Conquering Micro-services with GraphQL

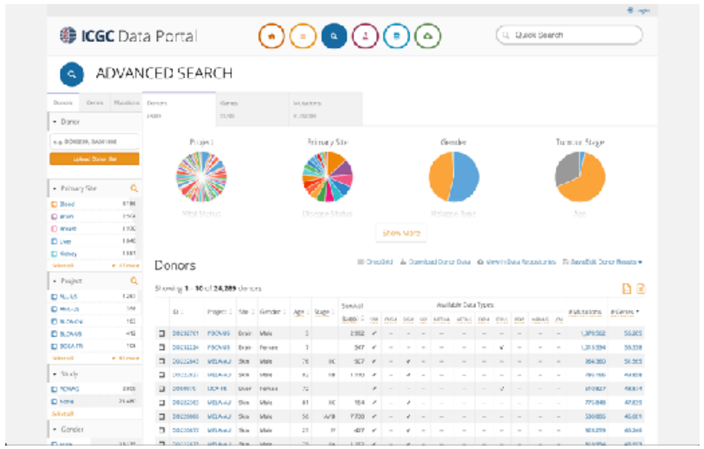
Our plan for Argo

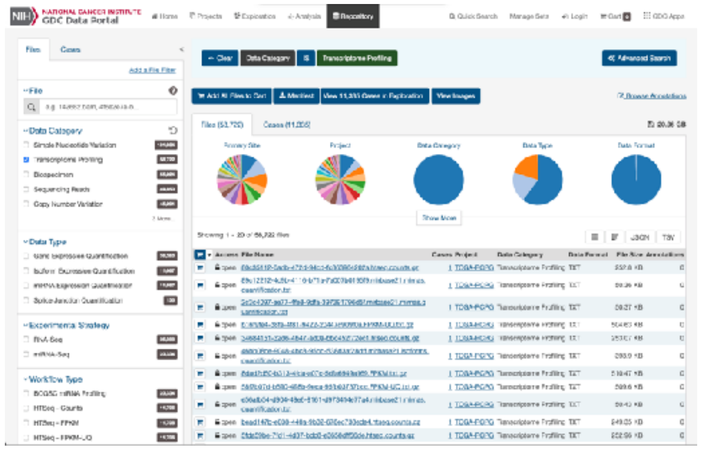
from OICR softeng with ❤️ ☕

