GraphQL in Kiwi.com

Tips and tricks

Michal Sänger

Why?

- Easy on-boarding
- Handy tools
- Bright future

Wild Wild rest

Wild Wild REST
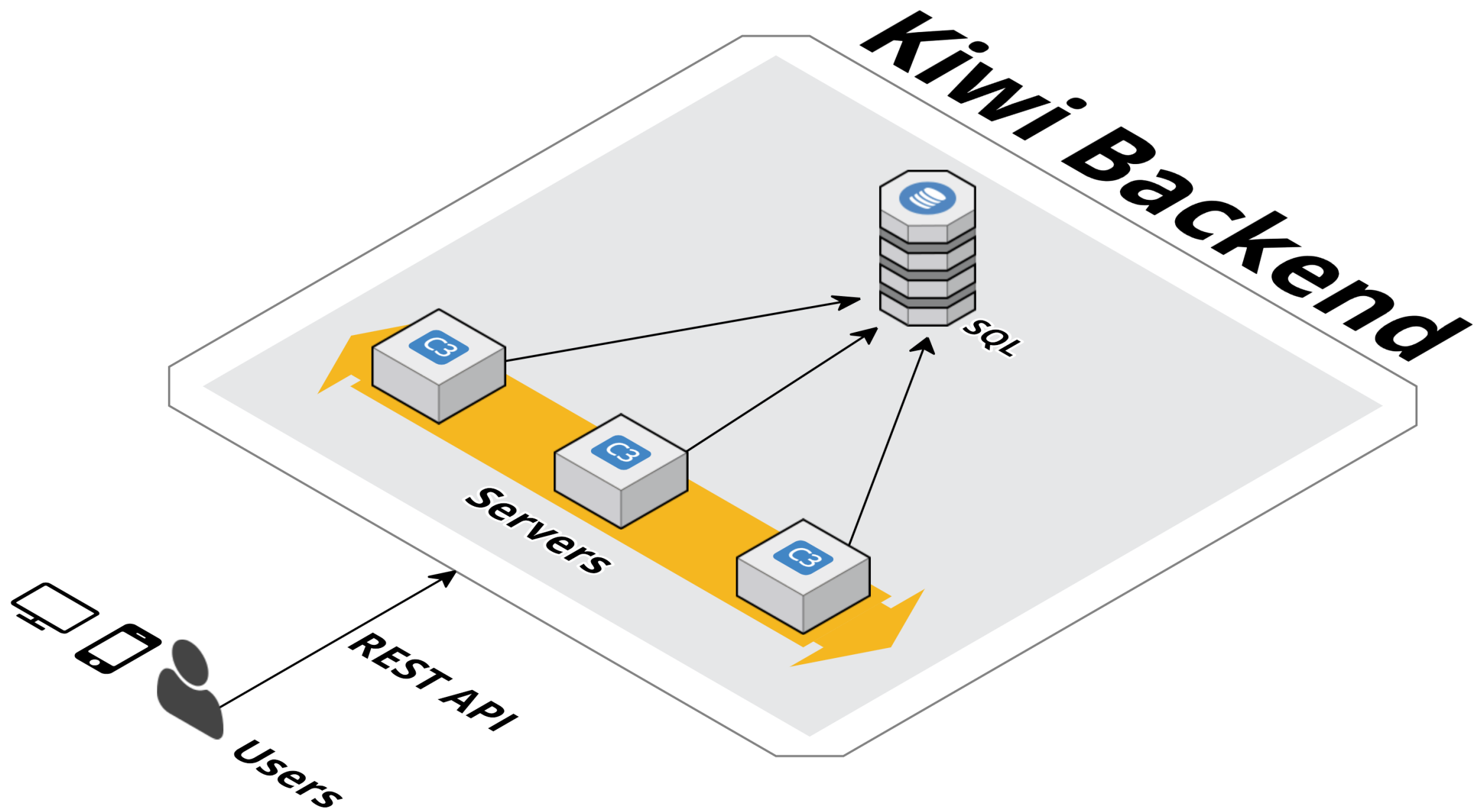
- docs.skypickerpublicapi.apiary.io
- docs.skypickerbookingapi1.apiary.io
- docs.locations10.apiary.io

