



Tools for Handling Complexity of API Landscapes

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Insight

API Servers

x API Clients

x API Designs

x API Design Versions

x API Server Runtime Environments

x API Client Runtime Environments

= **API Landscape Complexity**



API Landscape Maturity

Proof-of-concept

- API Description document
- API Server Contract testing

This is the very beginning of your API journey

- 1 API Server
- 1 API Client
- 1 API Server Runtime environment

API Landscape Complexity **1**

Proof-of-concept

- API Description document
- API Server Contract Testing
- Environment Configuration

This is the very beginning of your API journey

- 1 API Server
- 1 API Client
- **2** API Server Runtime Environments

API Landscape Complexity **2**

Pilot

- API Description document
- API Server Contract Testing
- Environment Configuration
- Identity Management

First state-of-the-art API live internally

- 1 API Server
- 3 API Clients
- **4** API Server Runtime Environments

API Landscape Complexity **12**

Takeoff

- API Description document
- API Server Contract Testing
- Environment Configuration
- Identity Management
- Mocking
- Component Release Mgmt

API Program internal success

- 1 API Server
- **30** API Clients
- **4** API Server Runtime Environments
- **5** API Designs

API Landscape Complexity **600**

Airborne

- API Description document
- API Server Contract Testing
- Environment Configuration
- Identity Management
- **Programmatic Mocking**
- Release **Automation**
- **API Landscape Virtualization**
- **Programmatic Subscription to API Design lifecycle**

API Program proven and growing

- 1 API Server
- **30** API Clients
- **50** API Server Runtime Environments
- **6** API Client Runtime Environments
- **100** API Designs
- **70** API Design Versions

API Landscape Complexity

63000000

Airborne

- API Description document
- API Server Contract Testing
- Environment Configuration
- Identity Management
- **Programmatic Mocking**
- Release **Automation**
- **API Landscape Virtualization**
- **Programmatic Subscription to API Design lifecycle**

API Program proven and growing

- **50** API Servers
- **3000** API Clients
- **50** API Server Runtime Environments
- **6** API Client Runtime Environments
- **100** API Designs
- **70** API Design Versions

API Landscape Complexity

315000000000

Airborne

- API Description document
- API Server Contract Testing
- Environment Configuration
- Identity Management
- **Programmatic Mocking**
- Release **Automation**
- **API Landscape Virtualization**
- **Programmatic Subscription to API Design lifecycle**

API Program proven and growing

- **50** API Servers
- **3000** API Clients
- **50** API Server Runtime Environments
- **∞** API Client Runtime Environments
- **100** API Designs
- **70** API Design Versions

API Landscape Complexity 

Airborne

- API Description document
- API Server Contract Testing
- Environment Configuration
- Identity Management
- **Programmatic Mocking**
- Release **Automation**
- **API Landscape Virtualization**
- **Programmatic Subscription to API Design lifecycle**

API Program proven and growing

- **50** API Servers
- **3000** API Clients
- ∞ API Server Runtime Environments
- ∞ API Client Runtime Environments
- **100** API Designs
- **70** API Design Versions

API Landscape Complexity ∞





Idea

Avoid distributed monolith.

**Move fast,
break nothing.**

**Know the exact price and risk
of making changes in an API
Landscape.**



—

**Your API Landscape,
totally organized.**

Implementation



—

Do you CI?

Do you even CD?

https://greenkeeper.io

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Break the builds!

C:\>

—

<https://github.com/apiaryio/dredd>

Automatic **API** server contract validation



DREDD

No more outdated API Documentation



node



php



<https://github.com/apiaryio/dredd>

1. node

```
wally:dhl netmilk$ dredd init
```

```
? Location of the API description document openapi.yml
```

```
? Command to start the API server under test npm start
```

```
? Host of the API under test http://127.0.0.1:3000
```

```
? Do you want to use hooks to customize Dredd's behavior? Yes
```

```
? Programming language of the hooks Ruby
```

```
? Do you want to report your tests to the Apiary inspector? No
```

```
? Dredd is best served with Continuous Integration. Do you want to create CI configuration? Yes
```

```
? Which CI do you want to use? (Use arrow keys)
```

```
AppVeyor
```

```
CircleCI
```

```
> Travis CI
```

```
Wercker (Oracle Container Pipelines)
```

<https://github.com/stoplightio/prism>

Automatic API Consumer Contract Validation

📖 README.md

Prism API Server by Stoplight

📈 maintainability **A** 📈 test coverage ?

Current Prism Version: 2.0.17

The perfect OpenAPI Specification (formerly known as Swagger) companion. Turn any OpenAPI Specification document

<https://github.com/apiaryio/gavel.js/>

Automatic **API** traffic contract validation


📖 README.md




🔗 Gavel.js — Validator of HTTP Transactions









<https://github.com/apiaryio/dredd>


Automatic **Style Guide** **Validation**



 [apiaryio](#) / [constitutions](#)







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 Code  Issues 0  Pull requests 0  Insights

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 **marcofriso** Readme orthography corrections. 358a7bf on 21 Jun 2018




[2 contributors](#)  

178 lines (130 sloc) | 5.54 KB  Raw  Blame  History   

<https://github.com/Azure/openapi-diff>


Automatic **Breaking Change** Detection






 Azure / **openapi-diff**




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 **sergey-shandar** Update README.md (#132) 5dccc42 7 days ago

5 contributors     

72 lines (53 sloc) 2.41 KB [Raw](#) [Blame](#) [History](#)   

<https://github.com/semantic-release/semantic-release>

Automatic Component Versioning

📖 README.md



semantic-release

Fully automated version management and package publishing

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<https://greenkeeper.io>

Programmatic **Subscription** to the **API Design Lifecycle**



Greenkeeper
AUTOMATED DEPENDENCY
MANAGEMENT

Get safety & consistency with **real-time monitoring** and **automatic updates**

<https://greenkeeper.io>

Programmatic Subscription to the API Design Lifecycle

An in-range update of github is breaking the build 🚨 #557

 Closed

greenkeeper bot opened this issue on 22 Nov 2017 · 5 comments



greenkeeper bot commented on 22 Nov 2017

Contributor



Version 12.0.4 of [github](#) was just published.

What's outside?

Hic sunt leones.

Reverse documentation of external API Landscape contracts

Enable culture change and support conventions

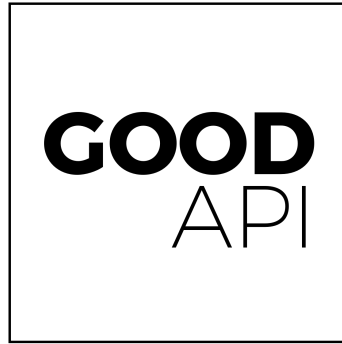
Impact

High velocity delivery of high level user-stories

Radical Agility for the engineering teams

<https://jobs.zalando.com/tech/blog/radical-agility-study-notes/>

Automate everything.



Independent API Consulting

<http://bit.do/goodapi-complexity-tools>