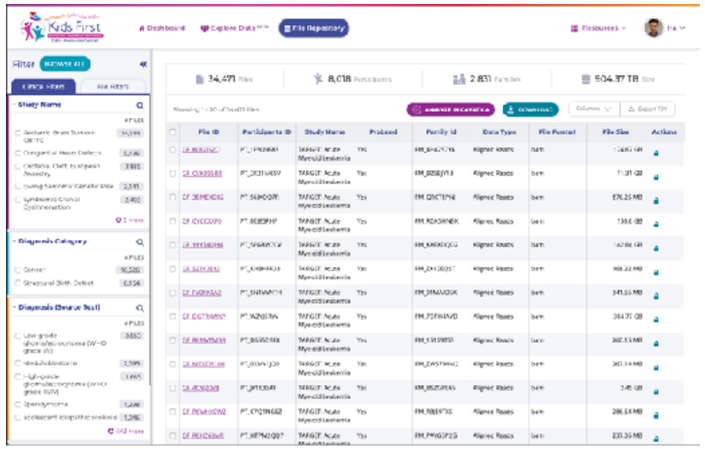
ICGC

NIH NATIONAL CANCER INSTITUTE GDC Data Portal

Gabriella Miller Kids First PEDIATRIC RESEARCH PROGRAM Data Resource Center







