



GSMA Interoperability Test Platform

*A joint test environment for Mobile Money API
and Mojaloop*

22 April 2020

BILL & MELINDA
GATES foundation

INCLUSIVE
TECH LAB



OVER ONE BILLION
REGISTERED MOBILE MONEY ACCOUNTS

INDUSTRY FIRST

 **57%**
DIGITAL

Digital transaction values now exceeding cash-in/out values

2019

State of the Industry Report on Mobile Money

Available now



\$1.9bn processed daily

BY THE MOBILE MONEY INDUSTRY

Launch of Mobile Money API Specification v1.1

INCLUSIVE
TECH LAB

GSMA-led industry collaboration aimed at providing a modern harmonised API for mobile money that is easy to **use and secure**



- Enables parties to interact with mobile money accounts.



- Jointly designed by key stakeholders
- Mobile money providers, platform vendors, third party service providers and industry partners



- Aims to:
 - Reduce complexity within the mobile money industry,
 - Limit fragmentation in the mobile money ecosystem



Mobile Money specific scope

- Interoperability
- Merchant payments, online/offline
- Bill payments
- Basic account management
- International transfers
- Bulk transactions
- Cash in/out

Industry feedback

- Adopters' feedback collected on v1.0
- Interaction with operators and platform providers
- Open house industry convening in December 2019

Release 1.1 – dev portal

- Developer guides
- API reference documentation
- Security design & implementation guidelines
- FAQs & glossaries
- Developer tools



INCLUSIVE
TECH LAB

Interoperability Test Platform



Interoperability Test Platform

INCLUSIVE
TECH LAB

A close-up photograph of two hands, one light-skinned and one dark-skinned, shaking hands firmly against a white background.

The joint test environment for
financial inclusion



Mobile Money API

mojaloop

Mojaloop API

What is the Interoperability Test Platform?

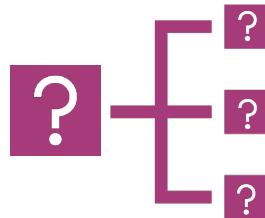
The Interoperability Test Platform is a facility where:

1. **Service providers** can test how to connect to mobile money providers and the wider mobile money ecosystem using the [GSMA Mobile Money API](#)
2. **Mobile money providers / other DFS players** can test how to connect to a central hub (i.e. Mojaloop) and the wider ecosystem using the [Mojaloop API](#)



Why to use the Interoperability Test Platform?

INCLUSIVE
TECH LAB



- Enable the industry players to use 2 **key technologies** for **financial inclusion**
- Support the **Mobile Money** industry to **test interoperability** technologies
- **Facilitate the ecosystem expansion** for financial inclusion

Why we build it?



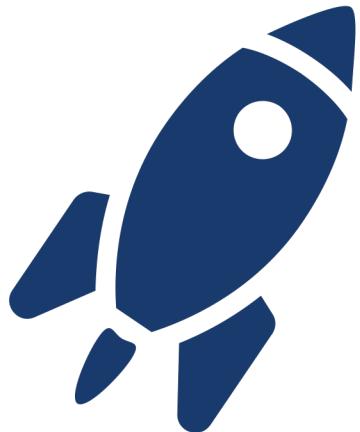
- **Validate** your system connecting with **real life** interoperable ecosystem
- Built **independently** from core **interoperable** software bringing more **trust** to your test results
- **Plug-and-play** setup
- **Free and open source**

Why to use?



Interoperability Test Platform: Beta Release

INCLUDE
TECH LAB



Inclusive Tech Lab
Interoperability Test Platform

Bruno Martins

+ New Session

Test Session all Test Cases Execution: 1 9

Use case flow Test data example https://interop.gsmainclusivetechlab.i...

< Authorized Transaction by Payer FSP

Description

The Service Provider wants to test if he is capable of receiving a transaction from a different wallet provider that he has an account. In this case, we simulate the scenario when the Payer would like to buy goods or services from a Service Provider (the Payee), but each of them uses different wallet providers. This flow shows the necessary steps for this transaction simulating an approved transaction.

