**JS Integration API – Documentation**

Inov8 Limited

10/15/2021

Version: 1.25



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## --Revision History

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** | **Author** | **Description** | | **Version** |
| 10/09/2021 | Hamza | 1. Agent Account Login 2. Agent Login PIN Generation 3. Agent Login PIN Rest 4. Agent Balance Inquiry 5. Agent IBFT Payment Inquiry 6. Agent IBFT Payment | 1.25.1 | |

# Introduction

This document provides an overview of Inov8’s JS Account Opening API via Fone Pay. This API provides features for interconnectivity between disparate global systems for availability JS Account Opening.

# Connectivity

The service is made available to the partner systems via a SOAP service. To access this API the partner system is provided a user name and password which is required to be supplied for each transaction request. Because of the fact that SOAP service are platform independent the system allows for integration with heterogeneous systems developed in any technology.

This API is developed using J2EE 1.6 on top of Apache CXF framework. It has a SOAP based interface which is a worldwide standard. Apache CXF promises high performance and scalability and provides very flexible deployment options.

# Security

The service is not available over the internet so the access is only granted to the allowed IP addresses. The partner is provided a user name and a password which is mandatory for every transaction and a transaction is carried out only after the partner is authenticated using the provided user name and password. Following are the salient security features of the system.

* The system employs industry standard security techniques to prevent disclosure of sensitive data and to avoid malicious attacks.
* The system is capable of using public-private key encryption between the client and the server.
* The public / private key pairs are changed periodically.
* All user passwords are encrypted using one way encryption.
* For the web users ACEGI framework is used for user authentication and authorization.
* All communication is done over Secure Socket Layer (SSL)
* Values input into every field are validated before use.
* Actions that seem to destroy data actually move it to a place where it can still be reviewed by administrators.
* The data access layer will be responsible for preventing SQL injection attacks (i.e., hackers attempting to enter SQL statements through application UI fields) (By Using Hibernate)
* The data access layer will allow read-only connections, which will be used for most requests, as well as write connections for requests that update the database

# Test System Account and URL

The test bed provided by Inov8 for JS Account Opening API provides the exact functionality as that of the live system except for the fact that the transactions sent to test systems do not debit/credit real accounts. The purpose of the test system is to verify the integration mechanics and transaction flow.

Once the partner is integrated with the test system, they are asked to run all the transaction scenarios and share the results so as to move forward towards the live cutover. Once the tests are successful on the test bed, moving to the live systems is only a matter of accessing the service on a different VPN. The rest of everything remains the same.

# Guideline

|  |  |  |
| --- | --- | --- |
| 1 | Channel ID | e.g. FonePay, APIGEE |
| 2 | Terminal ID | Third party (Careem etc.) |
| 3 | RRN | 12 digit unique number |
| 4 | Payment Type | 02 (for Wallet) |

# JS Branchless Open API’s

## Agent Account Login

Request Fields

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
|  | User Name | String | M(AES  Encrypted) | Inov8 | User Name required for authentication |
|  | Password | String | M(AES  Encrypted) | Inov8@123 | Password required for authentication |
|  | Date Time | String | M | 20170706121212 | Date time required in the following format  yyyyMMddHHmmss |
|  | Retrieval Reference Number | String(N) | M | 265974513254 | Transaction unique identifier |
|  | Channel ID | String | M | APIGEE | To identify from which channel we received request |
|  | Terminal ID | String | M | Daraz.pk, Careem etc. | Third party Id – Careem etc. |
|  | Agent ID | String | M |  | Agent ID |
|  | PIN | String | M | 1111 | MPIN/PIN must be in 4 digits |
|  | Reserved1 | String(255) | O | For future use |  |
|  | Reserved2 | String(255) | O | For future use |  |
|  | Reserved3 | String(255) | O | For future use |  |
|  | Reserved4 | String(255) | O | For future use |  |
|  | Reserved5 | String(255) | O | For future use |  |
|  | Data\_Hash | String(255) | M |  | Hash code of the all above data (concatenated data) hashed using SHA256 |

