



WORKSHOP

Design-First API Development Using Swagger & Node

Apigee Engineering

Agenda

1.

What is Design-First API Development?

2.

Installation

3.

The famous hello-world

4.

Project Conventions

5.

Mock mode i.e response simulation

6.

Query Parameters

7.

Adding a new operation

8.

How about POST?

Some social media love

Some social media love

@apigee Awesome API development workshop #iloveapis #nodejs

APIs are for...

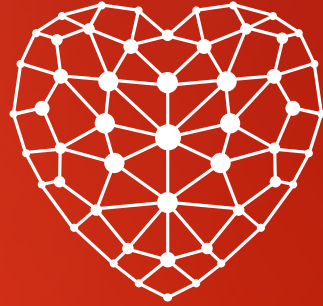
Developers

Apps :

- External
- Internal

Microservices

Devices



Design-First API Development

Zen of API Development

The code defines the API

The API generates the code

The code is the API

API-driven code

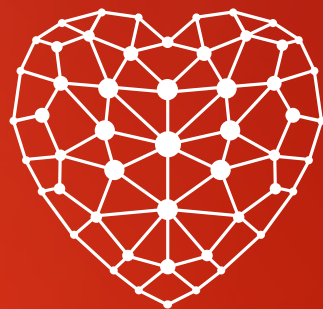
API-driven code philosophy

The API must be designed first.

The artifact that represents the API design must drive the API runtime.

The API design will change, and the framework must make it possible to adapt quickly without letting the code, design, and documentation fall out of sync.

The "DRY" Principle



Swagger-Node

Swagger-Node

The API is written in Swagger, optionally using Swagger-Editor

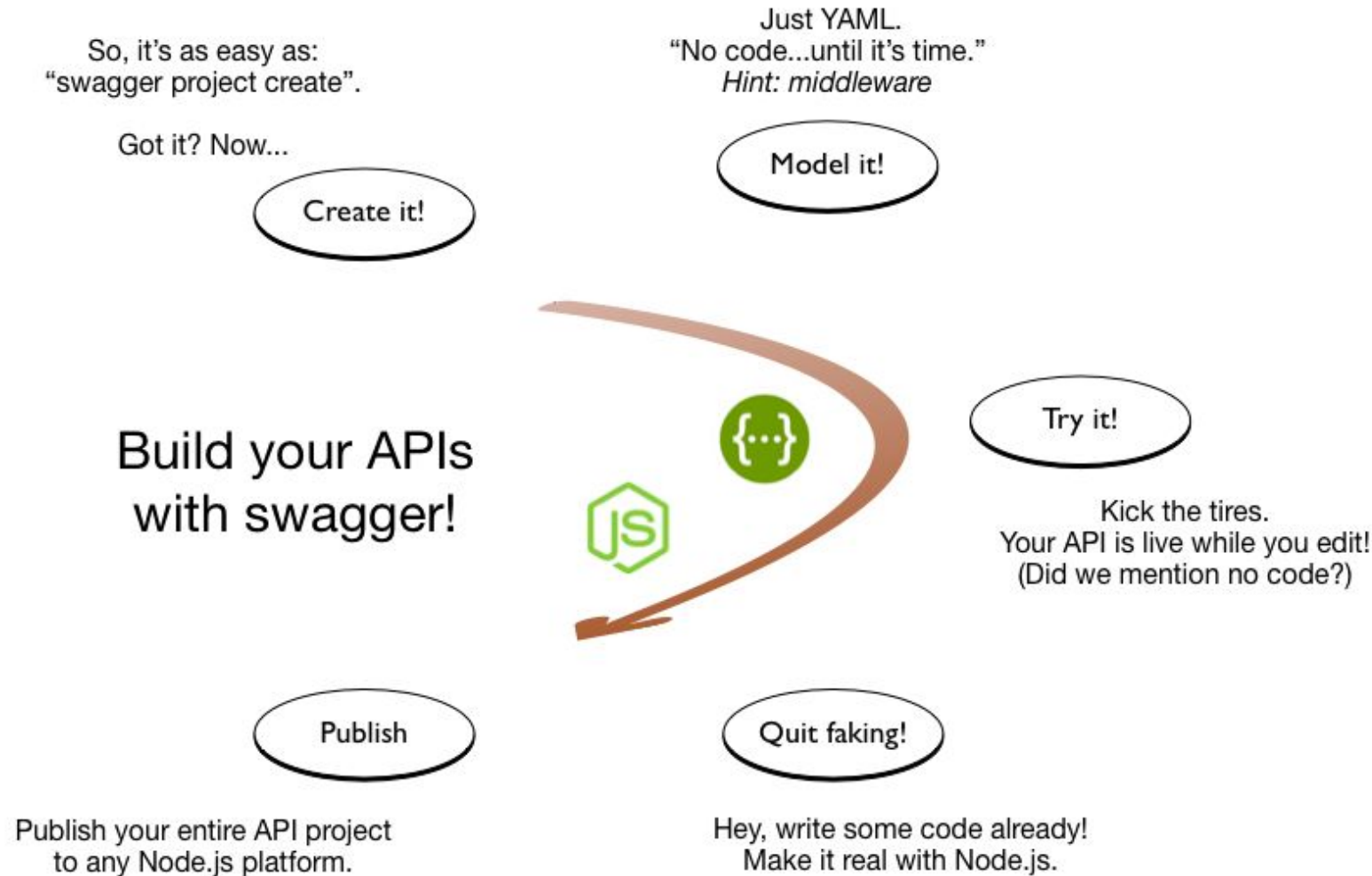
The Swagger API document is parsed when server starts

