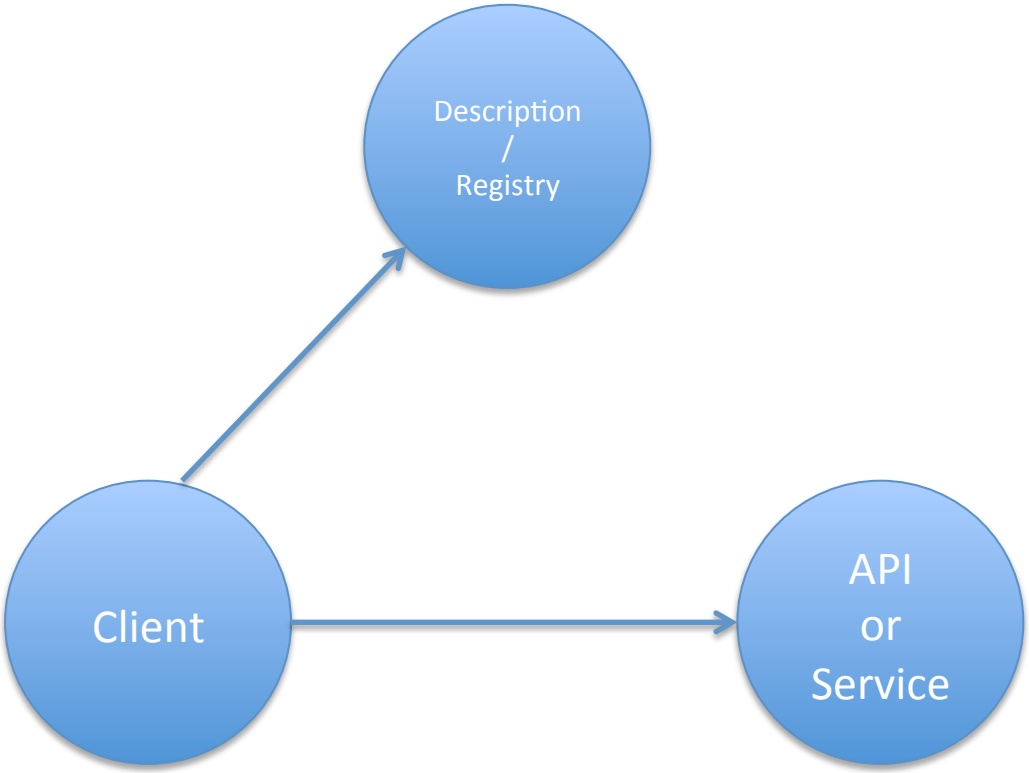
REST description

Oxford University
Software Engineering
Programme
June 2016

SOA contracts



SOAP + WSDL

- Enabled a lot of tooling
- Very powerful
- Built in from day 1
- Not perfect
  - WSDL 1.1 vs 2.0, doc/lit, rpc/lit, rpc/encoded
  - Not always interoperable

REST description

- Do we need it?

2007

Q: Does REST need a description document?

A: No.

Joe Gregorio, REST proponent, bitworking.org

More info

Debate: Does REST Need a Description Language?

by **Arnon Rotem-Gal-Oz** on Jun 06, 2007 | 7 **Discuss**

Share

Following up on the debate of REST vs. WS-* that has yet again, been discussed here last week , it is interesting to note a debate on the topic of contracts for RESTful services that has been picking up pace over the last few days. The question that emerged was whether REST needs contracts (a la WSDLs) and even more fundamentally whether REST with contracts was still REST. It started when Aristotle Pagaltzis asked "Does REST need a service description language": To which Paul Mueller responded Mark Baker followed up, agreeing with Aristotle that

> "The other day, someone posted on rest-discuss to ask whether there was a standard way to describe a REST service. This question resurfaces from time to time (and usually draws a pointer to the WADL effort as a response), which seems to indicate a popular misunderstanding of REST. I think describing a RESTful service with a WSDL-like language is a contradiction in terms..."

