



# Production API Portal manual

Open and Partner API services

9.9.2019

Version 1

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## WORKING WITH API SERVICE

Generally, the user tests the selected service using the trial version (SANDBOX) API as the first step. For more information see Sandbox API manual.

If everything works according to the user's wishes, it is possible to proceed to the production version of the API service. The production version of the API service is connected to the KB internal systems and returns real data.

In some cases (this is usually with the partner API), it is necessary to conclude a contract with the bank in order to be able to use the service (terms and conditions are defined in the API service detail).

To access the service, the user needs to:

1. **Select the service of their choice in the list of services, see [Overview of API Portal Services](#)**
2. **Create an Account at the API Portal, see [User Registration](#)**
3. **Add application (which will make service calls), see [Application Management](#)**

**Komerční banka, a.s.**

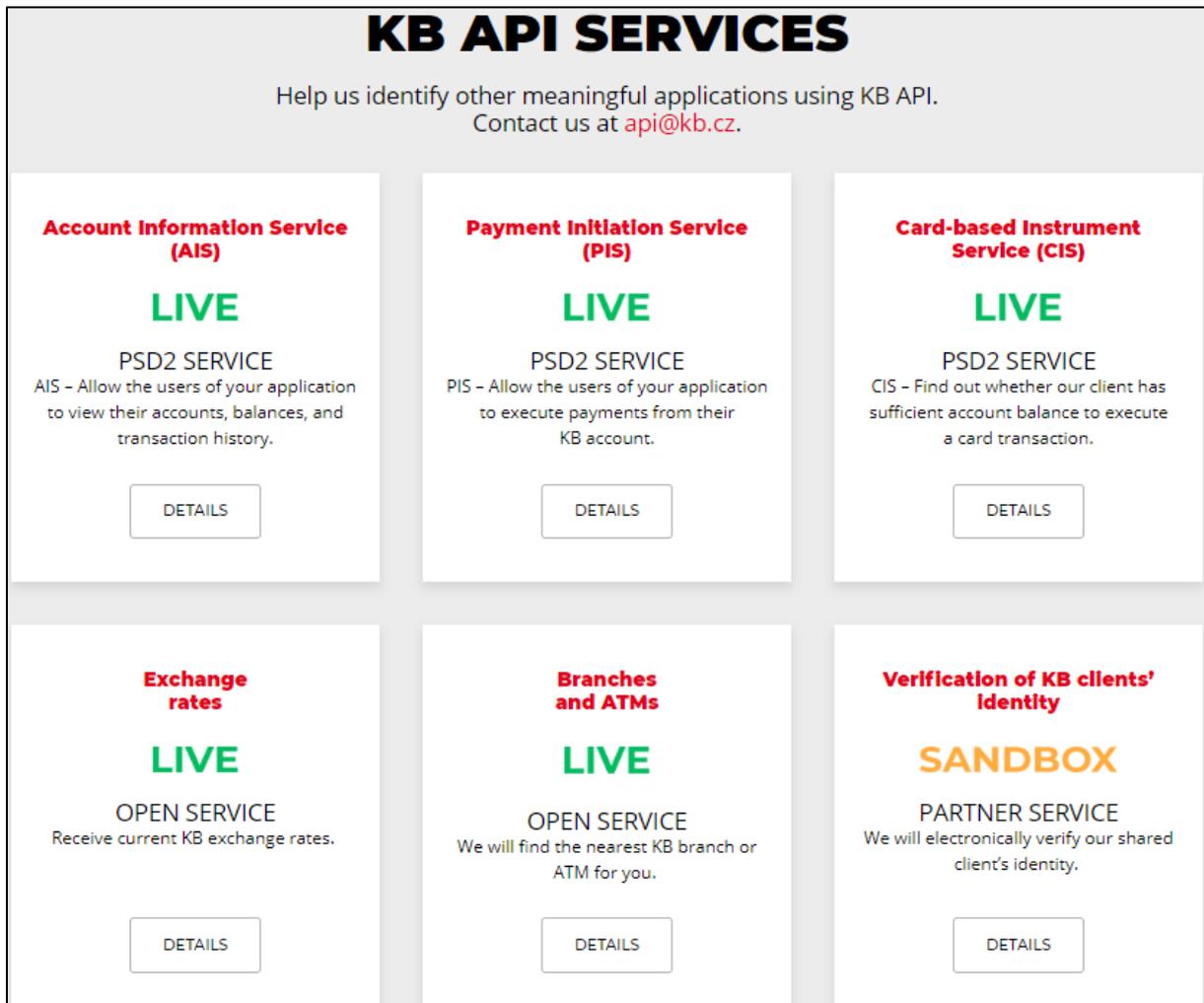
registered office: Na Příkopě 33, Praha 1, ZIP CODE 114 07, Company ID 45317054, registered in the Commercial Register maintained by the Municipal Court in Prague, Section B, Insert 1360

4. **Generate the key to the proclamation of the service, see [Generating API key](#)**

## OVERVIEW OF API SERVICES

Overview of services can be displayed at the page <https://www.kb.cz/cs/api> . This is the public part with description of services and information about the current state of services:

- **LIVE** - complete service, ready to use (this is the production version of the service)
- **SANDBOX** - ready for a trial
- **IDEA** - collecting ideas for a new service, the service does not yet exist or is in preparation)



