

Increasing Mojaloop Adoption

Mojaloop Convening January 2021

Speakers



Bryan Schneider

Mojaloop Principal SME

ModusBox,

Principal Technologist



David Gethings

Myanmar MFI Digitisation

ModusBox,
Cloud & Network Architect



Murthy Kakarlamudi

Myanmar MFI Digitisation

ModusBox,
Solution Architect



Silvia Hernández

Payment Manager For
Mojaloop

ModusBox,
Product Manager



Mojaloop's Mission

Increase financial inclusion by empowering organizations creating interoperable payments systems to enable digital financial services for all

To achieve this mission

- the cost of running a Hub needs to be reduced to make it an attractive proposition
- there needs to be mass adoption of participation within a Hub



How to increase adoption

Costs can be greatly reduced by supplying tools that enable a DFSP's ongoing participation. These tools should bring operational efficiencies, including a simple to use UX and thus reduced effort to complete tasks.

These tools include having a simple repeatable onboarding process.

Payment Manager solves these problems and has reduced the time for connection with both Mowali and UNCDF. Within the UNCDF project a MFI technically onboarded within a week.

Including smaller DFSPs with a minimal support team and low transaction volumes into a real-time payment network is difficult without creating risk or cost centers. Payment Manager solves this problem with it's slew of operational efficient solutions.



Simplifying the Onboarding Process Participation

IaC simplifies the creation of an environment. IaC turns deployment into a simple repeatable process. This helps reduce complexities often found in onboarding and operation management.

The steps involved are:





Deploy a Lab 1/2

The starting point of any DFSP connecting to the Hub is creating a environment to interact with and validate configuration, backend, changes, etc. Using IaC a secure deployment can be achieved very quickly.

Mojaloop IaC builds the infrastructure to run a production like deployment of Mojaloop in a Cloud environment. It is architected to be cloud agnostic and support on prem, with an initial implementation that works on AWS.

Along with Mojaloop, the IaC deploys API Gateway, Identity management, Monitoring, Altering, Secrets Management, Dependency caching, Simulators and can automatically execute Golden Path tests.





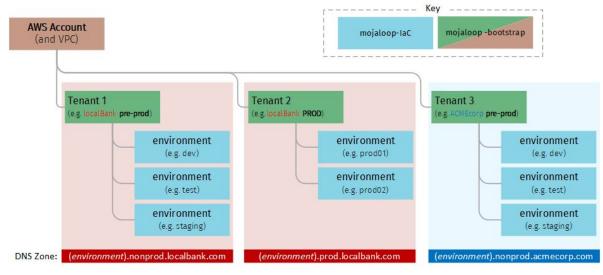








1/2 Deploy a Lab



IaC deployment Link

This model has three objectives:

- Consistent repeatable deployments of Mojaloop and supporting services.
- 2. To have a high degree of reusable code regardless of deployment environment (i.e. Cloud Provider or on prem).
- 3. Flexibility about number and purpose of each environment













Add Simulators

Next we add DFSP simulators to the lab.

This will enable a newly participating DFSP to complete their integration with the Hub much quicker than is currently possible as it provides a network to interact with like in a live environment.

The simulators enable DFSPs to:

- Validate their own integration in a self service way, which speeds up the time to go live.
- Debugging is more efficient as the user friendly Simulators assist integrators / developers in finding and fixing issues as they arise thru the tools provided to check messaging between different parties involved











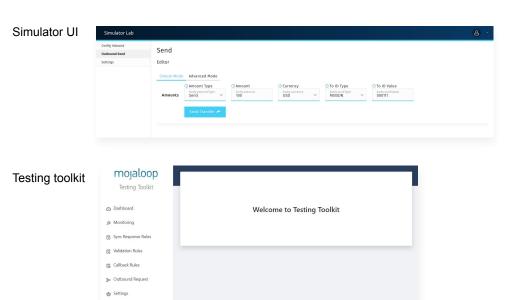


Add Simulators 2/2

There are interfaces options to interact for simulators

App Simulator





API Management











Connect to the Hub

When a DFSP wishes to connect to the Hub the connection wizard simplifies and automates certificate creation and the configuration of the connections required to different environments.

- The wizard uses security best practices, which is vital to give people trust in the system.
- The process is repeatable so brings efficiencies, which in turn means lower upfront costs and quicker to market.











