

A FEW THINGS TO THINK ABOUT BEFORE

ADVISORY

BLINDLY DUMPING REST FOR GRAPHQL



... AND GRAPHQL
FOR ALL?

Arnaud Lauret
@apihandyman

apistylebook.com

Collections Of Resources
For API Designers

DISC 1

C-1073

CC-1073-B)

© 1978

STEREO 33 $\frac{1}{3}$

2

INFORMED CHOICES

RECORDED COPYING, PUBLIC PERFORMANCE, REPRODUCTION, TO THE ORIGINAL RECORDING OR MASTERS ARE PROHIBITED WITHOUT THE WRITTEN PERMISSION OF THE RECORD MANUFACTURER AND OWNER OF THE WORK. MADE BY CANYON RECORDS INC. JAPAN. ALL RIGHTS OF RECORD MANUFACTURER AND OWNER OF THE WORK.

METALLICA
VS

IRON MAIDEN

Feelings



V S



Context

Feelings vs Context

API Style Impacts Whole API Lifecycle

A FEW THINGS TO THINK ABOUT BEFORE

ADVISORY

BLINDLY DUMPING REST FOR GRAPHQL



... AND GRAPHQL
FOR ALL?

DISC 2

C-1073

CC-1073-B)

© 1978

STEREO 33 $\frac{1}{3}$

2

WHAT IS
GRAPHOL?

RECORDED COPYING, PUBLIC PERFORMANCE, BROADCASTING, OR ORIGINAL RECORDING BY ANY MEANS, REGISTERED AND MADE BY CANYON RECORDS INC. JAPAN. ALL RIGHTS OF RECORD MANUFACTURER AND OWNER OF THE WORK

Query Language for Data

WYWIWYG

A close-up photograph of a vinyl record on a turntable. The record is dark with visible grooves. A stylus is in contact with the record, and a tonearm is visible on the right. A blue label is partially visible at the top. The word "Queries" is overlaid in white text in the center.

Queries

Track 1

```
{  
  viewer {  
    name  
    avatarURL  
  }  
}
```

GET /user


```
POST https://api.github.com/graphql
{
  "query": "{ me: viewer { name avatarURL} }"
}
```

```
{
  "data": {
    "viewer": {
      "name": "Arnaud Lauret",
      "avatarURL": "https://avatars0.githubusercontent..."
    }
  }
}
```

```
{  
  me: viewer {  
    fullname: name  
    picture: avatarURL  
  }  
}
```



```
{
  "data": {
    "me": {
      "fullname": "Arnaud Lauret",
      "picture": "https://avatars0.githubus..."
    }
  }
}
```

GET /user

GET /user/repos?sort=created&direction=desc

```
{ me: viewer {  
  fullname: name  
  picture: avatarURL  
  repositories(  
    first: 2,  
    orderBy: {field: CREATED_AT, direction: DESC}) {  
    edges {  
      node {  
        name  
      }  
    }  
  }  
}}
```



```
{ "data": {  
  "me": {  
    "fullname": "Arnaud Lauret",  
    "picture": "https://avatars0.githubusercontent...",  
    "repositories": {  
      "edges": [  
        {"node": { "name": "apistylebook-api" } },  
        {"node": { "name": "restfest-videos-data" }}  
      ]  
    }  
  }  
}
```

```
{  
  me: viewer { name avatarURL }  
  kin: user(login: "kinlane") { name avatarURL }  
  mike: user(login: "mamund") { name avatarURL }  
  graphqlRepos: search(  
    first: 5, query: "graphql", type: REPOSITORY) {  
    edges { node { ... on Repository {  
      name  
      description  
    }}}}  
}
```

A close-up photograph of a vinyl record on a turntable. The record is dark with a blue label at the top. The tonearm and stylus are visible on the right side. The text "Not SQL nor ETL" is overlaid in white on the record's surface.

Not SQL nor ETL

Track 2


```
{
  "data": {
    "me": {
      "myFirstTwoRepos": {
        "edges": [
          {
            "repo": {
              "name": "a-repo"
            }
          }
        ]
      }
    }
  }
}
```



```
{
  "data": {
    "me": {
      "myFirstTwoRepos":
        [
          {"name": "a-repo"}
        ]
    }
  }
}
```



Schema

Track 3

```
{  
  __type(name:"User") {  
    fields {  
      name  
      description  
    }  
  }  
}
```


A user is an individual's account on GitHub that owns repositories and can make new content.

IMPLEMENTS

[Node](#)

[RepositoryOwner](#)

FIELDS

`avatarURL(size: Int): String!`

`bio: String`

`bioHTML: HTML!`

`company: String`

`companyHTML: HTML!`

`contributedRepositories(first: Int, after: String, last: Int, before: String): RepositoryConnection!`

`createdAt: DateTime!`

`databaseId: Int (DEPRECATED)`

`email: String`

A close-up photograph of a vinyl record on a turntable. The record is dark with a blue label at the top. A green tonearm is positioned over the record. The text 'GraphQL ecosystem' is overlaid in white. The background shows a colorful, abstract pattern.