**KB API SERVICES**

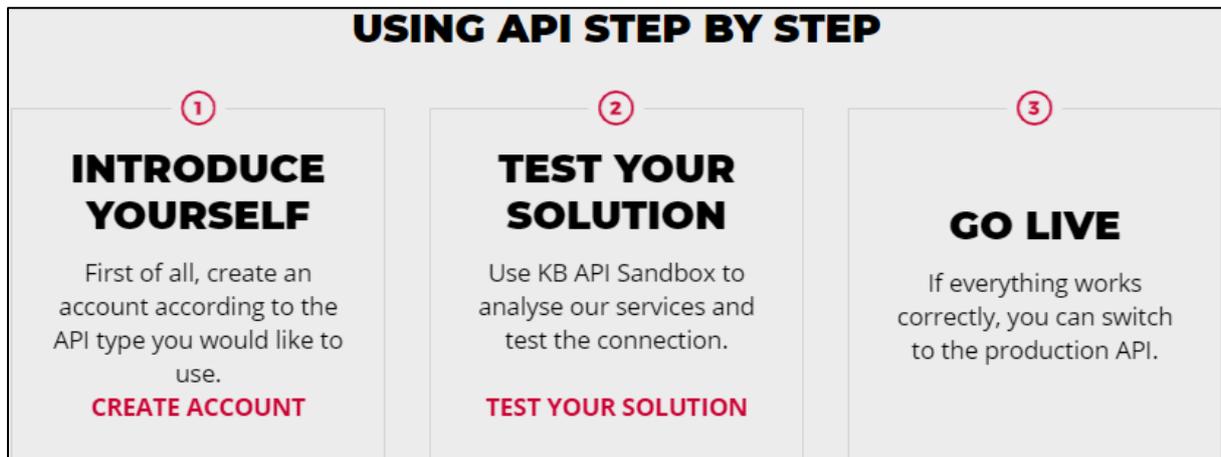
Help us identify other meaningful applications using KB API.  
Contact us at [api@kb.cz](mailto:api@kb.cz).

<p><b>Account Information Service (AIS)</b></p> <p><b>LIVE</b></p> <p>PSD2 SERVICE</p> <p>AIS – Allow the users of your application to view their accounts, balances, and transaction history.</p> <p>DETAILS</p>	<p><b>Payment Initiation Service (PIS)</b></p> <p><b>LIVE</b></p> <p>PSD2 SERVICE</p> <p>PIS – Allow the users of your application to execute payments from their KB account.</p> <p>DETAILS</p>	<p><b>Card-based Instrument Service (CIS)</b></p> <p><b>LIVE</b></p> <p>PSD2 SERVICE</p> <p>CIS – Find out whether our client has sufficient account balance to execute a card transaction.</p> <p>DETAILS</p>
<p><b>Exchange rates</b></p> <p><b>LIVE</b></p> <p>OPEN SERVICE</p> <p>Receive current KB exchange rates.</p> <p>DETAILS</p>	<p><b>Branches and ATMs</b></p> <p><b>LIVE</b></p> <p>OPEN SERVICE</p> <p>We will find the nearest KB branch or ATM for you.</p> <p>DETAILS</p>	<p><b>Verification of KB clients' Identity</b></p> <p><b>SANDBOX</b></p> <p>PARTNER SERVICE</p> <p>We will electronically verify our shared client's identity.</p> <p>DETAILS</p>

After selecting the service of choice, a detailed description with further information will appear and a link to login / registration to the API Portal.

## USER REGISTRATION

To access the service, a registration is required. Registration may be initiated from the detailed description of the selected service at the overview of API services (<https://www.kb.cz/cs/api>; see CREATE ACCOUNT).



After selecting registration, the user will be redirected to the developer section of the API Portal with a detailed description of the API and other features.

## REGISTRATION - USER INFORMATION

To log into the developer section of the API Portal, email and password (including password confirmation) need to be entered and a captcha confirmed.

**Registration  
Open Services**

E-mail \* ✔

I'm not a robot 

Password \* ✔

Retype Password \*

Validation Error box

REGISTER

CANCEL

Touto registrací beru na vědomí, že bude Komerční banka a.s. uchovávat můj email, heslo a IP adresu za účelem poskytnutí služby, informování o jejích změnách, vyhodnocení jejího využití a zaslání obchodních sdělení.

\* Povinná pole

After confirmation, a user profile will be created and the user will be redirected to an overview of the production API.

## MAIN MENU



The main menu contains:

- DEVELOPERS - API list display
- KB API OVERVIEW - API services overview display <https://www.kb.cz/cs/api>
- OPEN SERVICES - overview of public API services (user registration at the API Portal required only)
- PSD2 SERVICES - overview of PSD2 API services
- PARTNER SERVICES - overview of partner API services (user registration at the API Portal and contract with KB required)
- APIS - overview of API (depending on the selected context - open / PSD2 / partner services)
- APPLICATIONS - application management, see [Application Management \(APPLICATION\)](#)
- *Information on the logged-in user* - user login (email), password change option, logout from API Portal option

### Switching between sections requires login

Switching section (e.g. switching from OPEN SERVICES section to PARTNER SERVICES section) requires re-login (i.e. each section holds its own login data).

## APPLICATION MANAGEMENT

This concerns third party applications that consume the exposed API (could be a web application, mobile application, etc.).

