ACH Bank Account Validation -Transition to Support

The project team will update as the project progresses.

ACH Bank Account Validation API - Objective of the Application

New National Automated Clearing House Association (NACHA) rule governing electronic payments made through customer's bank accounts/Automated Clearing House transactions (ACH) have been/will be introduced:

Compliance with NACHA rule is required to adhere to the Bank of America (BofA) agreement and continue to be able to process/accept ACH payments. BofA processes all ACH payments where FPL and Gulf Power serve as originators (i.e. check payments - PPC, Pay Online, Pay by Phone, Automatic Bill Pay).   FPL Legal and external counsel were consulted to evaluate required actions needed to comply and validate FPL's approach.

PROJECT VISION

By January 1st, 2023, FPL and FPL NW systems will have a new validation process for authenticating bank account data entered for the first time through any channel by the customer.

Additionally, customer bank account data stored electronically will be encrypted/unreadable at rest across all storage locations.

The two changes will allow FPL and FPL NW to remain in compliance with National Automated Clearing House Association (NACHA) rules governing electronic payments made through customer's bank accounts.

Cloud O&M Costs

APP CODE	LINKED ACCOUNT	AWS ENVIRONMENT	YEAR TO DATE	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22
ZM815	430004966399	FPLProd	$5,041				$285	$980	$957	$928	$960	$931
ZM816	485449107334	FPLQA	$2,462	$421	$202	$22	$248	$302	$322	$349	$296	$300
ZM817	516627182506	FPLTest	$4,637	$424	$344	$479	$556	$577	$574	$555	$573	$555
ZM818	977465404123	FPLNonProd	$4,455	$433	$566	$588	$552	$497	$481	$476	$432	$430

Estimate summary Info

Upfront cost	Monthly cost	Total 12 months cost
0.00 USD	1,507.09 USD	**18,085.05 USD** Includes upfront cost

Getting Started with AWS

Contact Us | Sign in to the Console

My Estimate

Duplicate | Delete | Move to | Create group | Add support | **Add service**

Q Find resources

	Service Name ▲		Upfront cost ▽	Monthly cost ▽	Description ▽	Region ▽	Config Summary ▽
☐	AWS Lambda	☑	0.00 USD	5.60 USD	-	US East (N. Virginia)	Architecture (x8…
☐	Amazon API Gateway	☑	0.00 USD	0.19 USD	-	US East (N. Virginia)	HTTP API reques…
☐	Amazon CloudWatch	☑	0.00 USD	14.99 USD	-	US East (N. Virginia)	Number of Lam…
☐	Amazon RDS for PostgreSQL	☑	0.00 USD	1,485.85 USD	-	US East (N. Virginia)	Storage volume …
☐	Amazon Simple Queue Service (SQS)	☑	0.00 USD	0.00 USD	-	US East (N. Virginia)	DT Inbound: Not…
☐	Amazon Simple Storage Service (S3)	☑	0.00 USD	0.46 USD	-	US East (N. Virginia)	S3 Standard sto…

Technology Stack

| Interface	Technologies
Web	ReactJS 16.9, ReduX 8.3, Jest (Unit Testing), Material-UI
Back-end	Lambda Functions (NodeJS), Lambda Layers, AWS SQS, S3, Cloudwatch, API Gateway, AWS CloudWatch Logs
Front-end	AWS Cognito, AWS CloudFront
Database	Aurora PostgreSQL 12.8
Mainframe	JCL, Mainframe(DB2)
SAP	S4/HANA

Technical Skillsets Requirements

The target candidate should have the following technical knowledge:
1. AWS Cloud Concepts
2. Understanding the following core AWS services:
   S3
   Lambda
   Aurora Postgresql RDS
   CloudWatch
   API Gateway
   Secrets Manager
   AWS CloudFront
   SQS
3. Ability to read and write SQL queries, functions, and stored procedures
4. Ability to read and write NodeJS programming language
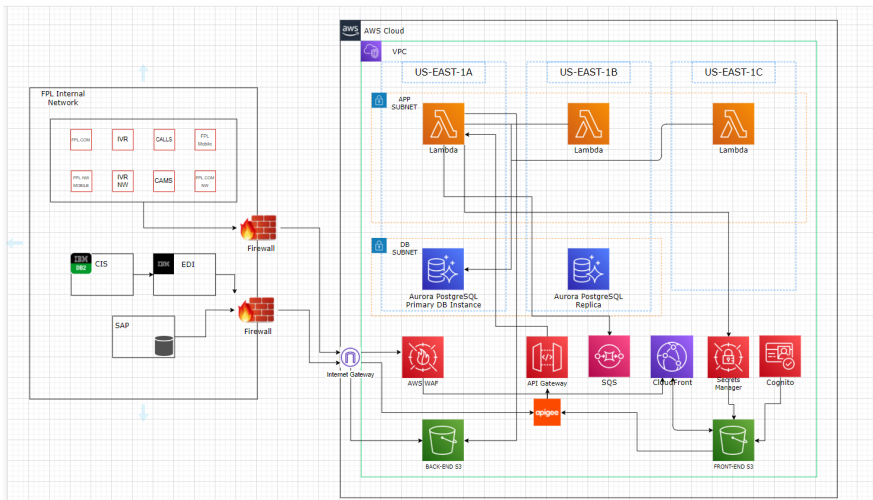
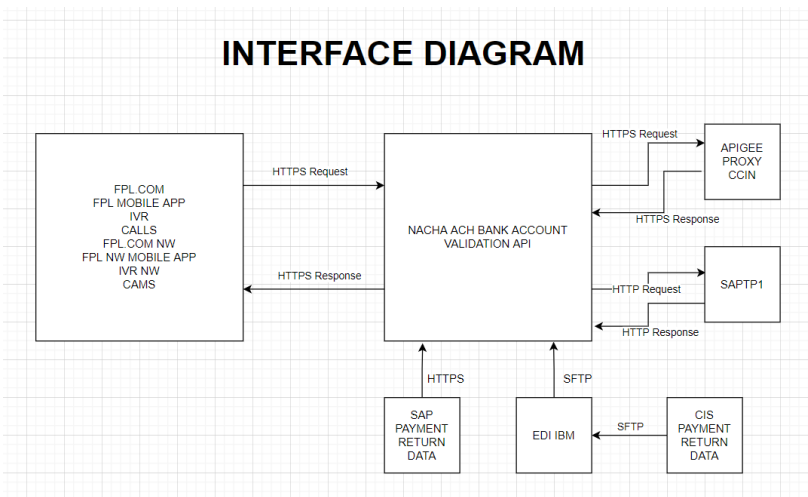# Architecture Diagrams

