

GDP - APIGEE and OKTA API Services

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APIGEE

We are using "apigee-client-php" (<https://github.com/apigee/apigee-client-php>) library in Developer Portal to access APIGEE EDGE management API.

All requests/responses handled with Apigee API Client Library in object format.

The Apigee API Client Library for PHP enables you to interact with the API using objects instead of coding to handle the HTTP request and response calls directly.

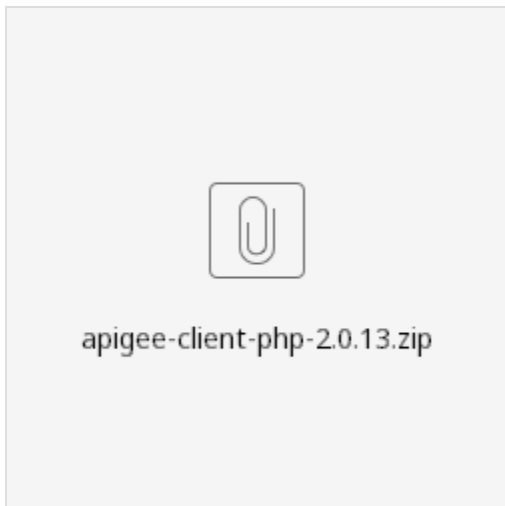
Releases - <https://github.com/apigee/apigee-client-php/releases>

Version used in GDP is 2.0.5

Latest available version is 2.0.13

We can test this library with PHP, Composer, APIGEE Edge and no need of any additional software.

Examples to check how this library works.



Create a "\$client" variable with oAuth or basic authentication details

```

use Http\Message\Authentication\BasicAuth;
use Apigee\Edge\HttpClient\Plugin\Authentication\OAuth;

//OAuthTokenStorage created by using Drupal service
$DPBoostOAuthTokenStorage = \Drupal::service('dpboost_group_edge.oauth_token_storage');
$OAuthTokenStorage = $DPBoostOAuthTokenStorage->setCacheId('token_cache:' . base64_encode($config['username'] . $config['organization']));

//Use OAuth or Basic Authentication
$auth = new OAuth($config['username'], $config['password'], $OAuthTokenStorage, $config['mfa'], $config['clientid'], $config['clientsecret'], $config['scope'], $config['authserver']);
(or)
$auth = new BasicAuth($config['username'], $config['password']);

//Client
$client = new Client($auth, $edge_server_url);

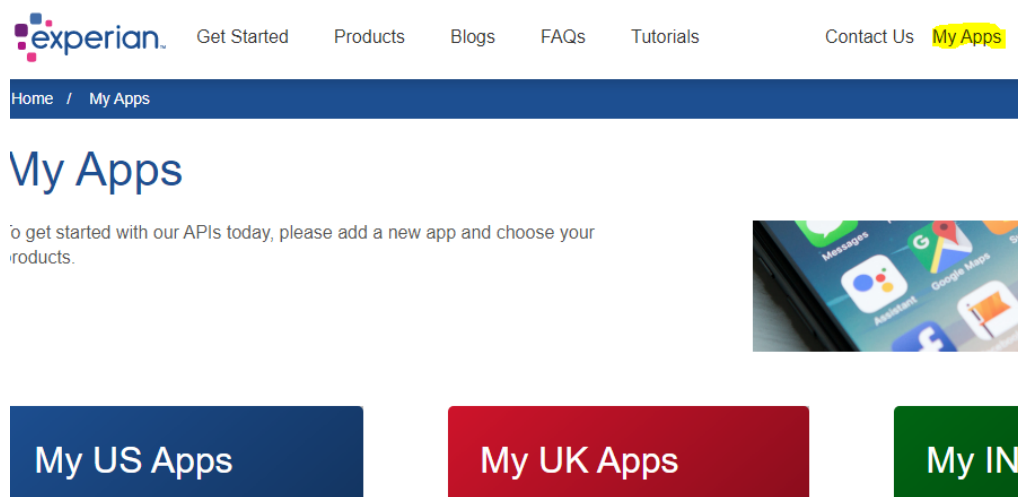
```

Fill above username, password, organization, mfa, clientid, secret, scope, auth server, and edge server details.

Using this "\$client" variable in sample codes mentioned below.

My Apps(/apps) Page

This page created with Drupal page manager module (/admin/structure/page_manager).



We added 2 blocks to this page, one is from custom block library and another one is module defined custom block.

Module defined custom block makes APIGEE Edge calls to generate the HTML.

1) This block loops all "experian_region" groups (Eg: United States, United Kingdom, Brazil, India, Netherlands, Spain, Singapore, Colombia) and triggers API calls to mapped APIGEE Orgs to fetch org related APIGEE products.

