GraphQL in Perl

The Story So Far

Ed J (mohawk)

London Perl Workshop 2017

Introduction

- GraphQL: What & Why
- What's now available for Perl 5
- Lessons learned
- Still to do: Return of the Perl 5
- Resources

GraphQL: What & Why

- "Seriously, why?"
- REST: Attack of the Requests
- GraphQL: A New Hope

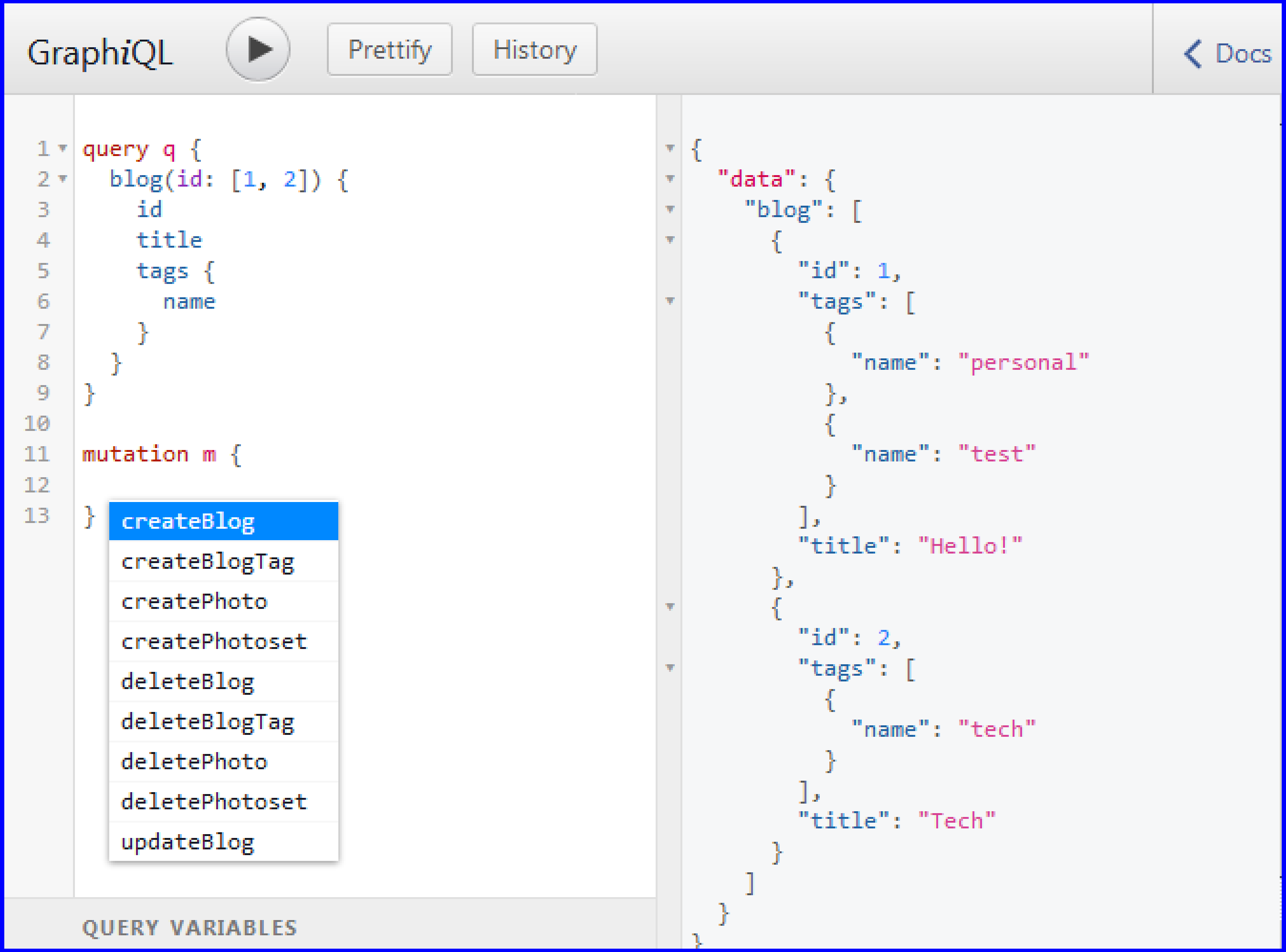
REST: Attack of the Requests

- Pros
  - Simple
  - Consistent(ish)
- Cons
  - Not rigorous (though OpenAPI)
  - Many requests for foreseeable cases

