



WynePay Deployment Update

PI-20 OSS Community Meeting

Zanzibar, Tanzania

26 Oct 2022

Thynn Win, Aung Thaw Aye

ThitsaWorks

ThitsaWorks provides financial technology solutions for Microfinance Institutions to collect, manage and analyze data needed to run effective operations and to manage risks.

Our team



Our Mission... Powering financial inclusion!



MYANMAR

ThitsaWorks Solutions Myanmar Co., Ltd.
No. 28 (A), Kyauk Kone Street, Room#701
Sky View Tower, Yankin Township, Yangon 11081

SINGAPORE

ThitsaWorks Pte. Ltd.
160 Robinson Road, #14-04
Singapore Business Federation Centre
Singapore 068914

WynePay Phases



Closed User Group
Some controlled users

FUT

CUG

LIVE

Live
Everyone

Friendly User Testing
Employees of MFIs



Agenda

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Deploying Hub Environments

Design Decisions and Lessons Learned

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Empowering DFSPs

Self-hosted Payment Manager for Mojaloop (PM4ML)

03

Making WynePay more inclusive

Payment Portal for MFI



Deploying Hub Environments

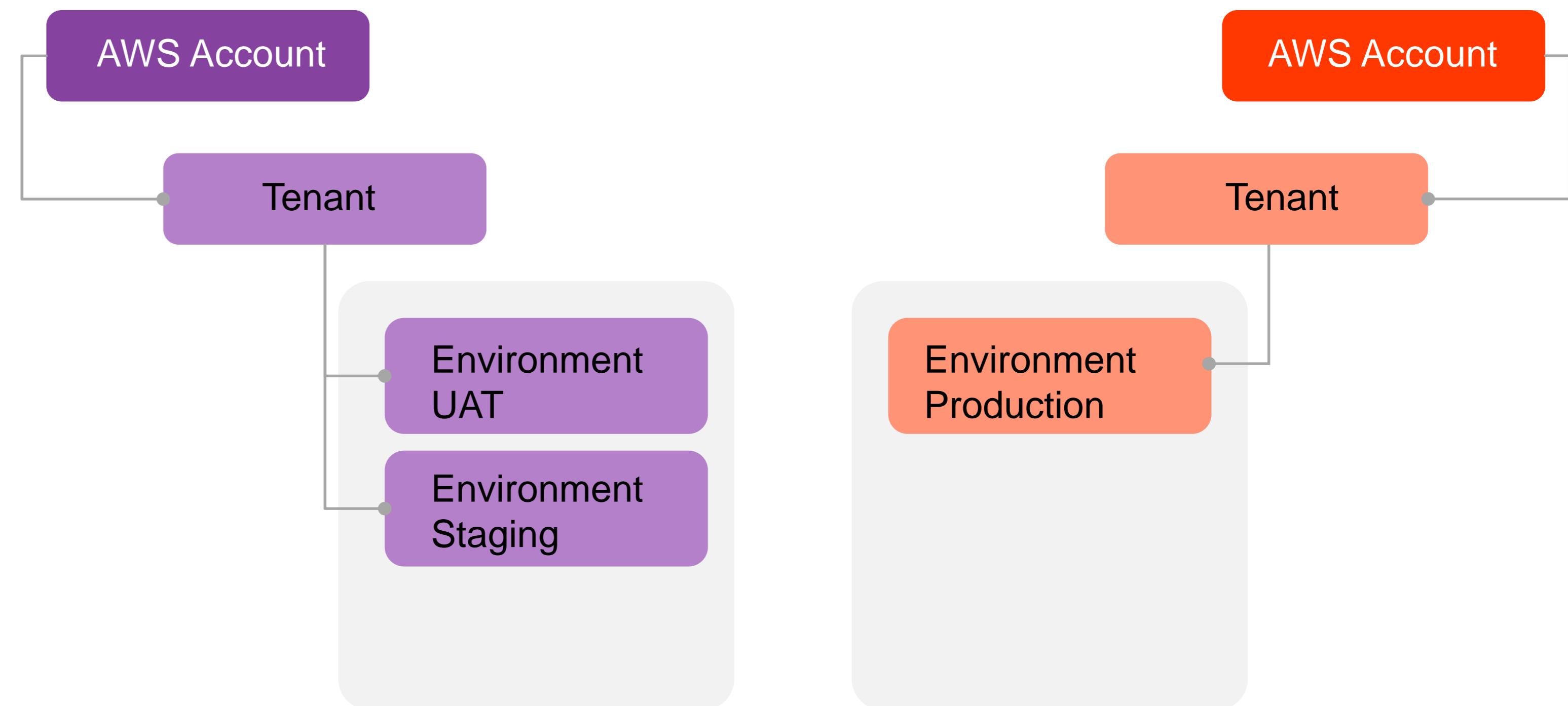
Design Decisions and Lessons Learned

Deploying Hub Envs from scratch

Plan



Use separate AWS account for each HUB environment.



Deploying Hub Envs from scratch

Plan



Setup a domain name with Route53 public hosted zone

Prepare SOPs and Runbooks

Disable unattended-upgrades to avoid random reboot, after deploying Tenant/HUB/PM4ML

Configure EBS's size to be 500GB and share 100 GB of it to Loki log storage.

Update log retention to 90days for Production Environment.
(default is 72 hr)

Verify with checklists.

Verify with /parties and /quote API calls after onboarding is done.

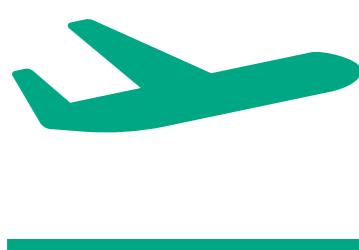
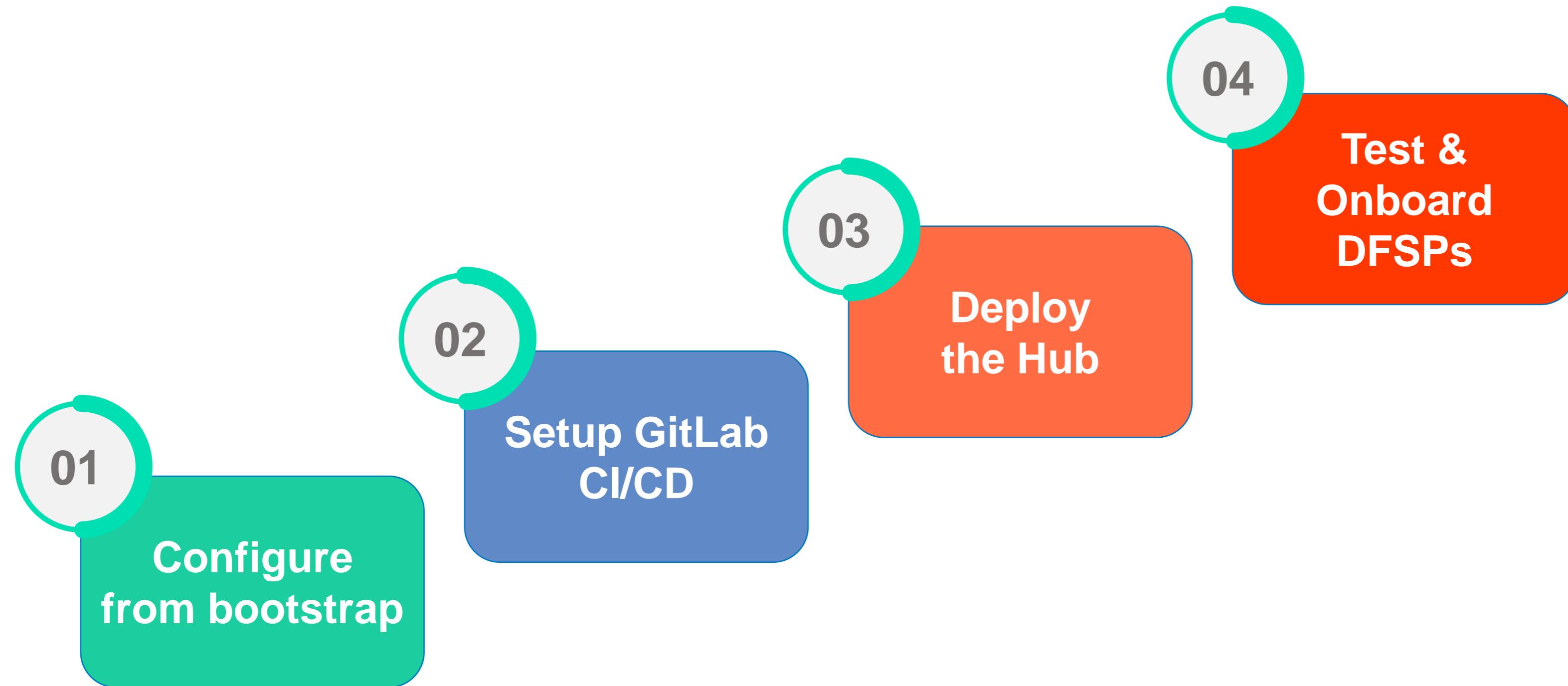
Not to onboard internal PM4ML in Prod.

