

mojaloop

Anatomy of a Mojaloop Transfer

mojaloop

Overview: Purpose

The purpose of the API is to *enable interoperable financial transactions from a Payer located in one Digital Financial Service Provider (FSP) to a Payee located in another FSP, without the Payer needing to know which FSP the Payee uses.*

API Limits/Restrictions:

The API does not currently support transfers which require currency conversion ([Design/PoC work ongoing](#))

All participants currently need to belong to the same switch. ([Design/PoC work ongoing](#))

The API facilitates communications between DFSPs. It does not specify any front-end interactions with the end customer

Prefunded accounts (Settlements, Funds In/Out, Reconciliation handled separately, outside of the Open API)

Overview:

FSPIOP API Public Release

Document Set

Version 1.0

Change Control Board [CCB]

Roadmap

Overview: Document set

Logical Documents

1. *Glossary*
2. Data Model
3. Generic Transaction Patterns
4. Use Cases
5. Business rules
- Operational guidelines

Async REST Binding Docs

6. API Definitions
 - Interoperation
 - Settlement
 - Rules
 - Reporting
7. JSON Binding Rules
8. Scheme Rules

Data Integrity, Confidentiality, Non-repudiation

9. PKI Best Practices
10. Signature
11. Encryption

Overview: Resources for Reference

mojaloop.io

mojaloop.io/documentation

github.com/mojaloop/mojaloop-specification

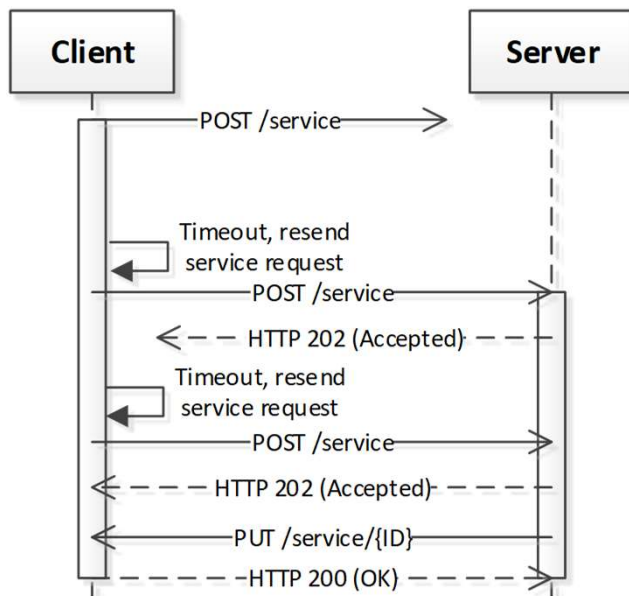
(Supporting Files section includes Swagger files)

API Introduction: General characteristics

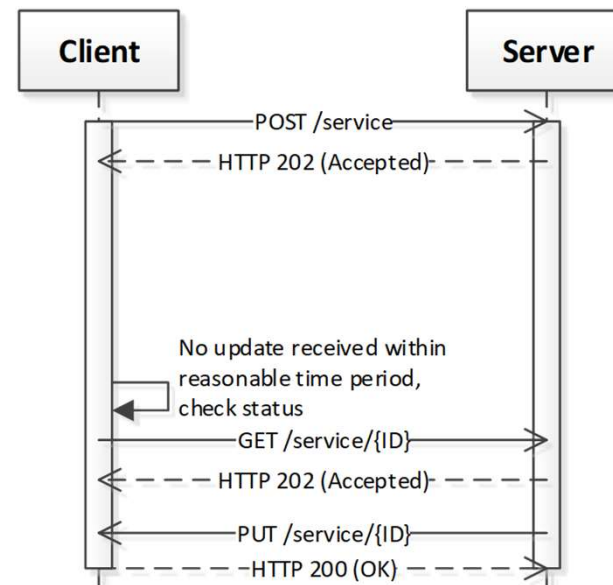
1. “Service Oriented REST”-architecture (“RESTish”)
2. HTTP and HTTP over TLS
3. All services are asynchronous
4. Only HTTP status codes 2xx and 4xx in HTTP response. Any processing errors in a server are sent in callback
5. JSON is used as data exchange format
6. Represent irrevocable financial transactions: transfers may be reversed, but may not be cancelled
7. Idempotent GET and POST
 - a. POST is idempotent as long as same service ID is sent

