e Best Tools for Working :h API Requests

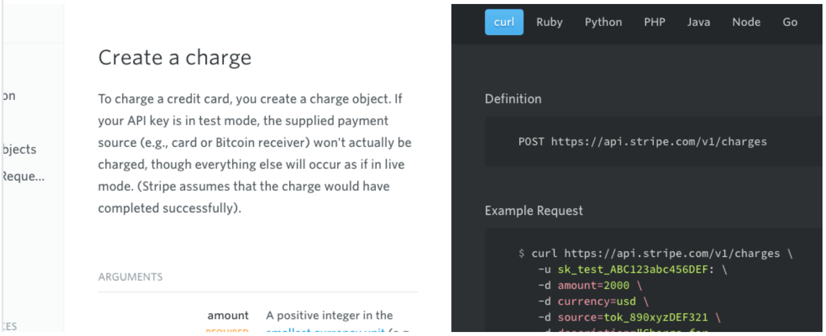
dam DuVander / January 26, 2017

e yourself as an explorer, braving high sea or rough terrain to er new routes. Along the way you'll meet many people, most of won't speak your language. An interpreter would be crucial to ip, making it possible to communicate and navigate unfamiliar :y.

ouilding or consuming an API, you need a similar translator to /our exploration. I *suppose* you could have a human perform ınslation, but computers do a much better job of making API :ts and parsing the responses. Yet, there is still a human ıt to the exploration phase of an API. During that period, you ınt one of these four tools to assist you in working with API :ts, to stand in as an interpreter that makes sense of the API.

L: Command Line Granddaddy

d be negligent to write about these tools without starting with The popular command line utility was created during the ng Web 1.0 years. Today, it's bundled with macOS, runs on ws and Linux, and is used as a language-agnostic example in cumentation of countless APIs.



Create a charge

To charge a credit card, you create a charge object. If your API key is in test mode, the supplied payment source (e.g., card or Bitcoin receiver) won't actually be charged, though everything else will occur as if in live mode. (Stripe assumes that the charge would have completed successfully).

ARGUMENTS

amount A positive integer in the

Definition

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

Example Request

```
$ curl https://api.stripe.com/v1/charges \
  -u sk_test_ABC123abc456DEF: \
  -d amount=2000 \
  -d currency=usd \
  -d source=tok_890xyzDEF321 \
```

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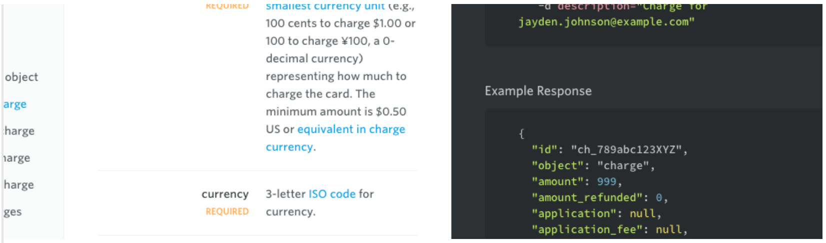

object
arge
harge
narge
harge
ges

REQUIRED 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 card. The minimum amount is $0.50 US or equivalent in charge currency.

currency
REQUIRED
3-letter ISO code for currency.

```
    -d description="Charge for
jayden.johnson@example.com"
```

Example Response

```
{
  "id": "ch_789abc123XYZ",
  "object": "charge",
  "amount": 999,
  "amount_refunded": 0,
  "application": null,
  "application_fee": null,
```

for example, has one of the best examples of API ientation and they make wide use of cURL examples. You can copy an example request in Stripe's documentation and paste your command line. Stripe makes it easy so developers can get a feel for the API, while recognizing one tiny catch: cURL ırticularly easy to use.

Daniel Stenberg
@bagder

has options on all single letters a-z (upper and lower case), ept for TWO upper case letters. We're saving them for... hm, nno.

0 3:23 PM - Dec 29, 2016

ee Daniel Stenberg's other Tweets

are so many different flags to send along with cURL commands ey've almost run out of letters. Further, the software is built to vith more than just API requests. There are a laundry list of ols and authentication methods in the cURL documentation. It's erful tool, but with great power comes great... complexity.

aid, with a little practice, you'll memorize the handful of on commands you'll use most with modern APIs:

for HTTP headers: `-H “Content-type: application/json”`

for HTTP method: `-X POST`

for data: `-d ‘{“field”: “value”, “numeric”: 42}’`

for basic authentication: `-u “username:password”`

end a Zapier shirt to whoever comes up with the best way to nber the `HXdu` flags, because I could really use a mnemonic.

