

Integration of Api Connect with OAuth

Public- Password grant

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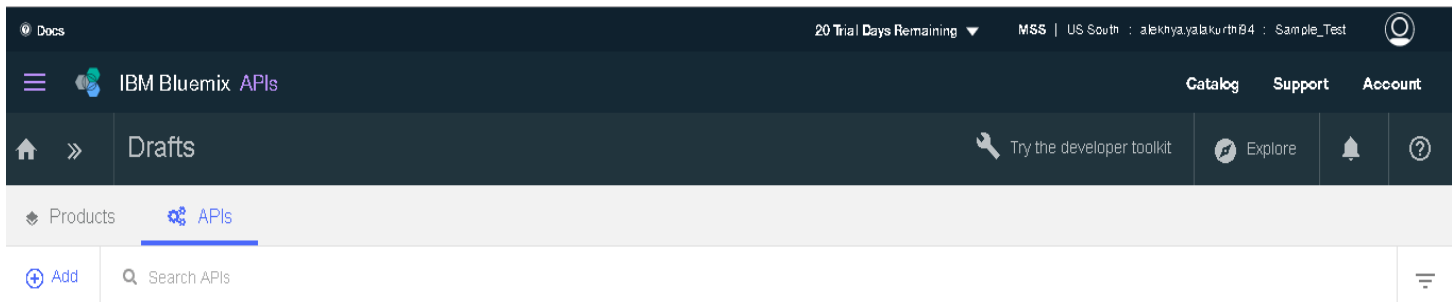
IBM Applications Developer,
Miracle Software Systems, Inc.

Date:02/02/2017

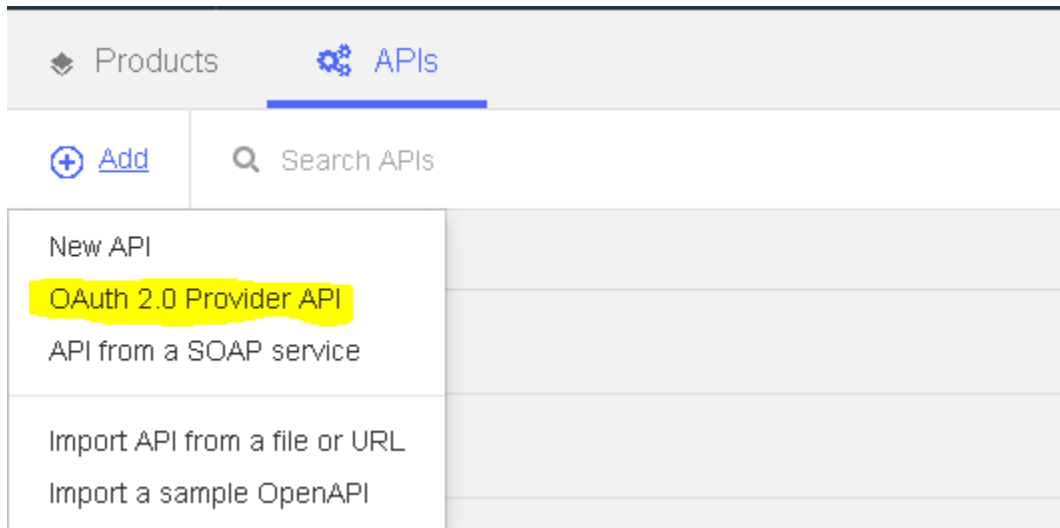
Create OAuth Provider API:

To create OAuth API, follow these steps:

1. Goto Drafts-> API's



2. Click on (+)Add and select OAuth 2.0 Provider API



3. Give Title: Public OAuth API, click Create API

OAuth 2.0 Provider API

Info	<div>Title *</div> <div>Public OAuth API</div>
	<div>Name *</div> <div>public-oauth-api</div>
	<div>Base Path</div> <div>/public-oauth-api</div>
	<div>Version *</div> <div>1.0.0</div>

