payments have changed. See [our statement descriptor guide](#) for details.
 - Instead of using the platform's statement descriptor, merchants can now use their own `destination` will now use the descriptor provided in the `statement_descriptor` parameter.
 - The full statement descriptor for a card payment can now be retrieved via the `statement_descriptor` dynamic descriptors provided at the merchant's dashboard or via the new `setting_statement_descriptor` parameter in the Accounts API.

GATES

`:versions:`

-

`:version: 2016-07-06`

`:new_gates:`

-

`:gate: hide_canceled_subscriptions`

`:description: >-`

You can now view canceled subscriptions by specifying ``status=canceled`` or ``status=all`` when listing subscriptions. In addition, you can now retrieve a canceled subscription by its ID.

PRINCIPLES OF A GREAT DEVELOPER EXPERIENCE

Aligned
incentives with
developers

Engaging and
speedy on-ramp
to get started

SDKs for many
programming
languages

Dynamic and
personalized
documentation

Useful design
for error codes
and messages

Reliability,
transparency,
and support

Backwards-
compatible API
updates

PRINCIPLES OF A GREAT DEVELOPER EXPERIENCE

Aligned
incentives with
developers

Engaging and
speedy on-ramp
to get started

SDKs for many
programming
languages

Dynamic and
personalized
documentation

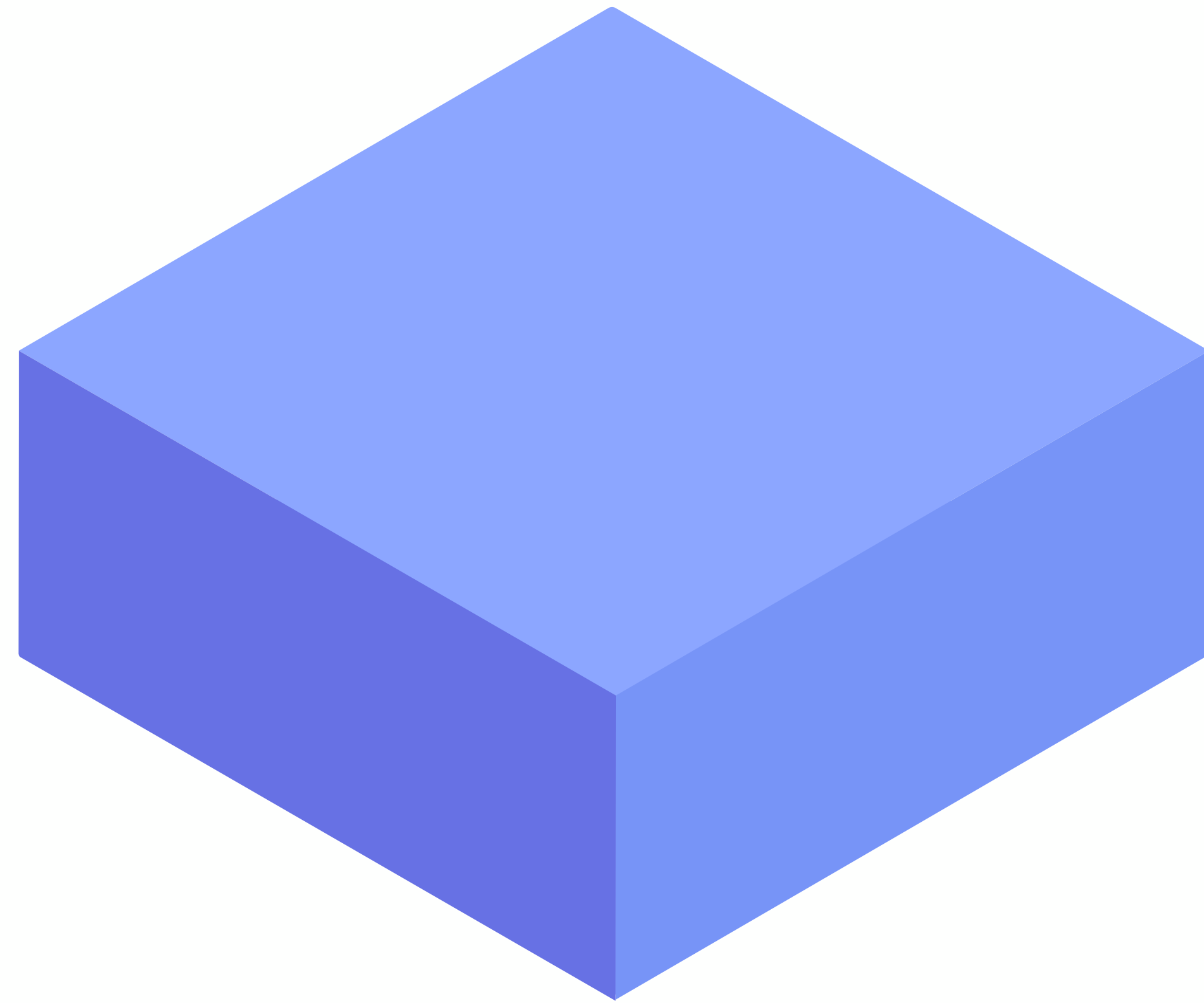
Useful design
for error codes
and messages