Response Fields

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
|  | Retrieval Reference Number | String(N) | M | 265974513254 | Transaction unique identifier |
|  | Response Code | String | M | 00 | Transaction successfully done , failure code |
|  | Response Description | String | M | Successful , transaction failure | Transaction successfully done , failure Description according to the response code |
|  | Response Date Time | String | M | 20170706121212 | Date time required in the following format  yyyyMMddHHmmss |
|  | IBAN | String | M |  | Beneficiary IBAN |
|  | Account Title | String | M | Ahsan | Customer Name |
|  | Account Level | String | M | L0,L1,L2 | Account Level |
|  | Account Balance | String | M |  | Account Balance |
|  | Data\_Hash | String(255) | M |  | Hash code of the all above data (concatenated data) hashed using SHA256 |

## Agent Login PIN Generation

Request Fields

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
|  | User Name | String | M(AES Encrypted) | Inov8 | User Name required for authentication |
|  | Password | String | M(AES Encrypted) | Inov8@123 | Password required for authentication |
|  | Date Time | String | M | 20170706121212 | Date time required in the following format  yyyyMMddHHmmss |
|  | Retrieval Reference Number | String(N) | M | 265974513254 | Transaction unique identifier |
|  | Channel ID | String | M | APIGEE | To identify from which channel we received request |
|  | Terminal ID | String | M | Daraz.pk, Careem etc. | Third party Id – Careem etc. |
|  | PIN | String | M | 3452 | PIN for login account |
|  | Agent ID | String | M |  | Agent ID |
|  | Reserved1 | String(255) | O | For future use |  |
|  | Reserved2 | String(255) | O | For future use |  |
|  | Reserved3 | String(255) | O | For future use |  |
|  | Reserved4 | String(255) | O | For future use |  |
|  | Reserved5 | String(255) | O | For future use |  |
|  | Data\_Hash | String(255) | M |  | Hash code of the all above data (concatenated data) hashed using SHA256 |

Response Fields

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
|  | Retrieval Reference Number | String(N) | M | 265974513254 | Transaction unique identifier |
|  | Response Code | String | M | 00 | Transaction successfully done , failure code |
|  | Response Description | String | M | Successful , transaction failure | Transaction successfully done , failure Description according to the response code |
|  | Response Date Time | String | M | 20170706121212 | Date time required in the following format  yyyyMMddHHmmss |
|  | Reserved1 | String | O | For future use |  |
|  | Reserved2 | String | O | For future use |  |
|  | Data\_Hash | String(255) | M |  | Hash code of the all above data (concatenated data) hashed using SHA256 |

## Agent Login PIN Reset

Request Fields

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
|  | User Name | String | M(AES Encrypted) | Inov8 | User Name required for authentication |
|  | Password | String | M(AES Encrypted) | Inov8@123 | Password required for authentication |
|  | Date Time | String | M | 20170706121212 | Date time required in the following format  yyyyMMddHHmmss |
|  | Retrieval Reference Number | String(N) | M | 265974513254 | Transaction unique identifier |
|  | Channel ID | String | M | APIGEE | To identify from which channel we received request |
|  | Terminal ID | String | M | Daraz.pk, Careem etc. | Third party Id – Careem etc. |
|  | Old PIN | String | M | 3452 | Old PIN for login account |
|  | New PIN | String | M | 1478 | New PIN for login |
|  | Confrim PIN | String | M | 1478 | Confirm PIN for login |
|  | Agent ID | String | M |  | Agent ID |
|  | Reserved1 | String(255) | O | For future use |  |
|  | Reserved2 | String(255) | O | For future use |  |
|  | Reserved3 | String(255) | O | For future use |  |
|  | Reserved4 | String(255) | O | For future use |  |
|  | Reserved5 | String(255) | O | For future use |  |
|  | Data\_Hash | String(255) | M |  | Hash code of the all above data (concatenated data) hashed using SHA256 |

