



**Information Technology**

# **MIGS Settlement**

**System Design Specification**

## 1. INTRODUCTION

The document was developed to document the enhancement of Migs Visa Settlement process to optimize manual work effort and employ Robotic workforce.

### 1.1. Purpose

The RPA solution will be expected to eliminate a lot of the manual steps currently involved in the process For Migs Visa Settlement Banking transactions. Bot first checks for pending task, its resumes if any is found else the bot first download three reports from the File server and necessary filtering are done. Performs all necessary data manipulations. The bot goes ahead to build an upload file. If the account is balanced or not, it notifies via email with the generated report.

### 1.2. Overview

This document gives the overview of important parts of the system to be built and the means of communication between each component to be built. The document also gives the overview of responsibility of each component to be built and the entry and exit criteria

### 1.3. References

The Functional Requirement document provided by the internal audit team is one of the documents used for this integration.

### 1.4. Definition and Acronyms

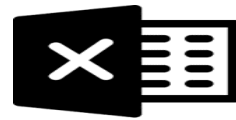
No	Abbreviation/Term	Description
1	RPA	Robotics Process Automation
2	Bot	Virtual Worker
3	SDD	Solution Design Document
4	PDD	Process Design Document
5	TBO	Transaction Banking Operation
6	FIP	First Instant Pay
7	EFT	Electronic Funds Transfer

## 2. SYSTEM OVERVIEW

This document defines the high-level requirements for the proposed Agency Banking Visa settlement process. It will be used as the basis for the following activities:

- Creating solution designs
- Defining functional requirements
- Developing test plans, test scripts, and test cases
- Determining project completion
- Assessing project success

