



# Other Protocols

Application Integration



# GraphQL



## Alternative to REST APIs

Growing in popularity. Some software-as-a-service providers are now offering both a REST API and GraphQL. Shopify now supports both options.

## Flexibility

GraphQL allows the consumer to query the provider's data and specify what specifically should be returned in the response payload.

## Better Efficiency

This results in more efficient interactions between the client and the server. Multiple REST API calls could be consolidated into a single GraphQL call with a combined result set.

# GraphQL

## Shopify GraphQL Docs

<https://shopify.dev/docs/admin-api/graphql/reference/orders/order>

API version: 2020-10 Latest Choose API version ▾

**Order** object

Samples

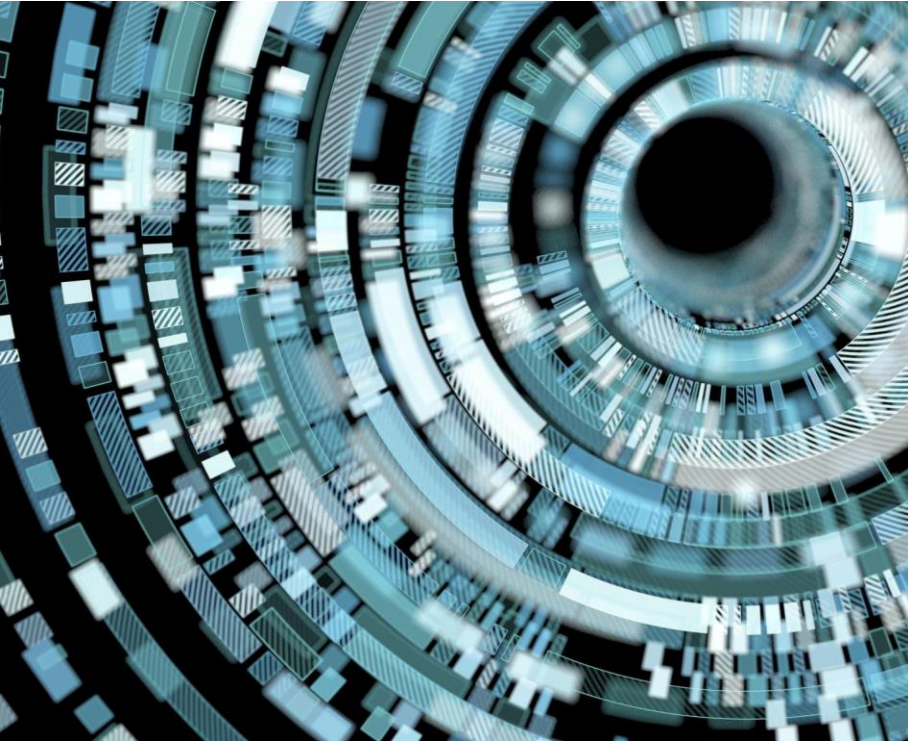
Version: 2020-10 (Latest) ▾

GraphQL ▶ Prettify Explorer < Docs

```
1 {
2   orders(first: 10) {
3     edges {
4       node {
5         id
6       }
7     }
8   }
9 }
10
```

```
{
  "data": {
    "orders": {
      "edges": [
        {
          "node": {
            "id": "gid://shopify/Order/1248358563862"
          }
        },
        {
          "node": {
            "id": "gid://shopify/Order/1248358694934"
          }
        },
        {
          "node": {
            "id": "gid://shopify/Order/1984311263254"
          }
        },
        {
          "node": {
            "id": "gid://shopify/Order/1984384466966"
          }
        }
      ]
    }
  }
}
```

# OData



## Open Data Protocol (OData)

A standard for building and consuming data-oriented REST APIs. Primarily used in the Microsoft .NET ecosystem.

## Data Querying and Manipulation

It provides guidance on how to structure headers, query strings and payloads for querying and data manipulation

## Better Efficiency

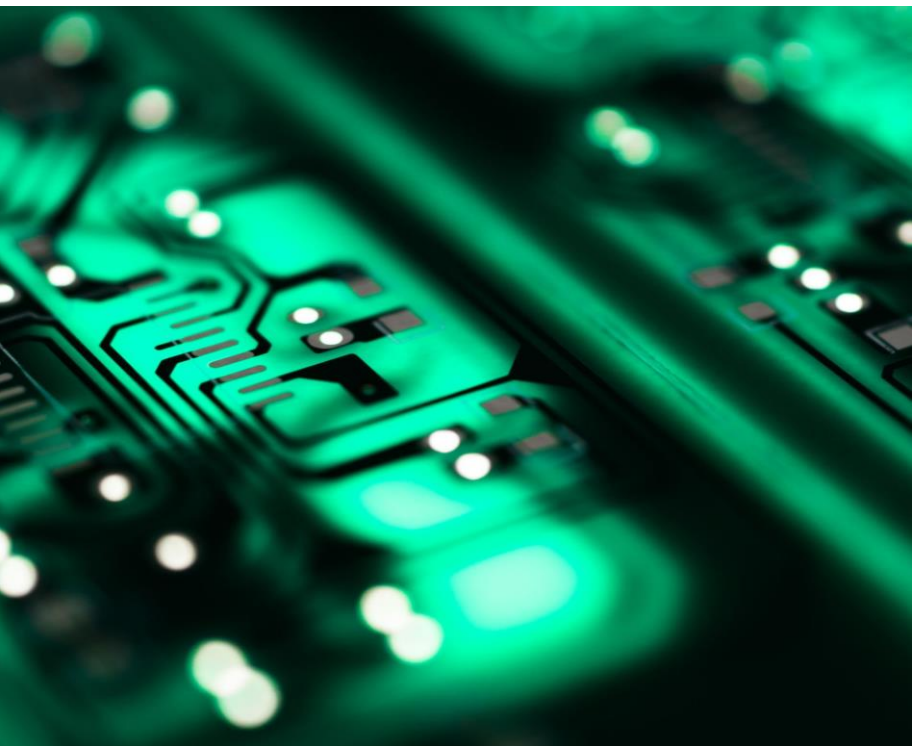
Supports the ability for clients to issue dynamic queries against the provider's data source, controlling which values are returned and how the resulting payload should be shaped

# OData

## An OData Query String Example

`https://services.odata.org/v4/TripPinServiceRW/People?$top=2 & $select=FirstName, LastName  
& $filter=Trips/any(d:d/Budget gt 3000)`

# gRPC



## Remote Procedure Calls

gRPC is an Internet friendly protocol that allows clients to execute remote procedure calls (RPCs) on servers.

## Better Performance than REST APIs

gRPC does not use JSON for its payloads. Instead it uses a compressed binary format called Protobuf. This results in much faster data transfer. Also supports streaming.

## Strongly Typed

The Protobuf format defines the payload structure to the client and server at compile time.