Response Fields

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
|  | Retrieval Reference Number | String(N) | M | 265974513254 | Transaction unique identifier |
|  | Response Code | String | M | 00 | Transaction successfully done , failure code |
|  | Response Description | String | M | Successful , transaction failure | Transaction successfully done , failure Description according to the response code |
|  | Response Date Time | String | M | 20170706121212 | Date time required in the following format  yyyyMMddHHmmss |
|  | Reserved1 | String | O | For future use |  |
|  | Reserved2 | String | O | For future use |  |
|  | Data\_Hash | String(255) | M |  | Hash code of the all above data (concatenated data) hashed using SHA256 |

## Agent Balance Inquiry

Request Fields

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
|  | User Name | String(AN) | M(AES Encrypted) | Inov8 | User Name required for authentication |
|  | Password | String(AN) | M(AES Encrypted) | Inov8@123 | Password required for authentication |
|  | Date Time | String | M | 20170706121212 | Transaction initiate date time required in the following format  yyyyMMddHHmmss |
|  | Retrieval Reference Number | String(N) | M | 265974513254 | Transaction unique identifier |
|  | Channel ID | String | M | APIGEE | To identify from which channel we received request |
|  | Terminal ID | String | M | Daraz.pk, Careem etc. | Third party Id – Careem etc. |
|  | Pin | String(N) | O | 1111 | Pin must be in four digits |
|  | Pin Type | String | O | 01, 02,03 | **01** for no OTP req and no OTP Validation.  **02** for OTP req and OTP to be validated.  **03** no OTP Generated and Mpin to be validated. |
|  | Agent ID | String | M |  | Agent ID |
|  | Reserved1 | String(255) | M | for future use |  |
|  | Reserved2 | String (255) | O | for future use |  |
|  | Reserved3 | String (255) | O | for future use |  |
|  | Reserved4 | String(255) | O | for future use |  |
|  | Reserved5 | String(255) | O | for future use |  |
|  | Data\_Hash | String(255) | M |  | Hash Code of the all above data (concatenated data) hashed using SHA256 |

Response Fields

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
| 1 | Retrieval Reference Number | String(N) | M | 265974513254 | Transaction unique identifier |
| 2 | Response Code | String | M | 00 | Transaction successfully done , failure code |
| 3 | Response Description | String | M | Successful , transaction failure | Transaction successfully done , failure Description according to the response code |
| 4 | Response Date Time | String | M | 20170706121212 | Date time required in the following format  yyyyMMddHHmmss |
| 5 | Balance | String | O | 5000.00 | Balance of wallet account |
| 6 | Data\_Hash | String(255) | M |  | Hash Code of the all above data (concatenated data) hashed using SHA256 |

## Agent IBFT Payment Inquiry

Request Fields

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
|  | UserName | String(AN) | M(AES Encrypted) | Inov8 | Channel Name Required For Authorization |
|  | Password | String(AN) | M(AES Encrypted) | Inov8@123 | Password Required For Authorization |
|  | Customer Moble Number | String | M |  | Customer Mobile Number |
|  | DateTime | String | M | 20170706121212 | Transaction initiate date time required in the following format  yyyyMMddHHmmss |
|  | RRN | String | M | 2659745132546 | Per request unique identifier |
|  | ChannelID | String | M | APIGEE | To identify from which channel we received request |
|  | TerminalID | String | M | Daraz.pk, Careem etc. | Third party Id – Careem etc. |
|  | Agent Id | String | M |  | Agent Id |
|  | Product Id | String | M |  | Product Id |
|  | Core Account ID | String | M | 03111111111 | Core Account Id |
|  | Bank IMD | String | M | 112266 | Sender Bank IMD |
|  | Purpose of payment | String | M | Misc, etc | Purpose of payment |
|  | Beneficiary Bank Name | String | M | AKBL | Beneficiary Bank Name |
|  | Amount | String | M | 1200.00 | Transaction Amount |
|  | Reserved1 | String(255) | M | 01,02,03 | **01** for no OTP req and no OTP Validation.  **02** for OTP req and OTP to be validated.  **03** no OTP Generated and Mpin to be validated. |
|  | Reserved2 | String (255) | O |  |  |
|  | Reserved3 | String (255) | O |  |  |
|  | Reserved4 | String(255) | O |  |  |
|  | Reserved5 | String(255) | O |  |  |
|  | Data\_Hash | String(255) | M |  | Hash Code of the all above data (concatenated data) hashed using SHA256 |