Precondition

Service Provider has GSMA Mobile Money API Implemented. Service Provider is

< 849f9675-2461-40ea-98a1-b12bbc7d3540 ✓ 14 Pass

Payer ↔ Service Provider → Step 1 → Mobile Money Operator 1 ↔ Mojaloop ↔ Mobile Money Operator 2

Step 1 POST /transactions

Step 2 POST /transactionRequests

Step 3 POST /transactionRequests

Step 4 PUT /transactionRequests/11...

Step 1 POST /transactions Status: HTTP 202

Pass

Request

PASS Header has the Url Callback

PASS Debit and Credit party is present and is a Valid Party in the network

Early List Access Available!!

Ready for Service Provider Testing

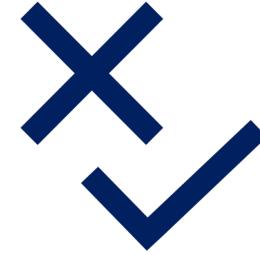
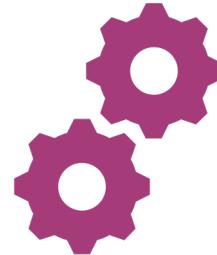
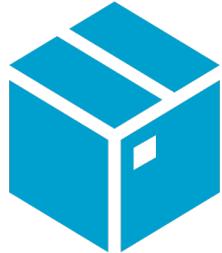
Merchant-Initiated Merchant Payment



Interoperability Test Platform: Beta Release

Under the hood

INCLUSIVE
TECH LAB



What is on the platform?

- Service Provider as SUT
- MMOs as **Simulators**
- Mojaloop as Interop Hub
- Test Platform **Validator**
- **Developer Experience**

How does the test engine work?

- **Driven** by Use Cases and **Test Cases**
- Simulation of **Happy** and **Unhappy** flows

What is validated?

- API Schema
- **Automatic validations** based on specifications
- Behavior Validation
- Defined rules on test case level following **business data**



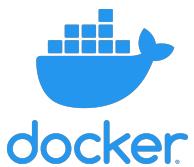
Interoperability Test Platform: Beta Release