Deploying Hub Envs from scratch

Execution



Launch a Hub environment in 2 days.





Deploying Hub envs from scratch

Lessons Learned

Docker hub rate limit issue:

We couldn't build two envs (UAT and Stg) on the same day because Docker Hub has a rate limit of 100 pulls per 6hrs per IP address.

Default AWS EIP limitation:

Only 5 EIPs by default, and requested for 20 EIPs

PM4ML scalability issue:

Current IaC supports ONE master node and unable to support for HA.

Internal PM4ML installation required:

Even though we don't require internal PM4ML for Prod, we needed to build the internal PM4ML.



Empowering DFSPs

Self-hosting Payment Manager for Mojaloop (PM4ML)

Empowering DFSPs to host PM4MLs

New DFSPs



PM4ML self-hosted by
MoMoney



PM4ML hosted by
ThitsaWorks

Empowering DFSPs to host PM4MLs

Steps



What Thitsaworks supported

- Created documentation to guide building of the PM4ML instance
- Provided PM4ML IaC template to build in their AWS account
- Organized hands-on training regarding PM4ML configurations and setup
- Provided technical support regarding connectivity
- Provided Payment Manager training

What MoMoney did

- Built PM4ML in their own AWS account
- Connected with PM4ML and their biller (CBS)
- Integrated WynePay public API endpoint in their wallet



Making WynePay more inclusive

Payment Portal for MFIs



Making WynePay more inclusive

Use Case Summary

MFIs using legacy systems with no access to interoperable platforms want to disburse loans to their borrowers or make payroll payments to staff with a variety of wallets.

Challenges

MFIs have to prepare different excel sheets per wallet/bank and upload them at the corresponding sites and track these with different support and monitoring services.

1. Time consuming & inefficient – negotiating different agreements, pricing, prepping different templates each time
2. Reconciling transactions is a nightmare
3. Tracking payment is unwieldy

80% of MFIs in Myanmar fall into one of the three categories:

1. No Core Banking System
2. Core Banking System with no API capability
3. Core Banking System with API capability but no IT capacity to build and maintain an integration