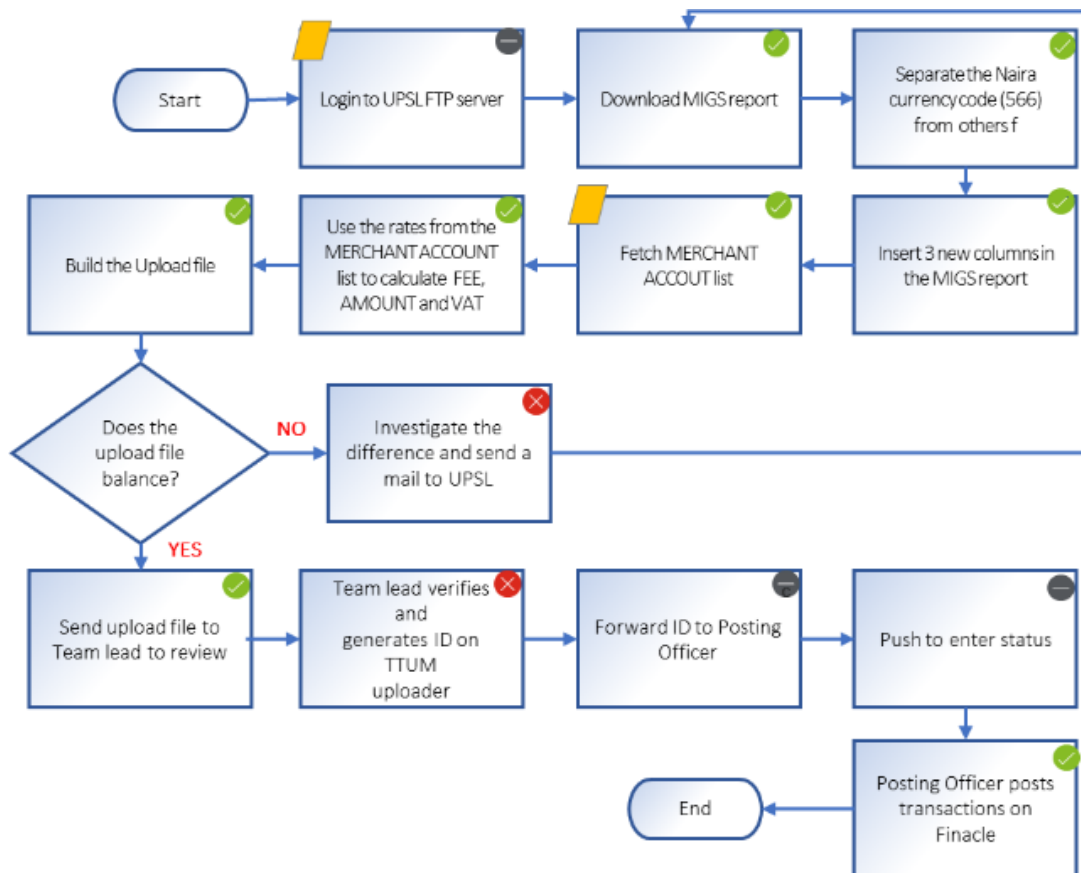
## 3. SYSTEM ARCHITECTURE



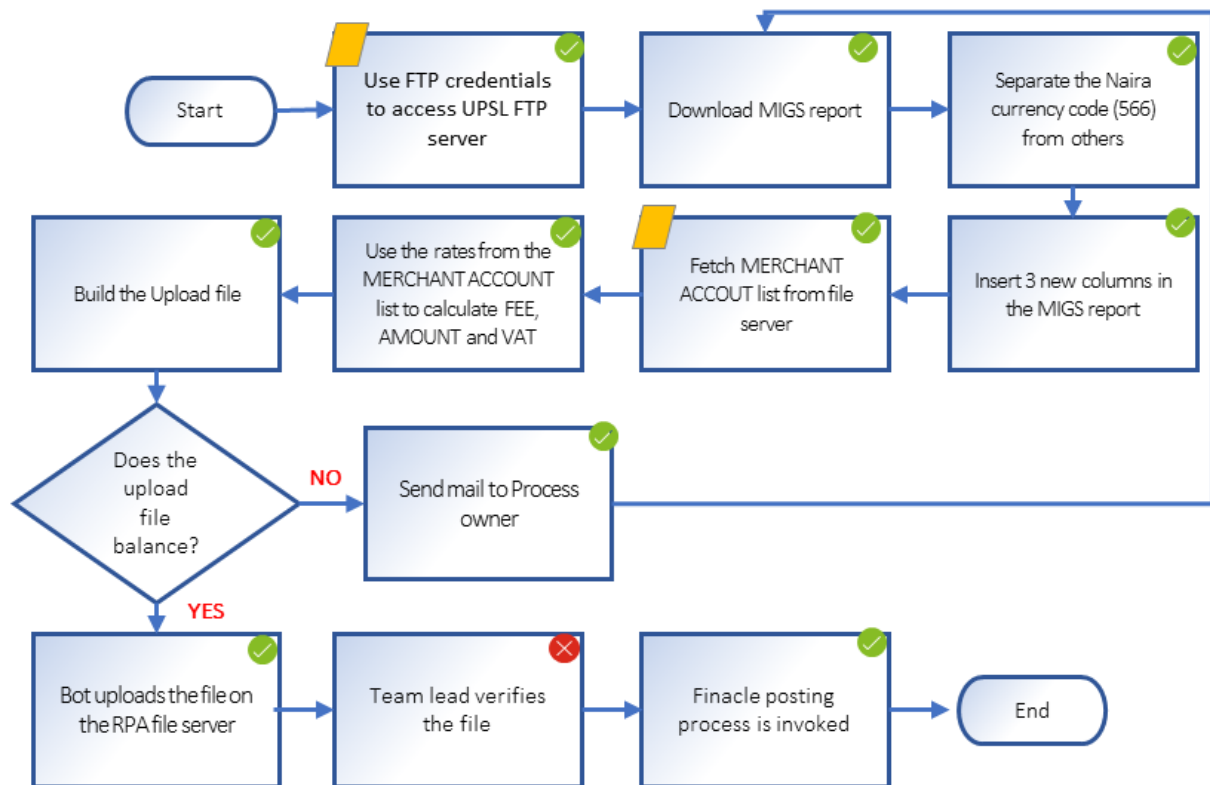
**Read Report, Filter and Data  
Manipulation**



**Reporting**



Current state for Agency Banking Process



Targeted state for Agency Banking Process

## MIGS VISA SETTLEMENT

1. Bot opens browser and Generate Report
  - Bot goes to UPSL FTP server address
  - Bot uses FTP credentials to access the platform and download MIGS report and visa clearing files
2. Process the settlement
  - Bot opens the MIGS report
  - Bot sorts by ORIGCLEARCCY to separate 566 from others (treat only 566)
    - i. Bot fetches the MERCHANT ACCOUNT list to get the NGN RATES for the merchant names in the MIGS report