Pie: Intuitive cURL Alternative Made

- Zapier at PyCon 2019
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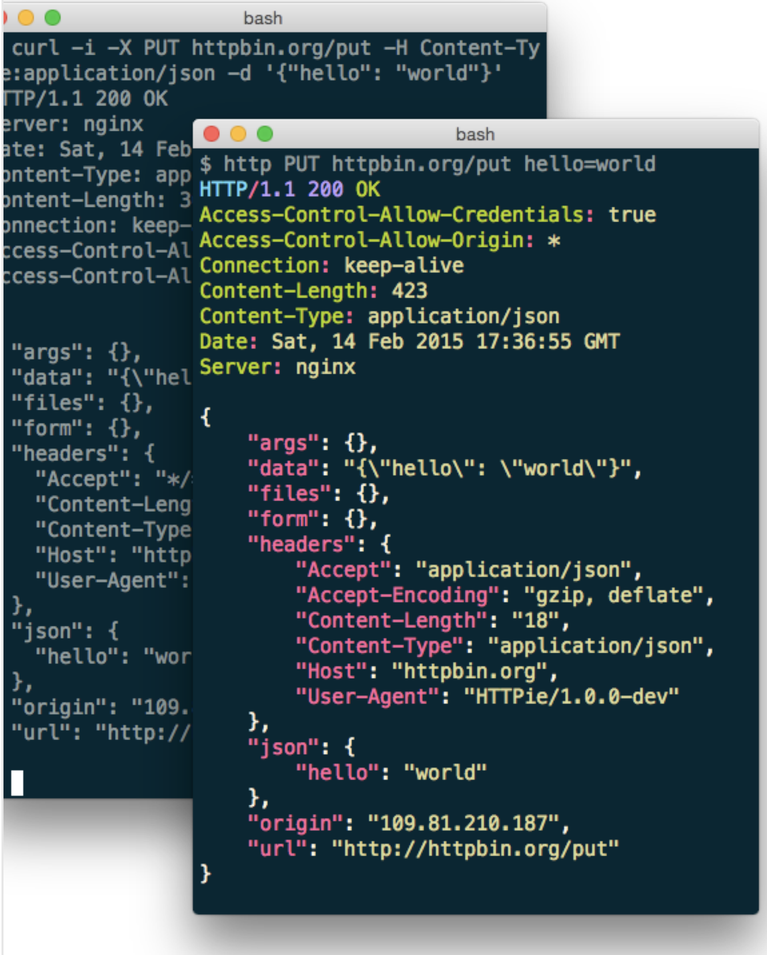
APIs

he command line functionality without the complexity? HTTPie esigned specifically for RESTful APIs, so it makes some ptions that save time and keystrokes.



```
 curl -i -X PUT httpbin.org/put -H Content-Ty
e:application/json -d '{"hello": "world"}'
TTP/1.1 200 OK
erver: nginx
ate: Sat, 14 Feb
ontent-Type: app
ontent-Length: 3
onnection: keep-
ccess-Control-Al
ccess-Control-Al

 "args": {},
 "data": "{\"hel
 "files": {},
 "form": {},
 "headers": {
   "Accept": "*/
   "Content-Leng
   "Content-Type
   "Host": "http
   "User-Agent":
 },
 "json": {
   "hello": "wor
 },
 "origin": "109.
 "url": "http://

▌
```

