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1. How to use DATA API via OAuth2 - technical part

The main functional flows are represented in https://coface.github.io/v2.html#process.

After the proper authentication, always the customer needs to:

- start with Searching and identifying a company,

- check the products availability,

- order a product,

- **check the status of the order** and

- Retrieve the data.

All functional calls below can be found in the Postman collection uploaded under https://coface.github.io/v2.html#documentation.

Remark!! In the sample calls which follow, the variable *{{dataAPIBaseUrl}}* = **https://icon-api-test.coface.com/dataapi-v1**

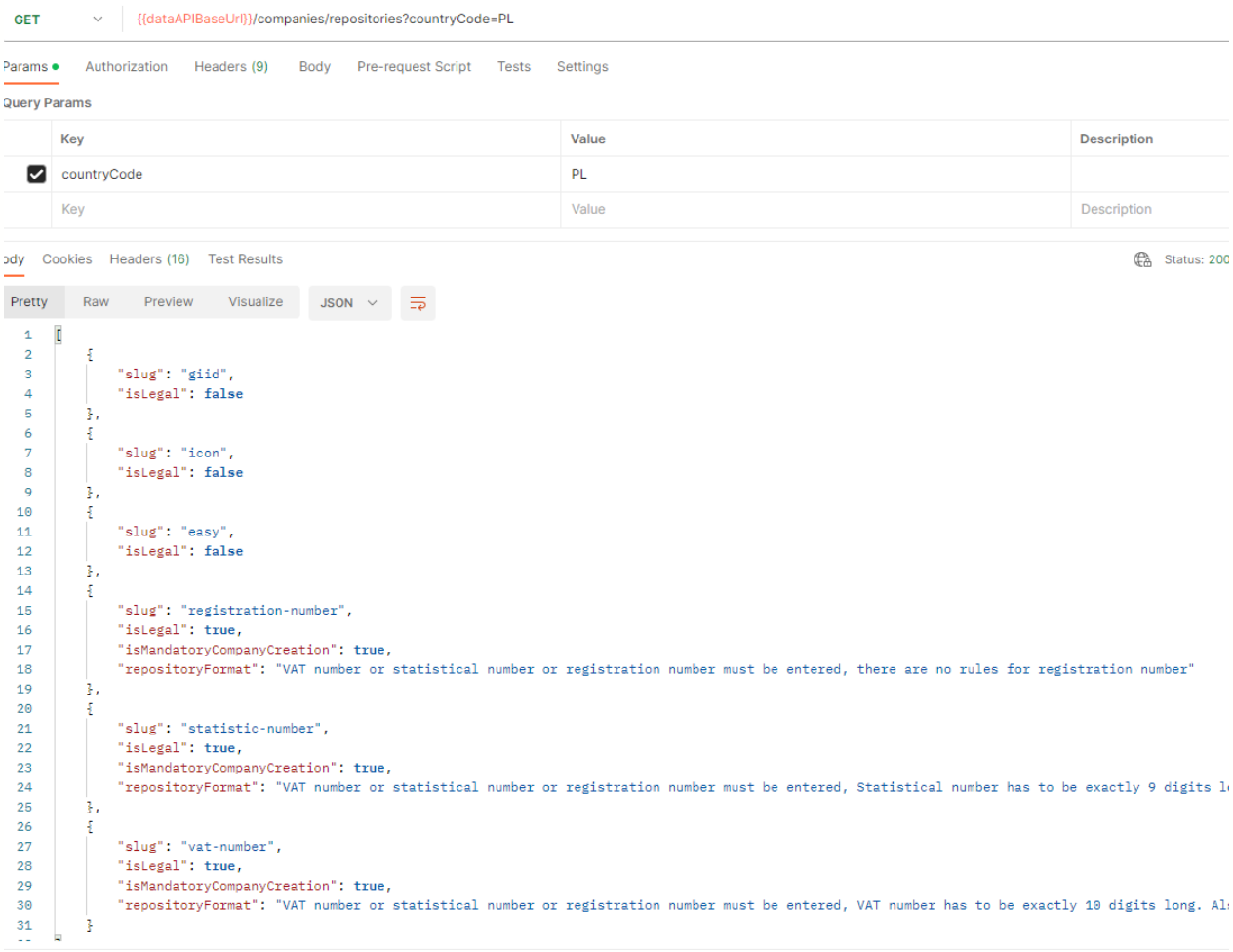
Prerequisite!! In order to perform the following calls, you should already have an user connected via AWS Dev portal. Please check this https://coface.github.io/utilities/DataAPI_UserConfiguration_SwaggerTesting.pdf, in case you do not have yet a connected and authorized user.

1.1 Get country identifiers

- Allows to obtain details of identifiers in specific countries which can be used for unique company identification (check which identifier is legal per country)
- Request can be done by specifying country ISO Code and in return customer get list of identifiers used in specific country

Request: ***GET*** *{{dataAPIBaseUrl}}/companies/repositories?countryCode=PL*

Response:



1.2 Search a company (identification of a company in the database)

There are several options for searching and identification of a company:

1.2.1 Search company by company info

Allows to perform search by name and countryCode mostly. Search can be performed using **minimum** companyName (or parts of the name) and countryCode:

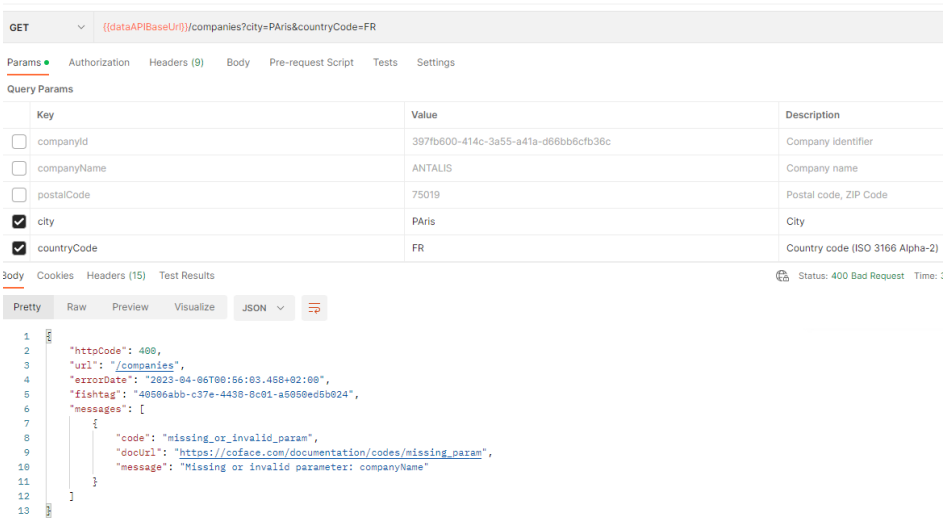
GET *{{dataAPIBaseUrl}}/companies?companyName=ANTALIS&countryCode=FR* => 28 companies returned

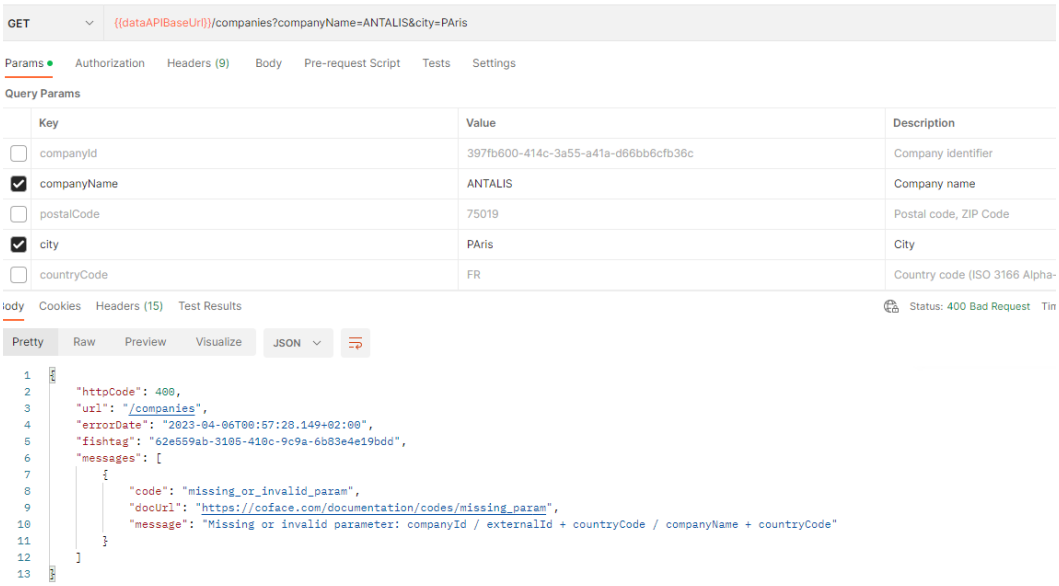
If more information is provided, like postalCode and city, more accurate the search is and company is identified:

GET *{{dataAPIBaseUrl}}/companies?companyName=ANTALIS&city=PAris&countryCode=FR* => 6 companies returned

GET *{{dataAPIBaseUrl}}/companies?companyName=ANTALIS&postalCode=75019&city=PAris&countryCode=FR* => 1 result returned. Company is identified.

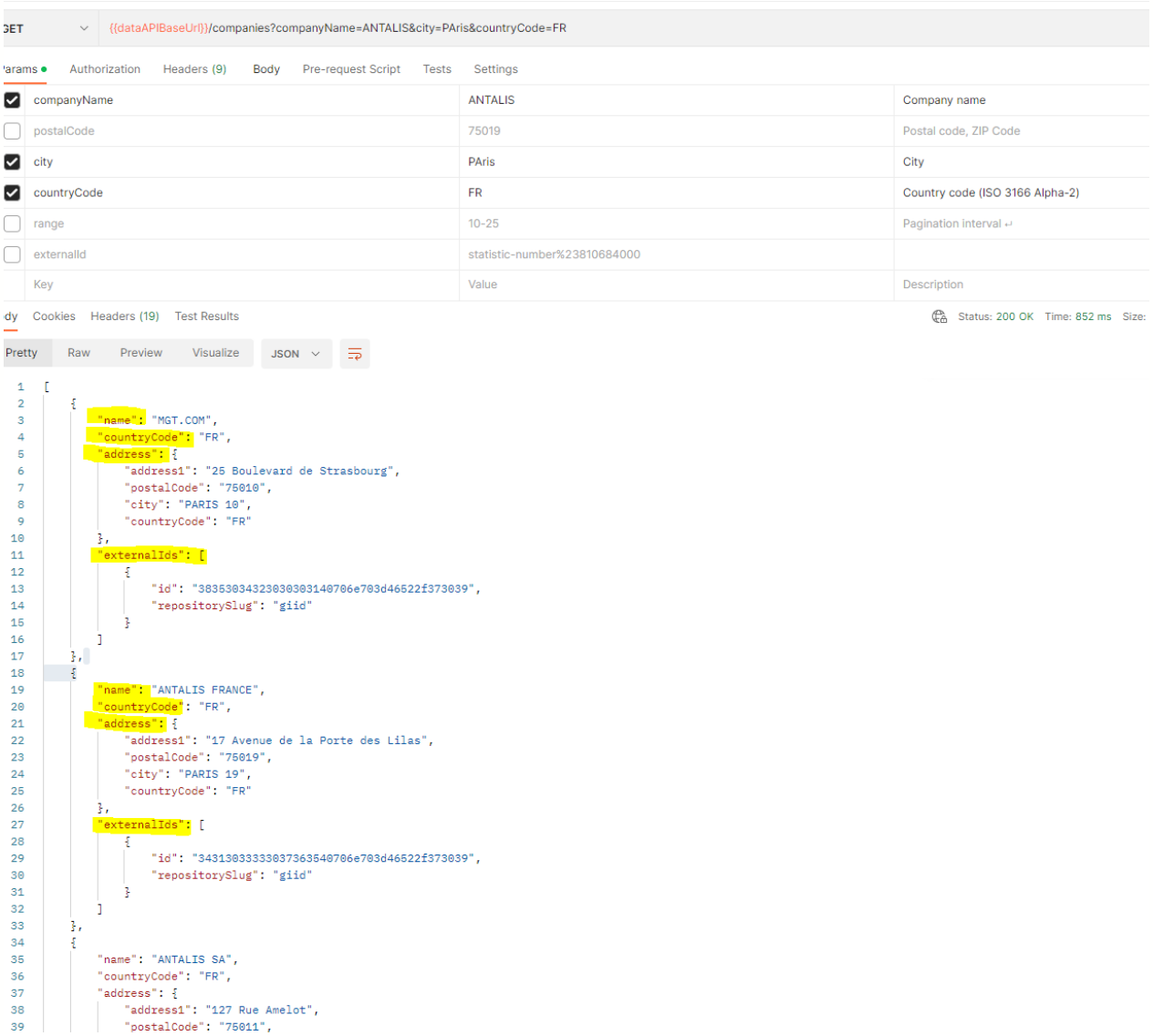
Error case: If combination companyName + countryCode is not provided, 400 Bad request is returned:





Success case – Returns list of companies found with the given criteria. For each company from the list, the response includes: name, countryCode, address and externalIds.

ExternalIds can be also used further for better identification of the company, checking the availability of the products or for ordering products for that corresponding company.