Application Management enables:

- Add / create a new application (**ADD APPLICATION**); see [Creating a New Application](#)
- Display application detail (**VIEW**); see [Application Detail](#)
- Change the name and description of the application (**EDIT**); see [Changing Applications](#)
- Remove application (**DELETE**); see [Removing Applications](#)
- Generating an API Key, see [Generating API Key](#)
- Connecting an application to API (**SUBSCRIBE**), see [Application Connection to API](#)



Name	Workflow Status	Subscriptions	Actions
DefaultApplication	ACTIVE	1	VIEW EDIT DELETE
LoremipsumApplication	INACTIVE	1	VIEW EDIT DELETE

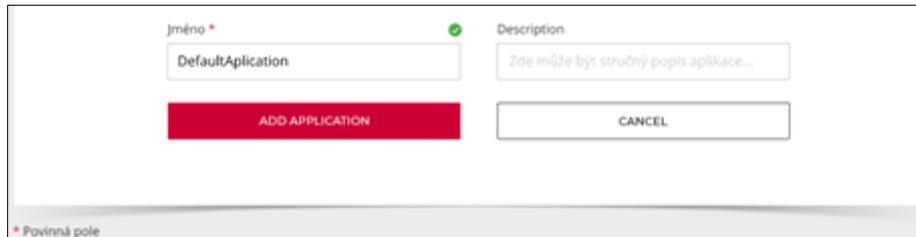
Show 10 Entries      Showing 2 to 2 of 2 entries 1 2 3 4



## CREATING A NEW APPLICATION

Requirements to the creation of a new application:

- Name - application name (required parameter)
- Description - description of the application (optional parameter)



## APPLICATION DETAILS

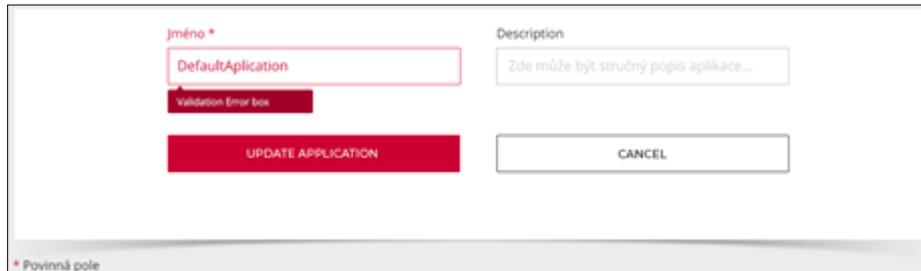
The application detail contains:

1. DETAILS - information about the application:
  - a. Status - application status (always APPROVED)
  - b. Per Token Quota - this parameter defines the restrictions on API calls (how many times in a defined period can API be called)
  - c. Description - any desired description of the application
2. PRODUCTION KEYS - generating production keys (relevant to the production API, or to the API Portal developer section), see [Production Key](#)
3. SUBSCRIPTION - overview of which APIs a particular application is connected to, see [Overview of Application Links to API](#)

DETAILS	PRODUCTION KEYS	SUBSCRIPTIONS	EDIT
Status	<b>APPROVED</b>		
Per Token Quota	<b>Unlimited</b> Allows unlimited requests  This feature allows you to assign an API request quota per access token. The allocated quota is shared among all the subscribed APIs of the application.		
Description	Not Given		

## CHANGE OF APPLICATION

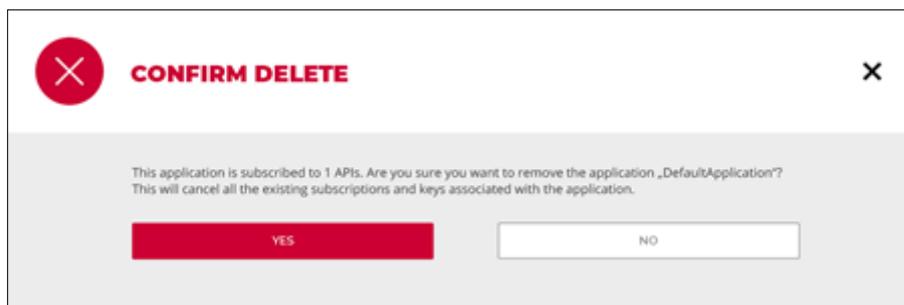
As part of change of application, the name and description of the application can be changed. Application name is unique.



The screenshot shows a form for updating an application. It has two main sections: 'Jméno \*' (Name) and 'Description'. The 'Jméno \*' field contains 'DefaultApplication' and has a red 'Validation Error box' below it. The 'Description' field contains the placeholder text 'Zde může být stručný popis aplikace...'. Below the fields are two buttons: 'UPDATE APPLICATION' (red) and 'CANCEL' (white). At the bottom left, there is a small red asterisk and the text '\* Povinná pole'.

## REMOVING APPLICATION

After selecting DELETE, the removal of the application needs to be confirmed. This operation removes the application links to the API.



The screenshot shows a confirmation dialog box titled 'CONFIRM DELETE'. It features a red circle with a white 'X' icon on the left and a close 'X' icon on the right. The main text asks: 'This application is subscribed to 1 APIs. Are you sure you want to remove the application „DefaultApplication”? This will cancel all the existing subscriptions and keys associated with the application.' Below the text are two buttons: 'YES' (red) and 'NO' (white).

## GENERATING AN API KEY

The production key is used to call the production version of the service / API. This key can call all production APIs linked to the particular application (see [Application Connection to API](#)). Note: In case of partner APIs, the call to the production version of API may be conditioned by concluding a contract with KB (without a contract, the API cannot be called).

Only one production key may be generated for a particular application.

The generation itself is initiated by the **GENERATE KEYS** option).

DefaultApplication

DETAILS

PRODUCTION KEYS

SUBSCRIPTIONS

EDIT



## No Keys Found

No keys are generated for this type in this application.

GENERATE KEYS

### RE-GENERATING AN API KEY

If an existing API key needs to be re-generated, it is possible to select **REGENERATE**.

### Generate a Test Access Token

Access Token

.....

REGENERATE

COPY

Above token has a unlimited validity period.

