

Leveraging the Banking & Commerce APIs

Hyperledger Hackathon

Create generic blockchain services and enable your business use cases



HOLLAND
FINTECH



LINUX
FOUNDATION



HYPERLEDGER PROJECT



Registration Process

Open a browser and go to:

<https://hackathon-abn-amro--hyperledger-dummybank.developer.eu.apiconnect.ibmcloud.com>

Click '**Login**' to continue.

The screenshot shows a web browser window for the IBM API Connect /dev portal. The URL in the address bar is `hackathon-abn-amro--hyperledger-dummybank.developer.us.apiconnect.ibmcloud.com`. The page has a dark blue header with the IBM API Connect logo and navigation links for Home, Getting started, API Products, Blogs, Forums, and Support. A large blue banner in the center features the text 'Innovate with our APIs' and a subtext 'Welcome to our API portal where you will find a great selection of APIs for your awesome innovative apps'. Below the banner is a section titled 'Featured APIs'. At the bottom, there's a section for 'Latest forum posts and tweets' with a message stating 'There are no posts to display.' Navigation links for 'Terms of use' and 'Privacy policy' are at the very bottom.

IBM API Connect /dev

Create an account Login Admin Login

Home Getting started API Products Blogs Forums Support

Innovate with our APIs

Welcome to our API portal where you will find a great selection of APIs for your awesome innovative apps

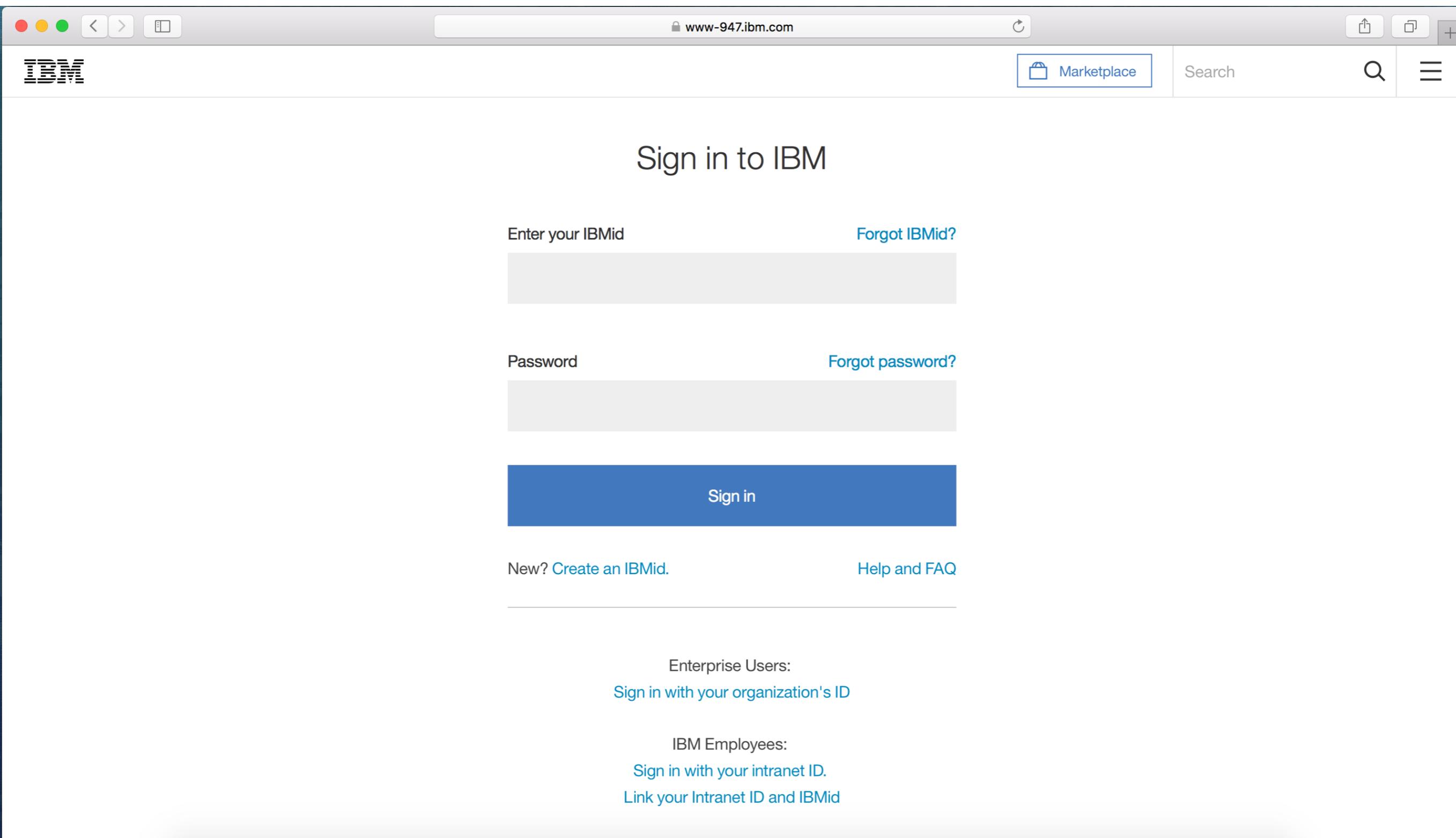
Featured APIs

Latest forum posts and tweets

There are no posts to display.

Terms of use Privacy policy

Enter your **IBM ID** credentials and click '**Sign in**'.