Monitoring & Operations

Supplying tools to enable a DFSP's ongoing Participation

In order to effectively run a business the DFSP needs access to real time data. Payment manager provides tools that brings operational efficiency, improving the user experience and reduce the effort to complete different tasks independently.

These tools:

- Provide real time business & technical insights that enable predictive support and monitoring
- Allow speedy detection of any issues and the ability to identify where actions are needed
- Show a real time view of cash-flow and liquidity







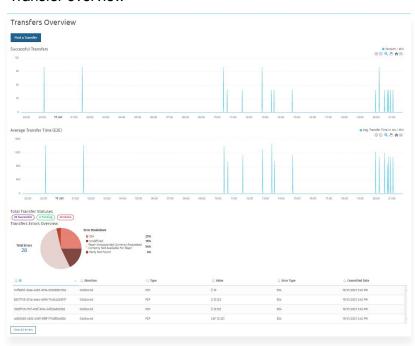






Monitoring - Transfers

Transfer overview



- Overall transfers status
- Error report to identify if there are actions required
- Specific transaction general and technical information









Monitoring - Services

Service Monitoring



- Services monitoring
- Customizable monitoring time
- Prometheus Statistics





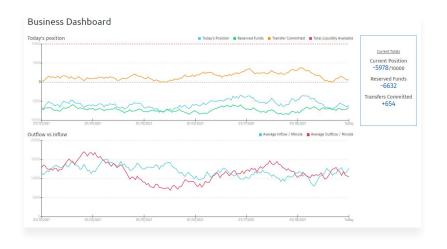






Monitoring - Positions

Business overview (roadmap)



- DFSP Position monitoring
- Flows monitoring from DFSP Perspective



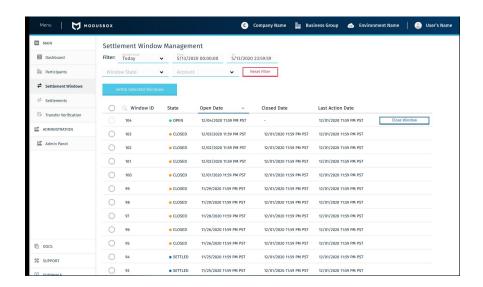






Settlement Pilot UX

Financial Portal provides the Hub an interface to make the settlement a quick and easy process. You are able to close windows at any time and settle one or multiple windows in a single step.











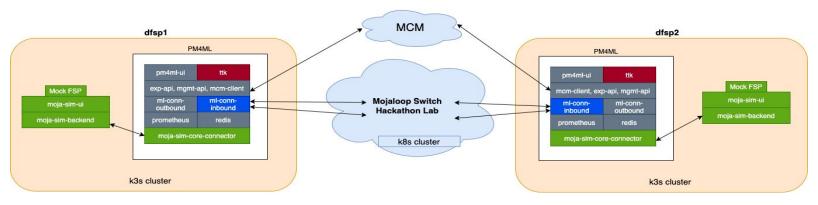
Demo

P2P and Settlement

- 1. End to End Demo
- 2. Transfer Dashboards
- 3. Technical Dashboards
- 4. Settlement Prototype for Financial Portal

PM4ML Connection Wizard

Secure DFSP Onboarding





PM4ML Product Roadmap

Basic inbound Services Technical Dashboards

In Server and Out Server Certificates auto-configuration

User management

Remote Health check

Local testing and validation

Rel 0.2 - Oct 2020

Rel 0.3 - Jan 2021

Rel +1

Rel +2

Mojaloop Connector

Connection Wizard

Transfer Technical Details

Basic outbound Services Technical Dashboards

Business Overview backend

Certificates auto-generation

JWS autoconfiguration



PM4ML Features

| Mojaloop Connector | Integrated SDK and connection components to manage certificates and endpoints to establish a secure communication and exchange this information with the Hub |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Connection Wizard | UX guide to complete the information and files that are needed by the Mojaloop Connector |
| Transaction Overview & Technical Details | Transfer dashboards with general transaction status information and access to technical details for specific transfers |
| Technical Dashboards | Services statistics to provide information about the availability for inbound Lookup, Quotes and Transfer Services from the DFPS point of view |
| TLS Certificates auto-configuration | Automatically configure TLS In Server and Out Server certificates for a secure communication |



Thank you

Bryan Schneider (bryan@modusbox.com)

Murthy Kakarlamudi (murthy@modusbox.com)

David Gethings (<u>david.gethings@modusbox.com</u>)
Silvia Hernandez (<u>silvia.hernandez@modusbox.com</u>)