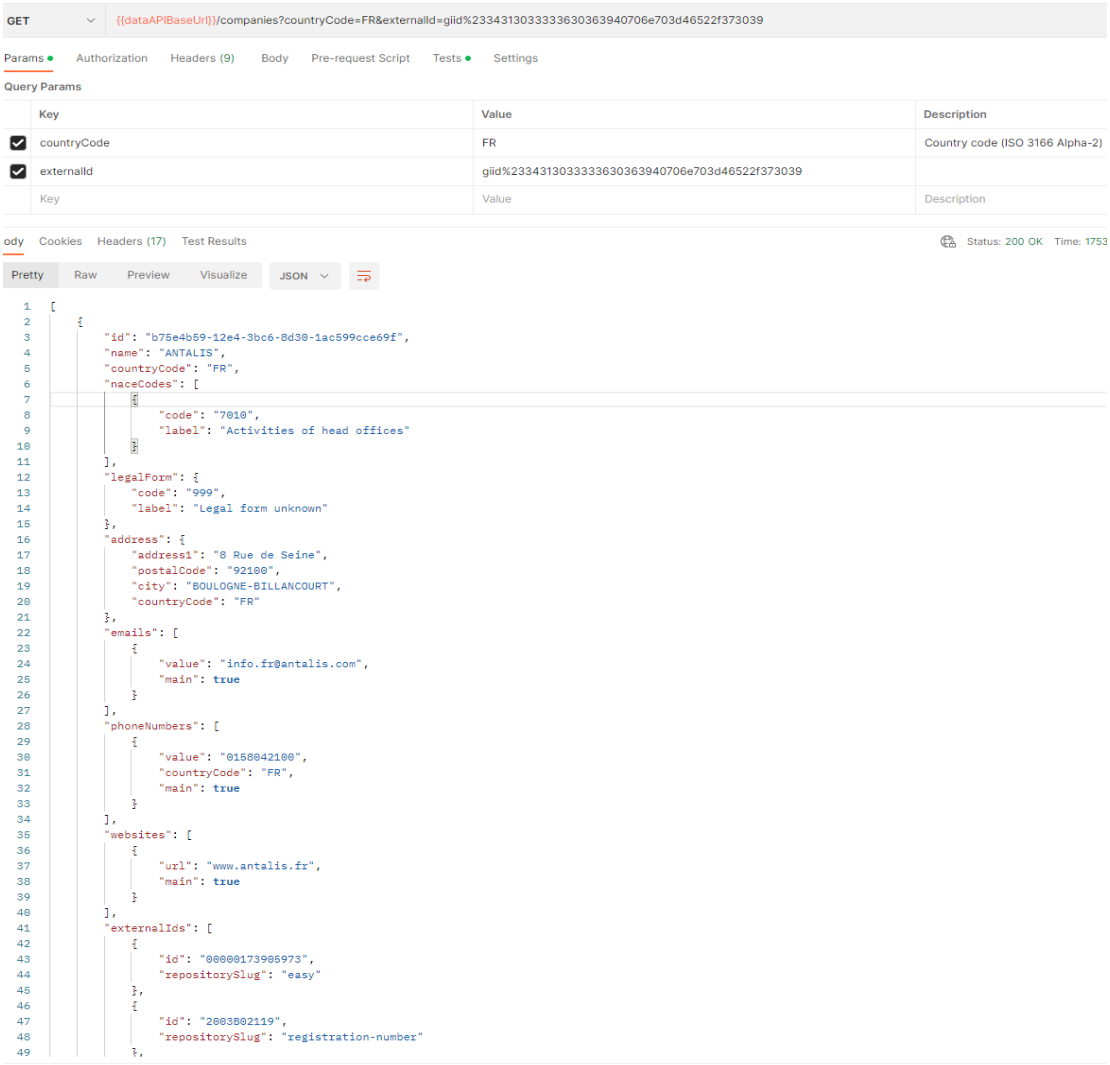
1.2.2 Search company by one of the externalId

Allows to search for a specific company by providing combination of countryCode + externalId. ExternalId can be one of the national identifiers or one of internal Coface IDs. It was either returned by previous method (using companyName + countryCode) either was already known (e.g.VAT number). Parameter **externalId** will be used with value {`repositorySlug`}#{`id`}.

Response returns either 1 unique result or no results.

Identifying company using giid number:

GET {{dataAPIBaseUrl}}/companies?countryCode=FR&externalId=giid%233431303333363036394070 6e703d46522f373039



GET {{dataAPIBaseUrl}}/companies?countryCode=FR&externalId=giid%233431303333363036394070 6e703d46522f373039

Params • Authorization Headers (9) Body Pre-request Script Tests • Settings

Query Params

Key	Value	Description
countryCode	FR	Country code (ISO 3166 Alpha-2)
externalId	giid%233431303333363036394070 6e703d46522f373039	
Key	Value	Description

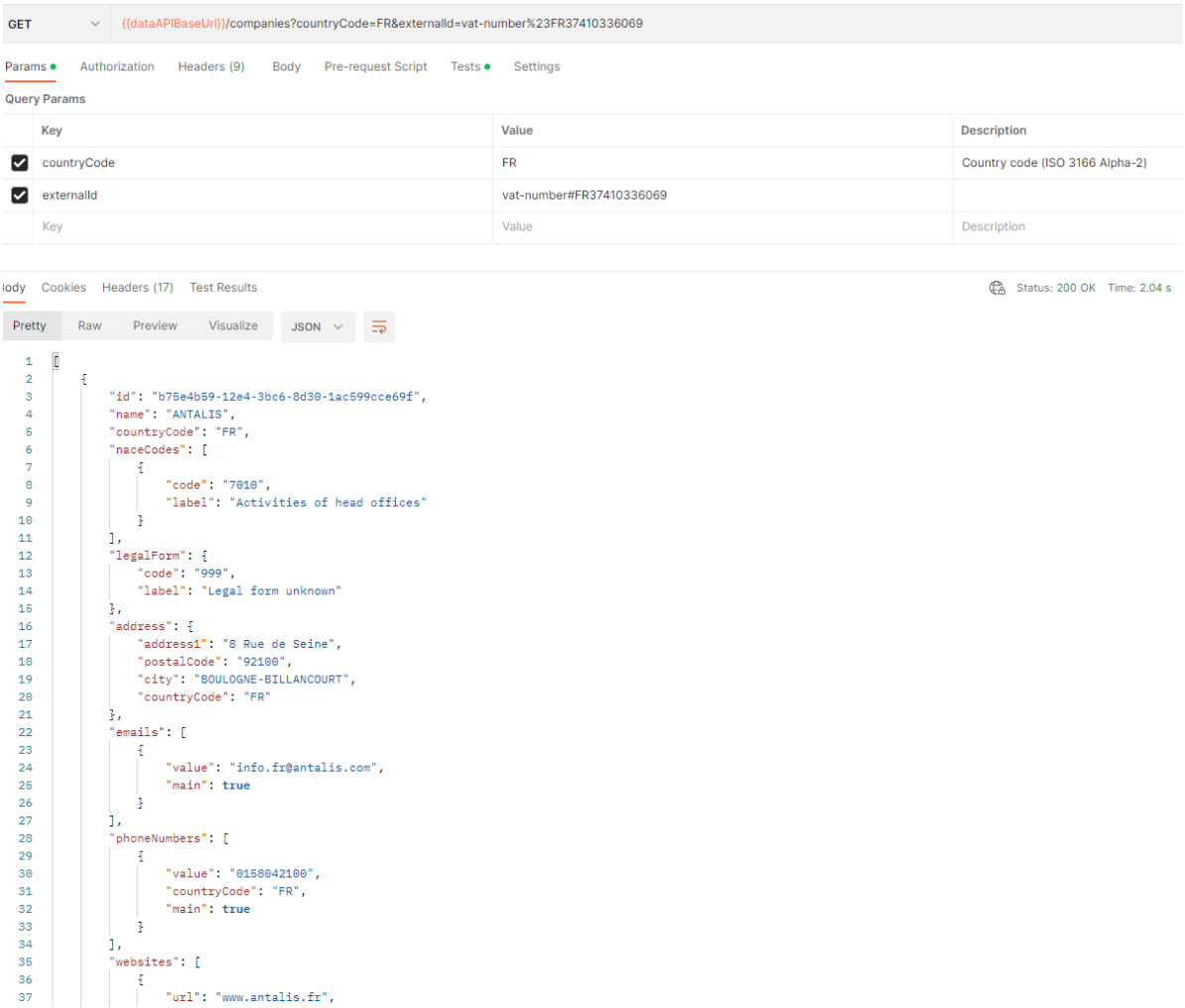
ody Cookies Headers (17) Test Results Status: 200 OK Time: 1753

Pretty Raw Preview Visualize JSON


```
[
    {
        "id": "b75e4b59-12e4-3bc6-8d38-1ac599cce69f",
        "name": "ANTALIS",
        "countryCode": "FR",
        "naceCodes": [
            {
                "code": "7010",
                "label": "Activities of head offices"
            }
        ],
        "legalForm": {
            "code": "999",
            "label": "Legal form unknown"
        },
        "address": {
            "address1": "8 Rue de Seine",
            "postalCode": "92100",
            "city": "BOULOGNE-BILLANCOURT",
            "countryCode": "FR"
        },
        "emails": [
            {
                "value": "info.fr@antalis.com",
                "main": true
            }
        ],
        "phoneNumbers": [
            {
                "value": "0158042100",
                "countryCode": "FR",
                "main": true
            }
        ],
        "websites": [
            {
                "url": "www.antalis.fr",
                "main": true
            }
        ],
        "externalIds": [
            {
                "id": "00000173905973",
                "repositorySlug": "easy"
            },
            {
                "id": "2003B02119",
                "repositorySlug": "registration-number"
            },
```

Identifying company using VAT number:

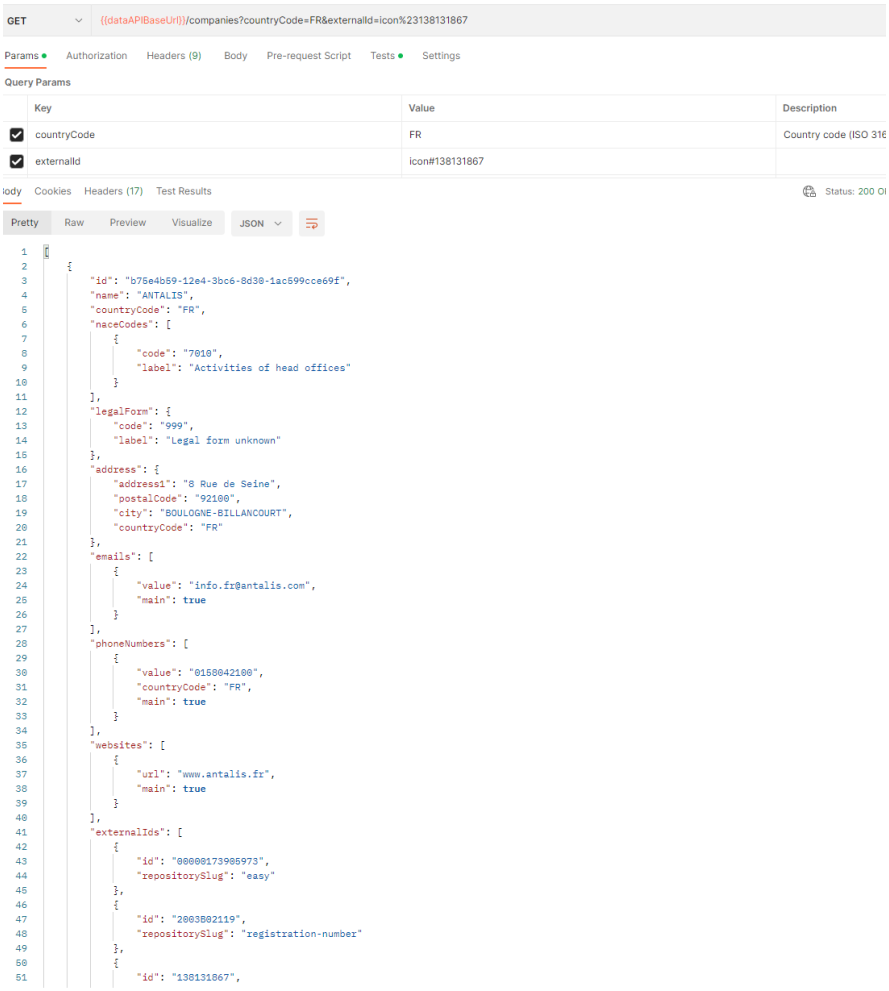
GET {{dataAPIBaseUrl}}/companies?countryCode=FR&externalId=vat-number%23FR37410336069




```
[
    {
        "id": "b75e4b59-12e4-3bc6-8d30-1ac599cce69f",
        "name": "ANTALIS",
        "countryCode": "FR",
        "naceCodes": [
            {
                "code": "7010",
                "label": "Activities of head offices"
            }
        ],
        "legalForm": {
            "code": "999",
            "label": "Legal form unknown"
        },
        "address": {
            "address1": "8 Rue de Seine",
            "postalCode": "92100",
            "city": "BOULOGNE-BILLANCOURT",
            "countryCode": "FR"
        },
        "emails": [
            {
                "value": "info.fr@antalis.com",
                "main": true
            }
        ],
        "phoneNumbers": [
            {
                "value": "0158042100",
                "countryCode": "FR",
                "main": true
            }
        ],
        "websites": [
            {
                "url": "www.antalis.fr",
```

Identifying company using ICON number:

GET {{dataAPIBaseUrl}}/companies?countryCode=FR&externalId=icon%23138131867

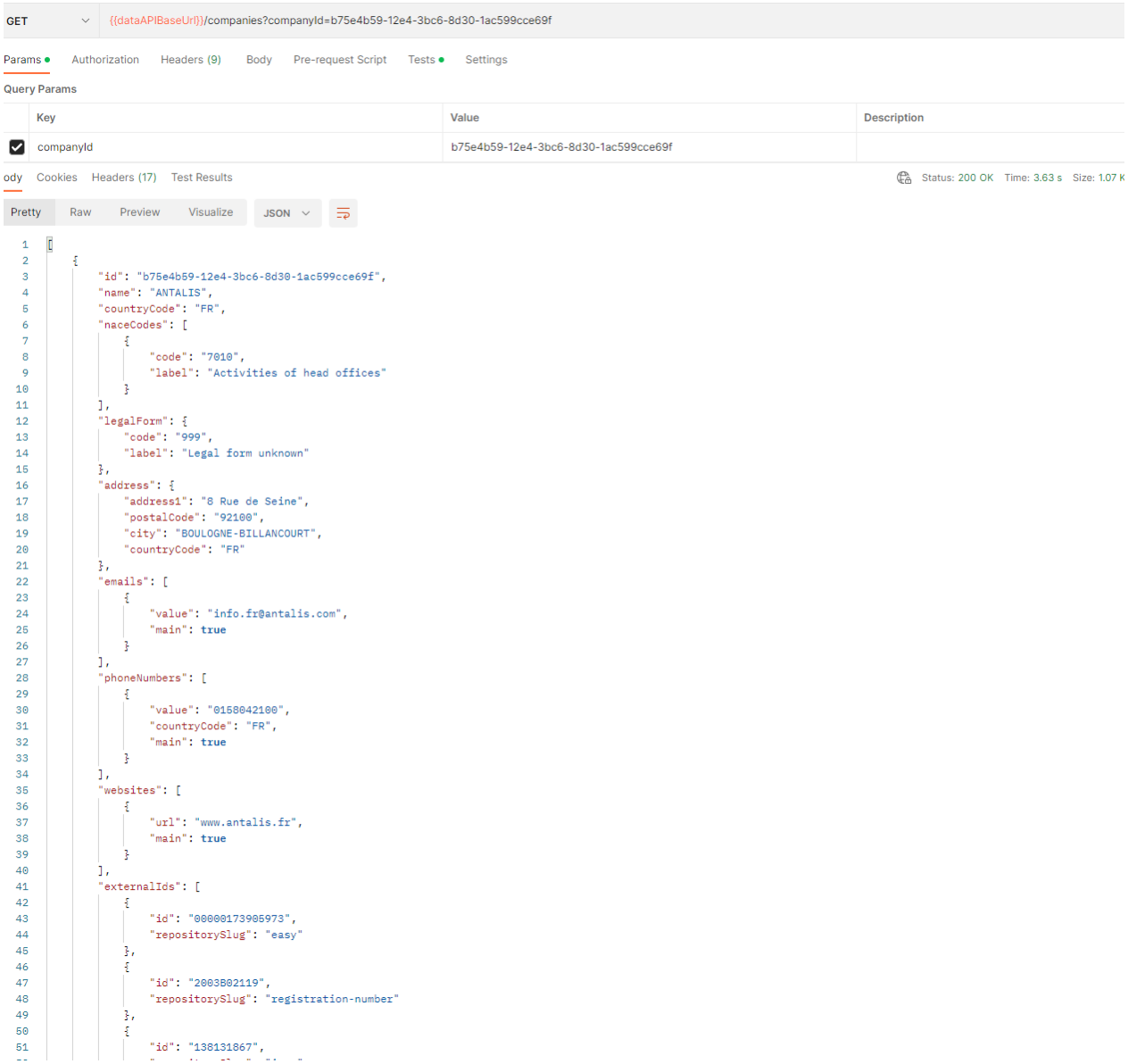


1.2.3 Search company by companyId

Allows to identify a company using the internal Coface id. This Id either is known without passing the precedent searches, either is returned when identifying the company as it could be seen in the previous methods.

If companyId parameter is provided, the other fields are ignored:

GET {{dataAPIBaseUrl}}/companies?companyId=b75e4b59-12e4-3bc6-8d30-1ac599cce69f



In all these cases, response should be identical. One company is uniquely identified.

Response contains information about the company requested: internal id inside ICON, name, countryCode, naceCodes, legalForms, address, emails, phoneNumbers, websites and externalIds.

Reaching this point, it means that customer either uniquely identified the company and can go to next step of checking the list of available products and order, or did not succeeded to find company.

1.3. Request a company identification

In case you did not managed to identify wanted company, you have the option to request a company identification by Coface and then to order products.

1.3.1 Request the identification

Endpoint to be used: ***POST*** *{{dataAPIBaseUrl}}/companies/identifications*

No parameters are required, but inside the request body, some information is required to be provided:

at least one of the externalID needs to be provided OR for some countries where no legal identifiers are needed, it is enough to provide the address.countryCode in combination with: name, address.postalCode and address.city.

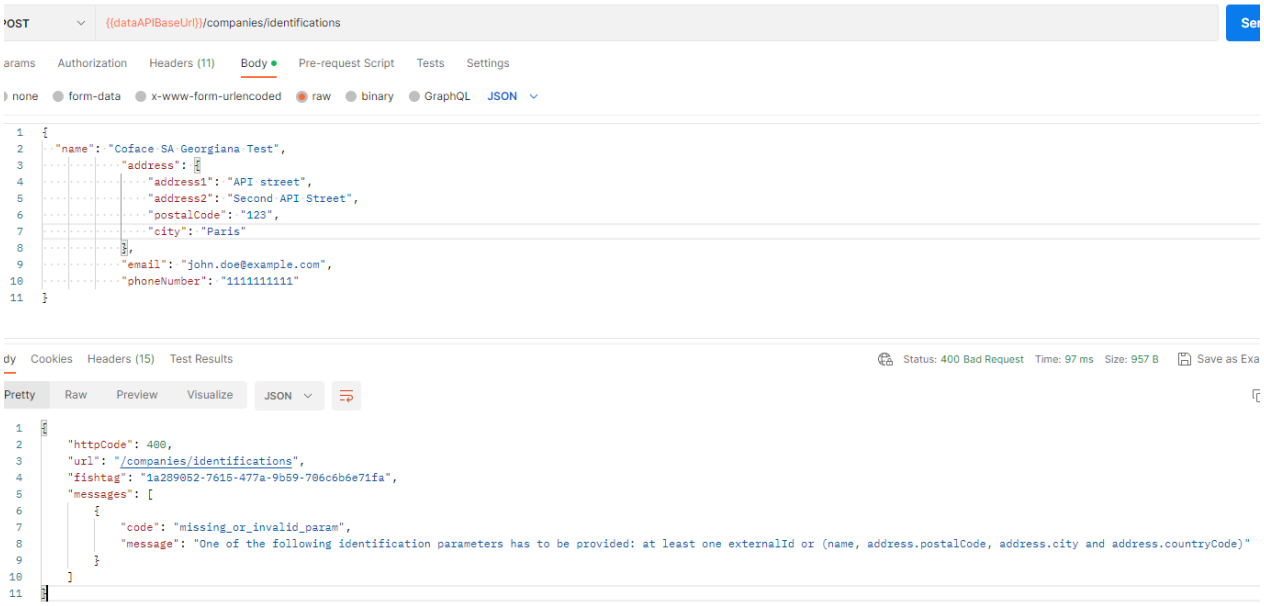
In case the provided information is not correct, response will be 400 Bad Request.

Information about which countries and what legal identifiers need to be provided, is provided via endpoint: ***GET*** *{{dataAPIBaseUrl}}/companies/repositories?countryCode={}.*

For each identifier, there are 2 fields which show if they need to be provided for a company identification and under which format:

```
"isMandatoryCompanyCreation": true,
"repositoryFormat": "VAT number or statistical number or registration number must be entered, there are no rules for registration number"
```

Error case: no address.countryCode

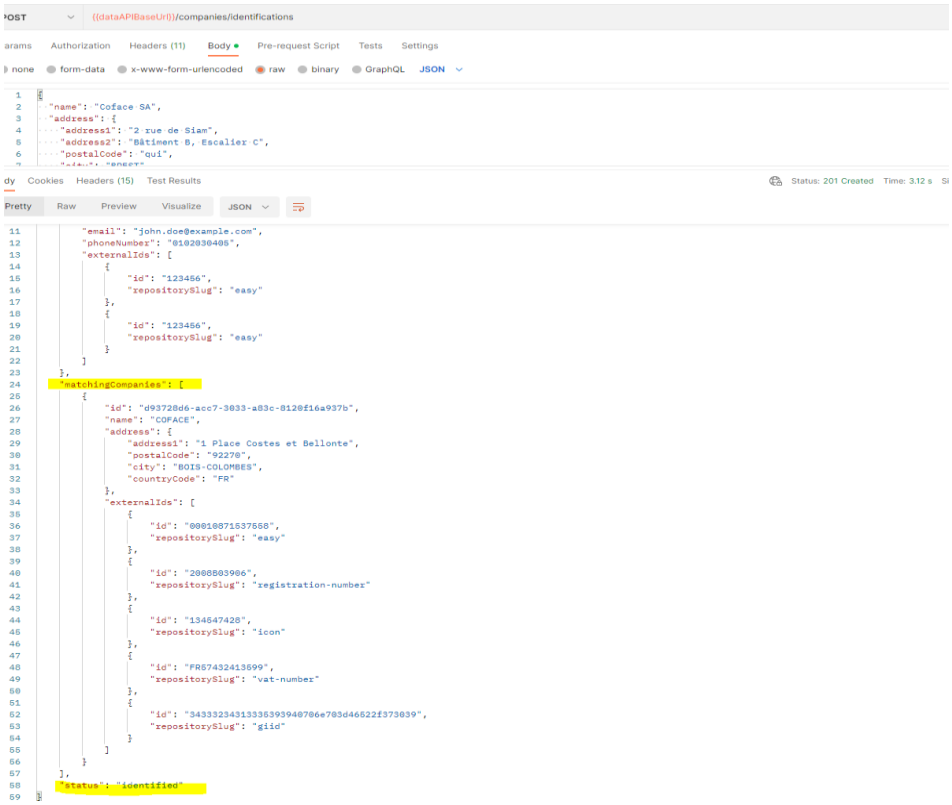


Success case - Request body:

```
{
  "name": "Coface SA",
```

```
  "address": {
    "address1": "2 rue de Siam",
    "address2": "Bâtiment B, Escalier C",
    "postalCode": "qui",
    "city": "BREST",
    "countryCode": "FR"
  },
  "email": "john.doe@example.com",
  "phoneNumber": "0102030405",
  "externalIds": [
    {
      "id": "123456",
      "repositorySlug": "easy"
    },
    {
      "id": "123456",
      "repositorySlug": "icon"
    }
  ]
}
```

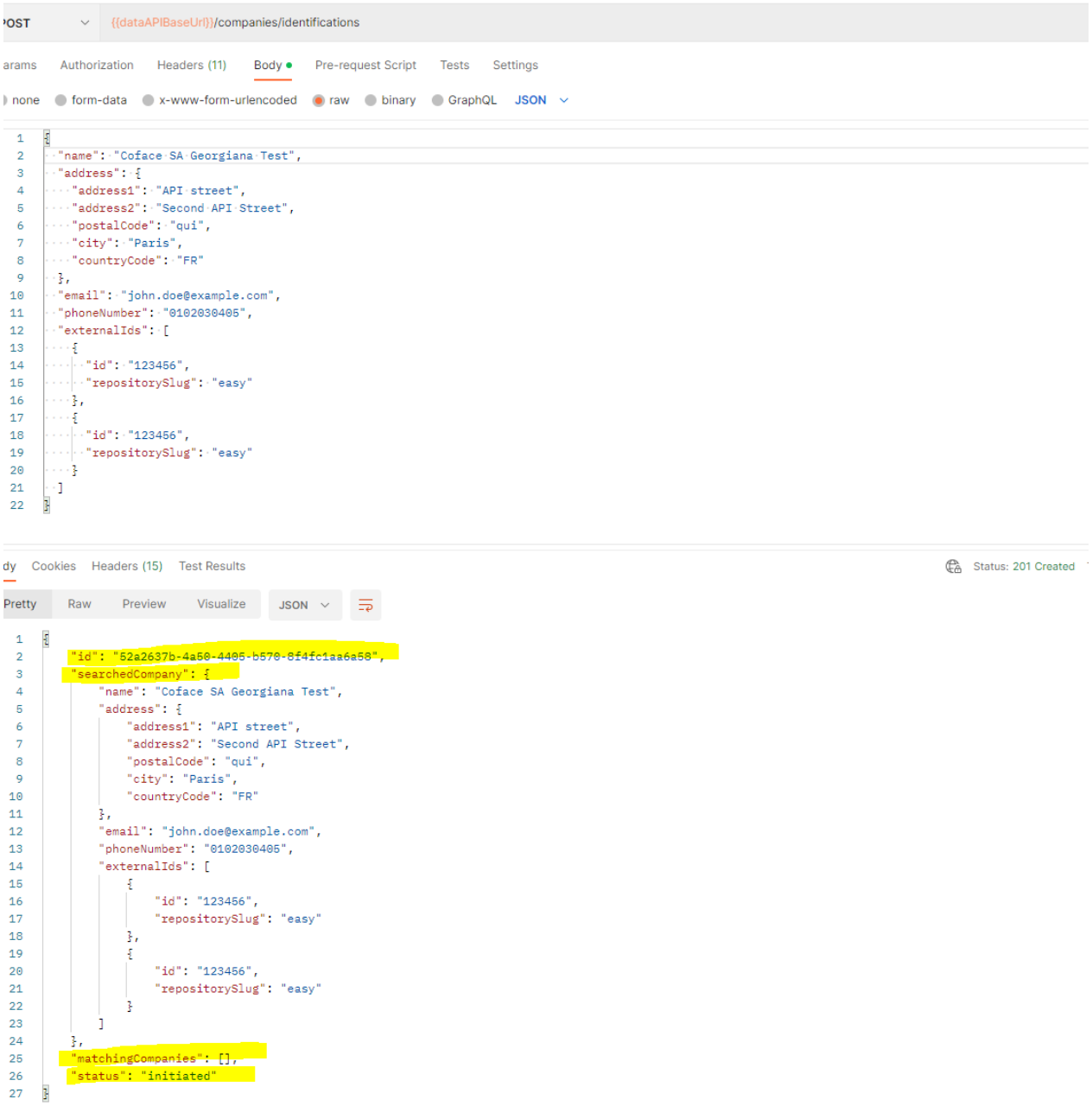

If based on the information provided, ICON identifies the company inside its database, then the response will provide the searchedCompany info, the matchingCompanies and status:"identified":



```
{
  "name": "Coface SA",
  "address": {
    "address1": "2 rue de Siam",
    "address2": "Bâtiment B, Escalier C",
    "postalCode": "qui",
    "email": "john.doe@example.com",
    "phoneNumber": "0102030405",
    "externalIds": [
      {
        "id": "123456",
        "repositorySlug": "easy"
      },
      {
        "id": "123456",
        "repositorySlug": "easy"
      }
    ]
  },
  "matchingCcompanies": [
    {
      "id": "d93728d6-acc7-3033-a83c-8120f16a937b",
      "name": "COFACE",
      "address": {
        "address1": "1 Place Costes et Bellonte",
        "postalCode": "92270",
        "city": "BOIS-COLOMBES",
        "countryCode": "FR"
      },
      "externalIds": [
        {
          "id": "00010871537658",
          "repositorySlug": "easy"
        },
        {
          "id": "2008803906",
          "repositorySlug": "registration-number"
        },
        {
          "id": "134647428",
          "repositorySlug": "icon"
        },
        {
          "id": "FR67432413699",
          "repositorySlug": "vat-number"
        },
        {
          "id": "34333234313336393940706e703d46822f373039",
          "repositorySlug": "giid"
        }
      ]
    }
  ],
  "status": "identified"
}
```


If inside ICON there are no companies matching information provided,

response will contain: id (which can be used for a future ordering), searchedCompany info (data provided in request), matchingCompanies = empty array and status:"initiated"



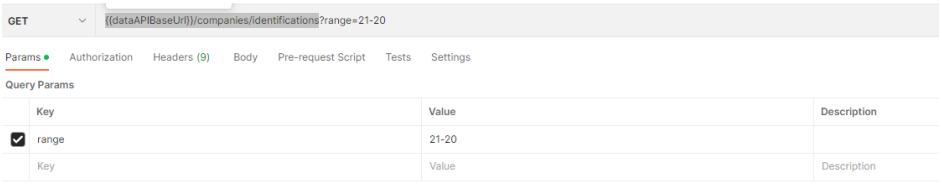
The second step that can be done is to order the wanted product for this company, even if it is not yet identified.