Incoming calls are classified, validated, and routed in real time

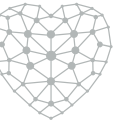
Integrates with Connect, Express, Hapi, Restify, Sails...

Incorporates a plugin model for Swagger (or non-Swagger) extensions

Swagger-Node: Flow Diagram



But why Swagger ?



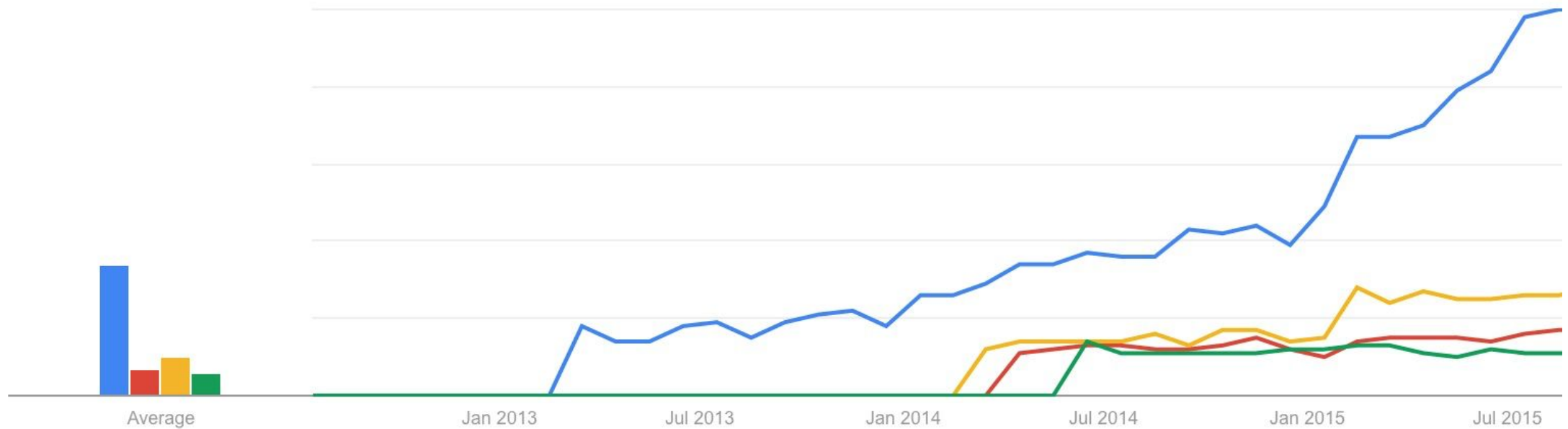
swagger api

raml api

api blueprint

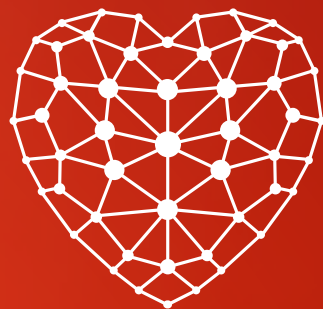
wadl api

Interest over time



But why Node.js ?





Installation

Installation -1

1. Make sure you have node.js installed. v4.1.2 preferred.

<https://nodejs.org/en/>

```
$ node --version
```

Installation -2

Install

```
$ sudo npm install -g swagger
```

Verify:

```
$ swagger --version
```

```
0.7.4
```

DONE

What do you get?

- CLI
 - project scaffolding
 - project lifecycle
- Your own API Studio (sort of :-))
 - Write YAML
 - Immediate feedback loop
 - Try-it on the fly
- Runtime

Let's take a tour of API Studio

- Code Completion
- Immediate feedback loop
- Simulated Response aka “Mock Mode”
- Collaboration
- Download YAML/JSON & Node.js project
- Generated doc
- Raw Spec endpoint

Let's create a project

```
$ swagger project create
```

Let's run the project

```
$ cd $project-name
```

```
$ swagger project start
```

Let's make some API call

```
$ curl http://127.0.0.1:10010/hello?name=Scott
```

Let's not forget the tests

```
$ swagger project generate-test
```

```
$ swagger project test
```

How about editing ?

```
$ swagger project edit
```

Dissecting it

- Project Conventions
