OpenAPIs are everywhere

EclipseCon 2018 - Jérémie Bresson - 2018-10-23
OpenAPI
Swagger vs OpenAPI: it is the same!
Jérémie Bresson

Java developer

@j2r2b

jmini

Open-source contributor
Conversational Banking made real

Switzerland | Germany | United Kingdom | Czech Republic | Bulgaria | US
OpenAPIs are everywhere
OpenAPIs are everywhere
OpenAPIs are everywhere
OpenAPIs are everywhere
OpenAPIs are everywhere
Content of an OpenAPI Specification
Content of an OpenAPI Specification

OpenAPI v3

- Info
- Servers
- Security
- Paths
- Tags
- ExternalDocs
- Components

JSON or YAML

Copyright ©2018 unblu inc. Creative Commons BY-SA 4.0
Content of an OpenAPI Specification

```yaml
openapi: 3.0.1
info:
title: A TODO-Task list application
description: A simple application to handle tasks.
version: 1.0.0
license:
  name: Apache-2.0
  url: 'http://www.apache.org/licenses/LICENSE-2.0.html'
servers:
  - url: 'http://localhost:8080/todoapp'
tags:
  - name: task
description: Task management
paths:
  /Task:
    get:
      operationId: getAllTasks
description: Get the list of all tasks
tags:
  - task
responses:
  200:
    description: a list of all tasks
```
Editors for OpenAPI specifications
Eclipse IDE plugin: KaiZen-OpenAPI-Editor

https://github.com/RepreZen/KaiZen-OpenAPI-Editor
Postman client
Postman: import OpenAPI (v2)
Server-side
Support for OpenAPI (Java Server)
Adding OpenAPI to a JAX-RS project

Thorntail
(a.k.a WildFly Swarm)
https://thorntail.io/

https://openliberty.io/
Adding OpenAPI to a JAX-RS project

• Add the additional maven dependency:

```xml
<dependency>
  <groupId>io.thorntail</groupId>
  <artifactId>microprofile-openapi</artifactId>
</dependency>
```

• Add OpenAPI annotations (next to the JAX-RS ones)
Code first approach
Code first approach
Specification first approach
Start with a Specification

Client → Specification → Server
Code generator: OpenAPI-Generator

OpenAPI Specification

OpenAPI Generator

HTML documentation
Client Code
Server Stub

Copyright ©2018 unblu inc. Creative Commons BY-SA 4.0
OpenAPI-Generator

- **Open Source** (Apache 2.0 License)

- Hosted on GitHub: https://github.com/OpenAPITools/openapi-generator

- Java code & mustache templates

- Fork of Swagger-Codegen
OpenAPI-Generator - Usage

Generate a java client for the example application

```
java -jar ./openapi-generator-cli-3.3.1.jar generate
    -i ../OpenAPI-Spec/todoapp.yaml
    -g java
    -o out/
```
OpenAPI: an ecosystem
A lot of tools are available for OpenAPI

- Editors
- Tool to generate documentation
- Breaking change detection
- Integration with existing tools (Postman, …)
- Code generation
  (OpenAPI-Generator, AutoRest, Swagger-Codegen, …)
Thank you for your attention

@j2r2b

jmini

Code Examples: https://github.com/jmini/ece2018-openapi

Evaluate the Sessions

Sign in and vote at eclipsecon.org

-1  0  +1