



Information Technology

PAY ARENA Settlement

System Design Specification

1. INTRODUCTION

The document was developed to document the enhancement of Pay Arena Visa 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 Pos Acquiring Dollar Visa Settlement Banking transactions. the bot first download the Pay Arena report 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

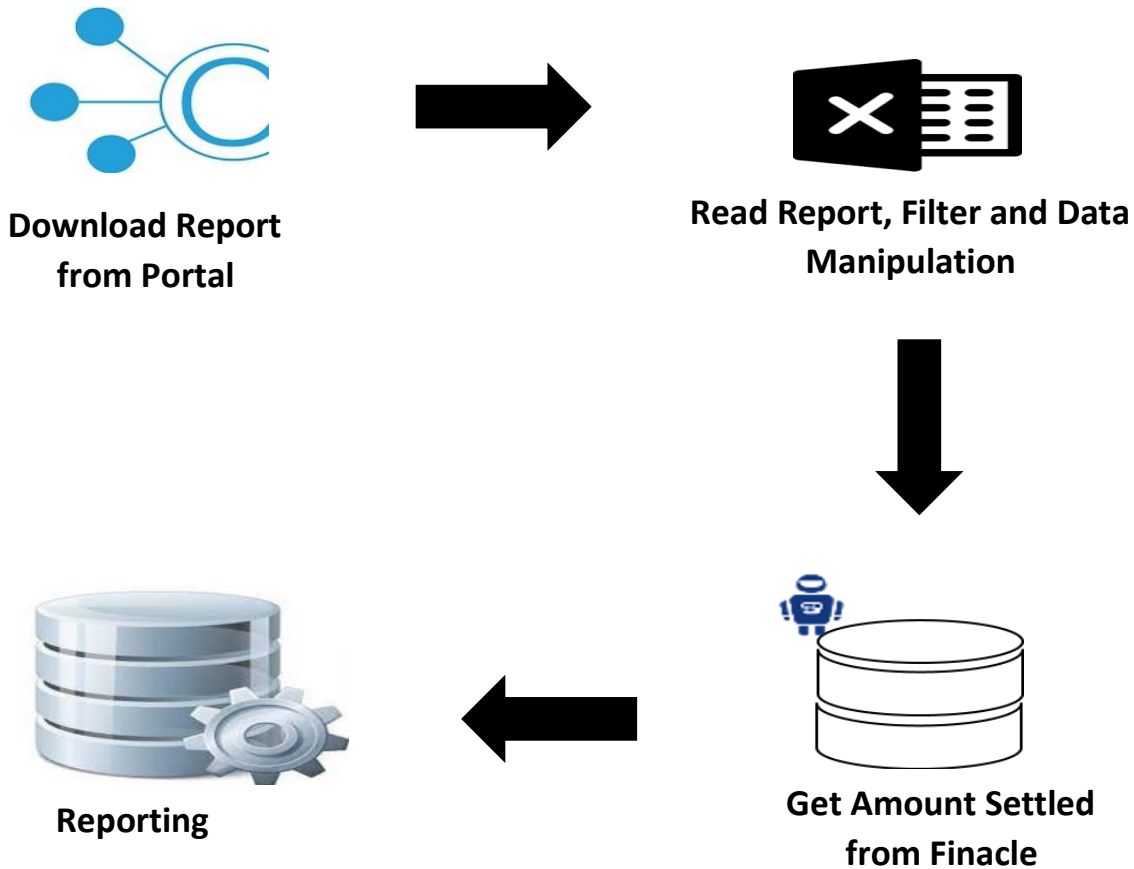
No	Abbreviation/Term	Description
1	RPA	Robotics Process Automation
2	Bot	Virtual Worker
3	SDD	Solution Design Document
4	PDD	Process Design Document
5	TBO	Transaction Banking Operation
6	FIP	First Instant Pay
7	EFT	Electronic Funds Transfer