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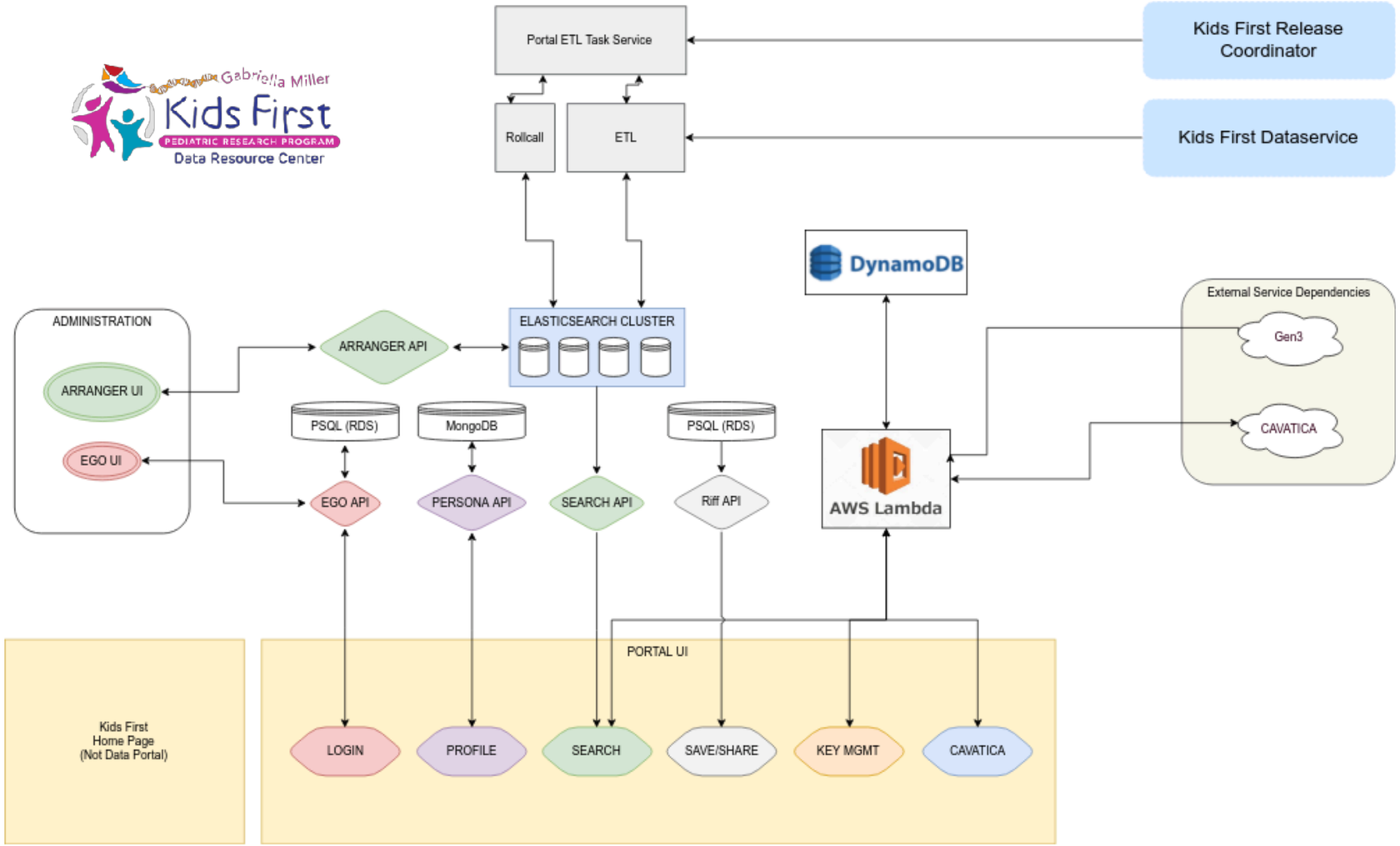
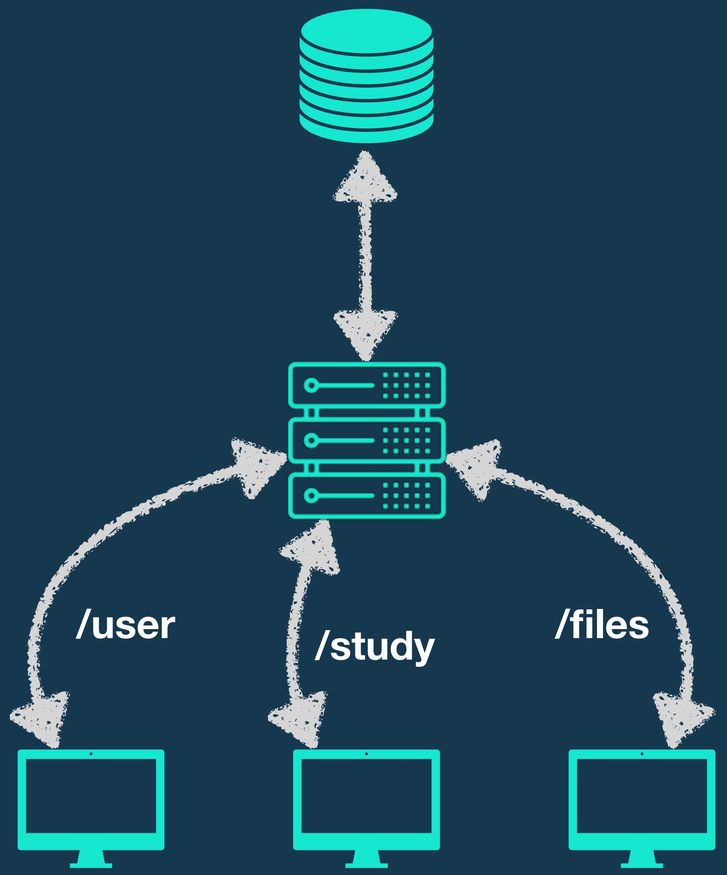
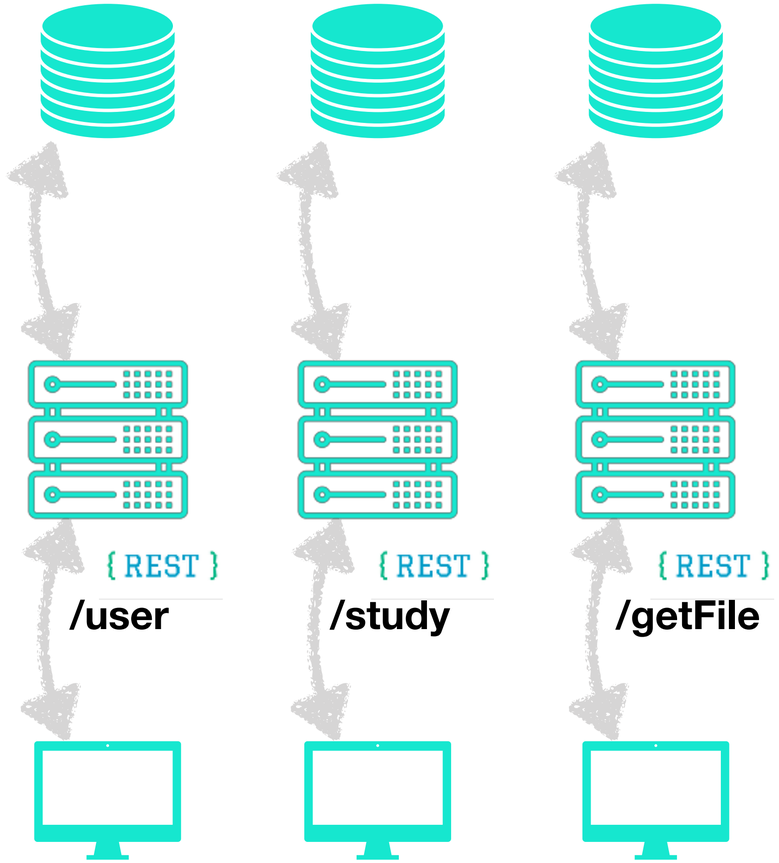
Behind the scene