Reliability,
transparency,
and support

Backwards-
compatible API
updates

Bigger ideas
and tools to
drive success

FULL STACK, TACTILE EXPERIENCES



stripe

FULL STACK, TACTILE EXPERIENCES



stripe

FULL STACK, TACTILE EXPERIENCES



stripe

PRINCIPLES OF A GREAT DEVELOPER EXPERIENCE

Aligned
incentives with
developers

Engaging and
speedy on-ramp
to get started

SDKs for many
programming
languages

Dynamic and
personalized
documentation

Useful design
for error codes
and messages

Reliability,
transparency,
and support

Backwards-
compatible API
updates

Bigger ideas
and tools to
drive success





Sorbet

FAST, POWERFUL TYPE CHECKER
DESIGNED FOR RUBY

UNINITIALISED CONSTANT ERRORS

```
class Hello

end

def main
  puts Helo.new
end

main
```

```
> ruby hello.rb
hello.rb:7:in `main': uninitialized constant Helo (NameError)
Did you mean?  Hello
               from hello.rb:12:in `<main>'
```


UNINITIALISED CONSTANT ERRORS

```
class Hello

end

def main
  puts Helo.new
end

main
```

```
> srb
hello.rb:7: Unable to resolve constant `Helo`
    7 |   puts Helo.new
      |         ^^^^
```

UNINITIALISED CONSTANT ERRORS

```
class Hello

end

def main
  puts Helo.new
end

main
```

 100% of Ruby files at Stripe!

```
> srb
hello.rb:7: Unable to resolve constant `Helo`
    7 | puts Helo.new
      |      ^^^^
```

UNDEFINED METHOD ERRORS

```
class Hello
  def greeting; 'Hello, world!'; end
end
```

```
def main
  puts Hello.new.greet
end
```

```
main
```

```
> ruby hello.rb
hello.rb:7:in `main': undefined method `greet'
Did you mean?  greeting
               from hello.rb:10:in `<main>'
```

UNDEFINED METHOD ERRORS

```
# typed: true
class Hello
  def greeting; 'Hello, world!'; end
end

def main
  puts Hello.new.greet
end

main
```

```
> srb
hello.rb:7: Method greet does not exist on `Hello`
  7 | puts Hello.new.greet
    | ^^^^^^^^^^^^^^^^^^^
```

UNDEFINED METHOD ERRORS

```
# typed: true
class Hello
  def greeting; 'Hello, world!'; end
end
```

```
def main
  puts Hello.new.greet
end
```

```
main
```

 80% of Ruby files at Stripe!

```
> srb
hello.rb:7: Method greet does not exist on `Hello`
    7 | puts Hello.new.greet
      | ^^^^^^^^^^^^^^^^^^^
```


MORE THAN JUST ERRORS

```
def do_thing(x)
  # ...
end
```

```
do_thing('some string') # is this ok?
do_thing(nil)           # is this ok?
```

MORE THAN JUST ERRORS

```
sig {params(x: String).void}  
def do_thing(x)  
  # ...  
end
```

```
do_thing('some string') # 😎 this is ok!  
do_thing(nil)           # ❌ this is not ok!
```

MORE THAN JUST ERRORS

```
sig {params(x: String).void}  
def do_thing(x)  
  # ...  
end
```

```
do_thing('some string') # 😎 this is ok!  
do_thing(nil)           # ❌ this is not ok!
```

 62% of methods at Stripe!

