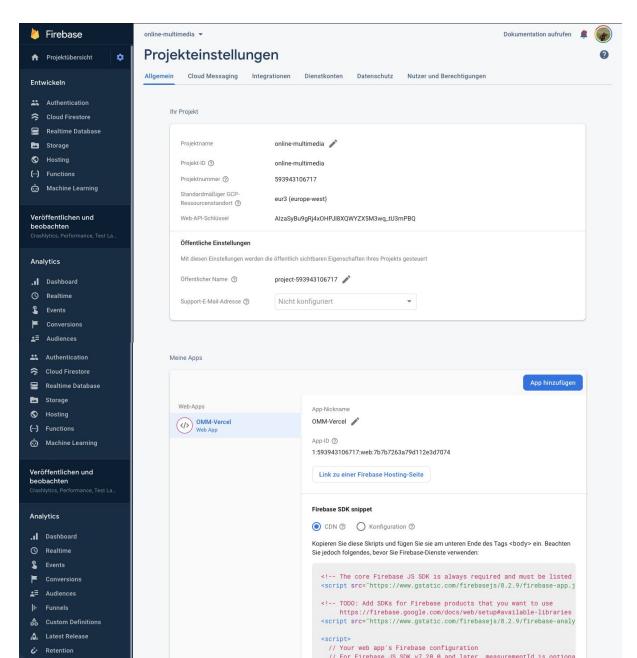
| Firebase                  | 1  |
|---------------------------|----|
| MongoDB Atlas & Realm     | 4  |
| Screenshot API - ApiFlash | 27 |

# **Firebase**

As seen in the next screenshot we use europe-west3 as a data/project-location, which corresponds to Frankfurt, Germany.

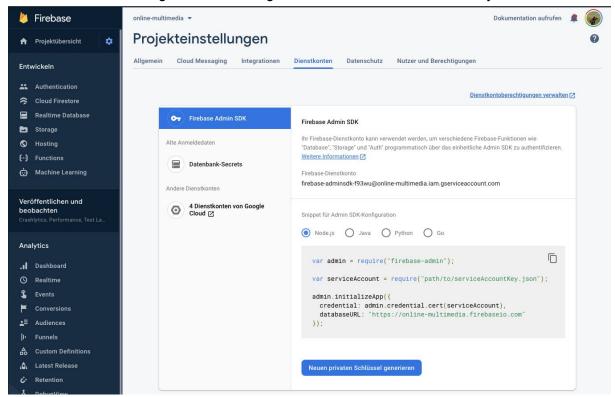
In order to connect firebase to our app you have to get the configuration & admin configuration data and write in into the corresponding fields in the .env.local file you can get these as follows:

## Configuration:

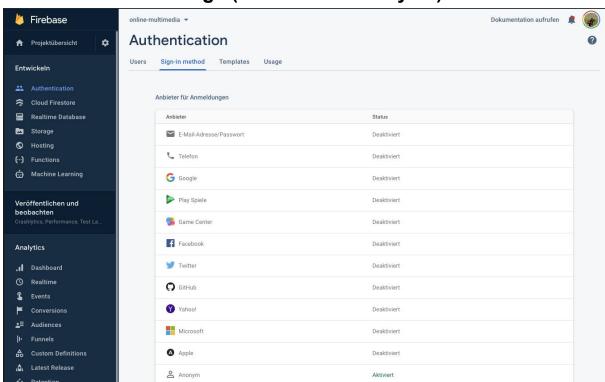


## Admin configuration:

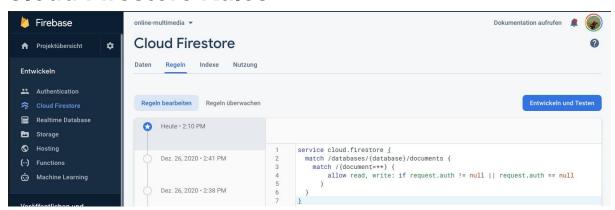
Click "Neuen schlüssel generieren" and get the .env fields from the JSON you downloaded