- swagger spec
- controllers
- helpers

Let's add something new

- A new path that uses POST operation

..which requires

- A new controller

Try it out

```
curl -X POST http://127.0.0.1:10010/conf/add -H  
"content-type:application/json" -d '{"x":5,"y":6}'
```

How about some API Management

- Let's add quota

Quota : Get the bits

- Let's add quota *[This is subject to change. See latest at <https://github.com/apigee-127/volos-swagger-apply/blob/master/README.md>]*

```
npm install --save volos-swagger-apply
```

```
npm install --save volos-quota-memory
```

Quota : Annotate your Swagger

```
x-volos-resources:  
  MyQuota:  
    provider: volos-quota-memory  
    options:  
      timeUnit: minute  
      interval: 1  
      allow: 1  
  
x-volos-apply:  
  MyQuota: {}
```

Quota : Tell the framework about it.

Add fitting to config/default.yaml to swagger_controllers :

```
- volos-swagger-apply
```

Quota : Verify that it works

```
curl -X POST http://127.0.0.1:10010/conf/add -H "content-type: application/json" -d '{"x":5,"y":6}'
```

```
{"message": "exceeded quota", "status": 403}
```


Deploy to Apigee

```
sudo npm install -g apigeetool
```

```
apigeetool deploynodeapp -u sdoe@apigee.com -o sdoe -e test -n 'Test Node App 2' -d . -m app.js -b /node2
```

OR

```
a127 project deploy
```

Where can I get help?

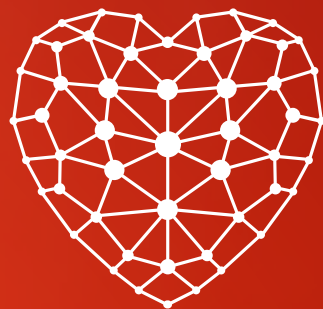
Source: <https://github.com/prabhatjha/iloveapi2015>

Community: <https://community.apigee.com>

Github:

github.com/apigee

github.com/apigee-127



Thank You