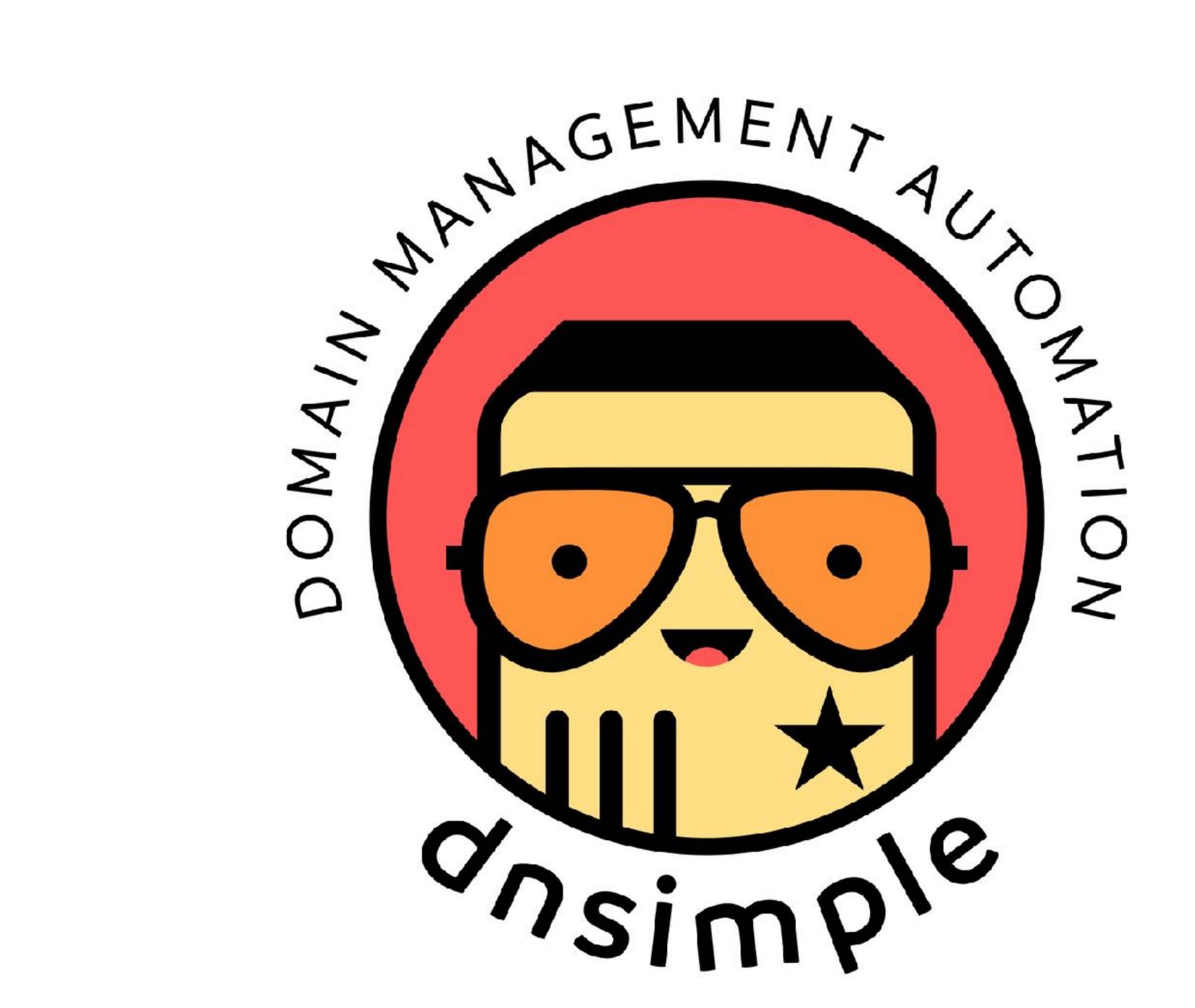


The Great API Redesign

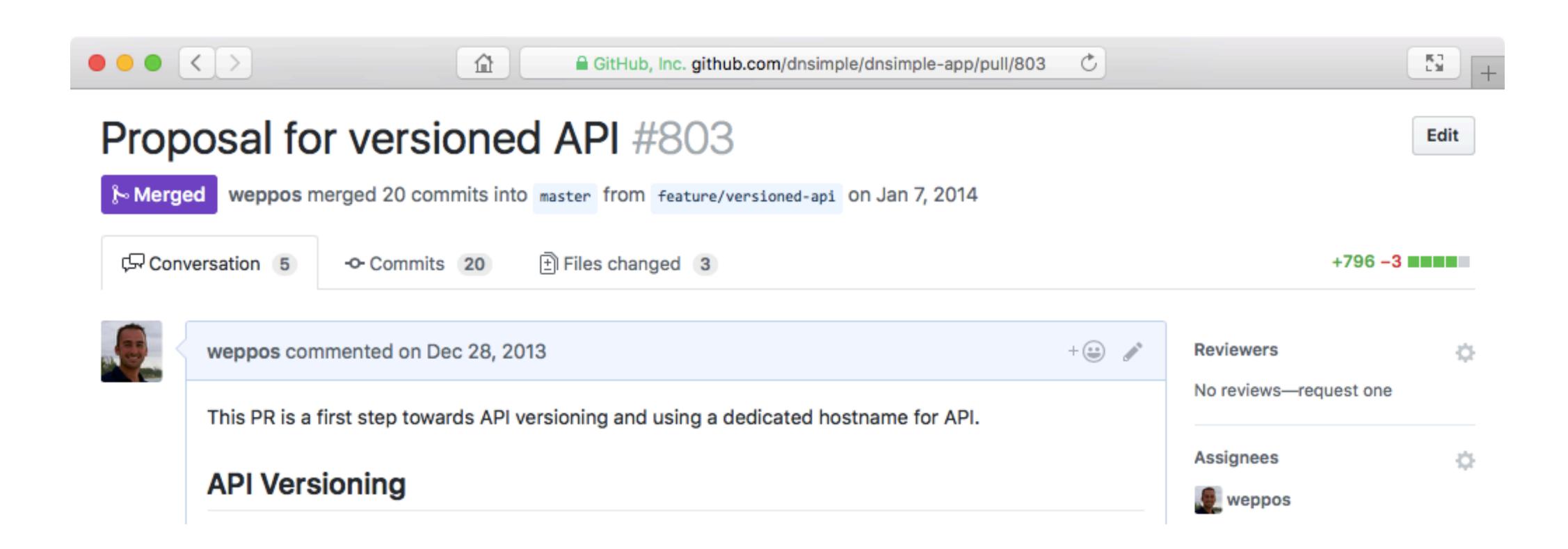
Simone Carletti, DNSimple







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

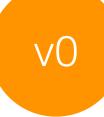


"This PR is a first step towards API versioning and using a dedicated hostname for API."