GraphQL: A New Hope

- “Type system with query language attached”
- Save network traffic
- Save time
- Save programming effort on fron-tend

GraphQL: A New Hope



```
query q {
  blog(id: [1, 2]) {
    id
    title
    tags {
      name
    }
  }
}

mutation m {

}
```

```
createBlog
createBlogTag
createPhoto
createPhotoset
deleteBlog
deleteBlogTag
deletePhoto
deletePhotoset
updateBlog
```

```
{
  "data": {
    "blog": [
      {
        "id": 1,
        "tags": [
          {
            "name": "personal"
          },
          {
            "name": "test"
          }
        ],
        "title": "Hello!"
      },
      {
        "id": 2,
        "tags": [
          {
            "name": "tech"
          }
        ],
        "title": "Tech"
      }
    ]
  }
}
```

What's now available for Perl 5

- CPAN Modules
- Sample applets

CPAN Modules

- GraphQL
- SQL::Translator::Producer::GraphQL
- Dancer2::Plugin::GraphQL
- Mojolicious::Plugin::GraphQL
- GraphQL::Plugin::Convert::DBIC
- GraphQL::Plugin::Convert::OpenAPI

CPAN Modules (links)

- https://metacpan.org/pod/GraphQL
- https://metacpan.org/pod/SQL::Translator::Producer::GraphQL
- https://metacpan.org/pod/Dancer2::Plugin::GraphQL
- https://metacpan.org/pod/Mojolicious::Plugin::GraphQL
- https://metacpan.org/pod/GraphQL::Plugin::Convert::DBIC
- https://metacpan.org/pod/GraphQL::Plugin::Convert::OpenAPI

Sample applets

- Mojolicious
- Dancer2
- Tempire's MojoExample for DBIC
- Tutorial

Sample applets: Mojolicious

```
use Mojolicious::Lite;

get '/' => sub {
  my $c = shift;
  $c->render(template => 'index');
};

plugin GraphQL => {
  convert => [ 'Test' ],
  graphiql => 1,
};

app->start;
```

Sample applets: Dancer2

```
use Dancer2;
use Dancer2::Plugin::GraphQL;

set charset    => 'UTF-8';
set template   => 'simple';
set plugins => { 'GraphQL' => { graphiql => 1 } };

get '/' => sub {
    send_as html => template 'index', {
        title => 'Perl-GraphQL demo app',
    };
};

graphql '/graphql' => [ 'Test' ];
```