GraphQL ecosystem

Track 4

Consumer Libraries
GraphiQL Explorer
Server Libraries



GraphQL in a nutshell

Track 5

- Data you need
- Less data volume
- Less API calls
- Schema
- Providers and consumers tools

learngraphql.com

developer.github.com/early-access/graphql/

Fascinating but let's keep a cool head

DISC 3

C-1073

CC-1073-B)


© 1978

STEREO 33 $\frac{1}{3}$

2

**RADICALLY
DIFFERENT
OX**

RECORDED COPYING, PUBLIC PERFORMANCE, REPRODUCTION, TO ORIGINAL RECORDING OR IMAGE, TRADE REGISTERED AND MADE BY CANYON RECORDS INC. JAPAN. ALL RIGHTS OF RECORD MANUFACTURER AND OWNER OF THE WORK



Queries Semantic

Track 1

GET /users/{id}

PATCH /users/{id}

DELETE /users/{id}

Consistency & Predictability

Query: Read

Mutation: Write

```
query {  
  user(id: "{id}") {  
    name  
  }  
}
```

```
mutation {  
  deleteUser(id: "{id}")  
  removeUser(id: "{id}")  
  suppressPeople(id: "{id}")  
}
```

Inconsistency & Unpredictability

A close-up photograph of a vinyl record on a turntable. The record is dark with a light blue label at the top. The stylus and tonearm are visible on the right side. The text "Errors Semantic" is overlaid in the center.

Errors Semantic

Track 2

404

=

Shared Semantic
Humans And Machines

```
{  
  user(login: "unknown-user") {  
    name  
  }  
}
```


Could not resolve to a User with the
login of 'unknown-user'

```
{  
  user {  
    name  
  }  
}
```

Field 'user' is missing required
arguments: login

=

Specific Semantic
Humans Only



Focusing on data instead of actions

Track 3

Hypermedia REST
=
Process

GraphQL

=

Data

A close-up photograph of a vinyl record. The record is dark with a blue label at the top. A green marker is placed on the record's surface, pointing to a specific track. The text "Client Caching" is overlaid in white. The background shows a colorful, abstract pattern.

Client Caching

Track 4

REST

=

Standard HTTP protocol caching

GraphQL

=

Custom Client Caching

A close-up photograph of a vinyl record spinning on a turntable. The record is dark with visible grooves. A tonearm is positioned over the record, with a stylus resting on the surface. The turntable's platter is visible, and the background shows a blue and yellow patterned surface. The text "GraphQL DX in a nutshell" is overlaid in white on the record.

GraphQL DX in a nutshell

Track 5

- More flexibility
- Less predictability and consistency
- Less guidance in process
- More Responsibility

Good or Bad?

...it depends!

DISC 4

C-1073

CC-1073-B)

© 1978

STEREO 33 $\frac{1}{3}$

2

ALTOG SO
DIFFERENTO
PX?

RECORDED COPYING, PUBLIC PERFORMANCE, REPRODUCTION, OR ORIGINAL RECORDING BY ANY MEANS, REGISTERED AND MADE BY CANYON RECORDS INC. JAPAN. ALL RIGHTS OF RECORD MANUFACTURER AND OWNER OF THE WORK

“If you suck at providing REST API
You’ll suck at providing GraphQL API”

Arnaud Lauret, @apihandyman


A close-up photograph of a vinyl record on a turntable. The record is dark with visible grooves. A blue sticker is partially visible at the top left. A tonearm with a green and black cartridge is positioned on the right side of the record. The lighting is dramatic, highlighting the texture of the vinyl and the metallic parts of the turntable.

GraphQL will not solve
your API design problems

Track 1

Still a well designed consumer
friendly abstraction

Need stronger governance



GraphQL will not solve
your API documentation
problems

Track 2



A5 Amsus2 B B5
B7 B7/D# C C5
C#5 Cadd9 D D5
D#5 E5 Em F#m
G

Interface Description it not
Documentation



Less data may be more
data and more CPU

Track 3

Bandwidth Usage

Lazy consumers

A close-up, high-angle shot of a vinyl record spinning on a turntable. The record is dark with a light-colored label at the top. The tonearm and stylus are visible on the right side, resting on the record. The turntable has a perforated metal edge. The background is a colorful, abstract pattern. The text "Analytics and Pricing" is overlaid in the center in a white, serif font.

Analytics and Pricing

Track 4

Query used +
Query depth +
Data Volume

Pricing?

API Gateway Impacts?



GraphQL PX in a nutshell

Track 5

Same Challenges As REST

But From A New Perspective

- Design Governance
- Documentation
- Architecture And Infrastructure
- Pricing Model
- API Tooling

ORIGINAL RECORDING BY U.S. MADE REGISTERED AND MADE BY CANYON RECORDS INC. JAPAN. ALL RIGHTS OF RECORD MANUFACTURER AND OWNER OF THE WORK RECORDED COPYING, PUBLIC PERFORMANCE, DISTRIBUTION, TO THE WORK

FINAL DISC

C-1073 (C-1073-B)
© 1978

STEREO 33 1/3 **2**

AND GRAPHOL FOR ALL API GOODBOXES

... And GraphQL for all API toolboxes

REST

VS

GraphQL

IT DEPENDS!!!

Thank you