Dec 28, 2013

API VO



Dec 28, 2013

APIVO

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

It worked TM

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

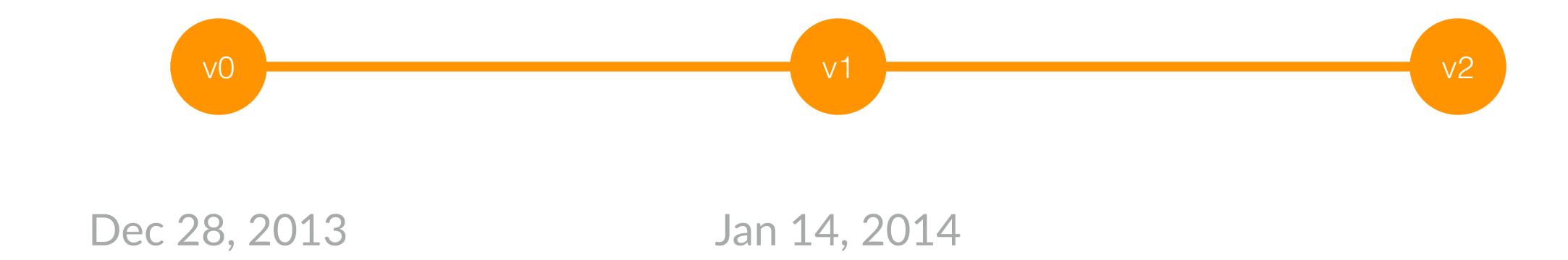
API v1



Dec 28, 2013

Jan 14, 2014

API v2



Separate Application

http://hanamirb.org

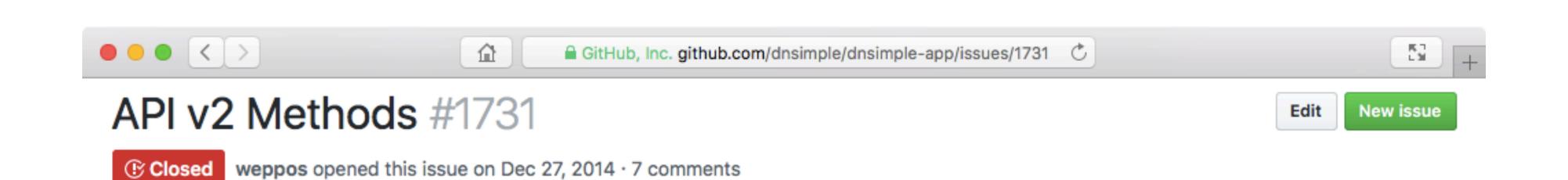
- Use of a separate (sub)application
- No longer tightly coupled to the Rails controllers



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







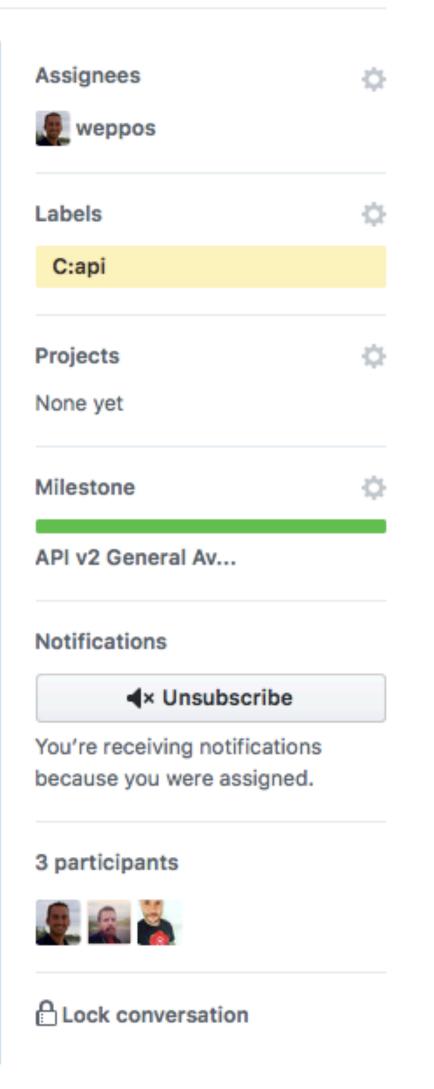
Here I summarize the list of all the API methods I'd like to discuss for API v2.

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.