**Authentication Settings (->Activate "anonym")** 



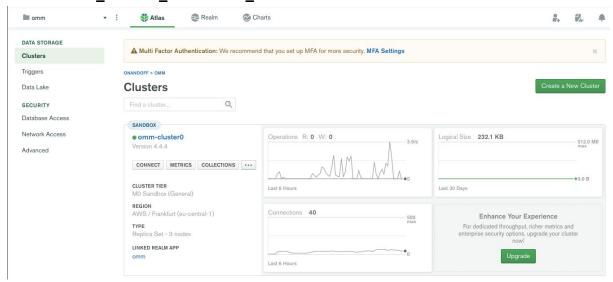
# **Cloud Firestore Rules**



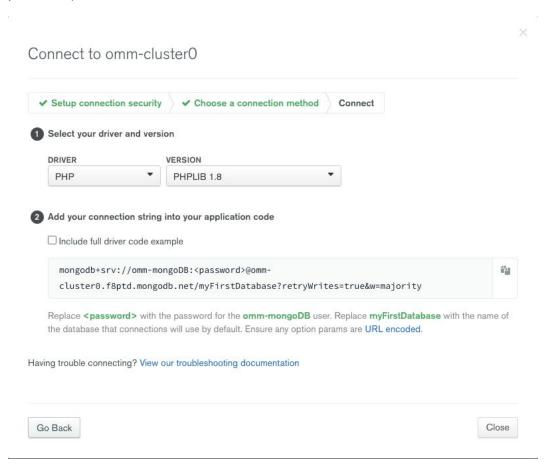
# MongoDB Atlas & Realm

As seen in the next screenshot we use AWS / Frankfurt (eu-central-1) as a data/project-location, which corresponds to Frankfurt, Germany.

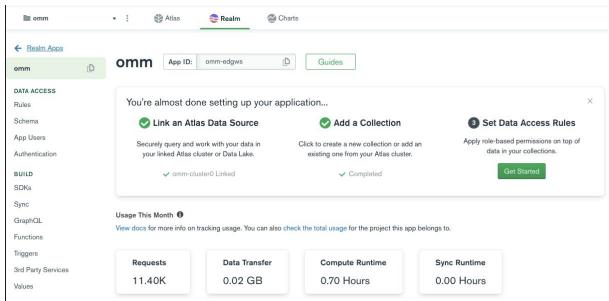
Get the NEXT\_PUBLIC\_MONGODB\_URI:



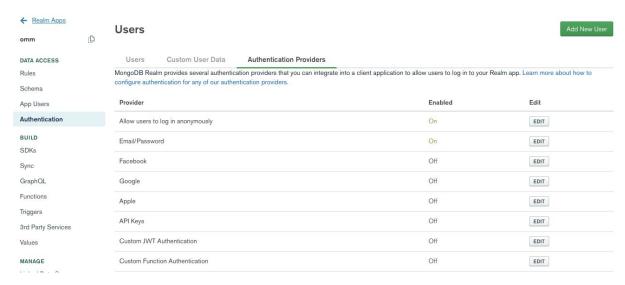
Click on "CONNECT" (remove "myFirstDatabase" from the url & use your user and password):



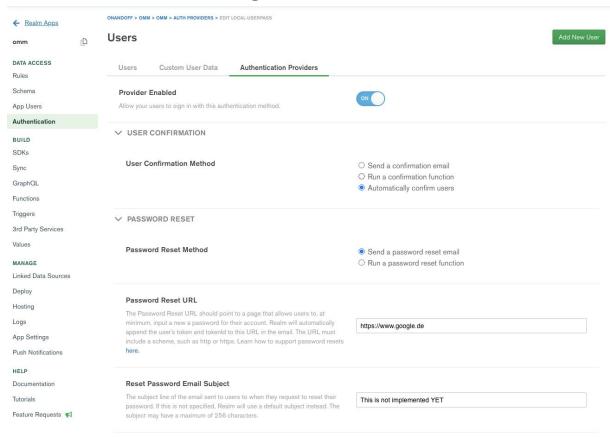
## Get NEXT\_PUBLIC\_MONGODB\_REALM\_ID here (App ID):