### APPLICATION CONNECTION TO API

Linking the application with the API forms a condition for calling the API. The application can be interconnect in the detail of the selected API. In the *Applications* item, it is possible to select the desired application and create a link by selecting the SUBSCRIBE option.

API PORTAL - OPEN SERVICES

Touchpoint-Sandbox - v1

<p><b>Version</b> v1</p> <hr/> <p><b>Updated</b> 15/Apr/2019 12:44:25 PM UTC</p> <hr/> <p><b>Status</b> <span style="background-color: #4caf50; color: white; padding: 2px 5px; font-weight: bold;">PUBLISHED</span></p>	<p><b>Applications</b></p> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px;">       DEFAULTAPPLICATION ▾     </div> <div style="text-align: center;"> <div style="background-color: #e91e63; color: white; padding: 5px 15px; border: 1px solid #ccc; display: inline-block;">SUBSCRIBE</div> </div>
--	--

### OVERVIEW OF APPLICATION CONNECTION TO API

The overview of to which API the selected application is connected can be viewed in detail of the selected application (option SUBSCRIPTIONS).

DETAILS	PRODUCTION KEYS	SUBSCRIPTIONS	EDIT
<input type="text" value="Filter by ..."/>			
API Name	Status	Actions	
TOUCHPOINT - V1 <span>PUBLISHED</span>	UNBLOCKED	UNSUBSCRIBE	
Show <input type="text" value="10"/> entries Showing 1 to 1 of 1 entries			1

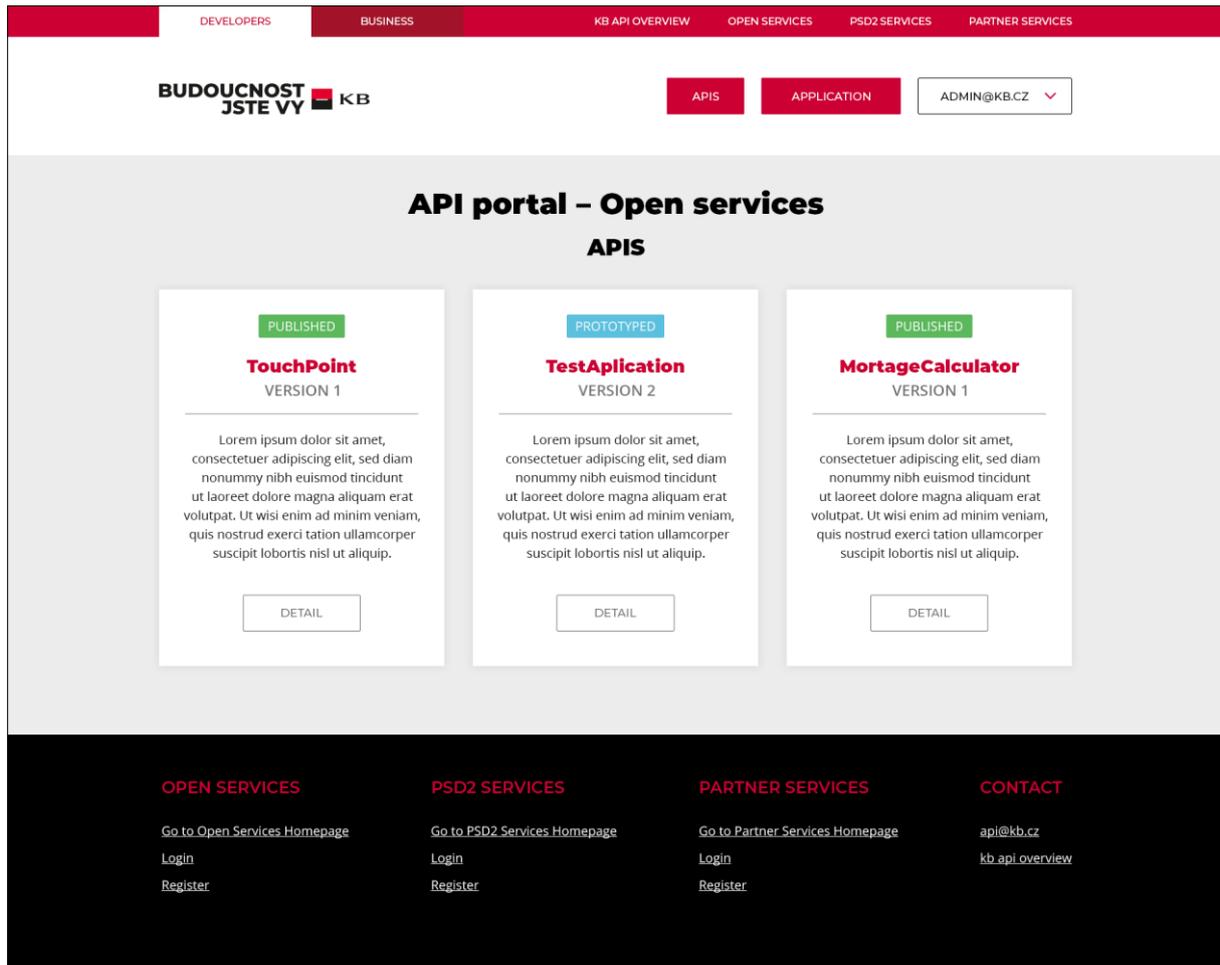
## API SERVICES MANAGEMENT

The list of services is displayed after logging into the API Portal.

The developer section of the API Portal does not display any services in one overview but divided into sections (OPEN SERVICES, SERVICES PARTNER, PSD2 SERVICES). It is possible to switch between the sections but the re-login (or registration) to the particular section is necessary (each section can hold their own login).

