Open Switch API

An Open API for PISPs, FinTechs, 3rd Party Payment Aggregators

WiredIn, October 1st, 2024

Exploring Open Banking APIs
ML PISP Project, ThirdParty-SDK, Tink, OpenBankProject

1. **Mojaloop ThirdParty-SDK (** https://github.com/mojaloop/thirdparty-sdk **)**: Provides ThirdParty (PISP) SDK that interfaces between a Mojaloop API compliant switch, and a ThirdParty backend platform that does not natively implement the Mojaloop API. The ThirdParty API is for non-fund holding participants to interact over a centralized Mojaloop Hub/Switch. This API allows Payment Initiation Service Providers (PISPs) to act as proxy in initiating payments. The API also helps in establishing a relationship between a User, his/her DFSP, and a PISP. ***We recommend to use and extend this project to meet RSwitch OpenAPI PISP Requirements***.

2. **Tink (** https://tink.com **)**: Tink's APIs are not open source. Tink provides a proprietary open banking platform that offers various services through APIs, such as account aggregation, payment initiation, and data enrichment services. The source code for these service is not publicly available for modification or redistribution. Access to the APIs are made available to clients under commercial terms. ***Likely not the approach to take here***.

3. **OpenBankProject (** https://www.openbankproject.com/ **)**:

    – **Global Standards**: allows to share data in compliance with major Open Banking API standards in use worldwide including UK Open Banking, Berlin Group, Bahrain OBF, …

    The Open Bank Project is an open source API for banks that enables account holders to interact with their bank using a wider range of third-party applications and services.

    Short of using the OBP-API we should instead use it as reference to enhance the ML ThirdParty-SDK to meet the Open Banking API standards where necessary.

Defining Open Banking
Banking, Payments, Mortgages

- Open Banking: Exchange of consumer data between banks, other DFSPs, and regulated providers (PISPs, FinTechs, …) on the basis of **consumer consent**.

  - Open Banking typically allows for the exchange of transactional and bank payment financial data.

- PISPs and 3PPIs are defined by the PSD2 (Payment Services Directive - PSD2), as players who are not direct account holders, and act as proxies in initiating payments.

- Is subset of Open Finance (Insurance, Pensions, Investments), and Open Data (Telecom, Utility, Transit, Healthcare, …)

Objectives for this PI
Compliance and Innovation in Open Banking

- Explore Open Banking Project (OBP) - **Global Standards**: allows to share data in compliance with major Open Banking API standards in use worldwide including UK Open Banking, Berlin Group, Bahrain OBF, …

- Make use of the PISP-Project (https://github.com/mojaloop/documentation/tree/master/website/versioned_docs/v1.0.1/api/thirdparty/assets/diagrams) Flow diagrams to define the PISP's Open APIs

  - Linking APIs (User/Account Holder using a PISP app to initiate payments needs to provide consent to their DFSP, before transfer requests)

  - Transfer APIs

- Create an MVP/Pilot with select financial institutions to test the APIs

Acceptance Criteria
Pilot Phase

- APIs meet the functional requirements as specified in the API documentation.

- Compliance with PSD2 (Second Payment Services Directive), and other specific open banking regulations (like those defined in the RNDPS in Rwanda).

- Successful integration and functionality testing with at least 1 banking institution, and 1 non-banking institution (FinTechs, PISPs, Payment/Bill Aggregators, …).

- Positive feedback from UATs indicating readiness for production rollout.

Implementation Plan
Product Roadmap

- **Phases**:

  1. **Requirements Gathering** (~ 1 month)

     - **Objective**: Define the scope and requirements for the Open Banking API, focusing on understanding the target market, compliance needs, and technical requirements.

     - **Activities**:

       - Stakeholder discussions to determine functional and non-functional requirements

       - Use cases: map out how different types of users will interact with the system

       - Discussions with banks, fintechs, and other financial institutions to understand their requirements and pain-points.

       - Analysis of regulatory requirements for Open Banking (reference Open Banking from other regions: UK, Brazil, …)

  2. **Architecture Design** (~ 2 weeks)

     - **Objective**: Review and gauge the suitability of the Mojaloop Thirdparty SDK for use as the Open Banking solution that meets the adopters' business and technical requirements.

     - **Activities**:

       - Selection and deep review of the ML Thirdparty SDK

       - Review the security architecture on the ML Thirdparty SDK, including authentication, authorization, and data encryption.

  3. **Development & Customization of Core Modules** (~ 2 - 3 months)

  4. **Integration Testing with the Switch** (~ 1 month)

  5. **Deployment and Go-Live** (~ 2 weeks)

- **Initial Steps**:

  - Define MVP features and scope (Payment Initiation and Account Information Services)