Wild Wild REST

- **WTF factor > 0**
- **Docs get old**
- **Versioning**
- **Over fetching**

How

- **Proxy REST API**
- **Serverless**

Kiwi Backend

SQL

Servers

REST API

GraphQL

Users
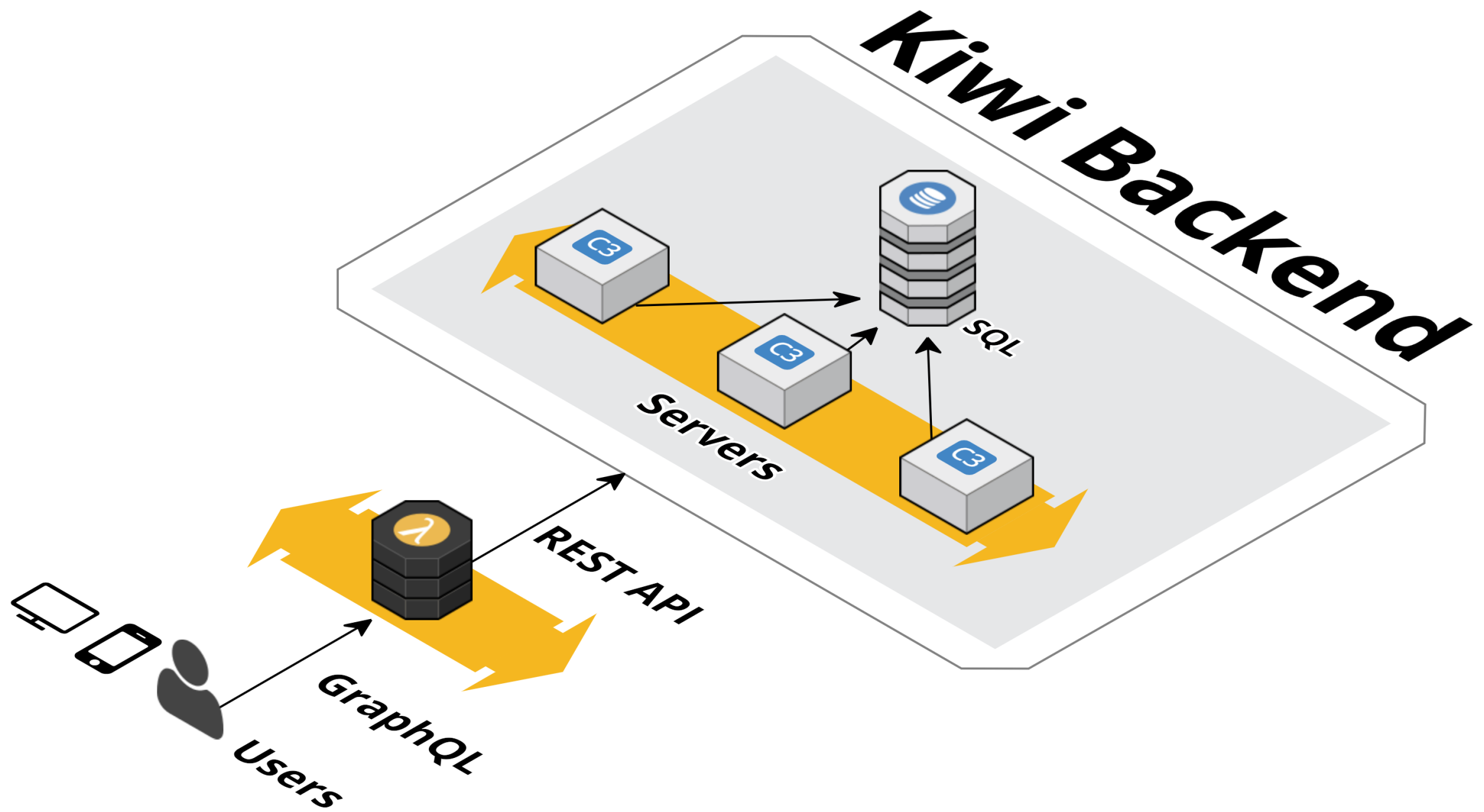
Wish driven development

How

New project? - www.graph.cool

Tools

- Apollo Optics
- GraphQL Voyager