https://www.infoq.com/news/2007/06/rest-description-language

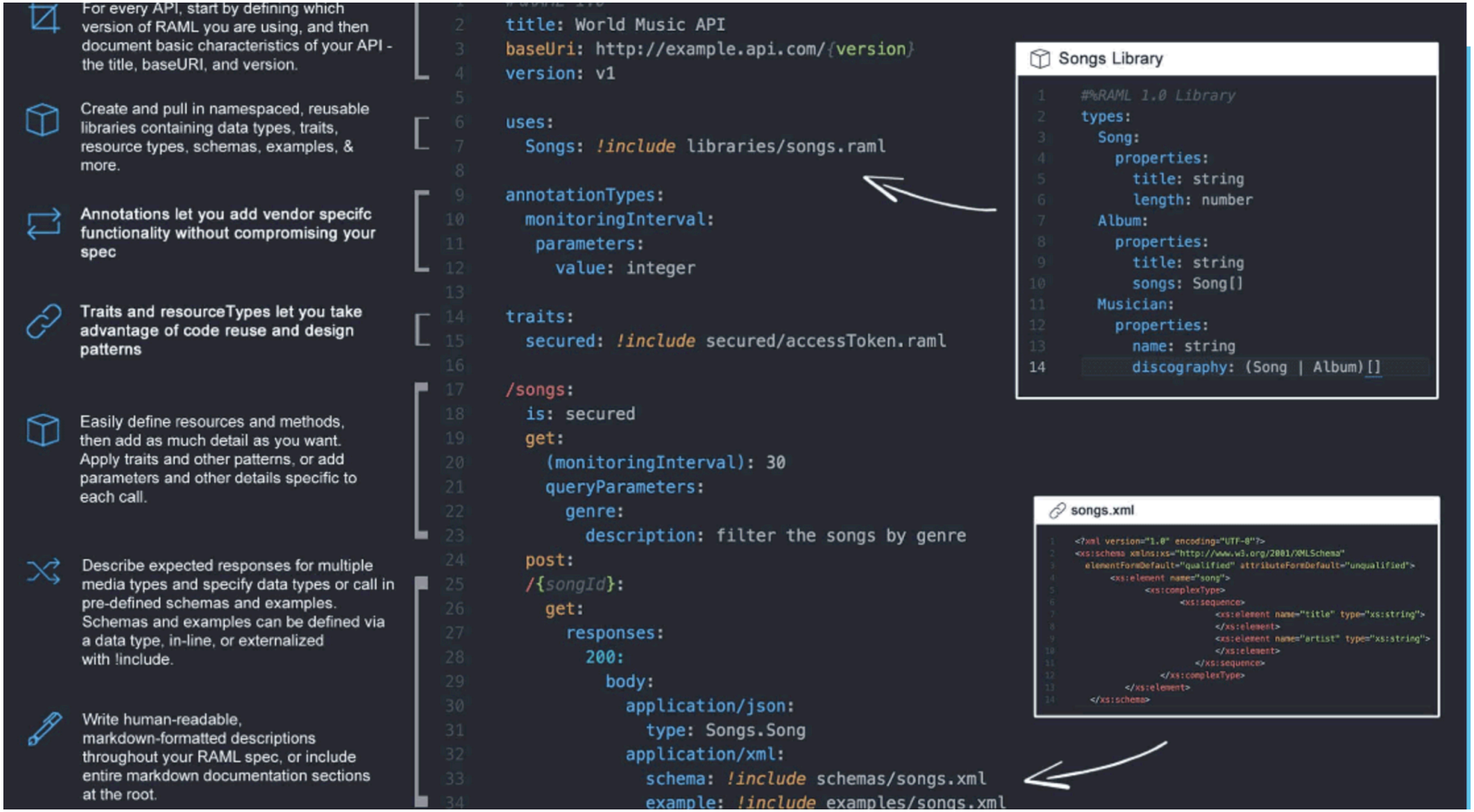
Luckily this is no longer current

- WADL (pretty much dead)
- RAML
  - www.raml.org
- Swagger
  - www.swagger.io
- API Blueprint
  - www.apiblueprint.org

Top down or bottom up

- Just like WSDL, we can use these for design as well as description
- Language neutral way of creating prototype interfaces
- More in the API management section

RAML



RAML

- YAML language
  - Easy
- Industry support
  - Basically a Mule project, with some supporters
- API console, tooling, etc
  - All good

Swagger

SWAGGER TOOLS & RESOURCES

TOOLS

SWAGGER UI

Use a Swagger specification to drive your API documentation. **Demo** and **Download**.

SWAGGER EDITOR

An editor for designing Swagger specifications from scratch, using a simple YAML structure. **Demo** and **Source**.

SDK GENERATORS

Turn an API spec into client SDKs or server-side code with **Swagger Codegen**.

RESOURCES

SERVER INTEGRATIONS

Dozens of integration options for putting Swagger in your API, from both SmartBear and the community. Pick your language, framework and **get started!**.

