



Banno Integration Guide

Version 1.1
May 2024

In strict commercial confidence
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Step by Step Integration Plan

In order for the Unifimoney plugin to work, you will need to have two different External Applications. One External Application is for the *Card Face*, and the other External Application is for the *Expanded View*.

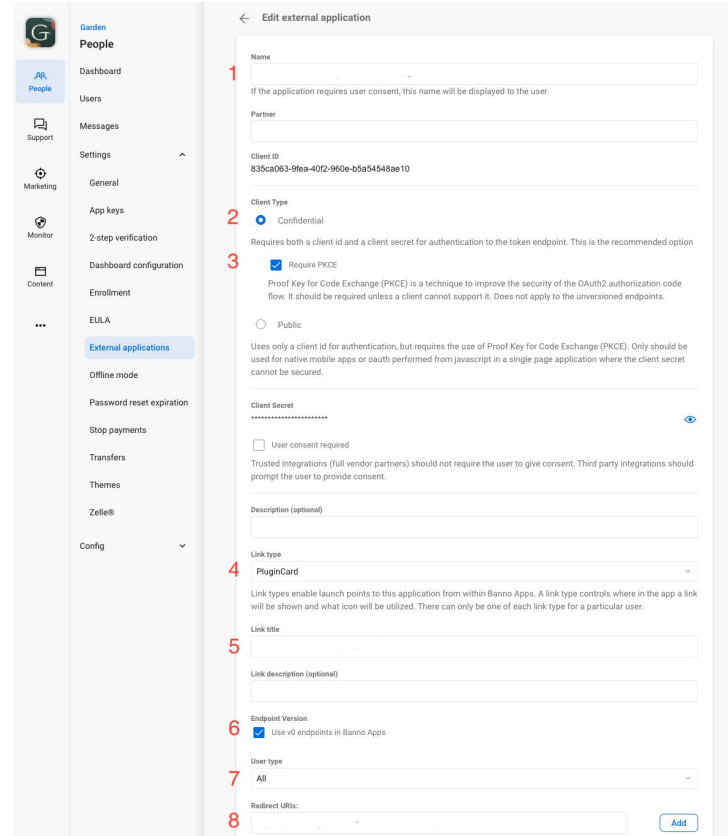
Unifimoney will need to provide you with the two redirect URI's referred to in Step 2-8 and Step 3-8. Please contact your account manager to get these provisioned.

First Step:

Create the External Application

1. Set name to 'Unifimoney Expanded View'
2. Ensure confidential is selected
3. Check Require PCKE
4. Select LinkType to PluginCard
5. Set Link Title to 'Unifimoney Expanded View'
6. Endpoint Version must be checked
7. User Type to All
8. **Unifi to provide**

Finally click save at the bottom of the page



Edit external application

1 Name

If the application requires user consent, this name will be displayed to the user.

Partner

Client ID
835ca063-96a-40f2-960e-b5a54548ae10

Client Type

2 ☒ Confidential
Requires both a client id and a client secret for authentication to the token endpoint. This is the recommended option

3 ☒ Require PCKE
Proof Key for Code Exchange (PKCE) is a technique to improve the security of the OAuth2 authorization code flow. It should be required unless a client cannot support it. Does not apply to the unversioned endpoints.

☐ Public
Uses only a client id for authentication, but requires the use of Proof Key for Code Exchange (PKCE). Only should be used for native mobile apps or oauth performed from javascript in a single page application where the client secret cannot be secured.

Client Secret
.....

☐ User consent required
Trusted integrations (full vendor partners) should not require the user to give consent. Third party integrations should prompt the user to provide consent.

Description (optional)

Link type

4 **PluginCard**

Link types enable launch points to this application from within Banno Apps. A link type controls where in the app a link will be shown and what icon will be utilized. There can only be one of each link type for a particular user.