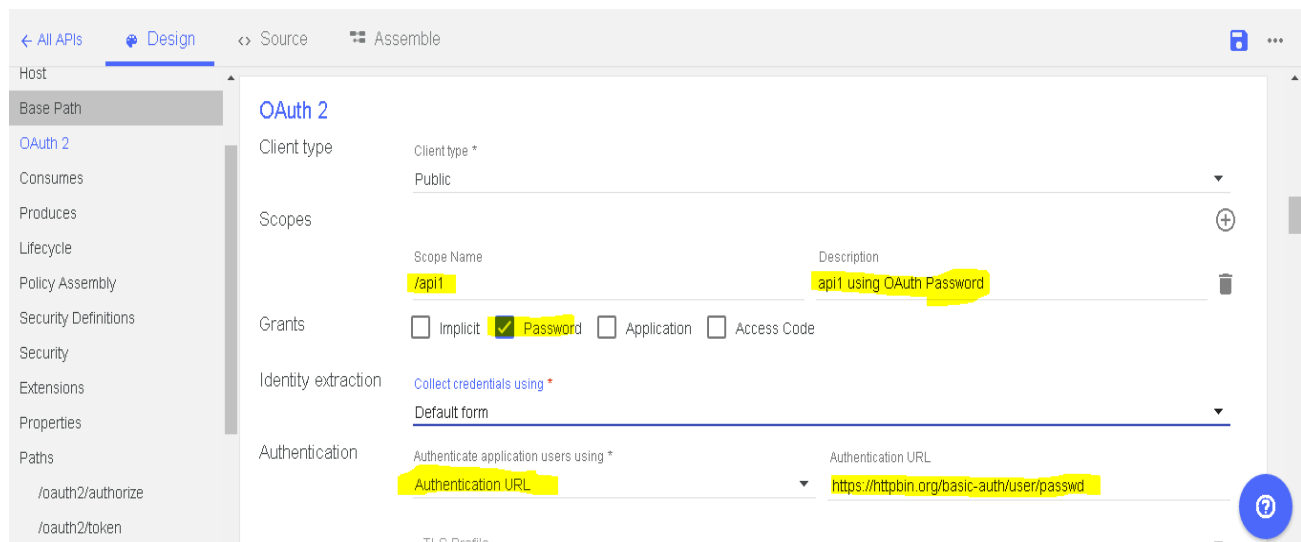
[Cancel](#) [Add a product...](#) [Create API](#)

4. Fill the fields:

- Base Path: /public

← All APIs	Design	Source	Assemble
Host			
Base Path		Base Path	Base Path
OAuth 2		/public	
Consumes			

- Scopes
 - Scope Name: /api1
 - Description: api1 using OAuth Password
- Grants
 - Password
- Authentication URL
 - example: <https://httpbin.org/basic-auth/user/passwd>



5. Click Save

Create the invoke API that needs to be secured:

Follow these steps:

1. Goto Drafts-> API's
 2. Click on (+)Add and select API
 3. Give Title: 'API1' , click Add
- Fill the fields:

4. Base Path: /api1

OAuth 2.0 Provider API

Info	<div>Title *</div> <div>API1</div>
	<div>Name *</div> <div>api1</div>
	<div>Base Path</div> <div>/api1</div>
	<div>Version *</div> <div>1.0.0</div>

[Cancel](#) [Add a product...](#) [Create API](#)

5. Under Security Definitions, click (+) , Select OAuth, and fill the following fields

- Name : public-oauth
- Description: public oauth provider API
- Flow: password
- Token URL:
 - `https://$(catalog.host)/{OrgName}/{Catalog Name}/public/oauth2/token`

Security Definitions (+)

public-oauth (OAuth) (-)

Name *

public-oauth

Description

public oauth provider API

Flow

Password

Token URL

`https://$(catalog.host)/alekhyayalakurthi94-sampletest/sb/public/oauth2/token`

Scopes

6. Under Security, toggle the public-oauth security definitions

Security



Define security requirements for the API. Multiple alternative sets can be defined, any one of which can be satisfied to access the API.

