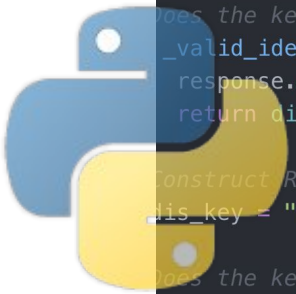
From Code to Community

Uli Hitzel
Python Singapore User Group
November 2019



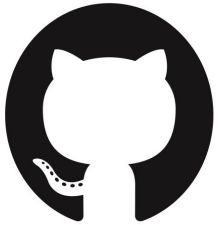
```
oute('/keys/<id>', method='PUT')
ite_key(id):
i_auth = _authenticate()

Authorization is needed for this endpoint
 api_auth["authenticated"] == "False":
  response.status = 401
  return dict({"info":"Unauthorized."})

Get User ID and quota
er_id = api_auth["id"]
er_quota = _get_user_quota(user_id)
rrent_number_of_resources = _user_resources_number(u

Does the key have a valid format?
 _valid_identifier(str(id)) != True:
  response.status = 400
  return dict({"info":"Key name is invalid."})

Construct Resource Location from user_id and id
 redis_key = "KEY:"+str(user_id)+"::"+str(id)

Does the key exist already?
yexists = rc.get(redis_key)
 keyexists == None:
  # Are we allowed to create more objects?
  if user_quota != 0 and current_number_of_resources
      response.status = 400
      return dict({"info":"Quota exceeded."})

  # Increase the counter of resources for this user_
  rc.incr("NUMRES:"+str(user_id))
```

How do you run an Open Source Project?

1. Take some Source Code
2. Dump in on GitHub
3. Done!

Developer Advocate

/in/uhitzel



/u1i/slides






Agenda

1 – Open Source &
How To Run Projects

2 – Bambleweeny

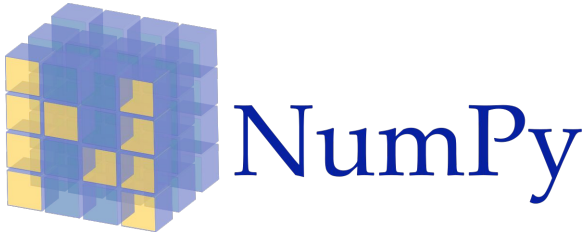
3 – Get involved!

bamble
weeny

release v0.31 | Docker Pulls 1451 | license MIT | issues 4 open

GET	/keys/{id}	Read Key
PUT	/keys/{id}	Write Key
DELETE	/keys/{id}	Delete Key
GET	/keys/	List Keys
GET	/incr/{id}	Increase Key


