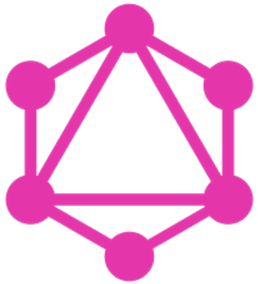


GraphQL mit Prisma 2 & TypeScript

Web Worker Saar Meetup Mai 2020

Sven Hennessen

@svenhennessen

hennessen.net

GraphQL Definition

GraphQL is a **query language for APIs** and a runtime for fulfilling those queries with your existing data. GraphQL provides **a complete and understandable description of the data in your API**, gives clients the power to **ask for exactly what they need and nothing more**, makes it **easier to evolve APIs over time**, and **enables powerful developer tools.**

— https://graphql.org

GraphQL Features

Syntax

- Feldliste
- Interaktiv

Typ-Sicherheit

- Primitive GraphQL Typen: Int, Float, String, Boolean, ID (docs)
- Eigene Typen definierbar
- Lists, (Non-)Null, Enums
- Client und Server validieren Typen

API Dokumentation

- IDE mit Schema & API Dokumentation
- Referenz-Implementierung GraphiQL, verbreitete Variante GraphQL Playground

```
{
  headers {
    title
    items {
      title
      type
      createdAt
    }
  }
}
```

```
{
  "data": {
    "headers": [
      {
        "title": “test-title",
        "items": [
          {
            "title": “test",
            "type": "B",
            "createdAt": “…”
          }
        ]
      }
    ]
  }
}
```

Prisma 2 Definition

Prisma is an **open-source database toolkit.** It replaces traditional **ORMs** and makes database access easy with an **auto-generated query builder** for **TypeScript & Node.js.**

— https://prisma.io

Prisma 2 Historie

Prisma Labs

- Firma in Berlin/San Francisco
- Investoren-Finanziert

Projekte

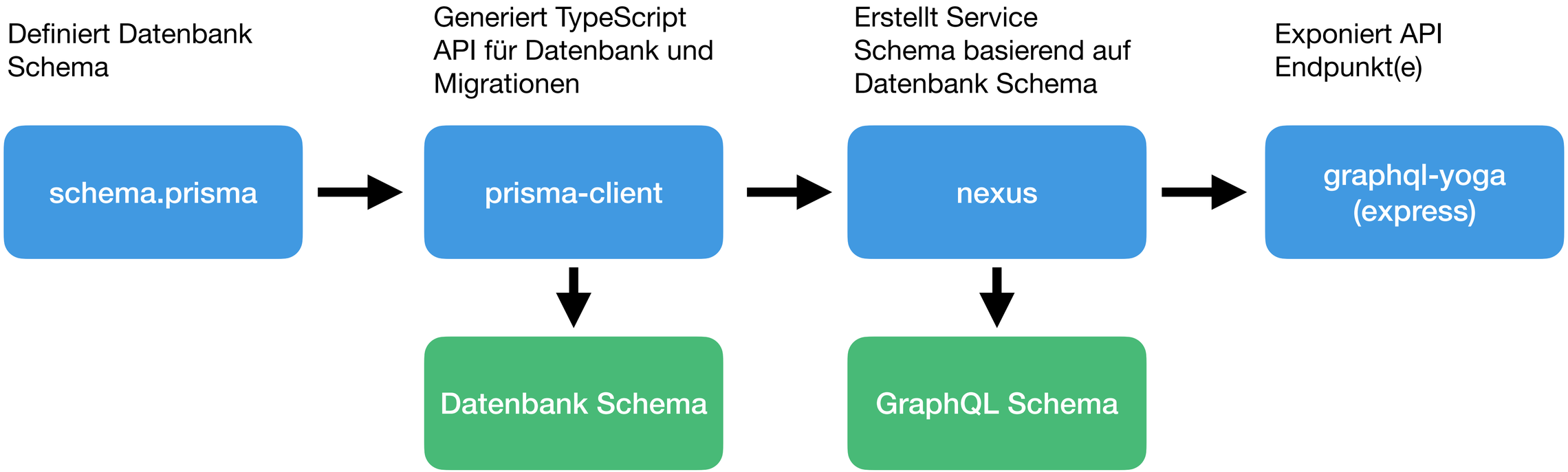
- Vielzahl Projekte rund um Datenbanken
- prisma (1) bis v1.34
  - Scala (JVM)
  - Deployment im eigenen Docker-Container
- prisma (2) (GitHub)
  - **prisma-client** (GitHub) + migrate + studio
  - Re-write in Rust (Query Engine) & TypeScript (Client)
  - Deployment als npx Binary mit dem eigenen Projekt

Verwendung mit GraphQL

- Typ-Definition mit nexus
- Server mit graphql-yoga

Prisma 2 in Beta ⚠️ https://www.isprisma2ready.com/

Prisma 2 Service Architektur

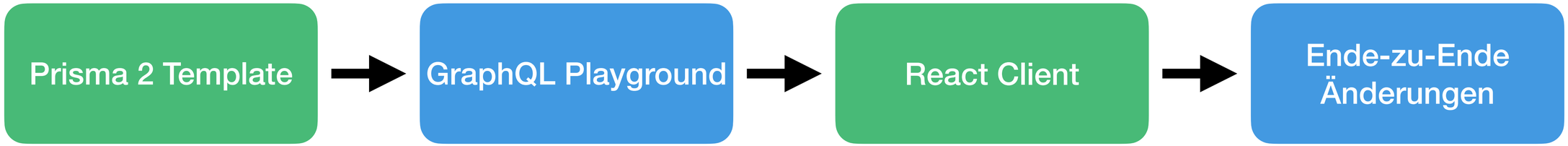


Demo React Client

Basierend auf apollo-client

- Generiert TypeScript auf Basis von verwendeten Queries/Mutations und der Server API
- Bietet React Komponenten und Hooks um API zu konsumieren
  - Apollo React Hooks
  - Apollo React Komponenten

Demo


Prisma 2 Template
GraphQL Playground
React Client
Ende-zu-Ende Änderungen

Kernpunkte

- Weniger fehleranfällig durch Typsicherheit
- Funktioniert besonders gut wenn man Full-Stack entwickelt
- Refactorings werden einfacher
- Schnelles Iterieren als Entwickler mit “echten” Daten
- Gute Testbarkeit durch
  - apollo-client im Frontend und
  - custom resolver im Backend

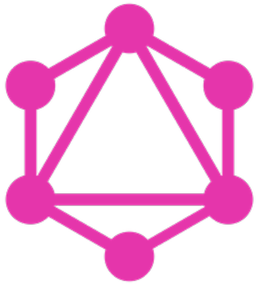
Weitere Themen

- Subscriptions (Web Sockets)
- Schema und Migrations im Produktionsbetrieb
- UI-First Entwicklung
- Introspection
  - API Introspection
  - DB Schema Introspection

Links

- graphql.org
  - Datentypen
- GraphiQL
- GraphQL Playground
- prisma.io
  - GitHub Projekt
  - Prisma Client
- Apollo Client
  - React Hooks
  - React Komponenten
- prisma-2/boilerplate
- Demo-Script
- Permissions mit graphql-shield
- API Introspection und Schema Introspection
- Logos
  - https://commons.wikimedia.org/wiki/File:GraphQL_Logo.svg
  - https://github.com/prisma/presskit
  - github.com/remojansen/logo.ts

Fragen?



Danke!

Sven Hennessen

@svenhennessen

hennessen.net