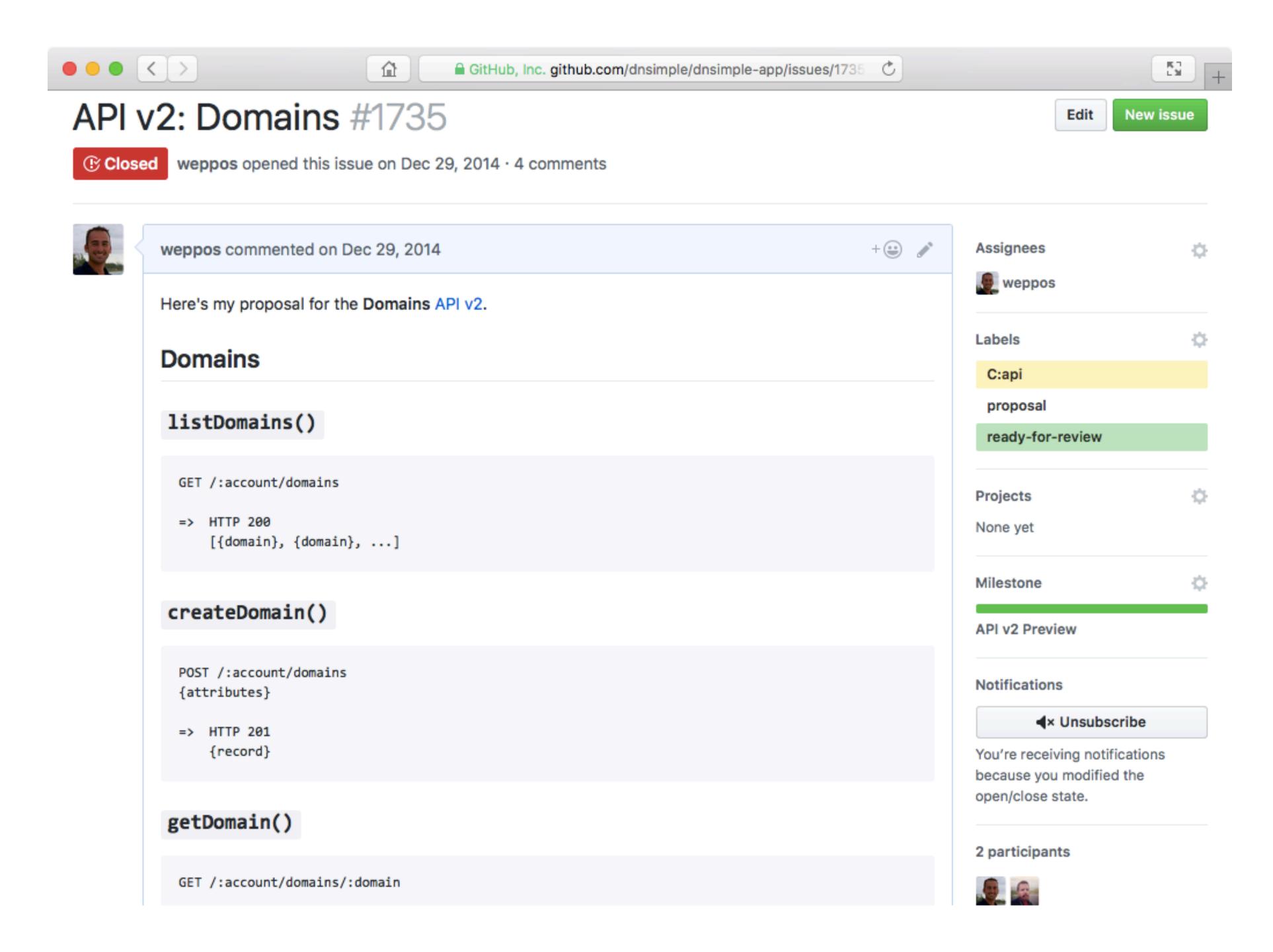
Methods

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		<pre>createDomain()</pre>
x		<pre>getDomain()</pre>