TensorFlow


NumPy


Scrapy

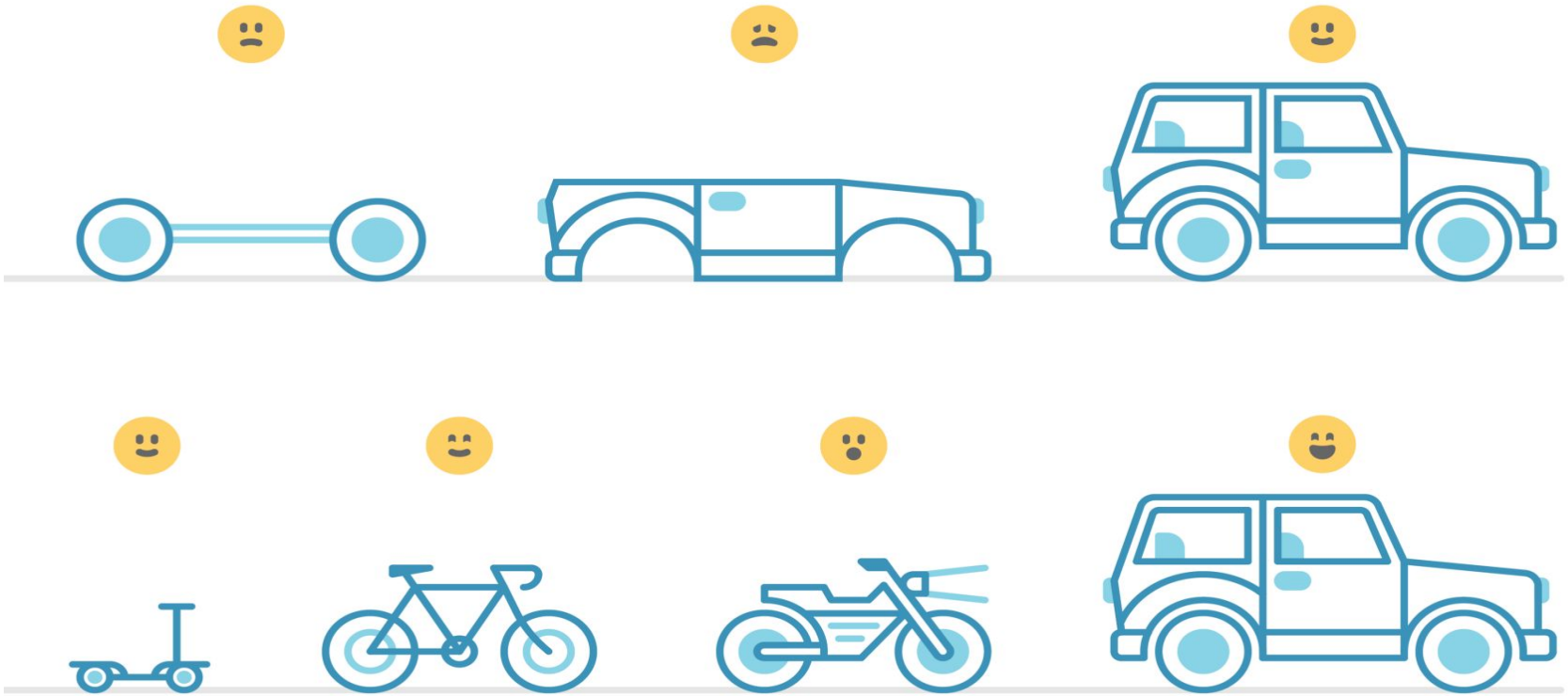

Requests
http for humans

Open Source

Open Source

People will **see** my Code

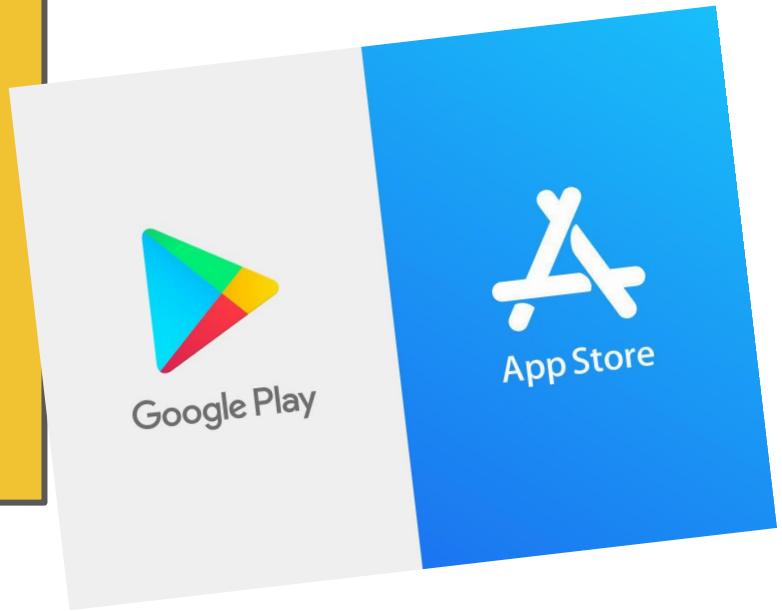
People will **use** my Stuff



Why do it?

- You get inspired & grow
- Make new connections
- Give back to the Community
- It’s rewarding & fun

You’re on the ‘App Store’!



Your RedisConf19 session "Bambleweeny: Redis with HTTP & OAuth" has been accepted!

You replied on Mon 2/25/2019 18:06

DN

Dave Nielsen <dave@redislabs.com>
Sat 2/23/2019 01:55
Uli Hitzel

Dear Uli,

Thank you for submitting your talk to RedisConf19.

On behalf of the Speaker Selection Committee, I'm delighted to let you know that your talk has been accepted and we'd be honored to have you speak at RedisConf.


Soleil


Cheers
MARKET
ATM MACHINE AVAILABLE
CHECK OUR SPECIALS
LIQUOR • BEER • WINE
GROCERIES • MONEY ORDERS

How do you run an Open Source Project?

You'll have to be:

A Developer
+ Marketing Person
+ Project Manager

/Cheukting

I’m probably here

Solve a real Problem

1

Build something you're using yourself

Turn it into a ‘Living Thing’

- GitHub
- Issues, Versions, Releases
- Contributions & Pull Requests

Market it! 3

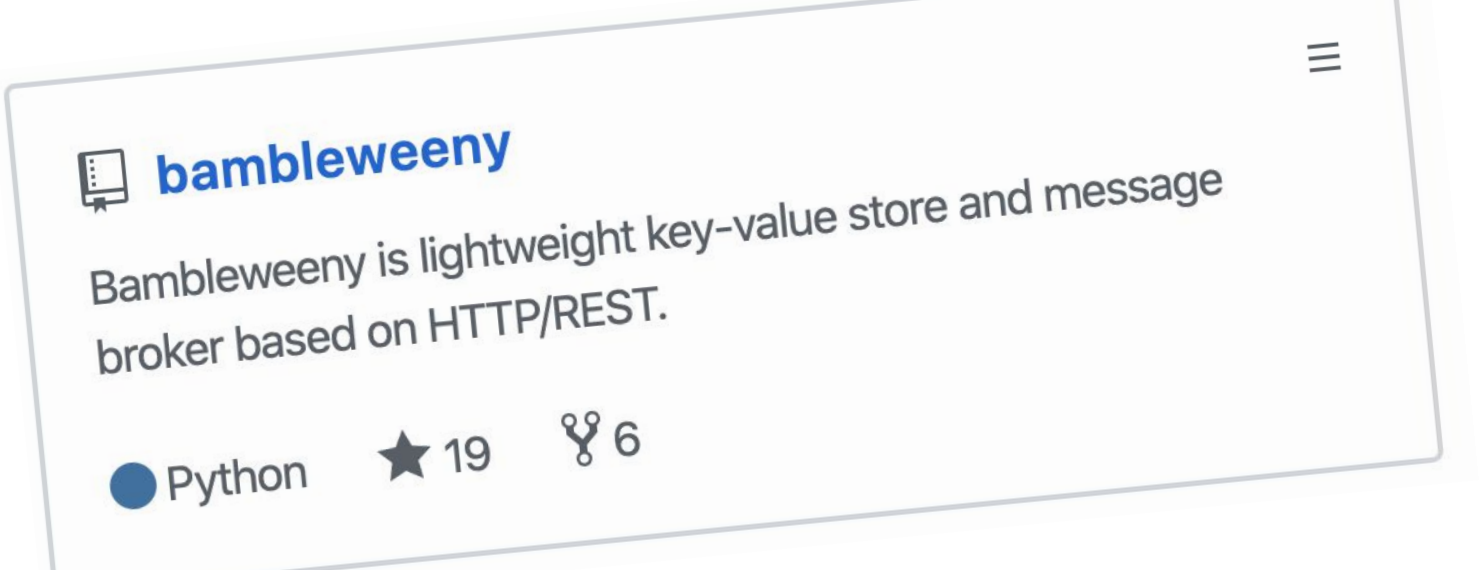
- Branding: Naming, Logo
- Superb Documentation
- Great ‘First 20 Minutes’ Experience
- Promote it