APIGEE Edge API Calls:

```
use Apigee\Edge\Api\Management\Controller\ApiProductController;
```

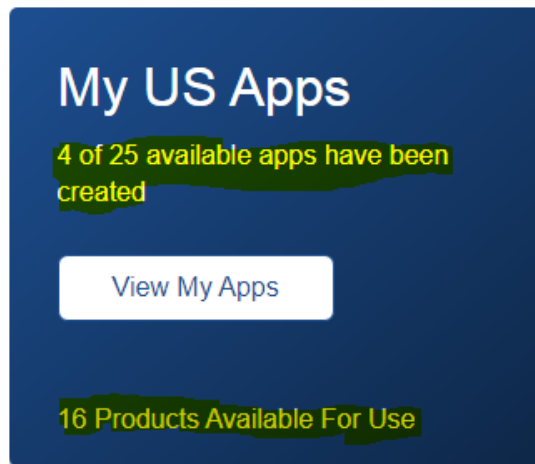
```

$products = new ApiProductController($organization, $client);
$product_entities = $products->getEntities();

```

2) Loop APIGEE Products and check APIGEE product name matches with any one of Drupal Group products(machine name). If machine name available in any one of the drupal group then display that region markup.

3) In this apps page, we have AJAX call also to fetch
a) number apps created by Developer/User per region
b) number of products available per region



URL Format: /api/region-user-counts/<user id>/<group id>

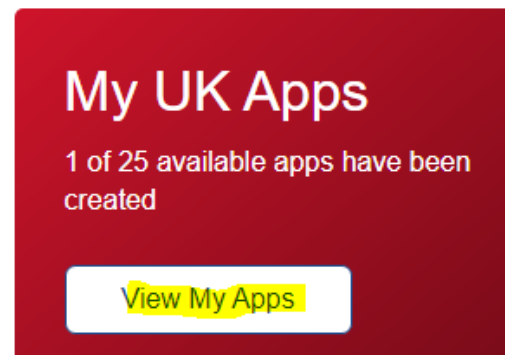
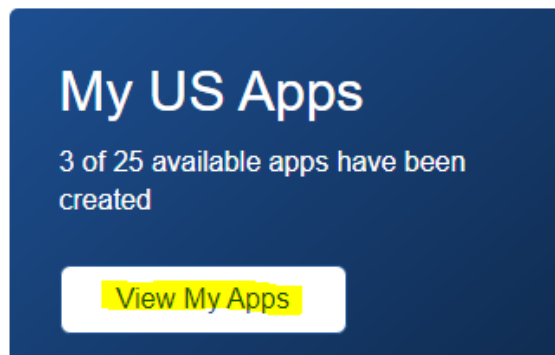
Time took to generate the complete markup is 12Sec(Average) due to Apigee Edge API Calls.

Work around we did to improve the performance - Cached APIGEE products details in Drupal cache to avoid multiple APIGEE Edge calls.

Solution - We should have configuration page to decide what to display in MyApps page and delete AJAX calls.

View My Apps Page

This is a custom module defined page, these URLs are in MyApps(/apps) page as shown in below image.



Eg: /group/1/join-check or /group/2/join-check, In these URLs 1 and 2 numbers are Experian Region Group numbers

1) If user is not a member of Drupal Region Group, then add that user to particular group(United States, United Kingdom etc..) and redirect user to My Apps Page.

Eg: /group/1/join-check to /apps page

2) If user is a member of Drupal Region Group, then find the developer in APIGEE Edge Org.

If user is not a member of APIGEE Edge, add user to APIGEE Edge Org and redirect user to the View My Apps Page.

These URLs internally redirects to

/group/1/join-check -> /group/1/user/124/apps

/group/2/join-check -> /group/2/user/124/apps

Here 1,2 numbers are Group region numbers and 124 is user id.

from this page, users can see particular region apps and they can create new apps, edit/delete existing apps.

APIGEE Edge API Calls:

```

use Apigee\Edge\Api\Management\Controller\DeveloperController;

use Apigee\Edge\Api\Management\Controller\DeveloperAppController;

$developerController = new DeveloperController($config['organization'], $client);
$developers = $developerController->getEntities();

//Check user exist or not:
$test_email = "test@experian.com";
$user_exist = ($developerController[$test_email]) ? true : false;

//Get developer apps: If user exist fetch apps details
$developerApps = new DeveloperAppController($config['organization'], $test_email, $client);
$app = $developerApps->getEntities();

//To fetch app details: Loop $apps and fetch below details
//App Display Name
$app->getDisplayName()
//App ID
$app->getAppId()
//App Status
$app->getStatus()
//Get Creds
$creds = $app->getCredentials()
$first_cred = reset($creds);
$first_cred->getConsumerKey();
$first_cred->getConsumerSecret();

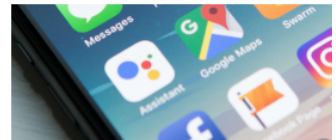
```

My US Apps

To get started with our APIs today, please add a new app and choose your products.