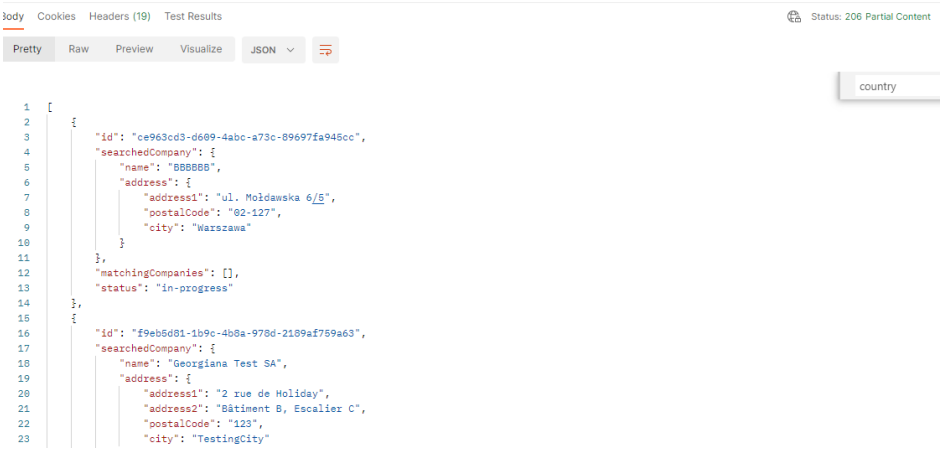
See details under 1.4.2 Ordering a product for a company not identified

1.3.2 Request all identifications

All requests to identify companies made on customer where you have the profile/ user are shown under endpoint:

GET {{dataAPIBaseUrl}}/companies/identifications





1.4. Ordering a product

The structure of the request depends from the result of searching/identification of company.

1.4.1 Ordering a product for an identified company:

Remarks!!

1. Slugs and product codes

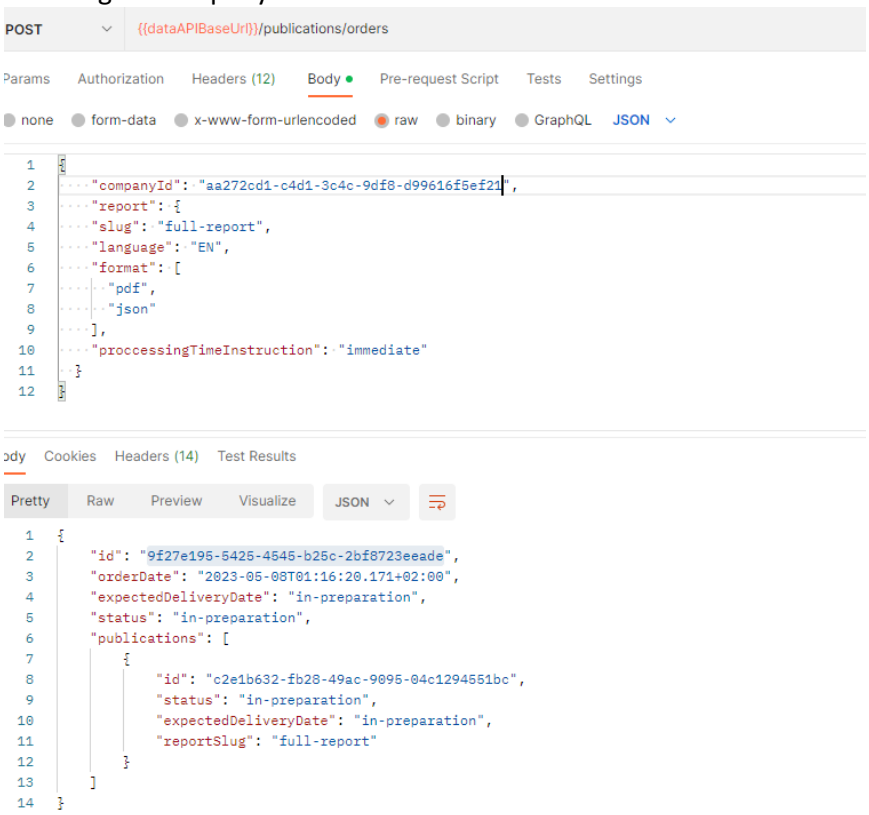
Attention: for DRAGON products (DRA, CO, AO) availability is not immediate. Therefore *processingTimeInstruction* option should have value `immediate_if_available_inquiry_otherwise` or `inquiry` with investigationSpeedLevel : normal.

2. Format of reports

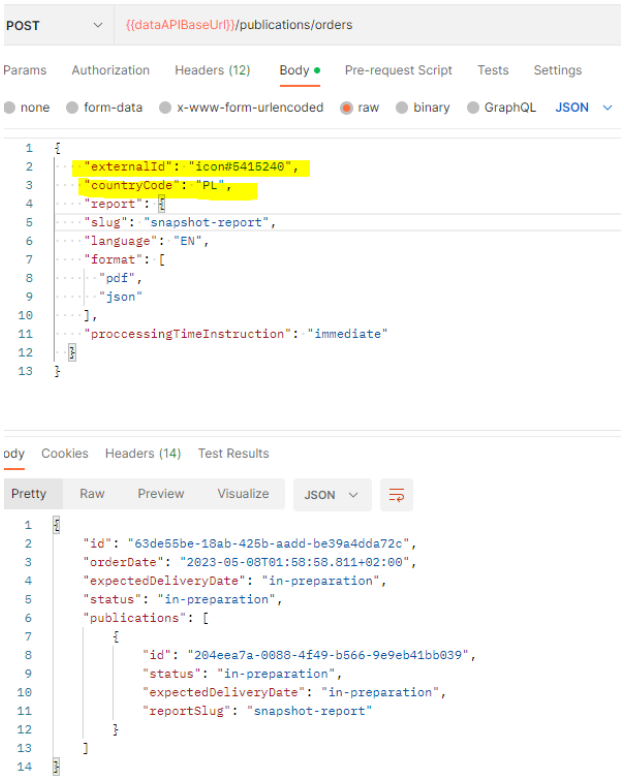
API allows to request report in different formats such as JSON, XML, PDF or HTML. For JSON and XML it will require additional mapping on customer side to integrate structured form of data to his own system needs.

3. Ordering a product can be made either using the internal companyId returned by the API in one of the previous commands (the ones for identifying the company) OR using one of the externalIds (same, returned by the API when identifying the company)

Ordering via companyId:



Ordering via externalId:



1.4.2 Ordering a product for a company not identified

Prerequisite: you need to request an Identification of the company on which you need to order (See section **1.3.1 Request the identification)** so that you have the id returned by ICON.

Endpoint to be used:

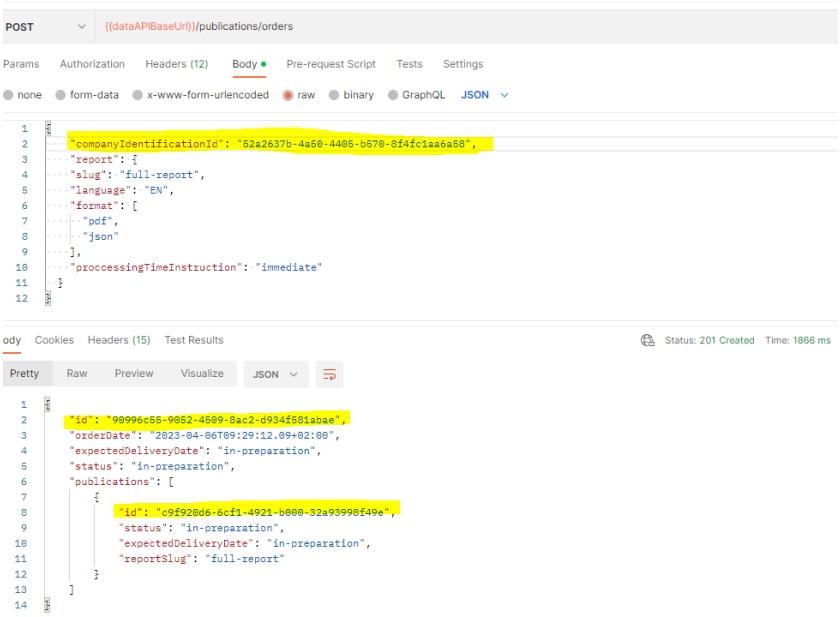
POST *{{dataAPIBaseUrl}}/publications/orders* or

POST *{{dataAPIBaseUrl}}/monitorings/orders*

Request body:

```
{
    "companyIdentificationId": "52a2637b-4a50-4405-b570-8f4fc1aa6a58",
    "report": {
    "slug": "full-report",
    "language": "EN",
    "format": [
      "pdf",
      "json"
    ],
    "proccessingTimeInstruction": "immediate"
  }
}
```

Response is the same as when ordering for an identified company. From here, all the other steps can be performed: get status of the order and, when ready, get the content of the order.



No parameters

Body of the request should contain mandatory information such as: company-id or other identifier, product code, format, language. Products available and their availability are returned previously by calling GET /company endpoint (mentioned at 4.2.2).

More details and explanation for fields that need to be present in the body, can be found behind each element from swagger, by clicking on Model and after that, on arrow down for each drop down that is available.

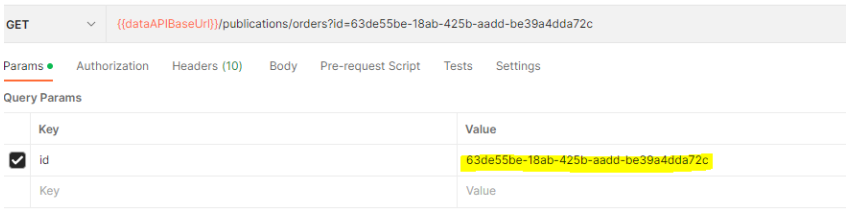
Swagger can be found under AWS Dev portal: https://devportal.coface.com/apis/qves74kqv0/v1

1.5. Checking order status

After using the POST method, customer gets as response a JSON structure containing:

- one id which allows checking the status of the order (initial status of request is “in-preparation”)
- “publications” section containing all products ordered in same order. All of them have this initial status “in-preparation”

In order to check the status of the whole order, first id value must be used for endpoint *GET /publications/orders?{id}*

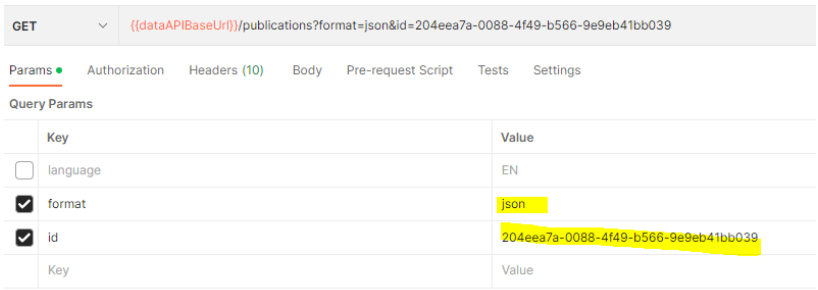


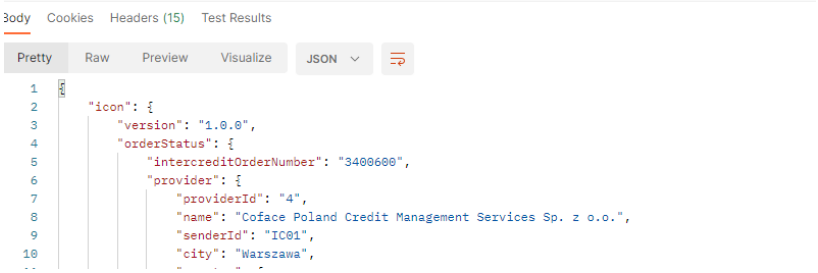
Status of the order will be ready if all publications of the order are ready. If one of the publication is not ready, the status of global order will be still “in-preparation”.

Attention! Only when status of the order / publication will be “ready” you will be able to retrieve the content of the corresponding product ordered (publication)

1.6. Retrieving the data

If order is finished, customer can call method *GET /publications?format={format}&{id}*
Format and id parameters are mandatory. Format should be the one used when POST call was made and id should be the id returned in “publications” section returned by API on POST method.