majime

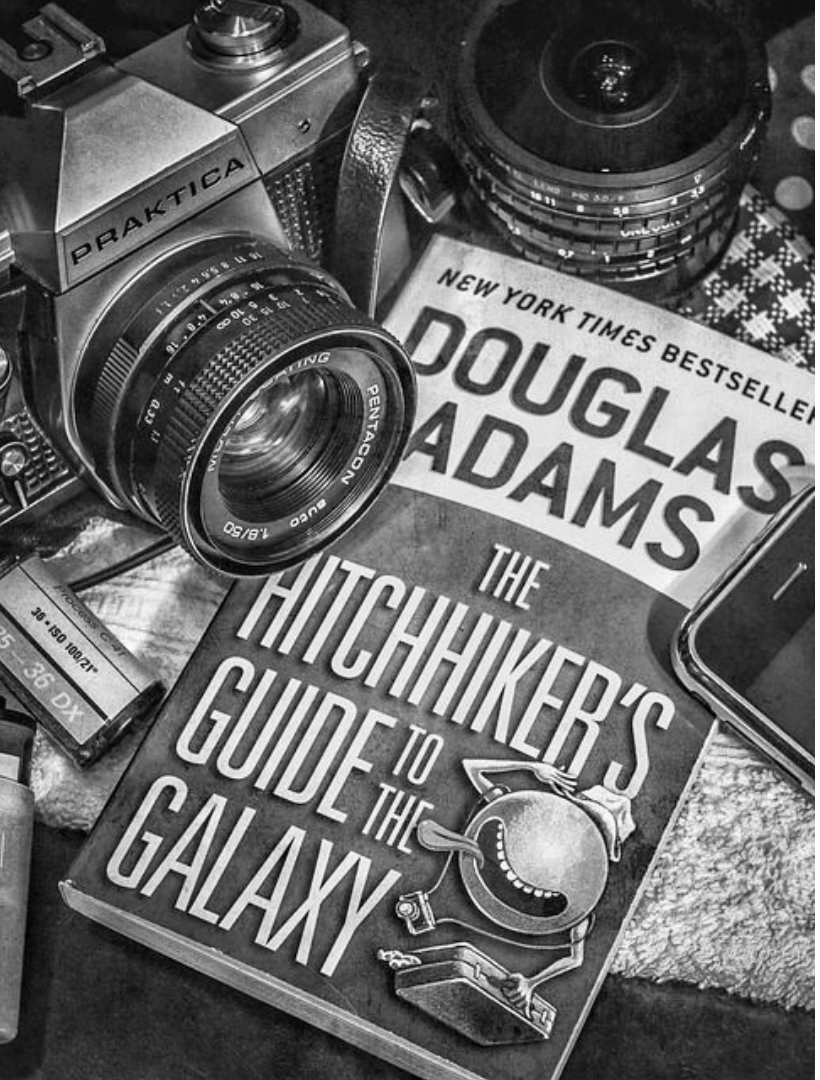
KEIJU

YOISHO
偽の会社

/u1i



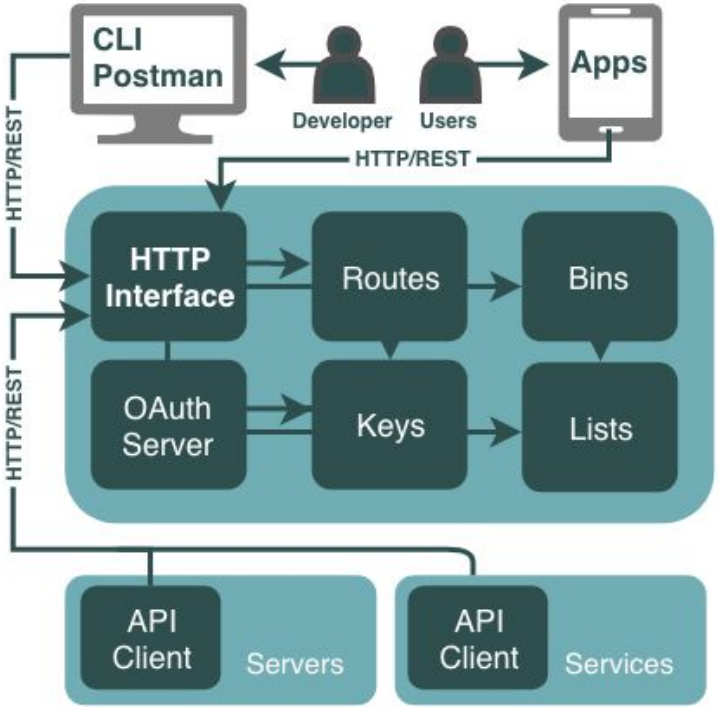
bamble weeny



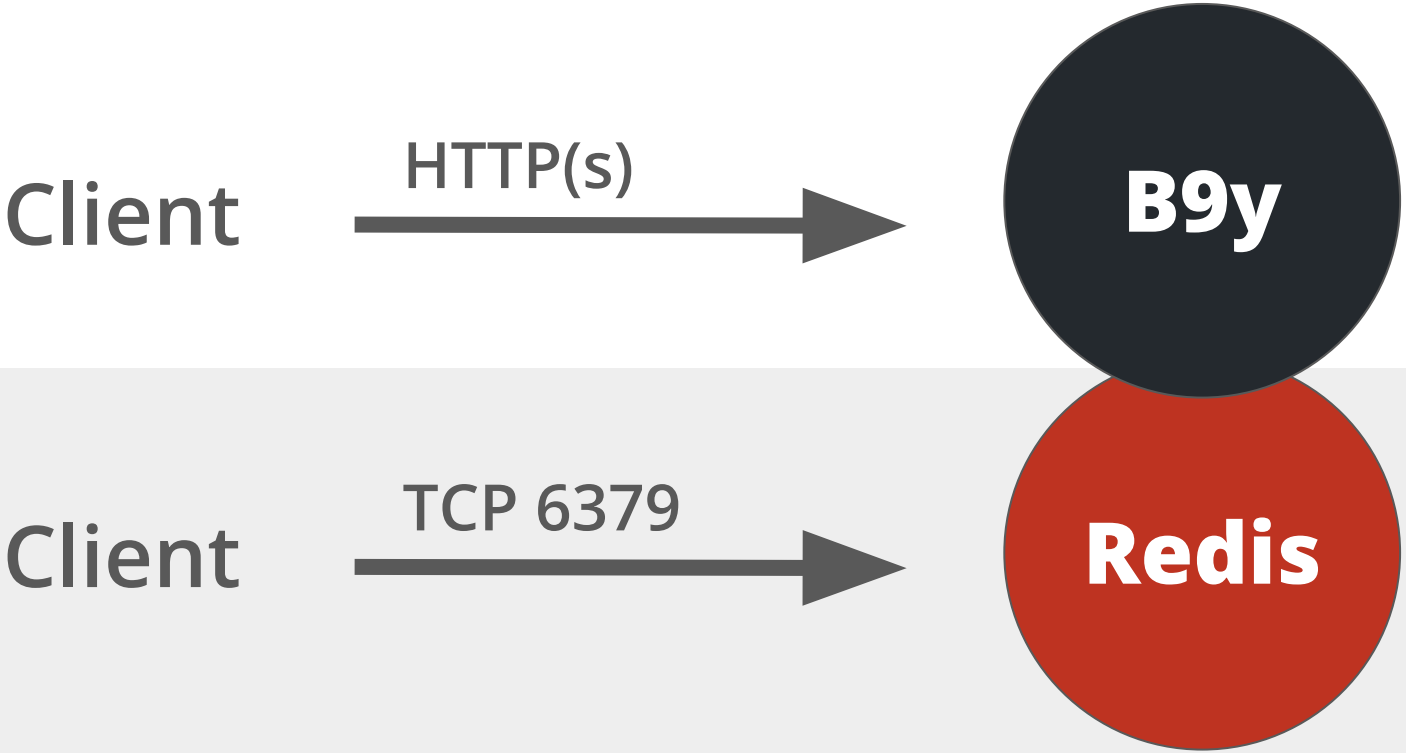
The Bambleweeny 57 Submeson Brain is part of the Finite Improbability Generator.