S/N	MERCHANT ACCOUNT	MERCHANT TITLE	RATE	CURRENCY	CAP
1	2015200662	VISA RADISSON	0.035	USD	
2	48919400007302	VISA IKEJA SHERATON	0.035	USD	
3	2015759191	ABUJA HAWTHORN SUITES	0.035	USD	
4	2026749961	VISA LEADWAY LEOLA ABUJA	0.035	USD	
5	2026749033	VISA LEADWAY PANACHE	0.035	USD	
6	2025241028	VISA SPEEDWINGS LOGISTICS	0.035	USD	
7	2021671030	VISA DE RENAISSANCE	0.035	USD	
8	2008108322	VISA DE VINE PLUS	0.035	USD	
9	2025241028	VISA SPEEDWINGS LOGISTICS	0.035	USD	
10	2031735023	VISA LILYGATE	0.035	USD	
11	2012125760	VISA LA COURT	0.035	USD	
12	2026935302	VISA DESIGN TRADE	0.035	USD	
13	2012766536	VISA EKO HOTEL	0.035	USD	
14	2031797782	AFRICAN TOURISM	0.035	USD	
15	2029798609	AFRICAN TOURISM	0.015	NGN	2000
16	2034361623	VOGUEPAY	0.035	USD	
17	2034162150	VOGUEPAY	0.015	NGN	

- Bot inserts 3 new columns to calculate FEE (ORIGINAL AMT \* RATE), AMOUNT DUE MERCHANT (ORIGINAL AMT – FEE) and VAT (7.5/107.5\*FEE)
  - Bot sorts by Merchant names to separate each merchant's transaction
  - Bot totals the FEE, AMOUNT and VAT for each merchant
  - Bot subtracts FEE total from AMOUNT total to get ACTUAL AMOUNT
3. The Bot will compare the total ORIGINAL AMOUNT on the naira sheet of the visa clearing file with the ORIGINAL AMOUNT on the MIGS report

TRAN	EX	RRN	DESTCLE	ORIGCLE	ORIGCLEARCCY	ORIGINALAMT	ORIGINAL	DESTCLE	CLEARAMT	375	49625	26 16279	30	3970	2 093023	28 25581	405	376 7442	139 5349	9850	10 46512	826	485738****	FBNS2101	FBN0018	AFRICAN TOURISM
598	132115156	21	50000	566	50000	566	50000	566	50000	375	49625	26 16279	30	3970	2 093023	28 25581	405	376 7442	139 5349	9850	10 46512	826	485738****	FBNS2101	FBN0018	AFRICAN TOURISM
598	132118161	21	4000	566	4000	566	4000	566	4000																	
598	132110146	21	10000	566	10000	566	10000	566	10000	150	9850	10 46512														
598	132109144	21	10000	840	10000	840	10000	840	10000																	
598	132108142	21	10000	840	10000	840	10000	840	10000																	

4. Extract all items in the generated report and build an Upload File
  - To build the unique narration for AFRICAN TOURISM merchant, concatenate RRN-, DD.MM.YY, RRN number from MIGS report, AFRICAN TOURISM

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	account	Narration	amount	type														
2	48934304001301	VISA DOM MIGS 18.11.2021		D														
3	2029798609 RRN- 18.11.2021-132109144224	AFRICAN TOURISM		C														
4	51357000003001	AFTC VISA DOM WEB MIGS FEE 18.11.2021		C			RRN-	19.11.21	AFRICAN	TOURISM	132110145	=CONCAT(G4,I44,K4,L4)						
5	51333104000101	AFTC VISA VAT WEB MIGS FEE 18.11.2021		C														
6	2029798609 18.11.2021	STD CHRGS ON AFRICAN TOURISM		D														
7	48934300008501	18.11.2021 STD CHRGS ON AFRICAN TOURISM		C														
8	2027842845	VISA FBN INSURANCE LIMITED 18.11.2021		C														
9	2027842845	VISA FBN INSURANCE LIMITED 18.11.2021		D														
10	2027842845	VISA FBN INSURANCE LIMITED 18.11.2021		C														
11	2027842845	VISA FBN INSURANCE LIMITED 18.11.2021		D														
12	23057000003001	FBN INS VISA DOM WEB MIGS FEE 18.11.2021		C														
13	23033104000101	FBN INS VISA VAT WEB MIGS FEE 18.11.2021		C														
14	2029798609 18.11.2021	STD CHRGS ON FBN		D														
15	48934300008501	18.11.2021 STD CHRGS ON FBN		C														
16	9999999999	END																
17																		
18																		
19																		
20																		