- GraphiQL

GraphQL Voyager

localhost:3002

GRAPHQL
VOYAGER

Type List

Booking 👁
No Description

Coordinates 👁
No Description

Flight 👁
No Description

Leg 👁
Leg is the operation of an aircraft from one scheduled departure station to its next scheduled arrival station.
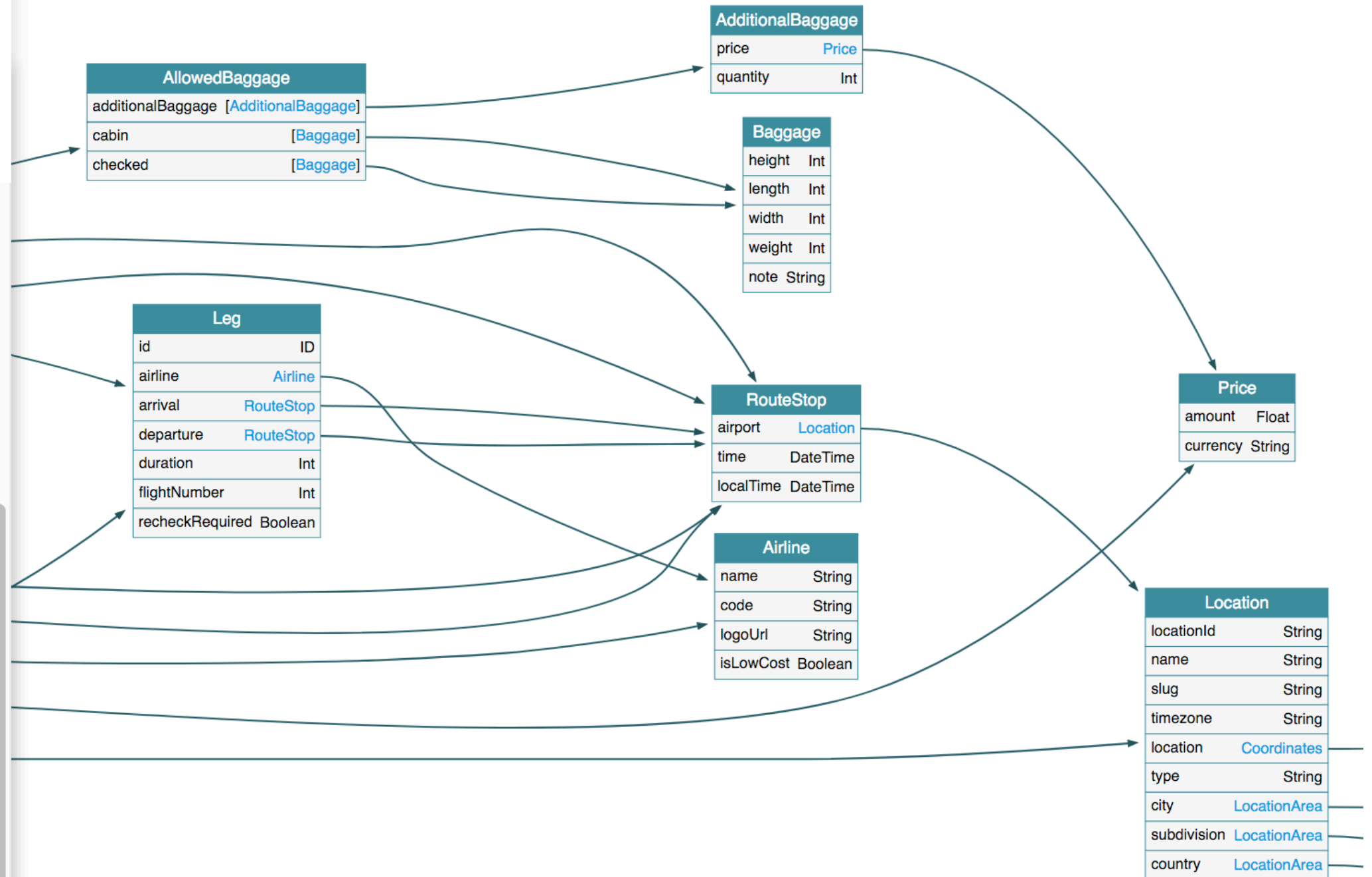
Location 👁
No Description