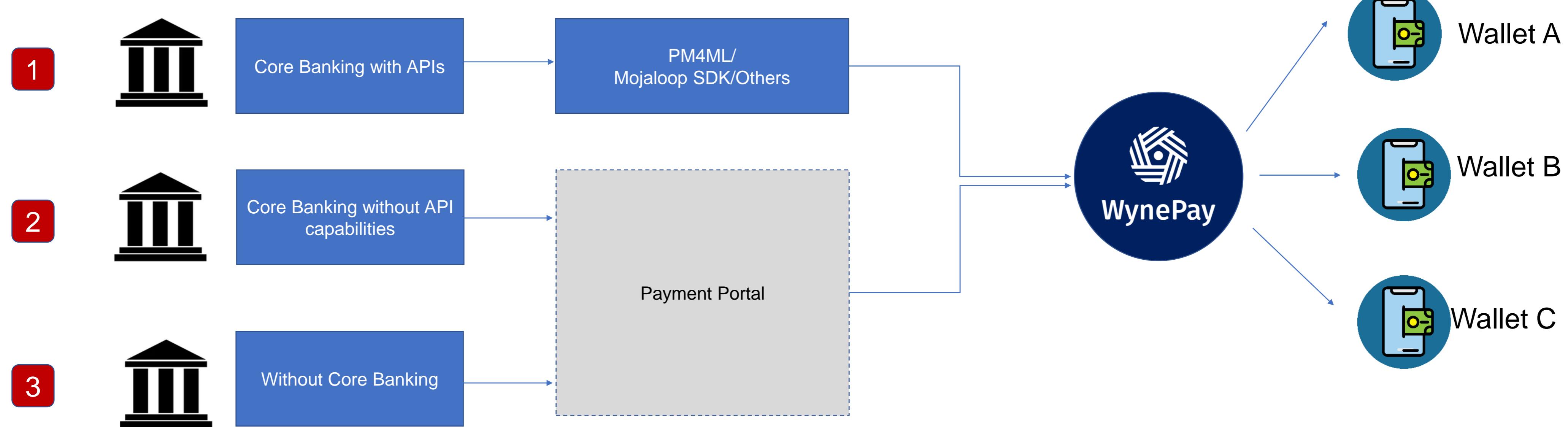
Making WynePay more inclusive



Solution

MFIs access **Payment Portal** and make disbursements or payrolls to anyone using WynePay participants by uploading csv files. Learn to prepare one template and track and monitor all the payments (across multiple DFSPs) securely through this role-based portal. The portal provides a simple unified experience with virtually no wait time for building integration or system upgrades.

Different type of MFIs



Create the roles with granular access



The screenshot illustrates the process of creating a user with granular access rights. On the left, the THITSA PAY application interface shows a sidebar with "USERS" and "BRANCHES" sections. The main area displays a form for creating a new user named "Kyaw". A prominent blue button labeled "Grant the privilege" is overlaid on the form. A red arrow points from this button to the right-hand modal window, which is titled "Ingyin Acc_Manager". This modal lists various actions with checkboxes, many of which are checked, indicating the赋予 (granting) of those specific permissions to the user.

THITSA PAY

USERS

- Search Users
- Add New User
- QRCode Requests

BRANCHES

- Search Branches
- Add New Branch

Give Feedback

Grant the privilege

First Name * Kyaw

Middle Name Middle Name YANGON - INSEIN - Branch 1

Last Name * Kyaw Username * kyawkyaw@gmail.com

Full Name Kyaw Kyaw Password *

Phone * 09 Confirm Password *

Job Title Job Title Is Active? * YES

Email * kyawkyaw@gmail.com

This user is for an account manager.
Only 2 account manager allowed

*Password must be at least 8 chars with at least 1 upper case, 1 number and 1 special char.

Add Permission Copy Permission

Ingyin Acc_Manager

Branch * Select All
YANGON - INSEIN - Branch 1 YANGON - HLEGU - Branch 3

Actions *

- Make Payment
- Delete Payment
- Make Payroll
- Make Loan Disbursement
- Make Loan Repayment
- Approve Payment
- Reject Payment
- Download Payment
- View Payroll
- View Loan Disbursement
- View Loan Repayment

Save

Upload CSV and view the process result



The screenshot shows the THITSA PAY application interface for Bulk Payment. On the left, a sidebar has "TRANSFER" and "SEARCH" sections with "Bulk Payment" and "Batch" options. A "Give Feedback" button is also present. The main area shows a form for bulk payment setup, including dropdowns for Payment Type, Payment Channel, From FSP, and To FSP, and buttons for "Choose...", "Browse", and "Upload". Above this form is a blue callout bubble with the text "Upload CSV file for Bulk Payment". To the right of the form is a sidebar with "Ingyin maker" and sections for "Instructions", "Reference files", and "Template" (with options for "Payroll" and "Disbursement"). Below the form is a table showing the results of the upload. The table has columns: Batch ID, Name, Created By, Created Time, Payment Type, Status, Total, Success, Failed, and Action. Two rows are shown: one for "20OctTestFsp-okdollar disbursement.csv" and another for "Test2ITKTestFsp-". A red box highlights the table, and a red arrow points from the "Action" column of the first row to a blue callout bubble with the text "The result of the process".

