

Salesforce Apex Hours



How to leverage GraphQL to improve Data Gathering in Salesforce

Speakers

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Venue/Link

Bit.ly/ApexHours



#SalesforceApexHours



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GraphQL

 **#SalesforceApexHours**

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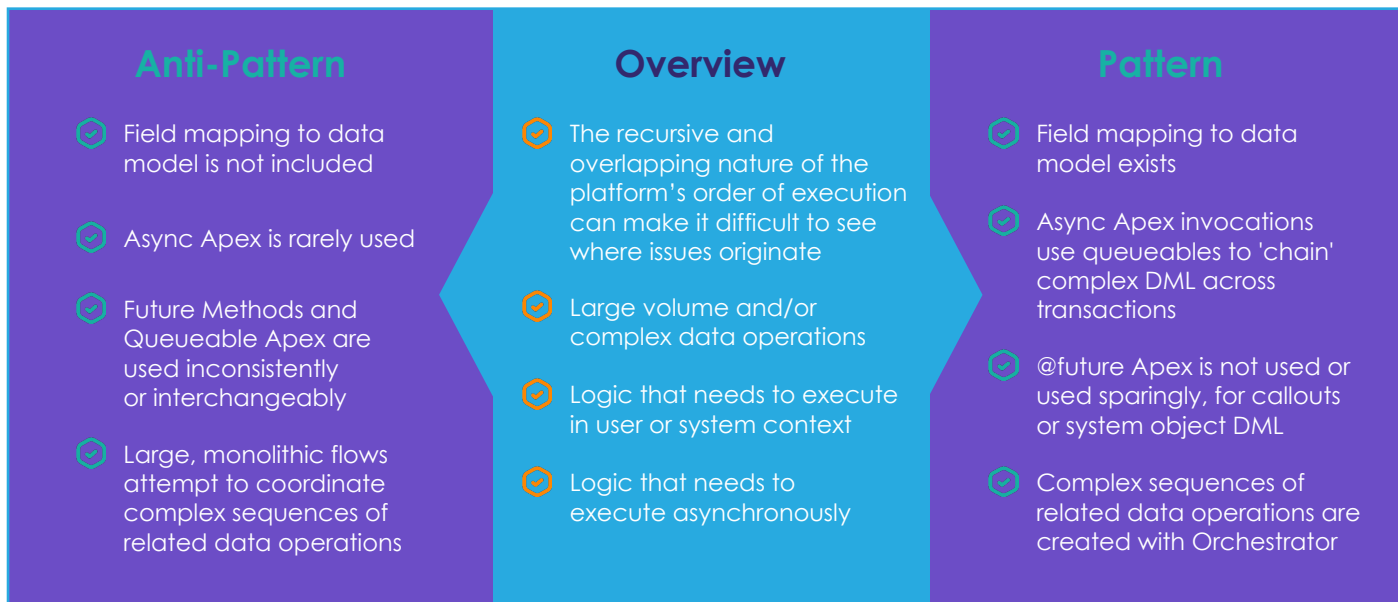


WELL-ARCHITECTED

<ApexHOURS/>



Ensuring Robust Data Integrity



Performance.



GRAPHQL BASICS

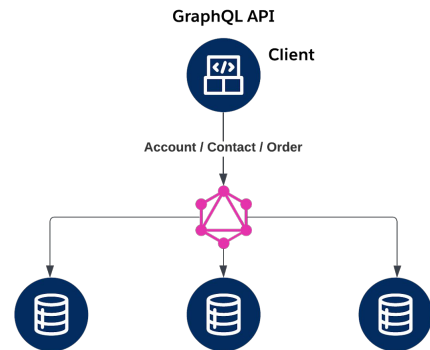
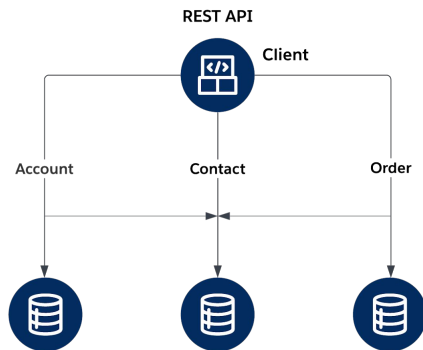


WHAT IS GRAPHQL?

- Query language specification & runtime for APIs
- Single endpoint for all resources to be aggregated
- Efficient because only necessary data is requested

HOW IS IT DIFFERENT FROM REST APIs?

