



MSU SPEC DOCUMENT

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# MSU SPEC DOCUMENT

## Document Information

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## Revision History

Date	Version	Section Changed	Change Description	Author

## Distribution List

Name	Designation	Company

## Introduction

### Background

Midlands State University (MSU) and CBZ have entered into an agreement whereby CBZ Holdings will host their student accounts. MSU should be able to open Wallets for new students directly at CBZ.

### Challenge

Currently there is no integration between MSU and CBZ Touch Platform. The accounts opening and KYC Documents sharing is being done manually leading to delays in meeting customer requirement of an Account.

### Proposed Solution

To automate the process for MSU student account opening process. The solutions is to be deployed through the current Internal Applications. The document described specs for solutions below

1. MSU Automatic Wallet Creation API
2. KYC Document exchange between CBZ and MSU

### Details of the Solution

In order to achieve above solution there is need to;

#### **Enable Wallet Creation in CBZ Touch Platform**

MSU personnel will capture the student data in their system and upon saving the data. MSU should call the transaction type below which is running on the BulkPayments API

**NB:** Before sending, the wallet opening request, please refer to Appendix A document for National ID validation .Based on the response MSU may proceed to open the wallet.

Transaction Type: **OW1\_ACC**

Request **JSON**

**---ADVISE MANDATORY FIELDS:** All fields are mandatory

```
{
  "InstitutionID": "MSU",
  "ExtReferenceNo": "apitest123",
  "Request": {
    "TransactionType": "OW1_ACC",
    "ProcessingCode": "200",
    "Cif": "263732419962"
    "CName": "MACDONALD CHIKANGA"
    "FName": "MACDONALD"
    "LName": "CHIKANGA"
    "DoB": "YYYYMMDD"
    "Mobile": "63-121401-S-22"
    "Email": "mchikanga@cbz.co.zw"
    "Cat": "122"
    "Branch": "018"
    "Pref_Lang": "en_US"
  }
}
```

## Tag Details

CIF-Customers mobile number

CNAME-Customers Full name

FNAME-Customers first name

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LNAME-Customers last name

DOB- Date of birth in format YYYYMMDD

Nation ID-National ID

MOBILE-Customers Mobile number

EMAIL-Customers email address if not available put mobile number@cbz.co.zw eg 263732419962@cbz.co.zw

Cust Cat -This is customers category MSU in this case. This is static

Branch code -This is static ie 018

pref\_lang-STATIC VALUE

## Response JSON

```
{
  "InstitutionID": "MSU",
  "ExtReferenceNo": "apitest123",
  "TransactionType": "ACC_OW1",
  "Response": [
    {
      "Status": "SUCCESS",
      "StatusDescription": "Customer Created successfully 770211",
      "ErrorCode": ""
    }
  ]
}
```

-----

```
{
  "InstitutionID": "MSU",
  "ExtReferenceNo": "apitest123",
  "TransactionType": "ACC_OW1",
```

```
"Response": [
  {
    "Status": "FAILURE",
    "StatusDescription": "Mobile Number is Already Registered.",
    "ErrorCode": ""
  }
]
}

{
  "InstitutionID": "MSU",
  "ExtReferenceNo": "apitest123",
  "TransactionType": "ACC_OW1",
  "Response": [
    {
      "Status": "FAILURE",
      "StatusDescription": "Please check NationalID.",
      "ErrorCode": ""
    }
  ]
}
```

CBZ will then share the wallet opening response with MSU through the API.

Customer will receive SMS alert advising of the new Wallet opened. This will be handled by MFS System

"Congratulations!!! You are now a CBZ Wallet user. Your wallet account number is 263732419962. Your wallet account is now added to CBZ Mobile Banking service."