Architecture: ZM815_GUI_AWS_Arch.drawio
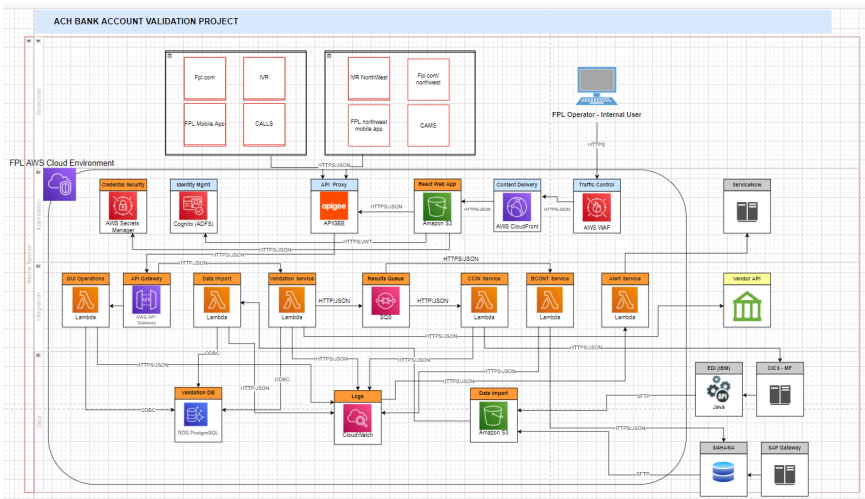
Cloud Architecture Diagram

AZ Architecture: ZM815_AWS_AZ.drawio

Interface Diagram

Error Handling Mechanism Document

Error Handling Mechanism.docx

DataModel

DataModel: zm815_Model_Diagram_Page.drawio
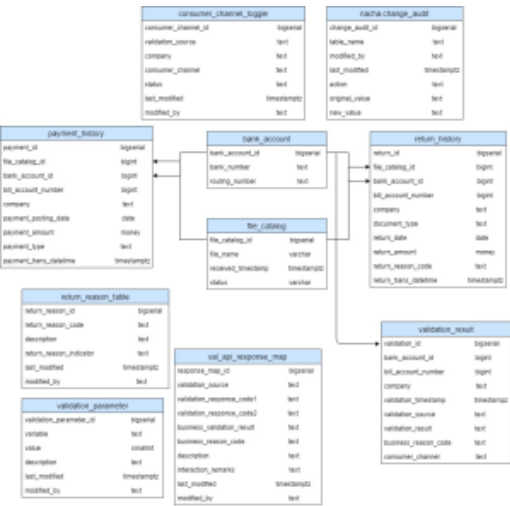
Application Runbook

Process Flow - ProcessFlow.drawio

A. DAILY SCHEDULED BATCH PROCESSES

TASK	LAMBDA FUNCTION	TIME
SAP PAYMENT FILE	2fpv-zm815-nacha-PaymentItemInsert-LF	0:30
SAP RETURN FILE	2fpv-zm815-nacha-ReturnItemInsert-LF	1:00
CIS PAYMENT FILE	2fpv-zm815-nacha-PaymentItemInsert-LF	7:00
CIS RETURN FILE	2fpv-zm815-nacha-ReturnItemInsert-LF	7:15
HISTORICAL PURGE	2fpv-zm815-nacha-HistoricalPurge-LF	23:00
RECORD PURGE	2fpv-zm815-nacha-RecordPurge-LF	23:30