For each application, it is possible:

- to display detail of service of similar description
- to display description of the API (in the Open API 3.0.0 format)
- to display additional documentation to the particular service

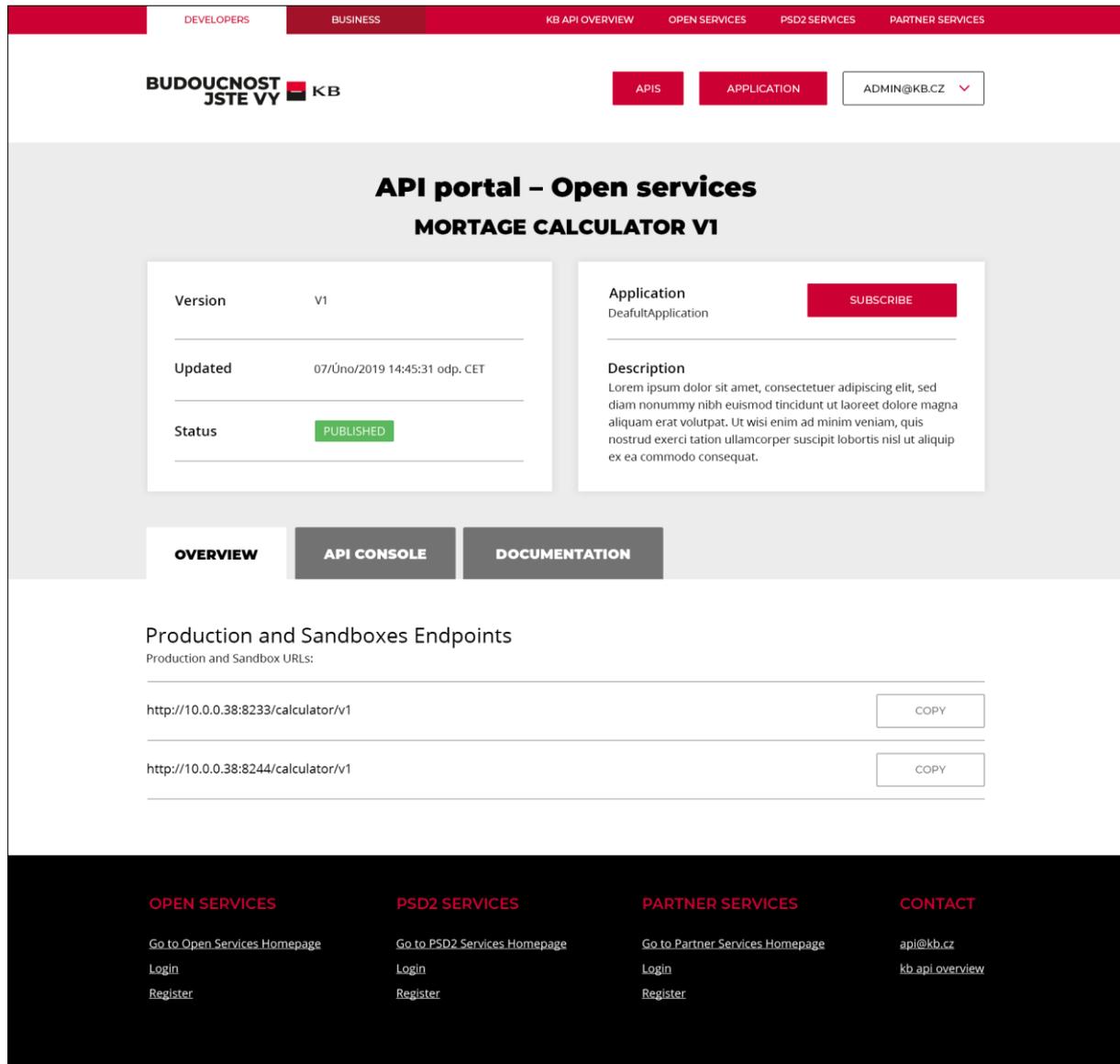


The screenshot shows the 'API portal - Open services' page. The navigation bar includes 'DEVELOPERS', 'BUSINESS', 'KB API OVERVIEW', 'OPEN SERVICES', 'PSD2 SERVICES', and 'PARTNER SERVICES'. The header features the KB logo and a user dropdown menu with 'ADMIN@KB.CZ'. The main content area is titled 'API portal - Open services' and 'APIS'. It displays three service tiles: 'TouchPoint VERSION 1' (PUBLISHED), 'TestApplication VERSION 2' (PROTOTYPED), and 'MortgageCalculator VERSION 1' (PUBLISHED). Each tile contains a description and a 'DETAIL' button. The footer contains links for 'OPEN SERVICES', 'PSD2 SERVICES', 'PARTNER SERVICES', and 'CONTACT'.

List of APIs can be viewed by selecting APIS. After selecting the desired API, its detail is shown, see [API Detail](#) . Each service (each API) has a separate "tile" (application).