Monolithic System



Micro-…what?

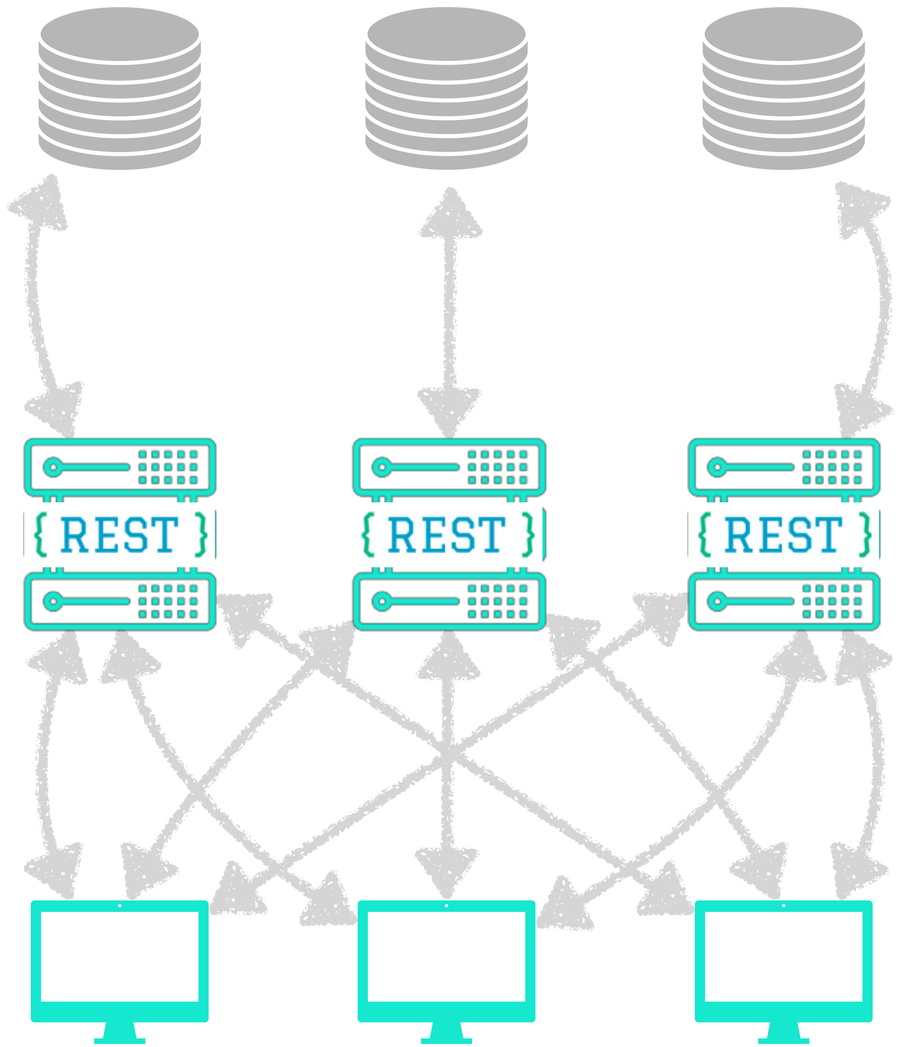


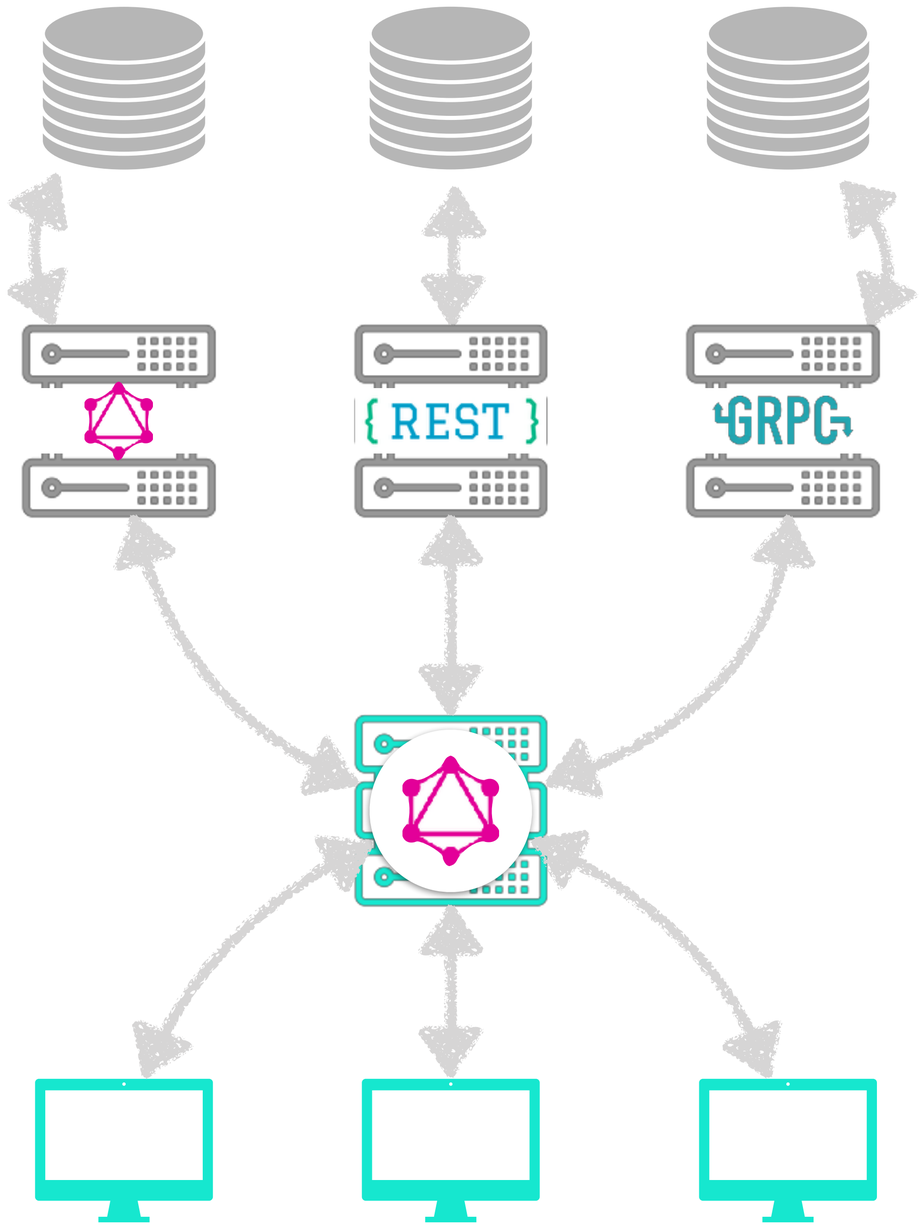
Micro-services System

- Functionally decoupled
- Independently deployable
- Independently scalable

Some challenge

- No place to handle cross-cutting concerns
- Front-end handles heavy business logic
- Inefficiencies with **REST**:
  - Over & under-fetching
  - Lack of API schema -> manual documentation