+ 🙂



API clients



May 2, 2016

May 2, 2016

Sep 6, 2016

Sep 13, 2016

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

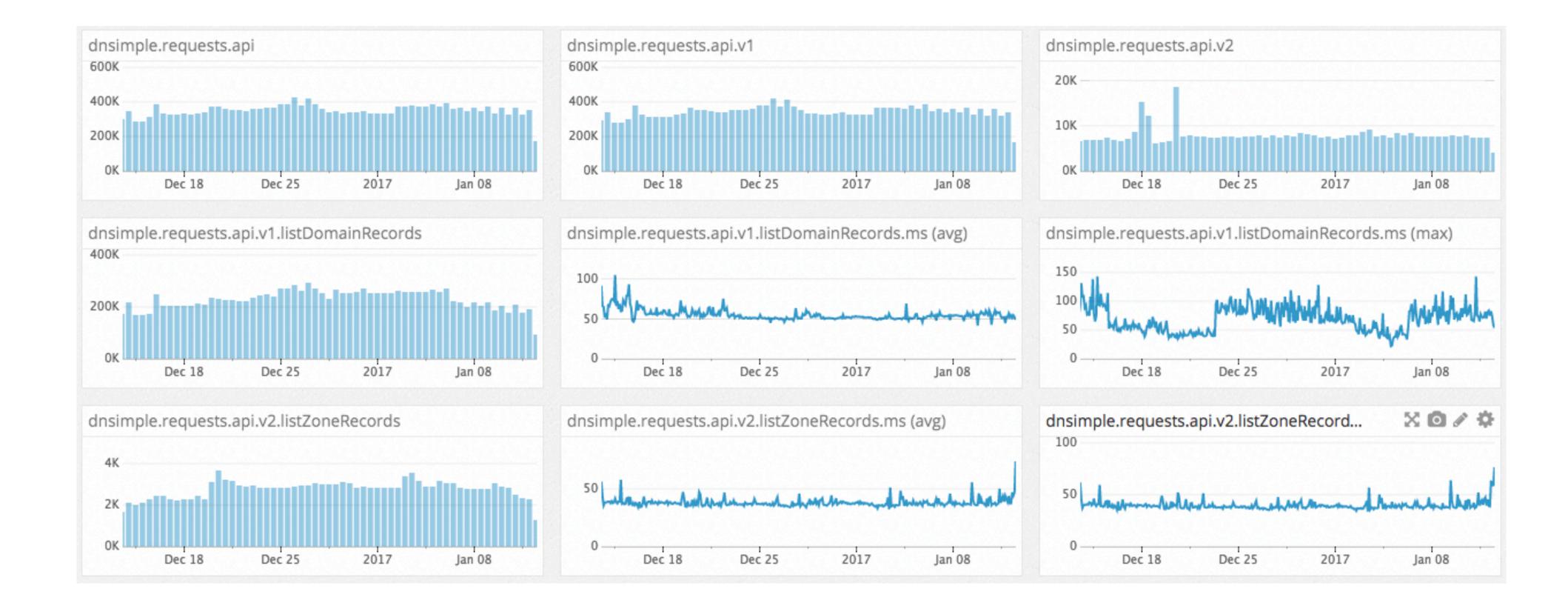
API clients

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

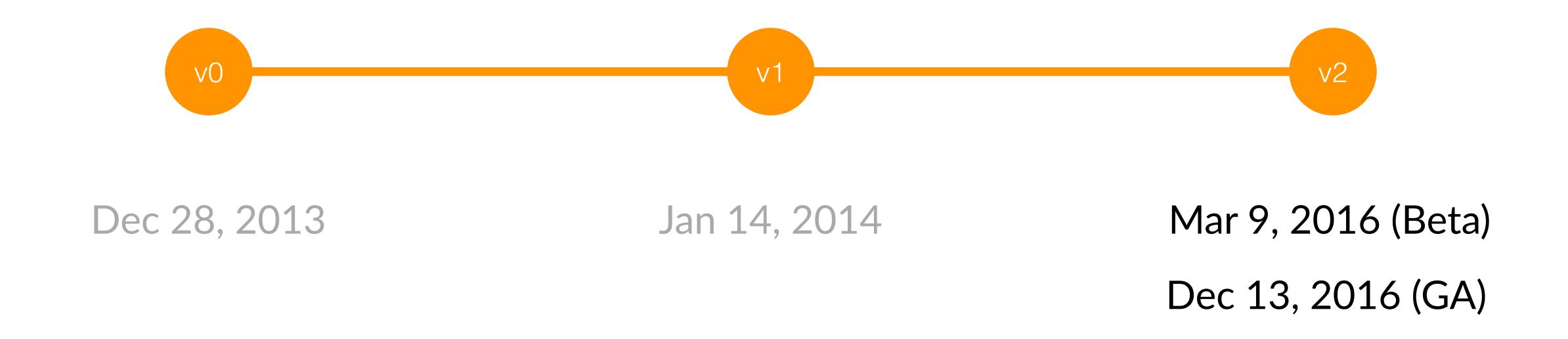
https://blog.dnsimple.com/2017/01/api-client-testing-with-http-fixtures/