B. ACH BANK ACCOUNT VALIDATION TRANSACTION

ACH BANK ACCOUNT VALIDATION TRANSACTION

ACH Bank Account Validation: Consumer Channel by Hour - 2022-12-07
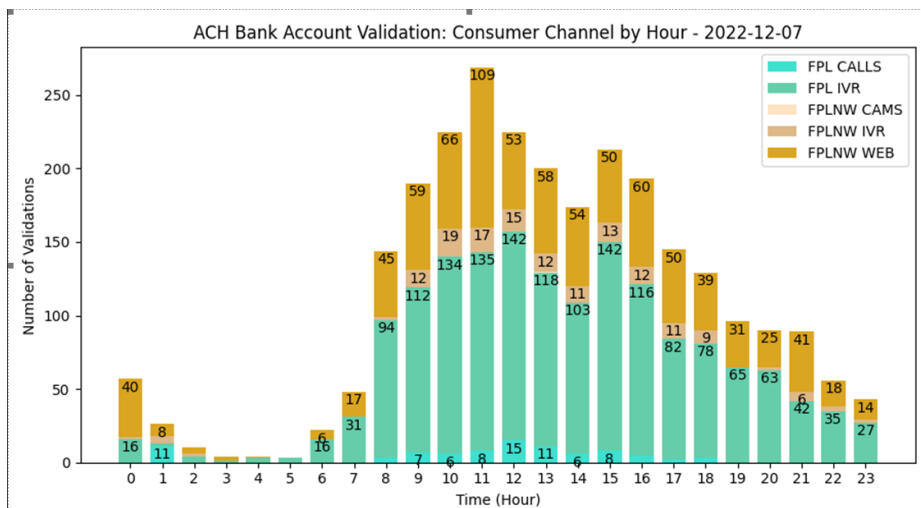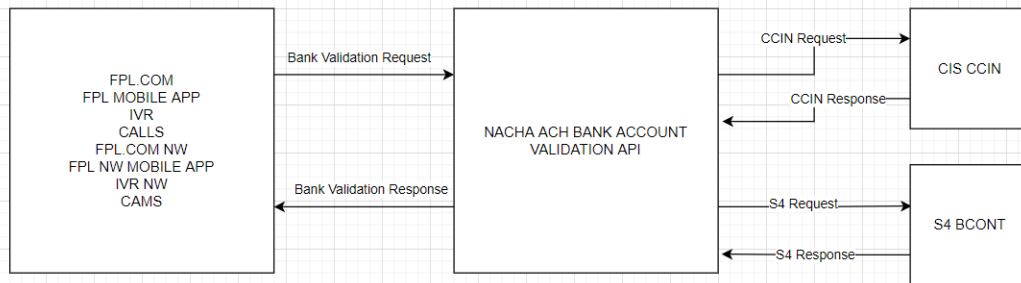
C. ADMIN PORTAL WEB APPLICATION

ADMIN PORTAL WEB APPLICATION
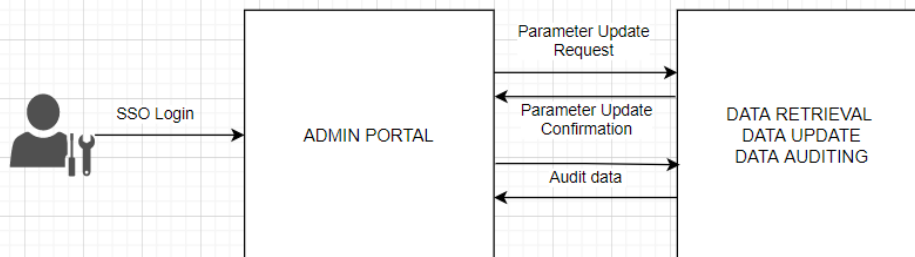
Mainframe Technical Components

Component	Name	Description

Transaction	KJ27	Mainframe REST Web Service triggered from Non Cash Deposit Portal to retrieve Information for corresponding Account number and SSN provided in Portal for Surety Bond contract
Program	CUMWS027	Mainframe REST Web Service Program to retrieve data from CIS tables and send to Portal
Generic ID	ZZZ1NDT (Test) ZZZ0NDP (Prod)	Generic ID to trigger Mainframe transaction KJ27, Password to Generic ID are stored in APIGEE PROXY API : Product For NonCashDeposit service is **CSNonCashDeposit**
Web Service End Point		Test-https://sc01.fpl.com:6012/fpl/cics/cis2cs/CISJSNonCashDeposit QA- https://sc01.fpl.com:6014/fpl/cics/cis2cr/CISJSNonCashDeposit PROD - https://sg01.fpl.com:3056/fpl/cics/cis2prod/CISJSNonCashDeposit