Option 1 ☒ public-oauth (OAuth)



7. Under Paths, click the (+) sign, change GET/path-1 to /users

Paths

/users

Path *

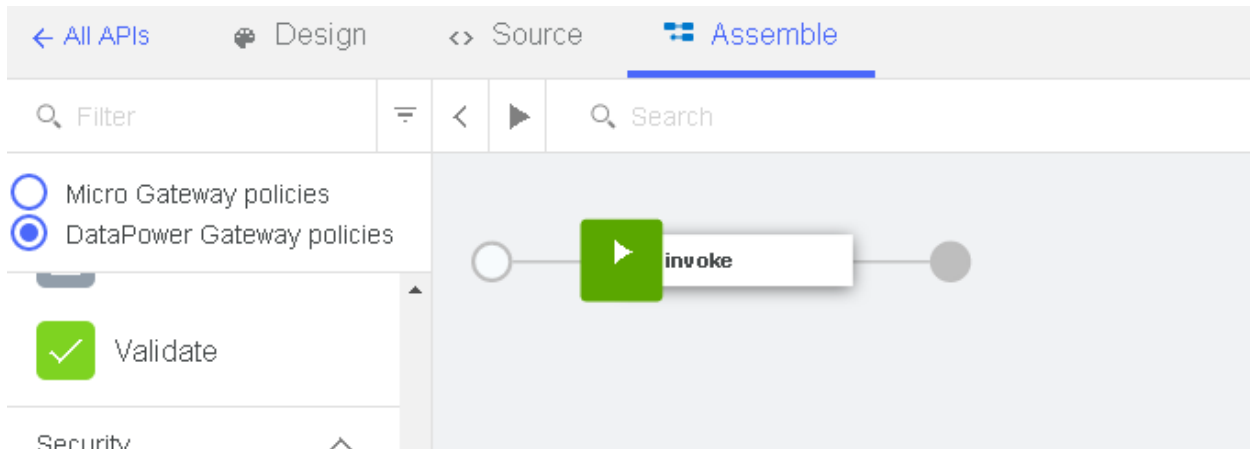
/users

Parameters

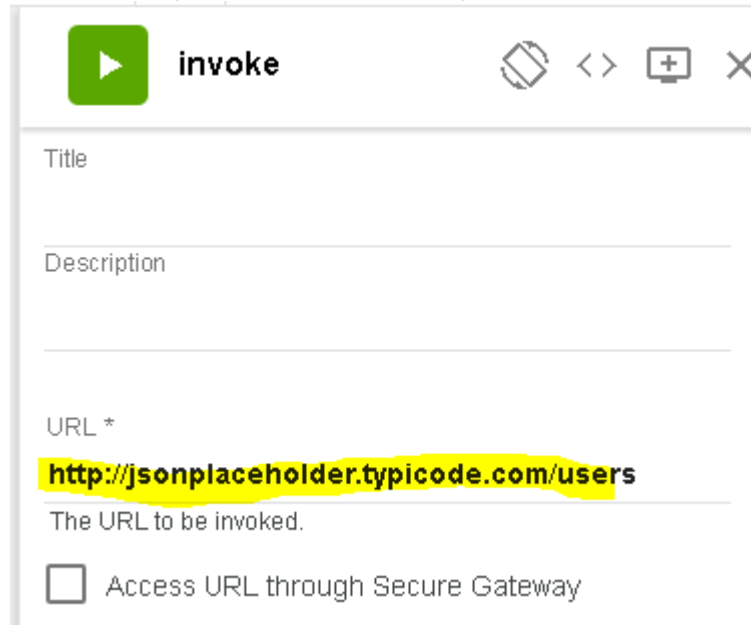
No parameters defined

GET /users

8. Click Assemble on the nav bar and select invoke



9. Change the URL to <http://jsonplaceholder.typicode.com/users>



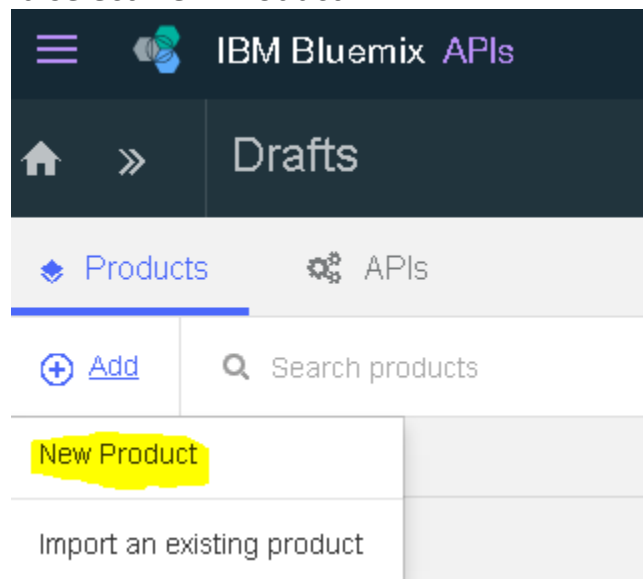
10. Click Save

Create a Product:

Now, create a product, that contains both Oauth provider API and Invoke API

To create plan and publish, follow these steps:

1. Go to Drafts-> Products
