

**For: Bank of Ireland**

**Document Version: 0.2**

**AISP**

**Solution Blueprint**

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# Document Control

|  |  |
| --- | --- |
| **Title** | AISP Solution Blueprint |
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## Change Record

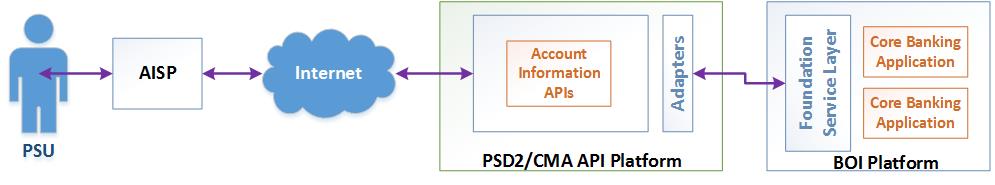
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| --- | --- | --- | --- |
| **Version No.** | **Date** | **Author(s)** | **Revision Notes** |
| 0.1 | 17-May-17 | Ramandeep Singh - Capgemini | Initial Version |
| 0.2 | 05-Jun-17 | Sandeep Sharma - Capgemini | Added API details |

# Functional Overview

The AISP module will provide the required functionality and APIs for the Account Information Service Providers to access the required account information as described in PSD2 and CMA directives.

An account information service is an online service to provide consolidated information on one or more payment accounts held by a PSU with another ASPSP or multiple PSPs. An AISP acts as an aggregator of data relating to a Payment Service User’s accounts

## Functional Block Diagram



* **PSU**: *Payment Service User* is the customer who would be utilizing account aggregation functionality of AISP to access account information from the Bank (ASPSP).
* **AISP**: *Account Information Service Provider* will invoke the appropriate account information APIs passing the required Access Token and other required parameters to retrieve PSU’s account information from the Bank.
* **PSD2/CMA API Platform**: PSD2/CMA API Platform provides the required APIs to the external parties to access account details and payment services. This API platform will interface with Bank’s core banking system through Foundation Services Layer to access required account information and invoke payment services.
* **Foundation Service Layer**: *Foundation Service Layer* provides access to core banking systems through REST web services and XML based input/output.

# List of PSD2 Platform APIs

List of APIs exposed to external and internal parties

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **SNO** | **Category** | **API Name** | **Consumer** | **HTTP Method** | **Endpoint URL Pattern** | **I/O Message Format** |
| 1 | AISP Consent | Create Account Info Request | AISP | POST | /banks/{bankId}/account-requests | Pending (SCA-Consent Related) |
| 2 | AISP Consent | Get Account Info Request | AISP | GET | /banks/{bankId}/account-requests/{AccountRequestId} | Pending (SCA-Consent Related) |
| 3 | AISP Consent | Delete Account Info Request | AISP | DELETE | /banks/{bankId}/account-requests/{AccountRequestId} | Pending (SCA-Consent Related) |
| 4 | AISP Account Information | Get Account Info | AISP | GET | /banks/{bankId}/accounts/{AccountId} | **ICD AISP-Account-Information v0.2.docx** |
| 5 | AISP Account Information | Get Account Balances | AISP | GET | /banks/{bankId}/accounts/{AccountId}/balances | **ICD AISP-Single Account-Balance v0.2.docx** |
| 6 | AISP Account Information | Get Account Transactions | AISP | GET | /banks/{bankId}/accounts/{AccountId}/transactions | **ICD AISP-Single Account-Transaction v0.2.docx** |
| 7 | AISP Account Additional Information | Get Account Beneficiaries | AISP | GET | /banks/{bankId}/accounts/{AccountId}/beneficiaries | Pending (CMA Related) |
| 8 | AISP Account Additional Information | Get Account Direct-Debits | AISP | GET | /banks/{bankId}/accounts/{AccountId}/direct-debits | Pending (CMA Related) |
| 9 | AISP Account Additional Information | Get Account Product | AISP | GET | /banks/{bankId}/accounts/{AccountId}/product | Pending (CMA Related) |
| 10 | AISP Account Additional Information | Get Account Standing-Orders | AISP | GET | /banks/{bankId}/accounts/{AccountId}/standing-orders | Pending (CMA Related) |

# SCA and Consent

## Overview

Before and AISP is able to access an account information for a customer, they need to create a consent with the customer which will include data clusters and permissions.

## Sequence / Integration Diagram

* Capgemini API Platform - AISP Consent Cross Functional Flows v01.vsdx
* Capgemini API Platform - AISP SCA and Consent Sequence Diagrams v01.vsdx
* Capgemini PSD2 AISP APIs - Balance v01.vsdx
* Capgemini PSD2 AISP APIs - Transactions v02.vsdx

## Integration Points

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SNO** | **System/Application** | **Integration Point** | **Purpose** | **ICD Document** | **Feature Catalog Reference** |
| 1 | Foundation Service | TPP Fraud Check | Check TPP Fraud  *(BOI to confirm if this is needed and is possible with NetReveal)* | Pending (SCA-Consent Related) |  |
| 2 | Foundation Service | Validate Login Credentials | Validate Login credentials of the user | Pending (SCA-Consent Related) |  |
| 3 | Foundation Service | Perform MFA/2FA | Initiate 2FA | Pending (SCA-Consent Related) |  |
| 4 | Foundation Service | Validate User Behavior with Fraudnet | User behavior fraud check | Pending (SCA-Consent Related) |  |
|  |  |  |  |  |  |

## Configuration Elements

<To be finalized with SCA-Consent flow>

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SNO** | **Configuration Category** | **Configuration Element** | **Purpose** | **Default Value** | **BOI Value** |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

