

Elixir client from OpenAPI (Swagger) definition

niku

2017/04/01

About Me

twitter: niku_name

github: niku



Live in Sapporo City, Hokkaido

About Me

A member of Sapporo.beam

- Local meetup for ErlangVM
- In Sapporo City, Hokkaido
- On every thursday
- Since 2014-02-12
- Next 161th

About Me

An elixir-lang contributor

```
/Users/niku/src/elixir-head% git log --author=niku  
commit a4028e73604807b9e13a5404a98e9f51d2a1eb0d  
Author: niku <niku@niku.name>  
Date: Mon Dec 12 17:27:28 2016 +0900
```

Make the example a valid mix project (#5555)

```
commit 5b9b186d4b6f78f83211821bb4453897be14c13b  
Author: niku <niku@niku.name>  
Date: Sun Aug 3 22:58:55 2014 +0900
```

Improve IEx docs about .iex.exs

```
commit e68f617e2add9772082b09c4e35cc03c2cc5bd04  
Author: niku <niku@niku.name>  
Date: Tue Jul 29 23:46:52 2014 +0900
```

Remove duplicate test

Elixir

I ♥ Elixir and ErlangVM.

A hard thing

In many cases, Official SDK for ErlangVM haven't been provided (yet).

SDKs

Simplify using AWS services in your applications with an API tailored to your programming language or platform.

Android

[Install](#) -
[Documentation](#) -
[Learn more](#) -

Browser

[Install](#) -
[Documentation](#) -
[Learn more](#) -

iOS

[Install](#) -
[Documentation](#) -
[Learn more](#) -

Java

[Install](#) -
[Documentation](#) -
[Learn more](#) -

.NET

[Install](#) -
[Documentation](#) -
[Learn more](#) -

Node.js

[Install](#) -
[Documentation](#) -
[Learn more](#) -

PHP

[Install](#) -
[Documentation](#) -
[Learn more](#) -

Python

[Install](#) -
[Documentation](#) -
[Learn more](#) -

Ruby

[Install](#) -
[Documentation](#) -
[Learn more](#) -

Go

[Install](#) -
[Documentation](#) -
[Learn more](#) -

C++

[Install](#) -
[Documentation](#) -
[Learn more](#) -

AWS Mobile SDK

[Install](#) -
[Documentation](#) -

Should I make a elixir client to each service?

(↶ ∅ ~ ∅) ↷ ⌊ — — — ⌋

OpenAPI(Swagger)

<https://github.com/OAI/OpenAPI-Specification>

language-agnostic interface to REST APIs which allows both humans and computers to discover and understand the capabilities of the service

OpenAPI definition example

write in yaml or json

```
swagger: '2.0'
info:
  version: 0.1.0
  title: Simple API
paths:
  /:
    get:
      responses:
        200:
          description: OK
```

OpenAPI definition example

Simple API

Version 0.1.0

Paths

/



GET /

Responses

Code	Description
200	OK

Try this operation

Generate from OpenAPI definition

<https://github.com/swagger-api/swagger-codegen#template-creator>

Template Creator

Here is a list of template creators:

- API Clients:
 - Akka-Scala: @cchafer
 - Bash: @bkryza
 - C++ REST: @Danielku15
 - C# (.NET 2.0): @who
 - Clojure: @xhh
 - Dart: @vissachar
 - Elixir: @niku

OpenAPI online editor

<http://editor.swagger.io/>

The screenshot displays the Swagger Petstore OpenAPI editor. The left pane shows the OpenAPI JSON definition, and the right pane shows the rendered API documentation.

```
1 swagger: "2.0"
2 info:
3   description: |
4     This is a sample server Petstore server.
5
6   [Learn about Swagger](http://swagger.io) or
7   join the IRC channel "#swagger" on irc
8   .freenode.net.
9
10  For this sample, you can use the api key
11  "special-key" to test the authorization
12  filters
13
14  version: "1.0.0"
15  title: Swagger Petstore
16  termsOfService: http://helloverb.com/terms/
17  contact:
18    name: apiteam@swagger.io
19  license:
20    name: Apache 2.0
21    url: http://www.apache.org/licenses/LICENSE-2
22    .0.html
23  host: petstore.swagger.io
24  basePath: /v2
25  schemes:
26    - http
27  paths:
28    /pets:
29      post:
30        tags:
31          - pet
32        summary: Add a new pet to the store
33        description: ""
34        operationId: addPet
35        consumes:
36          - application/json
37          - application/xml
38        produces:
39          - application/json
40          - application/xml
41        parameters:
42          - in: body
43            name: body
44            description: Pet object that needs to
45              be added to the store
```

Swagger Petstore

This is a sample server Petstore server.

Learn about Swagger or join the IRC channel `#swagger` on irc.freenode.net.