2. Click on (+) and select New Product



3. Under title, give Oauth_product
New Product

Info	Title *
	OAuth_product
	Name *
	oauthproduct
	Version *
	1.0.0

- Under API's, click (+) and add the API's we created. Public OAuth API and API1 and save it

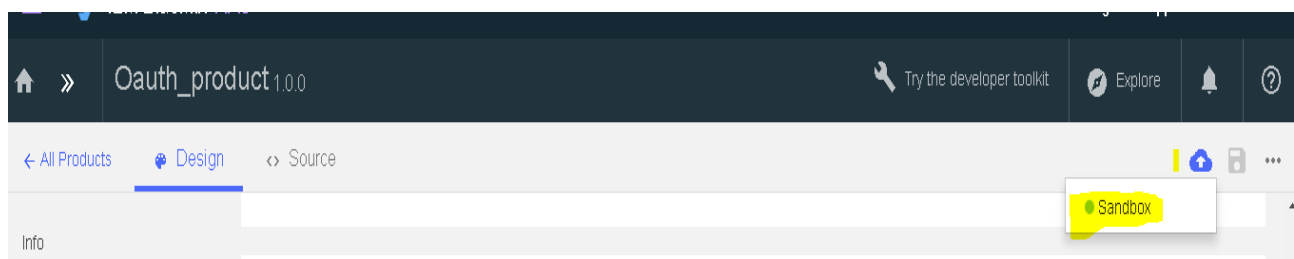
Select APIs

Select the APIs to include in this product. Any APIs removed from this

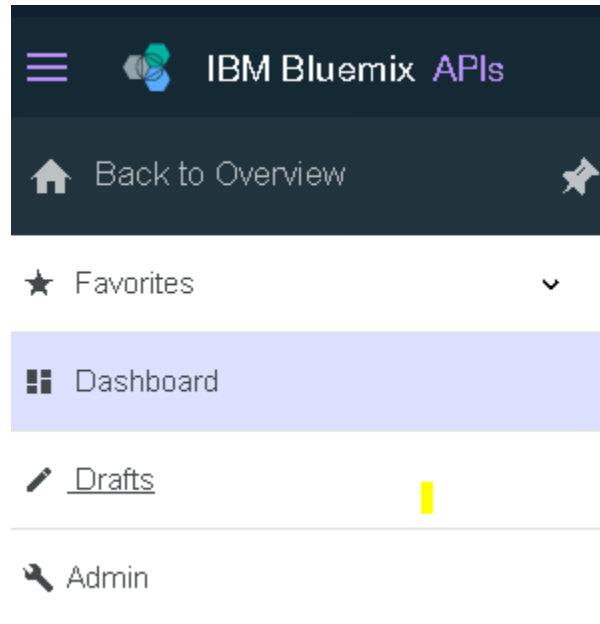
🔍 Search APIs

<input checked="" type="checkbox"/>	Public OAuth API	1.0.0
<input checked="" type="checkbox"/>	API1	1.0.0
<input type="checkbox"/>	jwtAPI	1.0.0
<input type="checkbox"/>	API_IIB	1.0.0