- REST uses specific API endpoints to fetch different types of data
- Contains the probability of over-fetching or under-fetching data



GRAPHQL SCHEMA



Example GraphQL API Query

```
query accounts {  
  uiapi {  
    query {  
      Account {  
        edges {  
          node {  
            Id  
            Name {  
              value  
            }  
          }  
        }  
      }  
    }  
  }  
}
```

TYPES

- **Query:** Entry point for read operations
- **Mutation:** Entry point for create, update and delete

EDGES

- Handle lists or relationships between nodes
- Links multiple nodes with info about the relationship

NODES

- Individual data object or entity in schema
- Often encapsulate specific fields of the data



GRAPHQL SCHEMA



Query contacts and their associated cases and accounts

```
query contacts {  
  uiapi {  
    query {  
      Contact {  
        edges {  
          node {  
            Cases {  
              edges {  
                node {  
                  Subject { value }  
                  Status { value }  
                  Priority { value }  
                }  
              }  
            }  
          }  
        }  
      }  
      Account {  
        Name { value }  
      }  
    }  
  }  
}
```

TYPES

- Query: Entry point for read operations
- Mutation: Entry point for create, update and delete

EDGES

- Handle lists or relationships between nodes
- Links multiple nodes with info about the relationship

NODES

- Individual data object or entity in schema
- Often encapsulate specific fields of the data

QUERY ACCOUNTS WITH OPPs



Request

QUERY

```
1 query accounts {
2   uiapi {
3     query {
4       Account {
5         edges {
6           node {
7             Id
8             Name {
9               value
10            }
11            Opportunities {
12              edges {
13                node {
14                  Name {
15                    value
16                  }
17                  Amount {
18                    value
19                  }
20                }
21              }
22            }
23          }
24        }
25      }
26    }
27  }
28 }
```



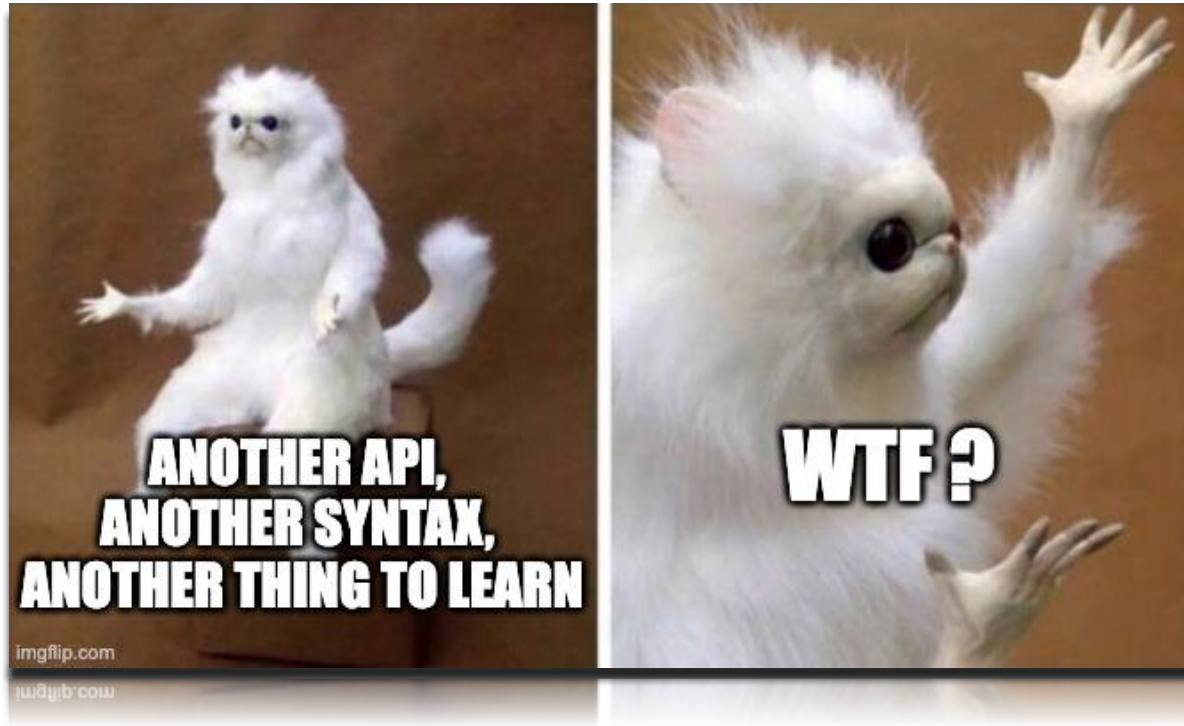
Response

```
1 {
2   "data": {
3     "uiapi": {
4       "query": {
5         "Account": {
6           "edges": [
7             {
8               "node": {
9                 "Id": "001Qy00000eDt7tIAC",
10                "Name": {
11                  "value": "Edge Communications"
12                },
13                "Opportunities": {
14                  "edges": [
15                    {
16                      "node": {
17                        "Name": {
18                          "value": "Edge Emergency Generator"
19                        },
20                        "Amount": {
21                          "value": 75000.0
22                        }
23                      },
24                    },
25                    {
26                      "node": {
27                        "Name": {
28                          "value": "Edge Installation"
29                        },
30                        "Amount": {
31                          "value": 50000.0
32                        }
33                      },
34                    }
35                  ]
36                }
37              }
38            }
39          ]
40        }
41      }
42    }
43  }
44 }
```

```
1 SELECT Id, Name, (SELECT Name, Amount FROM Opportunities) FROM Account
```