# **Authentication & Users**

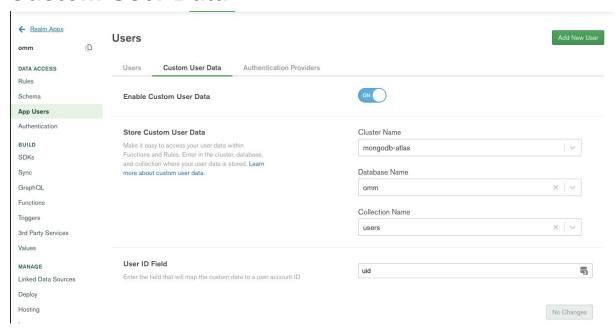


# **Email/Password Settings**



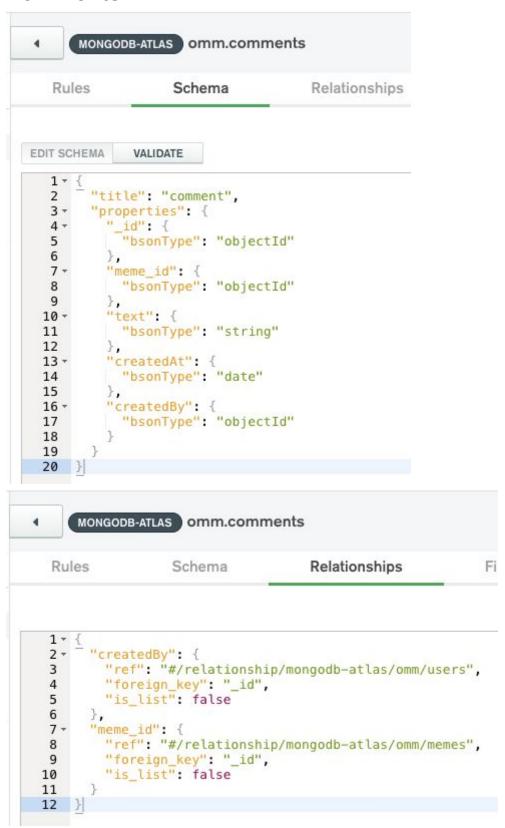
No Changes

# **Custom User Data**



# **Schemas & Relationships**

## **Comments**



## **Memes**

```
MONGODB-ATLAS omm.memes
 4
     Rules
                           Schema
                                                    Relationships
EDIT SCHEMA
                   VALIDATE
            "title": "meme",
    3 +
            "properties": {
              "_id": {
   "bsonType": "objectId"
    4 -
    5
              },
"commentCount": {
  "bsonType": "int"
    6
    7 -
    8
              },
"comments": {
  "bsonType": "array",
  "items": {
    "bsonType": "objec
    9
   10 -
   11
   12 -
                     "bsonType": "objectId"
   13
                 }
   14
              },
"createdAt": {
  "bsonType": "date"
   15
   16 -
   17
              },
"createdBy": {
  "bsonType": "objectId"
   18
   19 +
   20
              }
"downVotes": {
  "bsonType": "array",
  "items": {
     "bsonType": "objec
   21
   22 -
   23
   24 -
                     "bsonType": "objectId"
   25
                 }
   26
              },
"forkedBy": {
  "bsonType": "array",
  "items": {
        "bsonType": "objec
   27
   28 -
   29
   30 -
                     "bsonType": "objectId"
   31
   32
   33
              },
"forkedFrom": {
  "bsonType": "objectId"
   34 -
   35
              },
"isDraft": {
  "bsonType": "bool"
   36
   37 -
   38
              };
"json": {
"bsonTy
   39
   40 -
                  "bsonType": "string"
   41
   42
               "points": {
   43 +
                  "bsonType": "int"
   44
              },
"svg": {
  "bsonType": "string"
   45
   46 -
   47
              },
"template": {
  "bsonType": "objectId"
   48
   49 -
   50
               "title": {
   51
   52 -
   53
                  "bsonType": "string"
   54
   55 -
               "upVotes": {
                 "bsonType": "array",
"items": {
   56
   57 -
                    "bsonType": "objectId"
   58
                 }
   59
   60
               "url": {
   61 -
                  "bsonType": "string"
   62
   63
```

```
2 +
3
              comments": {
  "ref": "#/relationship/mongodb-atlas/omm/comments",
  "foreign_key": "_id",
  "is_list": true
  5
          }
"createdBy": {
  "ref": "#/relationship/mongodb-atlas/omm/users",
  "foreign_key": "_id",
  "is_list": false
 6
7 -
  8
  9
10
          }
}
"downVotes": {
    "ref": "#/relationship/mongodb-atlas/omm/users",
    "foreign_key": "_id",
    "is_list": true
11
12 -
13
14
           },
"forkedBy": {
    "ref": "#/relationship/mongodb-atlas/omm/memes",
    "foreign_key": "_id",
    "is_list": true
16
17
18
19
20
          }
"forkedFrom": {
    "ref": "#/relationship/mongodb-atlas/omm/memes",
    "foreign_key": "_id",
    "is_list": false
21
23
24
25
26
27 -
               "ref": "#/relationship/mongodb-atlas/omm/templates",
"foreign_key": "_id",
"is_list": false
28
30
           },
"upVotes": {
31
32 +
              "ref": "#/relationship/mongodb-atlas/omm/users",
"foreign_key": "_id",
"is_list": true
33
34
35
37 }
```

