

KUDA

BANK TRANSFER SERVICE

API DEBUG REPORT

1. CHANGE LOG

Version	Date	Status	Author
1.0	06/27/2022	Initial draft	Emmanuel Irabor
2.0	15/05/2023	Modified draft <ul style="list-style-type: none">Added GetToken InterfaceUpdated sample request and response payloads of all endpoints.Added failure response samplesUpdated response codes.	Emmanuel Irabor

2. NETWORKING

2.1 Connectivity

Communication Protocol = HTTP

Connections	Requirements	Description	Status
VPN	N/A	N/A	N/A
Whitelist	N/A	N/A	N/A
Certificate	N/A	N/A	N/A

2.2 Kuda API Structure / Authentication

KUDA API is based on a single endpoint architecture approach. The specific operations are determined from the requests sent to this endpoint.

The KUDA API requires authentication using an access token which is gotten from the **GetToken** endpoint and passed in the header of every request you make.

3. Credential Information (Test Environment)

Item	Value
TEST_BASE_URL	http://kuda-openapi-uat.kudabank.com/v2.1
ApiKey	I8DkOcXWNQ5ZRet4Kvbh
merchantEmail	reconciliationsnigeria@palmpay-inc.com
Test Main Account	2000355517

4. API ENDPOINTS

1. Get Token.
2. Bank List.
3. Name Enquiry (INTRA & INTER).
4. Main Account Balance Enquiry.
5. Single Fund Transfer (INTRA & INTER).
6. Check Transaction Status (INTRA & INTER).
7. Retrieve Main Account Transactions.
8. Retrieve Filtered Main Account Transactions.

1.1 Get Token

This endpoint generates a new access token for authentication.

All **serviceType** request requires a generated access token for authentication. To get the access token, you need to call the **GetToken** request. This request needs your **Kuda developer email** and generated **apiKey**.

Note: Any new access token you generate expires after every 1 hour.

URL: "TEST_BASE_URL/Account/GetToken"

Method: POST

Request Format:

S/N	Param	Type	Value	Description
1	email	String	{{merchantEmail}}	The user's Kuda registered developer account email.
2	apiKey	String	{{ApiKey}}	The generated API key from the Kuda developer dashboard.

Request Sample:

```
{
  "email": "reconciliationsnigeria@palmpay-inc.com",
  "apiKey": "l8DkOcXWNQ5ZRet4Kvvh"
}
```

Response Sample:

```
eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCIsImN0eSI6IkpXVCJ9.eyJmdWxsbmFtZSI6IiBBTlBTElQQVkgTElNS
VRFRCAgICAgICAgICAgICAgICIsImVtYWlsIjoicmVjb25jaWxpYXRpb25zbmlnZXJpYUBwYWxtcGF5LWluYy5
jb20iLCJjbGllbnQta2V5IjoiodDZQeTJMWWZlRXNpUkt6QkFiNGsiLCJleHAiOjE2ODM5MTIyNDMsImZlcyI6I
kNvcnVJZGVudG10eSIsImF1ZCI6IkpXVCIsImNvcnVJZGVudG10eSJ9.Su4C8I9WyWBdRiwCpsiPaH_mu2XBLdRtyq7GCP
B2ZDw
```

1.2 Bank List

This service is used to get a list of banks. The Bank list covered here are for all Nigerian Financial Institutions supported by NIBSS. The Bank List contains all NIP participants, including all commercial banks, Micro-Finance Banks (MFBs), and Mobile Money Operators (MMOs).

Note: That in production, the list of banks and bank codes may change based on the responses gotten from NIBSS.

Request Format:

S/N	Param	Type	Value	Description
1	servicetype	String	BANK_LIST	Type of Service
2	requestref	String	Random string	Reference of the request

URL: “TEST_BASE_URL”

Method: POST

Header:

Authorization: Bearer “{{accessToken}}”

Request Sample:

```
{
  "servicetype": "BANK_LIST",
  "requestref": "12345"
}
```