Link title

5

Link description (optional)

Endpoint Version

6 ☒ Use v0 endpoints in Banno Apps

User type

7 **All**

Redirect URIs:

8

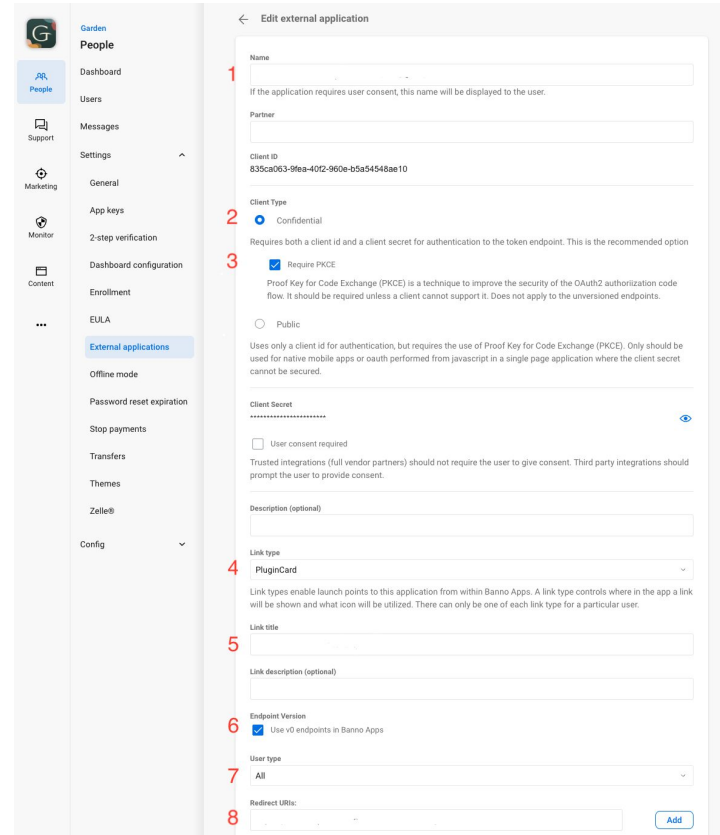
Add

Second Step:

Create the External Application

1. Set name to 'Unifimoney Card Face'
2. Ensure confidential is selected
3. Check Require PCKE
4. Select LinkType to PluginCard
5. Set Link Title to 'Unifimoney Card Face'
6. Endpoint Version must be checked
7. User Type to All
8. **Unifi to provide**

Finally click save at the bottom of the page



Edit external application

1. Name:

If the application requires user consent, this name will be displayed to the user.

Partner:

Client ID: 835ca063-9faa-40f2-960e-b5a54548ae10

Client Type: ☒ Confidential

Requires both a client id and a client secret for authentication to the token endpoint. This is the recommended option

3. ☒ Require PCKE

Proof Key for Code Exchange (PKCE) is a technique to improve the security of the OAuth2 authorization code flow. It should be required unless a client cannot support it. Does not apply to the unversioned endpoints.

☐ Public

Uses only a client id for authentication, but requires the use of Proof Key for Code Exchange (PKCE). Only should be used for native mobile apps or oauth performed from javascript in a single page application where the client secret cannot be secured.

Client Secret:

☐ User consent required

Trusted integrations (full vendor partners) should not require the user to give consent. Third party integrations should prompt the user to provide consent.

Description (optional):

4. Link type:

Link types enable launch points to this application from within Banno Apps. A link type controls where in the app a link will be shown and what icon will be utilized. There can only be one of each link type for a particular user.

5. Link title:

Link description (optional):

6. Endpoint Version: ☒ Use v0 endpoints in Banno Apps

User type:

7. Redirect URIs:

8.