Priorities

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



API v2

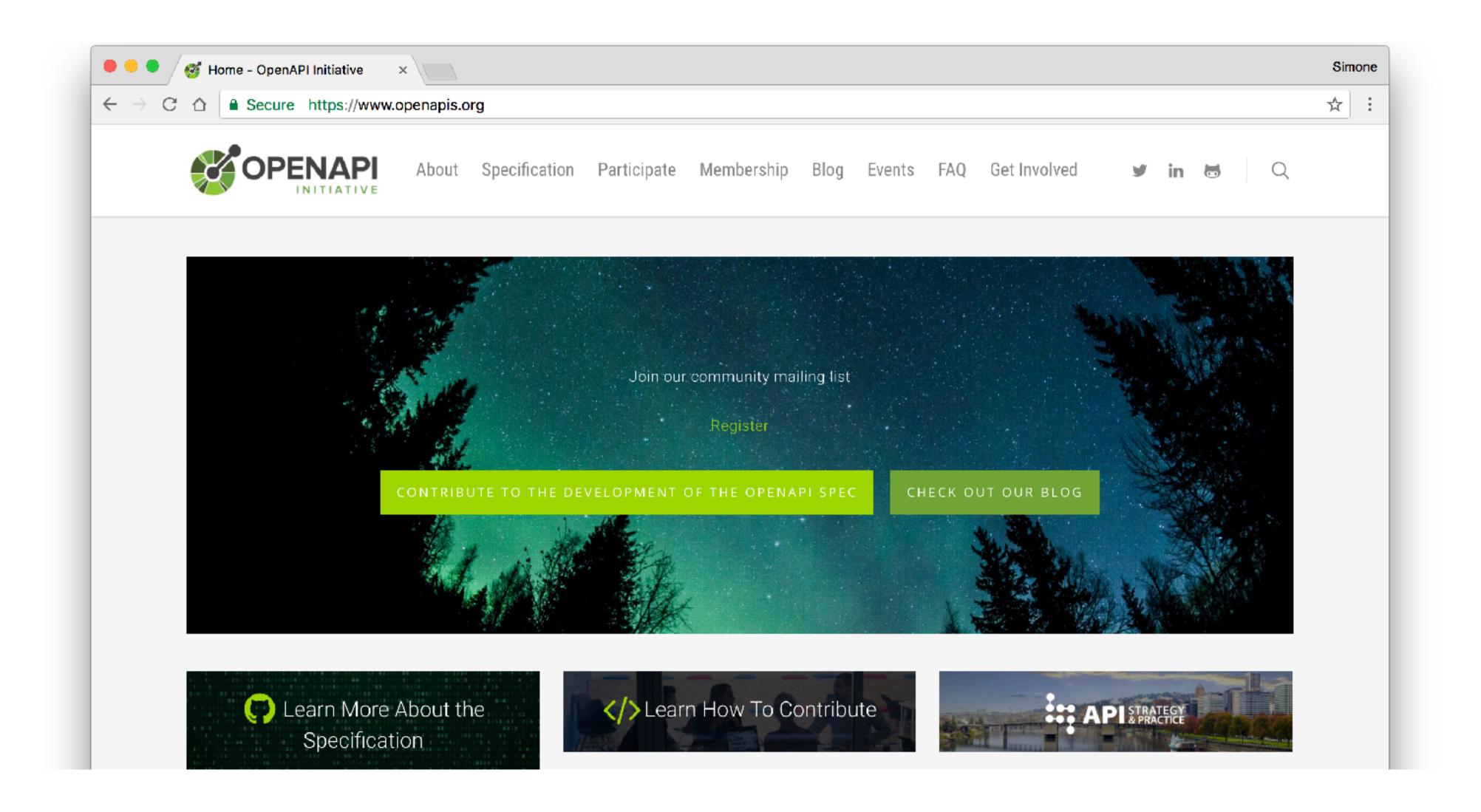


Stats

- 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

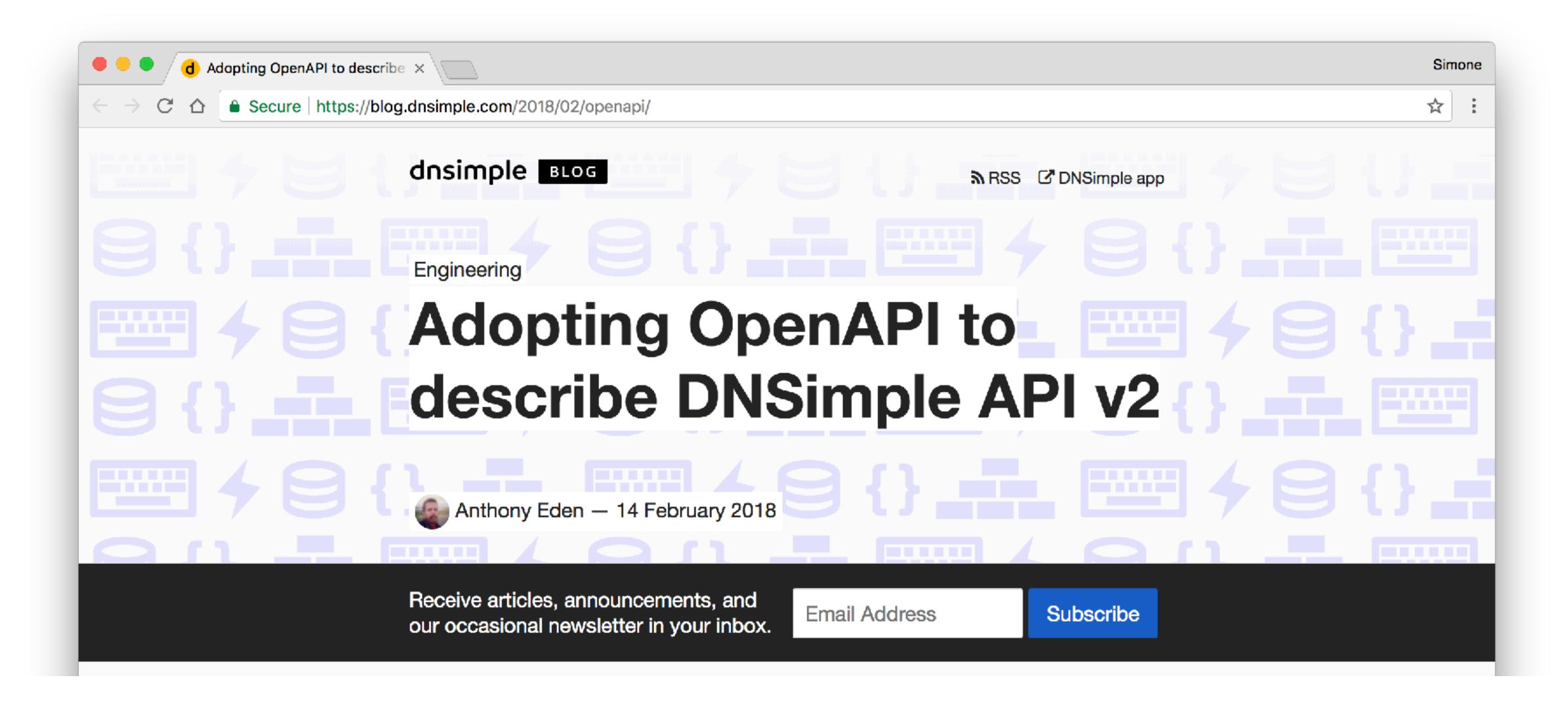
What's next?

- 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)