Sample applets: MojoExample

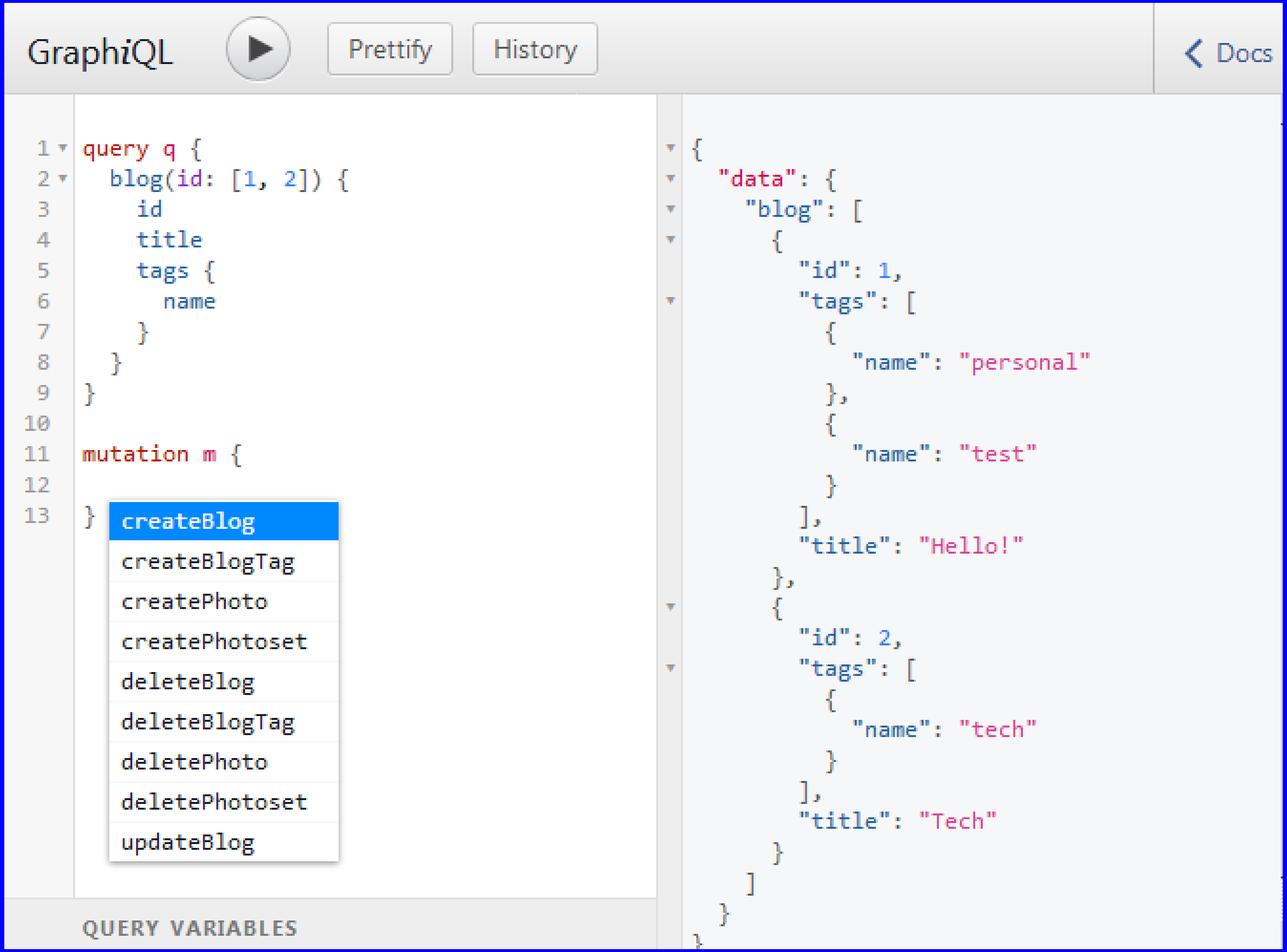
```
use Mojolicious::Lite;

helper db => sub {
  return Schema->connect('dbi:SQLite:' . ($ENV{TEST_DB} ||
'test.db'));
};

plugin GraphQL => {
  convert => [ 'DBIC', sub { app->db } ],
  graphiql => 1,
};

app->start;
```

Sample applets: MojoExample



```
query q {
  blog(id: [1, 2]) {
    id
    title
    tags {
      name
    }
  }
}

mutation m {

}
```

```
createBlog
createBlogTag
createPhoto
createPhotoset
deleteBlog
deleteBlogTag
deletePhoto
deletePhotoset
updateBlog
```

```
{
  "data": {
    "blog": [
      {
        "id": 1,
        "tags": [
          {
            "name": "personal"
          },
          {
            "name": "test"
          }
        ],
        "title": "Hello!"
      },
      {
        "id": 2,
        "tags": [
          {
            "name": "tech"
          }
        ],
        "title": "Tech"
      }
    ]
  }
}
```

Sample applets (links)

- https://github.com/graphql-perl/sample-mojolicious
- https://github.com/graphql-perl/sample-dancer2
- https://github.com/mohawk2/MojoExample
- http://blogs.perl.org/users/ed_j/2017/10/graphql-perl---graphql-js-tutorial-tran

Lessons learned

- Pegex
- Immutable data

Still to do: Return of the Perl 5

- Finish async
- Make DBIC plugin support Relay like JS postgraphql
- Federate GraphQL services (and REST microservices)
- Sample app with React/Relay

Summary

- GraphQL: What & Why
- What's now available for Perl 5
- Lessons learned
- Still to do: Return of the Perl 5
- Resources

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Resources

- https://github.com/graphql-perl
- https://github.com/mohawk2/presentations
- http://blogs.perl.org/users/ed_j/

Questions?