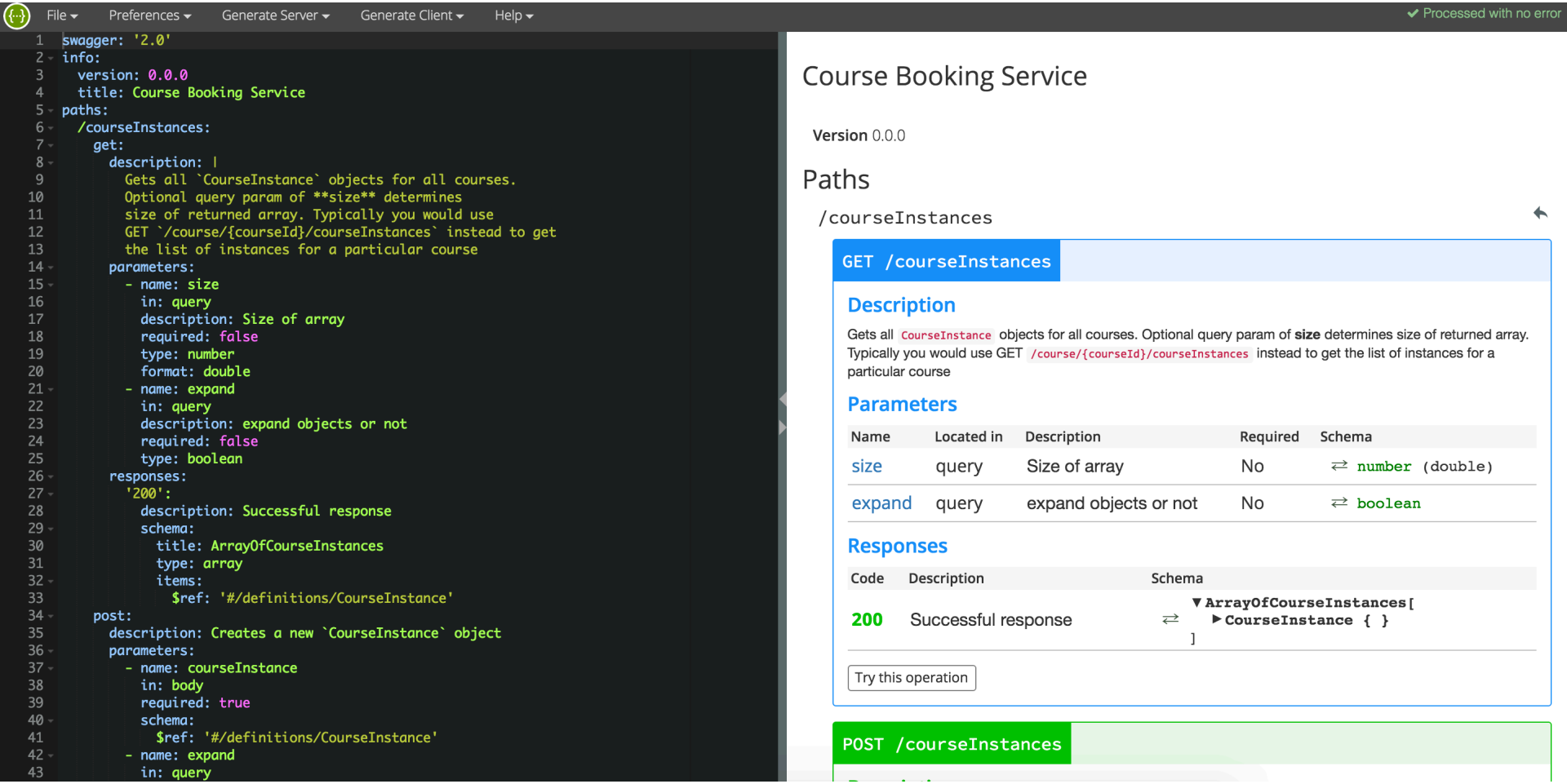
SERVICES

From API management to Platform as a Service, there are a number of services tightly integrated with Swagger. **See more**.

Swagger

- JSON format is the standard
- Now supports YAML too
- Donated to the Open API Initiative
  - Previously created by Wordnik and owned by SmartBear
- Much wider industry support
- Nice editor for design first
- *Admission: this is the choice of WSO2*