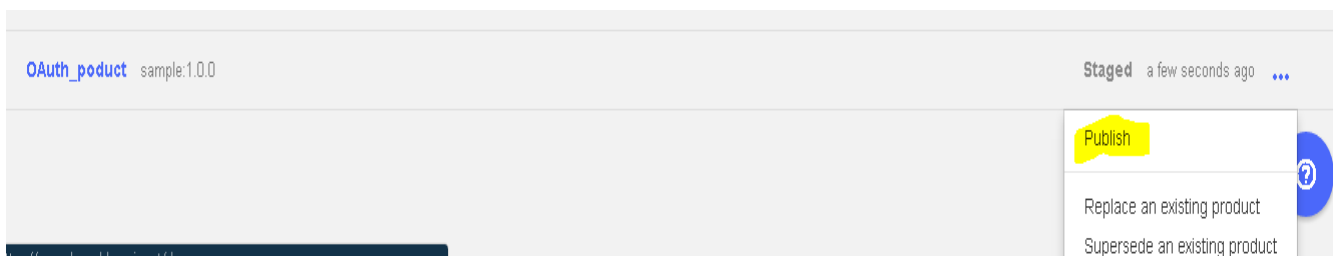
- Stage the product to Sandbox catalog



6. Go to Dashboard-> Sandbox



7. Under products, find the product OAuth_product



8. Click on ... and select publish

In Developer Portal:

Now, we need to create a developer application and subscribe the application to the Oauth_product default plan

1. Click on Apps-> Register New Application
2. Fill the following fields:
 1. Title: Oauth_App
 2. OAuth Redirect URI: <https://localhost>

Register application

Title *

Oauth_App

Description

OAuth Redirect URI

<https://localhost>

The URL authenticated OAuth flows for this application should be redirected to.

Submit

3. Note Client ID


4. Click on API Products-> Oauth_product
5. Subscribe

[Oauth_product 1.0.0](#)