Bambleweeny

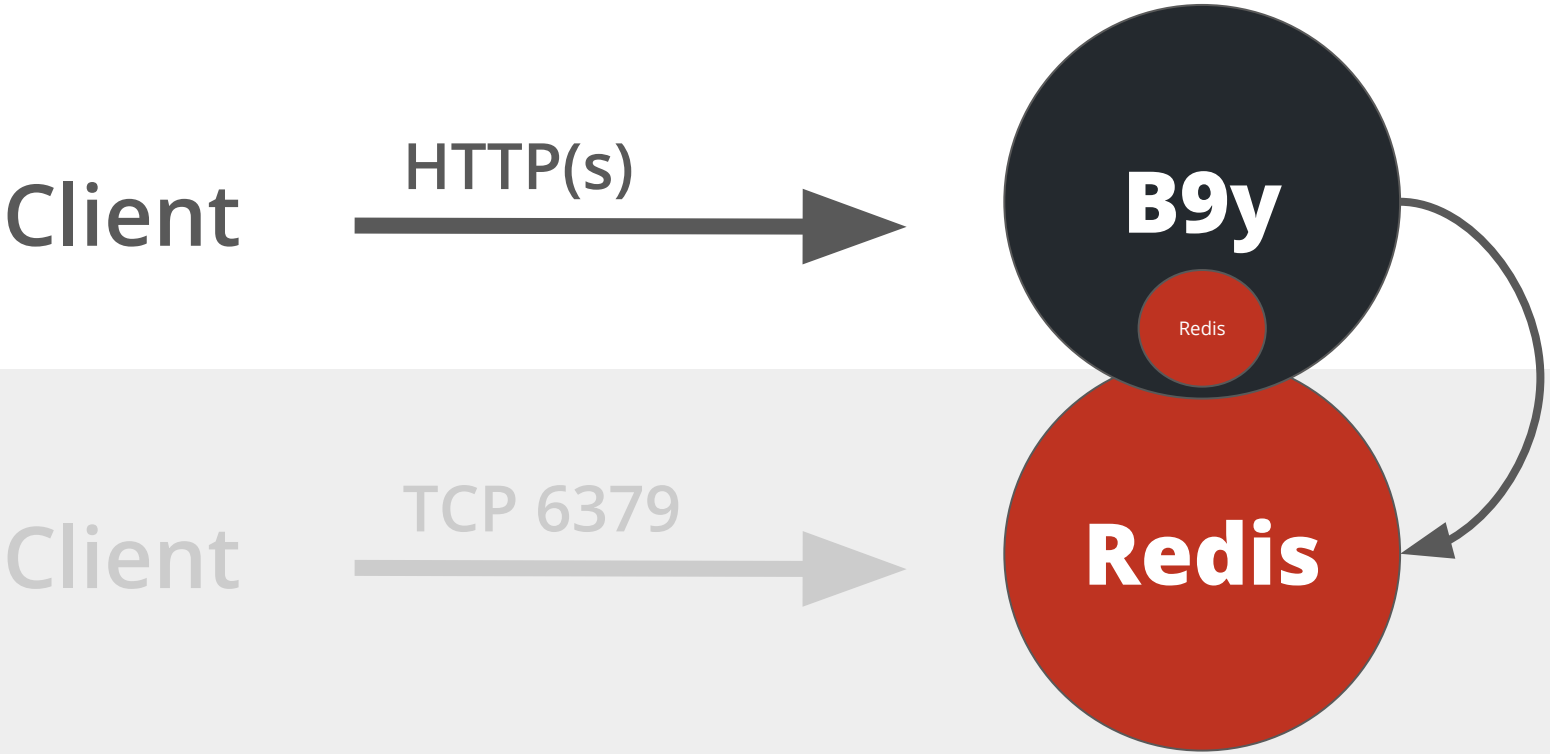
- Lightweight HTTP/REST based Key-Value Store & Message Broker
- Multi-Tenancy → Manage Identities, Access & Quotas
- Fast, Easy to Use & Well-Documented
- Written in Python, using Redis, deployable in a tiny Container