## API DETAIL

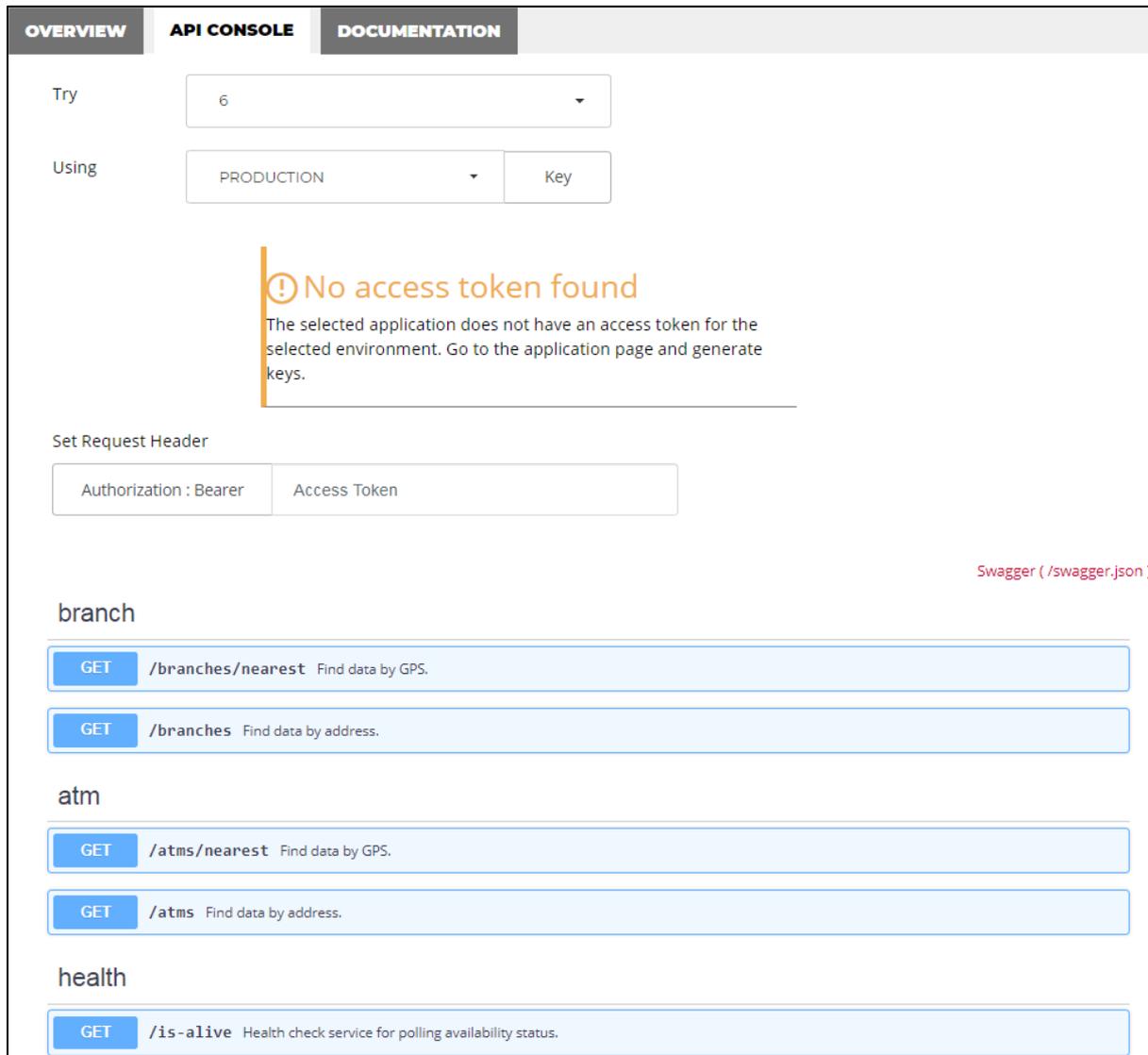
API Detail provides information about the API service - API service version, date of API service addition, API service status (always PUBLISHED), url of endpoints (OVERVIEW section), API description in the Open API 3.0.0 format (section API CONSOLE), documentation to API (if needed, all the necessary information is given in the description of the API - API CONSOLE section).



The screenshot shows the API Detail page for 'MORTGAGE CALCULATOR V1'. The page has a red navigation bar at the top with links for DEVELOPERS, BUSINESS, KB API OVERVIEW, OPEN SERVICES, PSD2 SERVICES, and PARTNER SERVICES. Below the navigation bar is the KB logo and a user profile dropdown menu showing 'ADMIN@KB.CZ'. The main content area is titled 'API portal - Open services' and 'MORTGAGE CALCULATOR V1'. It features two columns of information: the left column shows 'Version: V1', 'Updated: 07/Úno/2019 14:45:31 odp. CET', and 'Status: PUBLISHED'; the right column shows 'Application: DeafultApplication' with a 'SUBSCRIBE' button and a 'Description' section with placeholder text. Below this is a navigation bar with 'OVERVIEW', 'API CONSOLE', and 'DOCUMENTATION' tabs. The 'OVERVIEW' tab is active, showing 'Production and Sandboxes Endpoints' with two URLs and 'COPY' buttons. The footer contains links for OPEN SERVICES, PSD2 SERVICES, PARTNER SERVICES, and CONTACT.

## API DESCRIPTION

This section contains the possibility of calling API and the description of API services itself.



The screenshot shows the 'API CONSOLE' tab in the API portal. At the top, there are three tabs: 'OVERVIEW', 'API CONSOLE', and 'DOCUMENTATION'. Below the tabs, there are two dropdown menus: 'Try' (set to '6') and 'Using' (set to 'PRODUCTION' and 'Key'). A prominent orange warning message states: 'No access token found. The selected application does not have an access token for the selected environment. Go to the application page and generate keys.' Below this, there is a 'Set Request Header' section with a dropdown menu showing 'Authorization : Bearer' and 'Access Token'. On the right side, there is a link for 'Swagger (/swagger.json)'. The main content area lists several API endpoints under three categories: 'branch', 'atm', and 'health'. Each endpoint is shown with a 'GET' method and a brief description.