API Introduction: Error Handling

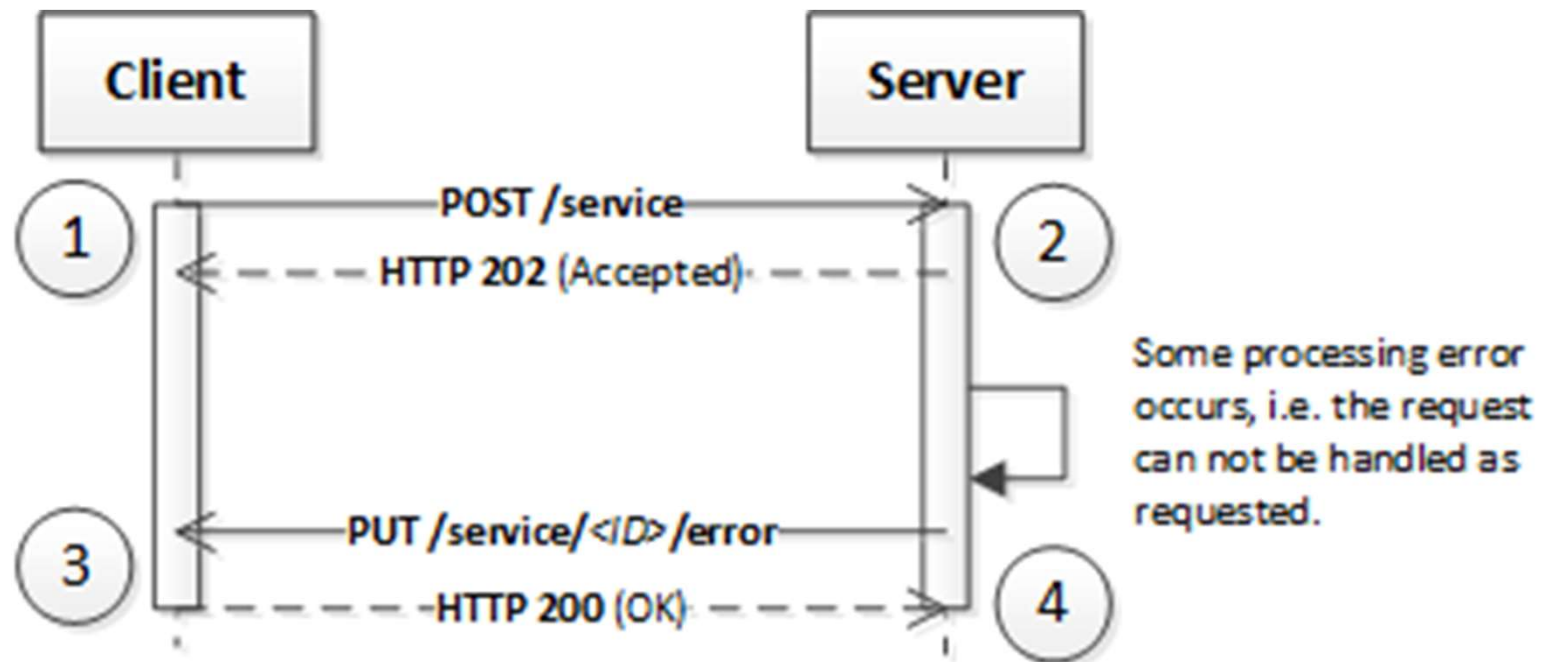
Client missing accepted response



Client missing callback



API Introduction: HTTP Mechanism - Errors



A Mojaloop Transfer has three stages:

Discovery



Agreement

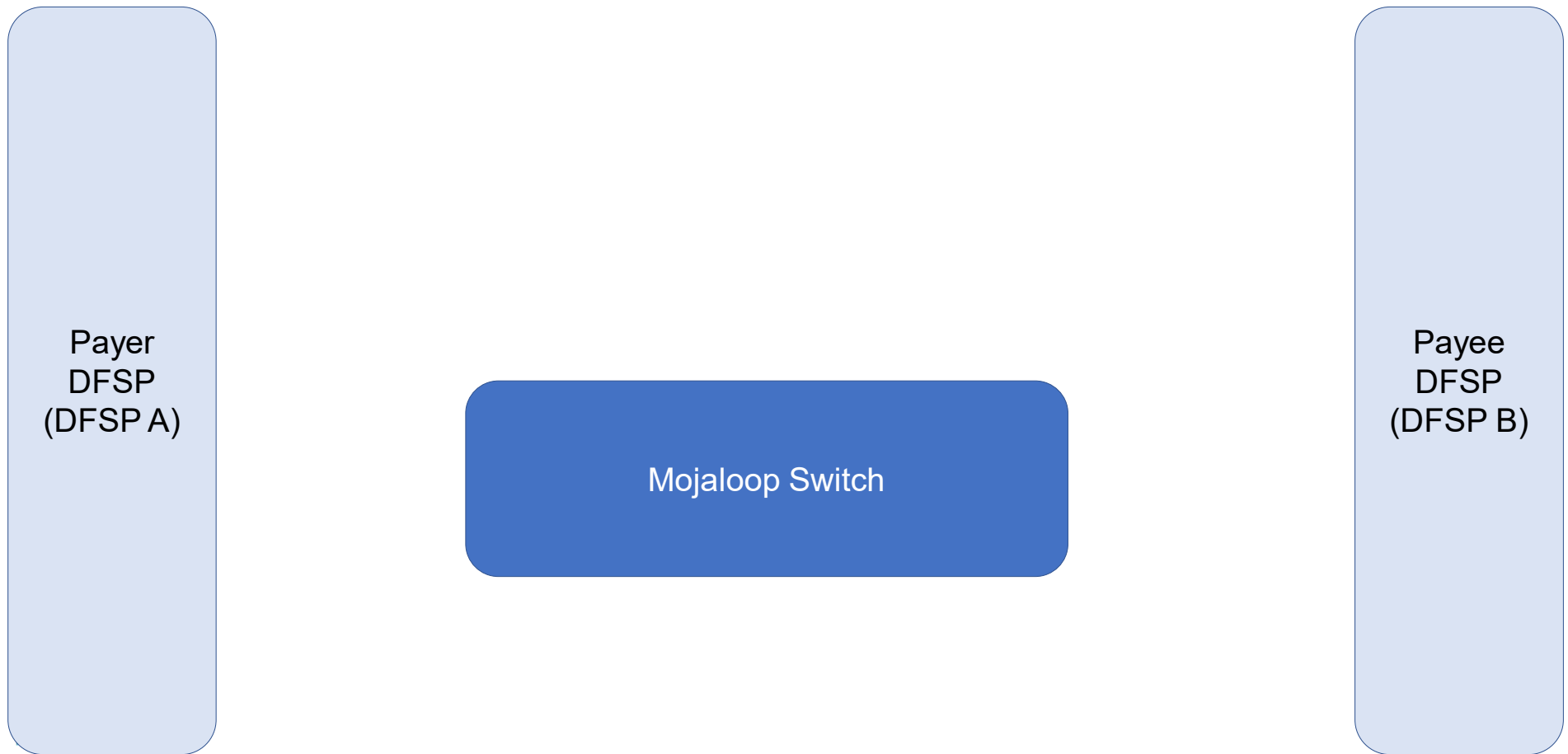


Transfer

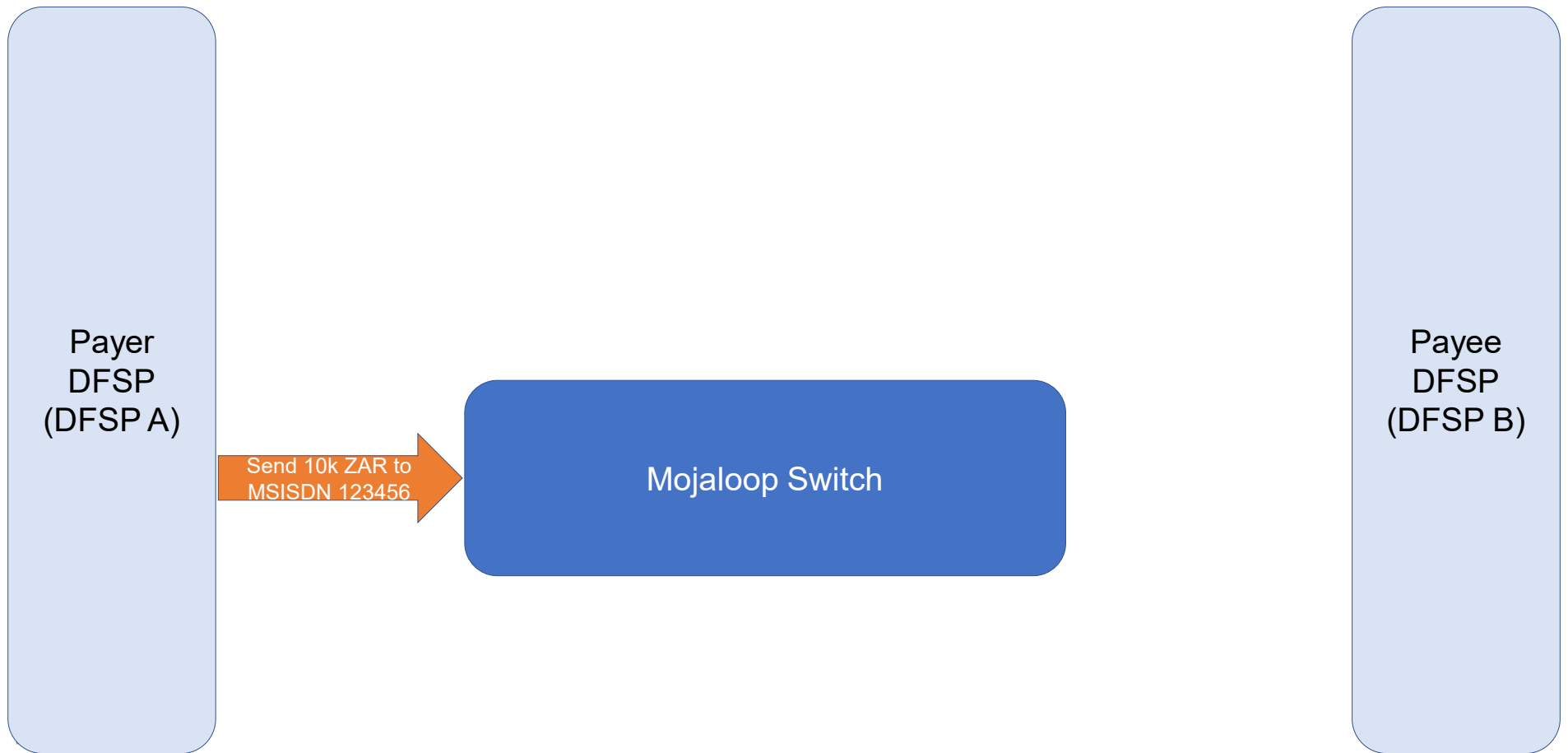
The three stages

- In the *discovery* phase:
 - The payer's DFSP identifies the owner of the identifier to which the payer wants to transfer funds;
 - The payee's DFSP provides information that the payer can use to check that they are sending to the account intended.
- In the *agreement* phase:
 - The payer's DFSP exposes the details of the proposed transaction
 - The payee's DFSP confirms that the payee's account can receive the proposed transfer
 - The payee's DFSP defines the terms under which the transfer will be accepted
 - The payee's DFSP puts a cryptographic lock and an expiry date on the transfer terms
- In the *transfer* phase:
 - The payer's DFSP and the switch reserve funds so that they can't be spent twice.
 - The payee's DFSP confirms that the transfer conforms with the terms agreed.
 - The payee's DFSP provides the switch and the payer's DFSP with a cryptographic key which confirms that the transfer has completed.
 - The payee's DFSP completes the transfer to the payee's account
 - The payer's DFSP removes the funds from the payer's account
 - The switch records the transfer for use by the settlement service