Mainframe Transition to Support

Application Support Transition_KJ27(Non cash Deposit Portal Web Service).doc

Web/Cloud Transition to Support

zm815_support_issues.docx

FMEA, RACI and Check list

FMEA ACH Bank Account Validation API.xlsx

NACHA Compliance RACI.xlsx

New Application Support checklist v1.0.xlsx

GitHub Repository

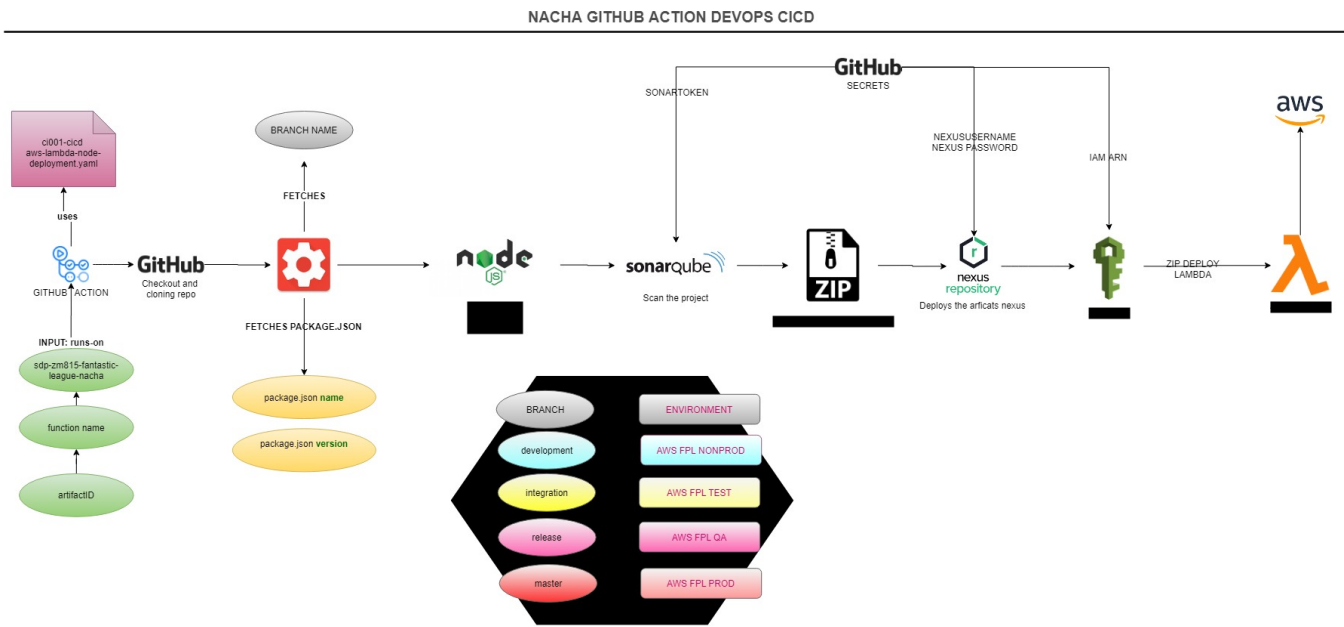| NAME	REPOSITORY
Validation Lambda Function	https://github.com/NextEraEnergy/zm815-nacha-bank-account-validation
Return Item Insert	https://github.com/NextEraEnergy/zm815-ReturnItemInsert-LF
Payment Item Insert	https://github.com/NextEraEnergy/zm815-PaymentItemInsert-LF
CCIN	https://github.com/NextEraEnergy/zm815-CCIN-LF
BCONT	https://github.com/NextEraEnergy/zm815-BCONT-LF
E-Mail Alert	https://github.com/NextEraEnergy/zm815-EmailAlert-LF
Database Layer	https://github.com/NextEraEnergy/zm815-Database-Layer
Cloud Watch alarm Layer	https://github.com/NextEraEnergy/zm815-CloudWatchAlarm-Layer
E-mail Layer	https://github.com/NextEraEnergy/zm815-Mail-Layer
Utils Layer	https://github.com/NextEraEnergy/zm815-Utils-Layer
Lambda Layer Version	https://github.com/NextEraEnergy/zm815-LambdaLayerVersions
Validation APIGEE	https://github.com/NextEraEnergy/ag876-APG-NACHA-Validation-API
Cloud formation template	https://github.com/NextEraEnergy/zm815-NACHA-CFT
Record Purge	https://github.com/NextEraEnergy/zm815-RecordPurge-LF
Historical Purge	https://github.com/NextEraEnergy/zm815-HistoricalPurge-LF
Admin GUI	https://github.com/NextEraEnergy/zm815-Admin-GUI

Table Record Get	https://github.com/NextEraEnergy/zm815-TableRecordGet-LF
Table Record Post	https://github.com/NextEraEnergy/zm815-TableRecordPost-LF

GitHub Branch Information

Branch Name	Mapped Environment
Feature	Development (No deployment to any environment)
Integration	Test (Deploys to AWS-FPLTest)
Release	QA (Deploys to AWS-FPLQA)
Master	Production (Deploys to AWS-FPLProd)

GitHub Actions Pipeline Architectural Diagram

Distribution List

Environment	Distribution List	Process
PROD Support DL	DL-CSIT-NACHA-API-SUPPORT@nexteraenergy.com	Used by the mainframe daily load processes to notify users on the number of daily extracted records and also used by the Tivoli alert system and by the lambda notification service.

Local Development Workspace Setup

[zm815_workspace_setup.docx](#)

AWS Lambda Details

[Nacha_Lambda_Details.xlsx](#)

AWS S3 Details

Development	Test	QA	Production
Back-end Bucket: 2fnv-zm815-nacha-s3	Back-end Bucket: 2ftv-zm815-nacha-s3	Back-end Bucket: 2fqv-zm815-nacha-s3	Back-end Bucket: 2fpv-zm815-nacha-s3
UI Bucket: 2fnv-zm815-nacha-ui-s3	UI Bucket: 2ftv-zm815-nacha-ui-s3	UI Bucket: 2fqv-zm815-nacha-ui-s3	UI Bucket: 2fpv-zm815-nacha-ui-s3
EnterpriseProd Bucket: 2epv-zm815-nacha-fplnonprod-s3	EnterpriseProd Bucket: 2epv-zm815-nacha-fpltest-s3	EnterpriseProd Bucket: 2epv-zm815-nacha-fplqa-s3	EnterpriseProd Bucket: 2epv-zm815-nacha-fplprod-s3

