



DevFest
Nantes

2014



NET/PSYS
ingénierie informatique

SOFTEAM Cadextan

SERLI

IPPON
Digital Technologies Hosting



7 novembre

8h - 18h30

Cité des
Congrès

Nantes Métropole
COMMUNAUTE URBAINE

Google™

intel

Braintree_developers



EPITECH.
L'ÉCOLE DE L'EXPERTISE INFORMATIQUE

MyScript.
The Power of Handwriting

lesjeudis.com
TERRETTES EMPLOI INFORMATIQUE

mozilla
FOUNDATION

ASI
Le service technologique

SNCF



Transformez vos Google Spreadsheets en API Web

Manuel Boillod



@mboillod @restlet

Restlet



Manuel Boillod



Ingénieur R&D chez Restlet

JUG Leader Nantes

 @mboillod
 boillodmanuel



Manuel Boillod



Les données

“Les données sont devenues une ressource, peu différente des matières premières, comme le charbon ou le minerai de fer, et dont l'importance économique dépassera celle du pétrole. “

Le Monde - goo.gl/80pnIq

Google Spreadsheet

- Simple pour tous
- Dispo sur Internet
- Sécurisé
- Collaboratif
- SDK Google

<https://developers.google.com/google-apps/spreadsheets/>

MARIO
002012

WORLDWIDE
0x99 1-1

SDK
ALL DAY



Spreadsheet boy





Formatted JSON Data

```
{\n  \"id\":77182096,\n  \"id_str\":\"77182096\",\n  \"name\":\"Ville de Nantes\",\n  \"screen_name\":\"nantesfr\",\n  \"location\":\"Nantes, France,\n  \"profile_location\":null,\n  \"description\":\"Compte Twitter officiel de la Ville de Nantes. Toute l'actualité nantaise à portée de tweets...\",  
  \"url\":\"http://t.co/oxStI99999\",  
  \"entities\":{\"text\"},\n  \"protected\":false,\n  \"followers_count\":319,\n  \"friends_count\":612,\n  \"listed_count\":552,\n  \"created_at\":Fri Sep 25 10:19:08 +0000 2009,\n  \"favourites_count\":679,\n  \"utc_offset\":3600,\n  \"time_zone\":\"Paris\",\n  \"geo_enabled\":true,\n  \"lang\":\"fr\"}
```

VALID

Écosystème

définition

- json schema
- raml
- swagger
- json-editor

services

- postman
- runscope
- apispark

Json Schema

Formatted JSON Data

VALID

```
{  
    "title": "Example Schema",  
    "type": "object",  
    "properties": {  
        "firstName": {  
            "type": "string"  
        },  
        "lastName": {  
            "type": "string"  
        },  
        "age": {  
            "description": "Age in years",  
            "type": "integer",  
            "minimum": 0  
        }  
    },  
    "required": [  
        "firstName",  
        "lastName"  
    ]  
}
```

Description d'un JSON

Outils

- validator
- ui generation
- documentations

Draft Version 4

Raml

Formatted JSON Data

```
%RAML 0.8
title: World Music API
baseUri: http://example.api.com/{version}
version: v1
traits:
  - paged:
      queryParameters:
        pages:
          description: The number of pages to return
          type: number
  - secured: !include http://raml-example.com/secured.yml
/songs:
  is: [ paged, secured ]
  get:
    queryParameters:
      genre:
        description: filter the songs by genre
  post:
```

```
"id": "532",
"created_at": "Fri Sep 25 10:19:08 +0000 2009",
"favourites_count": 679,
"utc_offset": 3600,
"time_zone": "Paris",
"geo_enabled": true,
```

VALID

Description d'une API

```
/{songId}:
  get:
    responses:
      200:
        body:
          application/json:
            schema: |
              { "$schema": "http://json-schema.org/schema",
                "type": "object",
                "description": "A canonical song",
                "properties": {
                  "title": { "type": "string" },
                  "artist": { "type": "string" }
                },
                "required": [ "title", "artist" ]
              }
          application/xml:
```

Swagger

/pet : Operations about pets

/store : Operations about store

POST /store/order Place an order for a pet

DELETE /store/order/{orderId} Delete purchase order by ID

GET /store/order/{orderId} Find purchase order by ID

Implementation Notes
For valid response try integer IDs with value <= 5. Anything above 5 or nonintegers will generate API errors

Response Class

Model | Model Schema

```
{
  "id": 0,
  "petId": 0,
  "quantity": 0,
  "status": "",
  "shipDate": ""
}
```

Response Content Type application/json

Parameters

Parameter	Value	Description	Parameter Type	Data Type
orderId	(required)	ID of pet that needs to be fetched	path	string

Response Messages

HTTP Status Code	Reason	Response Model
400	Invalid ID supplied	
404	Order not found	

Try it out!

Boite à outils

- Swagger-UI
- Sdk Generation
- Annotation Java
- Swagger Editor

JSON Editor

Editor

Below is the editor generated from the JSON Schema.