Method	Endpoint	Description
GET	/branches/nearest	Find data by GPS.
GET	/branches	Find data by address.
GET	/atms/nearest	Find data by GPS.
GET	/atms	Find data by address.
GET	/is-alive	Health check service for polling availability status.

## SAVE SWAGGER (IN JSON FORMAT)

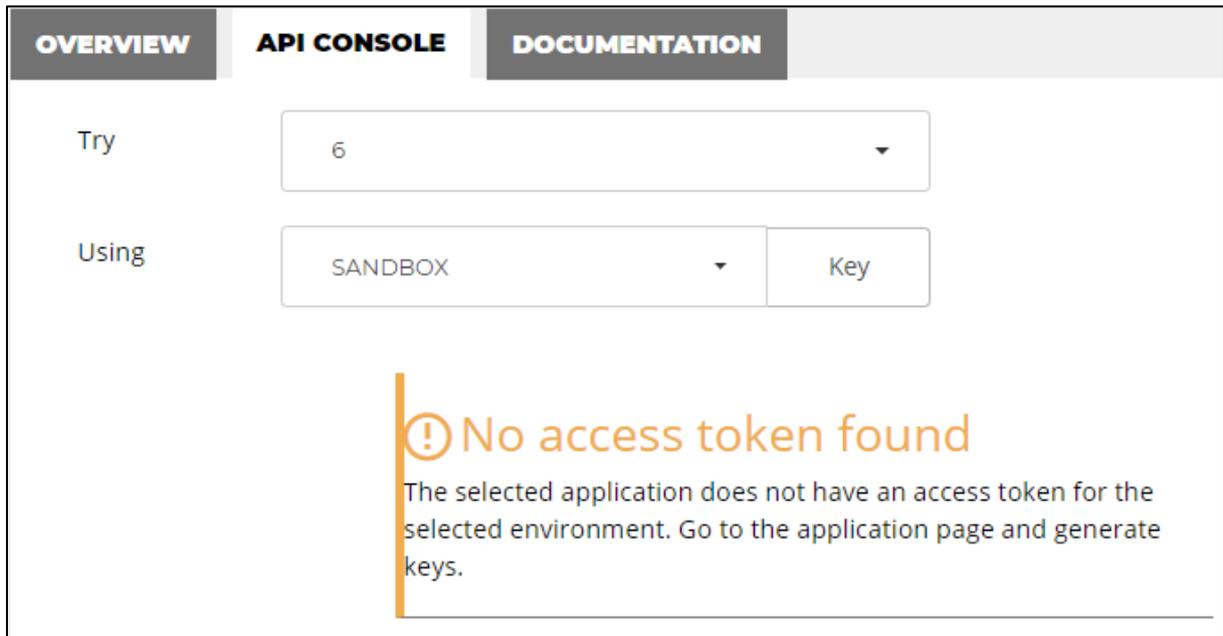
Swagger is possible to save by link *Swagger (/swagger.json)*.



This screenshot shows the 'Set Request Header' section of the API console. The dropdown menu is set to 'x-api-key : Bearer' and the value '17365595-1242-3361-bbc1-6316935a34f8' is entered. On the right side, the link 'Swagger (/swagger.json)' is circled in red, indicating where to click to download the Swagger JSON file.

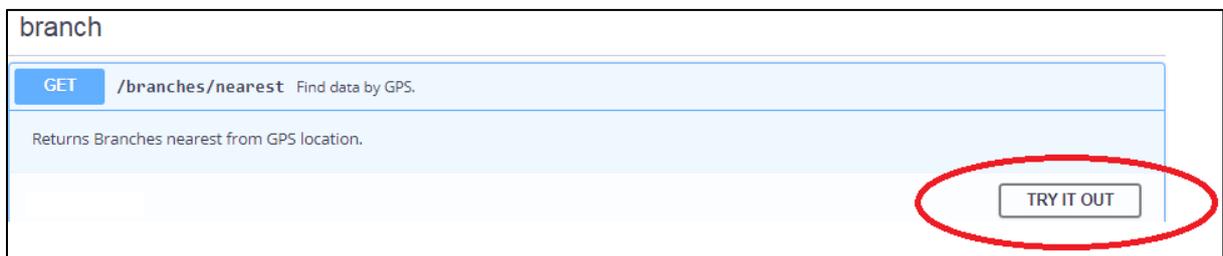
## CALLING THE SERVICE (API)

Under the *Try* item, it is possible to select an application which has been linked to the appropriate API, under the *using* item, it is possible to choose the API key.



