Problem solved by graphql

1. severe over fetching of data.
2. Concatenating multiple requests into one request.

Client makes a request and gets response from the server in the form of json or xml. Client will get the required fields from the response and use it.

Graphql comes from simple idea – instead of defining structure of response on server side, the flexibility is given to the client.

Client can define the response structure in the request. Server will send the response in the structure defined by client with the limited fields requested by client.

Graphql Specification

<https://facebook.github.io/graphql/#sec-Introspection>

Graphiql

<https://github.com/graphql/graphiql>

Inbrowser IDE

**GraphQl With REST**

1.

<https://medium.com/chute-engineering/graphql-in-the-age-of-rest-apis-b10f2bf09bba#.53k1fptk3>

GraphQL is an API

**GraphQL Server**

<https://medium.com/the-graphqlhub/your-first-graphql-server-3c766ab4f0a2#.45jczbxj0>

Our GraphQL server needs to be configured to respond to requests like these — it does this using a *schema*.

Create a node js graphql server

<https://github.com/RisingStack/graphql-server>

GraphQl Serving over http

<http://graphql.org/learn/serving-over-http/>

Create a graphQl Endpoint

<https://www.youtube.com/watch?v=UBGzsb2UkeY>

GraphQl Libraries

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

Java Library

<https://github.com/graphql-java/graphql-java>

By Facebook

<https://github.com/facebook/graphql>

**SBG V4 Framework**

**Introduction**

[**https://wiki.intuit.com/display/iea/Introduction+to+SBG+V4+framework**](https://wiki.intuit.com/display/iea/Introduction+to+SBG+V4+framework)

**QuickStart V4 Service Provider**

[**https://github.intuit.com/SBG/V4-API-Service-Developer-Guide/wiki/Quick-Start-V4-Service-Provider#create-sample-v4-api-service-servlet**](https://github.intuit.com/SBG/V4-API-Service-Developer-Guide/wiki/Quick-Start-V4-Service-Provider#create-sample-v4-api-service-servlet)

**Creating a V4 Service**

[**https://wiki.intuit.com/display/apdsoaservices/Creating+a+V4+service**](https://wiki.intuit.com/display/apdsoaservices/Creating+a+V4+service)

**GraphQL Java class used by v4 to execute queries**

[**http://graphql-java.github.io/graphql-java/javadocs/latest/graphql/GraphQL.html**](http://graphql-java.github.io/graphql-java/javadocs/latest/graphql/GraphQL.html)

**PCG V4**

**Request Service**

[**https://wiki.intuit.com/display/apdsoaservices/Request+Service**](https://wiki.intuit.com/display/apdsoaservices/Request+Service)

Query clone = **new** Query(queryModel); //clone so don't pollute the input query

QueryHelper query = **new** QueryHelper(clone);

**if** (query.isIdQuery()) {

**if**(query.isDefaultIdQuery()) {

context.getInput().setOperation("readDefault");

**return** readEntityDefault(context.getRequestContext(), query);

} **else** {

context.getInput().setOperation("readOne");

**return** readOneEntity(context.getRequestContext(), query.getIdQuery(), query);

}

} **else** **if** (query.isListQuery()) {

context.getInput().setOperation("readList");

**return** readEntityList(context.getRequestContext(), query);

} **else** {

**throw** **new** InteractionException("Non-prepared Query read not supported");

}