



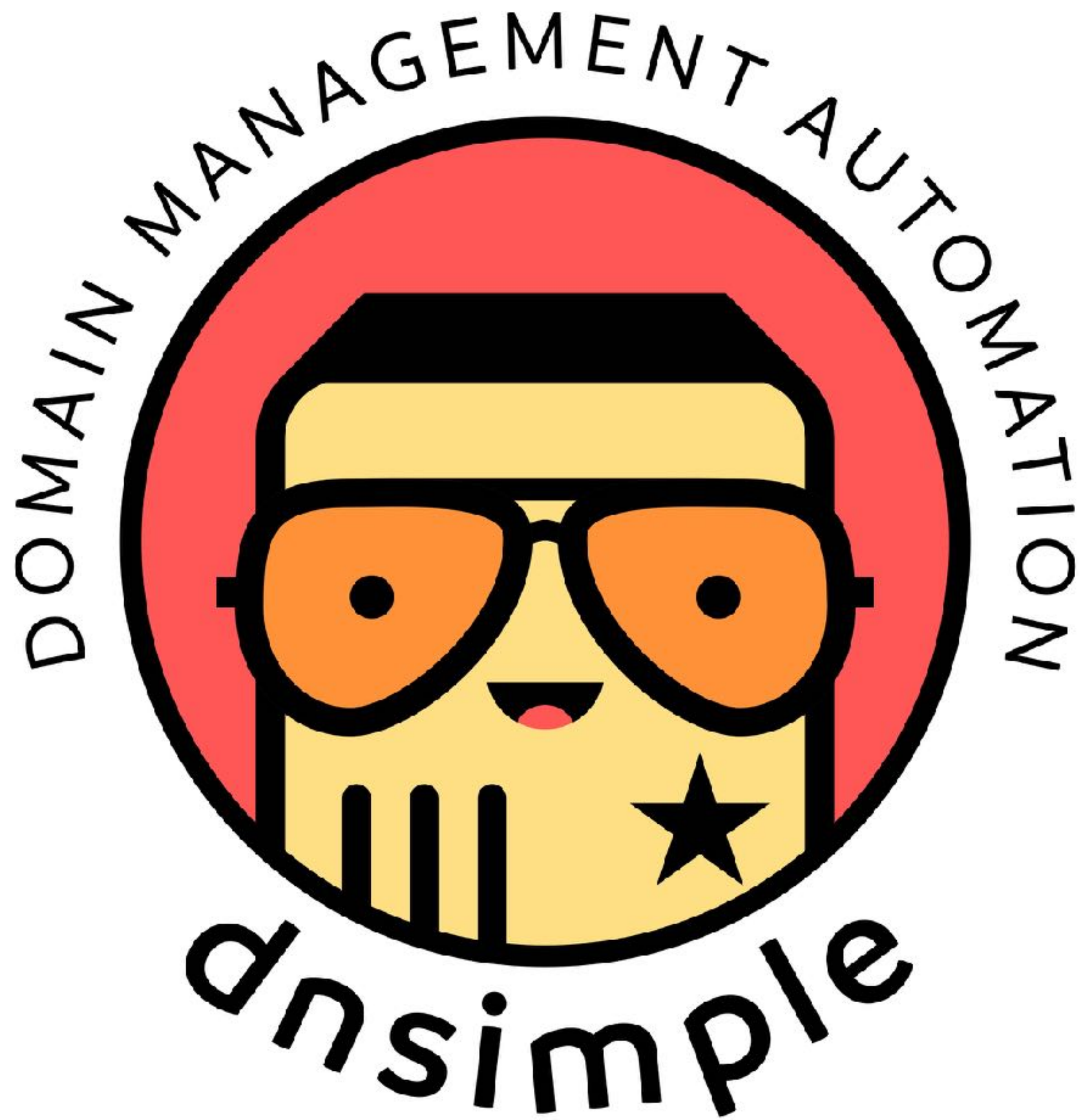
The Great API Redesign

Simone Carletti, DNSimple





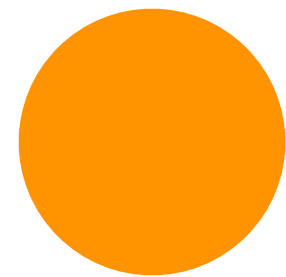
@weppos



"This PR is a first step towards API versioning and using a dedicated hostname for API."

The screenshot shows a web browser window with the address bar displaying 'GitHub, Inc. github.com/dnsimple/dnsimple-app/pull/803'. The main heading is 'Proposal for versioned API #803' with an 'Edit' button to its right. Below the heading, a purple 'Merged' badge is followed by the text 'weppos merged 20 commits into master from feature/versioned-api on Jan 7, 2014'. A navigation bar includes 'Conversation 5', 'Commits 20', and 'Files changed 3'. On the right, a green bar shows '+796 -3' with a progress indicator. A comment from 'weppos' dated 'Dec 28, 2013' contains the text 'This PR is a first step towards API versioning and using a dedicated hostname for API.' and a section titled 'API Versioning'. To the right of the comment, the 'Reviewers' section shows 'No reviews—request one' and the 'Assignees' section lists 'weppos'.

"This PR is a first step towards API versioning and using a dedicated hostname for API."



Dec 28, 2013

API v0



Dec 28, 2013

API v0

- Same hostname as website
- No versioning
- No metrics
- Shared Rails controllers

It worked™ 😬

GET <https://dnsimple.com/domains>

GET <https://dnsimple.com/domains.json>

API v1



Dec 28, 2013

Jan 14, 2014

API v1

- Introduce hostname `api.dnsimple.com`
- Introduce path-based versioning
- Still uses the same Rails controllers
- Simple transition through minimal changes

GET <https://api.dnsimple.com/v1/domains>

Why a separate hostname?

- Easily flag requests as API requests
- Improved error handling due to clear indication of what is an API call
- Adds the ability to extract API code from controllers
- Provides easier scaling

Why path-based versioning?

The approach I followed is simple.

May be not the most restful, but it's the one very commonly adopted that will also allow us to switch to a mime-based approach (in case we want to follow that route in the future).

Why path-based versioning?