[List of S3 file paths](#)

AD GROUP AND DOMAIN

Items	DEV	TEST	QA	PROD
AD Group Name	**AD Group:** AWS-DEV-ZM815-NACHA-ADMIN **Approver:** Izzy Leon, JC Vazquez	**AD Group:** AWS-TEST-ZM815-NACHA-ADMIN **Approver:** Izzy Leon, JC Vazquez	**AD Group:** AWS-QA-ZM815-NACHA-ADMIN **Approver:** Izzy Leon, JC Vazquez	**AD Group:** AWS-PROD-ZM815-NACHA-ADMIN **Approver:** Izzy Leon, JC Vazquez
Developer Role	**Default Role:** DevOps Role	**Default Role:** DevOps Role	**AD Group:** AWS-FPLQA-NC-Developer **Approver:** Nicolas Zerrate	**AD Group:** AWS-FPLProd-NC-Developer **Approver:** Nicolas Zerrate
Alternate Domain	https://nacha-fpldev.fpl.com/	https://nacha-fpltest.fpl.com/	https://nacha-fplqa.fpl.com/	https://nacha-fplprod.fpl.com/
CloudFront Domain	https://d36dgz1lvyvh53.cloudfront.net/	https://d2qa2isjotcwet.cloudfront.net/	https://d11q1tb8ynvtds.cloudfront.net/	https://d20ibieuto9y8a.cloudfront.net/

Add user to AD Group = [SNOW Add User to AD Group](#)

AWS AURORA POSTGRES DATABASE

Item	DEV	TEST	QA	PROD
Database URL	Writer: aws-fnv-zm815-nachadb-cluster-1272a4733d87-rds.cluster-c4ucntsmqjsv.us-east-1.rds.amazonaws.com Reader: aws-fnv-zm815-nachadb-cluster-1272a4733d87-rds.cluster-ro-c4ucntsmqjsv.us-east-1.rds.amazonaws.com	Writer: aws-ftv-zm815-nachadb-cluster-1254603aac27-rds.cluster-cq5nryu9qrxd.us-east-1.rds.amazonaws.com Reader: aws-ftv-zm815-nachadb-cluster-1254603aac27-rds.cluster-ro-cq5nryu9qrxd.us-east-1.rds.amazonaws.com	Writer: aws-fqv-zm815-nachadb-cluster-0e7689609ebf-rds.cluster-clfn2h31qwxn.us-east-1.rds.amazonaws.com Reader: aws-fqv-zm815-nachadb-cluster-0e7689609ebf-rds.cluster-ro-clfn2h31qwxn.us-east-1.rds.amazonaws.com	Writer: aws-fpv-zm815-nachadb-cluster-0a844c99b7f7-rds.cluster-cgqep0gwcrlg.us-east-1.rds.amazonaws.com Reader: aws-fpv-zm815-nachadb-cluster-0a844c99b7f7-rds.cluster-ro-cgqep0gwcrlg.us-east-1.rds.amazonaws.com
Database Schema	nachadbd	nachadbt	nachadbq	nachadbp
AD Group (Local Access)	AWS_FPL_NACHA_DB	AWS_FPL_NACHA_DB	AWS_FPL_NACHA_DB	AWS_FPL_NACHA_DB
Roles	nacha_dml_role nacha_select_role nacha_all_privs_role	nacha_dml_role nacha_select_role nacha_all_privs_role	nacha_dml_role nacha_select_role nacha_all_privs_role	nacha_dml_role nacha_select_role nacha_all_privs_role
Credentials in AWS Secrets Manager	2fnv-zm815-nacha-RDS-Secret	2ftv-zm815-nacha-RDS-Secret	2fqv-zm815-nacha-RDS-Secret	2fpv-zm815-nacha-RDS-Secret

APIGEE Proxy Endpoints

Generic ID to login to APIGEE Marketplace: zzz0zm815

ENVIRONMENT	INTERNAL PROXY
DEV	https://api-it-dev-aws.fpl.com/it_nacha_validation/validation
TEST	https://api-test-aws.fpl.com/it_nacha_validation/validation
QA	https://api-qa-aws.fpl.com/it_nacha_validation/validation
PRODUCTION	https://api-aws.fpl.com/it_nacha_validation/validation

SLA Tier

For ACHA Bank Account Validation severity 3 ticket will be opened.

Priority Level	Customer Impact	Service Response to the Customer Service	Resolution Time	Response Escalation (Need to update)	Feedback
3	Important – One or several customers impacted	Initial communication to the customer within 2 hours. (Mon-Fri, 8:00a – 5:00p)	0 – 24 hours. (Mon – Fri, 8:00a – 5:00p)	Immediate notification to Support Technician. Escalation to Support Technician's Escalation Level 1 at 1 hour 45 minutes. Escalation to Support Technician's Level 2 at 2 hours.	MS Outlook email and phone call upon response & resolution.

Number of users: Peak Time 20 users; On Average 10 users

Hours of operation: 5:00 A.M to 9:00 P.M. (Mon-Fri)

Peak Time: 7 A.M. – 3 P.M.

