**JS Account Opening Integration API – Documentation**

Inov8 Limited

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## Revision History

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** | **Author** | **Description** | | **Version** |
| 06/15/2017 | Abdul Qayyum | Initial Draft | 1.0 | |

# 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.

# JS Account Opening API

* 1. Verify Account

Request Fields.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
| 1 | User Name | String(AN) | M(AES Encrypted) | Inov8 | User Name Required For Authorization |
| 2 | Password | String(AN) | M(AES Encrypted) | Inov8@234 | Password Required For Authorization |
| 3 | CNIC | String(N) | M | 215498851 | Customer CNIC Number |
| 4 | Date Time | String | M | 20170706121212 | Transaction initiate Date time required in the following format  yyyyMMddHHmmss |
| 5 | Mobile Number | String | M | 03436598745 | Consumer Mobile Number |
| 6 | Retrieval Reference Number | String(N) | M | 2659745132546 | Transaction Unique identifier |
| 7 | Transaction Type | String | M | Linking or account opening | To identify that verification is for account linking or account opening |
| 8 | Channel ID | String | M | Like FonePay | To identify from which channel we receive a request |
| 9 | 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 | M | 24567843123 | 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 | Account Title | String | M | Abdul Qayyum | Customer Account Title |
| 5 | Mobile number | String | M | 03435689741 | Customer Mobile Number |
| 6 | CNIC | String | M | 341215896478 | Customer CNIC Number |
| 7 | Customer Status | String | M | 1 or 0 | Customer is in Active or de-active state |
| 8 | First Name | String | M | Gulfam | Consumer First Name |
| 9 | Last Name | String | M | Suleman | Consumer Last Name |
| 10 | CNIC Expiry | String | M | 2019-06-06 | Customer CNIC Expiry |
| 11 | Account Type | String | M | 01 | Account Type |
| 12 | Data\_Hash | String(255) | M |  | Hash Code of the all above data (concatenated data) hashed using SHA256 |

* 1. Account Opening

Request Fields.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
| 1 | User Name | String(AN) | M(AES Encrypted) | Inov8 | User Name Required For Authorization |
| 2 | Password | String(AN) | M(AES Encrypted) | Inov8@234 | Password Required For Authorization |
| 3 | CNIC | String(A 255) | M | 3444369962665 | Customer CNIC Number |
| 4 | Date Time | String | M | 20170706121212 | Transaction initiate Date time required in the following format  yyyyMMddHHmmss |
| 5 | Retrieval Reference Number | String(N) | M | 2659745132546 | Transaction Unique identifier |
| 6 | Mobile Number | String(N) | M | 03426958741 | Customer Mobile Number |
| 7 | Consumer Name | String(N) | M | Abdul Qayyum | Consumer Name |
|  | Account Title | String | M | Abdul Qayyum | Consumer Account Title |
| 8 | Birth Place | String(N) | M | Lahore Pakistan | Consumer Birth Place |
| 9 | Present Address | String | M | Lahore Pakistan | Consumer Present Address |
| 10 | CNIC status | String | M | Yes or No | CNIC expired or not |
| 11 | CNIC Expiry | String | N | 2018-06-16 | Consumer CNIC Expiry date |
| 12 | Date Of Birth | String | M | 1986-06-16 | Consumer Date of Birth |
| 13 | Father/ Husband Name | String | M | Abdul Qayyum |  |
| 14 | Mother Maiden | String | M |  |  |
| 15 | Gender | String | M | M or F | Male(M) or Female(F) |
| 16 | Channel ID | String | M | Like FonePay | To identify from which channel we receive a request |
| 17 | Account Type | String | M | L0(01), L1(02) | Consumer Account Type |
| 18 | Tracking Id | String | M | 123456987123 | Unique Tracking Id from biometic verification |
| 19 | 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 | M | 24567843123 | 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 | Data\_Hash | String(255) | M |  | Hash Code of the all above data (concatenated data) hashed using SHA256 |

* 1. Conventional Account Opening

Request Fields.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
| 1 | User Name | String(AN) | M(AES Encrypted) | Abdul007 | User Name Required For Authorization |
| 2 | Password | String(AN) | M(AES Encrypted) | Abdul007 | Password Required For Authorization |
| 3 | CNIC | String(A 255) | M | 3444369962665 | Customer CNIC Number |
| 4 | Date Time | String | M | 20170706121212 | Transaction initiate Date time required in the following format  yyyyMMddHHmmss |
| 5 | Retrieval Reference Number | String(N) | M | 2659745132546 | Transaction Unique identifier |
| 6 | Mobile Number | String(N) | M | 03426958741 | Customer Mobile Number |
| 7 | Customer Name | String | M |  |  |
| 8 | CNIC Expiry | String | M | 2018-06-16 | Consumer CNIC Expiry date |
| 9 | Date Of Birth | String | M | 1986-06-16 | Consumer Date of Birth |
| 10 | Customer Photo | String | M |  | Customer Photo |
| 11 | CNIC Front Photo | String | M |  | CNIC Front End Photo |
| 12 | CNIC Back Photo | String | M |  | CNIC Back End Photo |
| 13 | Signature Photo | String | M |  | Customer Signature Photo |
| 14 | Term Photo | String | M |  | Term Condition Photo |
| 15 | Channel ID | String | M | Like FonePay | To identify from which channel we receive a request |
| 16 | Account Type | String | M | L0(01), L1(02) | Consumer Account Type |
| 17 | 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 | M | 24567843123 | 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 | Data\_Hash | String(255) | M |  | Hash Code of the all above data (concatenated data) hashed using SHA256 |

