mojaloop

PISP

PI 12 - October 2020

JJ Geewax, Lewis Daly, Adrian Hope-Bailie

mojaloop

Overview

1. Background
2. Third-party APIs
3. PI 11 Updates
4. Design Updates
5. Outputs
   a. Account Linking
   b. End to End Transaction
6. Roadmap

Background

Background

According to PSD2: (PSD2 = Payment Services Directive 2 in Europe which defines this role explicitly)

PISP - Payment Initiation Service Provider

PISPs initiate payments from a user's account (on behalf of the user) to a payee account.

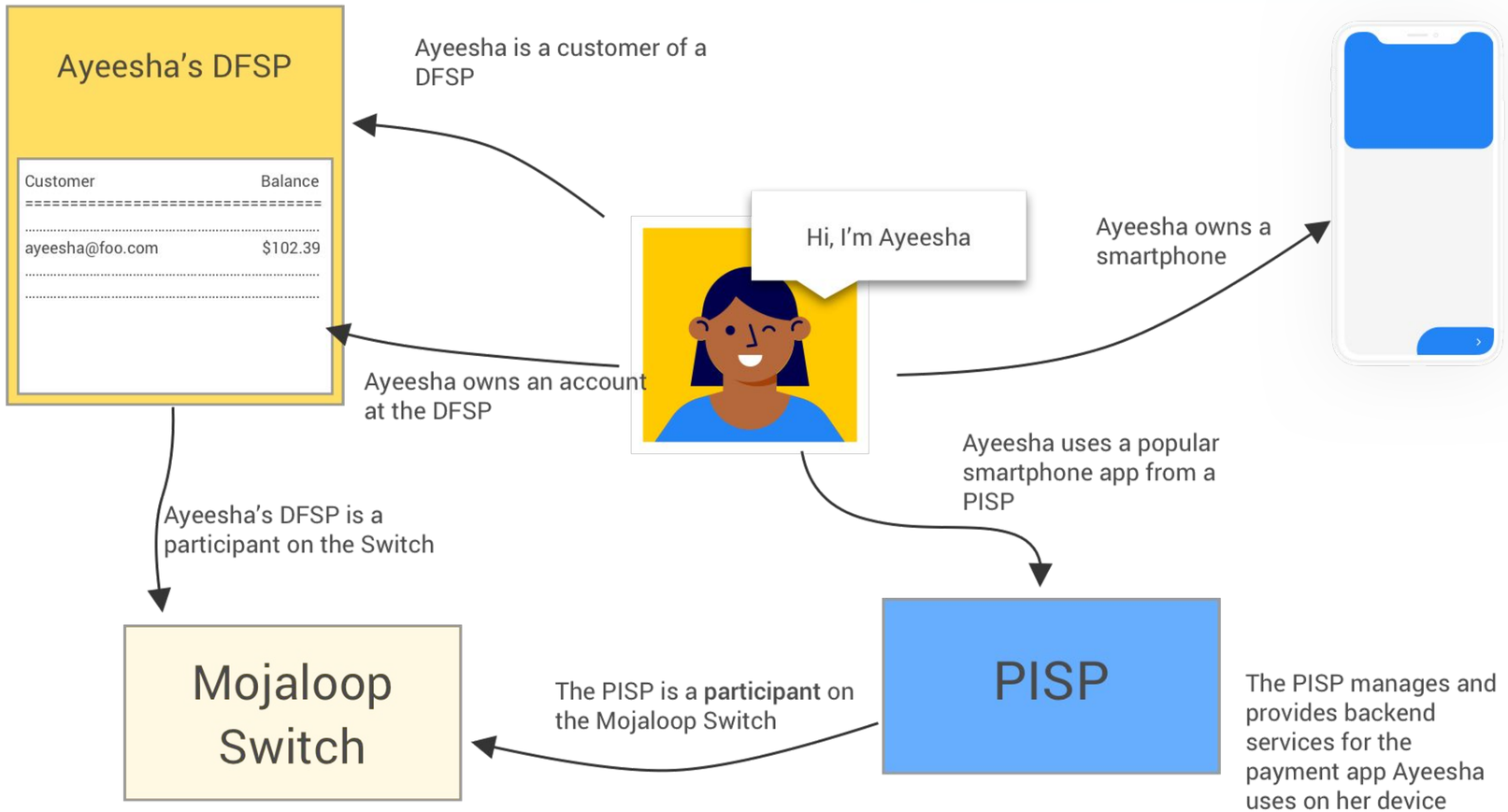
In Mojaloop:

A PISP is a new **participant** role, which:

- Has no liquidity (or settlement) requirements
- Initiates transactions on behalf of users at their DFSP

See the PI9 Presentation for more info.

Background



Original Source: [Mojaloop: 3rd Party Payment Initiation Proposal for Credit Transactions]

Third-party APIs

Third-party APIs

- Extend the functionality of a Mojaloop switch

- Separate API for 3rd-party participants
  - Forming a new “Special Interest Group” within the CCB

- Use cases on the roadmap include:
  - PISP
  - Split Payments (Michael + Moses - Thursday)
  - ATM/POS and Cross-Network (Adrian + Renjith - Thursday)
  - Bill Payments (to be explored…)

Inspired? Have another idea? Let’s discuss in the discourse thread

PI 11 Update

PI11 Objectives

1. End-to-End Transfers Flow at the switch
2. Scheme Adapter + Mojaloop Simulator implementation for E2E Transfers
3. Fully Implemented Auth Service
4. Account Linking flow at Switch
5. Working MojaPay PISP Demo App

PI11 Objectives

1. Enable End To End Transfers Flow at the switch

Completed

2. Scheme Adapter + Mojaloop Simulator implementation for E2E Transfers

Completed

90% complete

4. Account Linking flow at Switch

Completed

5. Working MojaPay PISP Demo App

Completed

PI11 Objectives

1. **End to End Transfers Flow at the switch**

- End to End transfers are working!
- CI/CD pipelines test on every build, against docker-compose environment
- Deployed a small PISP-Lab environment for testing against a live switch