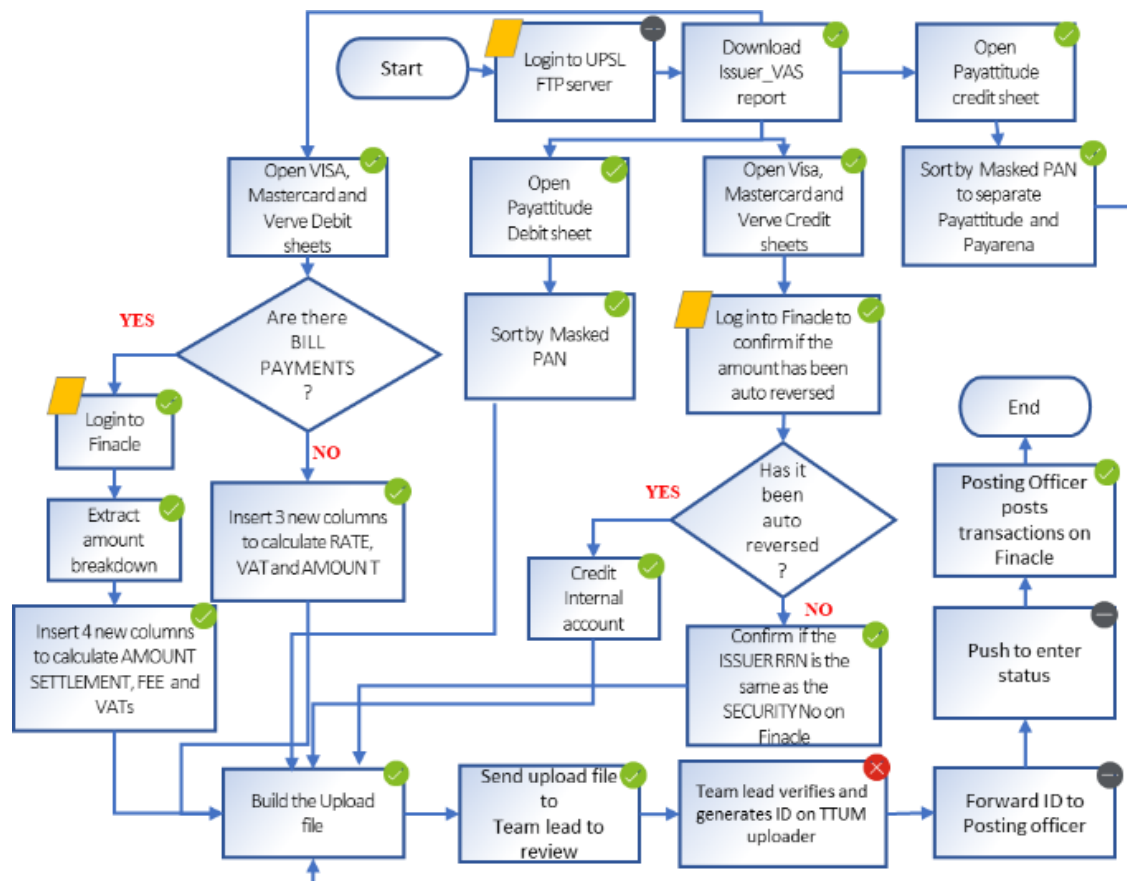
2. SYSTEM OVERVIEW

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:

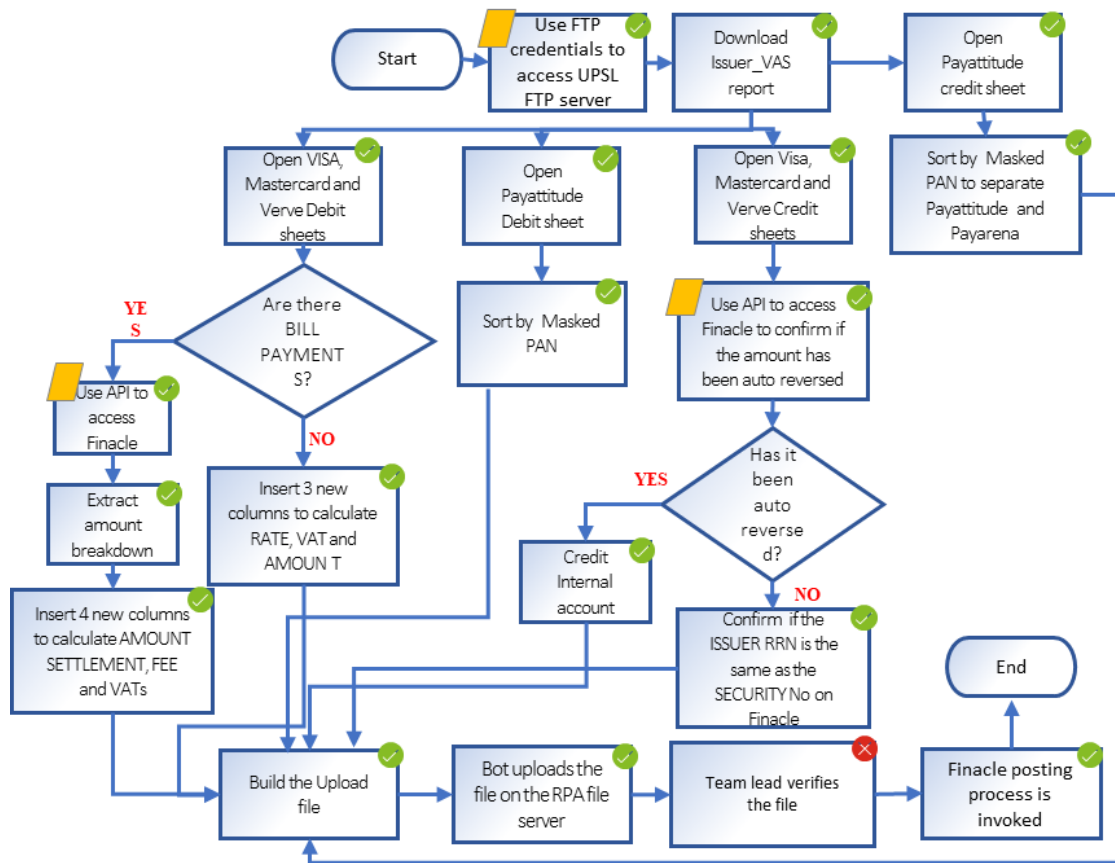
- Creating solution designs
- Defining functional requirements
- Developing test plans, test scripts, and test cases
- Determining project completion
- Assessing project success