- API version is embedded in the path and it prefixes the URL
- Everything in the URL is easily visible in logs
- Easiest implementation for both production and consumption
- Hitting path-based versioned APIs with a browser is easy
- New versions increase the major number
- Path and verb changes can be introduced at major version

API v1



Dec 28, 2013

Jan 14, 2014

API v2



Dec 28, 2013

Jan 14, 2014

Separate Application

<http://hanamirb.org>

- Use of a separate (sub)application
- No longer tightly coupled to the Rails controllers



<http://confreaks.tv/videos/railsconf2016-developing-and-maintaining-a-platform-with-rails-and-lotus>

the Roadmap

- Multi-account
- Reusable shared business logic
- Response serialization
- Pagination, Sorting and Filtering
- Authentication
- Rate limiting
- Webhooks
- API clients

API v2 Methods #1731

Edit New Issue

Closed weppos opened this issue on Dec 27, 2014 · 7 comments



weppos commented on Dec 27, 2014 • edited

Here I summarize the list of all the API methods I'd like to discuss for API v2.

The list represents an overview. The idea is to open a per-section ticket and delegate discussions on that specific endpoints to the corresponding ticket. Once a final conclusion is agreed, here we can just keep track of the state.

Methods

This [wiki page](#) tracks the state of the API v2 methods. The following table is a summary:

		Method
		Identity
x	#2809	+ whoami()
		Accounts
x	#3073	+ listAccounts()
	#1735	Domains
x		listDomains()
x		createDomain()
x		getDomain()

Assignees

weppos

Labels

C:api

Projects

None yet

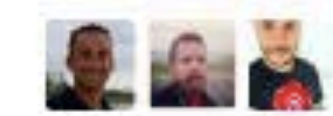
Milestone

API v2 General Av...

Notifications

You're receiving notifications because you were assigned.

3 participants



Lock conversation

API v2: Domains #1735

Edit New Issue

Closed weppos opened this issue on Dec 29, 2014 · 4 comments



weppos commented on Dec 29, 2014

Here's my proposal for the Domains API v2.

Domains

listDomains()

```
GET /:account/domains
=> HTTP 200
    [{domain}, {domain}, ...]
```

createDomain()

```
POST /:account/domains
{attributes}
=> HTTP 201
    {record}
```

getDomain()

```
GET /:account/domains/:domain
```

Assignees

weppos

Labels

C:api

proposal

ready-for-review

Projects

None yet

Milestone

API v2 Preview

Notifications

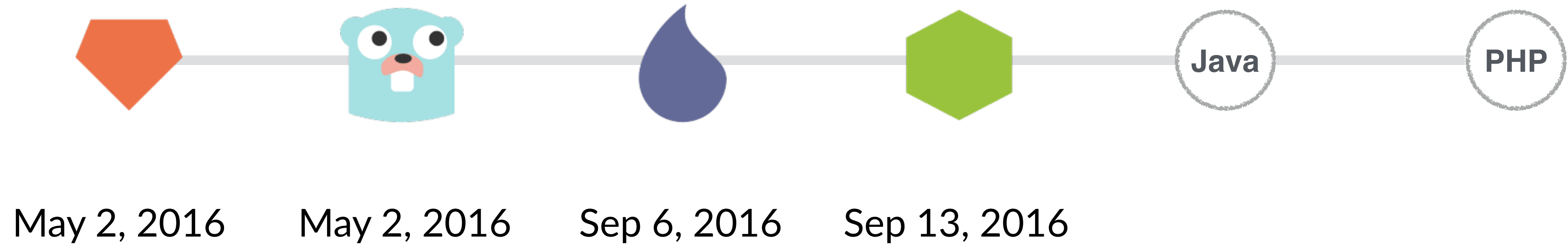
Unsubscribe

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

2 participants



API clients



<https://slidr.io/weppos/using-go-to-guide-api-design-decisions-dotgo-2016>

API clients

- Developing clients gets easier with each new client
- Common design patterns emerge
- Shared HTTP fixtures
- We built a foundation for API clients development

<https://blog.dnsimple.com/2017/01/api-client-testing-with-http-fixtures/>

Priorities

- Gathered metrics on v1 endpoint usage
- Prioritized implementation based on usage



API v2



Dec 28, 2013

Jan 14, 2014

Mar 9, 2016 (Beta)

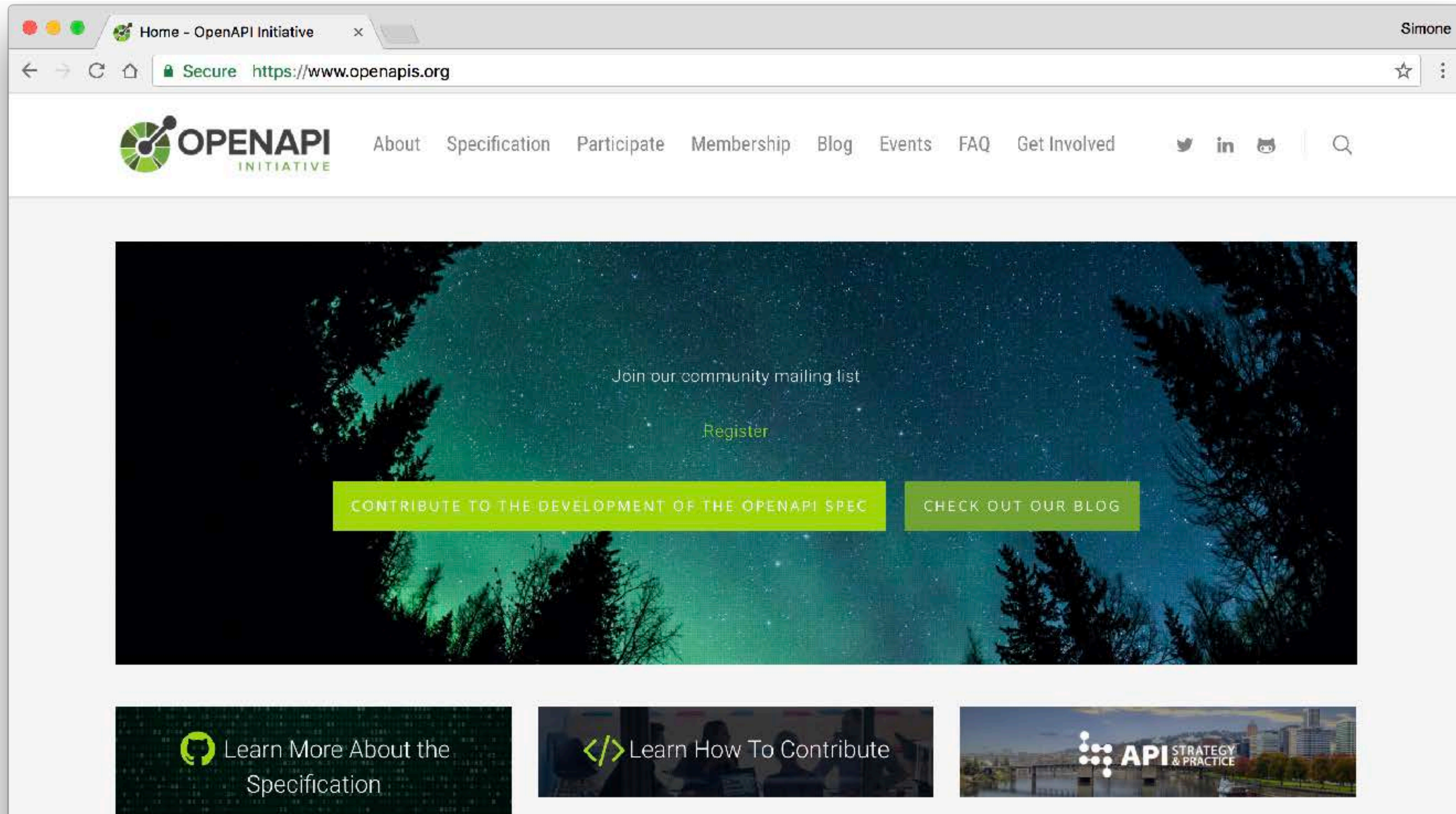
Dec 13, 2016 (GA)