PI11 Objectives

2. Scheme Adapter + Mojaloop Simulator implementation for E2E Transfers

Completed in ‘POC’ status

- PISP side is implemented
- DFSP side needs more work

PI11 Objectives

3. Fully Implemented Auth Service

Remaining work:

- Update API to cater for FIDO Attestation options
- Clarify signing of initial random challenge steps

PI11 Objectives

4. Account Linking Flow at the Switch

Remaining work:

- End to end tests with the TTK to mock out the DFSP side
- Register Consent object with ALS
  - this will allow for calls such as `GET /consents`
- FIDO registration modifications

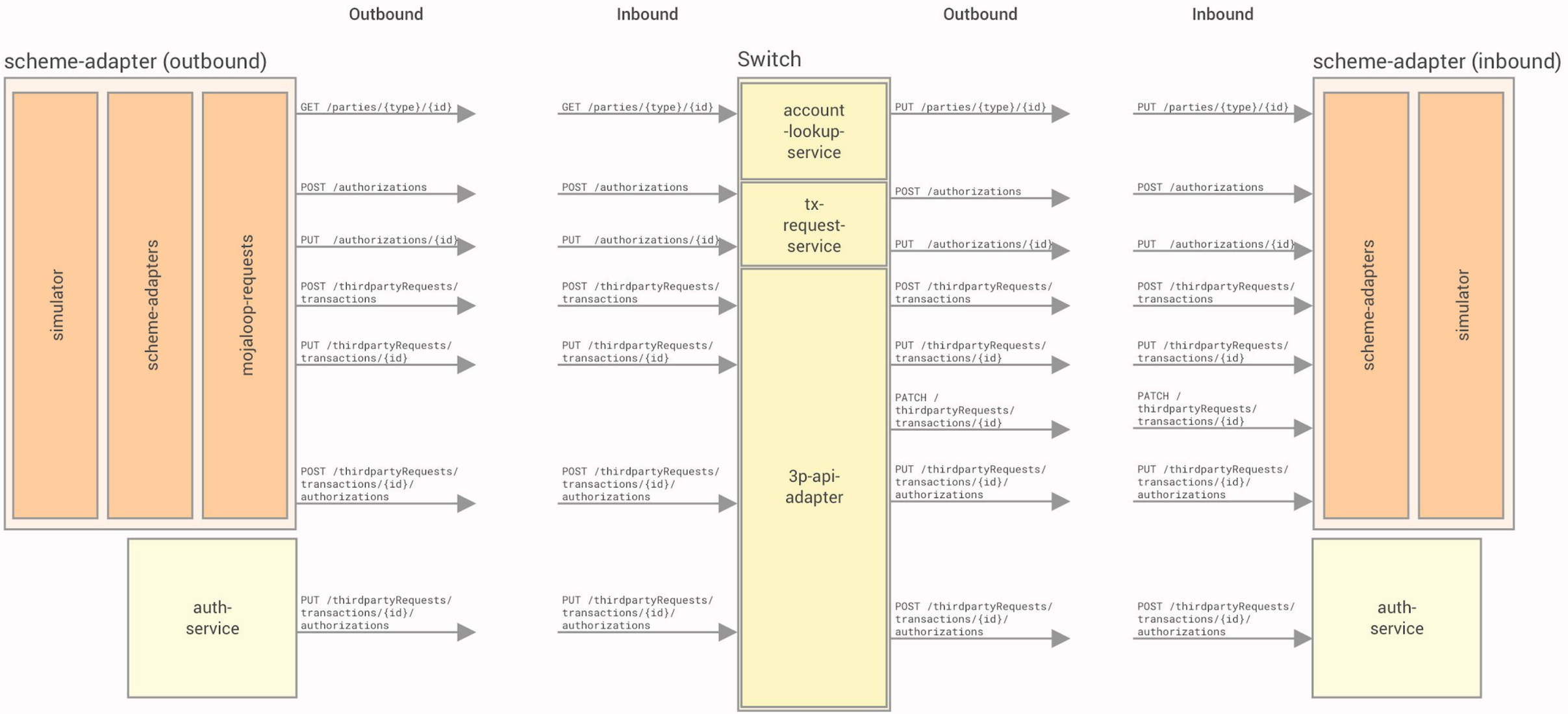
PI11 Objectives

5. Working MojaPay Demo App

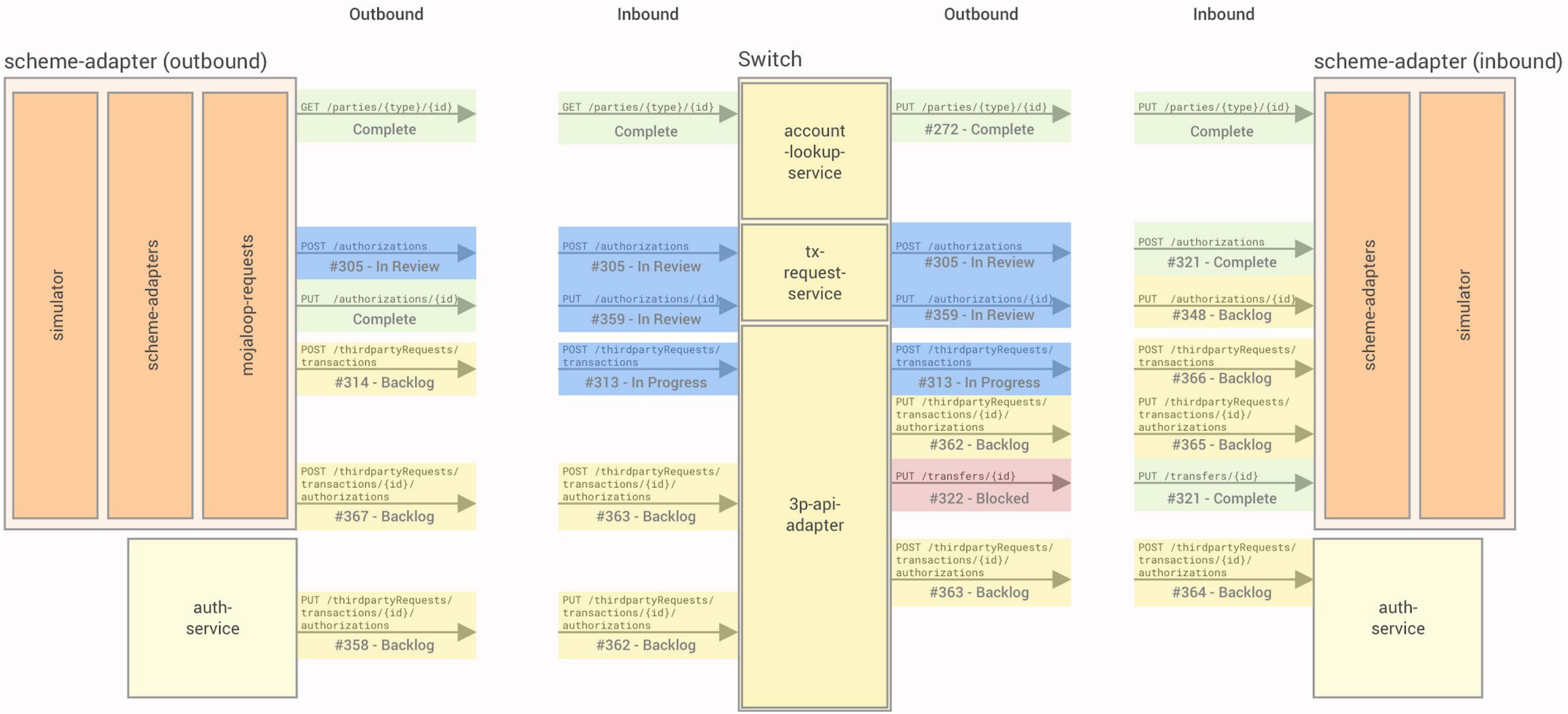
- **Account Linking:** Working with Testing Toolkit
  - mocked out FIDO credential creation

- **Transfers Flow:** Working(ish) with live pisp lab
  - need to finish DFSP scheme adapter implementation