The screenshot shows a web browser window for the URL www-947.ibm.com. The page title is "Sign in to IBM". The interface includes fields for "Enter your IBMid" and "Password", each with a "Forgot [something]" link. A large blue "Sign in" button is centered below these fields. Below the main form, there are links for "New? Create an IBMid.", "Help and FAQ", and sections for "Enterprise Users" and "IBM Employees", each with their respective sign-in links.

www-947.ibm.com

IBM Marketplace Search

Sign in to IBM

Enter your IBMid [Forgot IBMid?](#)

Password [Forgot password?](#)

[Sign in](#)

New? [Create an IBMid.](#) [Help and FAQ](#)

Enterprise Users:
[Sign in with your organization's ID](#)

IBM Employees:
[Sign in with your intranet ID.](#)
[Link your Intranet ID and IBMid](#)

Provide a name for your '**Organization**' and click '**Submit**'.

The screenshot shows a web browser window for the IBM API Connect /dev interface. The URL in the address bar is `hackathon-abn-amro--hyperledger-dummybank.developer.us.apiconnect.ibmcloud.com`. The page title is "IBM API Connect /dev". The navigation menu includes Home, Getting started, API Products, Apps, Blogs, Forums, and Support. A green banner at the top states: "You need to create a developer organization to continue." Below this, the main content area is titled "Create organization". It has a form field labeled "Organization name *" containing the value "EdwardsOrg". A blue "Submit" button is located below the form. At the bottom of the page, there are links for "Terms of use" and "Privacy policy".

You need to create a developer organization to continue.

Create organization

Organization name *

[Submit](#)

[Terms of use](#) [Privacy policy](#)

Click '**Apps**' to register your application.

The screenshot shows a web browser window for the IBM API Connect /dev interface. The URL in the address bar is `hackathon-abn-amro--hyperledger-dummybank.developer.us.apiconnect.ibmcloud.com`. The page title is "IBM API Connect /dev". The navigation menu at the top includes "Home", "Getting started", "API Products", "Apps" (which is highlighted in blue), "Blogs", "Forums", and "Support". A search bar is located on the right side of the menu. Below the menu, a yellow banner displays a warning icon and the text "No applications have been found.". At the bottom of the page, there are links for "Terms of use" and "Privacy policy".

Choose a **name** for your application and click '**Submit**'.

The screenshot shows a web browser window for the IBM API Connect /dev interface. The URL in the address bar is `hackathon-abn-amro--hyperledger-dummybank.developer.us.apiconnect.ibmcloud.com`. The page title is "IBM API Connect /dev". The main content area is titled "Register application". It contains fields for "Title *", "Description", "OAuth Redirect URI", and a "Submit" button. At the bottom, there are links for "Terms of use" and "Privacy policy".

IBM API Connect /dev

hackathon-abn-amro--hyperledger-dummybank.developer.us.apiconnect.ibmcloud.com

Home Getting started API Products Apps Blogs Forums Support

0

IBM

Register application

Title *

Description

OAuth Redirect URI

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

Submit

Terms of use Privacy policy

Click both 'Show' checkboxes on this page and take a note of your **client-id** and **client-secret**.

The screenshot shows the IBM API Connect /dev interface. At the top, there's a navigation bar with links for Home, Getting started, API Products, Apps, Blogs, Forums, and Support. Below the navigation bar, a message box displays a green checkmark icon followed by two bullet points: "Application created successfully." and "Your client secret is:" followed by a redacted string of dots. To the right of this message is a checkbox labeled "Show Client Secret" which is currently unchecked. A yellow circle highlights this checkbox. Below the message box, there's a link "[Back to Apps](#)". The main content area features a blue circular icon with a smartphone and gear icon, representing the application "MyDummyBankApp". Below the icon, there are four small icons: a bar chart, a bell, a pencil, and a bar chart. The text "2016-09-26" is displayed next. Under the app name, there's a "Client Credentials" section with a "+" button. It contains fields for "Client ID" and "Client Secret", each with a "Show" checkbox (also highlighted with a yellow circle) and a "Reset" button. To the right of these fields is a vertical edit icon. Further down, under the heading "Subscriptions", it says "No subscriptions found. Why not browse the [available APIs](#)?" At the bottom left, there's a "Bookmark this" link.

Next, click on '**API Products**' and then '**dummy-bank-apis**' to subscribe to this API.

The screenshot shows a web browser window for the IBM API Connect platform. The URL in the address bar is `hackathon-abn-amro--hyperledger-dummybank.developer.us.apiconnect.ibmcloud.com`. The page title is 'IBM API Connect /dev'. The navigation menu includes 'Home', 'Getting started', 'API Products' (which is underlined, indicating it's the active section), 'Apps', 'Blogs', 'Forums', and 'Support'. A search bar is located on the right side of the header. Below the header, there is a card for the 'dummy-bank-apis (v1.0.0)' product. The card features a teal circular icon with a white stack of three bars, the product name in blue, '(1 API included)', and a star rating icon with the text 'No votes yet'. At the bottom of the page, there are links for 'Terms of use' and 'Privacy policy'.

Click 'Subscribe'

IBM API Connect /dev

dummy-bank-apis 1.0.0

APIs

Commerce REST API

dummy-bank-apis 1.0.0

5 stars
No votes yet

Plans

Commerce REST API 1.0.0	Default Plan 
	5 per hour
	Subscribe

* = Mouseover for more information

[Share / Save](#)    [Bookmark this](#)

Add new comment

Your name

Subject

Finally, select your application and click '**Subscribe**' again to complete the subscription to the commerce API's.