- Bot copies and pastes the total ORIGINAL AMOUNT for all merchants to the 48934389043901-account number
- Bot copies and pastes the totals for ORIGINAL AMOUNT, AMOUNT DUE MERCHANT (credit 2029798609), STAMP DUTY (debit 2029798609 and credit 48934300008501), VAT (credit 51357000003001) and ACTUAL AMOUNT (credit 51357000003001) for each merchant
- Note: STAMP DUTY of N50 for each transaction is charged on ORIGINAL AMOUNTS that are 10,000 and above
- Note: AFRICAN TOURISM has a cap for the FEE charged. The FEE charged cannot be more than N2,000. If it is more than 2,000 the Bot will change it to 2,000
- Note: for AFRICAN TOURISM, the Bot copies and pastes AMOUNT DUE MERCHANT, STAMP DUTY, VAT and ACTUAL AMOUNT
- Note: For FBN INSURANCE, the Bot copies and pastes ORIGINAL AMOUNT and FEE for each transaction, ACTUAL AMOUNT, VAT total and STAMP DUTY

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	account	Narration	amount	type															
2	48934304001301	VISA DOM MIGS 19.11.2021	64,000.00	D															
3	2029798609 RRN- 19.11.21 132110145244	AFRICAN TOURISM	9,850.00	C															
4	51357000003001	AFTC VISA DOM WEB MIGS FEE 19.11.2021	139.53	C															
5	51333104000101	AFTC VISA VAT WEB MIGS FEE 19.11.2021	10.47	C															
6	2029798609 19.11.2021	STD CHRGS ON AFRICAN TOURISM	50.00	D															
7	48934300008501	19.11.2021 STD CHRGS ON AFRICAN TOURISM	50.00	C															
8	2027842845	VISA FBN INSURANCE LIMITED 19.11.2021	50,000.00	C															
9	2027842845	VISA FBN INSURANCE LIMITED 19.11.2021	375.00	D															
10	2027842845	VISA FBN INSURANCE LIMITED 19.11.2021	4,000.00	C															
11	2027842845	VISA FBN INSURANCE LIMITED 19.11.2021	30.00	D															
12	23057000003001	FBN INS VISA DOM WEB MIGS FEE 19.11.2021	376.74	C															
13	23033104000101	FBN INS VISA VAT WEB MIGS FEE 19.11.2021	28.26	C															
14	2029798609 19.11.2021	STD CHRGS ON FBN	50.00	D															
15	48934300008501	19.11.2021 STD CHRGS ON FBN	50.00	C															
16	9999999999	END																	
17																			
18																			

5. If the upload file does not balance, send a mail to the process owner
6. If it balances, Bot uploads the file on the RPA file server

**SYSTEM SPECIFICATION****3.2.1. Network system**

Network software and protocols for systems to communicate:

- a. TCP/IP
- b. HTTP
- c. HTTPS
- d. SFTP

**3.2.2. Authentication Credentials**

Valid authentication credentials are required to run software from third party vendors:

- a. To use application development tools
- b. To use web server, application server and database software in development, test and
- c. production mode

**3. DatabaseServer**

Oracle Server

**4. Client Computers**

Windows (Preferred) client computers

**5. Production support systems**

Web server computer(s) and related hardware support.

**4. REQUIREMENT MATRIX**


Requirement	Fulfilling component
Download Report from the FTP File Server	Bot
Send Upload file Report	Bot



## 5. DOCUMENT CHANGE RECORD

Date	Version	Author	Change Details
05/09/2022	1.0	Bakare Sodiq	Migs Settlement

### CREATEDBY

Name	Department/ Unit	Signature	Date
Bakare Sodiq	Developer/RPA		06/10/2022

### REVIEWEDBY

Name	Department/ Unit	Signature	Date

**APPROVALS**

Name	Department	Designation	Signature	Date
	IT			