* 1. Payment Inquiry

Request Fields.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
| 1 | User Name | String(AN) | M(AES Encrypted) | Abdul007 | User Name Required For Authorization |
| 2 | Password | String(AN) | M(AES Encrypted) | Abdul007 | Password Required For Authorization |
| 3 | Mobile Number | String(N) | M | 215498851 | Consumer Mobile Number |
| 4 | Date Time | String | M | 20170706121212 | Transaction initiate Date time required in the following format  yyyyMMddHHmmss |
| 5 | Amount | String | M | Amount to be verified |  |
| 6 | Retrieval Reference Number | String(N) | M | 2659745132546 | Transaction Unique identifier |
| 7 | Transaction Type | String | M | Product Name |  |
| 8 | Channel ID | String | M | Like FonePay | To identify from which channel we receive a request |
| 9 | 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 | M | 24567843123 | 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 | Charges | String | M | Charges Amount e.x 100 | Charges to be applied of transaction |
| 5 | Data\_Hash | String(255) | M |  | Hash Code of the all above data (concatenated data) hashed using SHA256 |

* 1. Payment Request

Request Fields.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
| 1 | User Name | String(AN) | M(AES Encrypted) | Abdul007 | User Name Required For Authorization |
| 2 | Password | String(AN) | M(AES Encrypted) | Abdul007 | Password Required For Authorization |
| 3 | Account Number | String(A 255) | M | 56247891 | Consumer Mobile Number or Card Number |
| 4 | Date Time | String | M | 20170706121212 | Transaction initiate Date time required in the following format  yyyyMMddHHmmss |
| 5 | Retrieval Reference Number | String(N) | M | 2659745132546 | Transaction Unique identifier |
| 6 | Amount | String(N) | M | 12200 | This field shows that How much amount will be deducted |
| 7 | Charges | String | M | 100 | Charges Applied on Transaction |
| 8 | Transaction Type | String | M | Product Name |  |
| 9 | MPIN | String | M | 2365 | Customer account MPIN for transaction |
| 10 | Terminal ID | String | M | 01/02 | To identify that either Transaction initiated from fonepay system or *any* other system |
| 11 | Payment Type | String | M | Card Type(01) or Account Type(02) or Account Settlement(03) | Payment against card or Account Number |
| 12 | Channel ID | String | M | Like FonePay | To identify from which channel we receive a request |
| 13 | 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 | Response Code | String | M | 00 | Transaction successfully done , failure code |
| 2 | Response Description | String | M | Successful , transaction failure | Transaction successfully done , failure Description according to the response code |
| 3 | Transaction Code | String | M | 123456 | JS Micro bank generated Code |
| 4 | Data\_Hash | String(255) | M |  | Hash Code of the all above data (concatenated data) hashed using SHA256 |

* 1. Payment Reversal

Request Fields.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
| 1 | User Name | String(AN) | M(AES Encrypted) | Abdul007 | User Name Required For Authorization |
| 2 | Password | String(AN) | M(AES Encrypted) | Abdul007 | Password Required For Authorization |
| 3 | Transaction Code | String(N) | M | 587215498851 |  |
| 4 | Date Time(Reversal Time) | String | M | 20170706121212 | Transaction initiate Date time required in the following format  yyyyMMddHHmmss |
| 5 | Original RRN | String | M |  |  |
| 6 | Channel ID | String | M | Like FonePay | To identify from which channel we receive a request |
|  | 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 | Response Code | String | M | 00 | Transaction successfully done , failure code |
| 2 | Response Description | String | M | Successful , transaction failure | Transaction successfully done , failure Description according to the response code |
|  | Data\_Hash | String(255) | M |  | Hash Code of the all above data (concatenated data) hashed using SHA256 |