Response Sample:

```
{
  "message": "Completed Successfully",
  "status": true,
  "data": {
    "banks": [
      {
        "bankCode": "999129",
        "bankName": "Kudimoney (Kudabank) "
      },
      {
        "bankCode": "999044",
        "bankName": "Access Bank"
      },
      {
        "bankCode": "999001",
        "bankName": "ADH"
      },
      {
        "bankCode": "999104",
        "bankName": "BOSAK"
      },
      {
        "bankCode": "999023",
        "bankName": "Citi Bank"
      },
      {
        "bankCode": "999052",
        "bankName": "Covenant MFB"
      }
    ]
  }
}
```

```
{
  "bankCode": "999063",
  "bankName": "DIAMOND BANK"
},
{
  "bankCode": "999050",
  "bankName": "ECOBANK"
},
{
  "bankCode": "999214",
  "bankName": "FCMB"
},
{
  "bankCode": "999003",
  "bankName": "FETS"
},
{
  "bankCode": "999070",
  "bankName": "Fidelity"
},
{
  "bankCode": "999011",
  "bankName": "First Bank"
},
{
  "bankCode": "999058",
  "bankName": "GTBank"
},
{
  "bankCode": "999301",
  "bankName": "JAIZ"
},
{
  "bankCode": "999082",
  "bankName": "Keystone Bank"
},
{
  "bankCode": "999107",
  "bankName": "Mutual Benefits"
},
{
  "bankCode": "999999",
  "bankName": "NIBSS"
},
{
  "bankCode": "999105",
  "bankName": "NOVA"
},
}
```

```
{
  "bankCode": "999078",
  "bankName": "NOW NOW"
},
{
  "bankCode": "999002",
  "bankName": "NPF"
},
{
  "bankCode": "999009",
  "bankName": "PagaTech"
},
{
  "bankCode": "999015",
  "bankName": "Parallex MFB"
},
{
  "bankCode": "999076",
  "bankName": "Skye Bank"
},
{
  "bankCode": "999221",
  "bankName": "Stanbic Ibtc"
},
{
  "bankCode": "999232",
  "bankName": "Sterling Bank"
},
{
  "bankCode": "999004",
  "bankName": "Teasy"
},
{
  "bankCode": "999018",
  "bankName": "Trustbond"
},
{
  "bankCode": "999033",
  "bankName": "UBA"
},
{
  "bankCode": "999215",
  "bankName": "UNITY BANK"
},
{
  "bankCode": "999116",
  "bankName": "VFD MFB"
},
}
```

```
{
  {
    "bankCode": "999035",
    "bankName": "Wema Bank"
  },
  {
    "bankCode": "999057",
    "bankName": "Zenith Bank"
  }
]
}
```

1.3 Name Enquiry

This service is used to fetch the account information of an account holder. The Name Enquiry service is a validation step that makes bank transfers safer. By retrieving the information associated with supplied account details, the user can confirm the intended beneficiary of the bank transfer. This service is used for both INTRABANK and INTERBANK.

Request Format:

S/N	Param	Value	Data Type	Description
1	servicetype	NAME_ENQUIRY	String	Type of service
2	requestref	12345	String	Random String
3	beneficiaryAccountNumber	1100307655	String	Destination bank account number
4	beneficiaryBankCode	999129	String	Destination bank code
5	SenderTrackingReference		String	Tracking reference of the virtual account trying to do the actual transfer. Leave it empty if the intended transfer is going to be from the main account
6	isRequestFromVirtualAccount	true or false	String	True or False value. If the intended transfer is to be made by the virtual account use value as true.

URL: “TEST_BASE_URL”

Method: POST

Header:

Authorization: Bearer “{{accessToken}}”

Request Sample (INTRA):

```
{
  "serviceType": "NAME_ENQUIRY",
  "requestRef": "12345",
  "Data": {
    "beneficiaryAccountNumber": " 1100307655",
    "beneficiaryBankCode": "999129",
    "SenderTrackingReference": "",
    "isRequestFromVirtualAccount": "false"
  }
}
```

Response Sample (INTRA):

```
{
  "message": "Request successful.",
  "status": true,
  "data": {
    "beneficiaryAccountNumber": " 1100307655",
    "beneficiaryName": "TAIWO BABATUNDE AKINNUSOYE",
    "senderAccountNumber": null,
    "senderName": null,
    "beneficiaryCustomerID": 0,
    "beneficiaryBankCode": "999129",
    "nameEnquiryID": 0,
    "responseCode": null,
    "transferCharge": 0,
    "sessionID": "NA"
  }
}
```

Note: For **INTERBANK** name enquiry, replace the “beneficiaryAccountNumber” and “beneficiaryBankCode” with that of the destination account.