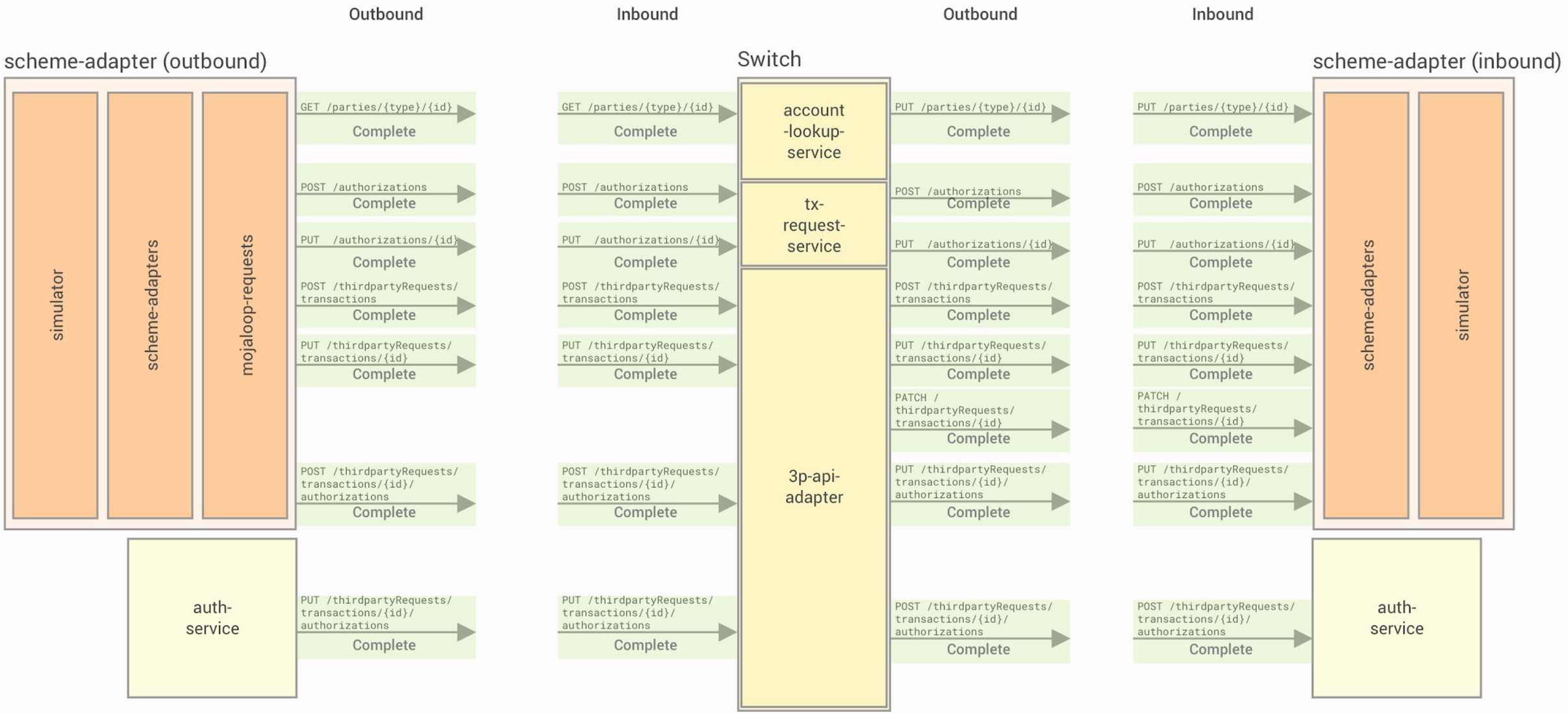
Transfers End To End - Overview



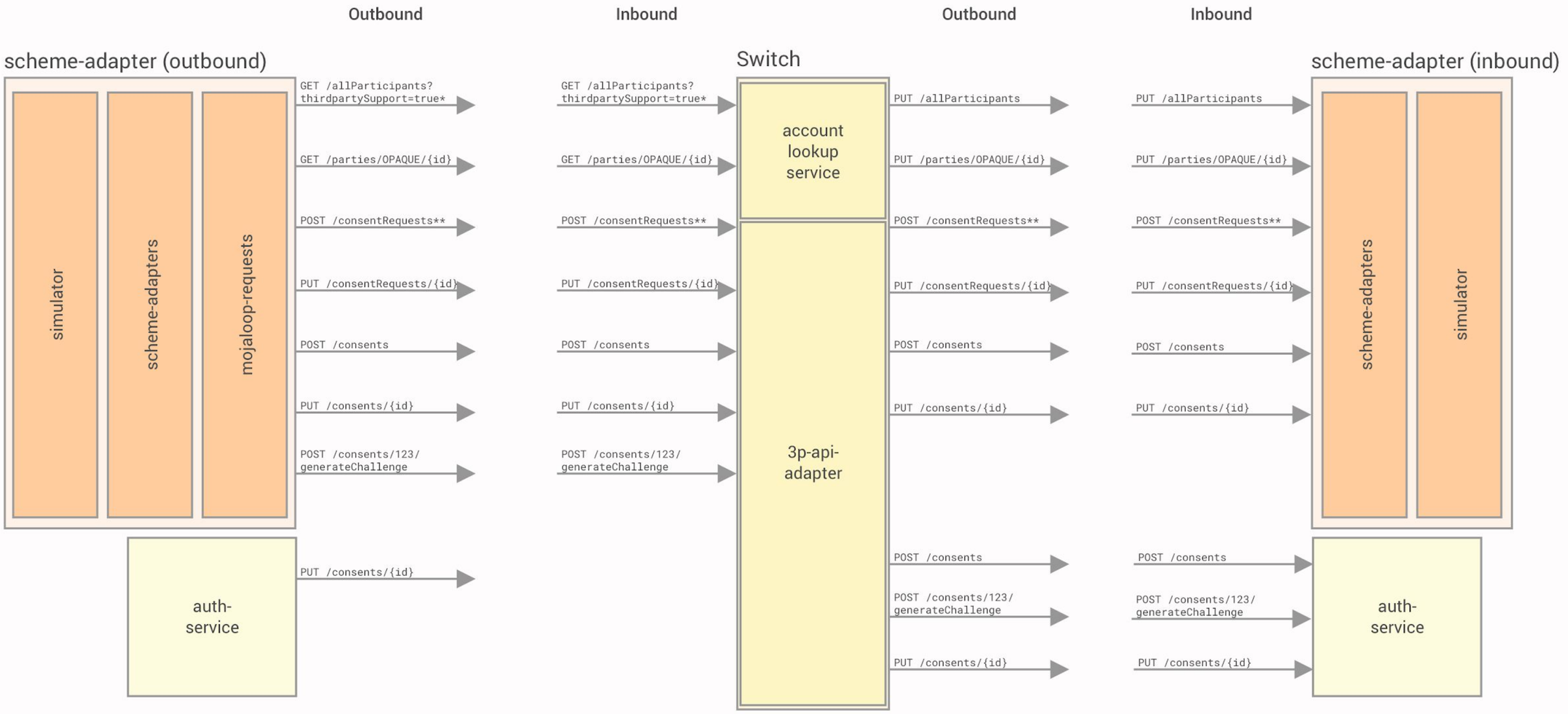
Transfers End To End - End of PI 10



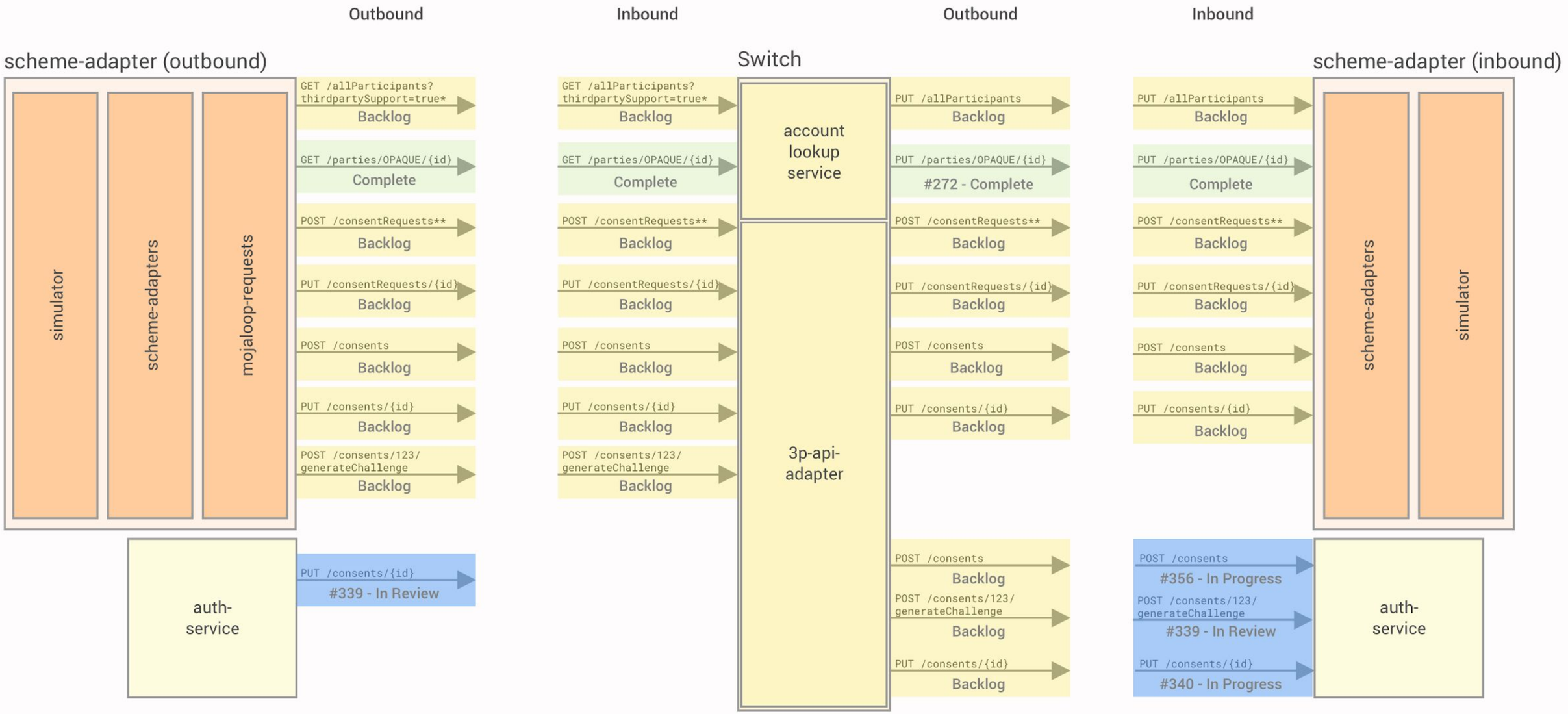
Transfers End To End - Today



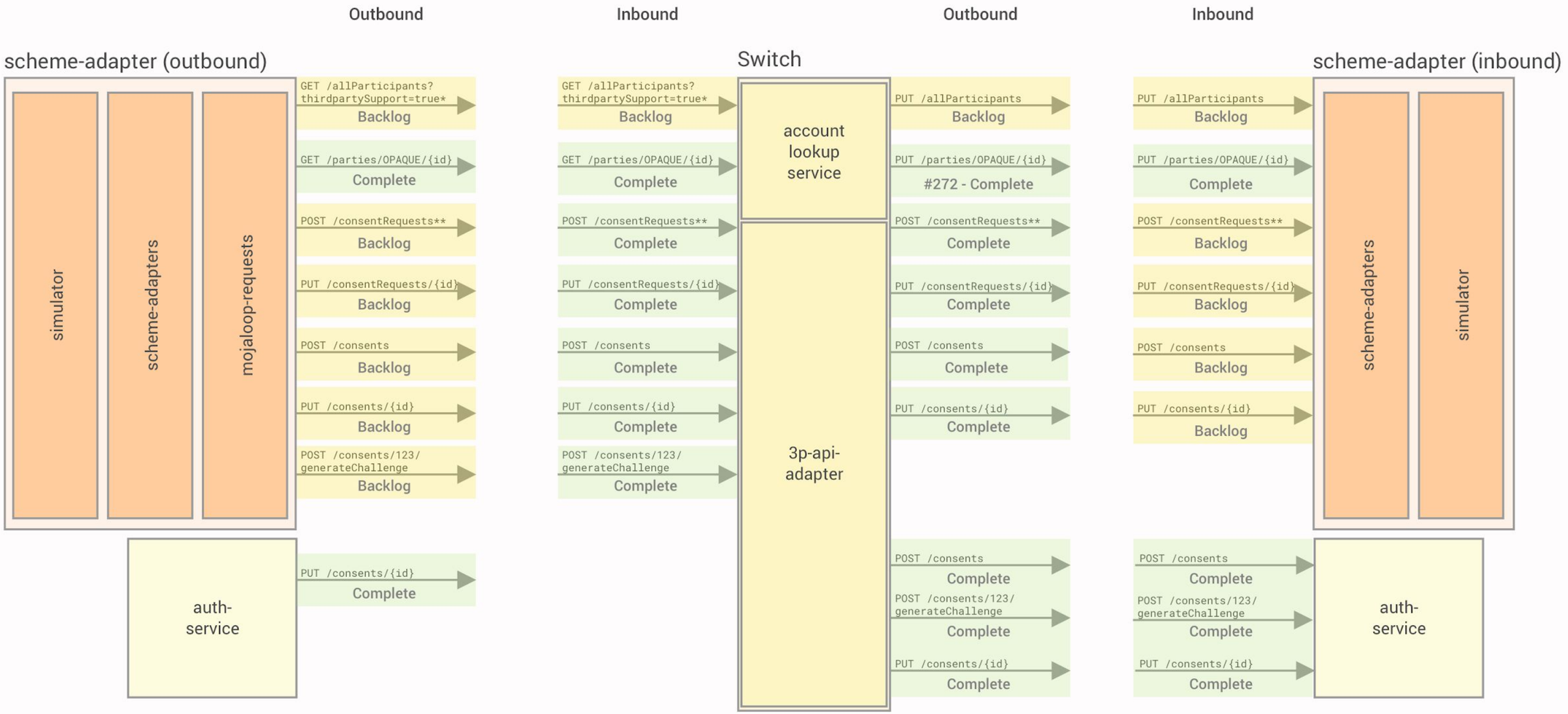
Linking End To End - Overview



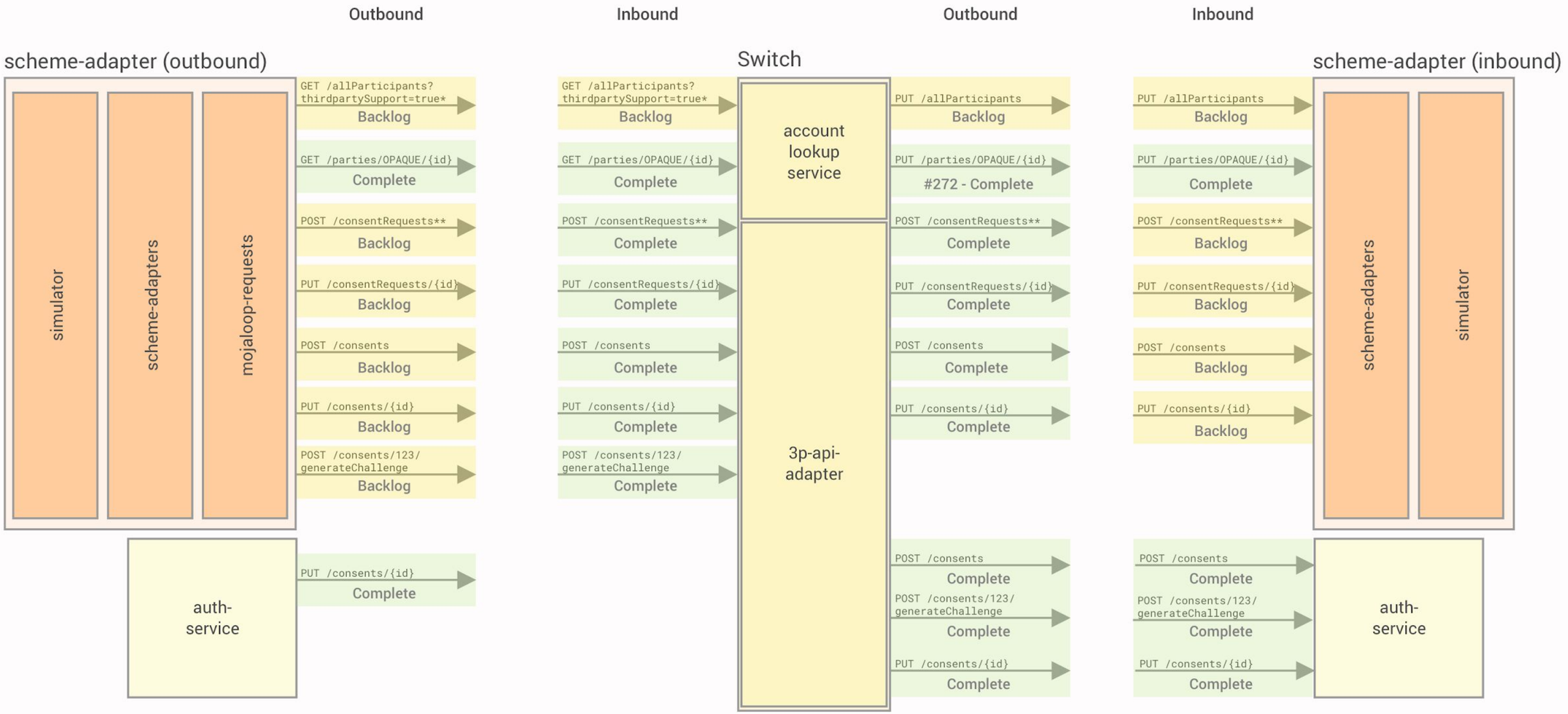
Linking End To End - PI 10



Linking End To End - Goal for PI 11



Linking End To End - Today



Design Updates

Transfer Signing Problem

What thing or things should be signed by the user to authorize the transaction?

Concerns:

- It must be meaningful (so we can't use the condition)
- FSPIOP-API Version? v1.1 or v2?
- If v1.1, what do we need to sign? We are currently thinking

  `sha256(Quote#ilpPacket.data)`

https://github.com/mojaloop/pisp/issues/66

Transaction Callback Problem

How do we get the final transaction status back to the PISP after a PUT /transfers?

It must come from the *switch* and not the Payer DFSP

Current proposal:

- In `PUT /quotes` and `POST /transfer`, send the transaction object as part of the request body

```
"subscribers": [
  { "id": "dfspA","role": "PAYER" },
  { "id": "pispA","role": "PISP" }
]
```

- Add a subscribers list to the transaction object:

- Requires v2 of the FSPIOP-API, since both the Payee and Payer DFSP need to adopt these changes