The screenshot shows the IBM API Connect interface. The top navigation bar includes links for Home, Getting started, API Products, Apps, Blogs, Forums, and Support. A sidebar on the left lists 'dummy-bank-apis 1.0.0' under APIs and 'Commerce REST API'. The main content area displays the 'dummy-bank-apis 1.0.0' API details, including its icon, name, a 5-star rating placeholder ('No votes yet'), and a 'Plans' section. A dropdown menu for 'Commerce REST API 1.0.0' is visible. A 'Subscribe' modal window is overlaid on the page, prompting the user to select an application to sign up to this plan. The 'MyDummyBankApp' option is selected. Below the modal, there are 'Share / Save' and 'Bookmark this' buttons. At the bottom, there are fields for 'Add new comment', 'Your name', and 'Subject'.

IBM API Connect /dev

dummy-bank-apis 1.0.0

APIs

Commerce REST API

dummy-bank-apis 1.0.0

★★★★★

No votes yet

Plans

Commerce REST API 1.0.0

Subscribe

Application

Select an application to sign up to this plan.

MyDummyBankApp

Subscribe

Share / Save

Bookmark this

Add new comment

Your name

Subject

Explore / test the APIs

Open a browser and go to:

<https://hackathon-abn-amro--hyperledger-dummybank.developer.eu.apiconnect.ibmcloud.com>

Click '**Login**' to continue.

The screenshot shows a web browser window for the IBM API Connect /dev portal. The URL in the address bar is `hackathon-abn-amro--hyperledger-dummybank.developer.us.apiconnect.ibmcloud.com`. The page has a dark blue header with the IBM API Connect logo and navigation links for Home, Getting started, API Products, Blogs, Forums, and Support. A large blue banner in the center features the text 'Innovate with our APIs' and a subtext 'Welcome to our API portal where you will find a great selection of APIs for your awesome innovative apps'. Below the banner is a section titled 'Featured APIs'. At the bottom, there's a section for 'Latest forum posts and tweets' with a message stating 'There are no posts to display.' Navigation links for 'Terms of use' and 'Privacy policy' are at the very bottom.

IBM API Connect /dev

Create an account Login Admin Login

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Innovate with our APIs

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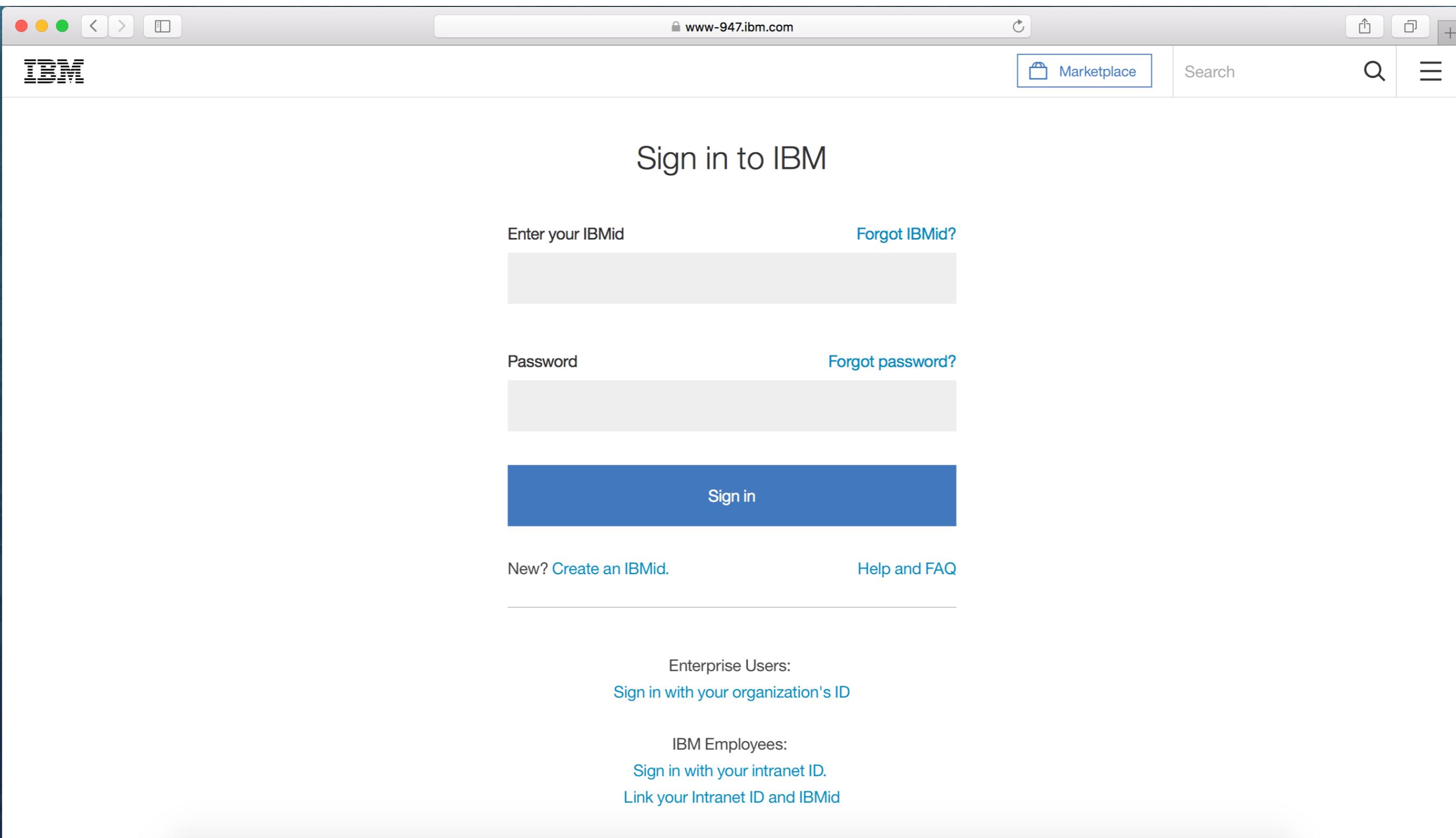
Featured APIs

Latest forum posts and tweets

There are no posts to display.