Maintenance window

The Maintenance window for **RDS aws-fpv-zm815-nachadb-cluster-0a844c99b7f7-rds** is at **sat:07:00-sat:07:30 UTC (GMT)** .

The Maintenance window for **Service Now** is on **Sunday 1 AM - 3AM EST**.

NEECode	ZM815	Status	Implementing	
Application name	NACHA Compliance	Operational status	Operational	
Short name		Application scoring profile	NEE Business Application Profile	ⓘ
Business process	🔍	✱ Application category	Legal, Regulatory and Compliance 🔍	ⓘ
✱ Application type	Homegrown	Application family	🔍	
✱ Architecture type	Web Based	User base	0-49	
Install type	Cloud	Active user count		
Platform	AWS	Last change applied date	🗓	
Business unit	CUST SERV BU 🔍 ⓘ	Disaster recovery plan	☐	
Start date	🗓	Patch Schedule	🔍	
Cloud migration strategy	-- None --	Maintenance schedule	Sunday 1am-3am 🔍 ⓘ	
✱ Pace layering class	Systems of Record	Application deployment type	Manual	
Regulatory implications	🔒 SOX	User location	🔒	
			Florida Large Offices (GO/Juno/JW/LFO)	

Application ranking (MC, BUI, or Other)

Mission Critical - Tier 1

No Disaster Recovery - High Availability on Cloud

Estimated level of support = 24/7

nacha_application_ranking.eml

ServiceNow Details

Product = Application

Configuration Item = NACHA Compliance

AppCode = ZM815

Performance and load test scripts and results. Assumptions and profile

Mainframe Testing -

NACHA Main Frame Test Suites

Entity Key	Summary	Linked Test Cases
CIC-TS-3013	Database Purge Process (QA)	3
CIC-TS-3012	Database Purge Process (Test)	3
CIC-TS-2847	Validate CCIN Error Handling with Error Codes from Web Service (QA)	1
CIC-TS-2846	Validate CCIN Error Handling with Error Codes from Web Service (Test)	1
CIC-TS-2809	Fix for CCIN is captured on Bill Accounts with leading zero's	1

CIC-TS-2805	Validate Extract MF Files are deleted	1
CIC-TS-2804	Validate allow empty file for NACHA Extracts Loads	1
CIC-TS-2802	NACHA API Error Handling Enhancements Test/QA	10
CIC-TS-2799	Validate MF Fix Payments Extract MF file is create with ABP without Duplicates CS/CR	1
CIC-TS-2756	CCIN API Key Secret Creation/ UAT/ Implementation	1
CIC-TS-2691	NACHA API UAT	30
CIC-TS-2690	NACHA API Setup QA	20
CIC-TS-2660	Extract of the Daily Payment History - Validations (CR)	5
CIC-TS-2659	Extract of the Daily Return Items - Validations (CR)	5
CIC-TS-2658	Validate Historical Payments and Historical Returns Extracts MF files are created (CR)	8
CIC-TS-2658	Validate Historical Payments and Historical Returns Extracts MF files are created (CR)	8
CIC-TS-2657	Validate Historical Payments and Historical Returns Extracts MF files are created	8
CIC-TS-2656	Validate CCIN Type NACHA API Bank Account Validation for API Response	5
CIC-TS-2655	Extract of the Daily Return Items - Validations (CS)	5
CIC-TS-2654	Extract of the Daily Payment History - Validations (CS)	5

System Test/UAT/Regression -

NACHA FPL Legacy and FPLNW SIT/UAT/Regression Test Suites

Data Warehouse

Entity Key	Summary	Linked Test Cases
CIC-TC-18031	Validate File Layout for table other than RRD_AFT_BANK_INFO_CRYPT and RTRN_ITEM_FACT	1
CIC-TC-18030	Validate Encrypt Bank account at-rest output data info for NO_BANK_ACCT/ CHK_ACCT_NUM No NPI Access Role (COM)	1
CIC-TC-18029	Validate Encrypt Bank account at-rest output data info for NO_BANK_ACCT/ CHK_ACCT_NUM No NPI Access Role (Res)	1
CIC-TC-18028	Validate Encrypt Bank Account number at-rest output data info NO_BANK_ACCT/ CHK_ACCT_NUM NPI Access Role (COM)	1
CIC-TC-18027	Validate Encrypt Bank Account at-rest output data info NO_BANK_ACCT/ CHK_ACCT_NUM with NPI Access Role (RES)	1
CIC-TC-18026	Validate record count for Output data info for customers in RRD_AFT_BANK_INFO_CRYPT and RTRN_ITEM_FACT table	1
CIC-TC-18025	Validate file layout input data info for cusomers	1

Documentum Test Cases

Entity Key	Summary	Linked Test Cases
CIC-TC-18020	Validate Encrypt Bank Acct Info at rest for FPLNW customer enroll update in ABP on FPLdotcom User with No NPI Role Access Assigned	1
CIC-TC-18019	Validate Encrypt Bank Acct for FPLNW customer update user with NPI Role access to ABP Application stored in Documentum	1
CIC-TC-18018	Validate Encrypt Bank Acct info FPLNW customer enroll user with No NPI Role access to ABP Application stored in Documentum	1

