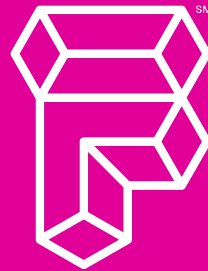


The Evolution of an API: *A Case for GraphQL*

UtahJS 2019 • Kylie Stewart

Hi! I'm Kylie



We're hiring!

What is an API?



Application Programming Interface



History of APIs

"The concept of an API pre-dates even the advent of personal computing, let alone the Web, ... The principal of a well documented set of publicly addressable "entry points" that allow an application to interact with another system has been an essential part of software development since the earliest days of utility data processing."

- Martin Bartlett

Successes and Failures



February 7th, 2000



November 20th, 2000



eBay Developers Program

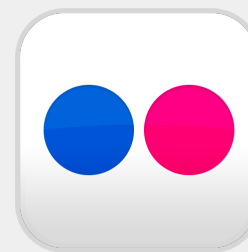
2003

del.icio.us

`http://del.icio.us/tag/[tag name]/`



2004 – 2006



APIs need to...

✓ be scalable

✓ deliver meaningful services

July 2005

ProgrammableWeb

The screenshot shows the ProgrammableWeb website interface. At the top, the logo "Programmableweb" is displayed above the tagline "Web 2.0 APIs Because the world is your programmable oyster". A navigation bar includes links for Home, Blog, The APIs, Examples, Mashups, Reference, Share, and About. The main content area features a Google search bar with a "Web" radio button selected and a "Here" radio button. Below the search bar, there are three main sections: "Add Your Favorites" with a link to "See the list", "What's New?" with the text "Everything.", and a "Web 2.0 Mashup Matrix" which is described as "an experimental view of Web 2.0 mashups." The matrix is a grid showing various services like Amazon, eBay, and Google Maps. At the bottom, there is a "Web 2.0 API Reference" section, described as "a database of Web 2.0 APIs. Organized into a structured format for easy reference." This section includes a table with columns for API and Description.

API	Description
addtoany	Social goal setting
addtofavorites	Online publishing for Radio (overland)
addtoit	Online editor
addtoit	Search services
addtoit	Search
addtoit	Internet-based dating service
addtoit	News aggregator
addtoit	Online information manager
addtoit	Multi-media archive database
addtoit	Shopping services

Representational State Transfer

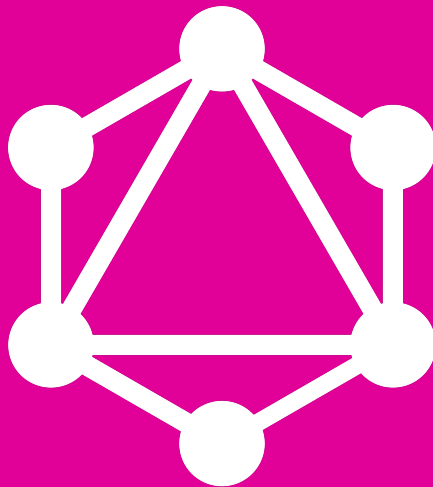
Single Object Access Protocol



And Beyond!

- Amazon s3
- Google Maps
- Foursquare
 - Twilio

Now: *GraphQL*



GraphiQL



Prettify

History

< Docs

```
1 {  
2   alllinks {  
3     url  
4     postedBy {  
5       name  
6       votes {  
7         link {  
8           url  
9         }  
10      }  
11    }  
12  }  
13 }
```

```
{  
  "data": {  
    "allLinks": [  
      {  
        "url": "http://graphql.org/",  
        "postedBy": null  
      },  
      {  
        "url": "https://jwt.io/",  
        "postedBy": {  
          "name": "Test User",  
          "votes": [  
            {  
              "link": {  
                "url": "https://jwt.io/"  
              }  
            }  
          ]  
        }  
      }  
    ]  
  }  
}
```

Important Pros

- The client specifies exactly what it needs
- Easier to aggregate data from variable sources
- Types define your data ★



- @emmabrillhart

Remember REST vs SOAP?

Say hello to
resolvers

Getting Started with GraphQL

`github.com/kale-stew/sample-server`

`github.com/kale-stew/talks`

Thank you!

@kyliestew on Twitter
@kale-stew on Github

