# Enhance ACD API Consumer ﻿experience with Graph-QL

## Challenge / Need

ACD API's are monolith and not purely microservice. We do follow API First approach and below issues are there because of this.

* We send back a lot of data to clients which increases network traffic.
* API Clients are going to have to massage and filter unwanted data to process it further.
* ﻿Other problem is API versioning, every time we create a new version, we pretty much make the code redundant.
* Right now, our clients﻿﻿ are making multiple API calls over the network to present a certain piece of information. For example, Whenever agents open an email, we are making API calls to pull skills, quick replies and then massage data and show it on interface.

## Solution

* We will be adding a Express GraphQL Server in between our API and Client.
* We will define Schemas, Queries and resolvers
* ﻿We will add resolvers which will talk to ACD APIs and send the response back. ﻿﻿
* ﻿We will provide a great documentation and browser querying capabilities with GraphiqL.

## Impact

* API Team will need to create and maintain Graph-QL infrastructure by adding newer Queries, Schemas, Resolvers.
* ﻿Client application teams will need to adopt Graph-QL queries, instead of making multiple API Calls.

## Target Audience

* ACD API Team
* ACD Client Applications such as Max Client, Studio, InContact Web, Userhub Lambdas

## Benefit

* This will reduce the burden on the infrastructure by avoiding multiple calls made by clients.
* ﻿Clients can offload the data interpretation to Graph-QL layer and consume it directly.
* ﻿Clients will be able to customize the queries for their needs instead of calling multiple APIs, this will make integration lot easier.
* ﻿It will also help us keep our current API first approach and avoid re-architecture of existing code.