Relationships

Filters

MONGODB-ATLAS omm.memes

Schema

4

Rules

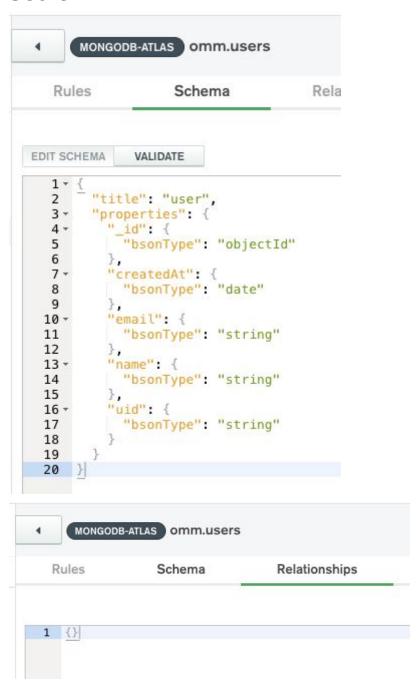
# **Templates**



```
Rules Schema Relationships

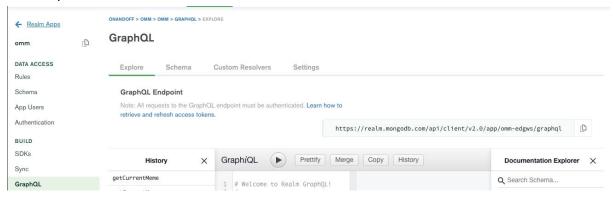
1 * {
2 * "createdBy": {
3 "ref": "#/relationship/mongodb-atlas/omm/users",
4 "foreign_key": "_id",
5 "is_list": false
7 }
```

## **Users**

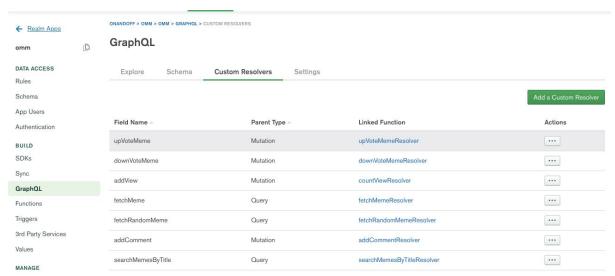


# **GraphQL**

## Get GraphQL URL here:



## **Custom Resolvers**



# Edit Custom Resolver: upVoteMeme

| GraphQL Field Name   | upVoteMeme         |                     |
|--|--------------------|---------------------|
| This is the name of the field that will be injected into the type you select below.  |                    |                     |
| Parent Type  |                    |                     |
| Select the type you would like your custom resolver to be accessed from.   | Mutation           | ~                   |
|  |                    |                     |
| Function   | C grow son so      |                     |
| Select the function that will be executed when a query including your custom resolver field is made.   | upVoteMemeResolver | ~                   |
|  |                    |                     |
| Input Type (Recommended)   |                    |                     |
| Optional JSON Schema definition describing the input object of your function. This will be used to generate the GraphQL input type for your Custom Resolver.   | Custom Type        |                     |
| <pre>1</pre>   |                    | (0)                 |
| 10 "bsonType": "objectId"  |                    | Ln 16 Col 2         |
| <ul> <li>✓ Must define "title".</li> <li>✓ Must define at least one field in "properties" with a "type".</li> <li>Payload Type (Recommended)</li> <li>Optional JSON Schema definition describing the response payload of your</li> </ul> | Existing Type      | [ v                 |
| Resolver.  | Meme               |                     |
| resulvei.  | Welle              | From GraphQL Schema |
|  |                    |                     |
| putType:   |                    | No Changes          |
| 'type": "object",<br>'title": "VoteMemeInput",   |                    | No Changes          |
| type": "object",<br>title": "VoteMemeInput",<br>required": [<br>"meme_id",   |                    | No Changes          |
| type": "object",<br>title": "VoteMemeInput",<br>required": [<br>"meme_id",<br>"user_id"  |                    | No Changes          |
| <pre>'type": "object", 'title": "VoteMemeInput", 'required": [    "meme_id",    "user_id"</pre>  |                    | No Changes          |
| <pre>'type": "object", 'title": "VoteMemeInput", 'required": [    "meme_id",    "user_id" ], 'properties": {    "meme_id": {    "bsonType": "objectId"</pre>   |                    | No Changes          |
| <pre>'type": "object", 'title": "VoteMemeInput", 'required": [    "meme_id",    "user_id" ], 'properties": {    "meme_id": {     "bsonType": "objectId"    },    "user_id": {</pre>  |                    | No Changes          |
| <pre>'type": "object", 'title": "VoteMemeInput", 'required": [    "meme_id",    "user_id" ], 'properties": {    "meme_id": {     "bsonType": "objectId"    },</pre>  |                    | No Changes          |