The Wallet is already in an authorised status

To create a wallet creation report on Datastore for Business to check and signoff daily using the Data source is 192.168.226.129\MOBIMIGRATION

Query :

```
select a.branch_code, x.currency, a.ACC_NUM , cname , cust_cat , CATEGORY , B.CREATED_AT , x.CURR_BALANCE, a.curr_app_status
from account a , customer b , CUSTOMER_CATEGORY c , CBACCOUNT x
where a.CUST_ID =B.CIF
and a.acc_num =x.acc_num
and cast(a.CREATED_AT as date) =cast(getdate() as date) ----- and '25-FEB-2019'
and cust_cat=c.id
and a.curr_app_status ='1' and a.rstatus ='1'
and cust_cat=':Xxx' -----MSU wallet customer category
```

## Enable Sharing of KYC documents

The KYC Documents are captured and stored at MSU where the student will present himself/herself. Due to regulation and account nature, there is need to have these documents available also at CBZ Holdings. MSU is able to share the documents electronically to CBZ however we need to have an application at CBZ end to receive the document.

The document are to be received and stored in a server for future retrieval. The document should be saved with account number and document type values e.g. 2637324199621

The system should store the documents with the institution id as well so as to be able to identify the documents per institution through the portal after allocation of the appropriate rights.

Below is the sending xml to be used by MSU and response

KYC upload 1

Below is the proposed sample Request and Response

---ADVISE MANDATORY FIELDS :All fields mandatory

## REQUEST JSON



```
{
  "InstitutionID": "MSU",
  "ExtReferenceNo": "apitest123",
  "Request": {
    "TransactionType": "OW1_KYC",
    "ProcessingCode": "200",
    "Cif": "263732419962"
    "CustName": "Macdonald Chikanga"
    "National_ID": "63-1214018-S-22"
    "Email": "mchikanga@cbz.co.zw"
    "DocumentType": "1"
    "Document": "Base64String, Max Size 10MB, format PDF only"
  }
}
```

## Response JSON

```
{
  "InstitutionID": "MSU",
  "ExtReferenceNo": "apitest123",
  "TransactionType": "OW1_KYC",
  "Response": [
    {
      "Status": "SUCCESS",
      "StatusDescription": "Document successfully added/updated.",
      "ErrorCode": ""
    }
  ]
}

{
  "InstitutionID": "MSU",
  "ExtReferenceNo": "apitest123",
```

```
"TransactionType": "OW1_KYC",
"Response": [
  {
    "Status": "FAILURE",
    "StatusDescription": "Error eror error desc.",
    "ErrorCode": ""
  }
]
}
```

The table to be used for storage of the data in the table; **MSU\_KYC\_DOCUMENTS**

```
CREATE TABLE [dbo].[MSU_KYC_DOCUMENTS](
  [ID] [bigint] IDENTITY(1,1) NOT NULL,
  [CIF] [varchar](100) NULL,
  [NAME] [varchar](100) NULL,
  [DOC] [varchar](100) NULL,
  [NATIONAL_ID] [varchar](100) NULL,
  [DOCUMENTTYPE] [varchar](100) NULL,
  [DOCUMENTDATA] [varbinary](max) NULL,
  [ADDDATE] [datetime] NULL,
  [MODIFIEDDATE] [datetime] NULL
) ON [PRIMARY] TEXTIMAGE_ON [PRIMARY]
```

Users should be able to search and download the documents using any field displayed on Enterprise Portal application.

Server Storage Details: **These to be provided once server is available**

## API Calls

This API adheres to standard HTTP protocol and guidelines.

Test environment url and endpoint is <http://192.168.6.115:7112/v1.svc/submitRequest>

Credentials will be shared separately upon successful VPN configuration between the two parties.

Alternatively you can use <https://pg.cbz.co.zw:6006/api.svc/submitRequest> for both SITs and UATs (service availability not guaranteed).

CBZPaymentsGateway API uses HTTP basic authentication e.g.

Authorization = Basic EASFzHF0CRpVD36T9iyKw==

Each request should specify the expected CONTENT\_TYPE header i.e. application/json; charset=utf-8

The Authentication details should be acquired from CBZ.

Each request should contain a unique reference number, which should be prefixed by the characters from the partners Institution ID, preferably the first three.