3. SYSTEM ARCHITECTURE





Current state for Agency Banking Process



Targeted state for Agency Banking Process

PAY ARENA

1. Bot opens browser and generates report
 - Bot goes to UPSL FTP server address
 - Bot uses FTP credentials to access the platform and download Issuer_VAS report from VAS Settlement folder
2. Process settlement template
 - For VISA, Mastercard and Verve Debit sheets, sort by TRANSACTION TYPE and TRANAMOUNT
 - If there is BILL PAYMENT transaction type,
 - i. Navigate to Finacle and
 - Use the customer's account number and transaction date to search in the customer's account for the amount breakdown (actual amount, fee and VAT) on Finacle
 - ii. Insert 4 new columns after TRANAMOUNT for ACTUAL AMOUNT SETTLED, FEE, VAT and Extra VAT (7.50)

MASKEDPAN	CARDHOLDER ACCOUNT PHONE NO	ISSFIID	TRANAMOUNT	TRANSACTION CURRENCY
539923*****4999	5026753066	FBHO	10,000.00	566 GENERAL
			186,885.00	
539923*****5627	5037315662	FBHO	1,607.50	566 GENERAL
539923*****2801	5056723396	FBHO	2,672.50	566 GENERAL
539923*****4377	5022291074	FBHO	2,707.50	566 GENERAL
539923*****5185	5078736141	FBHO	3,707.50	566 GENERAL
539923*****7351	51131392747	FBHO	8,007.50	566 GENERAL

- For TRANSFER and AIRTIME
 - i. Insert 3 new columns after TRANAMOUNT to calculate RATE, VAT and ACTUAL AMOUNT
 - ii. To calculate RATE and VAT:

Tranamount - RATE - VAT	Rate	VAT
1-5,000	10	0.75
5,001- 50,000	25	1.88
50,001 and above	50	3.75

- iii. To calculate ACTUAL AMOUNT is TRANAMOUNT minus VAT

MASKEDPAN	CARDHOLDER ACCOUNT	PHONE NO	ISSFIID	TRANAMOUNT	TRANSACTION CURRENCY	ICC	ISSUER FEE (IRF) RATE
427011*****1334	3007150520		FBNP	3,010.75	10.00	0.75	3,000.00
427011*****8523	3017831339		FBNP	4,010.75	10.00	0.75	4,000.00
427011*****8520	3146056458		FBNP	10,026.88	25.00	1.88	10,000.00
427011*****4787	3050374507		FBNP	10,026.88	25.00	1.88	10,000.00
427011*****6708	2004796565		FBNP	85,053.75	50.00	3.75	85,000.00
427011*****4810	2035667391		FBNP	100,053.75	50.00	3.75	100,000.00
427011*****4071	3016155797		FBNP	170,553.75	50.00	3.75	170,500.00
				382,736.51	220.00	16.51	382,500.00
							130.00

- For VISA, Mastercard and Verve Credit sheets
 - i. Bot navigates to Finacle
 - ii. Bot uses CARDHOLDER ACCOUNT NUMBER and date to search on Finacle to confirm if the amount in the customer's account auto reversed
 - iii. If it has not been auto reversed (credit), confirm that the ISSUER RRN on the credit sheet is the same as the Security No/Remarks 2 on Finacle, then credit the customer account when building the upload file