Stats

- **717 Days** from "Start" to "Finish"
- **3** (almost) full-time team members out of **11** total, with a collaborative effort from the entire DNSimple team
- **4** official API clients, with **2** more under development
- **75 API methods** currently available (*)
- **251 tickets** across **7** major milestones
- **~423 API related support tickets** handled in the last year
- **~1934 commits** across the **4** API clients and application

What's next?

- Adopt a formal language to describe the API
- Deprecate and shut down API v1
- Facilitate transition to API v2
- Implement new methods (e.g. certificate, pricing)



Open API

<https://www.openapis.org/>


Adopting OpenAPI to describe ✕ Simone

Secure | <https://blog.dnsimple.com/2018/02/openapi/> ☆ ⋮

dnsimple **BLOG** RSS ↗ DNSimple app

Engineering

Adopting OpenAPI to describe DNSimple API v2

 Anthony Eden — 14 February 2018

Receive articles, announcements, and our occasional newsletter in your inbox.

<https://blog.dnsimple.com/2018/02/openapi/>


DNSSimple API v2 OpenAPI defi x Simone

Secure | <https://blog.dnssimple.com/2018/04/openapi-in-depth/>

dnssimple **BLOG** RSS DNSSimple app

Engineering

DNSSimple API v2 OpenAPI definition in depth

 Anthony Eden — 10 April 2018

Receive articles, announcements, and our occasional newsletter in your inbox.

<https://blog.dnssimple.com/2018/04/openapi-in-depth/>

Swagger Editor

localhost:3001

Swagger Editor File Edit Generate Server Generate Client

```
1 openapi: 3.0.0
2 info:
3   title: DNSimple API
4   version: 2.0.0
5   contact:
6     name: DNSimple Support
7     email: support@dnsimple.com
8     url: 'https://dnsimple.com/contact'
9   description: >-
10  [DNSimple](https://dnsimple.com) provides DNS hosting and
11  domain
12  registration that is simple and friendly. We provide an
13  extensive API and an
14  easy-to-use web interface so you can get your domain
15  registered and set up
16  with a minimal amount of effort.
17  termsOfService: 'https://dnsimple.com/terms'
18 externalDocs:
19   url: 'https://developer.dnsimple.com'
20 security:
21   - basicAuth: 
22   - bearerAuth: 
23   - oauth:
24     - full
25 servers:
26   - url: 'https://api.dnsimple.com/v2'
27     description: DNSimple Production API
28     variables: {}
29   - url: 'https://api.sandbox.dnsimple.com/v2'
30     description: DNSimple Sandbox API
31 paths:
32   /accounts:
33     get:
34       description: Gets the accounts the current authenticated
```

domains

GET `/{account}/domains`

POST `/{account}/domains`

Add a domain to the account.

Parameters Try it out

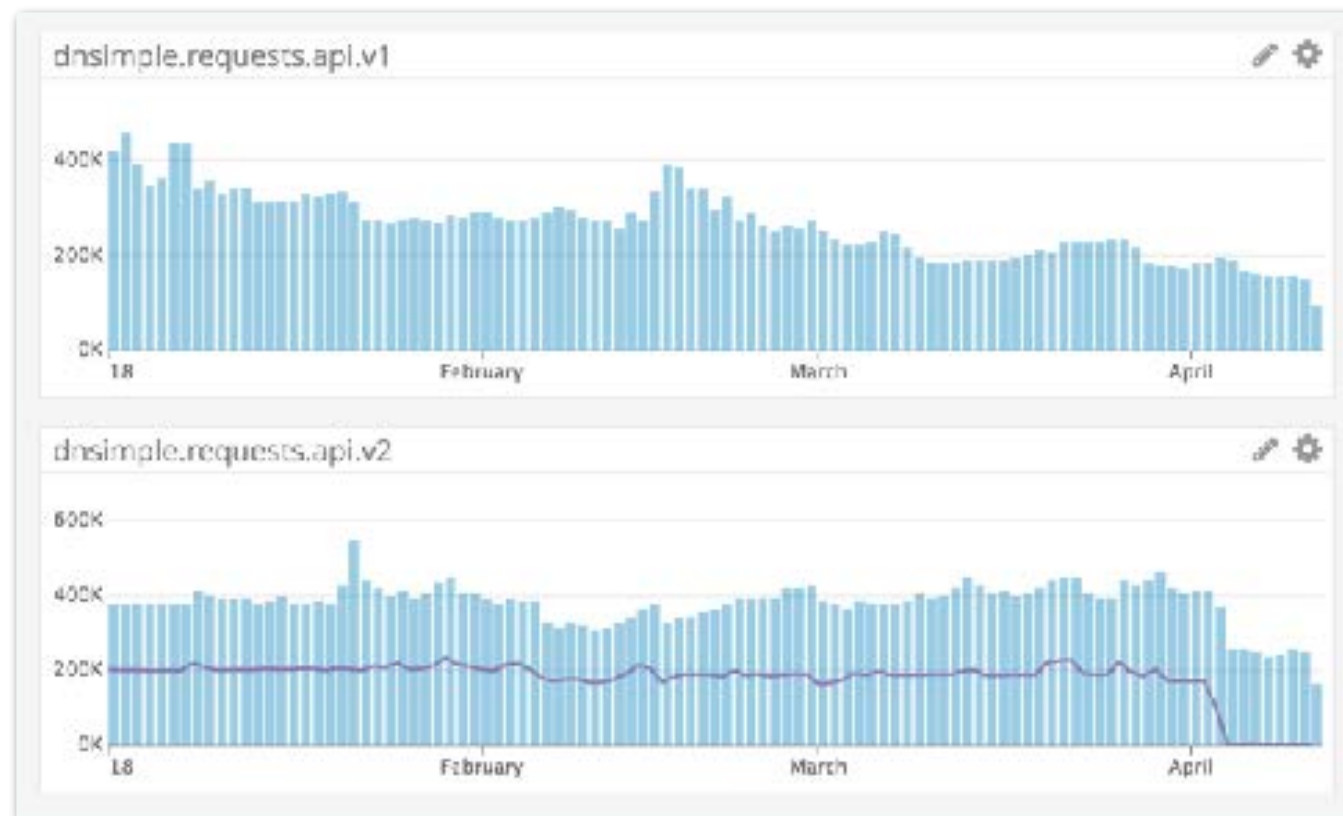
Name	Description
account <small>* required</small>	The account id
integer (path)	