AVOID PRIMITIVE OBSESSION

```
sig do
  params(
    amount: Integer,
    at: Integer,
  )
  .void
end
def charge_user_at(amount:, at:); end

charge_user_at(amount: 5, at: 1548979200)
```

AVOID PRIMITIVE OBSESSION

```
sig do
  params(
    amount: Amount,
    at: Time,
  )
  .void
end
def charge_user_at(amount:, at:); end

charge_user_at(
  amount: Amount.new("5.00", "eur"),
  at: Time.new(2019, 2, 1),
)
```


MODELLING INVARIANTS

```
class User < Model
  prop: email, String, optional: false
end
```

```
sig {params(user: User).void}
def forgot_password(user)
  send_password_reset(user.email)
end
```

```
sig {params(email: String).void}
def send_password_reset(email); end
```

MODELLING INVARIANTS

```
class VerifiedEmail < T::Struct
  const:email, String, optional: false
end
```

```
class UnverifiedEmail < T::Struct
  const:unverified_email, String, optional: false
end
```

```
class User < Model
  prop: email, T.any(VerifiedEmail, UnverifiedEmail)
end
```

MODELLING INVARIANTS

```
sig {params(user: User).void}
def forgot_password(user)
  email = user.email
  T.reveal_type(email)
  case email
  when VerifiedEmail
    send_password_reset(email)
    T.reveal_type(email)
  else
    T.let(email, UnverifiedEmail)
    T.reveal_type(email)
  end
end

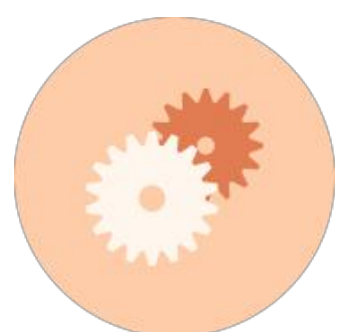
sig {params(email: String).void}
def send_password_reset(email); end
```

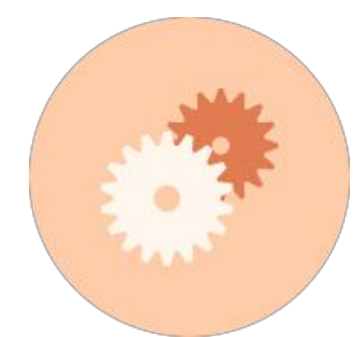




Sorbet

MILLIONS OF LINES OF CODE...
...COMPLETES IN SECONDS





Developer Dashboard

PROVIDING NEW GUIDANCE, INSIGHTS, AND
REAL-TIME MONITORING TOOLS

SINGLE PANE OF GLASS

Rocket Rides

Home

Payments

Balance

Customers

Radar

Sigma

Subscriptions

Connect

Orders

Developers

View test data

Business settings

Search...

Feedback about this page?

API version

Upgrade available...

VERSION	LAST USED	LAST 7 DAYS	USAGE
2018-02-28 <div>LATEST</div>	Mar 16, 2019	<div></div>	98%
2016-03-07 <div>DEFAULT</div>	Mar 16, 2019	<div></div>	2%

You may be using multiple API versions due to your client libraries or plugins. [Learn more](#) →

Monitoring

Show card errors

4h 12h 24h 1w

API requests

API error distribution


by endpoint

Webhooks

Webhooks response time

stripe

SINGLE PANE OF GLASS

 Rocket Rides

Home

Payments

Balance

Customers

Radar

Sigma

Subscriptions

Connect

Orders

Developers

View test data



Business settings

Search...

Feedback about this page?

API version

Upgrade available...

VERSION	LAST USED	LAST 7 DAYS	USAGE
2018-02-28 LATEST	Mar 16, 2019		98%
2016-03-07 DEFAULT	Mar 16, 2019		2%

You may be using multiple API versions due to your client libraries or plugins. [Learn more](#)