“CBZ” e.g. CBZ10001

“ECOCASH” e.g. ECO10001

## NB:

- i) Duplicate request referenceNumber will be disallowed.
- ii) VPN configurations is compulsory in production.

## HTTP methods

Generally, we will stick to HTTP API guidelines, and we shall utilize only one

- POST to create new resource.

## Known HTTP error codes

200 OK Successful.

204 No Content Successful.

201 Created New items successfully created.

400 Bad Request

401 Unauthorized Authentication failed.

403 Forbidden User is not allowed to access requested resource.

405 Method not allowed incorrect use of http method for the request. (e.g: POST instead of GET)

415 Unsupported media type incorrect media type specified, i.e. wrong format for image etc.

417 Expectation Failed, Username or Password missing.

5XX Operation failed could not complete the operation.

## Standard HTTP headers

- Content-Type: application/json; charset=utf-8
- Accept: application/json

## SAMPLE CODE METHOD

**NB:** We shall encrypt ONLY the Request Object in the request body

POST METHOD

C# CODE

```
private const string URL = "http://XXXXXXXX:XXXX/v1.svc";  
private const string DATA = {  
    "InstitutionID":"NDASENDA",
```

```
"ExtReferenceNo": "MASHI123456",
"Request": "aV7lWAqgCm6Ga3fLgFJnh9RUkQgSalu4ED4piAEClABDVELrc9x+3vJUzjiXjaSRvm+BwMlji1sgMQgZwaH5i/pLy37VehTdMKVIKUreqtNF3Azzalw/2wMkU8W
yiUdKPTUG1Meou6/A44MHKJuF52EL1H+mT/QTDUrwg0w2Pg2b5r7nmanoyr7e59QKWUAbve1D2igl9B4lR2OeqsyeAHyn8IPzWypBL4ZAEoTppbAxb/XwgmEmrXU8E
GWHyHQGxsgBNjv/+DtmTwKtW0OkmxdZhVtdEC986kkv9yiUMuGF74QwkOrFTzGon805T4mGtCDHKkSQK7nL1KAnwtcz0lR7Fd+KxGtDANb+p2V7f9HcIoxuePolGLHNj
1BEO8zK4aapqe1fYwYufy4B+me7d41ALnA8Wt4Uv8UxzJJjr7o6808H2UU2xCZat9DV1C9l3UwxJKjXlNnK2KIWku7WrbDelVq7lpG3Lo9Cd0PzFtyVgqa84cb5OA=="
};
private void CreatePOSTObject()
{
    HttpWebRequest request = (HttpWebRequest)WebRequest.Create(URL+"/submitRequest ");
    request.Method = "POST";
    request.Headers["Authorization"] = "Basic " + Convert.ToBase64String(Encoding.Default.GetBytes("username:password"));
    request.ContentType = "application/json";
    request.ContentLength = DATA.Length;
    using (Stream webStream = request.GetRequestStream())
    using (StreamWriter requestWriter = new StreamWriter(webStream, System.Text.Encoding.ASCII))
    {
        requestWriter.Write(DATA);
    }
    try
    {
        HttpWebResponse webResponse = (HttpWebResponse)request.GetResponse();
        using (Stream webStream = webResponse.GetResponseStream())
        {
            if (webStream != null)
            {
                using (StreamReader responseReader = new StreamReader(webStream))
                {
                    string response = responseReader.ReadToEnd();
                    if (webResponse.StatusCode != HttpStatusCode.OK)
                    {
                        string ErrorDescription = webResponse.StatusDescription.ToString();
                    }
                    else
                    {

```

```
}  
}  
}  
}  
}  
}  
catch (Exception e)  
{  
    Console.Out.WriteLine("-----");  
}  
}
```

## Systems in Scope

1. CBZ Bank Application
2. MSU
3. CBZ Touch

## Transaction Types

New transaction types:

OW1\_KYC

OW1\_ACC

CITZN\_VAL

## Transaction Codes and Module

No transaction code and module amendments needed

## Appendix A



Annexure1.pdf

## Document Sign Off

### Document Approvers

Name	Designation	Company	Signature	Date