Terms of use Privacy policy

Enter your **IBM ID** credentials and click '**Sign in**'.



The screenshot shows a web browser window for the URL www-947.ibm.com. The page title is "Sign in to IBM". The interface includes fields for "Enter your IBMid" and "Password", each with a "Forgot [something]" link. A large blue "Sign in" button is centered below these fields. Below the main form, there are links for "New? Create an IBMid.", "Help and FAQ", and sections for "Enterprise Users" and "IBM Employees", each with their respective sign-in links.

IBM

www-947.ibm.com

Marketplace

Search

Sign in to IBM

Enter your IBMid

Forgot IBMid?

Password

Forgot password?

Sign in

New? [Create an IBMid.](#)

[Help and FAQ](#)

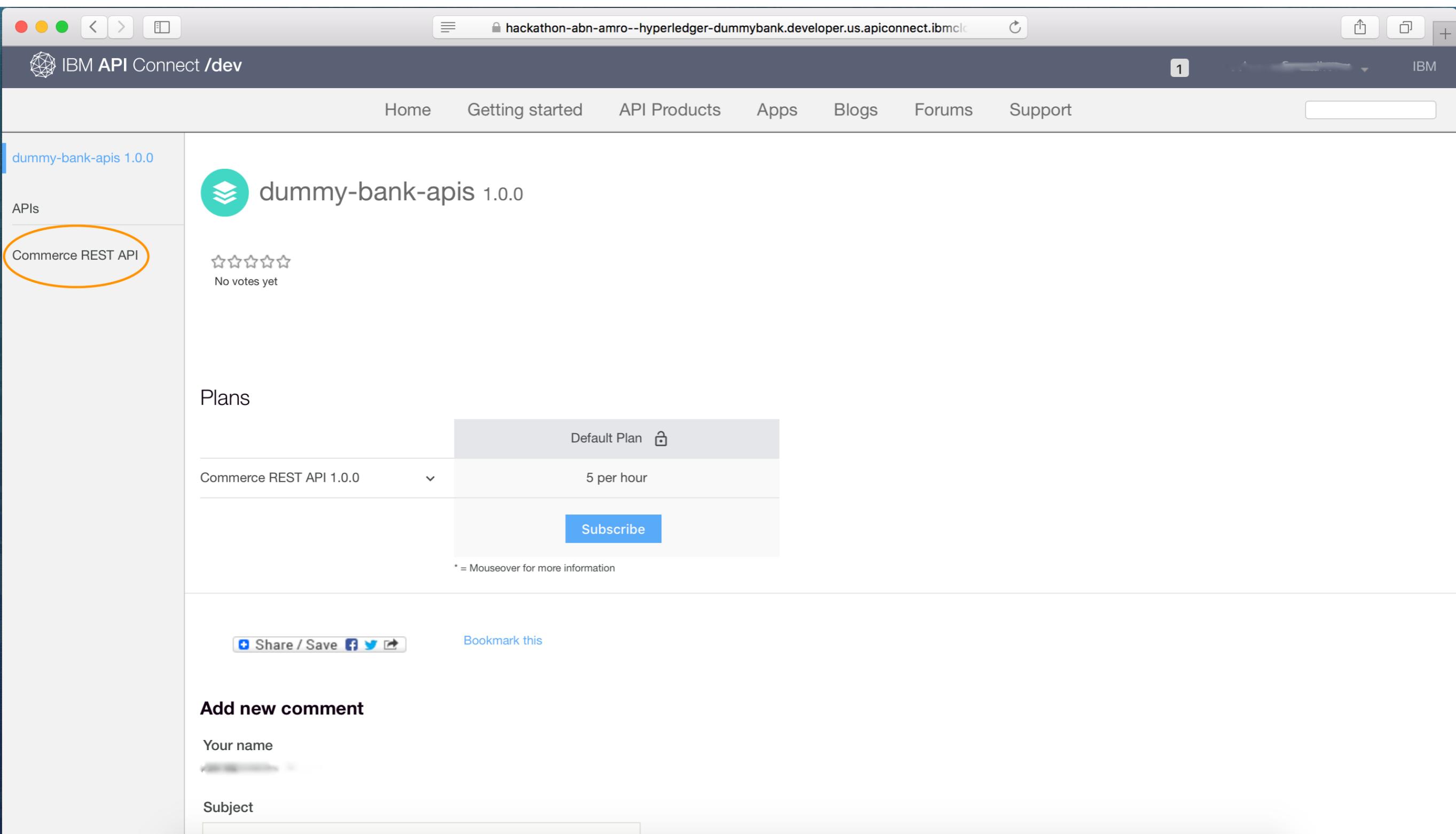
Enterprise Users:
[Sign in with your organization's ID](#)

IBM Employees:
[Sign in with your intranet ID.](#)
[Link your Intranet ID and IBMid](#)

Next, click on '**API Products**' and then the product '**dummy-bank-apis**'.

The screenshot shows a web browser window for the IBM API Connect platform. The URL in the address bar is `hackathon-abn-amro--hyperledger-dummybank.developer.us.apiconnect.ibmcloud.com`. The page title is 'IBM API Connect /dev'. The navigation menu includes 'Home', 'Getting started', 'API Products' (which is underlined, indicating it's the active section), 'Apps', 'Blogs', 'Forums', and 'Support'. Below the menu, there's a card for the 'dummy-bank-apis (v1.0.0)' product, which contains one API. The card includes a teal circular icon with a stack of three horizontal bars, the product name, its version, and a note that it includes 1 API. To the right of the product name is a five-star rating icon followed by the text 'No votes yet'. At the bottom of the page, there are links for 'Terms of use' and 'Privacy policy'.