## Logging & Monitoring Requirements

<To be finalized with SCA-Consent flow>

## Security and Connectivity

<To be finalized with SCA-Consent flow>

# Account Information API

## Overview

For Account Information API that is invoked by a TPP (AISP) to retrieve account Information of a customer for a single account identifier

## Sequence / Integration Diagram

## Integration Points

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SNO** | **System/Application** | **Integration Point** | **Purpose** | **ICD Document** | **Feature Catalog Reference** |
| 1 | Core Banking System | Foundation Services | To retrieve account balance data | ICD AISP-Account-Information v0.2.docx |  |
| 2 | Logging System | Splunk | Payload logging | NA |  |
| 3 | Database | MongoDB | Consent permissions reference data | NA |  |

## Configuration Elements

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SNO** | **Configuration Category** | **Configuration Element** | **Purpose** | **Default Value** | **BOI Value** |
| 1 | Throttling | Mule API Gateway Configuration | Throttle the request per TPP | 1000 / min |  |
| 2 | Security Policy | OAuth Mule Security Policy | Token based authorization | Enabled | Enabled |

## Logging & Monitoring Requirements

|  |  |
| --- | --- |
| Sno | Description |
| 1 | Payload logging – Implemented using Splunk |
| 2 | Audit log of API access – Implemented using Splunk |
| 5 | JVM Monitoring – Implemented using AppDynamics |
| 6 | API Analytics – Implemented using Splunk custom dashboards |

## Security and Connectivity

|  |  |
| --- | --- |
| Security | |
| 1 | MTLS |
| 2 | Token based authentication using OAuth |
| 3 | Permissions defined by CMA draft 0.1 Specifications, please refer to ICD for the details |
| Connectivity | |
| Dev & System Test | Mock data |
| SIT | VPN to BOI Network |
| UAT, Pre-Prod and Prod | AWS Direct Connect |

# Single Account Balance API

## Overview

Single Account Balance API that is invoked by a TPP (AISP) to retrieve account balance of single customer account identifier

## Sequence / Integration Diagram

Sequence diagram for the \ API.



## Integration Points

Describe at a high level what all integration points required and what information they provide.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SNO** | **System/Application** | **Integration Point** | **Purpose** | **ICD Document** | **Feature Catalog Reference** |
| 1 | Core Banking System | Foundation Services | To retrieve account balance data | ICD AISP-Single Account-Balance v0.2.docx |  |
| 2 | Logging System | Splunk | Payload logging | NA |  |
| 3 | Database | MongoDB | Consent permissions reference data | NA |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

## Configuration Elements

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SNO** | **Configuration Category** | **Configuration Element** | **Purpose** | **Default Value** | **BOI Value** |
| 1 | Throttling | Mule API Gateway Configuration | Throttle the request per TPP | 1000 / min |  |
| 2 | Security Policy | OAuth Mule Security Policy | Token based authorization | Enabled | Enabled |

## Logging & Monitoring Requirements

|  |  |
| --- | --- |
| Sno | Description |
| 1 | Payload logging – Implemented using Splunk |
| 2 | Audit log of API access – Implemented using Splunk |
| 5 | JVM Monitoring – Implemented using AppDynamics |
| 6 | API Analytics – Implemented using Splunk custom dashboards |

## Security and Connectivity

|  |  |
| --- | --- |
| Security | |
| 1 | MTLS |
| 2 | Token based authentication using OAuth |
| 3 | Permissions defined by CMA draft 0.1 Specifications, please refer to ICD for the details |
| Connectivity | |
| Dev & System Test | Mock data |
| SIT | VPN to BOI Network |
| UAT, Pre-Prod and Prod | AWS Direct Connect |

# Account Transactions API

## Overview

Account Transactions API that is invoked by a TPP (AISP) to retrieve account transactions of a single customer account identifier based on the consent authorization given to TPP (AISP)

## Sequence / Integration Diagram

Sequence diagram for the API:



## Integration Points

Describe at a high level what all integration points required and what information they provide.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SNO** | **System/Application** | **Integration Point** | **Purpose** | **ICD Document** | **Feature Catalog Reference** |
| 1 | Core Banking System | Foundation Services | To retrieve account transaction data | ICD AISP-Single Account-Transaction v0.2.docx |  |
| 2 | Logging System | Splunk | Payload logging | NA |  |
| 3 | Database | MongoDB | Consent permissions reference data | NA |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

## Configuration Elements

Describe specific configuration items and their configuration values decided

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SNO** | **Configuration Category** | **Configuration Element** | **Purpose** | **Default Value** | **BOI Value** |
| 1 | Throttling | Mule API Gateway Configuration | Throttle the request per TPP | 1000 / min | ? |
| 2 | Security Policy | OAuth Mule Security Policy | Token based authorization | Enabled | Enabled |

## Logging & Monitoring Requirements

|  |  |
| --- | --- |
| Sno | Description |
| 1 | Payload logging – Implemented using Splunk |
| 2 | Audit log of API access – Implemented using Splunk |
| 5 | JVM Monitoring – Implemented using AppDynamics |
| 6 | API Analytics – Implemented using Splunk custom dashboards |

## Security and Connectivity

|  |  |
| --- | --- |
| Security | |
| 1 | MTLS |
| 2 | Token based authentication using OAuth |
| 3 | Permissions defined by CMA draft 0.1 Specifications, please refer to ICD for the details |
| Connectivity | |
| Dev & System Test | Mock data |
| SIT | VPN to BOI Network |
| UAT, Pre-Prod and Prod | AWS Direct Connect |

# Logging and Monitoring Architecture