Request Sample (INTER):

```
{
  "serviceType": "NAME_ENQUIRY",
  "requestRef": "12345",
  "Data": {
    "beneficiaryAccountNumber": "0037316690",
    "beneficiaryBankCode": "999058",
    "SenderTrackingReference": "",
    "isRequestFromVirtualAccount": "false"
  }
}
```

Response Sample (INTER):

```
{
  "message": "Request successful.",
  "status": true,
  "data": {
    "beneficiaryAccountNumber": "0037316690",
    "beneficiaryName": "Kuda User",
    "senderAccountNumber": "",
    "senderName": null,
    "beneficiaryCustomerID": 0,
    "beneficiaryBankCode": "999058",
    "nameEnquiryID": 0,
    "responseCode": "00",
    "transferCharge": 0,
    "sessionID": "BFCA47296DA84C338CE3D7E6561B370E"
  }
}
```

1.4 Main Account Balance Enquiry

This service is used to check the balance of the main account. At every instance, users can confirm the balance status of their Main Bank account by using the *Account balance inquiry service_type*. This helps the user know the true balance on the main account.

Request Format:

S/N	Param	Value	Data Type	Description
1	servicetype	ADMIN_RETRIEVE_MAIN_ACCOUNT_BALANCE	String	Type of service
2	requestref		String	Random String

URL: "TEST_BASE_URL"

Method: POST

Header:

Authorization: Bearer "{{accessToken}}"

Request Sample:

```
{
  "servicetype": "ADMIN_RETRIEVE_MAIN_ACCOUNT_BALANCE",
  "requestref": ""
}
```

Response Sample:

```
{
  "message": "Operation successful",
  "status": true,
  "data": {
    "ledgerBalance": 4905550779618,
    "availableBalance": 4905550779618,
    "withdrawableBalance": 4905550779618
  }
}
```

1.5 Single Fund Transfer (INTRA & INTER)

The Single Fund Transfer service programmatically sends money from your main Kuda account to another bank account. Note that this service is used for both **INTRA** and **INTER** bank transfers.

Request Format:

S/N	Param	Value	Type	Description	Optional /Mandatory (O/M)
1	serviceType	SINGLE_FUND_TRANSFER	String	Type of service	M
2	requestRef	1234567	String	Random String	M

S/N	Param	Value	Type	Description	Optional /Mandatory (O/M)
3	beneficiaryAccount	2504020182	String	Destination Bank Account Number	M
4	beneficiaryBankCode	999129	String	Destination bank code	M
5	beneficiaryName	JOHN DOE	String	Name of the recipient	O
6	amount	1000.50	Integer	Amount to be transferred.	M
7	narration	TEST	String	User defined reason for the transaction	O
8	NameEnquirySessionID	NA	String	Session ID generated from the nameEnquiry request	M
9	SenderName	PALMPAY	String	Name of the person sending money.	O
10	trackingReference		String	Unique reference of the transaction	O
11	ClientAccountNumber	2000355517	String	Account number of the merchant	M
12	clientFeeCharge	0	Integer	It is an amount a client wishes to charge their customer for a transfer being carried out	O

URL: "TEST_BASE_URL"

Method: POST

Header:

Authorization: Bearer "{{accessToken}}"

Request Sample (INTRA):

```
{
  "servicetype": "SINGLE_FUND_TRANSFER",
  "requestref": "1234567",
  "Data": {
    "ClientAccountNumber": "2000355517",
    "beneficiarybankCode": "999129",
    "beneficiaryAccount": "2504020182",
    "beneficiaryName": "JOHN DOE",
    "amount": 1000.50,
    "narration": "TEST",
    "nameEnquirySessionID": "",
    "trackingReference": "",
    "senderName": "PALMPAY"
  }
}
```

Response Sample (INTRA):

```
{
  "requestReference": "1234567",
  "transactionReference": "23051554077",
  "instrumentNumber": null,
  "responseCode": "00",
  "status": true,
  "message": "Transaction successful",
  "data": null
}
```

Request Sample (INTER):

```
{
  "servicetype": "SINGLE_FUND_TRANSFER",
  "requestref": "12345671",
  "Data": {
    "ClientAccountNumber": "2000355517",
    "beneficiarybankCode": "999058",
    "beneficiaryAccount": "0037316690",
    "beneficiaryName": "JOHN DOE",
    "amount": 1000,
    "narration": "TEST",
    "nameEnquirySessionID": "",
    "trackingReference": "",
    "senderName": "PALMPAY",
    "clientFeeCharge": 0
  }
}
```