Request body required application/json

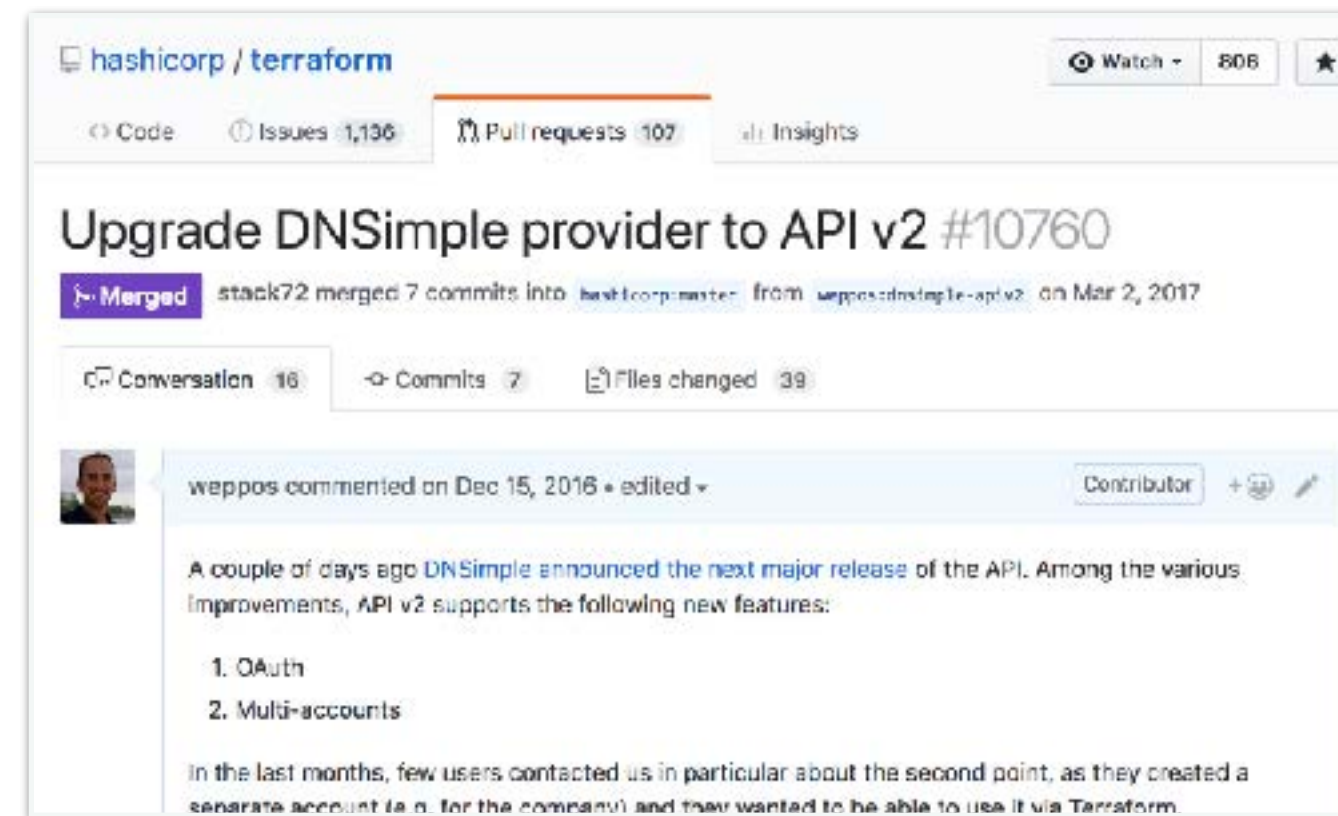
Domain attributes

Example Value	Model
<pre>{ "name": "string" }</pre>	

Transition to v2



Measure

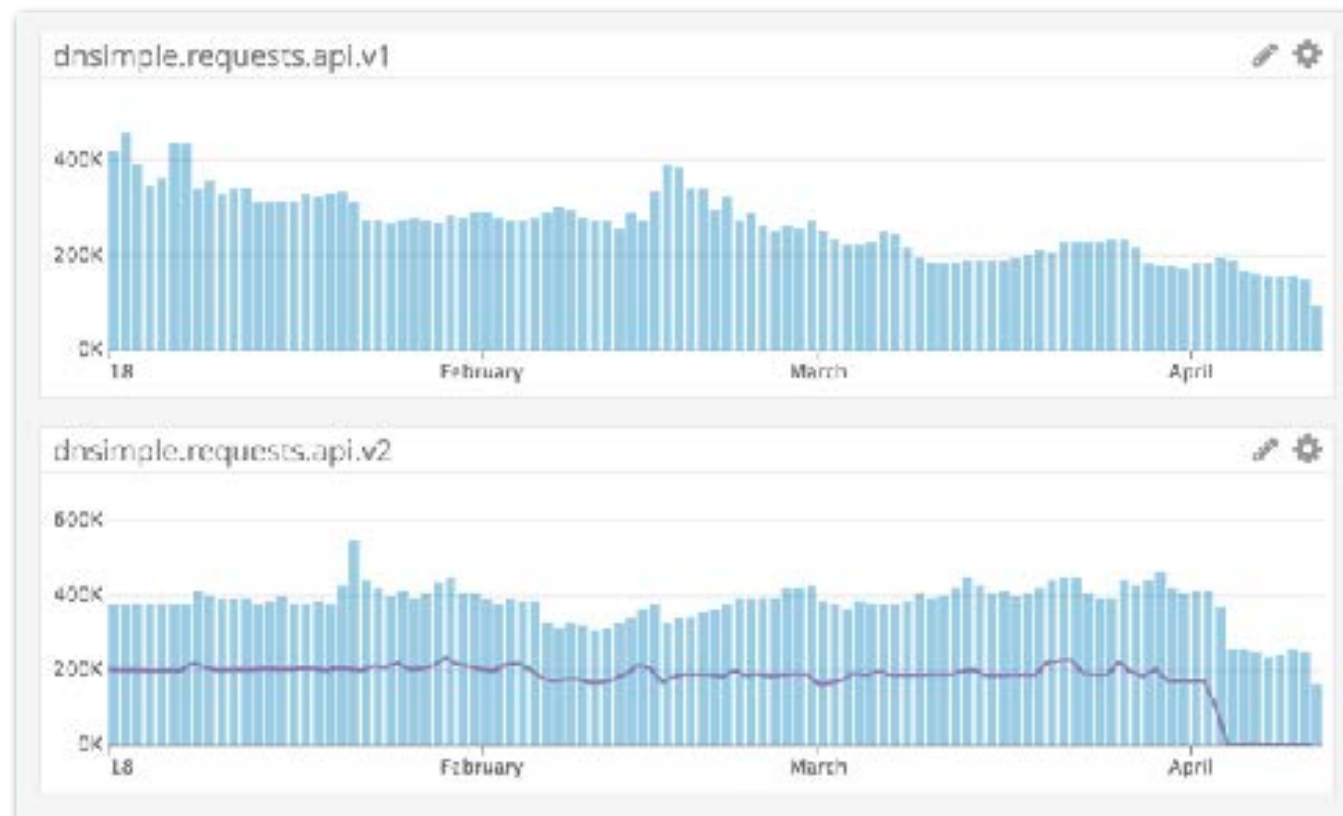


Facilitate



Deprecate

Transition to v2



Measure

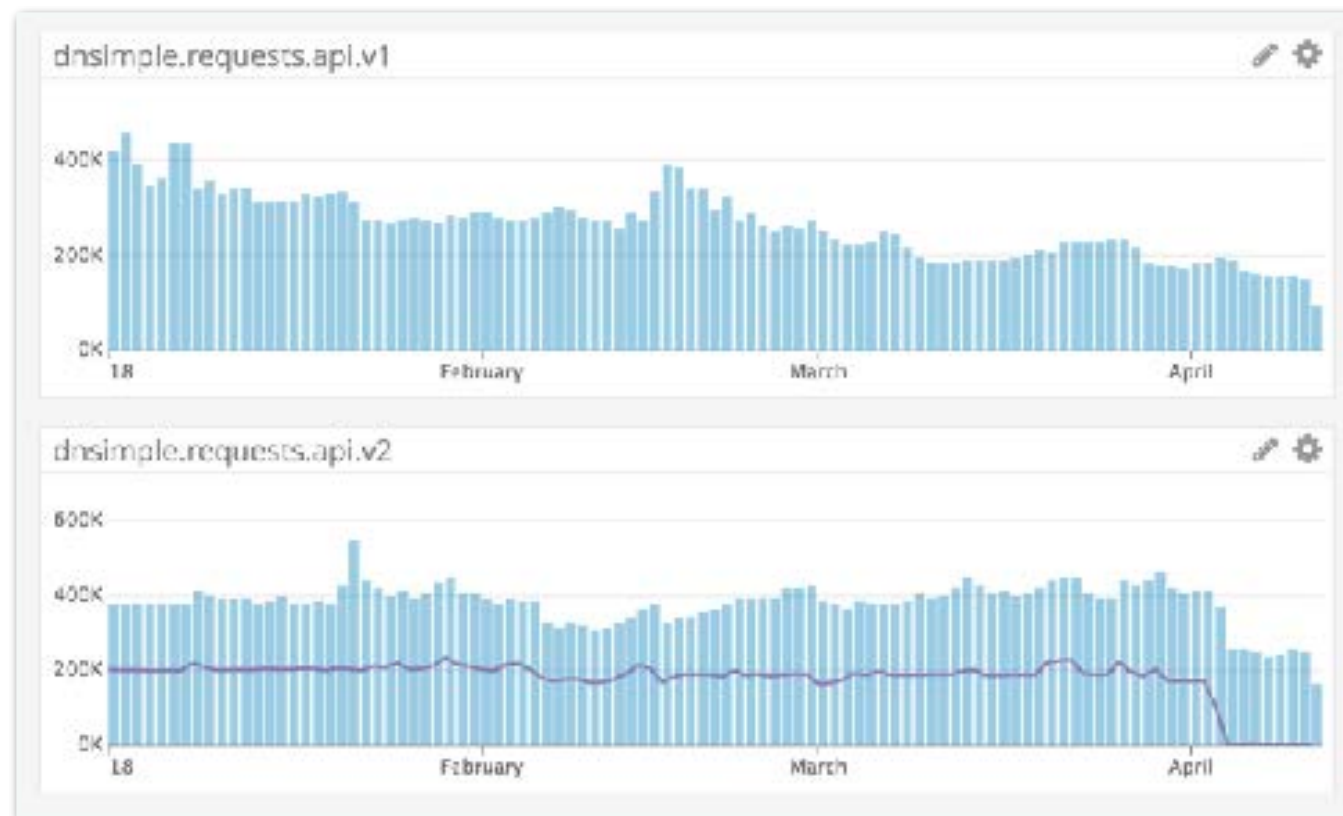
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Deprecate

The image shows a GitHub pull request for the 'hashicorp/terraform' repository, titled 'Upgrade DNSimple provider to API v2 #10760'. The pull request is merged and was created on Mar 2, 2017. It includes a comment from 'weppos' dated Dec 15, 2016, which lists two new features for API v2: 1. OAuth and 2. Multi-accounts. The comment also mentions that users were contacted about the second point because they wanted to use the API via Terraform.