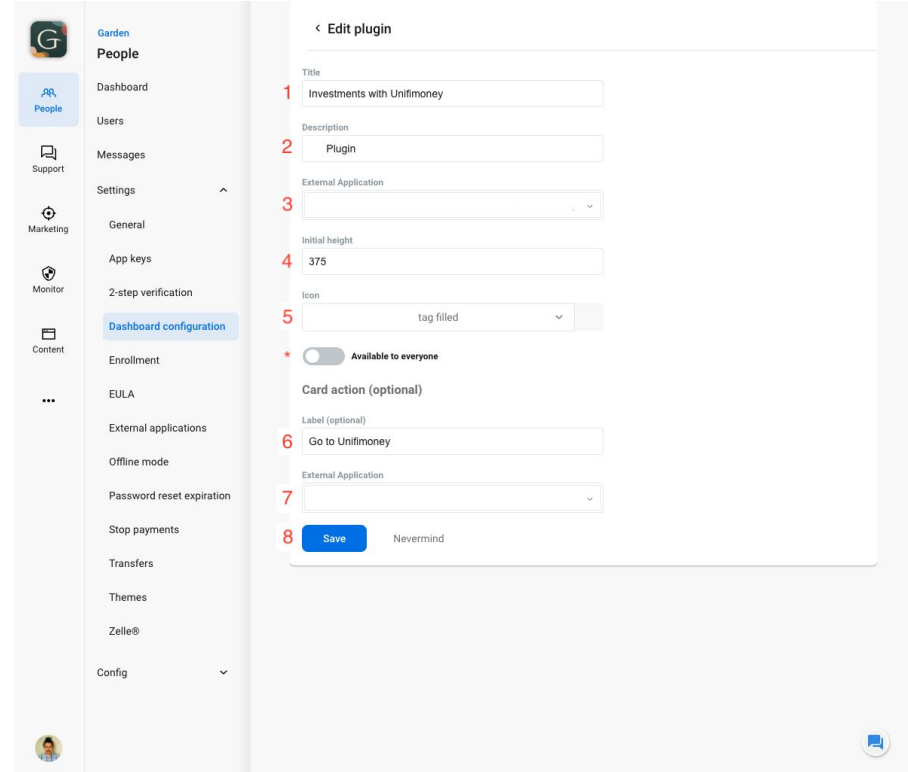
Third Step:

From the Dashboard Configuration screen

1. Title field - enter 'Investments with Unifimoney' or your choice
2. Description field - enter 'Plugin' or your choice
3. External Application - select "Unifimoney Prod Card Face" from the drop-down
4. Initial Height - enter 375
5. Select an Icon from -> <https://jackhenry.design/visual-language/iconography/>
6. Set the Label to "Go to Unifimoney"
7. External Application - select "Unifimoney Expanded View" from the drop-down

8. Then click Save

* **Note re-whitelisting**, you may want to specify to have "Available to everyone" set to off at this point. Off for this option means the plugin card is hidden from everyone, except for any user which has their permissions overridden to show the plugin



The screenshot shows the 'Edit plugin' configuration screen. The left sidebar contains a navigation menu with options: Garden, People, Dashboard, Users, Messages, Settings, Marketing, Monitor, Content, and a user profile icon. The main content area is titled '< Edit plugin' and contains the following fields and options:

- Title:** Investments with Unifimoney (Step 1)
- Description:** Plugin (Step 2)
- External Application:** (Step 3)
- Initial height:** 375 (Step 4)
- Icon:** tag filled (Step 5)
- Available to everyone:** (Step 6)
- Card action (optional):** Go to Unifimoney (Step 7)
- External Application:** (Step 8)
- Buttons:** Save, Nevermind

Fourth Step:

Share configuration details back to Unifimoney

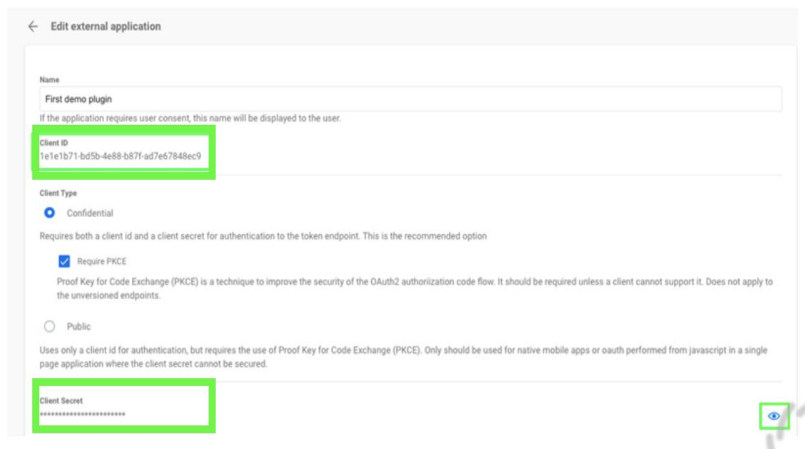
Source:

<https://jackhenry.dev/open-api-docs/plugins/quickstarts/buildyourfirsplugin/>

From your “Unifimoney Card Face” in order for us to deploy our code to Production environment we need

- client_id
- client_secret
- environment (the Banno environment deployment location)

Please **DO NOT** send these in clear text over the internet - use a secure service like Zix to send this information



← Edit external application

Name
First demo plugin
If the application requires user consent, this name will be displayed to the user.