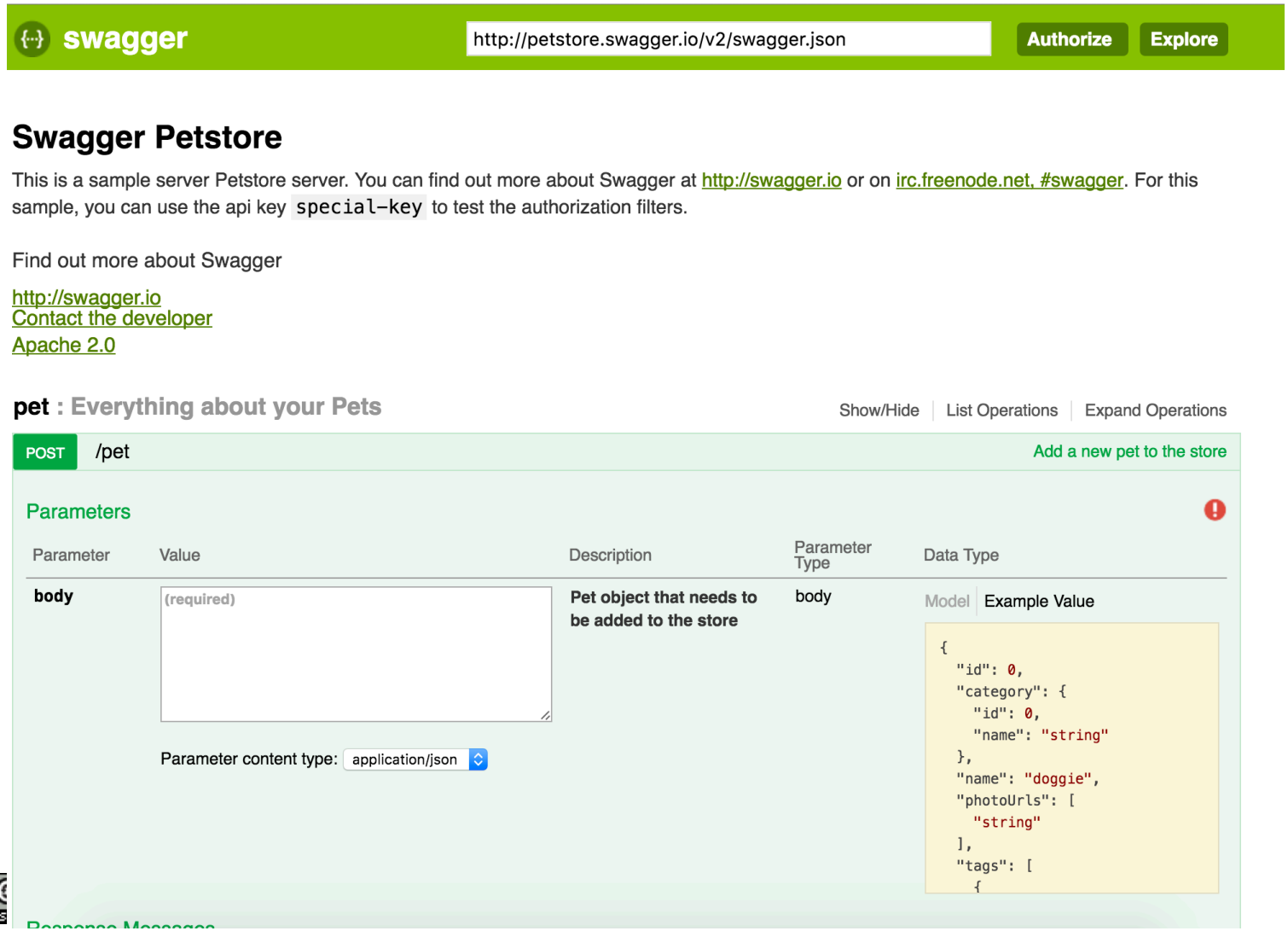
Swagger Editor



Editor features

- YAML based
- Allows you to dynamically design APIs / RESTful services
- Creates skeleton projects in many languages
  - including Node and JAX-RS
- Creates clients in many languages
  - Too many to list
- Import/export JSON

Swagger UI


swagger
http://petstore.swagger.io/v2/swagger.json
Authorize
Explore
Swagger Petstore
This is a sample server Petstore server. You can find out more about Swagger at http://swagger.io or on irc.freenode.net, #swagger. For this sample, you can use the api key special-key to test the authorization filters.
Find out more about Swagger
http://swagger.io
Contact the developer
Apache 2.0
pet : Everything about your Pets
Show/Hide
List Operations
Expand Operations
POST
/pet
Add a new pet to the store
Parameters
Parameter
Value
Description
Parameter Type
Data Type
body
(required)
Pet object that needs to be added to the store
body
Model
Example Value
{
"id": 0,
"category": {
"id": 0,
"name": "string"
},
"name": "doggie",
"photoUrls": [
"string"
],
"tags": [
{
Parameter content type:
application/json

Questions?