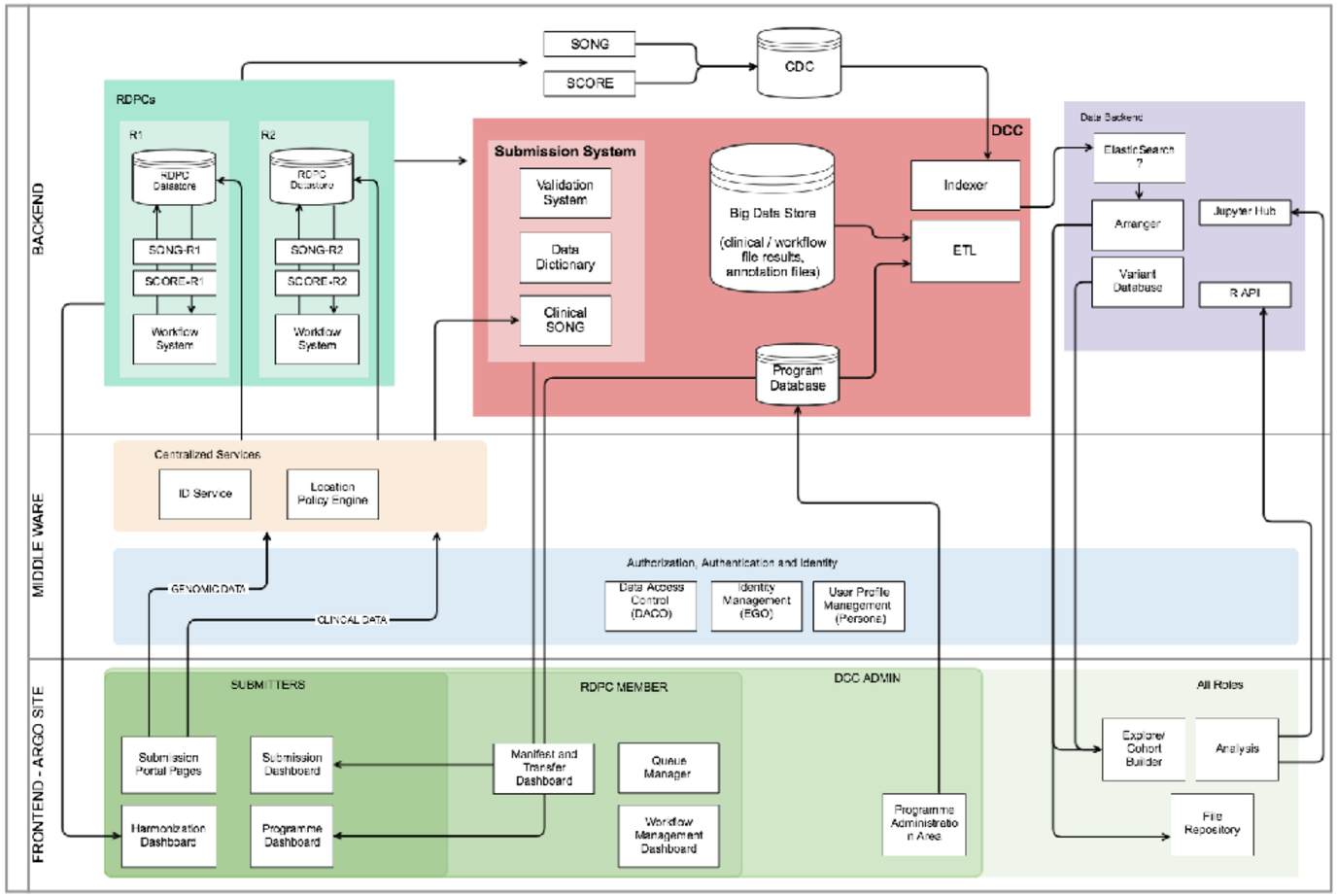
The GraphQL Solution

- An **aggregation layer** to handle cross-cutting concern

- **Why GraphQL?**
  - Explorable schema —> self-documenting

  - Schema Stitching:
    - Modelling underlying services as an independent schemas
    - “Stitch” the schemas together as nodes in a graph
    - Network advantage: batched request