1.7 Request Monitoring

Customer can request monitoring, by **ordering one of the combined products**: *Full Report with Monitoring, Snapshot Report with Monitoring, DRA with Monitoring, @ Credit Opinion with Monitoring, Advanced Opinion with monitoring, Country Risk Assessment with monitoring, and Sector Risk Assessment with monitoring.*

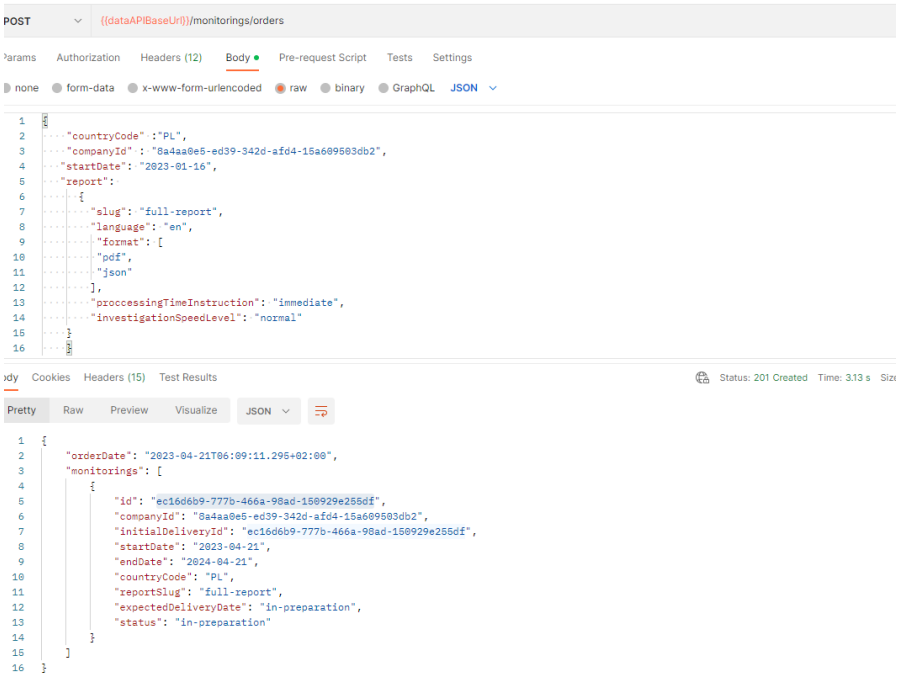
Only identified companies can be monitored.

By default Monitoring should last 12 months.

In order to order a combined product, endpoint ***POST*** *{{dataAPIBaseUrl}}/monitorings/orders*

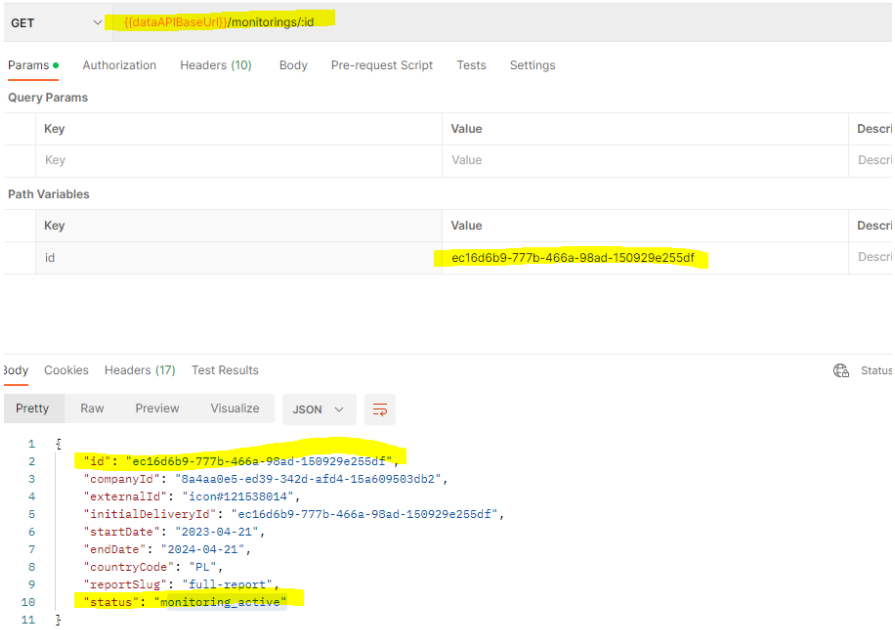
needs to be used, using the slug/product id returned by API when company was identified.

So, if I identified a company and I have the companyID, I am placing the monitoring order:



In the response I am getting some information like: Id of the monitoring order, start and end date of the monitoring, status (which is “in-preparation”) , expectedDeliveryDate, companyId, country Code and product for which monitoring was ordered.

Now, I can check the status of this order using endpoint ***GET*** *{{dataAPIBaseUrl}}/monitorings/:id*



If the request is successful (status is “monitoring_active”) then the company starts to be monitored.

1.8 Retrieving content of the report / product ordered via monitoring order

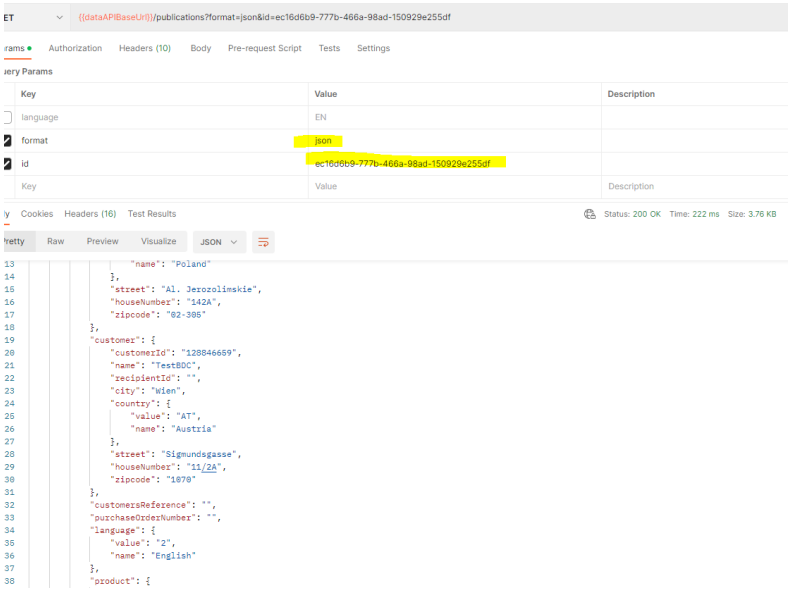
Because a combined product was ordered, we can also retrieve the content of the product ordered.

Using the id returned by the POST monitoring order (see 1.7), we are getting the content of the product using endpoint ***GET*** *{{dataAPIBaseUrl}}/publications?format={}&id={orderId}*

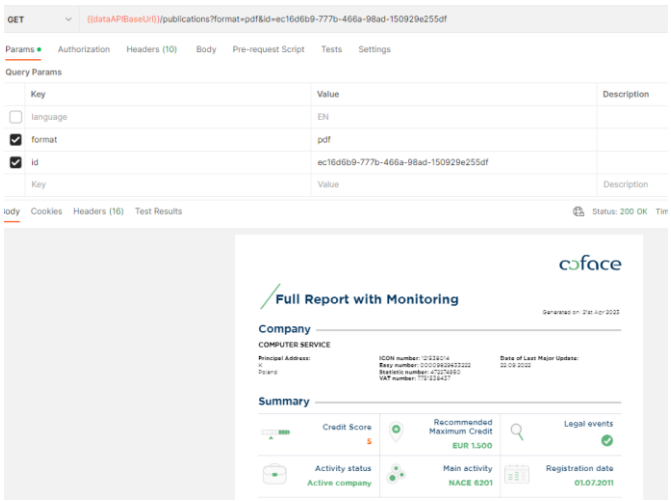
Where orderId is the id returned the API when posting the monitoring order

Format paramter is mandatory. As we ordered in 2 formats, we can retrieve both of them (reminder: only for CCE companies)

JSON format:



Pdf format:



1.8 Retrieving monitoring notifications

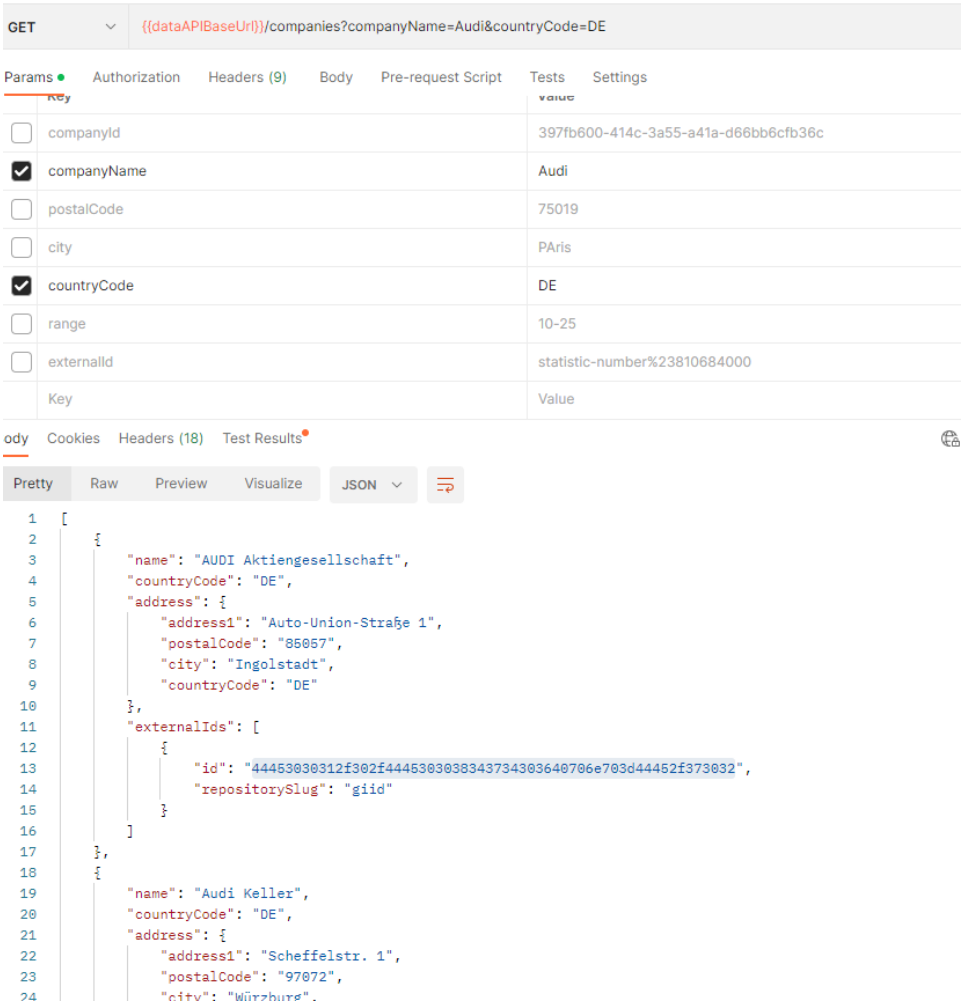
TBD!

2. Use cases

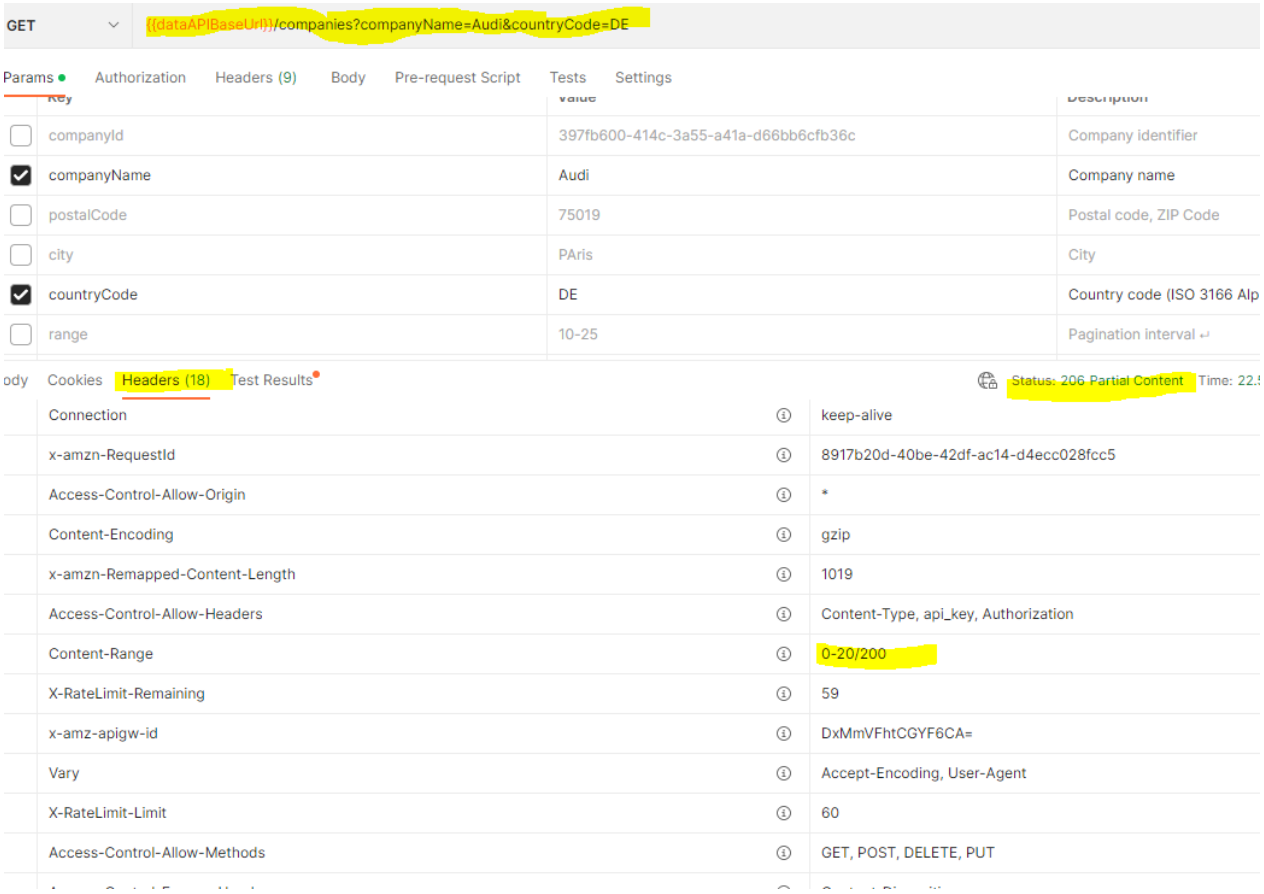
2.1 Ordering multiple products for same company