In the **APIs** section on the left, click the '**Commerce REST API**'.



The screenshot shows the IBM API Connect interface. On the left, there's a sidebar titled 'dummy-bank-apis 1.0.0' under 'APIs'. A link labeled 'Commerce REST API' is highlighted with an orange oval. The main content area displays the 'dummy-bank-apis 1.0.0' API details. It includes a teal icon with three stacked squares, the API name, a five-star rating placeholder ('No votes yet'), and a 'Plans' section. The 'Plans' section shows a 'Default Plan' with a lock icon, a dropdown menu for 'Commerce REST API 1.0.0', a price of '5 per hour', and a 'Subscribe' button. Below the plan section is a note: '* = Mouseover for more information'. At the bottom, there are sharing options ('Share / Save' with icons for Facebook, Twitter, and LinkedIn) and a 'Bookmark this' link. A 'Add new comment' section is also present.

IBM API Connect /dev

Home Getting started API Products Apps Blogs Forums Support

dummy-bank-apis 1.0.0

APIs

Commerce REST API

dummy-bank-apis 1.0.0

★★★★★ No votes yet

Plans

Default Plan 

Commerce REST API 1.0.0 5 per hour

Subscribe

* = Mouseover for more information

Share / Save    Bookmark this

Add new comment

Your name

Subject

Select the method you want to test. You will need the **x-ibm-client-id** and **x-ibm-client-secret** from your registered app to successfully call the operation.

The screenshot shows the IBM API Connect interface with the URL <https://hackathon-abn-amro--hyperledger-dummybank.developer.us.apiconnect.ibmcloud.com>. The page displays the **Commerce REST API 1.0.0** documentation. On the left sidebar, under the **Commerce REST API 1.0.0** section, the **Operations** tab is selected, showing several API endpoints like `GET /store/{storeId}/pro...`. The main content area shows the **Paths** section with the endpoint `/store/{storeId}/productview/bySearchTerm/{searchTerm}`. A detailed view of this endpoint is shown in a modal, including its **Description** (Gets matching products for a given search term. It supports specifying conditions to filter the search results), **Security** (which includes the **X-IBM-Client-Secret** header circled in orange), and **Parameters** (including the **storeId** parameter). To the right, there are sections for **cURL**, **Ruby**, **Python**, **PHP**, **Java**, **Node**, **Go**, and **Swift** code examples, and a **Support** section with a link to discuss the API in the forum. A large "Subscribe" button is also visible.

On the right-hand side, scroll down until you can provide values for the '**Client ID**', '**Client secret**', '**storeId**' and '**searchTerm**'. The **storeId** is set to **10201**. The '**searchTerm**' should match your search query.

The screenshot shows the IBM API Connect /dev interface. On the left, a sidebar lists various APIs and operations. The 'Operations' section is expanded, showing several GET requests for product views. One specific operation, 'GET /store/{storeId}/productview/bySearchTerm/{searchTerm}', is selected and detailed on the right. This page provides documentation for the 'catalogId' and 'currency' parameters, both of which are marked as 'Optional in query'. Below this, the 'Identification' section is visible, containing fields for 'Client ID' (set to 'MyDummyBankApp') and 'Client secret' (represented by a series of dots). Further down, the 'Headers' section includes 'content-type' (set to 'application/json') and 'accept' (also set to 'application/json'). The 'Parameters' section contains four fields: 'storeId' (set to '10201'), 'searchTerm' (set to 'Laptops'), 'pageNumber' (left empty), and 'pageSize' (left empty). The entire configuration area is highlighted with orange circles around the 'Client ID', 'Client secret', 'storeId', and 'searchTerm' fields.

Click 'Call operation' to perform the query.

The screenshot shows the IBM API Connect /dev interface. On the left, a sidebar lists various API endpoints under categories like 'APIs', 'Operations', and 'Definitions'. A specific endpoint, 'GET /store/{storeId}/pro...', is highlighted with an orange oval. The main content area displays the API details for this endpoint. It includes sections for 'Content-Type' (application/json, optional in header), 'Accept' (application/json, optional in header), and 'Responses'. The 'Responses' section shows a 200 status code with a JSON schema definition:

```
{  
  "schema": {  
    "title": "productview-productSummary",  
    "type": "object",  
    "properties": {  
      "recordSetTotal": {  
        "description": "",  
        "type": "integer",  
        "format": "int64"  
      },  
      "recordSetCount": {  
        "description": "",  
        "type": "integer",  
        "format": "int64"  
      },  
      "finalQuery": {  
        "description": "",  
        "type": "string"  
      },  
      "SuggestionView": {  
        "description": "",  
        "type": "array",  
        "items": {  
          "title": "productview-productSummary.SuggestionView"  
        }  
      }  
    }  
  }  
};
```

To the right of the API details, there is a configuration panel with tabs for 'cURL', 'Ruby', 'Python', 'PHP', 'Java', 'Node' (which is selected), 'Go', and 'Swift'. Below the tabs are input fields for various parameters: 'facet', 'advancedFacetList', 'filterFacet', 'orderBy', 'metaData', 'searchSource', 'responseFormat', 'catalogId', and 'currency'. At the bottom right of the configuration panel is a blue button labeled 'Call operation'.

The response should be similar to the response below.

The screenshot shows the IBM API Connect interface. On the left, there's a sidebar with 'APIs' and 'Definitions' sections. The main area displays a JSON schema for a 'SuggestionView' object. On the right, there's a 'Request' section with a GET request to 'https://api.us.apiconnect.ibmcloud.com/abn-amro--hyperledger-dummybank/wcs/resources/store/10201/productview/bySearchTerm/Laptops'. Below it, the 'Response' section shows a 200 OK status with various headers and a JSON response body.