Monitoring

☒ Show card errors

4h 12h 24h 1w

API requests

API error distribution

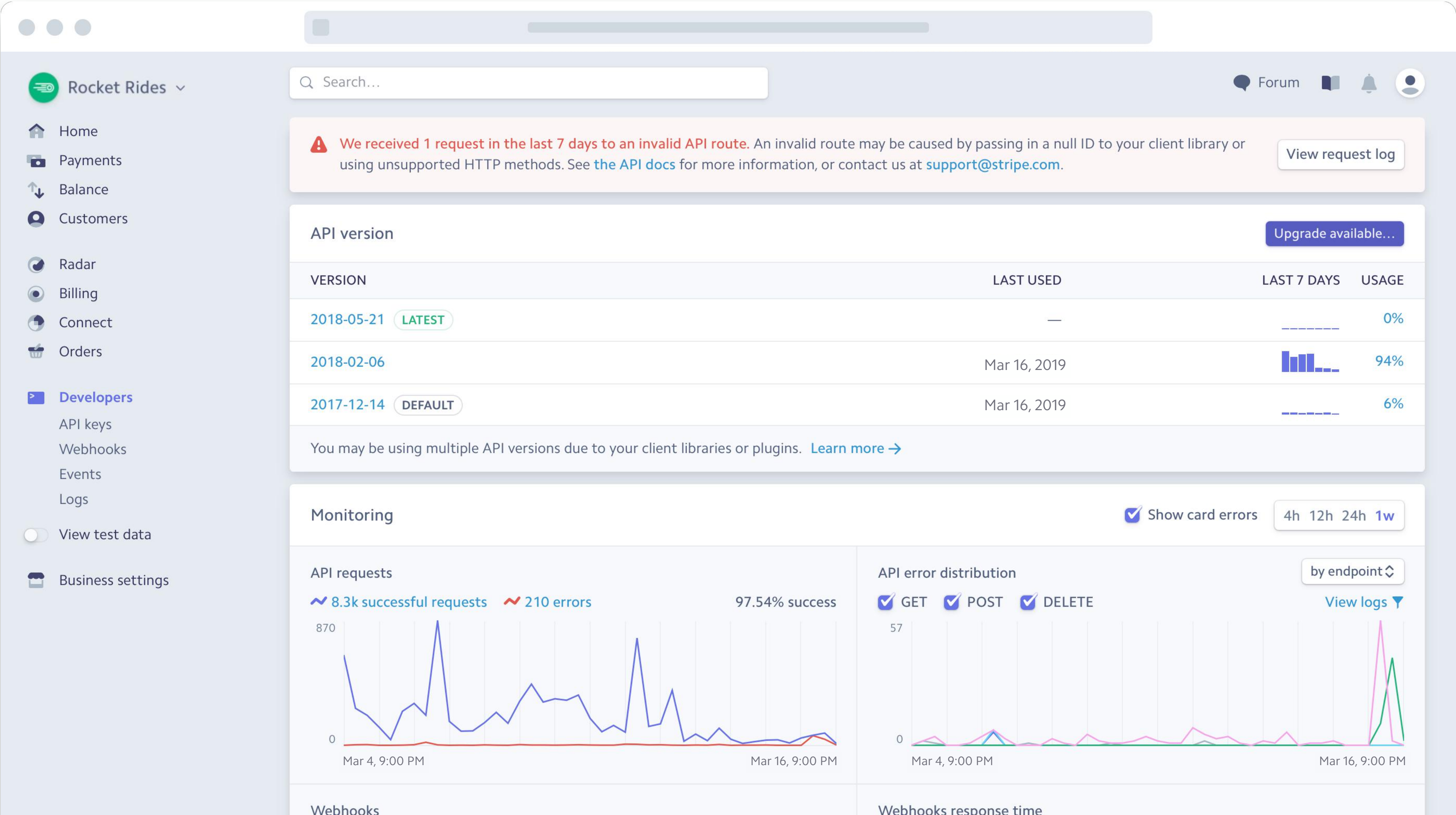
by endpoint

Webhooks

Webhooks response time



BEST PRACTICES AND RECOMMENDATIONS





API UPGRADES

Rocket Rides

▼

Home

Payments

Balance

Customers

Radar

Billing

Connect

Orders

Developers

API keys

Webhooks

Events

Logs

View test data

Business settings

Search...

Forum

We received 1 request in the last 7 days to an invalid API route. An invalid route may be caused by passing in a null ID to your client library or using unsupported HTTP methods. See [the API docs](#) for more information, or contact us at support@stripe.com.

View request log

API version

Upgrade available...

VERSION	LAST USED	LAST 7 DAYS	USAGE
2018-05-21 LATEST	—		0%
2018-02-06	Mar 16, 2019	Mar 15 75 requests	94%
2017-12-14 DEFAULT	Mar 16, 2019		6%

You may be using multiple API versions due to your client libraries or plugins. [Learn more](#) →

Monitoring

☒ Show card errors

4h 12h 24h 1w

API requests

8.3k successful requests 210 errors 97.54% success

API error distribution

☒ GET ☒ POST ☒ DELETE

by endpoint

View logs

Webhooks

Webhooks response time

API UPGRADES

Rocket Rides

[Forum](#)

[Home](#)
[Payments](#)

We received 1 request in the last 7 days to an invalid API route. An invalid route may be caused by passing in a null ID to your client library or using unsupported HTTP methods. See [the API docs](#) for more information, or contact us at support@stripe.com.

[View request log](#)

API version

Upgrade available...