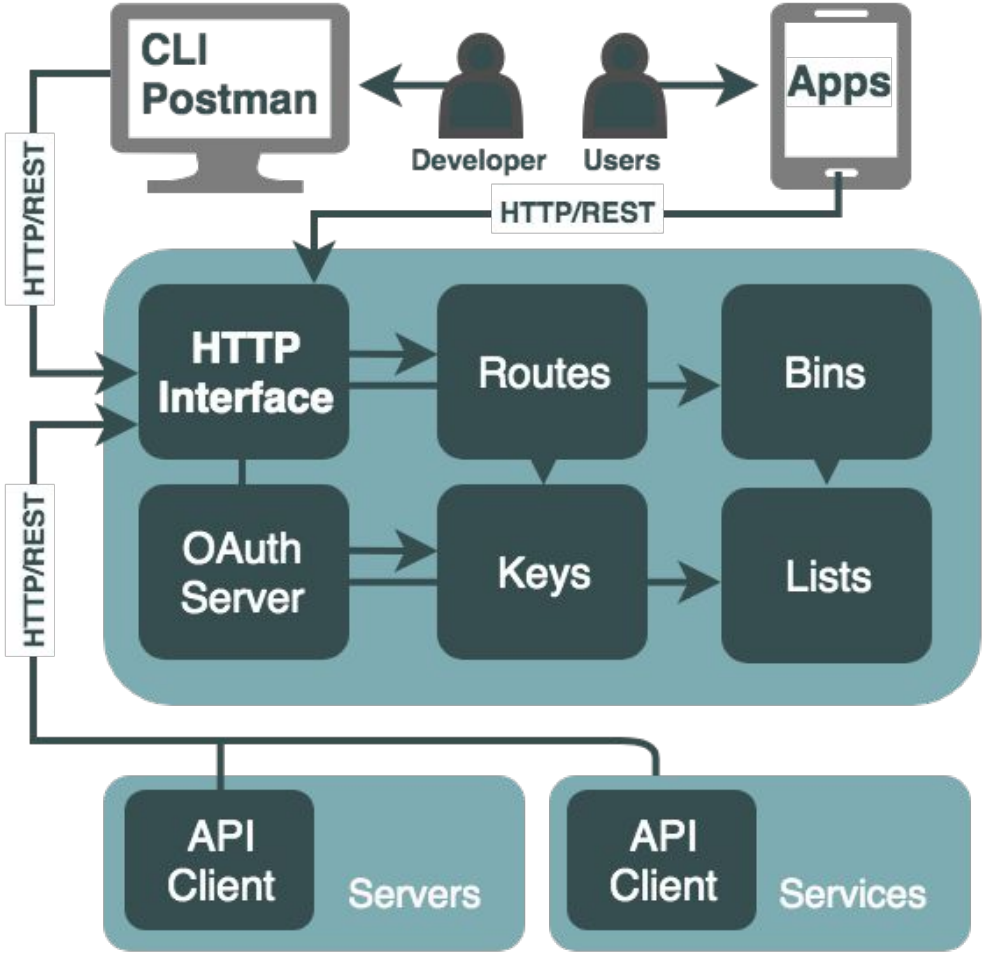


In Simple Terms



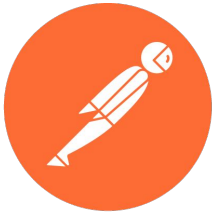
Self Contained or External Redis

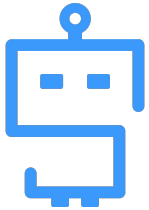



CLI
Postman
Developer
Users
Apps
HTTP/REST
HTTP/REST
HTTP/REST
HTTP
Interface
Routes
Bins
OAuth
Server
Keys
Lists
API
Client
Servers
API
Client
Services

REST API

- CRUD Interfaces for Keys & Lists
- Design First, Code Later
- API Specs at /swagger
- Use to render Documentation & SDKs





Keys

GET	`/keys/{id}`	Read Key
PUT	`/keys/{id}`	Write Key
DELETE	`/keys/{id}`	Delete Key
GET	`/keys/`	List Keys
GET	`/incr/{id}`	Increase Key

Routes

GET	`/routes/{id}`	Read Key
POST	`/routes`	Create Route

Lists

POST	`/lists/{id}`	Add Item to List
GET	`/lists/{id}`	Get Item from List
DELETE	`/lists/{id}`	Delete List
GET	`/lists`	Get All Lists

bambleweeny
22 requests

- config
- routes
- bins
- auth
- keys
  - GET Read Key
  - PUT Write Key
  - DEL Delete Key
  - GET List Keys
- save
- info
- incr
- lists
- users

POST Get Access Token

PUT Write Key

No Environment

Write Key

Examples (0)

PUT | http://localhost:8080/keys/redisconf19 | Send | Save

Params | Authorization | Headers (3) | Body | Pre-request Script | Tests | Cookies | Code | Comments (0)

none | form-data | x-www-form-urlencoded | raw | binary | JSON (application/json) | Beautify

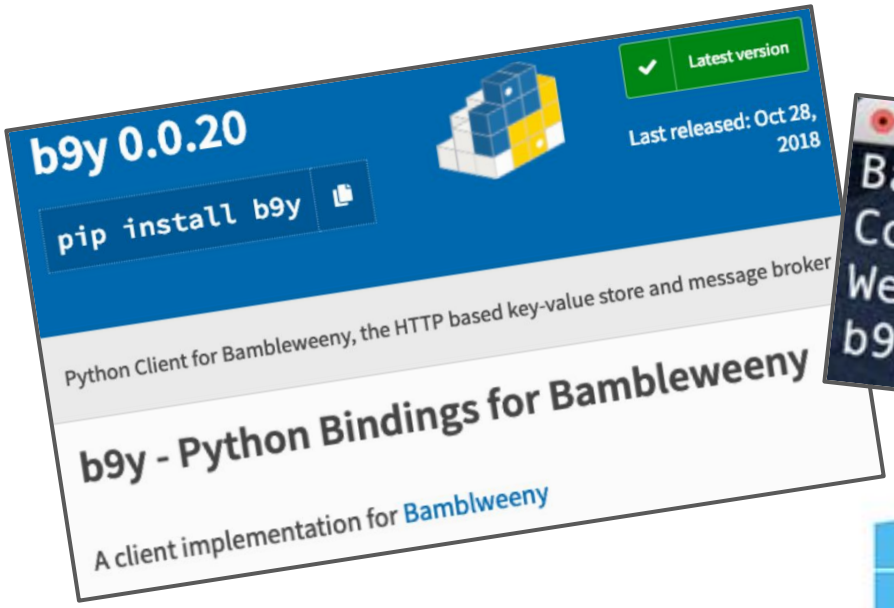
```
1 hello world!
```

Body | Cookies (4) | Headers (5) | Test Results | Status: 200 OK | Time: 10 ms | Size: 170 B | Save | Download