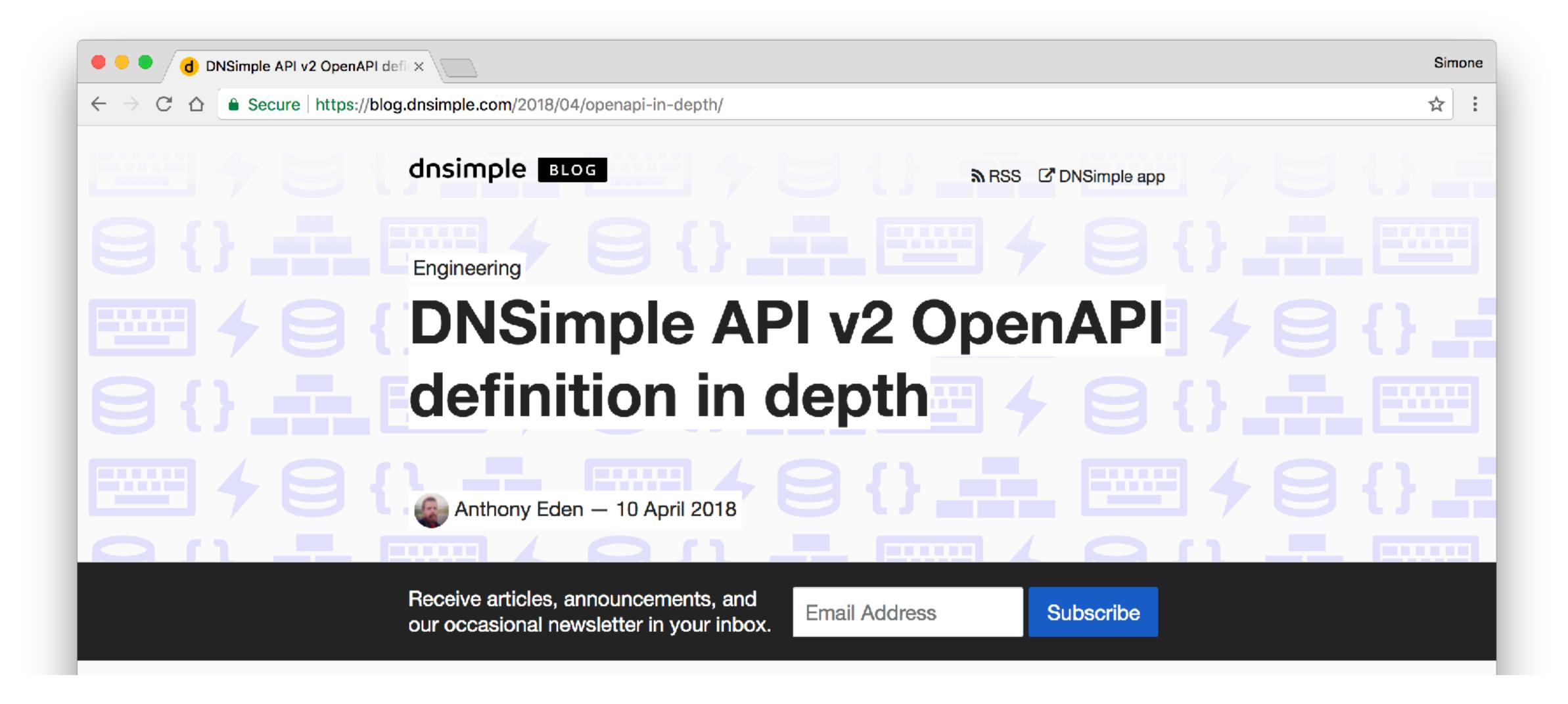


Open API

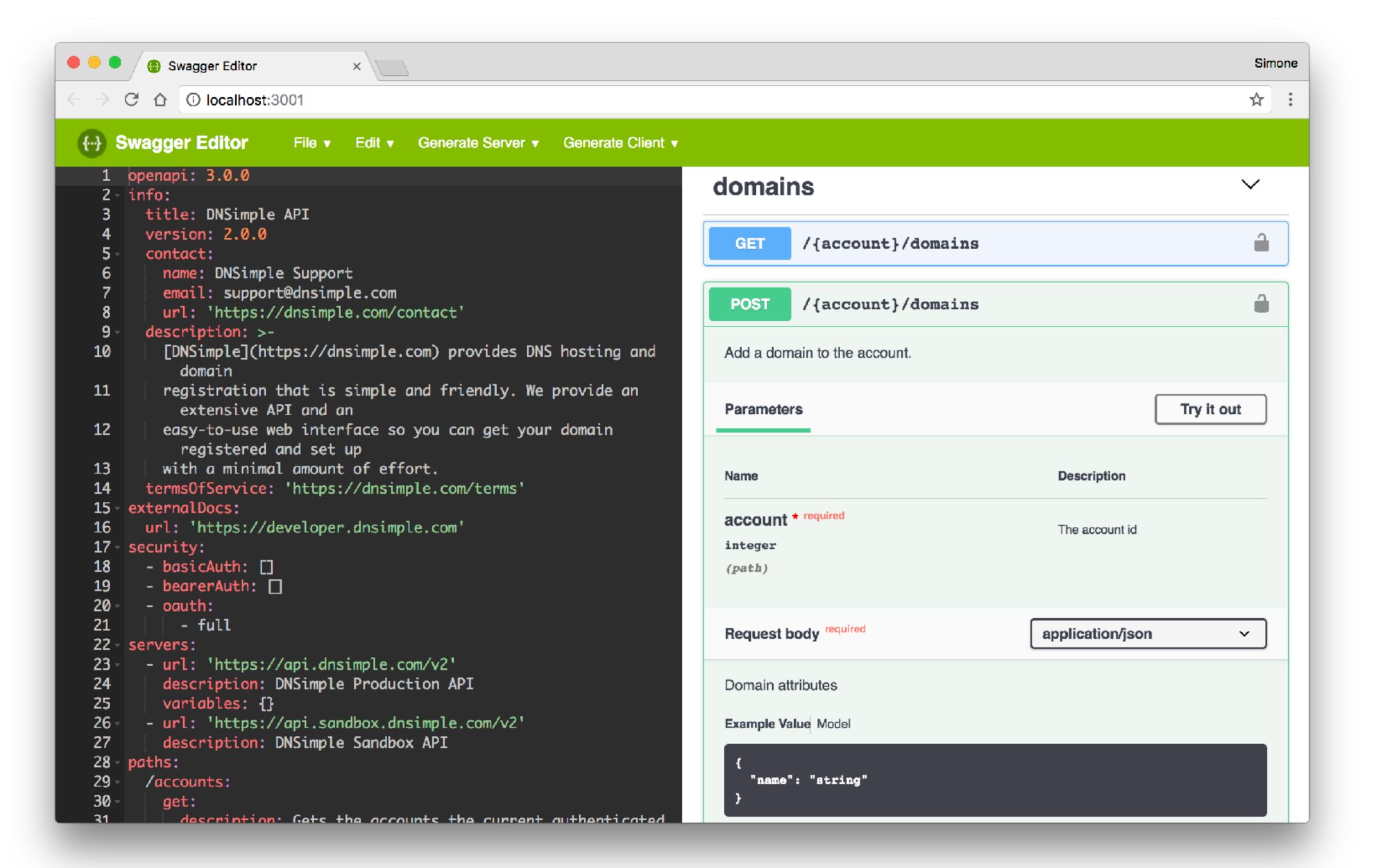
https://www.openapis.org/

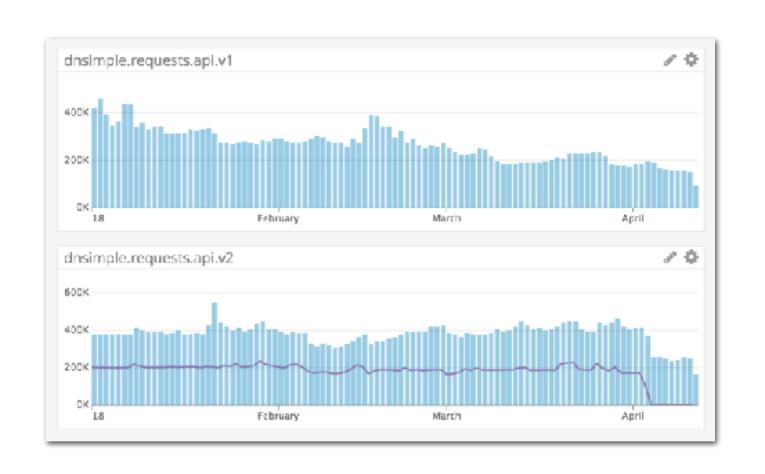


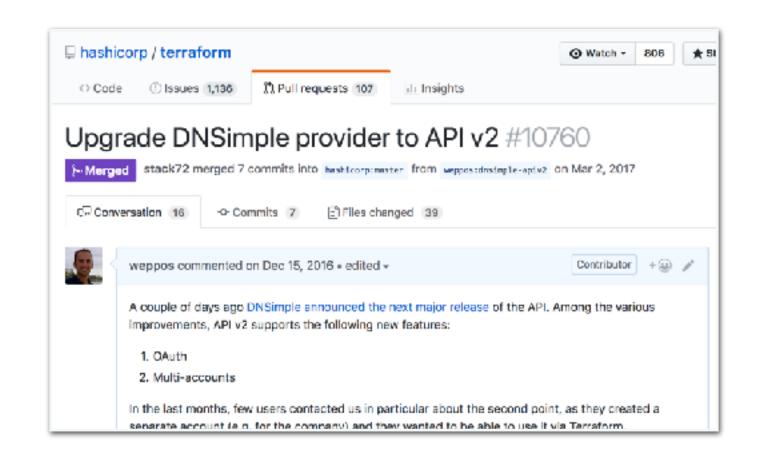
https://blog.dnsimple.com/2018/02/openapi/