VERSION	LAST USED	LAST 7 DAYS	USAGE
2018-05-21 LATEST	—		0%
2018-02-06	Mar 16, 2019	<div> <div>Mar 15</div> <div>75 requests</div> </div>	94%
2017-12-14 DEFAULT	Mar 16, 2019		6%

You may be using multiple API versions due to your client libraries or plugins. [Learn more](#) →

☐ View test data

[Business settings](#)

Monitoring

☒ Show card errors

4h 12h 24h 1w

API requests

8.3k successful requests
 210 errors
 97.54% success

API error distribution

☒ GET
 ☒ POST
 ☒ DELETE

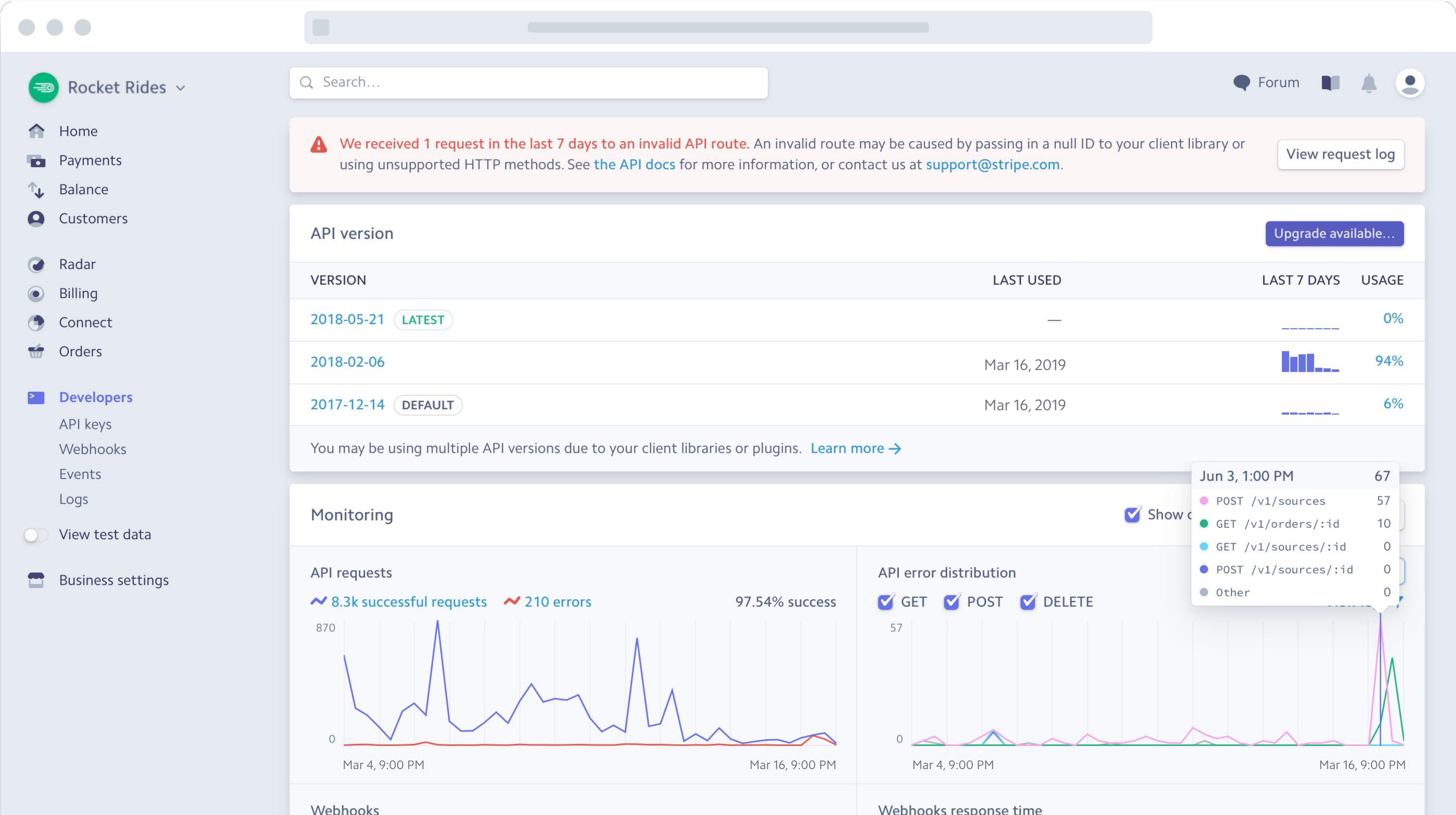
by endpoint ↕

[View logs](#)