CIC-TC-18017	Validate user with No NPI Role access to ABP Application stored in Documentum	1
CIC-TC-18016	Validate Encrypt Bank Acct Info at rest for FPL customer update ABP on FPL.com User with NPI Role Access Assigned	1
CIC-TC-18015	Validate Encrypt Bank Acct Info at rest for FPL customer enroll in ABP on FPL.com User with NPI Role Access Assigned	1
CIC-TC-18014	Validate Record Count for ABP Application Agreements stored in Documentum	1

API Components for Bank Account Validations Test Suites

Entity Key	Summary	Linked Test Cases
CIC-TS-3013	Database Purge Process (QA)	3
CIC-TS-3012	Database Purge Process (Test)	3
CIC-TS-2847	Validate CCIN Error Handling with Error Codes from Web Service (QA)	1
CIC-TS-2846	Validate CCIN Error Handling with Error Codes from Web Service (Test)	1
CIC-TS-2809	Fix for CCIN is captured on Bill Accounts with leading zero's	1
CIC-TS-2806	Validate Fix for BCONT remarks functionality	1
CIC-TS-2805	Validate Extract MF Files are deleted	1
CIC-TS-2804	Validate allow empty file for NACHA Extracts Loads	1
CIC-TS-2802	NACHA API Error Handling Enhancements Test/QA	10
CIC-TS-2801	API Performance Testing Jmeter	3
CIC-TS-2800	API Extracts Load Performance Enhancement	3
CIC-TS-2799	Validate MF Fix Payments Extract MF file is create with ABP without Duplicates CS/CR	1
CIC-TS-2756	CCIN API Key Secret Creation/ UAT/ Implementation	1
CIC-TS-2691	NACHA API UAT	30
CIC-TS-2690	NACHA API Setup QA	20
CIC-TS-2660	Extract of the Daily Payment History - Validations (CR)	5
CIC-TS-2659	Extract of the Daily Return Items - Validations (CR)	5
CIC-TS-2658	Validate Historical Payments and Historical Returns Extracts MF files are created (CR)	8
CIC-TS-2658	Validate Historical Payments and Historical Returns Extracts MF files are created (CR)	8
CIC-TS-2657	Validate Historical Payments and Historical Returns Extracts MF files are created	8
CIC-TS-2656	Validate CCIN Type NACHA API Bank Account Validation for API Response	5
CIC-TS-2655	Extract of the Daily Return Items - Validations (CS)	5
CIC-TS-2654	Extract of the Daily Payment History - Validations (CS)	5

IVR Test Suites

Entity Key	Summary	Linked Test Cases
CIC-TS-2668	FPL IVR PaybyPh English Speech	12
CIC-TS-2667	FPL IVR ABP Upd English DTMF	12
CIC-TS-2666	FPL IVR ABP Upd English Speech	12
CIC-TS-2665	FPL IVR PaybyPh English DTMF	12

CIC-TS-2664	FPL IVR ABP Update DTMF/Speech (Spanish)	13
CIC-TS-2663	FPL IVR Pay by Phone DTMF/Speech (Spanish)	13
CIC-TS-2670	FPLNW IVR PaybyPh English DTMF	2
CIC-TS-2669	FPLNW IVR PaybyPh English Speech	2

CALLS Test Suites

Entity Key	Summary	Linked Test Cases
CIC-TS-3021	Bank Account number ABP Enroll/Update for customer API Unresponsive Error Handling Email generated	1
CIC-TS-2850	UAT Bank Acct API Validation CALLS ABP RITS 2nd API Key	4
CIC-TS-2849	Bank Acct API Validation CALLS ABP RITS 2nd API Key (QA)	2
CIC-TS-2848	Bank Acct API Validation CALLS ABP RITS 2nd API Key (Test)	3
CIC-TS-2817	Bank Account number ABP Enroll/Update for customer BA with/without leading zeros - Second API Key	6
CIC-TS-2653	CALLS ABP Maintenance RITS Enroll Update Changes (CR)	20
CIC-TS-2652	CALLS ABP Maintenance RITS Enroll Update Changes (CS)	19

FPL.com Legacy, FPLNW and FPL MobileApp Test Suites

Entity Key	Summary	Linked Test Cases
CIC-TS-3056	FPLdotcom POL Error Handling UAT	8
CIC-TS-3031	FPLNW MobileApp - Pay Online Enroll/ Update - UAT Android/ IOS	14
CIC-TS-3019	FPLNW FPLdotcom POL Error Handling UAT	1
CIC-TS-3018	FPLdotcom POL Error Handling UAT	8
CIC-TS-3015	FPL Legacy MobileApp POL UAT -Android/ IOS	14
CIC-TS-3014	FPLdotcom UAT(1)	27
CIC-TS-2820	FPL FPLdotcom Webtest	36
CIC-TS-2819	FPLNW FPLdotcom - WebQA	35
CIC-TS-2818	FPLNW FPLdotcom - Webtest	35

