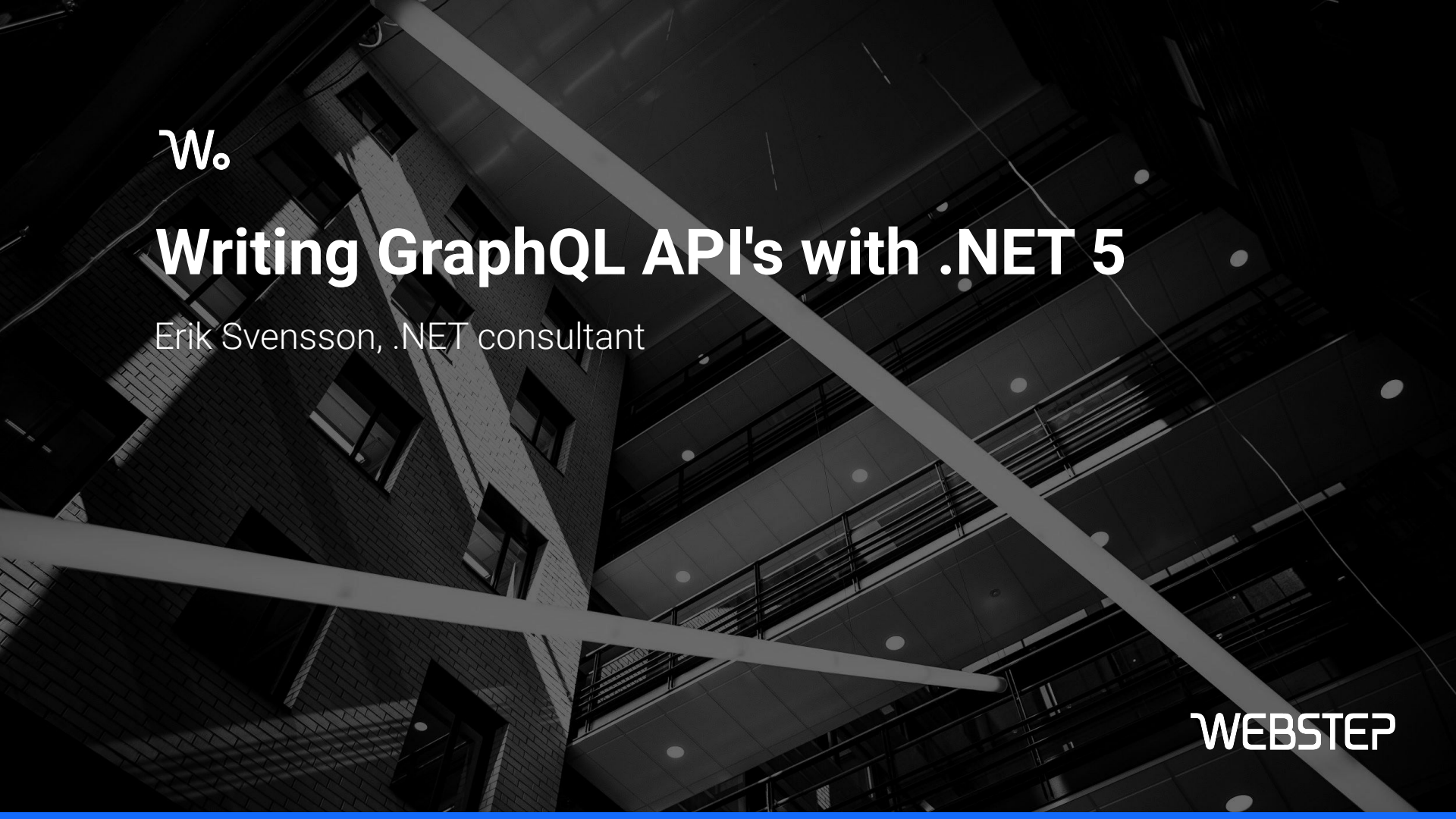


Writing GraphQL API's with .NET 5

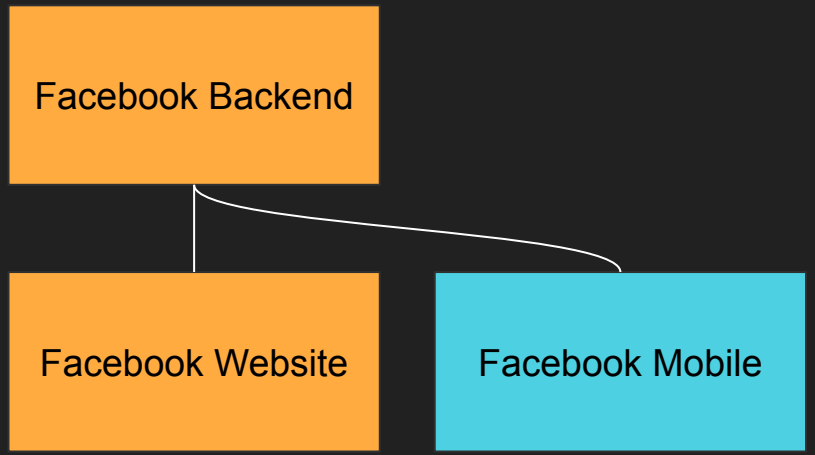
Erik Svensson, .NET consultant

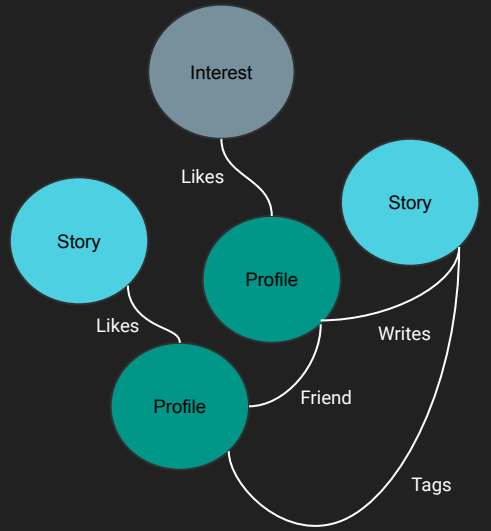
WEBSTEP

Agenda

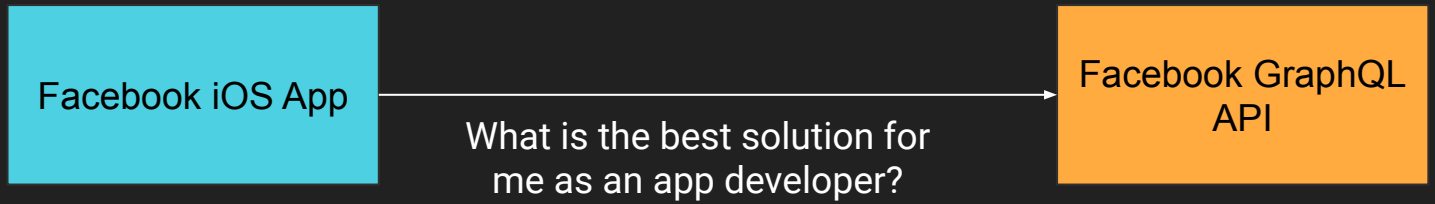
- GraphQL Backstory
- GraphQL vs REST
- GraphQL Syntax
- GraphQL in .NET
- Discussion / Questions

GraphQL Backstory





GraphQL Backstory



GraphQL vs REST

Resource: Customer

Resource: Contact

Resource: Address

```
GET /customers/123

{
    "id": 123,
    "parentCompany": 21,
    "name": "ACME Industries",
    "displayName": "ACME Inc.",
    "prefferedPaymentMethod": "VISA",
    "primaryContactId": 33,
    "addressId": 244
}
```

GraphQL vs REST: Multiple Round Trips

```
GET /customers/123 -> Customer fields
GET /customers/21 -> Parent company fields
GET /contacts/33 -> Contact fields
GET /address/244 -> Address fields
```

Create Custom Endpoint?

```
GET /customerView/123
```

GraphQL vs REST: Overfetching

```
GET /customers/123

{
    "id": 123,
    "parentCompany": 21,
    "name": "ACME Industries",
    "name": "ACME Industries",
    "displayName": "ACME Inc.",
    "prefferedPaymentMethod": "VISA",
    "primaryContactId": 33,
    "addressId": 244
    "phoneNumber": "1 (202) 469 0126",
    "emergencyContactId": 35,
    "theThingThatSomeonePayedFor": 55.06,
    "nameInSpanish": "La ACME Industrias",
```

GraphQL vs REST: Documentation

What do I find here?