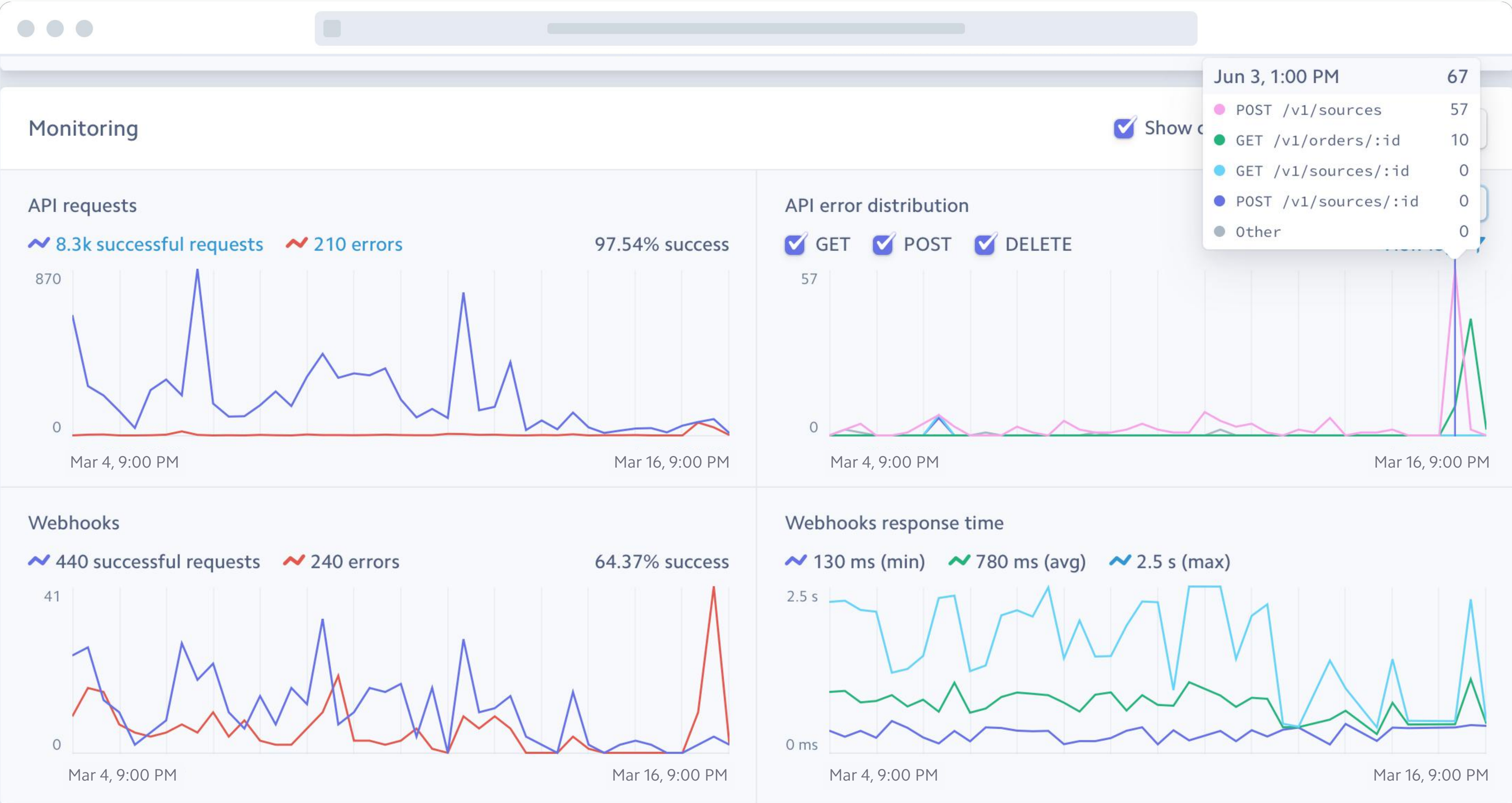
Webhooks

Webhooks response time

OBSERVABILITY



OBSERVABILITY



MACHINE READABLE DEFINITIONS

The screenshot displays the Postman application interface. On the left, a sidebar shows a list of API collections. The main workspace is configured for a GET request to the endpoint `https://api.stripe.com/v1/charges/:charge?expand={{expand}}`. The request is set to use Basic Authentication with the username `sk_test_JrpPoGYKvBQv0exkoy3e3p4g`. The response pane at the bottom shows a JSON object with a `list` of charge data, including details like `id`, `amount`, `created`, and `currency`.

Postman

New Import Runner

Builder Team Library

IN SYNC

No Environment

Filter

History Collections

All Me Team

GET https://api.stripe.com/v1/application_fees/:id?e...

POST https://api.stripe.com/v1/application_fees/:id/r...

GET https://api.stripe.com/v1/application_fees/:id/r...

POST https://api.stripe.com/v1/application_fees/:id/r...