Performance test JMeter Script - S01_Nacha_API.jmx

Performance test results: Re_ Nacha - Performance testing update.eml

Nacha IT Validation API												
Environment: Test **Date:** July 22, 2022			**Server Details: Test :** db.r5.large | 2 vCPU | 16 GB RAM **PROD :** db.r5.xlarge | 4vCPU | 32 GB RAM									
Test #	**Test Time**	**Label**	**# Samples**	**Average Response Time (in Seconds)**	**90% Response Time (in Seconds)**	**Min Response Time (in Seconds)**	**Max Response Time (in Seconds)**	**Error %**	**Throughput**	**Received KB/sec**	**Sent KB/sec**	**Errors Observed**
1	09:55 AM EST	100 Users 1 second	100	1.08	1.39	348	2.36	0.00%	30.44	16.83	14.51	NA
2	09:57 AM EST	500 Users 1 second	500	1.79	3.11	389	5.65	0.00%	64.14	35.45	30.57	NA
3	10:01 AM EST	500 Users 60 seconds	16724	1.64	5.62	3	6.71	83.65%	255.08	136.33	118.81	Errors #1
4	10:13 AM EST	500 Users 15 seconds	4722	2.10	6.64	113	17.61	69.67%	152.13	76.53	72.5	Errors #2
5	10:33 AM EST	50 Users 15 seconds	787	0.99	1.46	282	7.63	0.00%	47.84	26.45	22.8	NA
6	10:42 AM EST	100 Users 15 seconds	436	8.43	29.12	886	29.26	22.25%	9.91	5.32	4.72	Errors #3
	Errors #1	Response code:**502** Response message:**Bad Gateway** {"message": "Internal server error"}			**Errors #2**	Response code:**500** Response message:**Internal Server Error** {"message": "Internal server error"}			**Errors #3**	Response code:**504** Response message:**Gateway Timeout** {"message": "Endpoint request timed out"}		

Storm processes and procedures

(Need to Check)

This is not a storm application.

Alert status checklist 1, 2 and 3

n/a

Application coverage for storm

n/a

DR documentation for MC and BUI application

n/a

DR testing checklists and results

n/a

Contact list

Name	Roles / Organizations
Rene Villa	CS Director Billing and Payments Sponsor
Mike Mesa	CS BPO Manager
Anabelle Cardelles	CS BPO Manager
Rajendra Irri	IT Technology Director
Rohit Ravindranath	IT Agile Leader
Jonathan Foster	IT Master Architect
Silvia Cuadra	IT Scrum Master
Izzy Leon	CS BPO Product Owner
JC Vazquez	CS BPO SME
Jonathan Foster	IT Master Architect
Magen Fahie	IT Business Analyst
Nicolas Zerrate	IT Architect/JAVA TL/Developer
Anand Avadutha	IT AWS Infra Developer
Rudragoud Patil	IT AWS Lambda Developer
Vyshnavi Kalle	IT AWS Lambda Developer
Errol Gamory	IT MF Architect
Prakash Aswathi	IT Mainframe Tech Lead
Balakrishna Nandala	IT Mainframe Developer
Kalyani Isukapalli	IT Mainframe Developer
Vivian Torres	CS Customer Experience Specialist-BPO
Kristen Saumell	Marketing and Communication
Cecil Worley	CICD Pipeline Team

Muhammed Mugla	CICD Pipeline Team
Kenny Alvarez	CICD Pipeline Team
Sathiyapriya Krishnachalam	EDI IBM Developer

ITSC & Tier 2 support

	Onsite	Offshore
Primary	Zerrate Nicolas until (12/31/2022)	

Storm processes and procedures (Storm Manager)

N/A

NACHA ADMIN Portal Application Flow
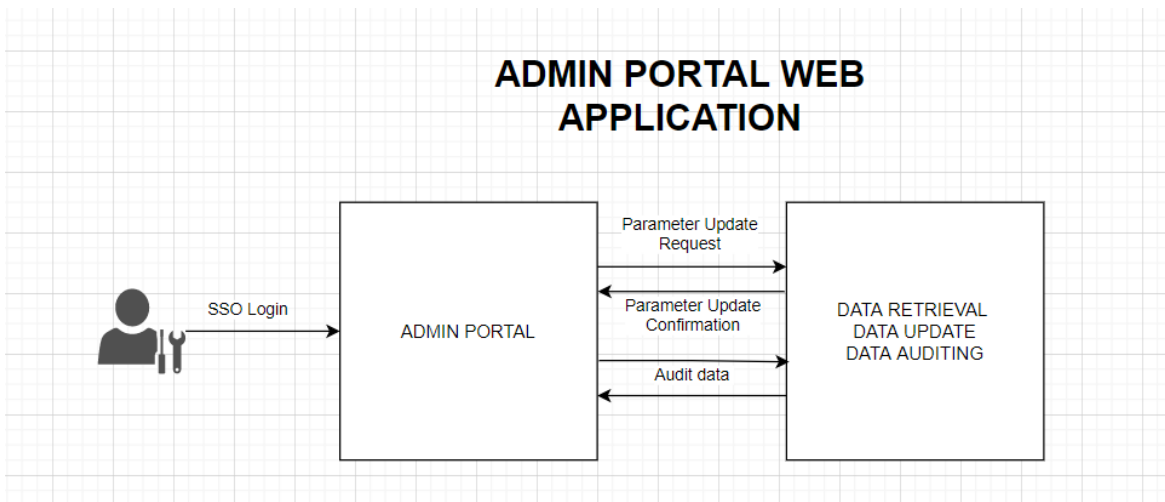
zm815_Application_Flow.docx

Purge Process

zm815_data_purge_document.docx

List of incidents (1 year back from 12/07/22)

ZM815-SNOW-Incidents.txt