Facilitate

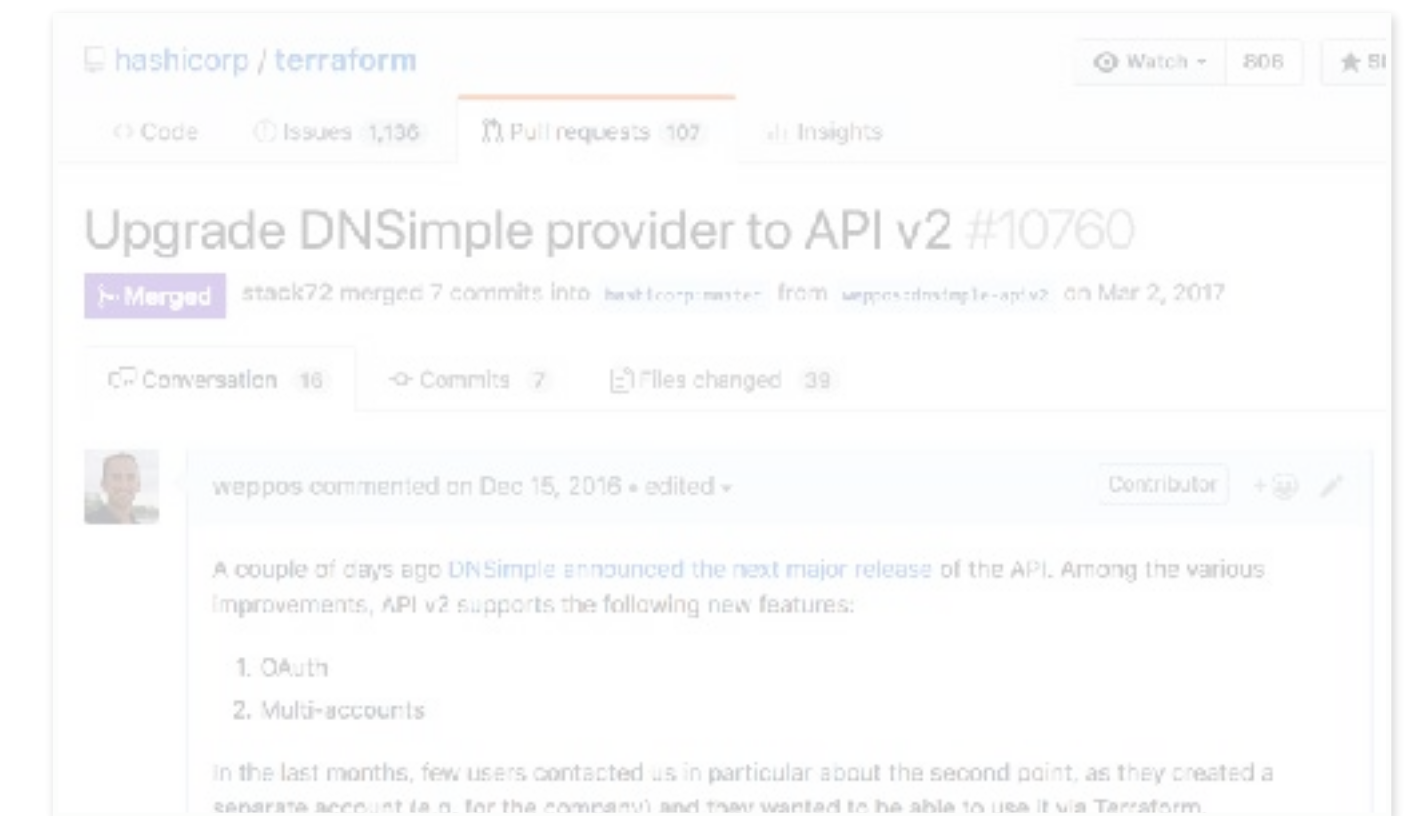
Transition to v2



Measure

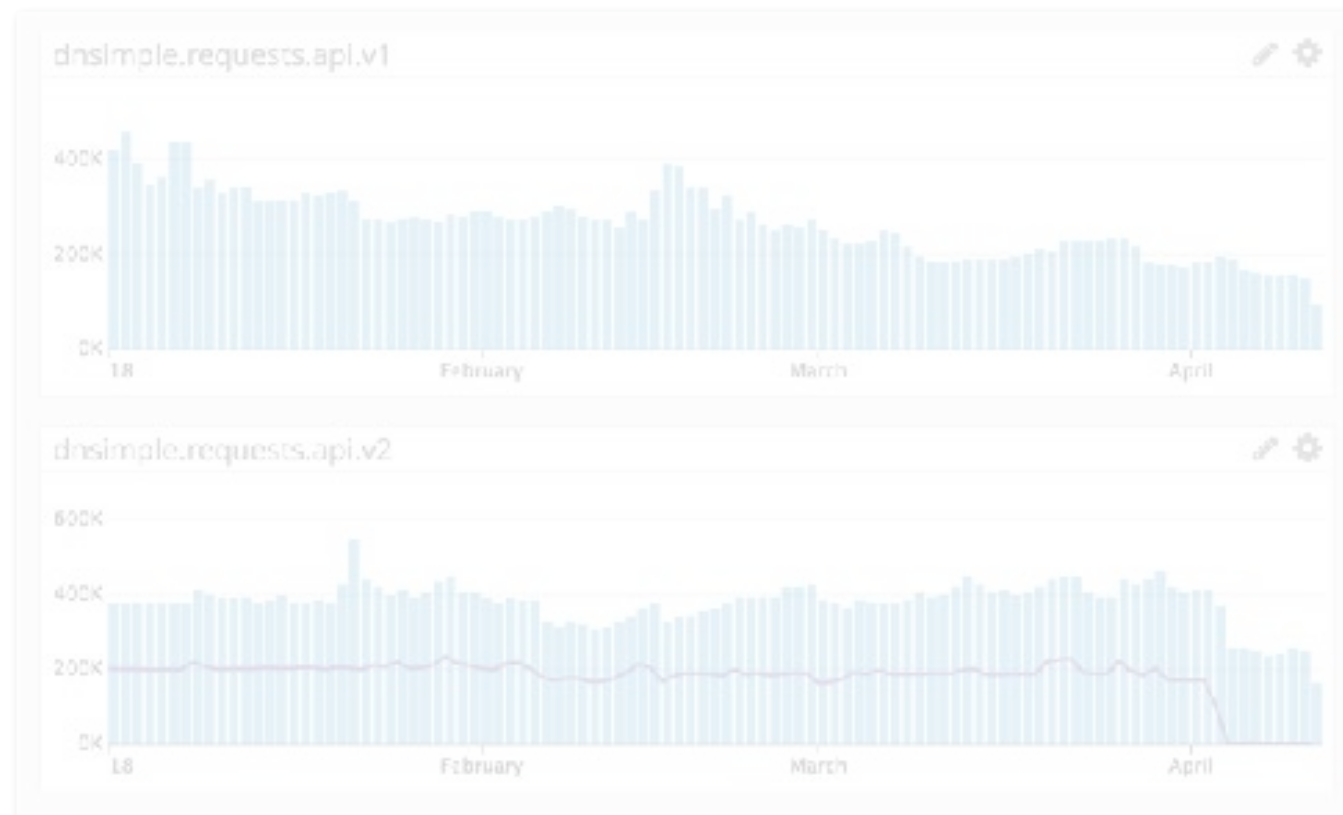


Deprecate



Facilitate

Transition to v2



Measure

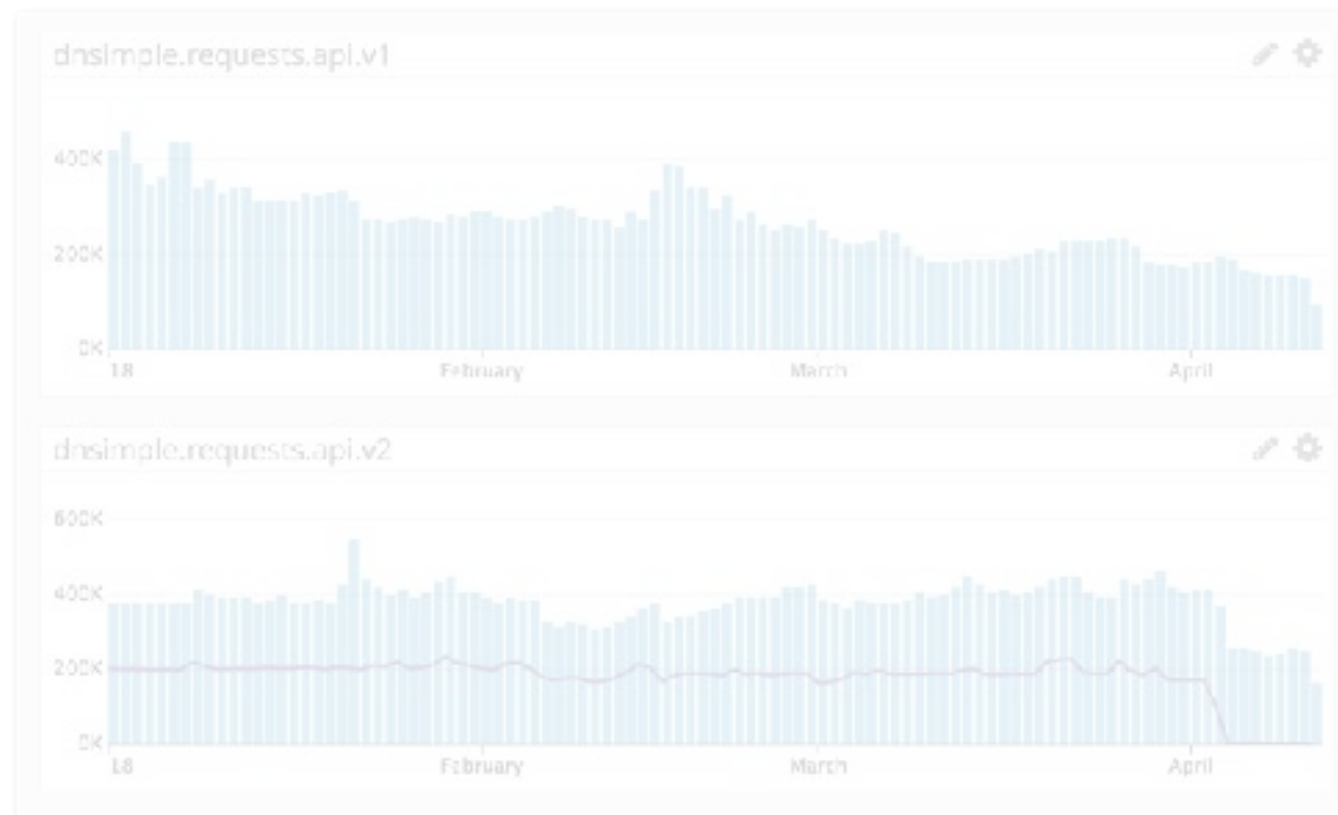
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Deprecate

A GitHub pull request from the repository 'hashicorp/terraform'. The title is 'Upgrade DNSimple provider to API v2 #10760'. It shows that 'stack72' merged 7 commits into 'hashicorp/master' from 'weppos:dnsimple-api-v2' on Mar 2, 2017. The pull request includes 16 conversations, 7 commits, and 39 files changed. A comment from 'weppos' dated Dec 15, 2016, lists two new features: '1. OAuth' and '2. Multi-accounts'.