Part Transaction Type	Debit	Credit
A/c. ID	3013262506	
Ref. CCY/Amt.	NGN	66,053.75
Treasury Ref. No./Rate		0.0000
Transaction Particulars Code		
Instrument Type		
Instrument Date		
Head Office Transaction Type		
Charge Event ID		
Ref. No.	000000658808	
Remarks 1	5061050000000002007	
User Part Transaction Code		
Record		
Options	SELECT	
Ledger Balance	NGN	66,053.75

- i. If it has been auto reversed, credit the internal account of the respective transaction type when building the upload file

Transaction type	Internal account to be credited
Airtime	48934389033901
Bill Payment	48934389034001
Transfer (Issuer)	48934389034201

- ii. To credit the internal account, build a unique narration (REV-DD.MM.YY-Remarks2)

	A	B	C	D	E	F	G	H	I	J
18	2023293085	VAS TERW PAYMENT26.NOV2121		D	-		-			
19	48957000007500	VAS TERW PAYMENT26.NOV2121		C	-		-			
20	2023293085	VAS TERW PAYMENT21.NOV2611		D	-		-			
21	48957000007500	VAS TERW PAYMENT21.NOV2611		C	-		-			
22	2023293085	VAS TERW PAYMENT 02Jul2121		D	-		-			
23	48957000007500	VAS TERW PAYMENT 02Jul2121		C	-		-			
24	2023293085	NET:UNIFIED PAYMENTS/VASFEEAD/PAYMENT02Apr2		C	-		-			
25	48957000007500	VAS TERW PAYMENT02Apr02		C	-		-			
26	2023293085	VAS TERW PAYMENT02Apr02		D	-		-			
27	48957000007500	VAS TERW PAYMENT02Apr02		C	-		-			
28	2023293085	VAS TERW PAYMENT02Apr02		D	-		-			
29	48957000007500	VAS TERW PAYMENT02Apr02		C	-		-			
30	48957000007500	VAS TERW PAYMENT02Apr02		C	-		-			
31	0013262506	REV-25.11.21-007010264241	66,053.75	C	(66,053.75)		66,053.75	25-11-2021 05:06:16 PM	REV-	REV-25.11.21-REV-25.11.21-007010
32	5133960476	006918081374	1,000.00	C	(1,000.00)		1,000.00	11-11-2021 12:15:02 PM	REV-	REV-11.11.21-006918081374
33				C	-		-		REV-	REV-00.01.00-
34				C	-		-		REV-	REV-00.01.00-

- For Payattitude Debit and Credit
 - Sort by Masked PAN to separate 901102***** from 901105*****

3. Build the upload file

- Copy the issuer net position from the Issuer_VAS report (cell E13) and paste it in the upload file (cell C2)

Clipboard	Font	Alignment	Number	Styles
13				
=SUM(E8:E12)				
A	B	C	D	E

UP
UNIFIED PAYMENT SERVICES LTD

SETTLEMENT DATE: 26-Nov-2021

CARDS/SCHEME	VOLUME	ISSUER DEBIT	ISSUER CREDIT	ISSUER NET POSITION	PROCESSING FEE
MASTERCARD	645.00	21,813,052.66	0.00	-21813052.66	0
VISA CARD	7.00	382,694.57	0.00	-382694.57	0
PAY ATTITUDE	1,475.00	4,178,429.86	63,048,719.63	58870289.77	0
VERVE CARD	858.00	29,502,848.31	67,039.16	-29435809.15	0
TOTAL	2,985.00	55,877,025.40	63,115,758.79	7,238,733.39	0.00
NOTE: ISSUER OBLIGATION INCLUDES PROCESSING FEE WHERE APPLICABLE:					

VISA POS CPD NOV 2021 BUILDING FILES PAYARENA - Excel										
File	Home	Insert	Page Layout	Formulas	Data	Review	View	Help	Tell me what you want to do	
File	Clipboard	Font	Alignment	Number	Styles	Format Painter	Wrap Text	Conditional Formatting	Normal 2	Normal 4
A160										

A	B	C	D	E	F	G	H
ACCT	NARRATION	AMOUNT	TRAN TYPE				
2023293085	VAS ISSO PAYMENT 26NOV 2021	7,238,733.39	D	7,238,733.39		7,238,733.39	
48934389033901	26.11.2021 PAYARENA AIRTIME SETT VISA		D				
48957000007500	26.11.2021 PAYARENA AIRTIME income VISA		C				
48933104000101	26.11.2021 PAYARENA AIRTIME vat VISA		C				
48934389033901	26.11.2021 PAYARENA AIRTIME SETT NMC	186,885.00	D	186,885.00		186,885.00	
48957000007500	26.11.2021 PAYARENA AIRTIME income NMC	668.11	C	(668.11)		668.11	
48933104000101	26.11.2021 PAYARENA AIRTIME vat NMC	49.62	C	(49.62)		49.62	
48934389033901	26.11.2021 PAYARENA AIRTIME SETT VERVE	169,257.00	D	169,257.00		169,257.00	
48957000007500	26.11.2021 PAYARENA AIRTIME income VERVE	605.09	C	(605.09)		605.09	

