

Edge Fundamentals

Introduction to OpenAPI Specification

"The Open API Initiative (OAI) is focused on creating, evolving and promoting a vendor neutral API Description Format based on the Swagger Specification"

For more info about OAI, see https://openapis.org

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OpenAPI Specification (OAS)

- An API is an interface between the provider of some backend system(s) who wants to expose a set of services and the
 consumers of those services who want to do something with them
- Many API providers describe their APIs via informal mechanisms for example a markdown document that shows typical requests and the responses. An alternative is to formally specify a "contract" for the interface, which describes all of the requests and responses.
- There have been multiple proposed standards for describing APIs, but the most popular is called <u>OpenAPI Specification</u>
 (The OpenAPI Specification was formerly known as Swagger).
- An OpenAPI Specification uses a standard format to describe a RESTful API. Written in either JSON or YAML format, an OpenAPI Specification is machine readable, but is also easy for humans to read and understand.
- The specification describes such elements of an API as its base path, paths and verbs, headers, query parameters, content types, response descriptions, and more. In addition, an OpenAPI Specification is commonly used to generate API documentation

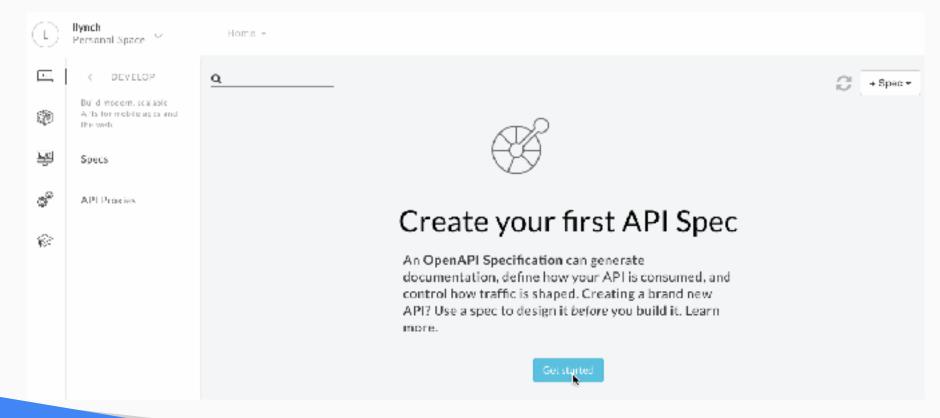
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OpenAPI Specification (OAS)

- An API described via an OpenAPI spec document allows the API provider and the API consumer to agree on how the API behaves.
- Google (and Apigee) are key contributing members of and has partnered with a number of other companies to help drive the OpenAPI spec and contribute open source software to the community.
- This is a partial list of the tools that Apigee has created, open-sourced, or contributed to related to API-first design, OpenAPI spec, or API deployment:
 - <u>a127</u> a toolkit for modeling and building rich, enterprise-class APIs in Node.js on your laptop.
 - <u>Swagger.io editor</u> web-based editor is the basis for the ones used in the above two projects, but it also includes code generators for a number of other languages.
 - <u>apigee2openapi</u> a tool that generates an OpenAPI spec document from an existing API Proxy defined in Apigee Edge.
- There are a number of JSON and YAML example specifications that you can download from the <u>OpenAPI Specification</u> repository.

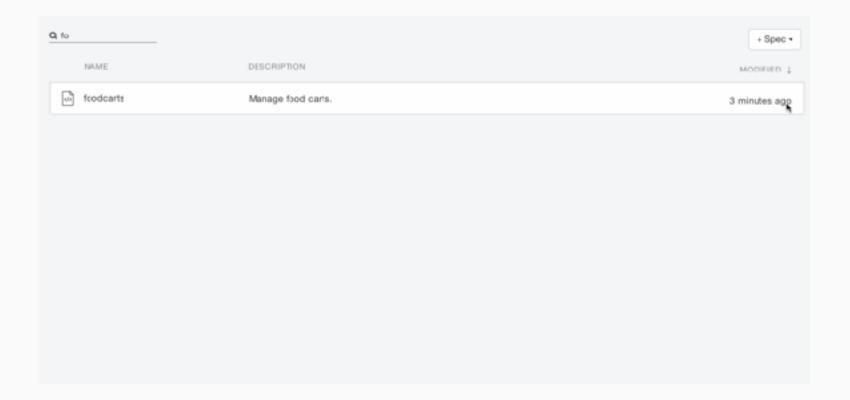
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Edge and OAS



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Additional reading

Open API Initiative

https://www.openapis.org/

OpenAPI Specification

https://github.com/OAI/OpenAPI-Specification/blob/master/versions/2.0.md

OpenAPI Wiki

https://github.com/OAI/OpenAPI-Specification/wiki

Pet store Example

http://petstore.swagger.io/

Lab

Please follow the steps provided here

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THANK YOU