Pretty | Raw | Preview | JSON

```
1 {
2     "info": "ok"
3 }
```

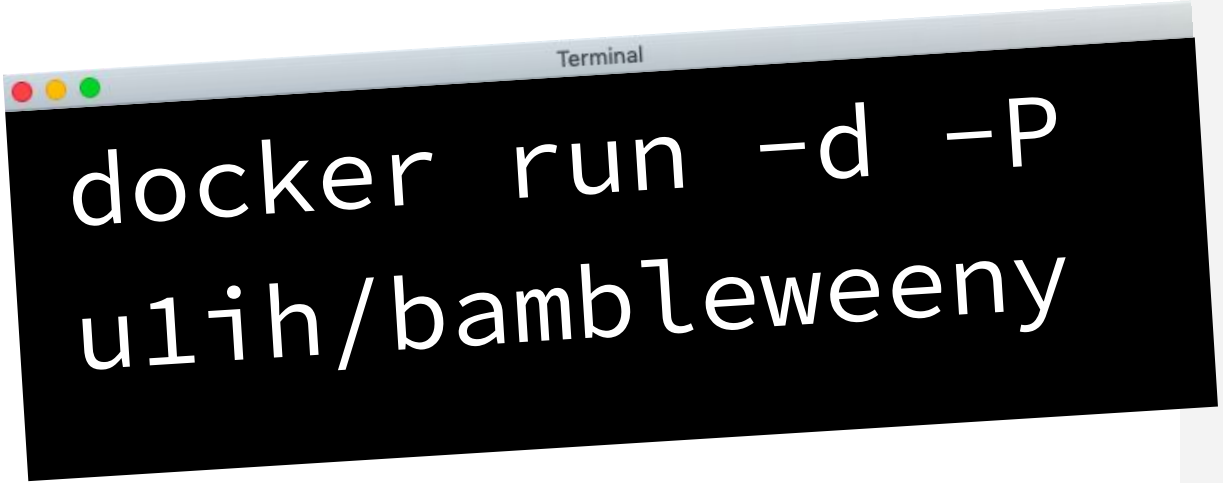
Python Client Library & CLI



Windows

macOS

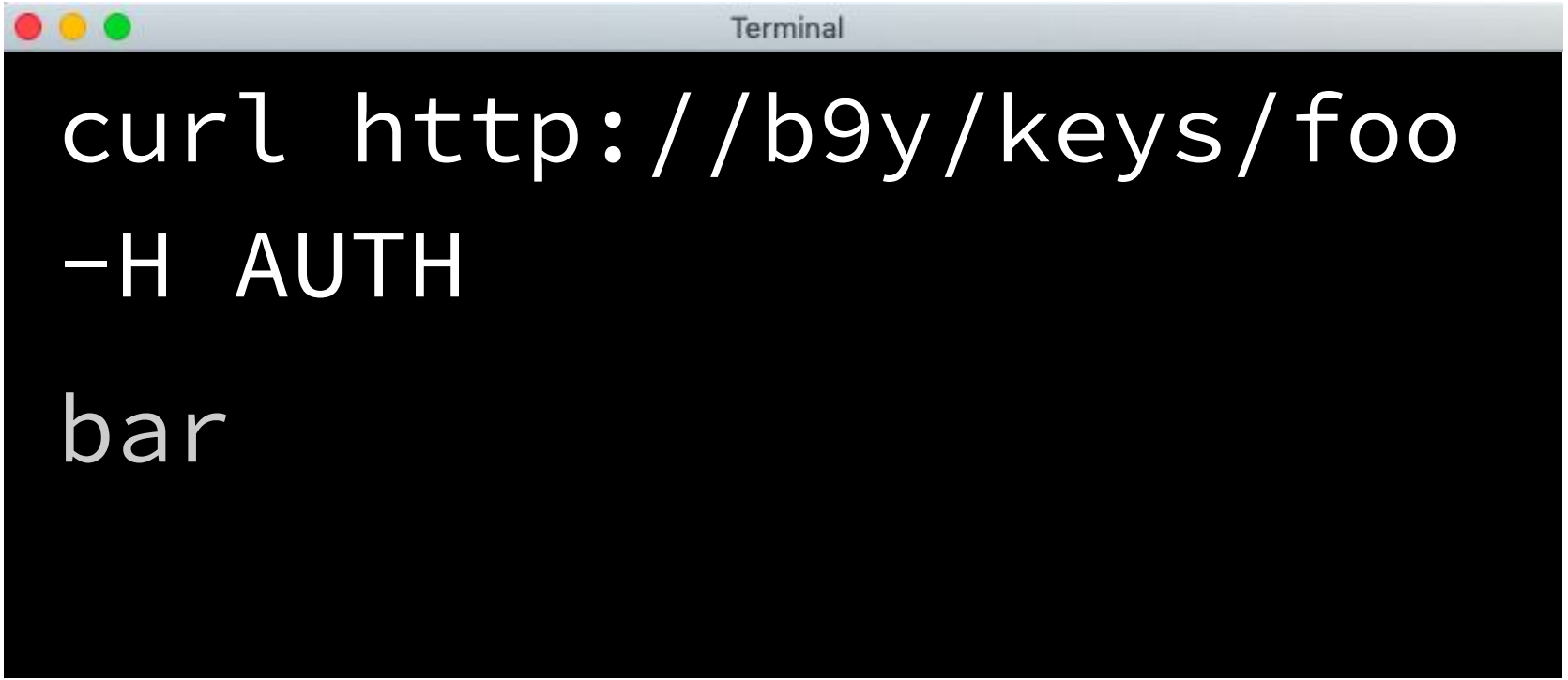
Easy to Run



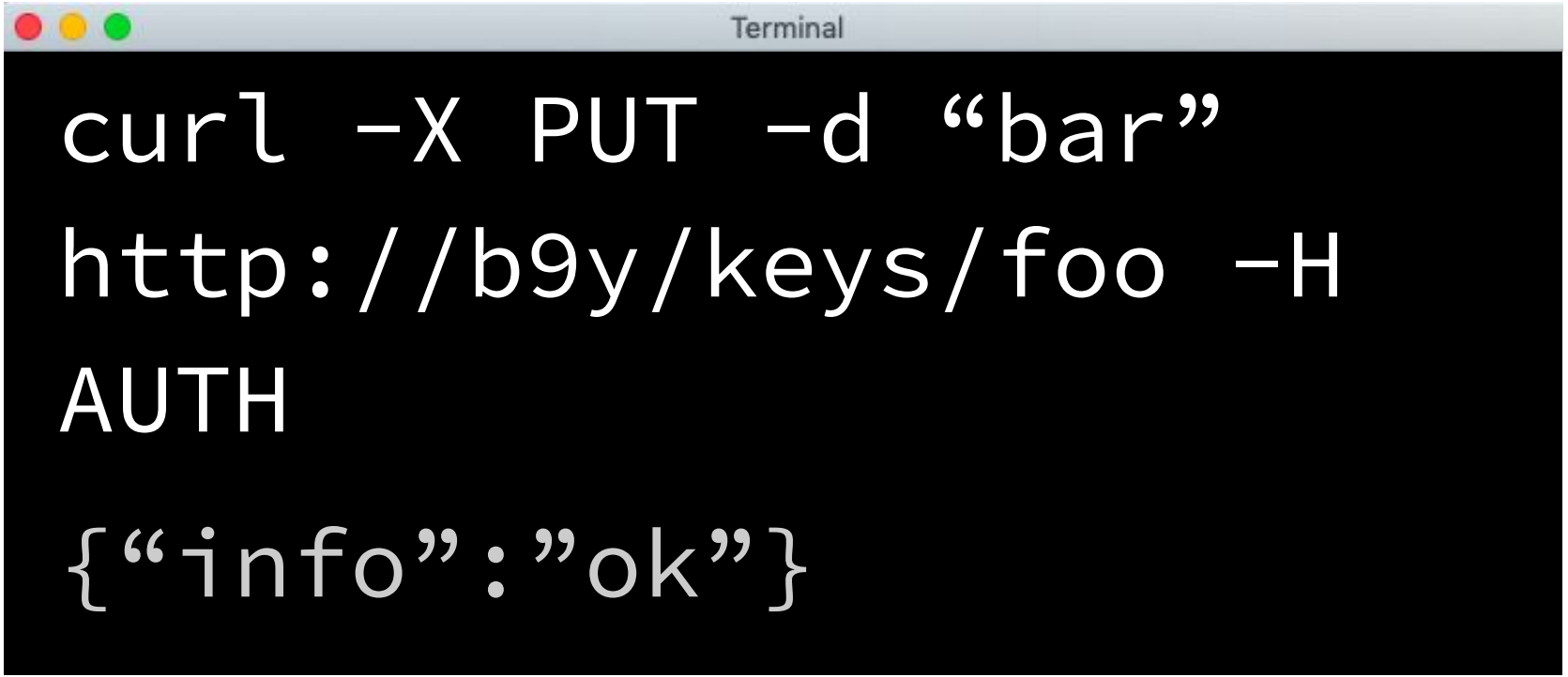
docker

OPENSHIFT

cURL: Get ‘foo’