- For VISA, Mastercard and Verve Debit sheets
 - For BILL PAYMENT
 - Copy and paste the totals for ACTUAL AMOUNT, FEE, VAT and Extra VAT
 - For AIRTIME and TRANSFER
 - Copy and paste the transaction amount totals of each transaction type in the upload file
 - Copy and paste the totals for the new amount, rate, issuer fee and issuer VAT in the upload file

48934389034201										
A	B	C	D	E	F	G	H	I	J	K
48933104000101	26.11.2021 PAYARENA BILL PYMT vat		C		-		-			
48934389034001	26.11.2021 PAYARENA BILL PYMT SETT VERVE		D		-		-			
48934389034101	26.11.2021 PAYARENA BILL PYMT SETT VISA		D		-		-			
2023293085	26.11.2021 PAYARENA BILL PYMT vat VERVE		D		-		-			
2023293085	26.11.2021 PAYARENA BILL PYMT vat VERVE		D		-		-			
48957000007500	26.11.2021 PAYARENA BILL PYMT income		C		-		-			
48933104000101	26.11.2021 PAYARENA BILL PYMT vat		C		-		-			
48934389034201	26.11.2021 PAYARENA ISSUER SETT	382,500.00	D	382,500.00		382,500.00				
48934389034301	26.11.2021 PAYARENA fee susp	220.00	D	220.00		220.00				
2023293085	26.11.2021 PAYARENA VAT DEBIT Visa	16.51	D	16.51		16.51				
48933104000101	26.11.2021 PAYARENA VAT CREDIT Visa	2.94	C	(2.94)		2.94				
48957000007500	26.11.2021 PAYARENA ISSUER income	39.00	C	(39.00)		39.00				
2023293085	21.11.2121 PAYARENA ISSUER income Visa DR		D		-		-			
2023293085	21.11.2121 PAYARENA VAT CREDIT Visa DR		D		-		-			
48934389034201	26.11.2021 PAYARENA ISSUER SETT NMC POINT		D		-		-			
48934389034301	26.11.2021 PAYARENA fee susp NMC		D		-		-			
2023293085	26.11.2021 PAYARENA VAT DEBIT NMC		D		-		-			
48933104000101	26.11.2021 PAYARENA VAT CREDIT NMC		C		-		-			
48957000007500	26.11.2021 PAYARENA ISSUER income NMC		C		-		-			
2023293085	21.11.2121 PAYARENA ISSUER income NMC		D		-		-			
2023293085	21.11.2121 PAYARENA VAT CREDIT NMC		D		-		-			
48934389034201	26.11.2021 PAYARENA ISSUER SETT VERVE		D		-		-			

- For Payattitude Debit
 - Copy and paste transaction amount total for 901102*****

- Copy and paste the total ISSUER FEE and VAT
- Copy and paste Totals for ORIGINAL AMOUNT and FEE
- For VISA, Mastercard and Verve Credit
 - Copy and paste issuer fee and issuer VAT
- For Payattitude Credit,
 - Copy and paste transaction amount, fee and VAT for Payattitude masked PAN
 - Copy and paste transaction amount, fee and VAT for Payarena masked PAN
- In building the upload file:

Narration	Sheet
PAYARENA AIRTIME SETT NMC	MasterCard TRANAMOUNT total
PAYARENA AIRTIME SETT VISA	Visa TRANAMOUNT total
PAYARENA AIRTIME SETT VERVE	Verve TRANAMOUNT total
PAYATTITUDE SETT debit/credit	Payattitude debit/credit TRANAMOUNT total

4. If the upload file does not balance, send a mail to the process owner
5. If it balances, Bot uploads the file on the RPA file server
6. Team lead reviews it
7. Bot invokes the posting process on Finacle

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	Pos Acquiring Dollar

CREATEDBY

Name	Department/ Unit	Signature	Date
Bakare Sodiq	Developer/RPA		01/12/2022

REVIEWEDBY

Name	Department/ Unit	Signature	Date

APPROVALS

Name	Department	Designation	Signature	Date
	IT			