Under the hood

INCLUSIVE
TECH LAB



Vue.js



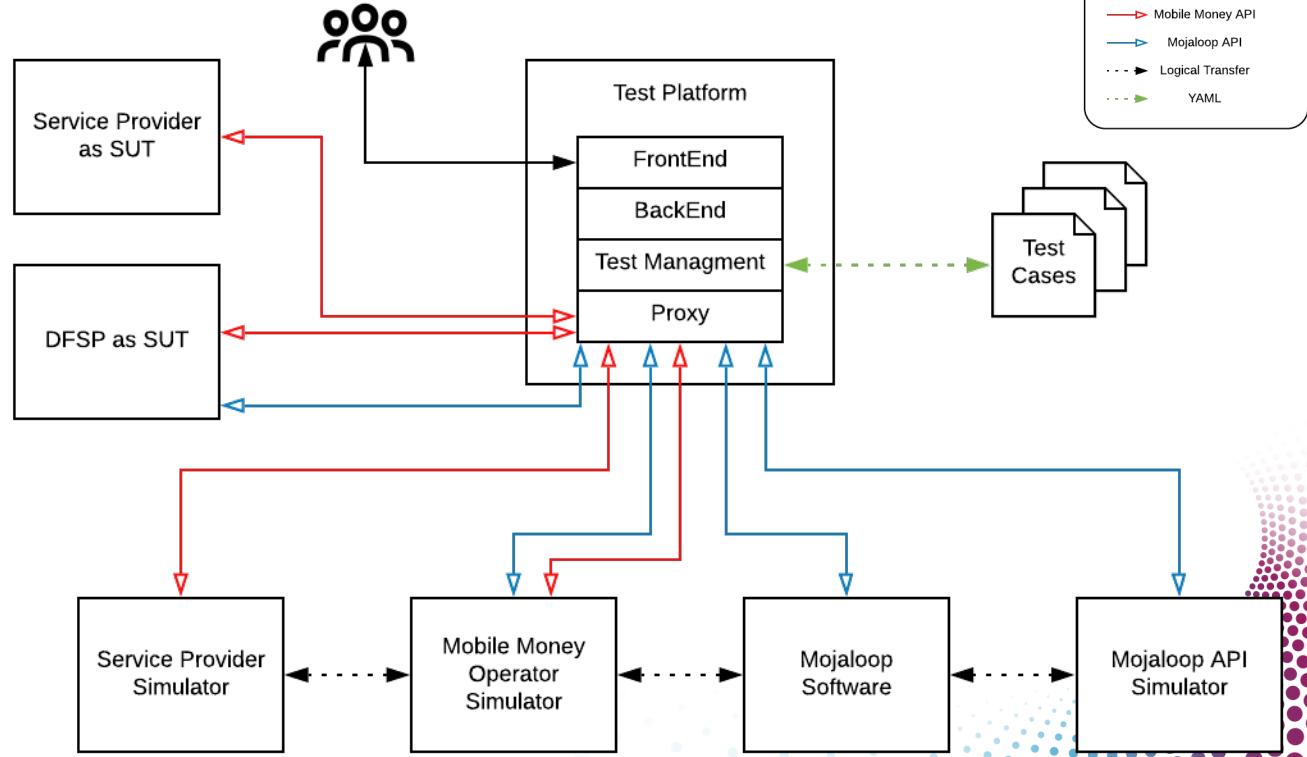
docker



NGINX®



redis





Interoperability Test Platform: Beta Release

Under the hood

INCLUSIVE
TECH LAB



Who can use the platform?

- **Service Provider** as SUT
- People who want to understand the end to end flow in details



What do we support?

- Merchant-Initiated Merchant Payment **Use Case**
- **9 Test Cases** with Happy and Unhappy flows



What do we offer?

- **End-to-end** testing
- **Full flow** visualization
- Message **unpacking** with full details
- **Simple pass/fail** result
- Detailed **error inspection**



Interoperability Test Platform: Roadmap

INCLUSIVE
TECH LAB



Beta Release

March 24

- Ready for Service Provider
- Support for Merchant-Initiated Merchant Payment
- 9 Test Case available
- Test Case Validation



Launch

Q2

- Ready for Mobile Money Operator
- New Use Cases
- Test cases on demand
- Automatic Schema Validation



Industry support

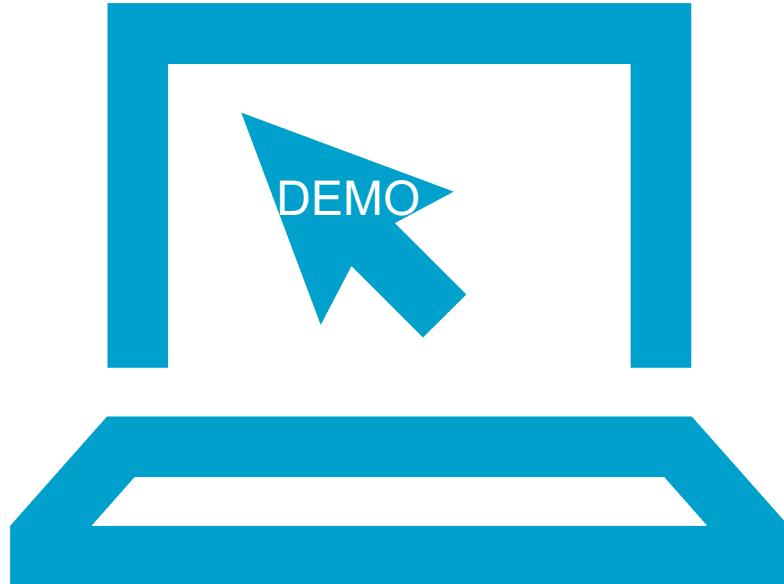
On demand

- Support the Mobile Money industry
- New Use Cases and Test Cases on demand
- Development of new features based on request



Interoperability Test Platform: Demo

INCLUSIVE
TECH LAB





Q&A

Join the Early Access List
GSMA.AT/ITP-EARLY-ACCESS

inclusivetechlab@gsma.com

INCLUSIVE
TECH LAB