LocationArea 👁
No Description

Price 👁
No Description

RouteStop 👁
No Description

AdditionalBaggage

price	Price
quantity	Int

AllowedBaggage

additionalBaggage	[AdditionalBaggage]
cabin	[Baggage]
checked	[Baggage]

Baggage

height	Int
length	Int
width	Int
weight	Int
note	String

Leg

id	ID
airline	Airline
arrival	RouteStop
departure	RouteStop
duration	Int
flightNumber	Int
recheckRequired	Boolean

RouteStop

airport	Location
time	DateTime
localTime	DateTime

Airline

name	String
code	String
logoUrl	String
isLowCost	Boolean

Price

amount	Float
currency	String

Location

locationId	String
name	String
slug	String
timezone	String
location	Coordinates
type	String
city	LocationArea
subdivision	LocationArea
country	LocationArea

+

RESET

−

Michal

localhost:3002

GRAPHQL
VOYAGER

< Type List **Flight** 👁

No Description

FIELDS

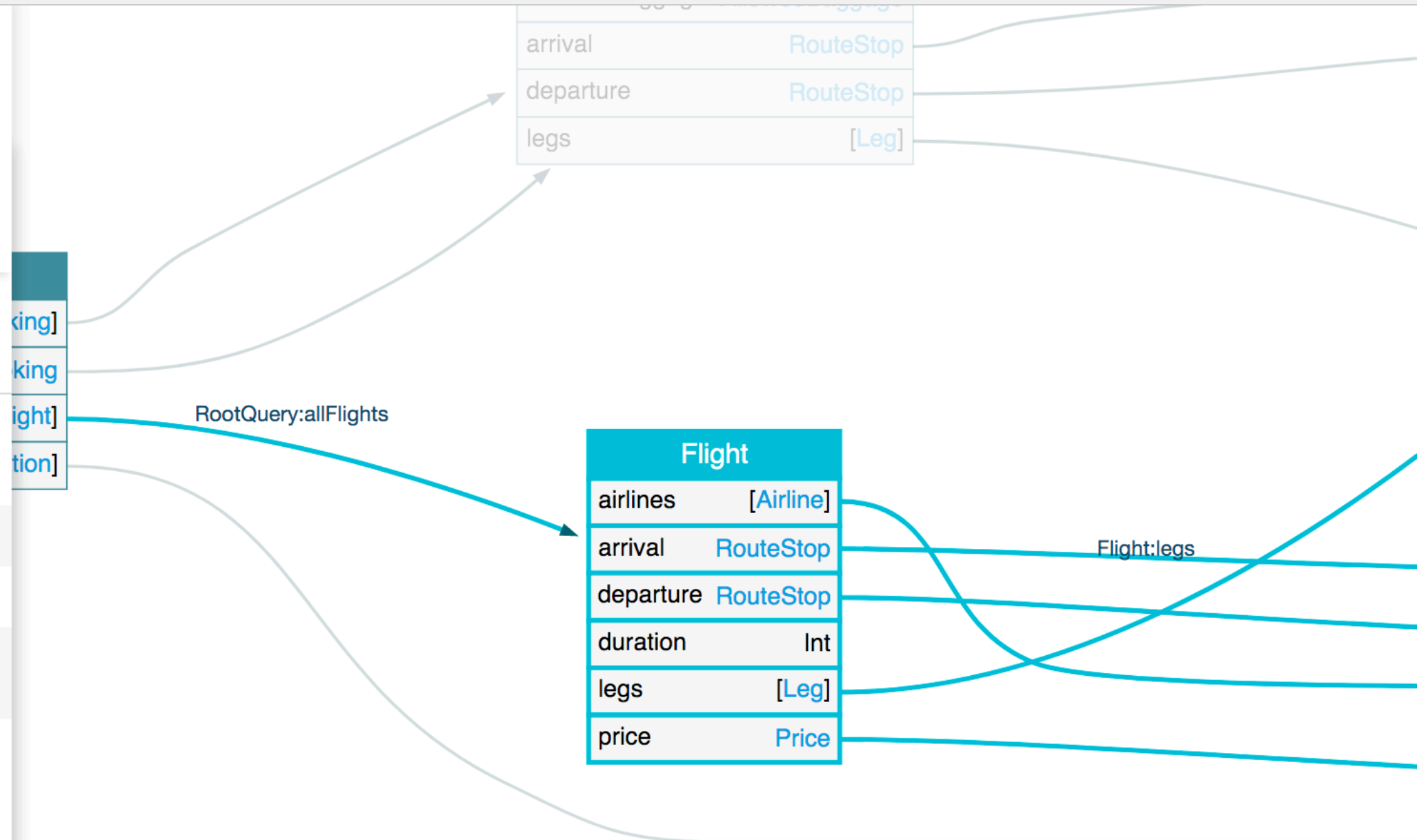airlines: [Airline]
List of all Airlines involved.