Person

name

Jeremy Dorn

age

17

favorite color



gender

male

First and Last name

Value must be
at least 18.

Location

city

San Francisco

state

CA

citystate

San Francisco, CA

This is generated automatically
from the previous two fields

Pets

type	name	
dog	Walter	

Génération d'IHM

A partir d'un JSON schema

<http://jeremydorn.com/json-editor/>

Postman

Tests d'API

The screenshot shows the Postman application window. In the top left, there's a preview of "Formatted JSON Data" with some sample user data. The main area displays the "petshop definition" from the "swagger" collection. The URL is set to <http://petstore.swagger.wordnik.com/api/api-docs> and the method is set to GET. Below the URL, there are buttons for Send, Save, Preview, Pre-request script, Tests, Add to collection, and Reset. The status bar shows a 200 OK response with a time of 435 ms. The Body tab is selected, showing the raw Swagger JSON definition:

```
{  
  apiVersion: "1.0.0",  
  swaggerVersion: "1.2",  
  - apis:[  
    - {  
      path: /pet,  
      description: "Operations about pets"  
    }  
  ]  
}
```

Runscope

Radar Tests

[Failures First](#) | [Last Run](#) | [Name](#)

[Create Test](#)

[Run All Tests](#)

Android App

✗ 8 ✓ 4 ⚡ 2 📈 1

[Edit Test](#) [Run Now](#)

LATEST RESULT **✗ Failed – 4 failures**

RAN Just Now via Dashboard

iOS Onboarding

✗ 3 ✓ 6 ⚡ 0 📈 0

[Edit Test](#) [Run Now](#)

LATEST RESULT **✓ Passed**

RAN Just Now via Dashboard

iOS App

✗ 3 ✓ 4 ⚡ 2 📈 0 ⏱ Every 5m

[Edit Test](#) [Run Now](#)

LATEST RESULT **✓ Passed**

RAN 3m ago via Schedule

Stripe Customer Workflow

✗ 2 ✓ 4 ⚡ 1 📈 0

[Edit Test](#) [Run Now](#)

LATEST RESULT **✗ Failed – 2 failures**

RAN 2h ago via Dashboard

Tests d'API

- debug
- test
- monitoring

APISpark

The screenshot shows the APISpark interface for managing APIs. A modal window titled "Deployment..." is open, indicating the status of the deployment process:

- ✓ API compilation (including validation)
- ✓ API packaging
- ✓ API delivery
- ✓ API initialization

In the background, the main dashboard displays an API named "ardoise" (Web API - Full Stack). The "General information" tab is selected, showing the API's URL as <http://ardoise.v2.apispark.net/v1>. Other tabs include "Overview", "Settings", and "Downloads". The "Endpoints" section lists several endpoints such as /users/, /operations/, and /stats/. The "Resources" section shows representations like /users/{userid} and /operations/{operationid}. The "Representations" section is partially visible.

Management d'API

- conception
- hébergement
- versioning
- documentation
- génération sdk
- connecteur
- ...

Restlet Studio

The screenshot shows the Restlet Studio interface with the following sections:

- General information:** RESTLET studio
- Endpoints:** https://mycontactsapi.apispark.net/yeah
- Sections:** All, Default
- Resources:**
 - /contacts/**
 - GET**: Loads a list of Contact
 - POST**: Adds a Contact
 - /contacts/{contactid}**
- Representations:**
 - Contact
 - ContactList

A large code editor window displays the following RAML 0.8 code:

```

1  #RAML 0.8
2  title: "WebAPITutorial"
3  version: "1.0.0"
4  baseUri: "https://mycontactsapi.apispark.net:443yeah"
5  schemas:
6  -
7      "ContactList": {"type": "object", "title": "ContactList"}
8      "Contact": {"type": "object", "title": "Contact", "properties": {"lastName": {"type": "string", "required": true, "title": "lastName"}, "id": {"type": "string", "required": true, "title": "id"}, "age": {"type": "integer", "required": true, "title": "age"}, "firstName": {"type": "string", "required": true, "title": "firstName"}}}
9  securitySchemes:
10 -
11 "/contacts/":
12     displayName: "ContactList"
13     post:
14         description: "Adds a Contact"
15         body:
16             "application/xml":
17                 schema: "Contact"
18             "application/x-yaml":
19                 schema: "Contact"
20             "text/x-yaml":
21                 schema: "Contact"
22             "text/xml":
23                 schema: "Contact"
24             "application/json":
25                 schema: "Contact"
26     get:
27         description: "Loads a list of Contact"
28         queryParameters:

```

At the bottom, there are links for Web API, Swagger, and RAML, along with the Restlet logo.

Design d'API

- conception
- documentation
- génération sdk
- export

<https://raw.githubusercontent.com/boillodmanuel/google-spreadsheets/master/devfest-2014.pdf>