* 1. OTP Verification

Request Fields.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
| 1 | User Name | String(AN) | M(AES Encrypted) | Abdul007 | User Name Required For Authorization |
| 2 | Password | String(AN) | M(AES Encrypted) | Abdul007 | Password Required For Authorization |
| 3 | OTP pin | String(A 255) | M | 12255 | Enter OTP pin that customer receive on Mobile Number in message |
| 4 | Mobile Number | String | M | 03421654789 | Consumer Mobile Number |
| 5 | CNIC | String | M | 34125687459 | Consumer CNIC Number |
| 6 | Date Time | String | M | 20170706121212 | Transaction initiate Date time required in the following format  yyyyMMddHHmmss |
| 7 | Retrieval Reference Number | String(N) | M | 2659745132546 | Transaction Unique identifier |
| 8 | Channel ID | String | M | Like FonePay | To identify from which channel we receive a request |
| 9 | 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 | Response Code | String | M | 00 | Transaction successfully done , failure code |
| 2 | Response Description | String | M | Successful , transaction failure | Transaction successfully done , failure Description according to the response code |
| 3 | Data\_Hash | String(255) | M |  | Hash Code of the all above data (concatenated data) hashed using SHA256 |

* 1. Card Tagging

Request Fields.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
| 1 | User Name | String(AN) | M(AES Encrypted) | Abdul007 | User Name Required For Authorization |
| 2 | Password | String(AN) | M(AES Encrypted) | Abdul007 | Password Required For Authorization |
| 3 | Card Expiry | String(A 255) | M | 2211 | Card Expiry Date |
| 4 | Card Number | String | M | 88821654789 | Consumer Card Number |
| 5 | First Name | String | M | Abdul | Consumer First Name |
| 6 | Last Name | String | M | Qayyum | Consumer Last Name |
| 7 | Transaction Date | String(N) | M | 20170706121212 | Transaction initiate Date time required in the following format  yyyyMMddHHmmss |
| 8 | Transation ID | String | M | 123456 | Transaction ID |
| 9 | Mobile Number | String | M | 03526588 | Customer Mobile Number |
| 10 | CNIC | String | M | 3245698744 | Customer CNIC |
| 11 | Channel ID | String | M | Like FonePay | To identify from which channel we receive a request |
| 12 | 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 | Response Code | String | M | 00 | Transaction successfully done , failure code |
| 2 | Response Description | String | M | Successful , transaction failure | Transaction successfully done , failure Description according to the response code |
| 3 | Data\_Hash | String(255) | M |  | Hash Code of the all above data (concatenated data) hashed using SHA256 |

* 1. Account Link De-Link

Request Fields.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
| 1 | User Name | String(AN) | M(AES Encrypted) | Abdul007 | User Name Required For Authorization |
| 2 | Password | String(AN) | M(AES Encrypted) | Abdul007 | Password Required For Authorization |
| 3 | Transaction Type | String(A 255) | M | 01/02 | Linking or De Linking account |
| 4 | Mobile Number | String | M | 03421654789 | Consumer Mobile Number |
| 5 | CNIC | String | M | 34125687459 | Consumer CNIC Number |
| 6 | Date Time | String | M | 20170706121212 | Transaction initiate Date time required in the following format  yyyyMMddHHmmss |
| 7 | Retrieval Reference Number | String(N) | M | 2659745132546 | Transaction Unique identifier |
| 8 | Channel ID | String | M | Like FonePay | To identify from which channel we receive a request |
| 9 | 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 | Response Code | String | M | 00 | Transaction successfully done , failure code |
| 2 | Response Description | String | M | Successful , transaction failure | Transaction successfully done , failure Description according to the response code |
| 3 | Data\_Hash | String(255) | M |  | Hash Code of the all above data (concatenated data) hashed using SHA256 |

* 1. Set Card Status

Request Fields.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial # | Data Element Name | Attribute Type | Mandatory(M/N) | Sample Request Value | Comments |
| 1 | User Name | String(AN) | M(AES Encrypted) | Abdul007 | User Name Required For Authorization |
| 2 | Password | String(AN) | M(AES Encrypted) | Abdul007 | Password Required For Authorization |
| 3 | Transaction Type | String(A 255) | M | 01 , 02 , 03 | Card Activation or De-Activation , Card Deletion |
| 4 | Mobile Number | String | M | 03421654789 | Consumer Mobile Number |
| 5 | CNIC | String | M | 34125687459 | Consumer CNIC Number |
| 6 | Date Time | String | M | 20170706121212 | Transaction initiate Date time required in the following format  yyyyMMddHHmmss |
| 7 | Retrieval Reference Number | String(N) | M | 2659745132546 | Transaction Unique identifier |
| 8 | Card Number | String | M | 125478966 | Customer Card Number |
| 8 | Channel ID | String | M | Like FonePay | To identify from which channel we receive a request |
| 9 | 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 | Response Code | String | M | 00 | Transaction successfully done , failure code |
| 2 | Response Description | String | M | Successful , transaction failure | Transaction successfully done , failure Description according to the response code |
| 3 | Data\_Hash | String(255) | M |  | Hash Code of the all above data (concatenated data) hashed using SHA256 |