3 of 25 available apps have been created

Create new app



App Name	Client ID	Client Secret	Operations	
Swagger Token Test Srao	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Show Secrets	Edit App Delete App

Create new app page

This is a custom module defined form, we can access this link from "View My Apps" Page.

Create new app



Client Secret	Operations	Status
<p>*****</p> <p>*****</p> <p>Show Secrets</p>	<p>Edit App</p> <p>Delete App</p>	<p>Approved</p>

Drupal Form: Drupal\dpboost_group_edge\Form\DeveloperApp

Form generation steps:

1) Check user reached max apps creation limit(25 Apps per region/APIGEE Org).
If reached, don't display the form.

2) Check user is in APIGEE org, if not don't display the form.

3) Fetches all the products visible to user
APIGEE Edge API call:

```
use Apigee\Edge\Api\Management\Controller\ApiProductController;
$products = new ApiProductController($config['organization'], $client);
$product_entities = $products->getEntities();
```

Only mapped products with machine name are displayed in the form.
Each product might have swagger and product link.

4) Fetches Developer details

APIGEE Edge API call:

```
use Apigee\Edge\Api\Management\Controller\DeveloperController;
$developerController = new DeveloperController($config['organization'], $client);
```

Check user exist or not:

```
$test_email = "test@experian.com";
$developer = ($developerController[$test_email]) ? developerController[$test_email] : false;
```

If user exist, get user developer id
Developer ID - \$developer->getDeveloperId()

5) Generate the form with products, developer details(Developer ID), APIGEE Org and terms and conditions link.
User accepted Terms and conditions details stored in GDP - dpboost_legal_approval.

6) Store details after the form submission with APIGEE Edge API call

APIGEE Edge API call:

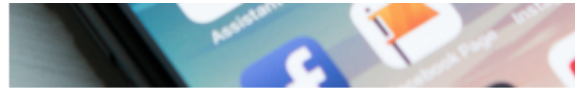
```
$dac = new DeveloperAppController($config['organization'], $test_email, $client);
$developerApp = new DeveloperApp([
    'name' => strtolower(str_replace(' ', '_', $app_display_name)),
]);
$developerApp->setDisplayName($app_display_name);
$dac->create($developerApp);
```

```
$dacc = new DeveloperAppCredentialController($config['organization'], $test_email, $developerApp->id(), $client);
$credentials = $developerApp->getCredentials();
$credential = reset($credentials);
$dacc->addProducts($credential->getConsumerKey(), $products);
```

Edit App page

This is a custom module defined form, we can access this link from "View My Apps" Page.

Create new app



Client Secret		Operations	
*****	*****	Show Secrets	Edit App Delete App

Drupal Form: Drupal\dpboost_group_edge\Form\DeveloperApp

Form generation steps

1) App id is passed to the form from View My Apps Page, It is in URL

Load app data from the passed app id.

```
$ac = new AppController($config['organization'], $client);  
$app = $ac->loadApp($app_id);
```

2) Check user is in APIGEE org, if not don't display the form.

```
$developerController = new DeveloperController($config['organization'], $client);
```

Check user exist or not:

```
$test_email = "test@experian.com";  
$developer = ($developerController[$test_email]) ? developerController[$test_email] : false;
```

```
Developer ID - $developer->getDeveloperId()
```

3) Fetches all the product visible to user

APIGEE Edge API call:

```
$products = new ApiProductController($config['organization'], $client);  
$product_entities = $products->getEntities();
```

Only GDP mapped products with machine name is displayed in this form.
Each product might have swagger and product link.

Choose previous selected apps:

```
$credentials = $app->getCredentials();  
$first_credential = reset($credentials);  
$current_products = $first_credential->getApiProducts();  
$values = [];  
foreach ($current_products as $product) {  
    $values[$product->getApiproduct()] = $product->getApiproduct();  
}
```

4) IF user not approved the terms and conditions earlier, then display TOC link.

5) Generate the form with products, app id and developer details.

6) On form Submission - Update app products

```
$credentials = $app->getCredentials();  
$first_credential = reset($credentials);  
$consumer_key = $first_credential->getConsumerKey();  
$acc = new DeveloperAppCredentialController($config['organization'], $developer->getDeveloperId(), $app_name, $client);
```

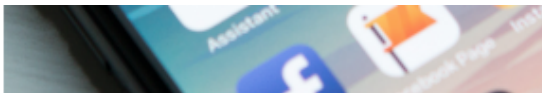
Only new products will be get added to the existing app.
\$acc->addProducts(\$consumer_key, \$products);

IF any product is not selected and it is part of the app earlier, then each product get deleted.
\$acc->deleteApiProduct(\$consumer_key, \$product);

Delete App Page

This is a custom module defined form, we can access this link from "View My Apps" Page.