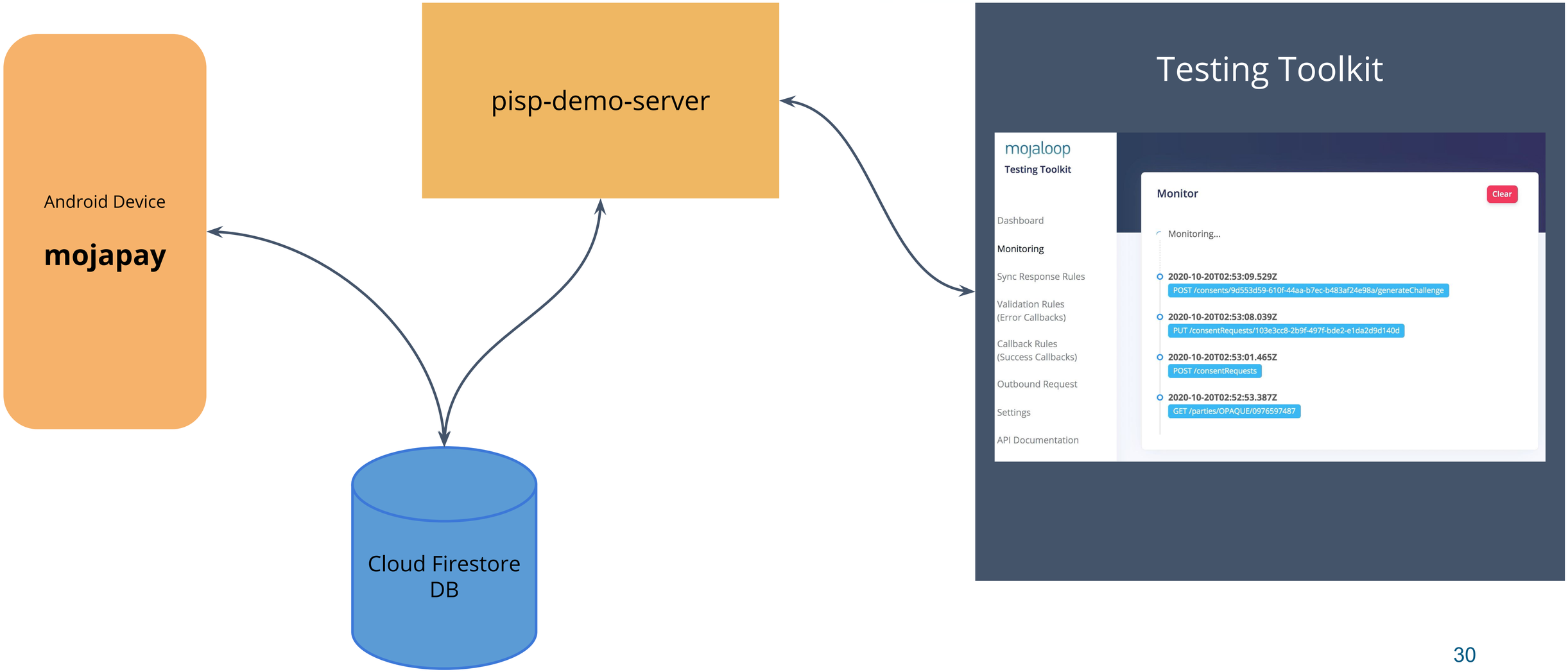
Outputs

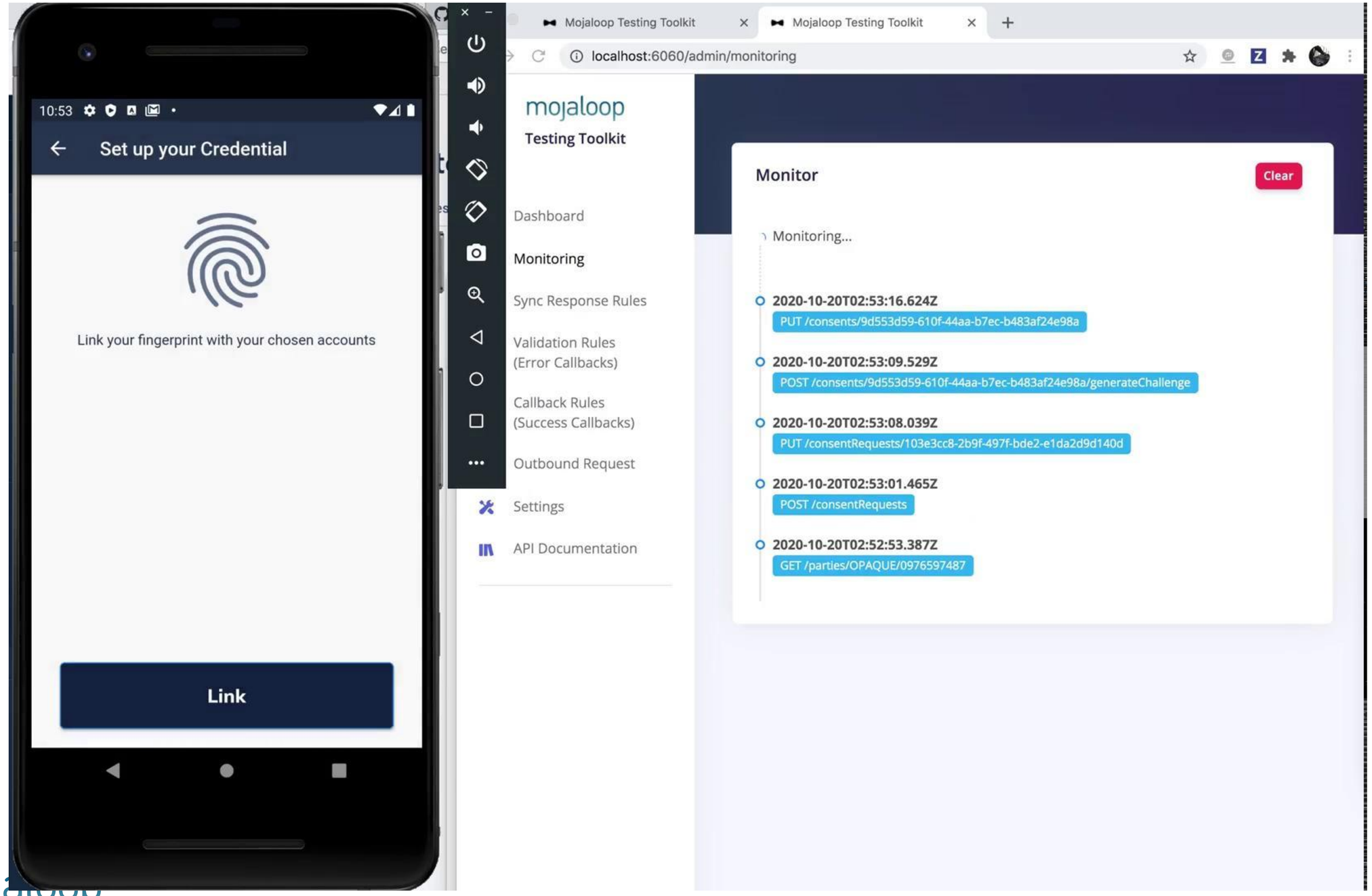
Principles of Third-party Payment Initiation

Account Linking

Let us consider the iceberg...