Request

```
GET https://api.us.apiconnect.ibmcloud.com/abn-amro--hyperledger-dummybank/wcs/resources/store/10201/productview/bySearchTerm/Laptops
X-IBM-Client-Id: ...
X-IBM-Client-Secret: .....
content-type: application/json
accept: application/json
```

Response

```
200 OK
Expires: Mon, 26 Sep 2016 15:26:25 GMT
Content-Type: application/json
Cache-Control: no-transform, no-cache=set-cookie
Content-Language: en-US
X-Global-Transaction-ID: 29538161
X-RateLimit-Limit: 5
X-RateLimit-Remaining: 4
{
  "recordSetTotal": "7",
  "resourceId": "https://wc8dev.ibm.com/wcs/resources/store/10201/productview/bySearchTerm/Laptops",
  "recordSetCount": "7",
  "MetaData": [
    {
      "metaKey": "price",
      "metaData": "1"
    }
]
```

Finally, on the right-hand side you can select your favourite language to get sample code for the request.

The screenshot shows the IBM API Connect /dev interface. On the left, a sidebar lists various APIs and definitions. The main content area displays a specific API endpoint: `/store/{storeId}/productview/bySearchTerm/{searchTerm}`. This endpoint is a GET request for matching products based on a search term. It requires two path parameters: `storeId` and `searchTerm`. The `storeId` parameter is described as the store identifier, with a schema showing it's required in the path, has type "integer", and an enum value of 10201. The `searchTerm` parameter is described as the term you are searching for, with a schema showing it's required in the path, has type "string", and is not a map. Two header parameters are also listed: `X-IBM-Client-Secret` (apiKey header) and `X-IBM-Client-Id` (apiKey header). On the right, a navigation bar offers sample code in cURL, Ruby, Python, PHP, Java, Node, Go, and Swift. The Java tab is currently selected, displaying Java code using the OkHttp library to make the API call. Below the code, there are sections for "Example Request" and "Example Response".

APIs

Commerce REST API 1.0.0

Operations

GET /store/{storeId}/pro...

GET /store/{storeId}/pro...

GET /store/{storeId}/pro...

GET /store/{storeId}/pro...

GET /store/{storeId}/pro...

Definitions

storeId

currency

productview-productSu...

productview-productSu...

com.ibm.commerce.fou...

priceUsage

productview-productSu...

productview-productSu...

productview-productSu...

Empty

productview-productSu...

Home Getting started API Products Apps Blogs Forums Support

hackathon-abn-amro--hyperledger-dummybank.developer.us.apiconnect.ibmcloud.com

IBM API Connect /dev

/store/{storeId}/productview/bySearchTerm/{searchTerm}

GET /store/{storeId}/productview/bySearchTerm/{searchTerm}

Description

Gets matching products for a given search term. It supports specifying conditions to filter the search results.

Security

X-IBM-Client-Secret apiKey header

X-IBM-Client-Id apiKey header

Parameters

storeId The store identifier.
Required in path
{
 "x-is-map": false,
 "enum": [
 10201
],
 "type": "integer"
}

searchTerm The term you are searching for.
Required in path
{
 "x-is-map": false,
 "type": "string"
}

cURL Ruby Python PHP Java Node Go Swift **Subscribe**

Example Request

```
// OkHttpClient from http://square.github.io/okhttp/  
  
OkHttpClient client = new OkHttpClient();  
  
Request request = new Request.Builder()  
    .url("https://api.us.apiconnect.ibmcloud.com/abn-amro--hyperledger-dumm  
ybank/wcs/resources/store/REPLACE_STOREID/productview/bySearchTerm/REPLAC  
E_SEARCHTERM?pageNumber=REPLACE_THIS_VALUE&pageSize=REPLACE_THIS_VALUE&  
intentSearchTerm=REPLACE_THIS_VALUE&originalSearchTerm=REPLACE_THIS_VALUE&c  
ategoryId=REPLACE_THIS_VALUE&searchType=REPLACE_THIS_VALUE&filterTerm=RE  
PLACE_THIS_VALUE&filterType=REPLACE_THIS_VALUE&manufacturer=REPLACE_THIS_V  
ALUE&minPrice=REPLACE_THIS_VALUE&maxPrice=REPLACE_THIS_VALUE&facet=REPLAC  
E_THIS_VALUE&advancedFacetList=REPLACE_THIS_VALUE&filterFacet=REPLACE_THI  
S_VALUE&orderBy=REPLACE_THIS_VALUE&metaData=REPLACE_THIS_VALUE&searchSour  
ce=REPLACE_THIS_VALUE&responseFormat=REPLACE_THIS_VALUE&catalogId=REPLAC  
E_THIS_VALUE&currency=REPLACE_THIS_VALUE")  
    .get()  
    .addHeader("x-ibm-client-id", "REPLACE_THIS_KEY")  
    .addHeader("x-ibm-client-secret", "REPLACE_THIS_KEY")  
    .addHeader("content-type", "application/json")  
    .addHeader("accept", "application/json")  
    .build();
```

Response response = client.newCall(request).execute();

Example Response

Definition

The ‘Dummy Bank REST APIs’ is used the same way as the ‘Commerce REST APIs’. Below a screenshot as an example.