APIs

Public OAuth API


API1



Oauth_product 1.0.0

☆☆☆☆☆
No votes yet

Plans

		Default Plan 
Public OAuth API 1.0.0	▼	100 per hour
API1 1.0.0	▼	100 per hour

Subscribe

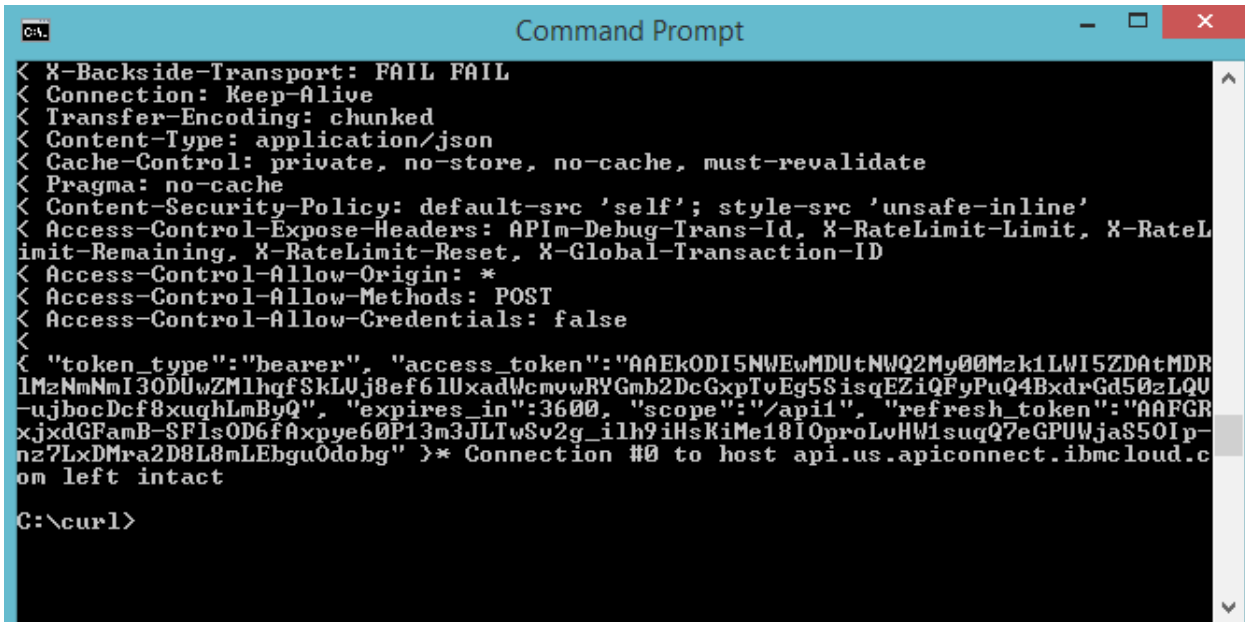
* = Mouseover for more information

\

To generate the token give the following:

```
curl -v -k -X POST -d 'grant_type=password&scope=<secured-api-base-  
path>&username=<username>&password=<password>&client-id>'  
"https://<gateway-host>/<org>/<catalog>/public/oauth2/token"
```

The token is generated



```
Command Prompt

< X-Backside-Transport: FAIL FAIL
< Connection: Keep-Alive
< Transfer-Encoding: chunked
< Content-Type: application/json
< Cache-Control: private, no-store, no-cache, must-revalidate
< Pragma: no-cache
< Content-Security-Policy: default-src 'self'; style-src 'unsafe-inline'
< Access-Control-Expose-Headers: APIM-Debug-Trans-Id, X-RateLimit-Limit, X-RateL
imit-Remaining, X-RateLimit-Reset, X-Global-Transaction-ID
< Access-Control-Allow-Origin: *
< Access-Control-Allow-Methods: POST
< Access-Control-Allow-Credentials: false
<
< {"token_type":"bearer", "access_token":"AAEkODI5NWUwMDU0tNWQ2Mg00Mzk1LWI5ZDAzMDR
IMzNmNmI3ODUwZm1hgf$klUj8ef6lUxadWcmvwRYGmb2DcGxpTvEg5SisqEZiQFyPuQ4BxdrGd50zLQU
-ujhocDcf8xuqhLmByQ", "expires_in":3600, "scope":"/api1", "refresh_token":"AAFGR
xjxdGFamB-SFlsOD6fAxppe60P13m3JLTWsu2g_ilh9iHsKiMe18lOproLvHW1suqQ7eGPUWjaS50Ip-
nz7LxDMra2D8L8mLEbgu0dobg"}* Connection #0 to host api.us.apiconnect.ibmcloud.c
om left intact

C:\curl>
```