GET /ogn-signoffs/23/templates

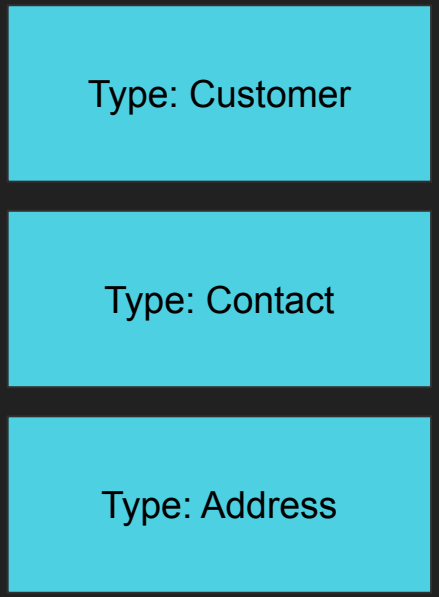
What does this field contain?

"migratedCustomer": 33

What endpoints do we actually expose?

Swagger?

GraphQL Syntax




```
GET /customers/123

VS

getCustomer(id: 123) {
    name
    parentCompany {
        name
    }
    contact {
        name
    }
    address {
        street
    }
}
```

GraphQL Syntax

GraphQL Query

```
{
   getCustomer(id: 34) {
      name
   }
}
```

POST /graphql -application/json

```
{
   "query": "{ getCustomer(id: 34) { name } }"
}
```

Response

```
{
 "data": { ... },
 "errors": [ ... ]
}
```

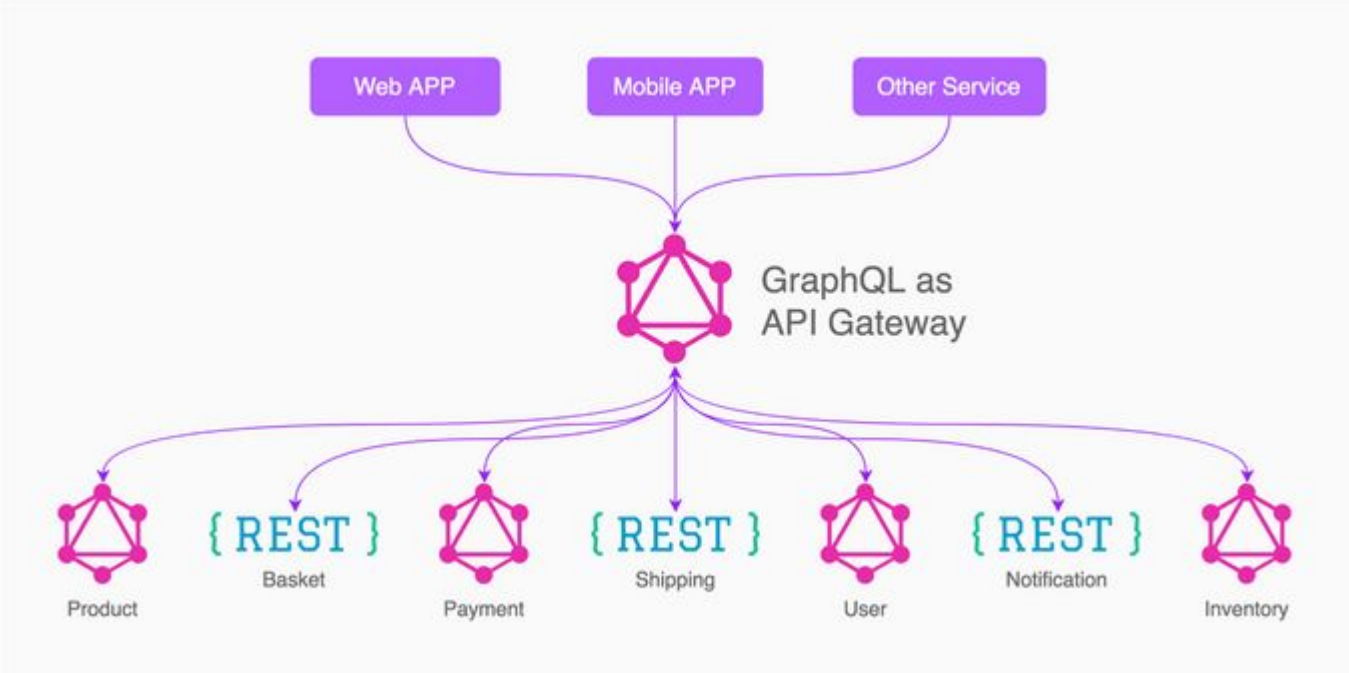
Demo Time

- Using the GraphQL Playground
- .NET 5 implementation
- Queries / Mutations / Subscriptions

https://github.com/svan-jansson/graphql_demo

Discussion

- GraphQL and Microservices / API Gateway / Migration Strategies
- Federal University of Minas Gerais, Brazil
- What is *your* opinion on GraphQL?



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