in SQL



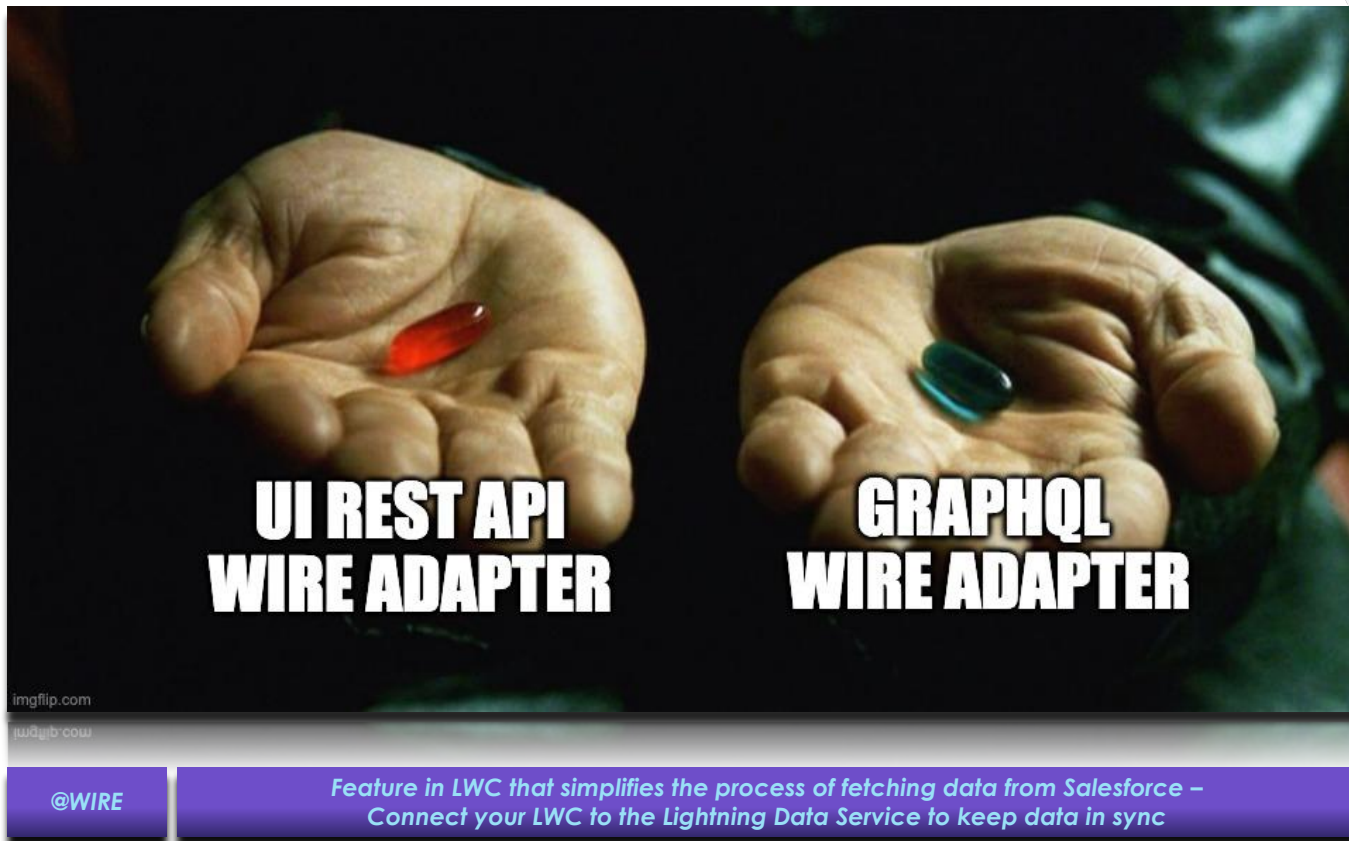


Demo

Myth

LWCS ARE
COMPLICATED AS I
ALWAYS NEED APEX TO
GET DATA.

UI LAYER | WHAT'S THE RIGHT CHOICE?



APEX vs. UI REST API vs. GRAPHQL



	Apex 	UI REST Wire Adapter 	GraphQL Wire Adapter 
Query data or metadata for multiple objects	Single HTTP request, complex	Multiple HTTP requests	Single HTTP request
Specification of fields to be queried	✓	Partly	✓
Lightning Data Service synchronization	✗	✓	✓
Additional features: fragments, pagination, ..	✗	✗	✓

Remarks

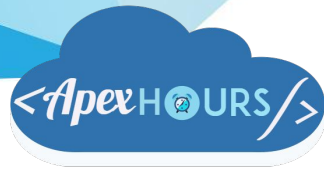
- Feature comparison as of now, GraphQL Platform API & Wire Adapter >> Limitations, e.g. no mutations in Wire Adapter possible yet
- GraphQL has the same query limitations as SOQL



Demo

Q&A

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