Facilitate

Transition to v2



Measure

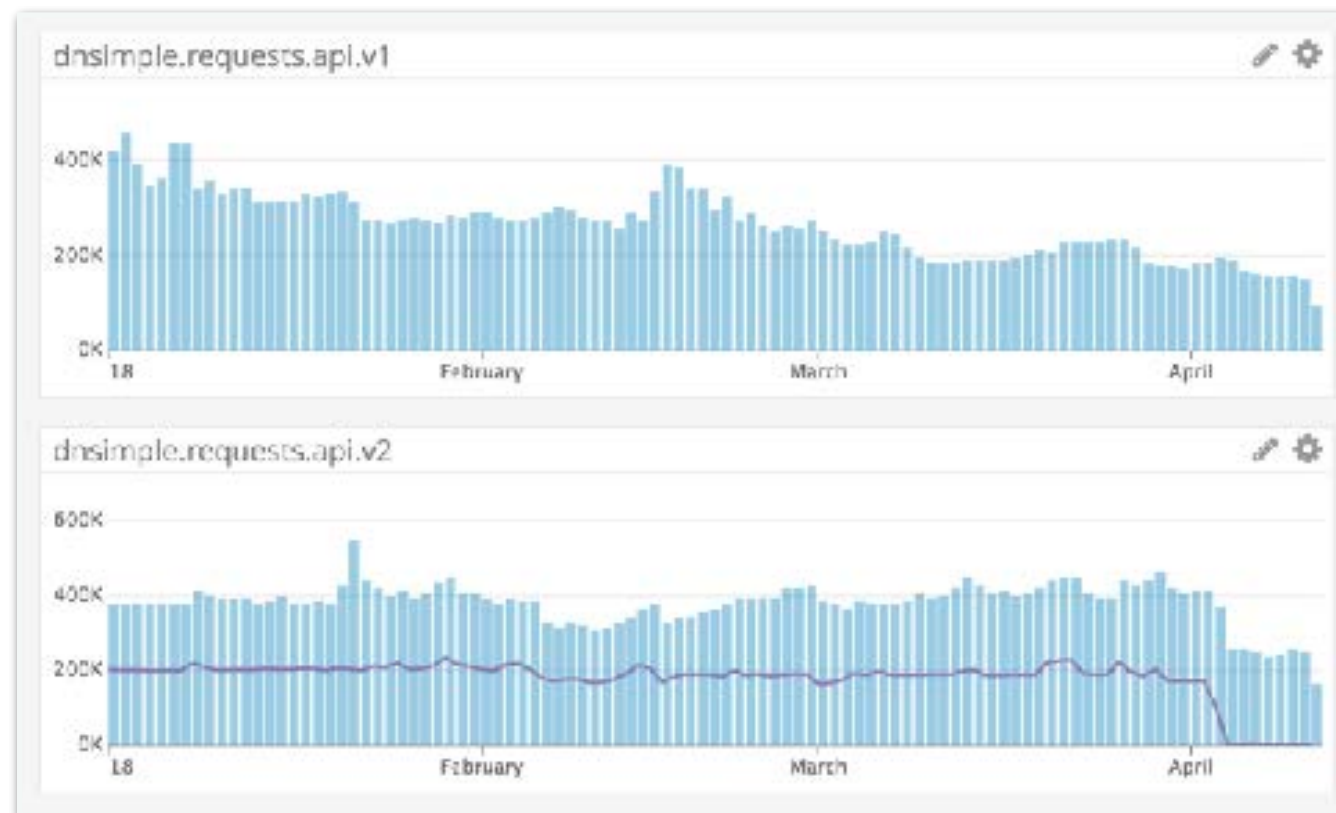


Deprecate

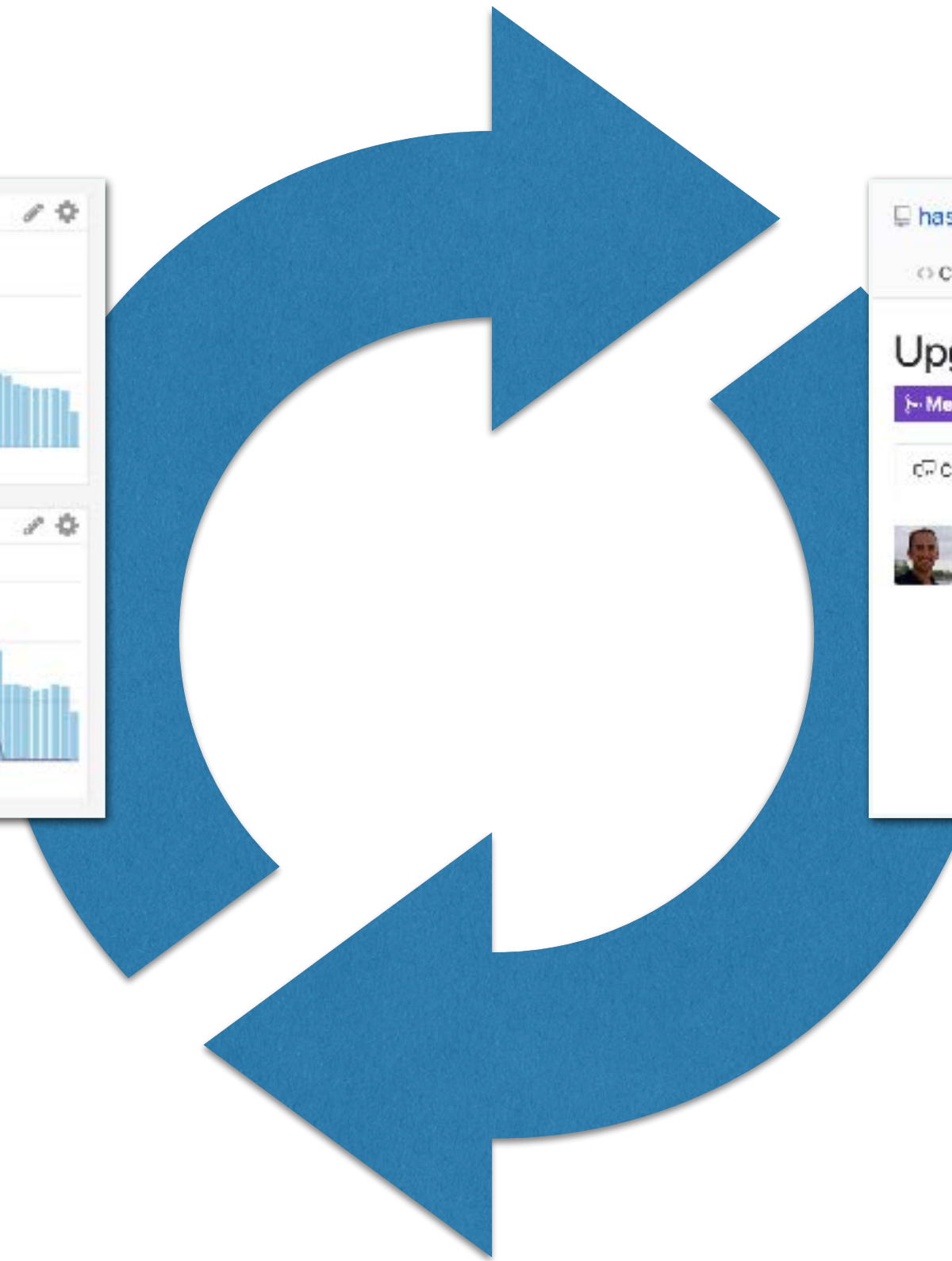


Facilitate

Transition to v2



Measure



The screenshot shows a GitHub pull request titled 'Upgrade DNSimple provider to API v2 #10760' in the 'hashicorp/terraform' repository. The pull request is merged and was merged on Mar 2, 2017. A comment from 'weppos' dated Dec 15, 2016, discusses the announcement of the next major release of the API and lists new features: 1. OAuth and 2. Multi-accounts. The comment also mentions that users were contacted about the second point as they created separate accounts for companies and wanted to use them via Terraform.

Facilitate

Lessons

- Simple transition through minimal changes
- Be a producer and a consumer
- Provide official clients (and/or contribute)
- Measure decisions
- Invest into the API



Trustybacca



Tiny Gandalf



Darth Trusty



Tiny Go



Rubies Trusty



Tiny D.

Thanks!

Simone Carletti // DNSimple

@weppos