The screenshot shows the IBM API Connect interface for the 'dummy-bank-apis 1.0.0' API. The left sidebar lists various API endpoints under 'Commerce REST API 1.0.0' and 'Operations'. The 'GET /bankingapis/acco...' endpoint is highlighted with a blue selection bar and circled in orange. The main content area displays the API's schema definition, which includes properties like 'bid', 'id', 'income', 'localProductCd', 'localProductNm', 'productCatNm', 'productClsNm', 'productGrpNm', 'totalVolume', 'volumeLending', 'volumeSavings', and 'balance'. The 'Parameters' section shows 'bid' set to '0' and 'id' set to '4000'. The 'Request' section provides the full HTTP request details, including the URL, headers (X-IBM-Client-Id and X-IBM-Client-Secret), content-type, and accept. The 'Response' section shows the initial part of the JSON response, starting with '200 OK' and some header information.

IBM API Connect /dev

Home Getting started API Products Apps Blogs Forums Support

dummy-bank-apis 1.0.0

APIs

Commerce REST API 1.0.0

Dummy Bank REST APIs 1.0.0

Operations

GET /bankingapis/acco...

GET /bankingapis/acco...

GET /bankingapis/acco...

GET /bankingapis/bran...

GET /bankingapis/bran...

GET /bankingapis/custo...

GET /bankingapis/custo...

GET /bankingapis/custo...

GET /bankingapis/muni...

GET /bankingapis/trans...

POST /bankingapis/tran...

GET /bankingapis/trans...

Definitions

Account

AccountPK

Municipality

type: integer, format: int32
}
},
"income": {
"type": number
},
"localProductCd": {
"type": string
},
"localProductNm": {
"type": string
},
"productCatNm": {
"type": string
},
"productClsNm": {
"type": string
},
"productGrpNm": {
"type": string
},
"totalVolume": {
"type": number
},
"volumeLending": {
"type": number
},
"volumeSavings": {
"type": number
},
"balance": {
"type": number
}

cURL Ruby Python PHP Java Node Go Swift Subscribe

Parameters

bid 0

id 4000

Call operation

Request

GET https://api.eu.apiconnect.ibmcloud.com/abn-amro--hyperledger-dummybank/hackathon/bankingapis/account/bank/0/customer/4000
X-IBM-Client-Id:
X-IBM-Client-Secret:
content-type: application/json
accept: application/json; charset=UTF-8

Response

200 OK
Content-Type: application/json
X-Global-Transaction-ID: 62303633
X-RateLimit-Limit: 500
X-RateLimit-Remaining: 495
[
{

Appendix

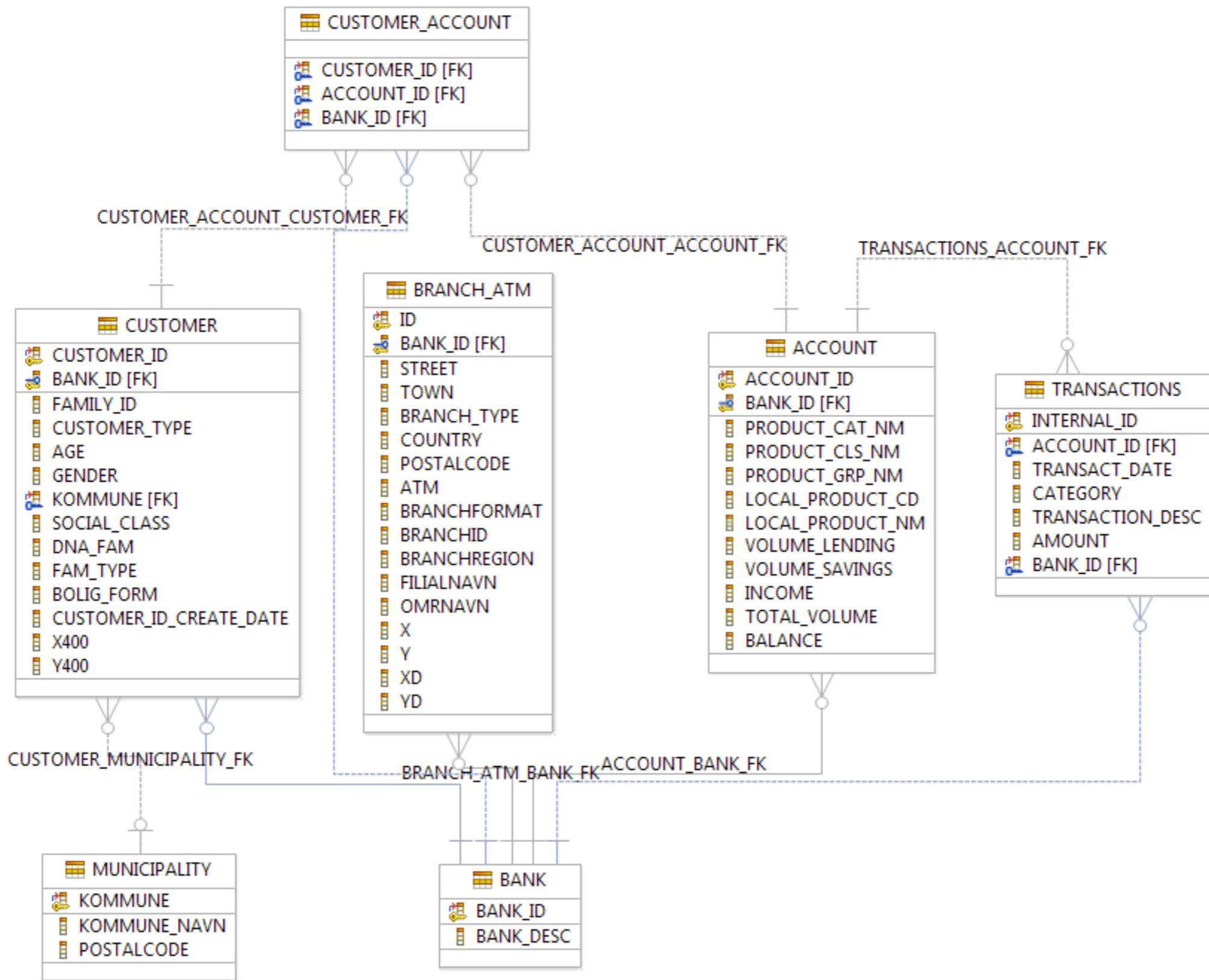
Overview of the banks

	Total	Bank 0	Bank 1
Customer Accounts	3 031	1 524	1 507
Transactions	10 449	5 459	4 990
	803 602	402 328	400 734