Create new app



Client Secret	Operations
***** *****	Show Secrets Edit App Delete App

Drupal Form: \Drupal\dpboost_group_edge\Form\DeveloperAppDelete

```
$test_email = "test@experian.com";

$sac = new AppController($config['organization'], $client);
$app = $sac->loadApp($app_id);

$dac = new DeveloperAppController($config['organization'], $test_email, $client);
$dac->delete($appgetName());
```

Swagger Documentation - Authorize window

We are keeping custom code block in Swagger Documentation pages to simplify the user "Authorization" process.

Available authorizations

password:

Client credentials location:

Authorization header

Apps:

Select

client_id:

client_secret:

Scopes: [select all](#) [select none](#)

☐ admin

admin scope

Authorize

Close

Steps to generate Apps options - Logged in users:

- 1) Check loaded content(swagger) is of type "product_documentation".
- 2) Get content(swagger) related Product Group(Public, Private or Protected).
- 3) Check Developer/User is a member of Product Group(Public, Private or Protected).
- 4) If member, Connect to APIGEE Edge with Product Group.
- 5) Check Developer exist or not in APIGEE EDGE.
- 6) If exist, get developer related all Apps.
- 7) Generate the apps list in Swagger UI "Authorize" window.

Quick Guide

[Quick Guide to Start Using Global Developer Portal in Prod](#)

Apigee Admin Setup

Creating Edge Connections

Url: /admin/config/development/edge-connections

Name *

Name of the connection.

CONFIGURATION INFO

Edge Organization *

The Edge org to connect to.

Username *

Password *

Edge Server URL *

The Edge Server URL, including version. Leave default (https://api.enterprise.apigee.com/v1) for Cloud Edge instances.

Authentication Type *

☒ Basic

☐ OAuth

Name: Title of the edge connection

Edge Organization: Apigee organization name

username and password: Apigee login credentials

Edge Server URL: Can use default url

DB table name: dpboost_edge_connection

Save file in folder: private://.apigee_tenancies/

OKTA

Setup

We are using below libraries/modules, settings for SAML setup

1) PHP Application, SimpleSAMLphp(<https://simplesamlphp.org/>) for SAML Setup(Requests, Responses, Signature Verification, Encryption/Decryption etc..).

Installation is from Project Dependency list (please check composer.json)

Application Code: <project root folder>/vendor/simplesamlphp/simplesamlphp/

Application Configuration: Configuration directory is picked from the environment variable "SIMPLESAMPLPHP_CONFIG_DIR".
SIMPLESAMPLPHP_CONFIG_DIR value is - <project root folder>/simplesamlphp/config

2) Drupal Module (https://www.drupal.org/project/simplesamlphp_auth) - Integrates Drupal with SimpleSAMLphp application.

Installation is from Project Dependency list (please check composer.json)

This Modules, allows users to authenticate to a remote SAML identity provider (IdP) via a locally configured SimpleSAMLphp service point (SP).

3) Changes needed in <Web Root>/htaccess file to support ACS (Assertion Consumer Service) URI (<base url>/simplesaml)

Add this line in .htaccess file -> RewriteCond %{REQUEST_URI} !/simplesaml

4) Service provider ACS URL is <base url>/simplesaml/module.php/saml/sp/saml2-acss.php/default-sp

- 5) experian_sso custom module, This module provides below functionality
- a) Registration form - Drupal Custom Form
 - b) Login widget - Custom Block
 - c) Roles update on each login - Hook
 - d) Service to interact with the SimpleSAMLPHP authentication library.
 - e) Alters user edit form and registration form - Hook

User Login Widget, Needs environment variables "EXPERIAN_B2C_LOGIN_URL" and "EXPERIAN_SAML_REDIRECT_URL" to point proper okta instance.

Registration Page, Needs environment variable "EXPERIAN_B2C_LOGIN_URL" for user creation.

Changes

Do below one of the change

- 1) Create softlink in web root folder (<web root folder>/simplesaml), which points to SimpleSAMLPHP application WWW folder (Eg: ..
/vendor/simplesamlphp/simplesamlphp/www/).

We are using this approach in Developer Portal

- 2) Change Apache Conf folder with below sample code

```
Alias /simplesaml "D:/gdp-app/experian-global91/vendor/simplesamlphp/simplesamlphp/www/"
<Directory "D:/gdp-app/experian-global91/vendor/simplesamlphp/simplesamlphp/www/">
Require all granted
</Directory>
```

Mandatory attributes

GDP/SP expecting mandatory attributes(SAML Assertion) from OKTA - Username(Unique), Email, FirstName, LastName

Username maps to Drupal user name field

Email maps to Drupal email field