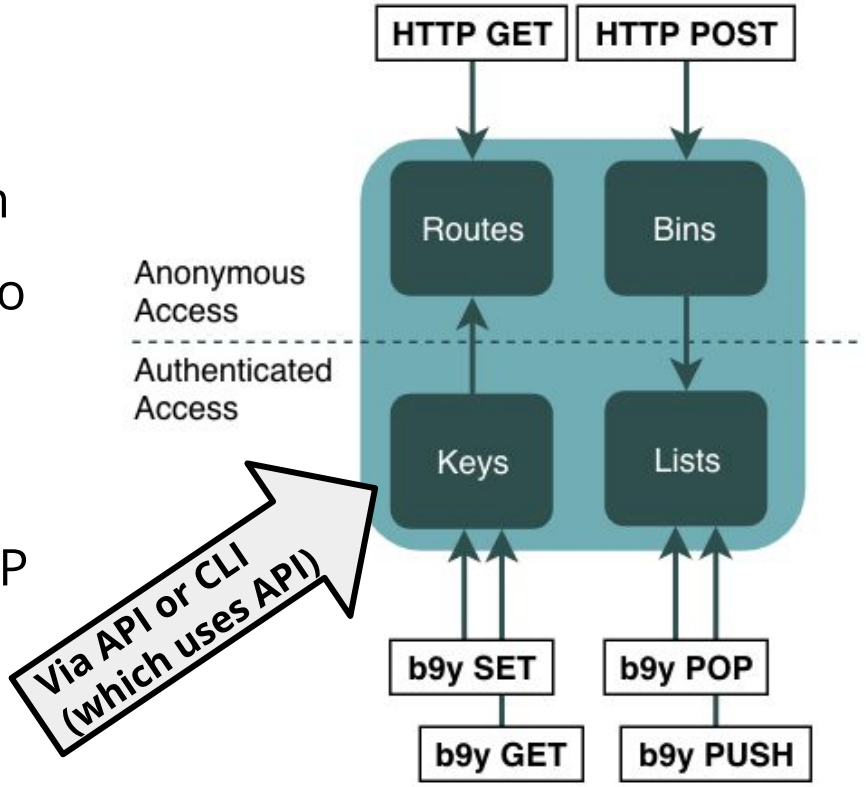
cURL: Set ‘foo’ = ‘bar’



cURL: Allow public access to ‘foo’

OAuth & Access Concepts

- Keys & Lists are Private
- Bearer Token via /auth/token
- Routes: Public READ Access to Keys via plain HTTP
- Bins: Public WRITE Access (“push”) to Lists via plain HTTP