Batch ID	Name	Created By	Created Time	Payment Type	Status	Total	Success	Failed	Action	
ac14b253	20OctTestFsp-okdollar disbursement.csv	Ingyin maker	Oct/20/2022 11:23:22 AM	Disbursement	Processed	2	2	0		
8fd0e364	Test2ITKTestFsp-	Ingyin maker	Oct/20/2022 10:32:15	Disbursement	Processed	2	2	0		

Manage the tasks



THITSA PAY

TRANSFER

- Task
- Batch Action History

SEARCH

- Batch
- Transaction

Give Feedback

The screenshot shows a list of payment batches in a table format. The columns are: Batch ID, Name, Created By, Created Time, Payment Type, Status, and three numerical columns (likely amount, count, and another amount). The first five rows are highlighted with a red border. A tooltip box appears over the fifth row, containing the text: "Here, checker can do:

- Approve the payment
- Reject the payment together with rejection reason.

".

Batch ID	Name	Created By	Created Time	Payment Type	Status			
d03bdc40	Disbursement 2.csv	Phyo Testqa2	Jul/28/2022 03:38:47 PM	Disbursement	Pending Approval	8	0	0
979a220f	disbursement.csv	Thiha Zaw User 1	Jul/28/2022 01:41:26 PM	Disbursement	Pending Approval	22	0	0
60a6812a	Disbursement_NRC.csv	Thiha Zaw User 1	Jul/28/2022 01:40:46 PM	Disbursement	Pending Approval	22	0	0
fdfad1ec	NRC Disbursement.csv	Thiha Zaw User 1	Jul/28/2022 01:37:39 PM	Disbursement	Pending Approval	22	0	0
d7ddcaff	Disbursement 2.csv	Thiha Zaw User 1	Jul/28/2022 01:25:16 PM	Disbursement	Pending Approval	1	0	0

Showing 1 to 5 of 9 entries

First Previous 1 2 Next Last

Search the transactions



THITSA PAY

TRANSFER
Task
Batch Action History

SEARCH
Batch
Transaction

Give Feedback

Search function provides various filters to be able to extract the accurate results.

The search results will be displayed as below.

Batch ID	Name	Created By	Created Time	Payment Type	Status	Total	Success	Failed	Action
d2d8c2e9	Disbursement 2.csv	Phyo Testqa2	Jul/27/2022 11:30:17 AM	Disbursement	Rejected	8	0	0	<i>Info</i>
ac14b253	20OctTestFsp-okdollar disbursement.csv	Ingyin maker	Oct/20/2022 11:23:22 AM	Disbursement	Processed	2	2	0	<i>Info</i>
8fd0e364	Test2ITKTestFsp-OKdollar disbursement.csv	Ingyin maker	Oct/20/2022 10:32:15 AM	Disbursement	Processed	2	2	0	<i>Info</i>
7c5738d4	19ITKTestFsp-OKdollar disbursement.csv	Ingyin maker	Oct/20/2022 10:01:30 AM	Disbursement	Processed	2	2	0	<i>Info</i>
e251beb5	Disbursement TestFSP onboard.csv	Thiha Zaw User 1	Oct/19/2022 04:39:25 PM	Disbursement	Processed	3	3	0	<i>Info</i>

Showing 6 to 10 of 62 entries

First Previous 1 2 3 4 5 ... 13 Next Last



Roadmap: DFSP Portal

A Portal for DFSPs to monitor settlement windows and details



Thank you!

ModusBox team

- Michael, Sam, Miguel, Vijay
- Jane, Oscar, David
- Paul Makin, Paul Baker
- and more...

DFSPs

- DFSPs in the FUT
- MoMoney
- CitizenPay

Mojaloop Foundation
Steve Haley

Bill & Melinda Gates Foundation
Miller Abel