https://blog.dnsimple.com/2018/04/openapi-in-depth/





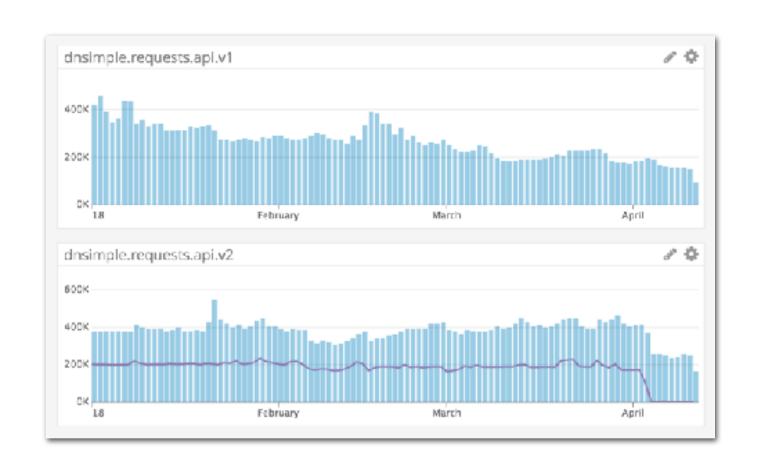


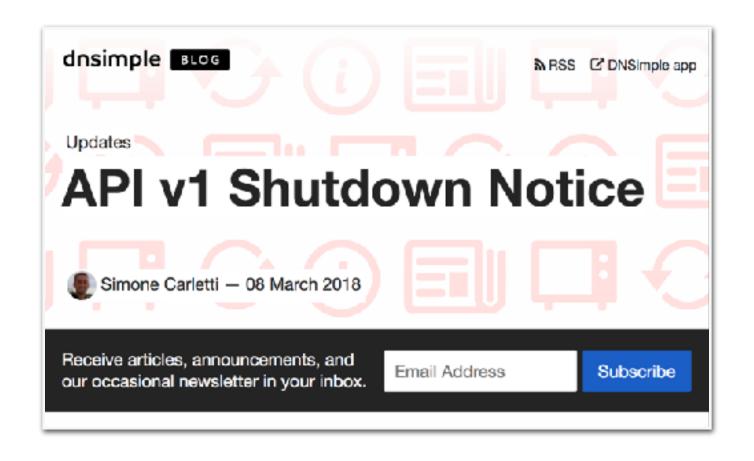


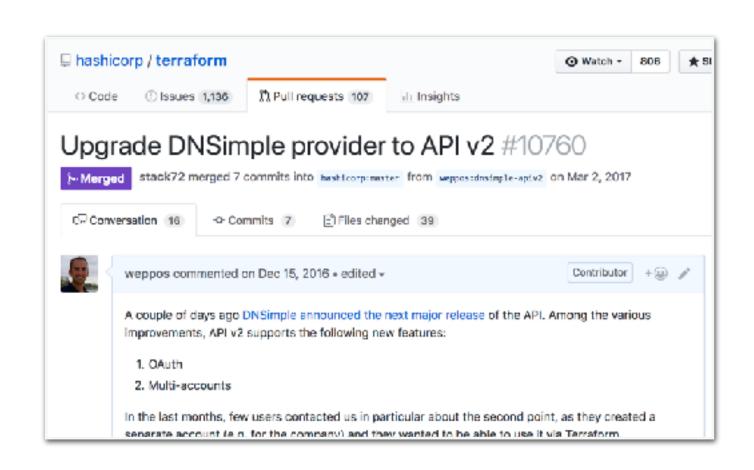
Measure

Facilitate

Deprecate

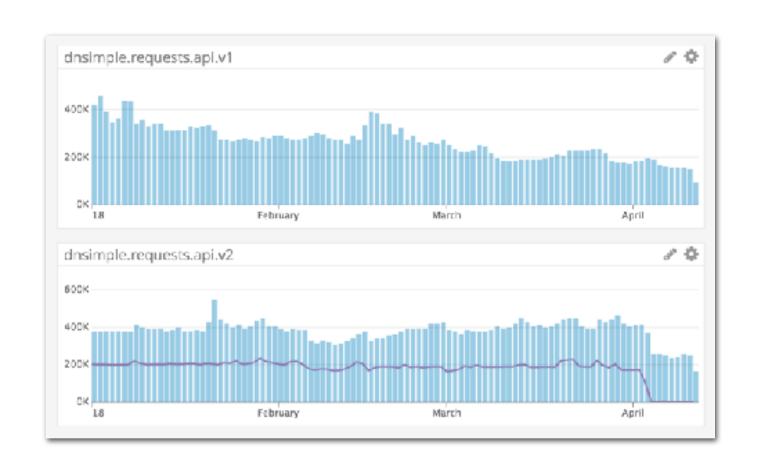




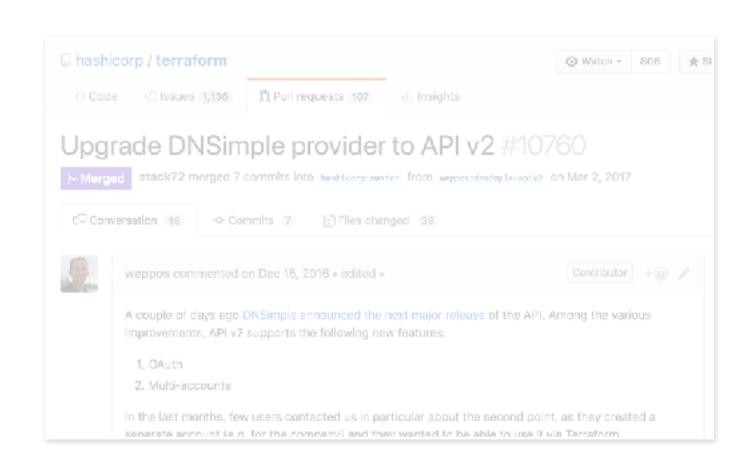


Measure

Deprecate