You want to order some products for Audi Company in DE

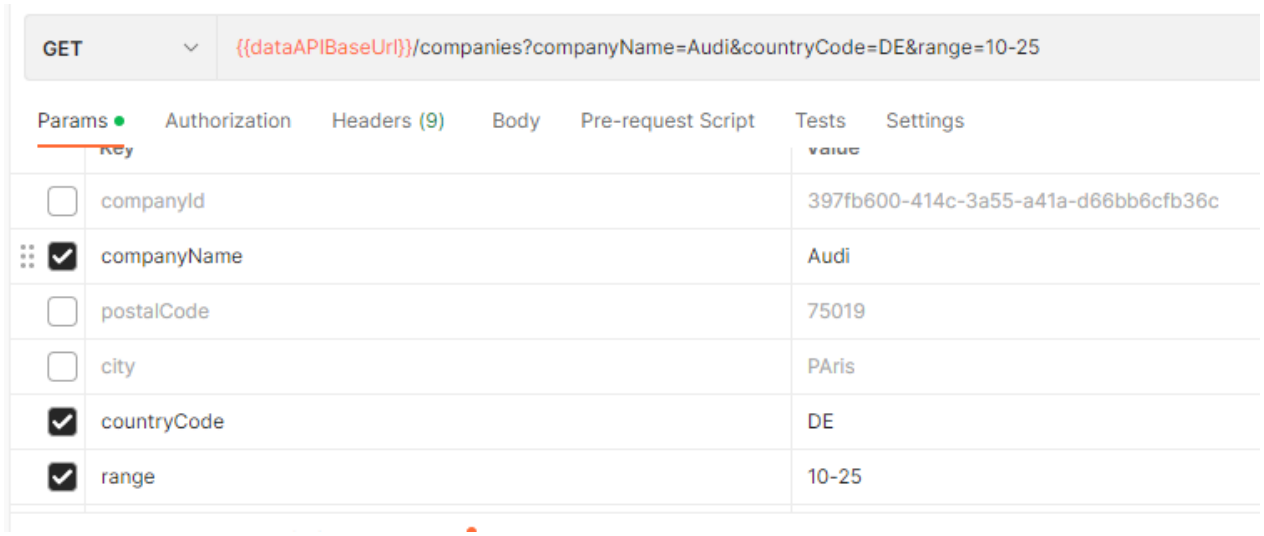
Searching using company name and country code, as this is what you know currently:



Call is sent to one of our providers (the one to which your customer profile is routed to). Provider is returning all results that it has with this name and country code. In this case, API returned 200 results. Per page we have 20 results, and pagination is in place (you can see the 206 partial content, and headers values highlighted below):

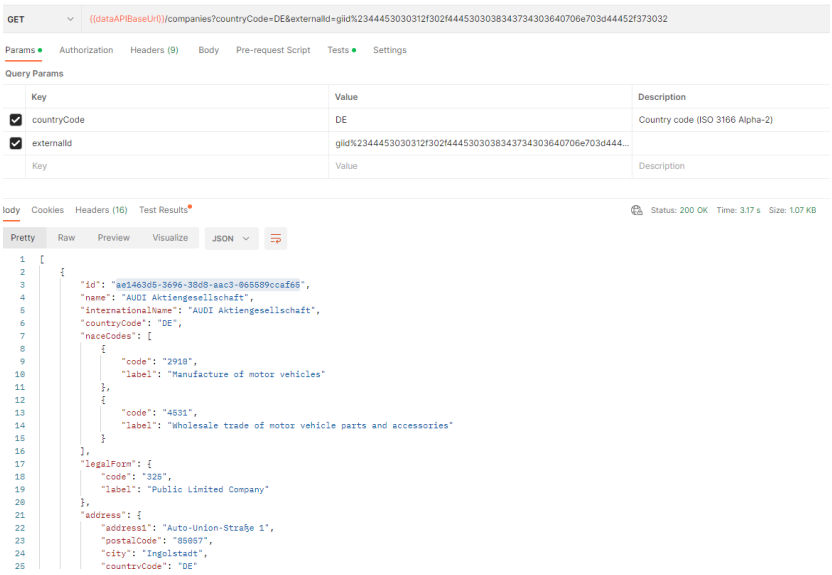


You have 200 results. In order to check others which are not in first page, you need to use the range parameter. We are showing max 20 results per page.



Now, out of 200 companies, you need to identify one of them in order to order some products.

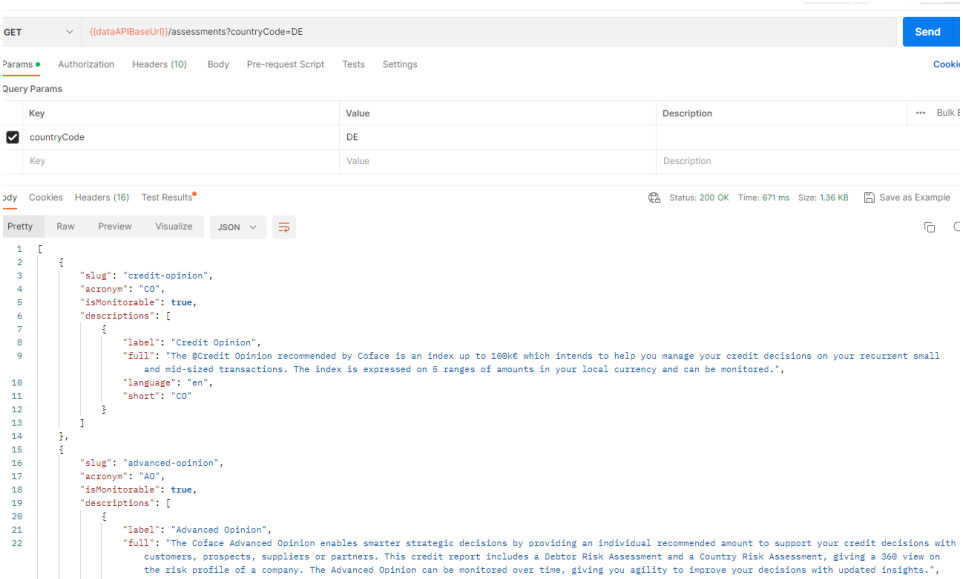
There are 2 ways: either you choose one, and take the giid value and use it as externalId parameter and make the order with it, OR, you make one more call and uniquely identify the company and then you can order using another identifier replied by API (vat number, companyId, icon no)



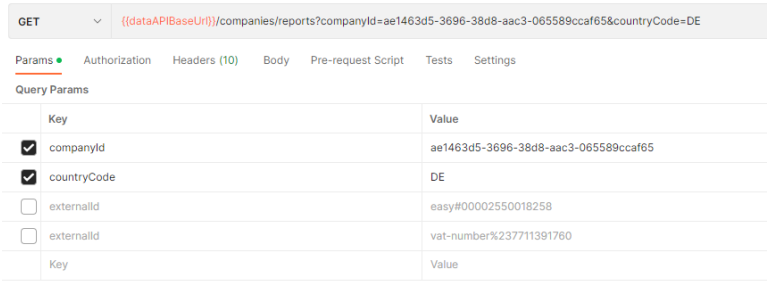
Now, company is saved into ICON, and has more identifiers associated: easy, icon nr, companyId, etc.

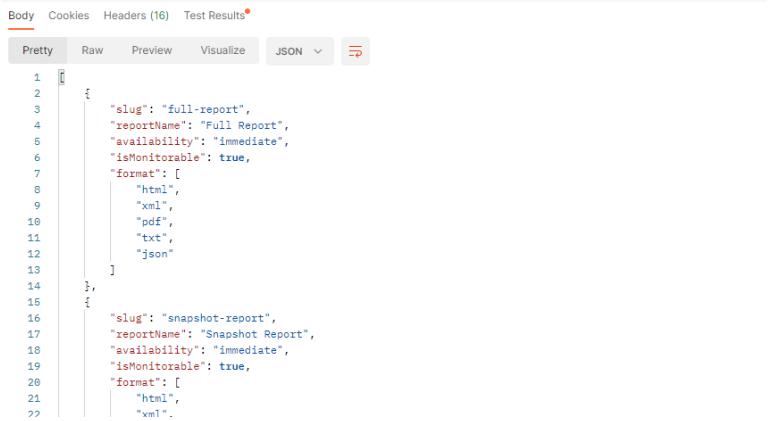
In this moment, you need to check and see what the available products are for this company, together with their availability (immediate or on-order):

Check assessments:

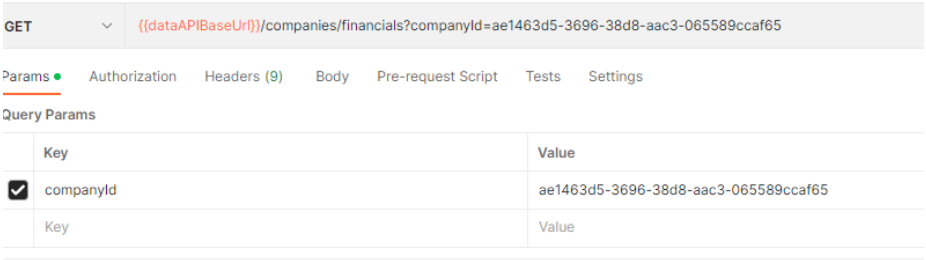


Check reports:



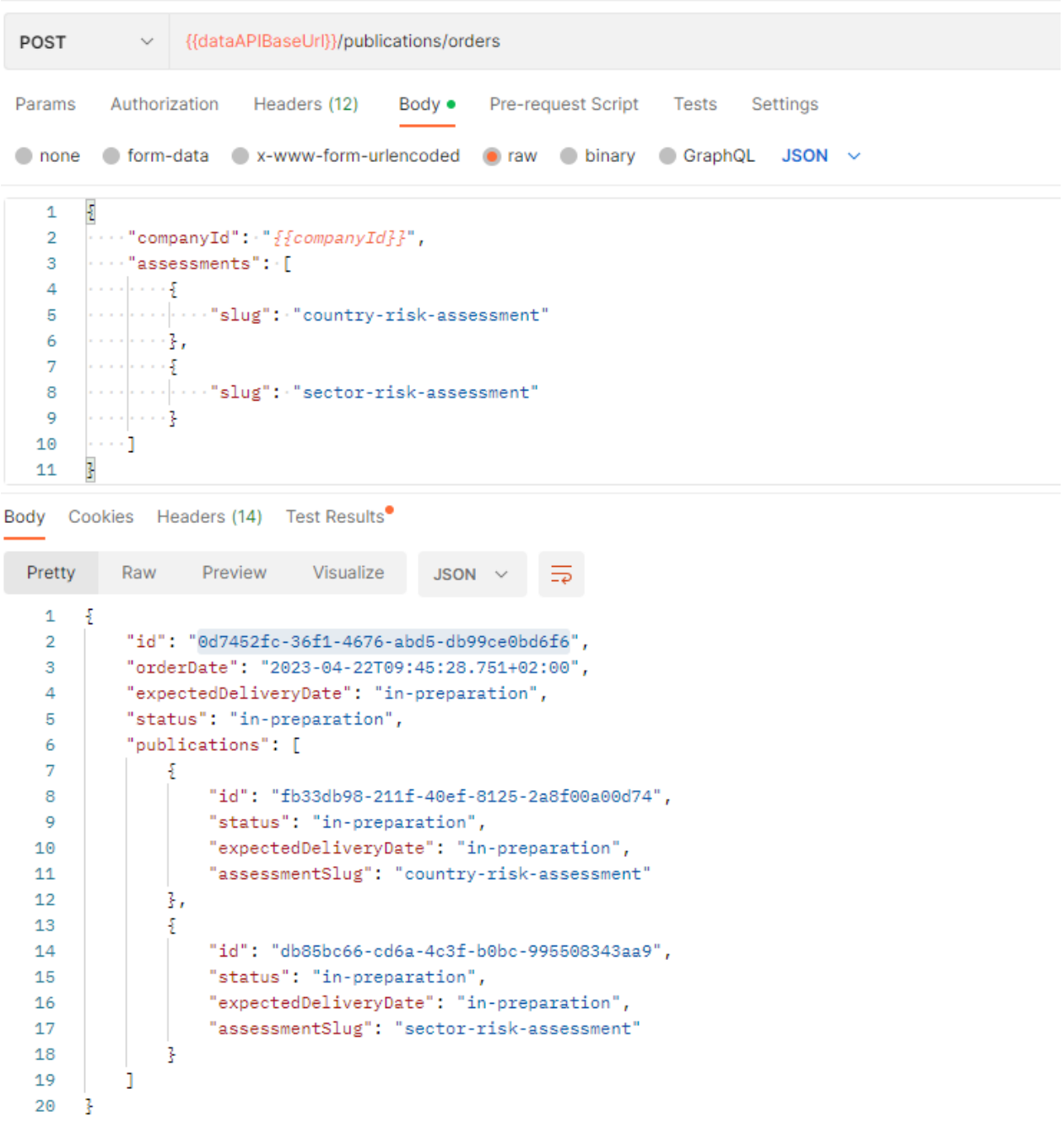


Check financials:



Now is time to order:

Ordering 2 assessments: Country Risk Assessment and Sector Risk Assessment:

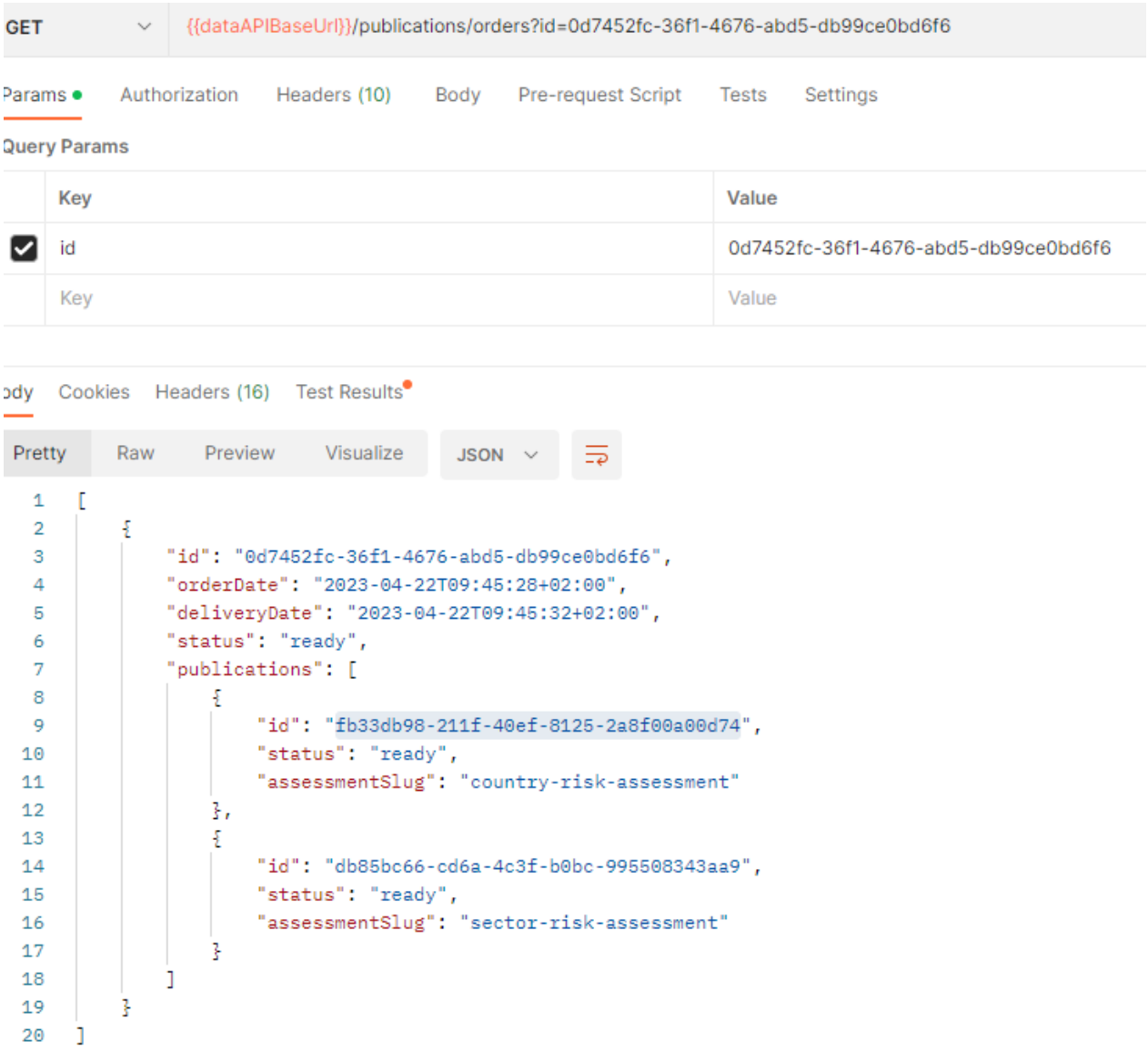


As we ordered 2 products in one order, in the response, we will get one global id of the order, first id from json and 2 ids corresponding to each product ordered.

Response of the POST call, will return status “in-preparation” if request is correct on first validations. But even if API returned Ids and “in-preparation” status, it might be that due to some technical or business reasons the order to not be created at all in the backoffice or to be cancelled.

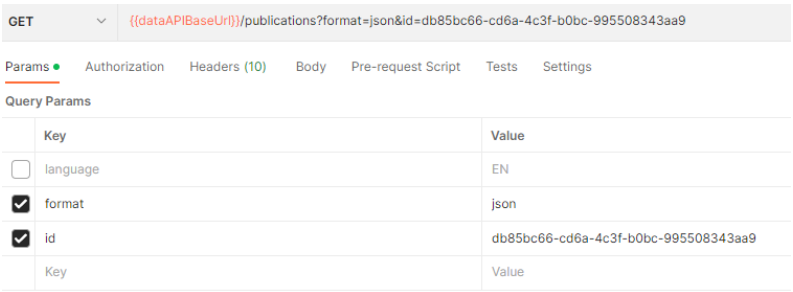
If , for example we order a product with instructions :”immediate” but the product was not available immediate, the call of POST order returns ID and status “in-preparation” in first phase, but when trying to call the status of the order, it can be cancelled, or answer can be an empty array, as order was not at all created in backend.

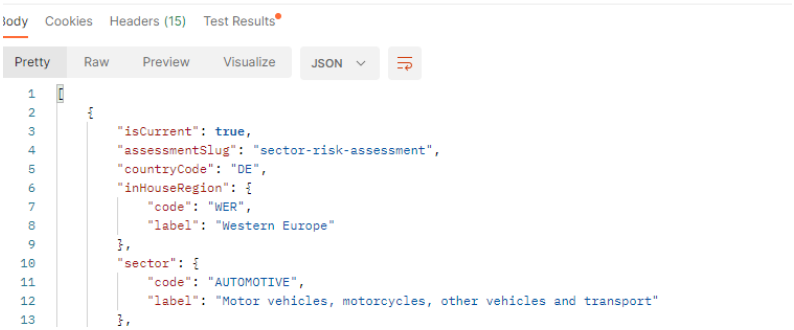
This is why we have the status call as mandatory step after ordering::



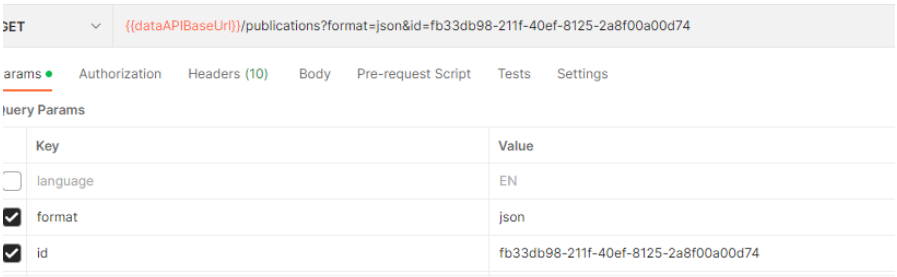
As both publications are ready, CRA and SRA, you can get now the content of the products, but with a call per each product.

Getting the sector risk assessments:





Getting the country risk assessment:




```
[
    {
        "isCurrent": true,
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        "countryCode": "DE",
        "countryRiskValue": "A3",
        "descriptions": [
            {
                "label": "Key financial data",
                "full": "A3: Less favourable and/or volatile macroeconomic and financial outlook. Political
                    shortcomings. The average probability of company default is satisfactory.",
                "language": "en",
                "short": "CRA"
            }
        ],
        "year": "2022",
        "yearPeriod": "Q4"
    },
    {
        "isCurrent": false,
        "assessmentSlug": "country-risk-assessment",
        "countryCode": "DE",
        "countryRiskValue": "A3",
```
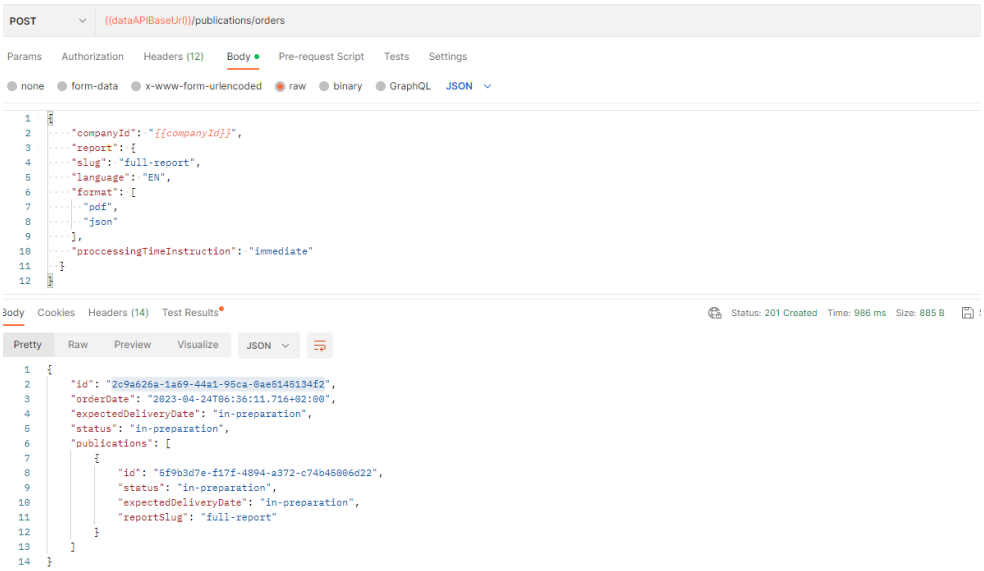
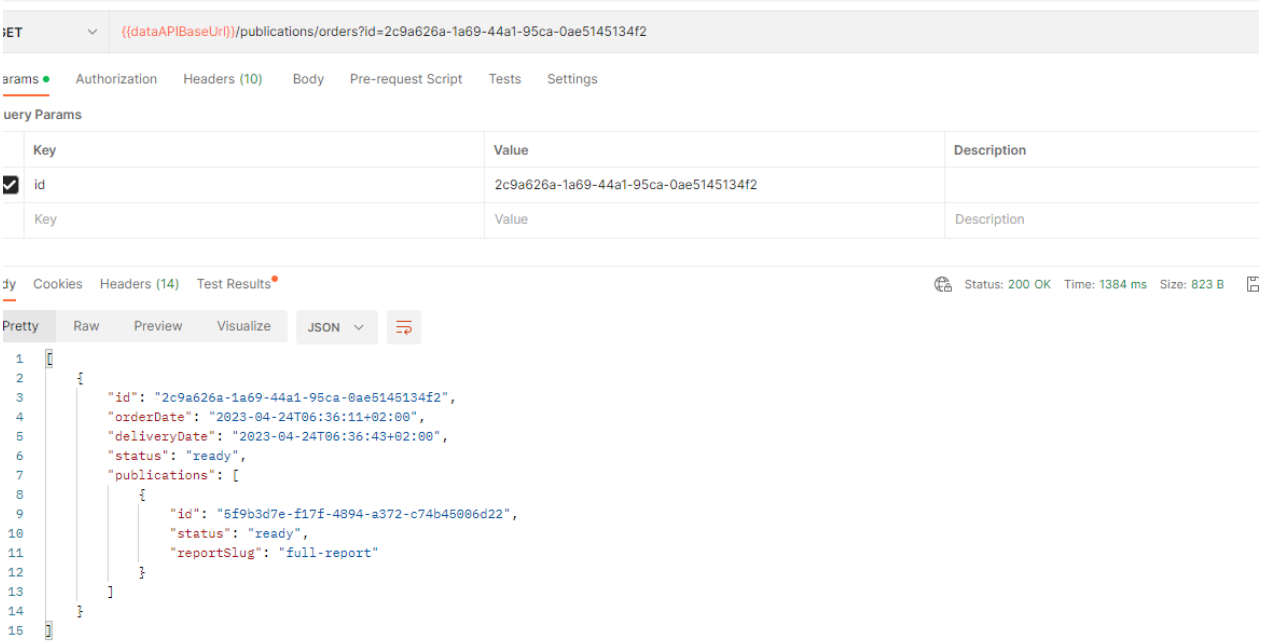

You can order now also reports.