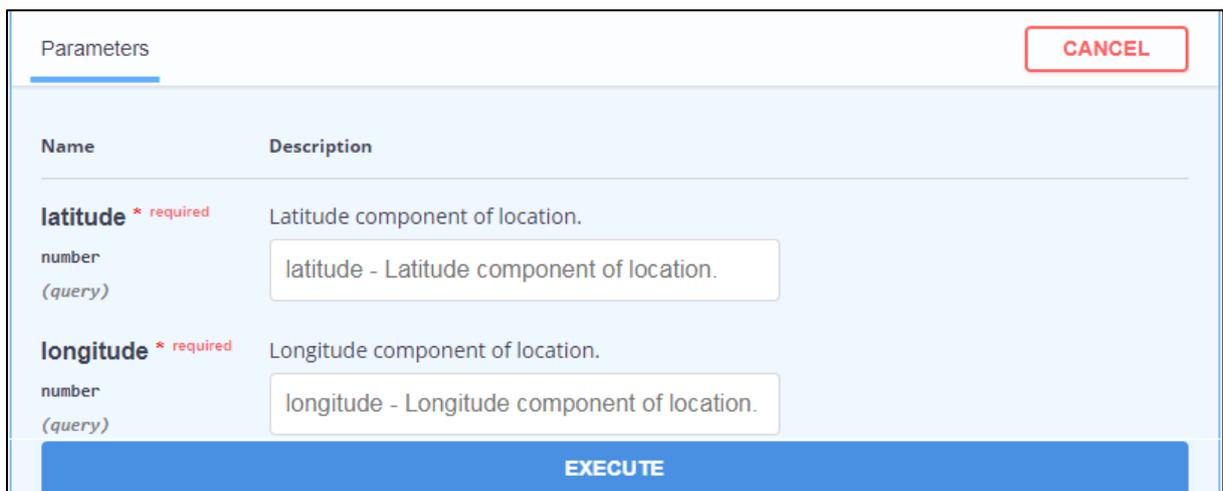
The screenshot shows the 'API CONSOLE' tab selected. Under 'Try', a dropdown menu shows '6'. Under 'Using', a dropdown menu shows 'SANDBOX' and a 'Key' field. A large orange warning message is displayed: 'No access token found'. Below the message, it says: 'The selected application does not have an access token for the selected environment. Go to the application page and generate keys.'

The call on API itself is triggered by the option TRY IT OUT (for entering input values).



The screenshot shows the 'branch' endpoint configuration. The method is 'GET' and the path is '/branches/nearest'. The description is 'Find data by GPS.' and 'Returns Branches nearest from GPS location.' The 'TRY IT OUT' button is circled in red.

And the EXECUTE option (after initiation).



The screenshot shows the 'Parameters' dialog box. It has a 'CANCEL' button in the top right. The parameters are listed in a table:

Name	Description
<b>latitude</b> * required number (query)	Latitude component of location. latitude - Latitude component of location.
<b>longitude</b> * required number (query)	Longitude component of location. longitude - Longitude component of location.

At the bottom of the dialog is a large blue 'EXECUTE' button.

If the key to call the API is not generated, see chapter [Generating API key](#) .

## DESCRIPTION OF API ATTRIBUTES

The actual description of the attributes is designed in the format of Open API 3.0.0, each attribute is given a detailed description and example of performance.

Parameters		TRY IT OUT
Name	Description	
<b>x-correlation-id</b> * required string (header)	Request correlation ID (GUID) is the generated unique identifier of the initial request, which stays the same through all the systems/application involved <ul style="list-style-type: none"> <li>example: '324d4777-b59e-4ad3-bb16-527856460113'</li> </ul>	
<b>latitude</b> * required number (query)	Latitude component of location.	
<b>longitude</b> * required number (query)	Longitude component of location.	
<b>isOpen</b> boolean (query)	Branch is open.	
<b>isAccessible</b> boolean (query)	Is the ATM wheelchair accessible.	
<b>page</b> * required integer (query)	Current branches page. Page starts with 0 (first page).	
<b>size</b> integer (query)	Number of branches per page. Default value is 30 branches per page.	

Swagger saved by link (see [Save swagger \(in JSON format\)](#)) contains header for sending API key.

Header is in securitySchemes:

securitySchemes:

default:

type: apiKey

in: header

name: **x-api-key**

description: Access Token that is generated in Api Manager

For attributes in response, examples of performance and fulfilment of attributes (response code 200 - option *example Value*) may be displayed.

Responses

Code	Description	Links						
200	<div style="background-color: #333; color: #fff; padding: 5px;">Successful operation.</div> <div style="border: 1px solid #ccc; padding: 2px; display: inline-block;">application/json</div> <p>Controls: <b>Accept</b> header.</p> <div style="border: 2px solid red; padding: 5px; margin: 5px 0;"> <p>Example Value Model</p> <pre style="background-color: #333; color: #fff; padding: 10px;">{   "content": [     null   ],   "totalPages": 0,   "totalElements": 0,   "pageNumber": 0,   "pageSize": 0,   "numberOfElements": 0,   "first": true,   "last": true,   "empty": true }</pre> </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Name</th> <th>Description</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>X-Total-Count</td> <td>Total count of branches.</td> <td>integer</td> </tr> </tbody> </table>	Name	Description	Type	X-Total-Count	Total count of branches.	integer	No links
Name	Description	Type						
X-Total-Count	Total count of branches.	integer						
204	<div style="background-color: #333; color: #fff; padding: 5px;">No data found.</div>	No links						
400	<div style="background-color: #333; color: #fff; padding: 5px;">The parent element contains a collection of all error states.</div>	No links						
401	<div style="background-color: #333; color: #fff; padding: 5px;">Authentication information is missing or invalid</div>	No links						
Headers:								
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Name</th> <th>Description</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>WWW_Authenticate</td> <td></td> <td>string</td> </tr> </tbody> </table>			Name	Description	Type	WWW_Authenticate		string
Name	Description	Type						
WWW_Authenticate		string						
500	<div style="background-color: #333; color: #fff; padding: 5px;">Internal server error.</div>	No links						

The attribute description itself may be displayed by switching to the *Model* option.

Example Value Model

```

Page {
  content {
    [ {
      oneOf ->
        Atm > {...}
        AtmNear > {...}
        Branch > {...}
        BranchNear > {...}
      ]
    }
  }
  totalPages integer
  Total number of pages.
  totalElements integer
  Total number of found elements.
  pageNumber integer
  Actual page number. Number of the first page is 0.
  pageSize integer
  Size of the page.
  numberOfElements integer
  Number of elements on the current page.
  first boolean
  Is the first page.
  last boolean
  Is the first page.
  empty boolean
  Is actual page empty.
}
  
```