Now, authorize the invoke api with the generated access token

```
curl -k -v -H "X-IBM-Client-Id:<client-id>" -H "Authorization: Bearer <access-token>" -X GET "https://<gateway-host>/<org>/<catalog>/api1/users"
```



```

C:\> curl -k -v -H "X-IBM-Client-Id:<client-id>" -H "Authorization: Bearer <access-token>" -X GET "https://<gateway-host>/<org>/<catalog>/api1/users"

< Vary: Origin, Accept-Encoding
< Access-Control-Allow-Credentials: true
< Cache-Control: public, max-age=14400
< Pragma: no-cache
< Expires: Fri, 27 Jan 2017 20:45:47 GMT
< X-Content-Type-Options: nosniff
< Etag: W/"160d-MxiAGkI3ZBrjm0xiEDfwqw"
< Via: 1.1 vegur
< CF-Cache-Status: HIT
* Server cloudflare-nginx is not blacklisted
< Server: cloudflare-nginx
< CF-RAY: 327dad531318202a-DFW
< Access-Control-Expose-Headers: APIn-Debug-Trans-Id, X-RateLimit-Limit, X-RateLimit-Remaining, X-RateLimit-Reset, X-Global-Transaction-ID
< Set-Cookie: __cfduid=dd93862ac84461ff2b30ebdc06228637d1485535547; expires=Sat, 27-Jan-18 16:45:47 GMT; path=/; domain=.typicode.com; HttpOnly
< X-RateLimit-Limit: name=rate-limit,100;
< X-RateLimit-Remaining: name=rate-limit,98;
<
[{"id":1,"name":"Leanne Graham","username":"Bret","email":"Sincere@april.biz","address":{"street":"Kulas Light","suite":"Apt. 556","city":"Gwenborough","zipcode":"92998-3874","geo":{"lat":"-37.3159","lng":"81.1496"},"phone":"1-770-736-8031x56442","website":"hildegard.org","company":{"name":"Romaguera-Crona","catchPhrase":"Multi-layered client-server neural-net","bs":"harness real-time e-markets"}},{"id":2,"name":"Ervin Howell","username":"Antonette","email":"Shanna@melissa.tv","address":{"street":"Victor Plains","suite":"Suite 879","city":"Wisokyburgh","zipcode":"90566-7771","geo":{"lat":"-43.9509","lng":"-34.4618"},"phone":"010-692-6593 x09125","website":"anastasia.net","company":{"name":"Deckow-Crist","catchPhrase":"Proactive didactic contingency","bs":"synergize scalable supply-chain s"}},{"id":3,"name":"Clementine Bauch","username":"Samantha","email":"Nathan@yesenia.net","address":{"street":"Douglas Extension","suite":"Suite 847","city":"McKenziehaven","zipcode":"59590-4157","geo":{"lat":"-68.6102","lng":"-47.0653"},"phone":"1-463-123-4447","website":"ramiro.info","company":{"name":"Romaguera-Jacobson","catchPhrase":"Face to face bifurcated interface","bs":"e-enable strategic applications"}},{"id":4,"name":"Patricia Lebsack","username":"Karianne","email":"Julianne.OConner@kory.org","address":{"street":"Hoeger Mall","suite":"Apt. 692","city":"South Elvis","zipcode":"53919-4257","geo":{"lat":"29.4572","lng":"-164.2990"},"phone":"493-170-9623 x156","website":"kale.biz","company":{"name":"Robel-Corkery","catchPhrase":"Multi-tiered zero tolerance productivity","bs":"transition cutting-edge web services"}},{"id":5,"name":"Chelsey Dietrich","username":"Kamren","email":"Lucio_Hettinger@annie.ca","address":{"street":"Skiles Walks","suite":"Suite 351","city":"Roscoeview","zipcode":"33263","geo":{"lat":"-31.8129","lng":"62.5342"},"phone":"(254)954-1289","website":"demarco.info","company":{"name":"Keebler LLC","catchPhrase":"User-centric fault-tolerant solution","bs":"revolutionize end-to-end systems"}},{"id":6,"name":"Mrs. Dennis Schulist","username":"Leopoldo_Corkery","email":"Karley.Dach@jasper.info","address":{"street":"Noberto Crossing","suite":"Apt. 950","city":"South Christy","zipcode":"23505-1337","geo":{"lat":"-71.4197","lng":"71.7478"},"phone":"1-477-935-8478 x6430","website":"ola.org","company":{"name":"Considine-Lockman","catchPhrase":"Synchronize d bottom-line interface","bs":"e-enable innovative applications"}},{"id":7,"name":"Kurtis Weissnat","username":"Elwyn.Skiles","email":"Telly.Hoeger@billy.biz","address":{"street":"Rex Trail","suite":"Suite 280","city":"Howemouth","zipcode":"58804-1099","geo":{"lat":"24.8918","lng":"21.8984"},"phone":"210.067.6132","website":"elvis.io","company":{"name":"Johns Group","catchPhrase":"Configurable multimedia task-force","bs":"generate enterprise e-tailers"}},{"id":8,"name":"Nicholas Runolfsdottir U","username":"Maxime.Nienow","email":"Sherwood@rosamond.me","address":{"street":"Ellsworth Summit","suite":"Suite 729","city":"Aliyaview","z
  
```