omm



## upVoteMemeResolver

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#### **Functions**

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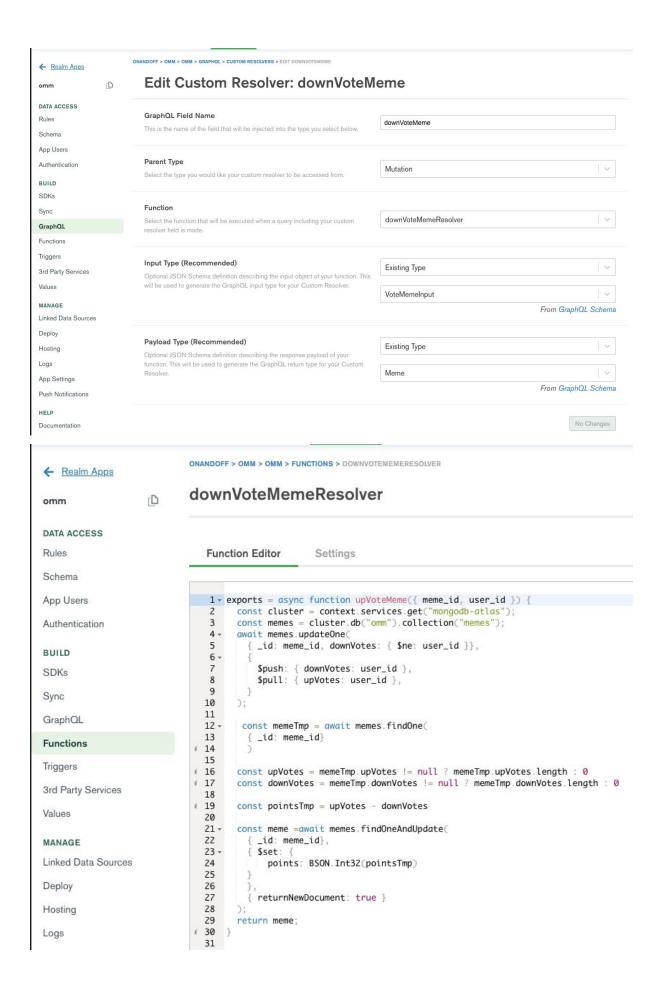
Hosting

