

GraphQL

No time for REST

What's wrong with REST?

- Not flexible
 - `http://www.example.com/api/v3/stuffs/?showThis=true¬That=true&sortOrder=titleAsc`
- Bandwidth heavy
 - articles count?
- No type information
 - Date?, URL?

GraphQL

- Flexible
- Precise
- Type-safe
- Documentation
- Deprecation

Schema -> Query -> Response

Schema -> Query -> Response

```
type Repository {  
  id: ID!  
  isPrivate: Boolean!  
  name: String!  
  path: URI!  
  labels(first: Int, after: String): LabelConnection  
}
```

```
type LabelConnection {  
  edges: [LabelEdge]  
  nodes: [Label]  
  pageInfo: PageInfo!  
  totalCount: Int!  
}
```

Github: <https://developer.github.com/early-access/graphql/explorer/>

Terminology

"Repository": Object type

"isPrivate": field

"String": Scalar type

"String!": non-nullable

Schema -> **Query** -> Response

```
{
  repository(owner: "davidmuzi", name: "Provenance") {
    path
    id
    isPrivate
  }
}
```

Schema -> Query -> **Response**

```
“repository”: {  
  "path": "/davidmuzi/Provenance",  
  "id": "MDEwO1JlcG9zaXRvcnkxMzU0MjQ3OAA==",  
  "isPrivate": false  
}
```


Browsing a Schema

[Github GraphQL API Explorer | GitHub Developer Guide](#)

Making a Request

```
curl -X "POST" "https://api.github.com/graphql" \
-H "Authorization: Bearer <TOKEN>" \
-H "Content-Type: text/plain; charset=utf-8" \
-d "{\"query\": \"{ viewer { name } }\"}"
```

Aliases

Allows multiple queries of the same type in a single Request

```
{  
  repo1: repository(owner:"davidmuzi", name: "Provenance") { id }  
  repo2: repository(owner:"davidmuzi", name: "DMDiskStation") { id }  
}
```

```
{  
  "data": {  
    "repo1": {  
      "id": "MDEwO1JlcG9zaXRvcnkxMzU0MjQ3OA=="  
    },  
    "repo2": {  
      "id": "MDEwO1JlcG9zaXRvcnkyODYzNzAxMg=="  
    }  
  }  
}
```

Mutations

Create and modify existing data

- 2 parts
 - mutation
 - variables

Mutation

mutation

```
mutation AddComment($input: AddCommentInput!) {  
  addComment(input: $input) {  
    clientMutationId  
  }  
}
```

variables

```
{  
  "input": {  
    "clientMutationId": "asdlkfbao87sdt==",  
    "subjectId": "asdkjfasdf97asd==",  
    "body": "A Comment"  
  }  
}
```

Other Features

- Enums
- Inheritance
- Unions
- Fragments
- Directives



Apollo



iOS (and Android) Client

<http://dev.apolldata.com>

Resources

<https://github.com/davidmuzi/graphql-ios-presentation>

<http://graphql.org/learn/>

<http://dev.apolldata.com/ios/>

<https://developer.github.com/early-access/graphql/explorer/>

Questions?