Client ID
1e1e1b71-bd5b-4e88-b87f-ad7e67848ec9

Client Type
☒ Confidential
Requires both a client id and a client secret for authentication to the token endpoint. This is the recommended option.
☒ Require PKCE
Proof Key for Code Exchange (PKCE) is a technique to improve the security of the OAuth2 authorization code flow. It should be required unless a client cannot support it. Does not apply to the unversioned endpoints.
☐ Public
Uses only a client id for authentication, but requires the use of Proof Key for Code Exchange (PKCE). Only should be used for native mobile apps or oauth performed from javascript in a single page application where the client secret cannot be secured.

Client Secret

Running the dynamic plugin

Configuration

Now that the static plugin is running, let's make it dynamic! First, we need the *Client ID* and *Client Secret* from the *External Application* that was configured above.

Find the *config.js* (make sure you have already renamed the example config file to just *config.js*) in the project's folder. Change the following values in that file:

- *client_id*: Use your *Client ID* value
- *client_secret*: Use your *Client Secret* value
- *environment*: Use your Banno environment deployment location

Now, return to the Banno People External Application, change the redirect URI from `http://localhost:8080/static` to `http://localhost:8080/dynamic`

Finally, restart the plugin server.

```
npm run start
```

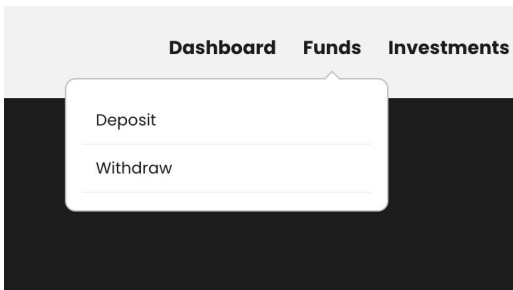
Now, navigate back to Banno Online dashboard, you can see that the plugin now greets the authenticated user by name and displays the number of accounts associated with the user.

You have successfully built your first plugin!

How to fund your you account in the pilot program:

To fund your Unifimoney cash account do the following

1. From top right menu select Funds/Deposit funds



2. Follow the instructions to create an ACH transfer that will clear into your bank account in T+2 days

How to White-List Users

It is possible to have the Unifimoney plugin be available to only a select few users.

This is something the financial institution can do without the need for Jack Henry to step in.

Specifically, administrators with access to Banno's back office for their institution.

The plugin can be enabled for;

1) enable a plugin for *all* users or

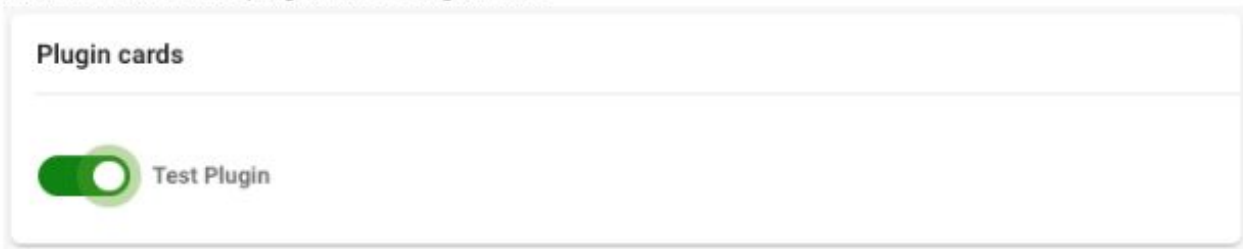
2) *hide* the plugin for all users and override permissions for individual users whom you want to see the plugin card.*

* (Technically each user would also need the permission for the *External Application(s)* turned on as well).

Enable Plug-in Card for User

As mentioned in the note above, if you don't want the plugin enabled for **ALL** users, we need to select which users to enable the Plugin Card for.

- From Banno People, click the *Users* and search by username.
- Click on the user
- Click **Permissions**
- Find and enable the plugin under **Plugin cards**



The user will now have the plugin available to them in the Banno Online dashboard.

We don't believe this would take very long at all, in fact the only limiting factor would be the administrator at the FI's *familiarity with the process*. It's very quick for them to do in Banno's back office UI.