Response Fields

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
|  | Retrieval Reference Number | String(N) | M | 265974513254 | Transaction unique identifier |
|  | Response Code | String | M | 00 | Transaction successfully done , failure code |
|  | Response Description | String | M | Successful , transaction failure | Transaction successfully done , failure Description according to the response code |
|  | DateTime | String | M | 20170706121212 | Transaction initiate date time required in the following format  yyyyMMddHHmmss |
|  | Core Account ID | String | M | 65383838683868686868 | Core Account ID |
|  | Core Account Title | String | M | Sheheryaar Nawaz | Core Account Title |
|  | Branchless Bank Account Id | String | M | Agent Agent | Branchless Bank Account Id |
|  | Beneficiary Bank Name | String | O | Alfalah | Beneficiary Bank Name |
|  | Beneficiary Branch Name | String | O | Liberty | Beneficiary Branch Name |
|  | Beneficiary IBAN | String (N) | O | Pk00011155844 | Beneficiary International Account Number |
|  | Transaction Amount | String | M | 1200.00 | Transaction Amount |
|  | Commission Amount | String | M |  | Commission Amount |
|  | Transaction Processing Amount | String | M |  | Transcation Processing Amount |
|  | Total Transaction Amount | String | O | 100.00 | Total Transaction Amount |
|  | Data Hash | String(255) | M |  | Hash code of the all above data (concatenated data) hashed using SHA256 |

## Agent IBFT Payment

Request Fields

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
|  | UserName | String(AN) | M(AES Encrypted) | Inov8 | Channel Name Required For Authorization |
|  | Password | String(AN) | M(AES Encrypted) | Inov8@123 | Password Required For Authorization |
|  | DateTime | String | M | 20170706121212 | Transaction initiate date time required in the following format  yyyyMMddHHmmss |
|  | RRN | String | M | 2659745132546 | Per request unique identifier |
|  | ChannelID | String | M | APIGEE | To identify from which channel, we received request |
|  | TerminalID | String | M | Daraz.pk, Careem etc. | Third party Id – Careem etc. |
|  | MPIN | String | O | 2365 | account MPIN for transaction |
|  | OTP | String | O | 1234 | OTP sent on Customer Mobile Number |
|  | Agent Id | String | M | 1002917 | Agent Id |
|  | Product Id | String | M | 10245158 | Product Id |
|  | Core Account Id | String | M | 65383838683868686868 | Core Account Id |
|  | Core Account Title | String | M | Shaheryar | Core Account Title |
|  | Bank IMD | String | M | 600648 | Bank IMD |
|  | Payment Purpose | String | M | Misc., Support etc. | Transaction Purpose |
|  | Beneficiary Bank Name | String | M | AKBL | Beneficiary Bank Name |
|  | Beneficiary Branch Name | String | M | Lahore | Beneficiary Branch Name |
|  | Beneficiary IBAN | String | M | PK15HBL0321123456700000 | Beneficiary IBAN |
|  | Transaction Amount | String | M | 200.00 | Transaction Amount |
|  | Total Amount | String | M | 215.00 | Total Amount |
|  | Reserved1 | String(255) | M | 01,02,03 | **01** for no OTP req and no OTP Validation.  **02** for OTP req and OTP to be validated.  **03** no OTP Generated and Mpin to be validated. |
|  | Reserved2 | String (255) | O |  |  |
|  | Reserved3 | String (255) | O |  |  |
|  | Reserved4 | String(255) | O |  |  |
|  | Reserved5 | String(255) | O |  |  |
|  | Data\_Hash | String(255) | M |  | Hash Code of the all above data (concatenated data) hashed using SHA256 |