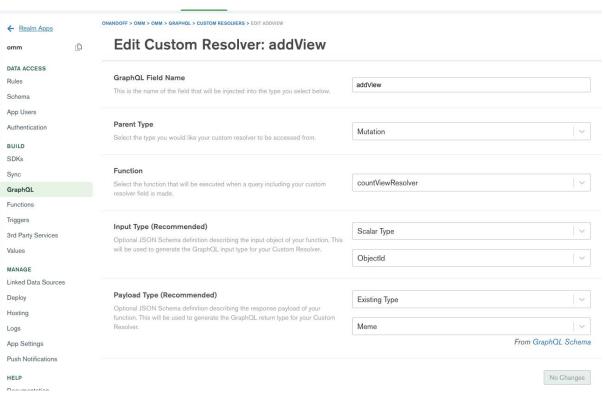
Logs

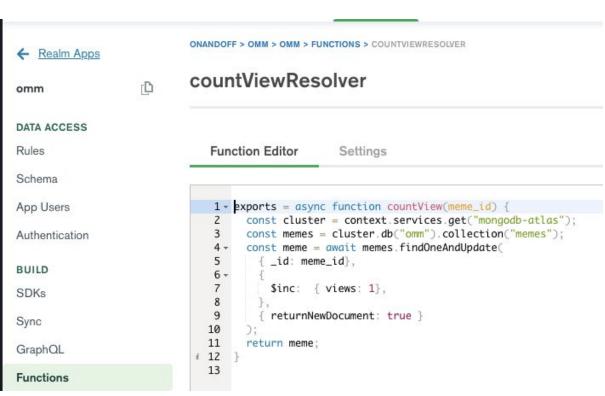
#### **Function Editor**

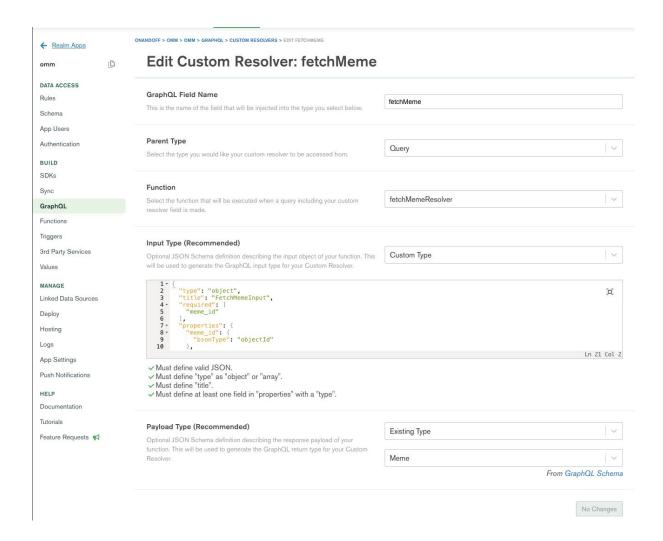
Settings

```
1    exports = async function upVoteMeme({ meme_id, user_id }) {
2    const cluster = context.services.get("mongodb-atlas");
3    const memes = cluster.db("omm").collection("memes");
 4 -
        await memes.updateOne(
             _id: meme_id, upVotes: { $ne: user_id }},
 5
            $push: { upVotes: user_id },
$pull: { downVotes: user_id },
 6
 8
 9
10
11 -
         const memeTmp = await memes.findOne(
         { _id: meme_id}
12
13
14
15
        const upVotes = memeTmp.upVotes != null ? memeTmp.upVotes.length : 0
16
        const downVotes = memeTmp.downVotes != null ? memeTmp.downVotes.length : 0
17
18
        const pointsTmp = upVotes - downVotes
19
20 -
        const meme =await memes.findOneAndUpdate(
           { _id: meme_id},
{ $set: {
21
22 -
23
               points: BSON.Int32(pointsTmp)
24
25
26
          { returnNewDocument: true }
27
28
        return meme;
29
30
```









```
Input Type:
  "type": "object",
  "title": "FetchMemeInput",
  "required": [
    "meme_id"
  ],
  "properties": {
    "meme_id": {
      "bsonType": "objectId"
    },
    "conditions": {
      "bsonType": "string"
    },
    "sorts": {
      "bsonType": "string"
    "next": {
      "bsonType": "boolean"
    }
  }
}
```

Settings







#### fetchMemeResolver

Function Editor

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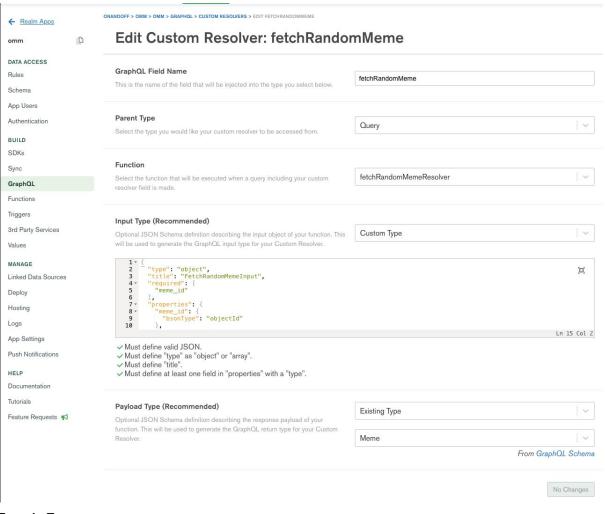
Push Notifications

#### HELP

Documentation

Tutorials

```
1 * exports = async function fetchMeme({ meme_id, conditions, sorts, next }) {
   3
         const cluster = context.services.get("mongodb-atlas");
         const memeCollection = cluster.db("omm").collection("memes");
   5
   6
         const sort = JSON.parse(sorts)
   7
         const condition = JSON.parse(conditions)
   8
   9 -
         if (condition.created At) \{\\
             for (var key of Object.keys(condition.createdAt)){
            condition.createdAt[key] = new Date(condition.createdAt[key])
  10 -
  11
  12
  13
  14 -
         if(condition._id){
  15 -
             for (key of Object.keys(condition._id)){
i 16
                 condition._id[key] = new BSON.ObjectId(condition._id[key])
  17
  18
         if(condition.createdBy){
   for (key of Object.keys(condition.createdBy)){
  19 -
# 20 -
                 condition.createdBy[key] = new BSON.ObjectId(condition.createdBy[key])
# 21
  22
  23
  24
         if(condition.template){
   for (key of Object.keys(condition.template)){
  25 -
i 26 -
i 27
                 condition.template[key] = new BSON.ObjectId(condition.template[key])
  28
  29
  30
         const memes = await memeCollection.find(condition).sort(sort).toArray()
# 31
  32
# 33
         const\ index = memes.findIndex(x \Rightarrow x._id.toString() === meme_id.toString())
  34
  35 -
         if(next){
           return index + 1 >= memes.length ? null : memes[index + 1]
# 36
  37 -
# 38
           return index - 1 < 0 ? null : memes[index - 1]
  39
  40
i 41
```



```
Input Type:
```

```
{
  "type": "object",
  "title": "FetchRandomMemeInput",
  "required": [
      "meme_id"
],
  "properties": {
      "meme_id": {
      "bsonType": "objectId"
      },
      "conditions": {
      "bsonType": "string"
      }
  }
}
```