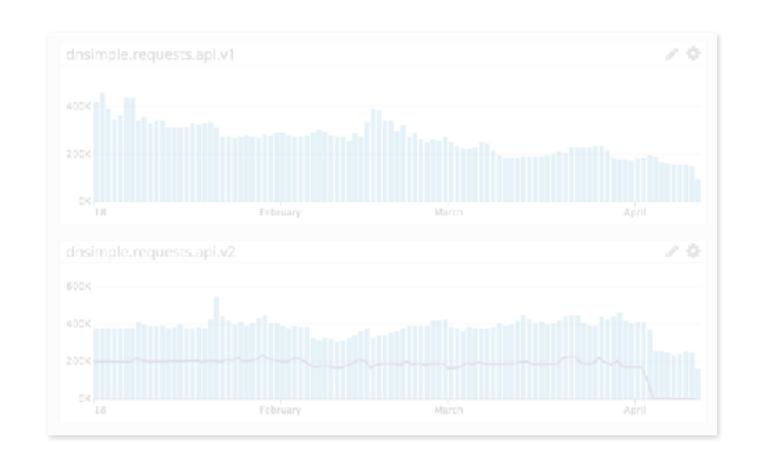


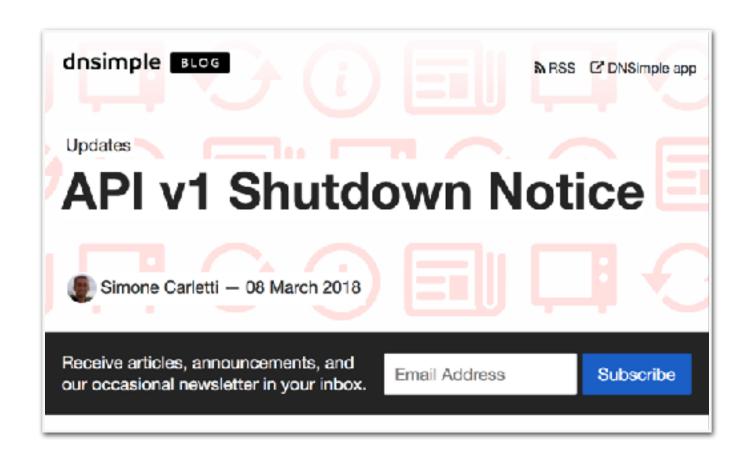


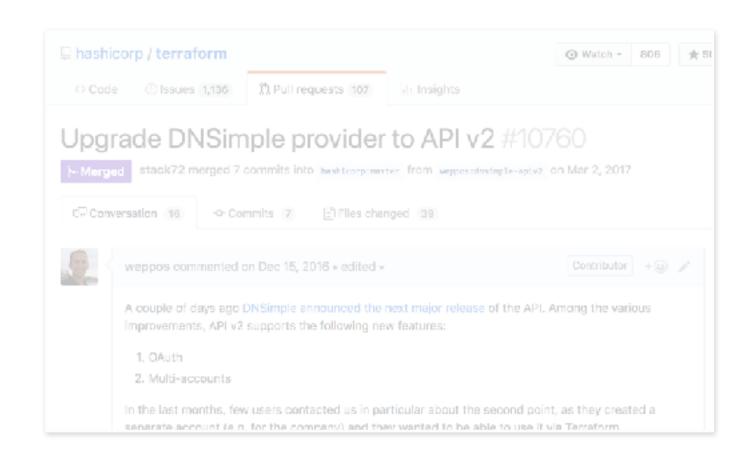


Measure

Deprecate





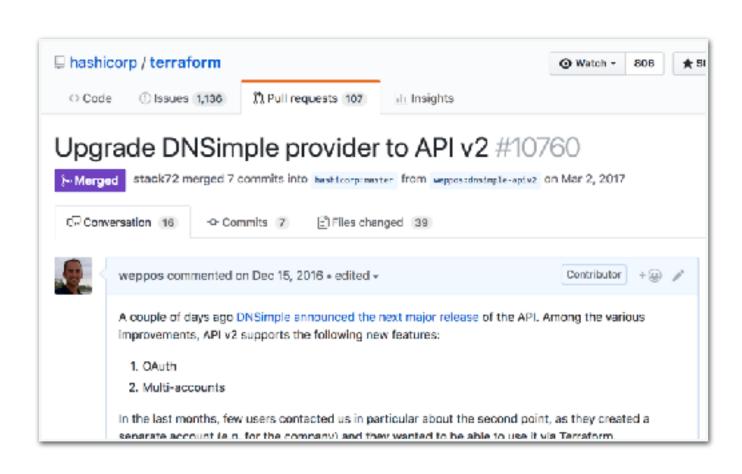


Measure

Deprecate







Measure

Deprecate



Lessons

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



Thanks!

Simone Carletti // DNSimple

@weppos