Response Fields

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
|  | Retrieval Reference Number | String(N) | M | 265974513254 | Transaction unique identifier |
|  | Response Code | String | M | 00 | Transaction successfully done , failure code |
|  | Response Description | String | M | Successful , transaction failure | Transaction successfully done , failure Description according to the response code |
|  | Response Date Time | String | M | 20170706121212 | Transaction initiate date time required in the following format  yyyyMMddHHmmss |
|  | Agent Mobile Number | String | M | 03217414741 | Agent Mobile Number |
|  | Beneficiary Bank Name | String | M | AKBL | Beneficiary Bank Name |
|  | Beneficiary Branch Name | String | M | Lahore | Beneficiary Branch Name |
|  | Beneficiary IBAN | String | M | PK15HBL0321123456700000 | Beneficiary IBAN |
|  | Core Account Id | String | M | Sheheryaar | Core Account Id |
|  | Core Account Number | String | M | 65383838683868686868 | Core Account Number |
|  | Transaction Id | String | M | 722364706000 | Transaction Id |
|  | Transaction Amount | String | M | 1200.00 | Transaction Amount |
|  | Commission Amount | String | M | 0.00 | Commission Amount |
|  | Transaction Processing Amount | String | M | 0.00 | Transcation Processing Amount |
|  | Total Transaction Amount | String | O | 1200.00 | Total Transaction Amount |
|  | Data Hash | String(255) | M |  | Hash code of the all above data (concatenated data) hashed using SHA256 |

# Response Codes

|  |  |  |
| --- | --- | --- |
| Serial # | Response code | Description |
|  | 00 | Success |
|  | 10 | 1. An error has occurred, please try again or contact your service provider 2. Customer L1 account is already exists in the system . |
|  | 13 | Account is not Active |
|  | 14 | No Customer found against given CNIC/Mobile Number |
|  | 15 | Customer account has been Closed |
|  | 16 | Customer account has expired |
|  | 17 | Customer account has been blocked |
|  | 18 | Customer credentials have been expired |
|  | 19 | Customer account has been deactivated |
|  | 20 | No Credentials Exist Against Customer |
|  | 21 | Invalid Credentials against Customer |
|  | 22 | Customer CNIC is blacklisted. Please contact your service provider |
|  | 23 | Mobile No is already in use |
|  | 24 | CNIC is already in use |
|  | 25 | Service disabled |
|  | 26 | Invalid input provided |
|  | 27 | An error has occurred, please try again or contact your service provider |
|  | 28 | FonePay service not enabled |
|  | 51 | Virtual Card Already Tagged |
|  | 52 | Virtual Card Is Blocked |
|  | 53 | Virtual Card Is Expired |
|  | 54 | Expiry Date Is Incorrect |
|  | 55 | Virtual Card Is Available |
|  | 56 | Virtual Card Already Tagged |
|  | 57 | Virtual Card Already Tagged |
|  | 58 | OTP Invalid |
|  | 59 | OTP Expired |
|  | 61 | The amount provided is greater than the maximum Product Limit |
|  | 65 | Incorrect MPIN, please retry |
|  | 66 | Account isn’t activated |
|  | 67 | Mobile No is already in use as a customer |
|  | 68 | Mobile No is already in use as a retailer |
|  | 69 | Mobile No is already in use as a handler |
|  | 70 | CNIC is already in use as a customer |
|  | 76 | Your account has been blocked |
|  | 9000 | PIN is required |
|  | 9001 | 1. Upgrade Customer Account from L0 to L1 2. Please Enable Action Authorization against the Debit Card Issuance. 3. Product doesn’t exist 4. Per day limit of sender exceeds 5. Incorrect MPIN, please retry |
|  | 9005 | 1. Your card request is already in process. Please contact Bank call center for further detail 2. Debit Card is already linked with your Wallet Account. 3. Please Issue Your Debit Card First |
|  | 9023 | Your OTP isn’t valid. Please enter valid OTP. |
|  | 9029 | Your OTP has been expired. Please regenerate OTP. |
|  | 9044 | Available balance is not enough for debit card issuance fee deduction. |