arrival: RouteStop

departure: RouteStop

duration: Int
Flight duration in minutes.

legs: [Leg]
Flight segments, e.g. stopover, change of
aircraft, etc.

price: Price
Total flight price.

arrival   RouteStop
departure   RouteStop
legs   [Leg]

king]
king
ight]
tion]

RootQuery:allFlights

Flight

airlines   [Airline]
arrival   RouteStop
departure   RouteStop
duration   Int
legs   [Leg]
price   Price

Flight:legs

➕
RESET
➖

GraphiQL

localhost:3001/?query=%7B%0A%20%20allLocations(radius%3A%20%7B%0A%20%20%20%20l...

```
1  {
2    allLocations(radius: {
3      lat: 40, lng: 5, radius: 500
4    },
5    first: 3) {
6      edges {
7        node {
8          locationId
9          name
10         slug
11         type
12        }
13      }
14    }
15  }
```

```json
{
  "data": {
    "allLocations": {
      "edges": [
        {
          "node": {
            "locationId": "MAH",
            "name": "Menorca",
            "slug": "menorca-minorca-spain",
            "type": "airport"
          }
        },
        {
          "node": {
            "locationId": "minorca_es",
            "name": "Minorca",
            "slug": "minorca-spain",
            "type": "city"
          }
        },
        {
          "node": {
            "locationId": "PMI",
            "name": "Palma de Mallorca",
            "slug": "palma-de-mallorca-palma-spain",
            "type": "airport"
          }
        }
      ]
    }
  }
}
```

QUERY VARIABLES

localhost:3001/?query=%7B%0A%20%20location%0A%7D&operationName=null

KIWI·COM   ▶   Prettify   Voyager   Login

‹ Schema   **RootQuery**   ✕

```
1  {
2    location
3  }
```

```
allLocations
```
LocationConnection Search for airports, cities, countries.

first: Int
before: String
last: Int
): BookingConnection

Search for your flight bookings.

booking(id: ID!): Booking

Flight booking by ID.

allFlights(
    search: FlightsSearchInput!
    options: FlightsOptionsInput
    after: String
    first: Int
    before: String
    last: Int
): FlightConnection

Search for scheduled flights.

allLocations(
    search: String
    radius: RadiusInput
    area: AreaInput
    options: LocationsOptionsInput
    after: String
    first: Int
    before: String
    last: Int
): LocationConnection

Search for airports, cities, countries.

QUERY VARIABLES

Code

- Flow type
- Relay pagination
- Tests, mocked API responses

Dataloader

- Data fetching lib
- Batching
- Caching

Dataloader

```
{
  allBookings(last: 2) {
    edges {
      node {
        id
        allowedBaggage {
          additionalBaggage {
            price {
              amount
              currency
            }
            quantity
          }
        }
      }
    }
  }
}
```

Dataloader

```
{
  allBookings(last: 2) {
    edges {
      node {
        id
        allowedBaggage {
          additionalBaggage {
            price {
              amount
              currency
            }
            quantity
          }
        }
      }
    }
  }
}
```

Dataloader

github.com/facebook/dataloader

Future

- Use on Kiwi.com and Mobile app
- Subscriptions via AWS
- Rate limiting

Thanks

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- Frontend & backend courses ✓
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