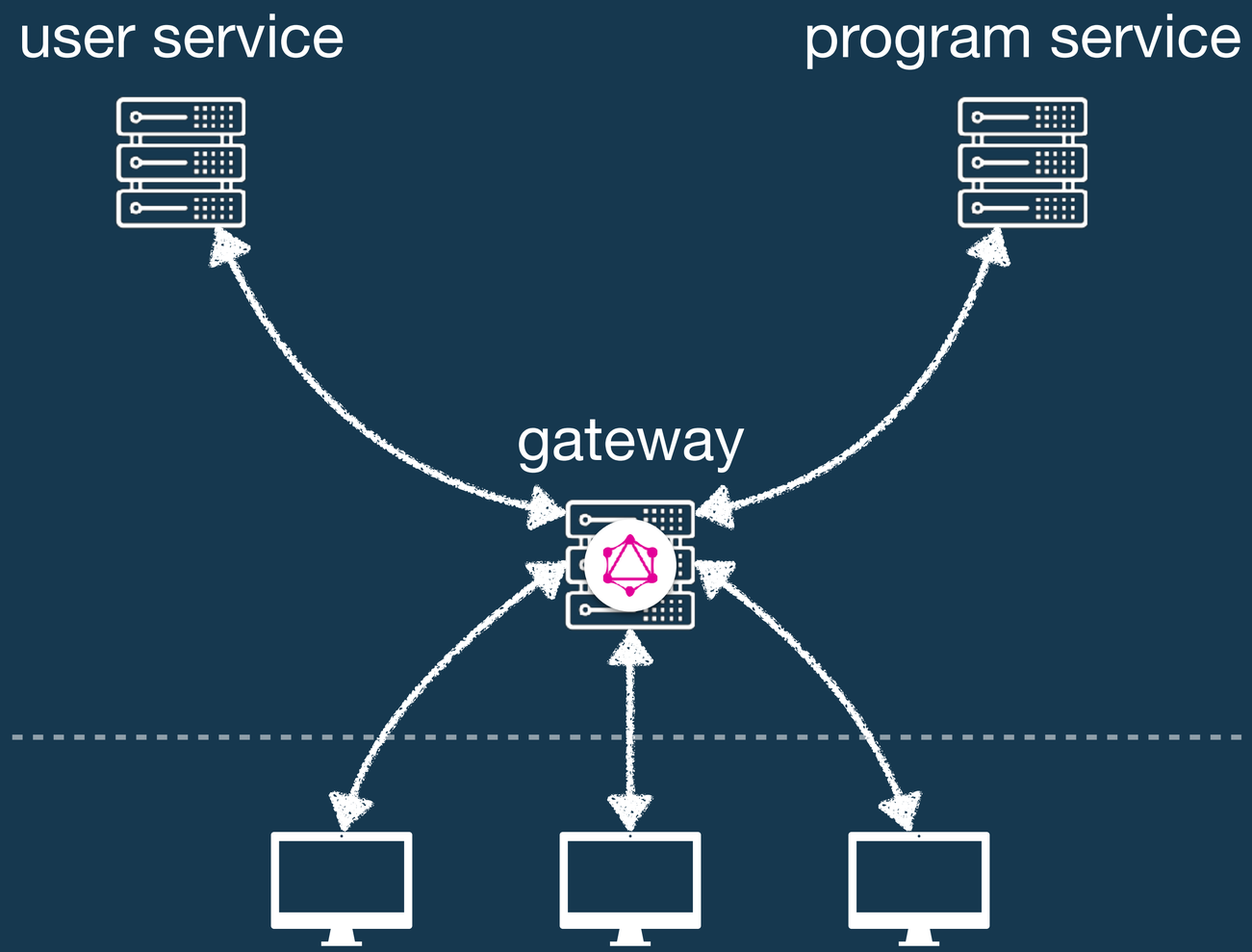
BRACE YOURSELF



ARGO

ARGO IS COMING

demo



The wins

- Explorability:
  - Better developer on-boarding
  - Collaboration with non-technical team members
- Central place for integration test —> higher quality software
- Network performance

thank you