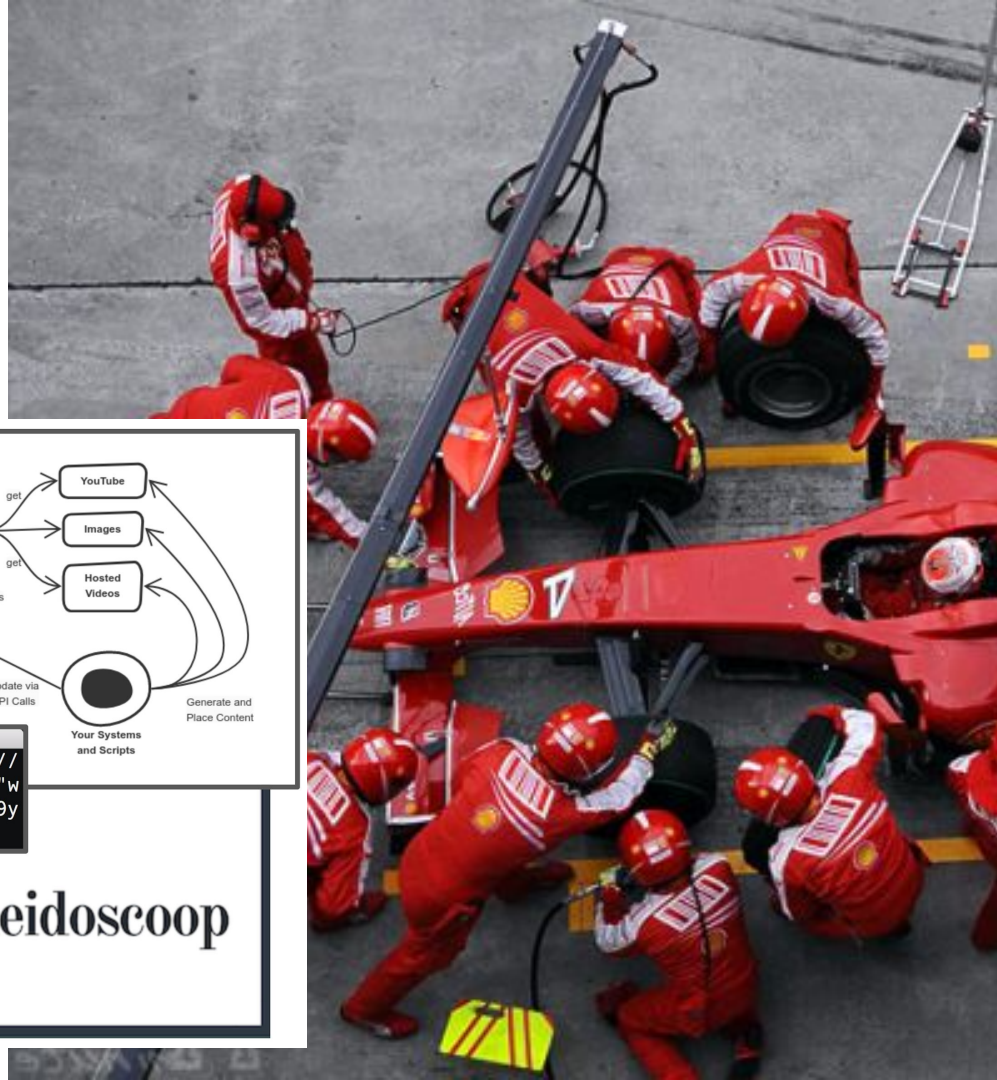


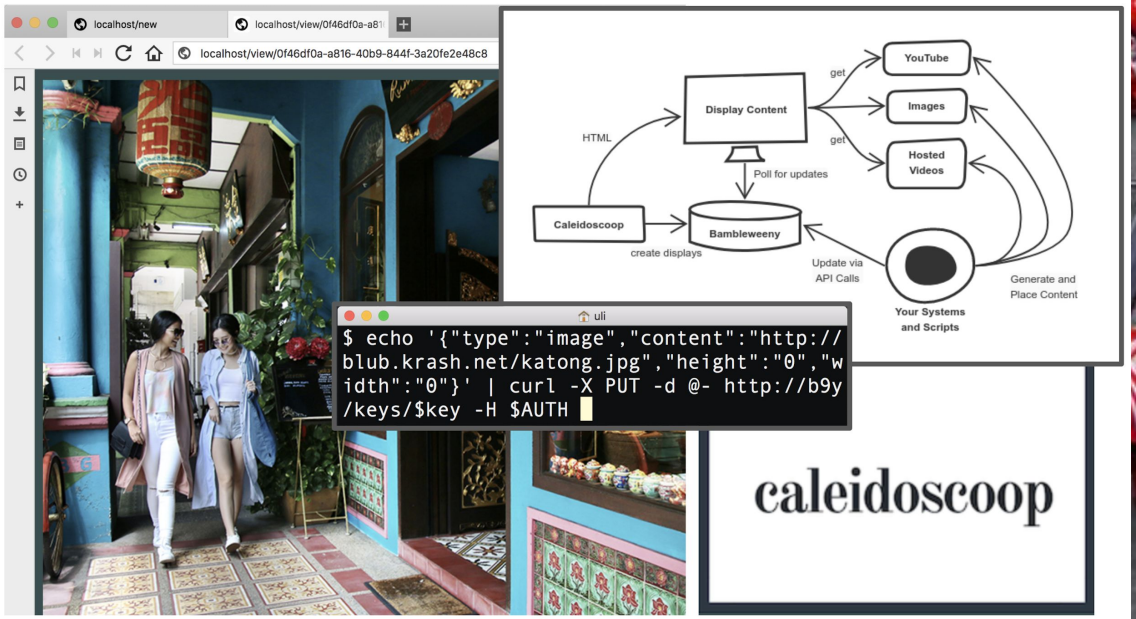
HTTP(s) is expensive

1x vCPU 1 GB RAM (AWS t2.micro)	Reads / second	Writes / second
Redis 4.01	**56k**	**55k**
Bambleweeny	**540**	**400**

Kubernetes
Microservices
Kafka
Elastic
Zookeeper
MongoDB

Use Case: Fast Prototyping

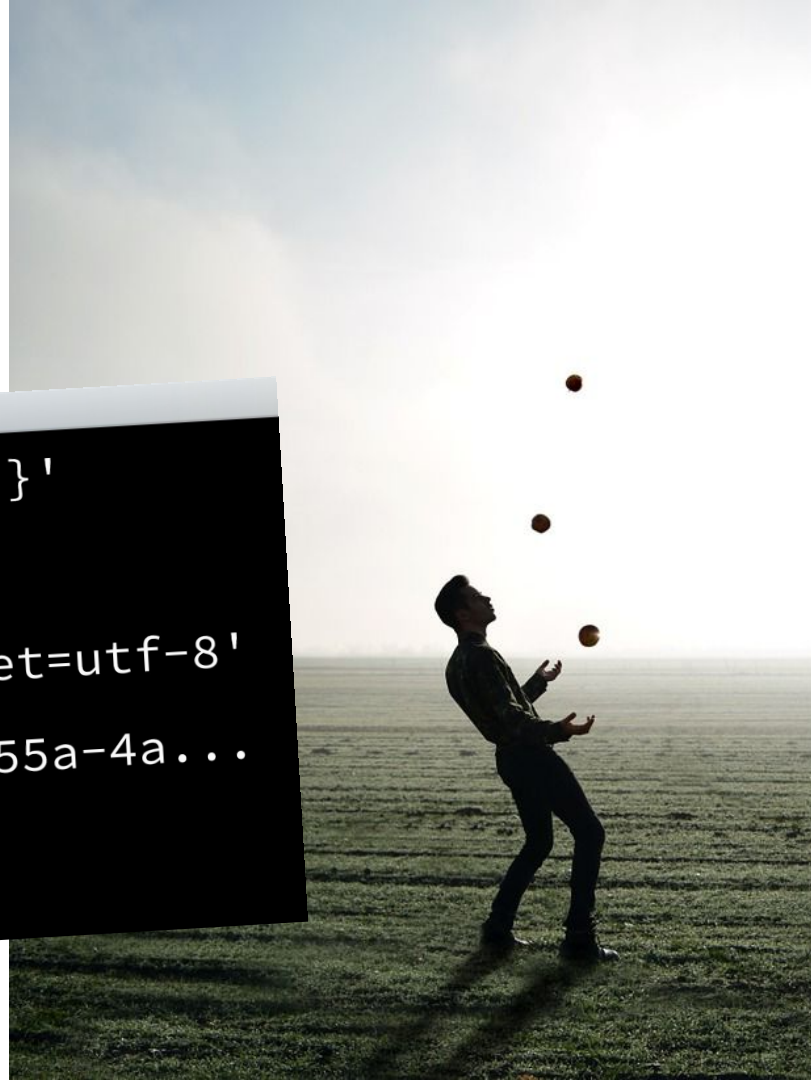




caleidoscoop

Use Case: POCs & API Mocking

```
Terminal
set api '{"message": "!@[message]"}'
set message 'cool stuff!'
route api 'application/json;charset=utf-8'
curl http://b9y/routes/cf670f2b-755a-4a...
{"message": "cool stuff!"}
```



Get involved

- Try it out!
- Help make it better → open GitHub issues for bugs & new features
- Spread the Word!

/u1i/bambleweeny