We saw earlier when we checked the availability of the products that full report and snapshot report are immediate. Let's order them:

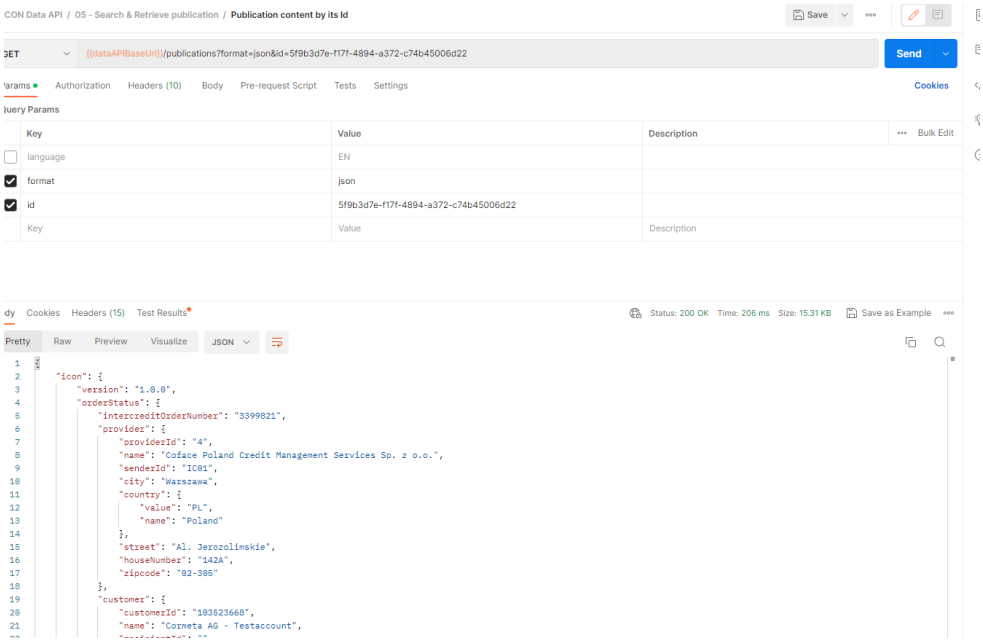
Ordering a full report:



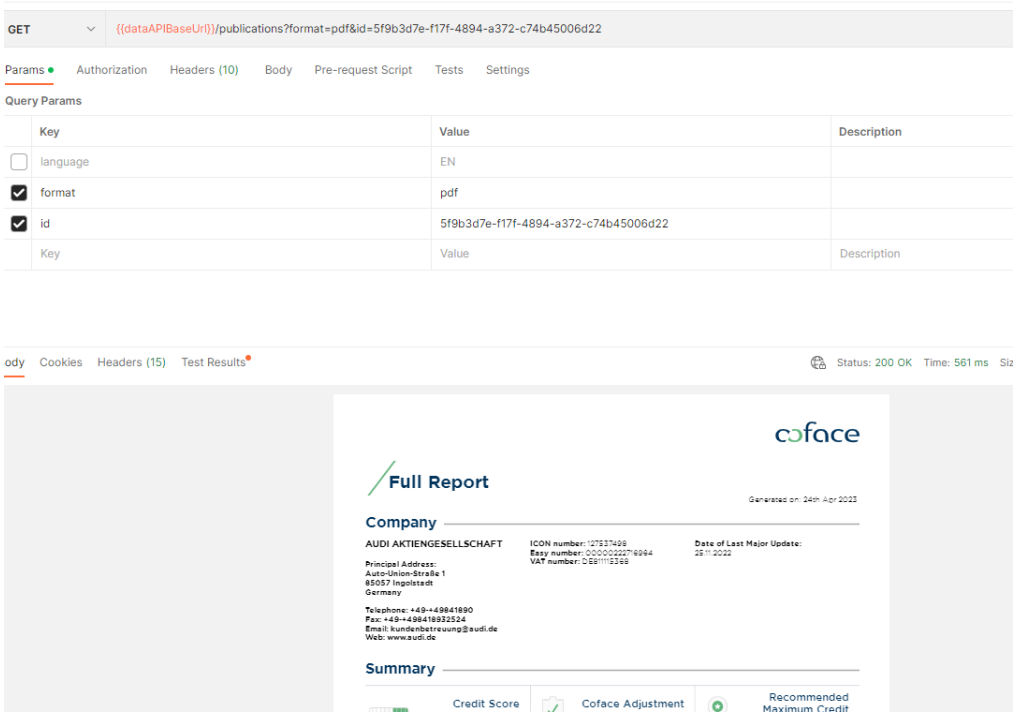
Checking the status of the order:



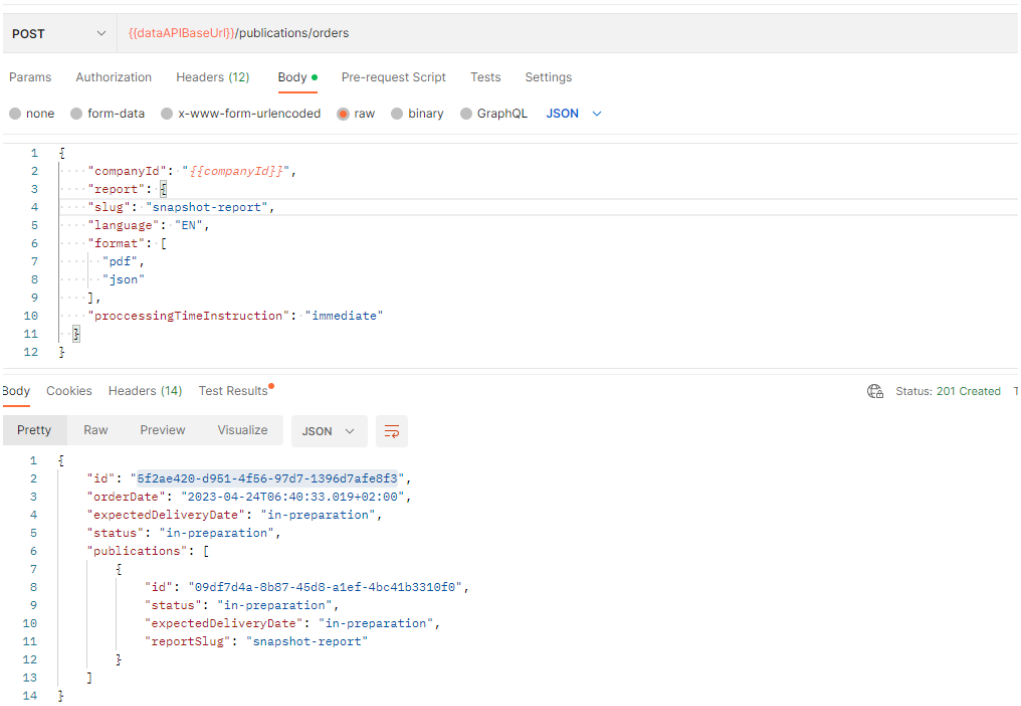
Getting the content of the full-report in json:



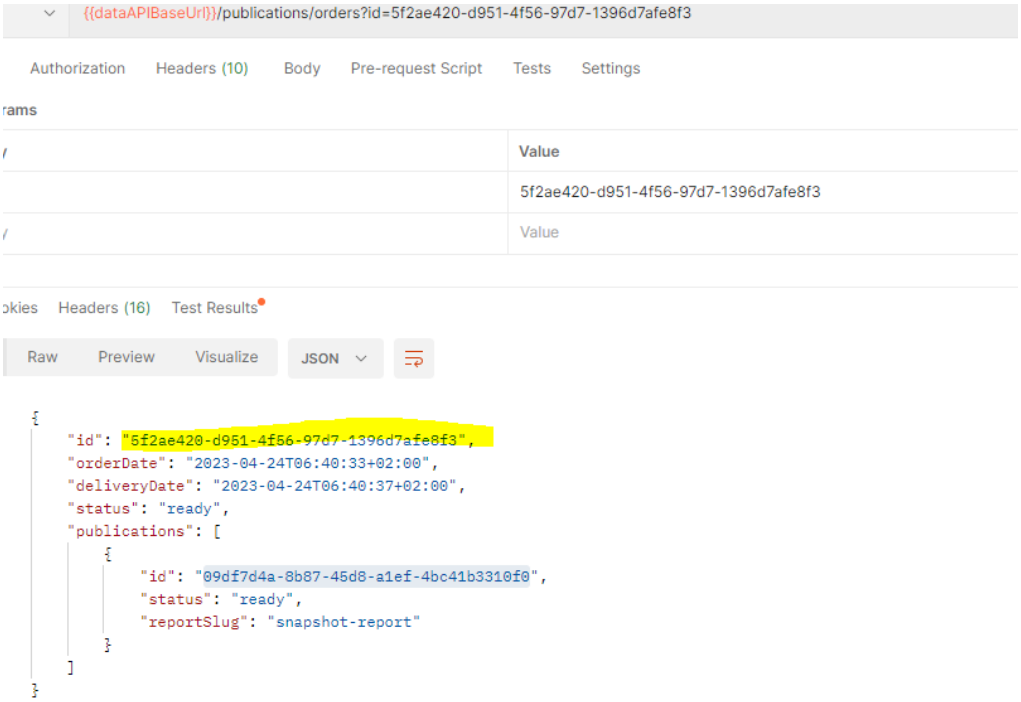
Getting the content of the full-report in pdf:



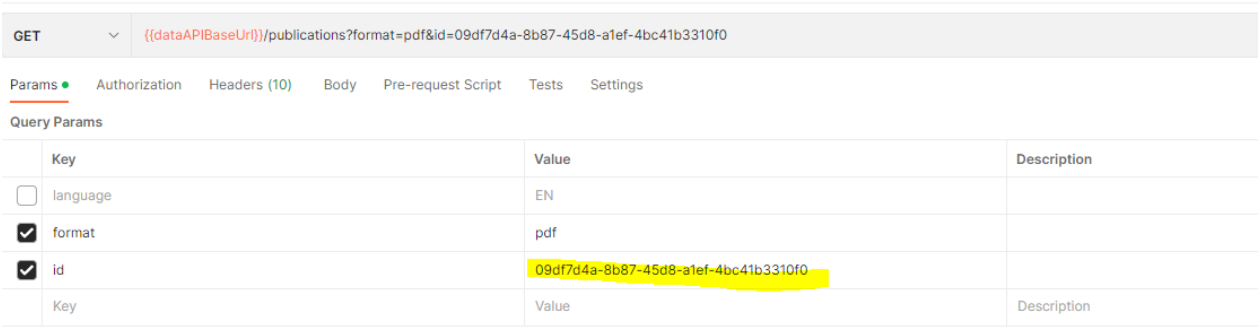
Now, let us order a snapshot report:



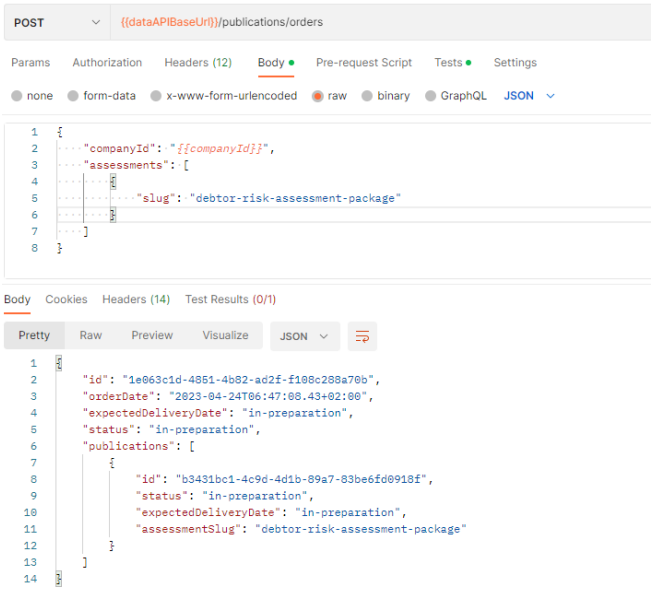
Getting order status:



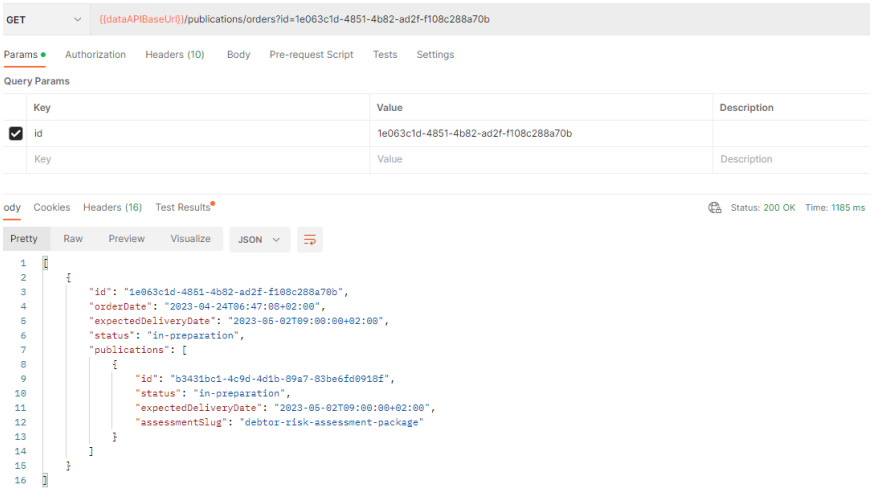
Getting the pdf format of the snapshot-report:



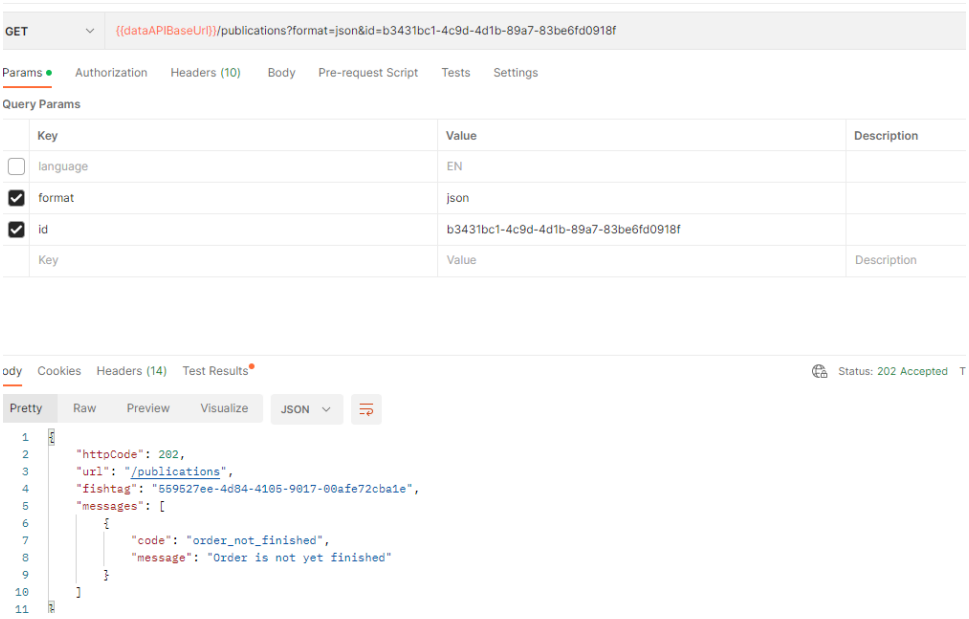
Let us now order one last product, Score product, DRA- package, which is the score with 5 years history:



As this is not an immediate product, and can take a little bit of time until is ready, first check status is still in-preparation:



If I am trying to get the content now, via /publications endpoint, it will not be ready:



But we do have the expected delivery date which is the maximum SLA for the product to be available.