D

# GraphQL Functions Triggers

3rd Party Services

```
Values

MANAGE
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Logs
```

HELP

App Settings

Push Notifications

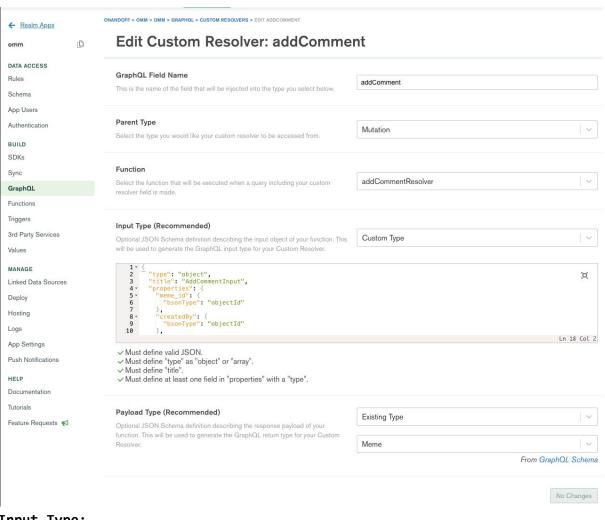
ONANDOFF > OMM > OMM > FUNCTIONS > FETCHRANDOMMEMERESOLVER

#### fetchRandomMemeResolver

Function Editor

Settings

```
1 * exports = async function fetchRandomMeme({ meme_id, conditions}) {
2    const cluster = context.services.get("mongodb-atlas");
   3
          const memeCollection = cluster.db("omm").collection("memes");
    4
   5
          const condition = JSON.parse(conditions)
    6
   7 -
          if ({\tt condition.createdAt}) \{
               for (var key of <code>Object.keys(condition.createdAt)){</code>
    8 -
                    condition.createdAt[key] = new Date(condition.createdAt[key])
   9
  10
  11
          if(condition._id){
  12 -
              for (key of Object.keys(condition._id)){
    condition._id[key] = new BSON.ObjectId(condition._id[key])
  13 -
  14
  15
  16
          if(condition.createdBy){
   for (key of Object.keys(condition.createdBy)){
  17 -
  18 -
  19
                  condition.createdBy[key] = new BSON.ObjectId(condition.createdBy[key])
  20
  21
  22
          if(condition.template){
   for (key of Object.keys(condition.template)){
      condition.template[key] = new BSON.ObjectId(condition.template[key])
  23 -
  24 -
  25
  26
  27
  28
  29 -
          const memes = await memeCollection.aggregate(
  30 -
                  { $match: { _id: { $ne: meme_id} } }, { $match: condition },
  31
  32
                 { $sample: { size: 1 } }
  33
  34
  35
          ).toArray()
return memes[0]
# 36
# 37
  38
```



## Input Type:

```
"type": "object",
  "title": "AddCommentInput",
  "properties": {
    "meme_id": {
      "bsonType": "objectId"
    "createdBy": {
      "bsonType": "objectId"
    },
    "text": {
      "bsonType": "string"
   },
    "createdAt": {
      "bsonType": "date"
    }
 }
}
```