Response Sample (INTER):

```
{
  "requestReference": "12345671",
  "transactionReference": "999129230515152828788407102058",
  "instrumentNumber": null,
  "responseCode": "00",
  "status": true,
  "message": "Transaction successful.",
  "data": null
}
```

FAILURE RESPONSE SAMPLES

Duplicate Reference:

```
{
  "requestReference": "1234567",
  "transactionReference": null,
  "instrumentNumber": null,
  "responseCode": "k26",
  "status": false,
  "message": "Request Reference has been used. Kindly pass a unique reference",
  "data": null
}
```

1.6 Check Transaction Status (INTRA & INTER)

This service is used to check the status of a particular transaction.

Request Format:

S/N	Param	Value	Data Type	Description	Optional /Mandatory (O/M)
1	serviceType	TRANSACTION_STATUS_QUERY	String	Type of service	M
2	requestRef	1234567	String	Random String	M
3	isThirdPartyBankTransfer	“true” or “false”	Boolean	This transfer was made to either a Kuda account or to a 3rd party bank	M
4	transactionRequestReference	8311484	String	Unique identifier for the transfer	M

URL: “TEST_BASE_URL”

Method: POST

Header:

Authorization: Bearer “{{accessToken}}”

Request Sample (INTRA):

```
{
  "servicetype": "TRANSACTION_STATUS_QUERY",
  "requestref": "123456",
  "Data": {
    "isThirdPartyBankTransfer": "false",
    "transactionRequestReference": "1234567"
  }
}
```

Response Sample (INTRA):

```
{
  "responseCode": "00",
  "sessionID": "23051554077",
  "status": true,
  "message": "Transaction successful.",
  "data": null
}
```

Request Sample (INTER):

```
{
  "servicetype": "TRANSACTION_STATUS_QUERY",
  "requestref": "123456",
  "Data": {
    "isThirdPartyBankTransfer": "true",
    "transactionRequestReference": "12345671"
  }
}
```

Response Sample (INTER):

```
{
  "responseCode": "00",
  "sessionID": "999129230515152828788407102058",
  "status": true,
  "message": "Transaction successful.",
  "data": null
}
```

FAILURE RESPONSE SAMPLES

Transaction Not Found:

```
{
  "responseCode": "k25",
  "sessionID": null,
  "status": false,
  "message": "Unable to locate the transaction with the reference supplied.",
  "data": null
}
```

1.7 Retrieve Main Account Transaction Logs

This service is used to retrieve a list of all transactions for the currently authenticated user.

Request Format:

S/N	Param	Value	Data Type	Description	Optional /Mandatory (O/M)
1	serviceType	ADMIN_MAIN_ACCOUNT_TRANSACTIONS	String	Type of service	M
2	requestRef	7641291	String	Random String	M
3	PageSize	1	String	Page Size	M
4	PageNumber	1	String	Number of Pages	M

URL: "TEST_BASE_URL"

Method: POST

Header:

Authorization: Bearer "{{accessToken}}"

Request Sample:

```
{
  "servicetype": "ADMIN_MAIN_ACCOUNT_TRANSACTIONS",
  "requestref": "",
  "Data": {
    "pageSize": "1",
    "pageNumber": "1"
  }
}
```