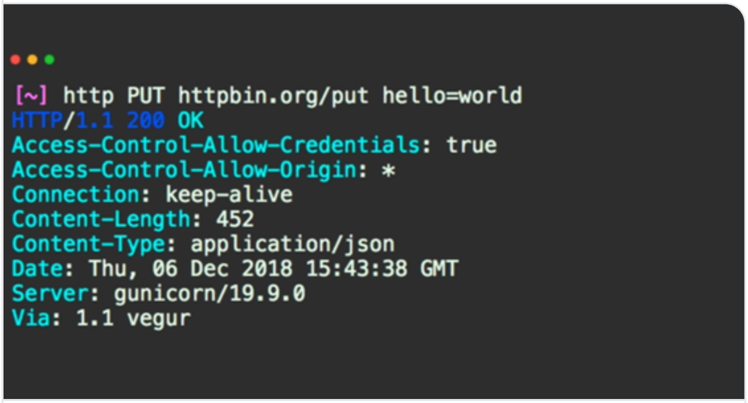
```
$ http PUT httpbin.org/put hello=world
HTTP/1.1 200 OK
Access-Control-Allow-Credentials: true
Access-Control-Allow-Origin: *
Connection: keep-alive
Content-Length: 423
Content-Type: application/json
Date: Sat, 14 Feb 2015 17:36:55 GMT
Server: nginx

{
    "args": {},
    "data": "{\"hello\": \"world\"}",
    "files": {},
    "form": {},
    "headers": {
        "Accept": "application/json",
        "Accept-Encoding": "gzip, deflate",
        "Content-Length": "18",
        "Content-Type": "application/json",
        "Host": "httpbin.org",
        "User-Agent": "HTTPie/1.0.0-dev"
    },
    "json": {
        "hello": "world"
    },
    "origin": "109.81.210.187",
    "url": "http://httpbin.org/put"
}
```

nany modern APIs use JSON as a data format, HTTPie expects n requests and when parsing responses. Even better, minified when unnecessary whitespace is removed) is expanded, ed, and syntax highlighted. It's easy to read the responses, means I find myself going through a series of requests much with HTTPie.

farazdagi.eth
@farazdagi

u are developing RESTful services and haven't heard of TPie? Fix this ASAP: httpie.org You'll thank me later :)



```
[~] http PUT httpbin.org/put hello=world
HTTP/1.1 200 OK
Access-Control-Allow-Credentials: true
Access-Control-Allow-Origin: *
Connection: keep-alive
Content-Length: 452
Content-Type: application/json
Date: Thu, 06 Dec 2018 15:43:38 GMT
Server: gunicorn/19.9.0
Via: 1.1 vegur
```

TTPie – command line HTTP client

.I HTTP that will make you smile. JSON support, syntax ghlighting, wget-like downloads, extensions, and more.

:pie.org

2:53 PM - Dec 22, 2016

;ee farazdagi.eth's other Tweets

: is a joy to use and I've seen many people react like Victor. You ve some syntax to memorize, but far fewer flags:

TP methods and other headers are passed without any flags: `tp POST http://example.com`

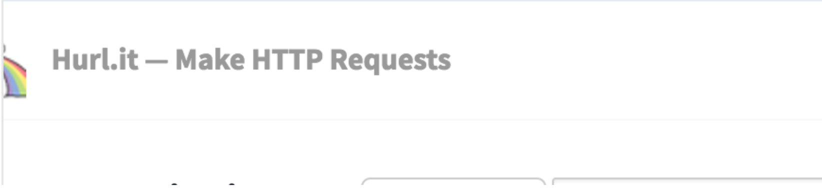
ta uses equals signs, with special syntax for non-strings (`:=`) d data in query strings (`==`), for example: `tp POST http://rexample.com field=value numeric:=42`

for basic authentication: `-a “username:password”`

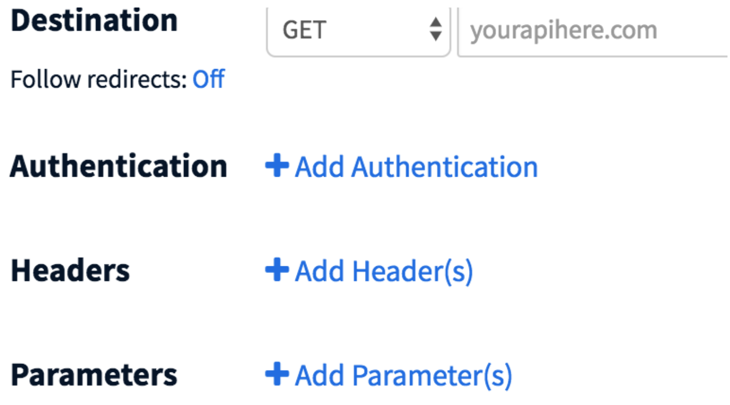
: most part, the syntax fades into the background, and you're h a pure API experience.

l.it: Form-based Request Inspector

the tools for working with API requests live on the command TTPie and cURL are rugged, for fast and experienced ation. If you're after both a translator and a guide for your y, though, consider the web-based Hurl.it.