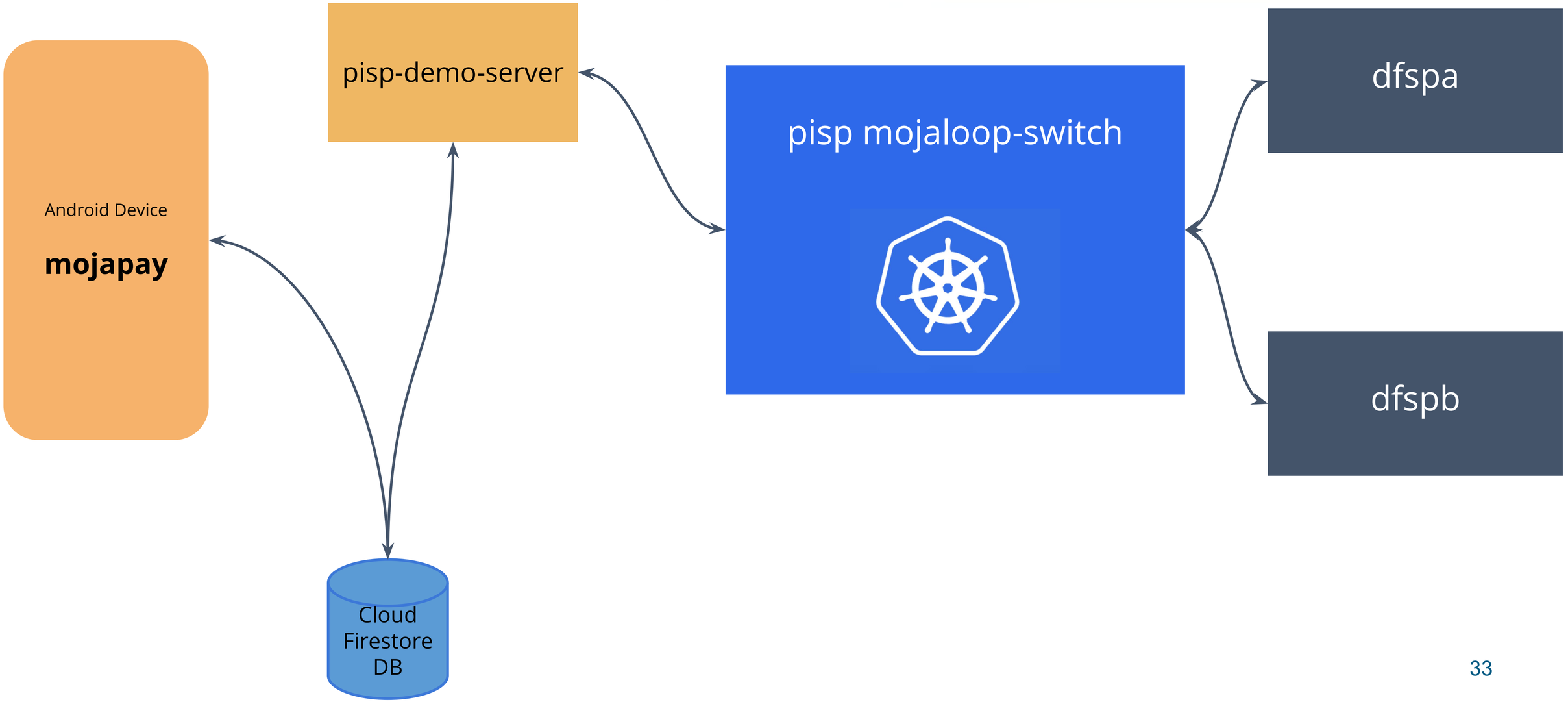
Account Linking with TTK




10:53
Set up your Credential
Link your fingerprint with your chosen accounts
Link
Mojaloop Testing Toolkit
Mojaloop Testing Toolkit
localhost:6060/admin/monitoring
mojaloop
Testing Toolkit
Dashboard
Monitoring
Sync Response Rules
Validation Rules
(Error Callbacks)
Callback Rules
(Success Callbacks)
Outbound Request
Settings
API Documentation
Monitor
Clear
Monitoring...
2020-10-20T02:53:16.624Z
PUT /consents/9d553d59-610f-44aa-b7ec-b483af24e98a
2020-10-20T02:53:09.529Z
POST /consents/9d553d59-610f-44aa-b7ec-b483af24e98a/generateChallenge
2020-10-20T02:53:08.039Z
PUT /consentRequests/103e3cc8-2b9f-497f-bde2-e1da2d9d140d
2020-10-20T02:53:01.465Z
POST /consentRequests
2020-10-20T02:52:53.387Z
GET /parties/OPAQUE/0976597487

End to End Transaction

End to End Transaction



Other Cool Outputs

These are things we worked on that we would love to see adopted in the broader community

- Automated CI/CD Releases with changelogs and release notes

- docker-local mojaloop switch for local development
  - Simply a mojaloop switch running with docker-compose
  - No need for Kubernetes

- POC Method for seeding test environments
  - No need for postman or crazy long environment files

- API Snippets - shared swagger/open api .yaml snippets
  - makes writing APIs easier
  - keeps consistency between swagger files across the organization

v11.8.1

bb9e61a

Compare

v11.8.1 Release

Edit

mojaloopci released this 20 days ago · 0 commits to 666a6f9ffaffb0ba8965cbfa38418db24eea8b3c since this release

11.8.1 (2020-10-01)

Bug Fixes

- **ci:** remove license scan and image scan since we can't prune the devDepencencies (#34) (666a6f9)
- **dockerfile:** remove npm prune step (#33) (d281ae0)

▸ **Assets** 3

v11.8.0

409d777

Compare

v11.8.0 Release

Edit

mojaloopci released this 21 days ago · 0 commits to fca94181437c129c91cdf5a4cff44ca091c7db81 since this release

11.8.0 (2020-09-30)

Features

- add post consents handler (#32) (fca9418)

▸ **Assets** 3

The Future...

PI 12 Roadmap... some ideas

- Finalize API changes
  - Produce a draft proposal to CCB

- Finalize Linking Flows
  - integration + e2e tests
  - scheme-adapter implementations

- Fully featured lab

- Merge back to mainstream Mojaloop
  - independent services
  - Helm charts
  - test scenarios

Your further input is appreciated! Help us make sure we are building the right thing and prioritize the right stuff.

Further Afield

- Refine the mojapay demo app + server reference implementations

- PISP documentation as a *product*

- Talk to Fintechs
  - *What would you build if you had these features available?*
  - *What else might you need to make this work for you?*

Questions? Comments?

Thanks!