	Corporate	Current	Savings	Insurance Damage	Insurance Life	Investment	Mortgage	Personal Loan
Accounts Bank 0	10	1 313	1 322	815	656	439	90	814
Accounts Bank 1	10	1 225	1 241	744	561	368	87	754
Total	20	2 538	2 563	1 559	1 217	807	177	1 568

	Cash Withdrawal	Credit Card	Transfer Outbound	Transfer Inbound	Cheque Deposit	Cheque Written
Transactions	203 004	518 789	48 837	28 595	1 315	2 522

Model & Relations - a visual overview



Data Type Descriptions

1/2

Please note that the data is “synthetic” and has been generated to sort of reflect the country of the Netherlands. The dummy banks therefore look familiar but is by no means perfect. As a developer, think of it as a large “stub” representing two Dutch banks.

CUSTOMER

A Human being.

CustomerId	The identification (Id) for a customer. This is a unique value in the data source. An individual person may have multiple customer Ids.
BankId	The identification (Id) for a bank. Valid values are: <i>0</i> <i>1</i>
FamilyId	The identification (Id) for a “family”. This indicates the relationship between customers who are part of the same family. Customers who share the same <i>FamilyId</i> belong to the same family.
CustomerType [1-2]	Tells the kind of customer id, It can be solo or Corporate Valid values are: <i>Corporate</i> <i>Solo Customer ID</i>
Customer_Id_Create_Date	The date the customer was on-boarded into the system.
Age	Current age of customer, calculated from another system.
Gender	The gender of the customer gender [M=Male, K = Female]
Municipality	Municipality number which represents the governmental region in Denmark. This description for this municipality can be mapped using the Municipality APIs.
SocialClass	Describes the working status or income source of a customer. Valid values are: <i>Child</i> <i>Dependent</i> <i>Retired</i> <i>Student</i> <i>Unemployed</i> <i>Working</i>

Data Type Descriptions

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Please note that the data is “synthetic” and has been generated to sort of reflect the country of the Netherlands. The dummy banks therefore look familiar but is by no means perfect. As a developer, think of it as a large “stub” representing two Dutch banks.

CUSTOMER

A Human being.

DnaFam	<p>The general description of the family unit which the customer provided:</p> <p>Valid values are:</p> <ul style="list-style-type: none">ChildMarriedSingle
FamType	<p>The detailed description of the family unit which the customer provided:</p> <p>Valid values are:</p> <ul style="list-style-type: none">ChildMarried familyMarried, no kidsSingleSolo Parent
BoligForm	<p>What kind of housing the Customer lives in</p> <ul style="list-style-type: none">ChildOwnerSpouseTenant
X400	<p>The very approximate (anonymous) location of the customer based on a UTM32 format. (coordinates in a square 400*400 meters). Note that these are not the actual coordinates of real customers.</p>
Y400	<p>The very approximate (anonymous) location of the customer based on a UTM32 format. (coordinates in a square 400*400 meters). Note that these are not the actual coordinates of real customers.</p>

ACCOUNT

A customer can have several accounts

Account / account_history

History will provide a report of all account activities

AccountId	The identification (Id) for the account. This is a unique value in the data source.
ProductCatNm	<p>Product category name. Valid values are:</p> <ul style="list-style-type: none">CurrentInsurance DamageInsurance LifeInvestmentMortgagePersonal LoanSavingsCorporate
ProductClsNm	<p>Product class name. Valid values are:</p> <ul style="list-style-type: none">CurrentInsurance DamageInsurance LifeInvestmentMortgagePersonal LoanSavingsCorporate

ACCOUNT

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ProductGrpNm	<p>Product group name.</p> <p>Valid values are:</p> <ul style="list-style-type: none">CurrentInsurance DamageInsurance LifeInvestmentMortgagePersonal LoanSavingsCorporate
VolumeLending	Lending volume ultimo, or last day of month
VolumeSaving	Saving volume ultimo, or last day of month
Income	Pseudo transaction fees and interest accrued during the event
Balance	Current Balance of the account

Transaction

Transactions information

AccountId	The identification (Id) for the account.
TransactionDate	Actual date of transaction
Category	<p>The category or type of the transaction. Valid values are:</p> <p>Cash Withdrawal Cheque Deposit Cheque Written Credit Card Transfer Inbound Transfer Outbound</p>
TransactionDesc	The description of the transaction.
Amount	-Number (removing money from account) +Number (adding money to account)

LOCATION

Locations span places like Bank Offices and ATMs.

BRANCHATM

Street	The street location of the branch or ATM
Town	The town location of the branch or ATM
BranchType	Type of branch: Valid values are: ATM Central Community
Id	The Id and description of the branch or ATM
Country	The country
PostalCode	The postal code
ATM	The number of ATMs available at the location
BranchFormat	Valid values are: ATM Central Community
BranchId	Branch unique id (integer)
FilialType	Type of office
BranchRegion	Region Drenthe Flevoland Fryslan Gelderland Groningen Limburg Noord-Brabant Noord-Holland Overijssel Utrecht Zeeland Zuid-Holland
X	Latitude
Y	Longitude

Municipality

An area related to CUSTOMER, BANK or ATM.

postalcode	Postal code
name	Actual name