For this sample, you can use the api key `special-key` to test the authorization filters

Version 1.0.0

Contact information
apiteam@swagger.io

Terms of service
<http://helloverb.com/terms/>

License
Apache 2.0

Security

api_key (API Key) Authenticate	
Name	api_key
In	header

petstore_auth (OAuth 2.0) Authenticate	
Flow	implicit

OpenAPI online editor

You can download an elixir client generated from OpenAPI definition

Generate Server ▾

Generate Client ▾

Help ▾



Akka Scala



Android



Async Scala



Bash



Clojure

le server Petstore

```
swagger](http://swagger  
channel `#swagger`  
t.
```

you can use the

An elixir client generated from OpenAPI definition

```
/Users/niku/Downloads/elixir-client% tree
.
├── README.md
├── config
│   └── config.exs
├── lib
│   ├── swagger_petstore
│   │   ├── api
│   │   │   ├── pet.ex
│   │   │   ├── store.ex
│   │   │   └── user.ex
│   │   └── model
│   │       ├── apiResponse.ex
│   │       ├── category.ex
│   │       ├── order.ex
│   │       ├── pet.ex
│   │       ├── tag.ex
│   │       └── user.ex
│   ├── mix.exs
│   └── test
│       └── test_helper.exs
└── 6 directories, 13 files
```

Use an elixir client

Add new pet (definition)

Paths

/pet

POST /pet pet

Summary
Add a new pet to the store

Parameters

Name	Located in	Description	Required	Schema
body	body	Pet object that needs to be added to the store	Yes	<pre>⚡ a Pet { A pet for sale in the pet store id: integer category: Pet category { } name: string * photoUrls: [] tags: [] status: string }</pre>

Responses

Code	Description
405	Invalid input

Security

Security Schema	Scopes
petstore_auth	write:pets read:pets

Use an elixir client

Add new pet (code)

named ElixirConfJa2017

```
SwaggerPetstore.Api.Pet.add_pet(%{"name" => "ElixirConfJa2017"})
```

Use an elixir client

```
/Users/niku/Downloads/elixir-client% mix deps.get
(...snip...)
/Users/niku/Downloads/elixir-client% mix run -e \
% 'IO.inspect SwaggerPetstore.Api.Pet.add_pet(%{"name" => "ElixirConfJa2017"})'
%Tesla.Env{body: %{"id" => 9072482292156441678, "name" => "ElixirConfJa2017",
  "photoUrls" => [], "tags" => []},
  headers: %{"access-control-allow-headers" => "Content-Type, api_key, Authorization",
    "access-control-allow-methods" => "GET, POST, DELETE, PUT",
    "access-control-allow-origin" => "*", "connection" => "close",
    "content-type" => "application/json",
    "date" => "Fri, 31 Mar 2017 14:47:18 GMT",
    "server" => "Jetty(9.2.9.v20150224)"}, method: :post, opts: [], query: [],
  status: 200, url: "http://petstore.swagger.io/v2/pet"}
```

Get an pet ID 9072482292156441678

Use elixir client

Get the pet by ID (definition)

/pet/{petId}

GET /pet/{petId} pet

Summary

Find pet by ID

Description

Returns a single pet

Parameters

Name	Located in	Description	Required	Schema
petid	path	ID of pet to return	Yes	integer (int64)

Responses

Code	Description	Schema
200	successful operation	<pre>⚡ Pet { A pet for sale in the pet store id: Integer category: Pet category [] name: string * photoUrls: [] tags: [] status: string }</pre>
400	Invalid ID supplied	
404	Pet not found	

Security

Security Schema	Scopes
api_key	

[Try this operation](#)

Use elixir client

Get the pet by ID (code)

ID 9072482292156441678

```
SwaggerPetstore.Api.Pet.get_pet_by_id(9072482292156441678)
```

Use elixir client

```
/Users/niku/Downloads/elixir-client% mix run -e \
'IO.inspect SwaggerPetstore.Api.Pet.get_pet_by_id(9072482292156441678)'
%Tesla.Env{body: %{"id" => 9072482292156441678, "name" => "ElixirConfJa2017",
  "photoUrls" => [], "tags" => []},
  headers: %{"access-control-allow-headers" => "Content-Type, api_key, Authorization",
  "access-control-allow-methods" => "GET, POST, DELETE, PUT",
  "access-control-allow-origin" => "*", "connection" => "close",
  "content-type" => "application/json",
  "date" => "Fri, 31 Mar 2017 14:53:28 GMT",
  "server" => "Jetty(9.2.9.v20150224)"}, method: :get, opts: [], query: [],
  status: 200, url: "http://petstore.swagger.io/v2/pet/9072482292156441678"}
```

It seems work well.

Brand-new feature (not yet released)

View API Document with using h/1

```
/store/inventory:  
  get:  
    tags:  
      - store  
    summary: Returns pet inventories by status  
    description: Returns a map of status codes to quantities
```

```
iex(1)> h SwaggerPetstore.Api.Store.get_inventory  
  
def get_inventory()  
  
Returns pet inventories by status  
  
Returns a map of status codes to quantities
```

Conclusion

- For web service provider
 - Please provide us SDK of ErlangVM
 - Or else OpenAPI definition
- For elixir user
 - It is **very experimental** now
 - However, please try it
 - Please let me know if it doesn't work well