Hurl.it — Make HTTP Requests



Destination GET youraphere.com

Follow redirects: Off

Authentication

Headers

Parameters

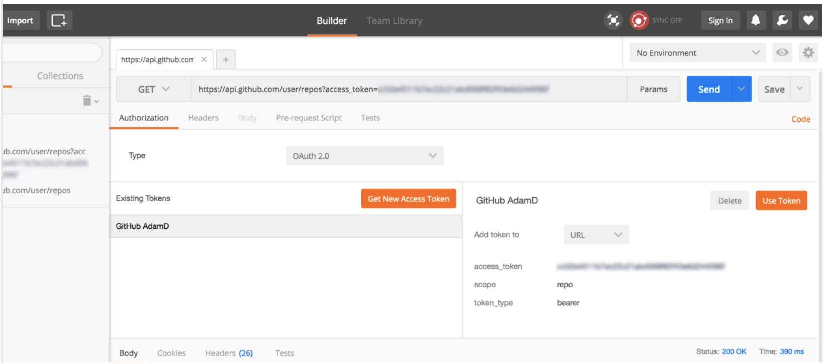
ou start off simply: Choose your HTTP method and paste your you need to add authentication, other headers, or parameter lick the appropriate buttons. You won't have to remember flags er syntax (other than JSON if you're adding a body to a request).

lets you review the request and explore the response as pretty, highlighted, link-clickable JSON. Scroll to the top and make our original form fields remain.

> When working with webhooks, you'll want a similar tool to accept ication data. You can use Hurl.it's sibling project RequestBin, or pipe lata into your local application using a tunnel like ngrok.

tman: Chrome Plugin for Larger ects

it is a guide, then Postman is a Sherpa. The Chrome plugin is ailable as native apps for Windows and Mac, giving you a ete API diagnostic tool. Though used by developers consuming Postman's most powerful features are aimed at API providers.



GET https://api.github.com/user/repos?access_token=[redacted]

ıb.com/user/repos?acc [redacted]

ıb.com/user/repos

Type OAuth 2.0

Existing Tokens

GitHub AdamD

GitHub AdamD

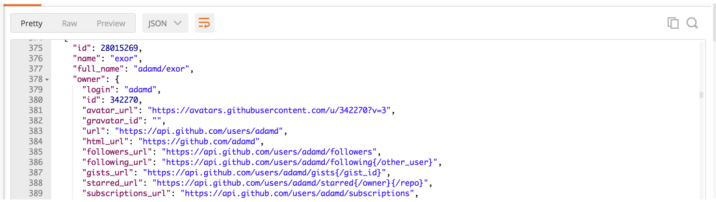
Add token to URL

access_token [redacted]

scope repo

token_type bearer

Status: 200 OK Time: 390 ms



```
    "id": 28015269,
    "name": "exor",
    "full_name": "adamd/exor",
    "owner": {
      "login": "adamd",
      "id": 342270,
      "avatar_url": "https://avatars.githubusercontent.com/u/342270?v=3",
      "gravatar_id": "",
      "url": "https://api.github.com/users/adamd",
      "html_url": "https://github.com/adamd",
      "followers_url": "https://api.github.com/users/adamd/followers",
      "following_url": "https://api.github.com/users/adamd/following{/other_user}",
      "gists_url": "https://api.github.com/users/adamd/gists{/gist_id}",
      "starred_url": "https://api.github.com/users/adamd/starred{/owner}{/repo}",
      "subscriptions_url": "https://api.github.com/users/adamd/subscriptions",
```

sic usage, the experience is similar to Hurl.it. Choose your HTTP d, paste your URL, and add your other headers or body data. there aren't command line flags to learn, but that doesn't mean an isn't powerful. For OAuth-based requests, for example, an walks you through the process of retrieving and using a Then your token is available for all subsequent requests.

use Postman, it logs your previous request history. Further, n store them as collections, share with others, and import API ptions (such as Swagger and RAML). And there's more to be ered. The Sherpa will present them to you when you're ready.

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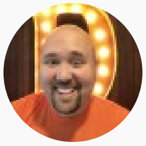
ou're ready to begin your API exploration. You have a team of otential translators, ready to bring your API request to a server turn it safely with a response in hand. Who you pick depends level of detail you'll need and how often you expect to need it.



About the Author

Adam DuVander is a developer marketer working from Portland, Oregon. He loves APIs and the people who make and use them.

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