Response Sample:

```
{
  "message": "Request successful.",
  "status": true,
  "data": {
    "postingsHistory": [
      {
        "referenceNumber": "23051578128",
        "reversalReferenceNumber": null,
        "accountNumber": "2000355517",
        "linkedAccountNumber": null,
        "realDate": "2023-05-15T16:04:24.29",
        "amount": 100000,
        "openingBalance": 4905550879618,
        "balanceAfter": 4905550779618,
        "narration": "jj",
        "instrumentNumber": "FooBjjoar",
        "postingRecordType": 1,
        "postedBy": "N/A",
        "financialDate": "2023-05-15T00:00:00",
        "financialDateToBackdate": null,
        "ipAddress": null,
        "merchant": "Kuda",
        "recipientName": null,
        "senderName": null,
        "recipientBank": null,
        "senderBank": null,
        "userID": null,
        "hasCOTWaiver": false,
        "forceDebit": false,
        "postingType": 1,
        "transactionMethod": 0,
        "sessionId": null,
        "charge": 0,
        "beneficiaryName": "Wick inc",
        "allowChangeCategory": false,
        "categoryId": 0,
        "categorySet": false,
        "tagId": 999999,
        "beneficiaryReference": "2504217616",
        "goalTitle": null,
        "phoneNumberRecharged": null,
        "billId": null,
        "tier0Waiver": false,
        "detailOfClosure": null,
        "reasonForClosure": null,
        "closedBy": null
      }
    ]
  }
}
```



```
    }  
  ],  
  "message": null,  
  "statusCode": "k00",  
  "totalRecordInStore": 32243,  
  "totalDebit": 42196385.82,  
  "totalCredit": 5021738.81  
}  
}
```

1.8 Retrieve Filtered Main Account Transaction Logs

This service is used to retrieve a **filtered** list of all transactions for the currently authenticated user by date of transactions.

Request Format:

S/N	Param	Value	Data Type	Description	Optional /Mandatory (O/M)
1	serviceType	ADMIN_MAIN_ACCOUNT_FILTERED_TRANSACTIONS	String	Type of service	M
2	requestRef	8838533	String	Random String	M
3	StartDate	2022-06-24T00:00:00.000	String	Date you want to start filter transactions from	M
4	EndDate	2022-06-27T23:59:59.018Z	String	Date you want to end filtered transactions	M
5	PageSize	1	String	Page Size	M
6	PageNumber	1	String	Number of Pages	M

URL: "TEST_BASE_URL"

Method: POST

Header:

Authorization: Bearer "{{accessToken}}"

Request Sample:

```
{
  "servicetype": "ADMIN_MAIN_ACCOUNT_FILTERED_TRANSACTIONS",
  "requestref": "",
  "Data": {
    "pageSize": "1",
    "pageNumber": "1",
    "startDate": "2023-01-01",
    "endDate": "2023-05-31"
  }
}
```

Response Sample:

```
{
  "message": "Request successful.",
  "status": true,
  "data": {
    "postingsHistory": [
      {
        "referenceNumber": "23051578128",
        "reversalReferenceNumber": null,
        "accountNumber": "2000355517",
        "linkedAccountNumber": null,
        "realDate": "2023-05-15T16:04:24.29",
        "amount": 100000,
        "openingBalance": 4905550879618,
        "balanceAfter": 4905550779618,
        "narration": "jj",
        "instrumentNumber": "FooBjjoar",
        "postingRecordType": 1,
        "postedBy": "N/A",
        "financialDate": "2023-05-15T00:00:00",
        "financialDateToBackdate": null,
        "ipAddress": null,
        "merchant": "Kuda",
        "recipientName": null,
        "senderName": null,
        "recipientBank": null,
        "senderBank": null,
        "userID": null,
        "hasCOTWaiver": false,
        "forceDebit": false,
        "postingType": 1,
      }
    ]
  }
}
```

```

        "transactionMethod": 0,
        "sessionId": null,
        "charge": 0,
        "beneficiaryName": "Wick inc",
        "allowChangeCategory": false,
        "categoryId": 0,
        "categorySet": false,
        "tagId": 999999,
        "beneficiaryReference": "2504217616",
        "goalTitle": null,
        "phoneNumberRecharged": null,
        "billId": null,
        "tier0Waiver": false,
        "detailOfClosure": null,
        "reasonForClosure": null,
        "closedBy": null
    }
],
"message": null,
"statusCode": "k00",
"totalRecordInStore": 32227,
"totalDebit": 0,
"totalCredit": 0
}
}

```

5. RESPONSE CODES

KUDA transfer response codes are a combination of the standard ISO response codes and codes unique to us.

5.1 Transfer Status Codes

S/N	Code	Description
1	00 or k00	Successful
2	k02	SQL Exception
3	K04	Endpoint timeout
4	K06	General Error
5	K08	Cache operation Error
6	K09	Model Validation Error
7	K96	Fatal Error

S/N	Code	Description
8	K25	No Record Found
9	K26	Record Already Exists
10	K27	Http Request Exception
11	K28	Task Cancelled Exception
12	K91	Timeout Exception
13	K92	Cache Connection Failure