## addCommentResolver

#### DATA ACCESS

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#### **Functions**

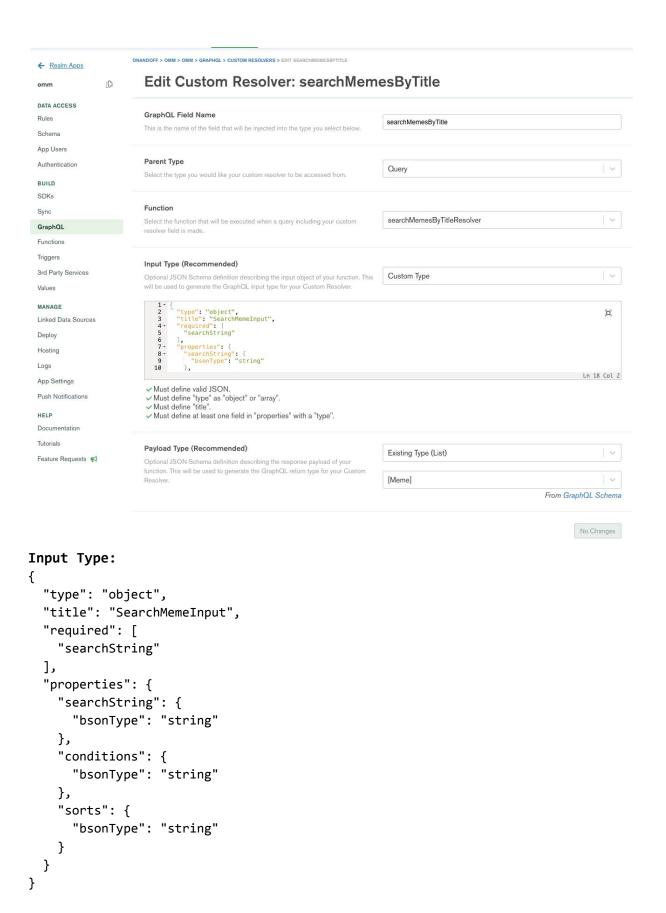
Triggers

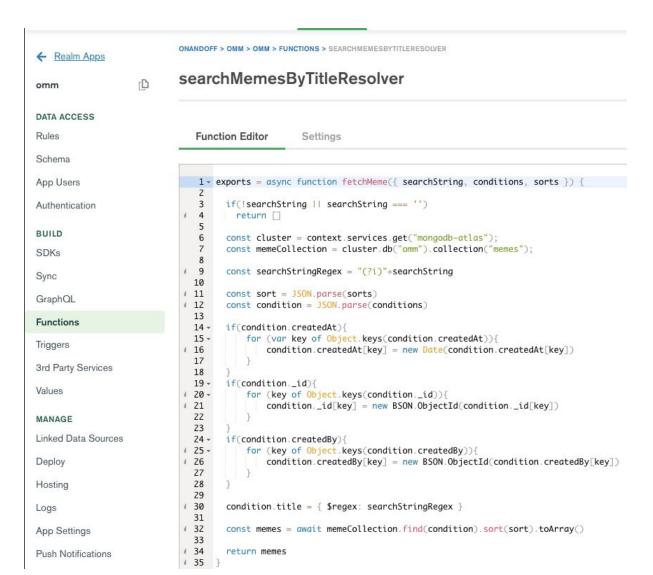
3rd Party Services

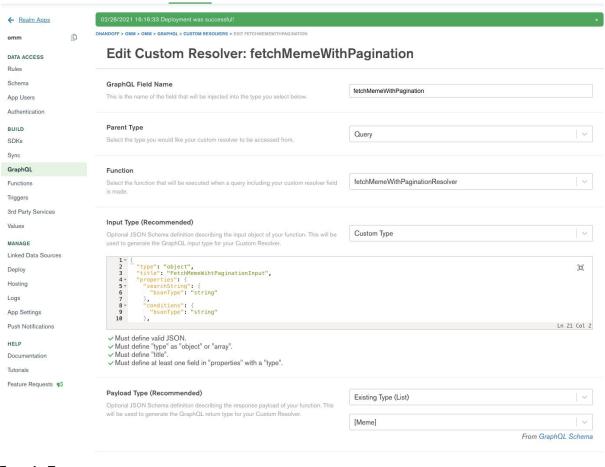
#### **Function Editor**

Settings

```
1 - exports = async function upVoteMeme(input) {
2    const cluster = context.services.get("mongodb-atlas");
 3
       const memes = cluster.db("omm").collection("memes");
       const comments = cluster.db("omm").collection("comments");
 4
 5
 6
       const comment_id = (await comments.insertOne(input)).insertedId
 8 -
       const meme = await memes.findOneAndUpdate(
 9
         { _id: input.meme_id},
10 -
11
             $push: { comments: comment_id },
             $inc: { commentCount: 1}
12
13
14
         { returnNewDocument: true }
15
16
       return meme;
17 }
18
```





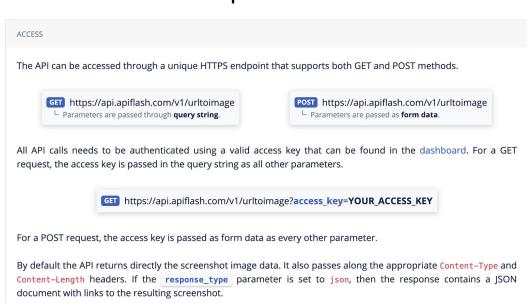


## Input Type:

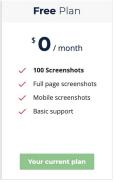
```
"type": "object",
  "title": "FetchMemeWihtPaginationInput",
  "properties": {
    "searchString": {
      "bsonType": "string"
    },
    "conditions": {
      "bsonType": "string"
    },
    "sorts": {
      "bsonType": "string"
    },
    "limit": {
      "bsonType": "int"
    "skip": {
      "bsonType": "int"
    }
  }
}
```

Push Notifications HELP

# Screenshot API - ApiFlash







set up account to access API key