GET https://api.stripe.com/v1/balance?expand={{ex...

GET https://api.stripe.com/v1/balance/history?expa...

GET https://api.stripe.com/v1/balance/history/:id?e...

GET https://api.stripe.com/v1/bitcoin/receivers?exp...

GET https://api.stripe.com/v1/bitcoin/receivers/:id?...

GET https://api.stripe.com/v1/bitcoin/receivers/:rec...

GET https://api.stripe.com/v1/bitcoin/transactions?...

GET https://api.stripe.com/v1/charges?expand={{ex...

POST https://api.stripe.com/v1/charges

GET https://api.stripe.com/v1/charges/:charge?expa...

POST https://api.stripe.com/v1/charges/:charge

POST https://api.stripe.com/v1/charges/:charge/capt...

GET https://api.stripe.com/v1/charges/:charge/disp...

POST https://api.stripe.com/v1/charges/:charge/disp...

POST https://api.stripe.com/v1/charges/:charge/disp...

POST https://api.stripe.com/v1/charges/:charge/refu...

GET https://api.stripe.com/v1/charges/:charge/refu...

POST https://api.stripe.com/v1/charges/:charge/refu...

https://api.stripe.com https://api.stripe.com https://api.stripe.com/v1/ch

https://api.stripe.com/v1/charges/:charge?expand={{expand}}

Examples (0)

GET https://api.stripe.com/v1/charges

Params Send Save

Authorization Headers (3) Body Pre-request Script Tests

TYPE

Basic Auth

Username sk_test_JrpPoGYKvBQv0exkoy3e3p4g

Password

The authorization header will be automatically generated when you send the request. [Learn more about authorization](#)

Preview Request


Body Cookies Headers (14) Test Results

Status: 200 OK Time: 894 ms Size: 26.91 KB

Pretty Raw Preview JSON

```
1 {
2   "object": "list",
3   "data": [
4     {
5       "id": "ch_1BYQRvD5BmnDq0rbMTw0Bmw8",
6       "object": "charge",
7       "amount": 3794,
8       "amount_refunded": 0,
9       "application": null,
10      "application_fee": null,
11      "balance_transaction": "txn_1BYQRvD5BmnDq0rboPmxHbFV",
12      "captured": true,
13      "created": 1513133903,
14      "currency": "eur",
15      "customer": null,
16      "description": null,
17      "destination": null,
18      "dispute": null,
19      "failure_code": null
```


AUTOMATED TESTING




Search or jump to...

Pull requests


Issues

Marketplace

Explore



+



stripe / stripe-mock

Watch

11

Star

289

Fork

17

<> Code

Issues 8

Pull requests 0

Projects 0

Wiki

Insights

stripe-mock is a mock HTTP server that responds like the real Stripe API. It can be used instead of Stripe's testmode to make test suites integrating with Stripe faster and less brittle.

192 commits

5 branches

45 releases

8 contributors

MIT

Branch: master


New pull request

Create new file

Upload files


Find file

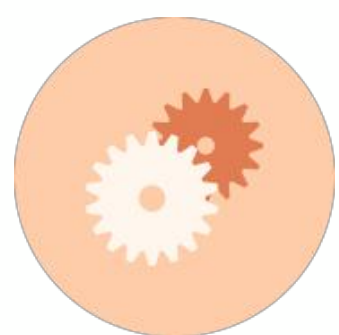
Clone or download

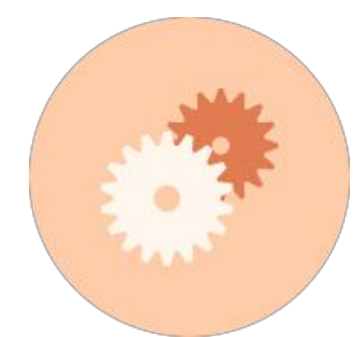
 brandur-stripe Merge pull request #77 from stripe/brandur-reflect-idempotency-key

Latest commit ccfce7e 3 days ago

generator/datareplacer	Hedge against the "zero Value"	5 days ago
openapi @ 667d635	Allow empty content type on `DELETE`	24 days ago
param	Validate `multipart/form-data` + error on mismatched media types	a month ago
scripts	Push Docker image to Docker Hub	2 months ago
spec	Replace data in response with data from request	19 days ago
vendor	Replace data in response with data from request	19 days ago
.dockerignore	Leaner Docker image through the use of multi-stage builds	2 months ago
.gitignore	Not general, but adding my `TODO.md` to `.gitignore`	a month ago
.gitmodules	Add OpenAPI submodule + bindata/test instructions	a year ago
.travis.yml	Leaner Docker image through the use of multi-stage builds	2 months ago







Developer Dashboard

PROVIDING NEW GUIDANCE, INSIGHTS, AND
REAL-TIME MONITORING TOOLS

PRINCIPLES OF A GREAT DEVELOPER EXPERIENCE

Aligned
incentives with
developers

Engaging and
speedy on-ramp
to get started

SDKs for many
programming
languages

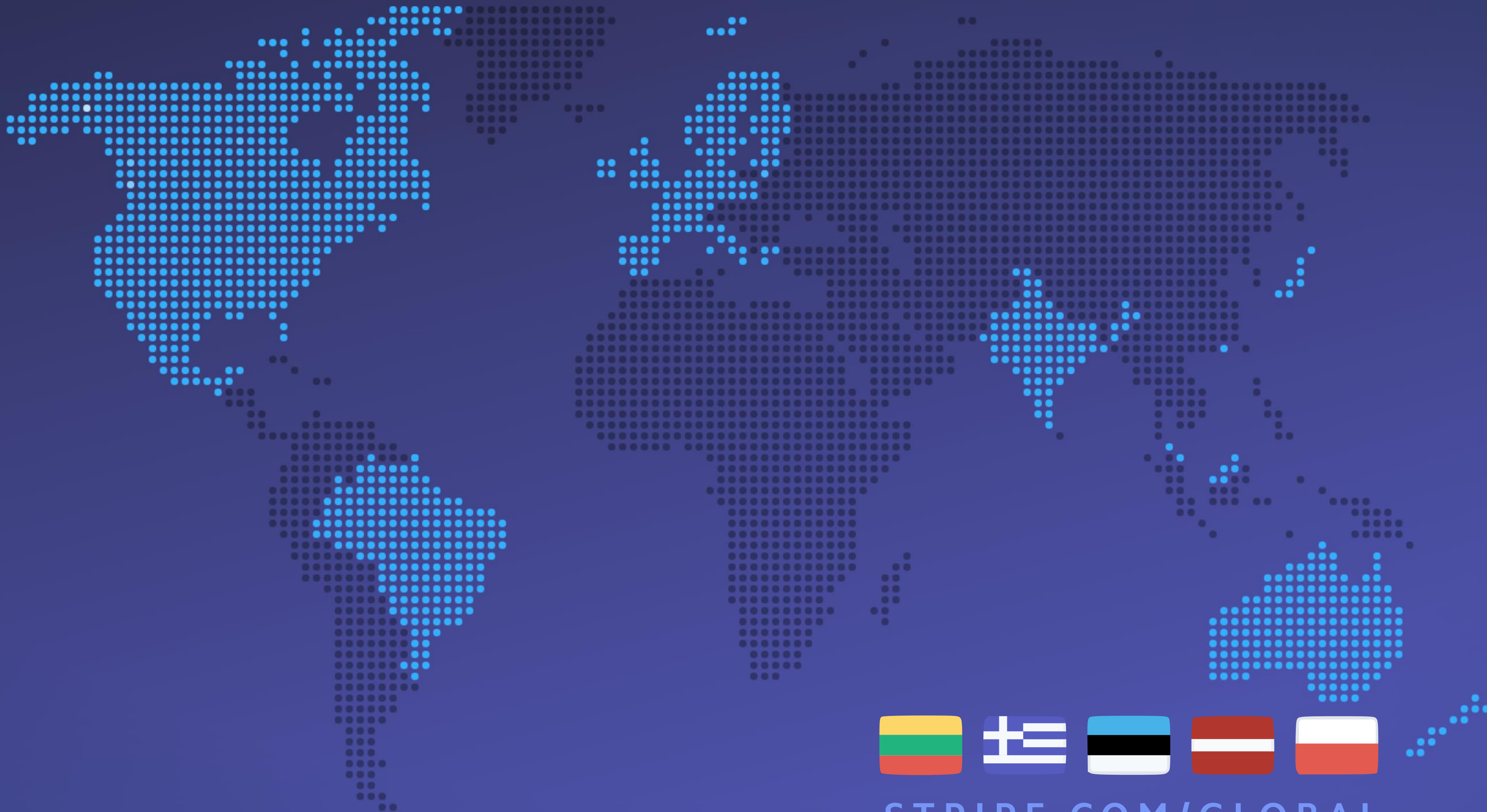
Dynamic and
personalized
documentation

Useful design
for error codes
and messages

Reliability,
transparency,
and support

Backwards-
compatible API
updates

Bigger ideas
and tools to
drive success



[STRIPE.COM/GLOBAL](https://stripe.com/global)