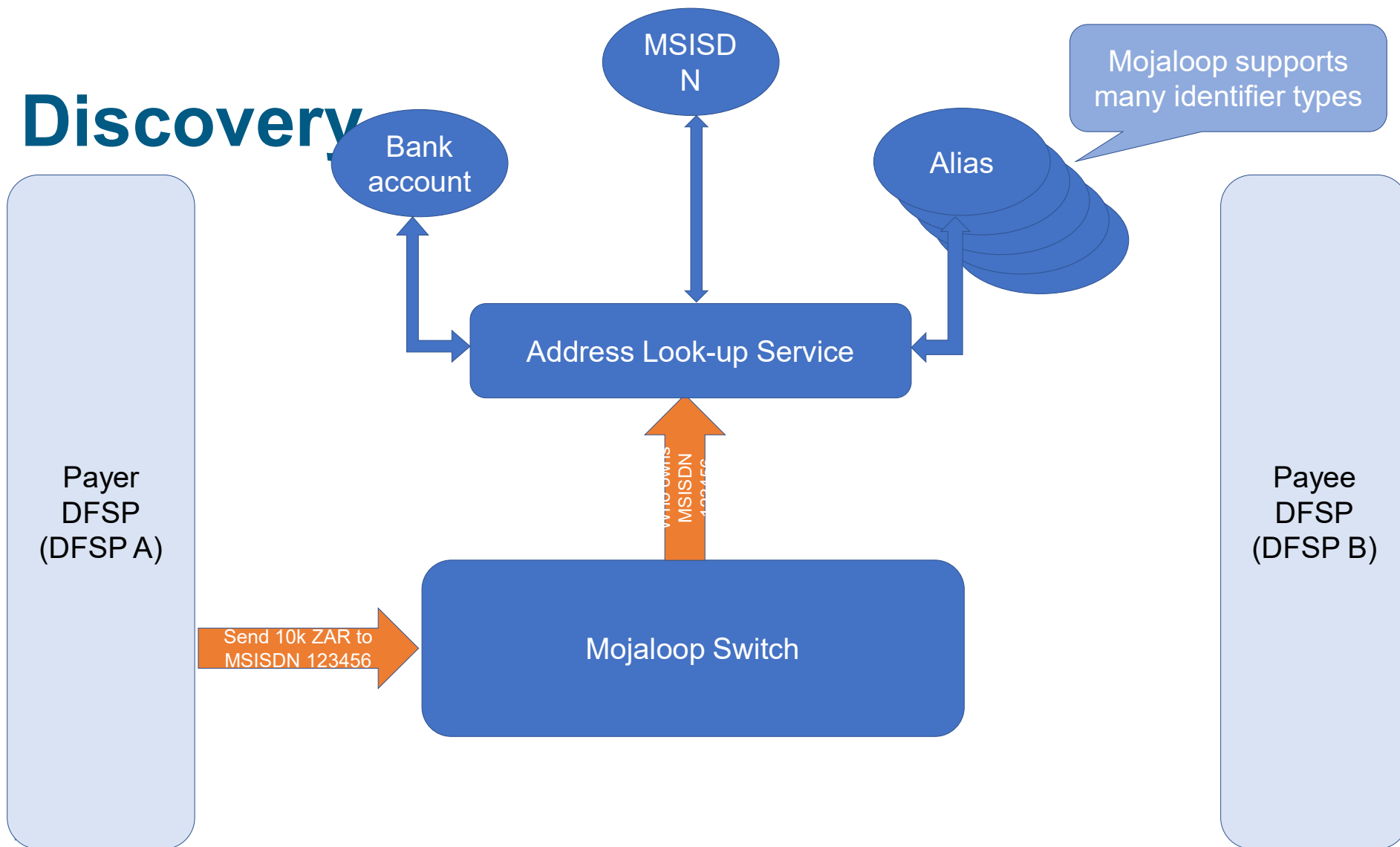
The transfer model



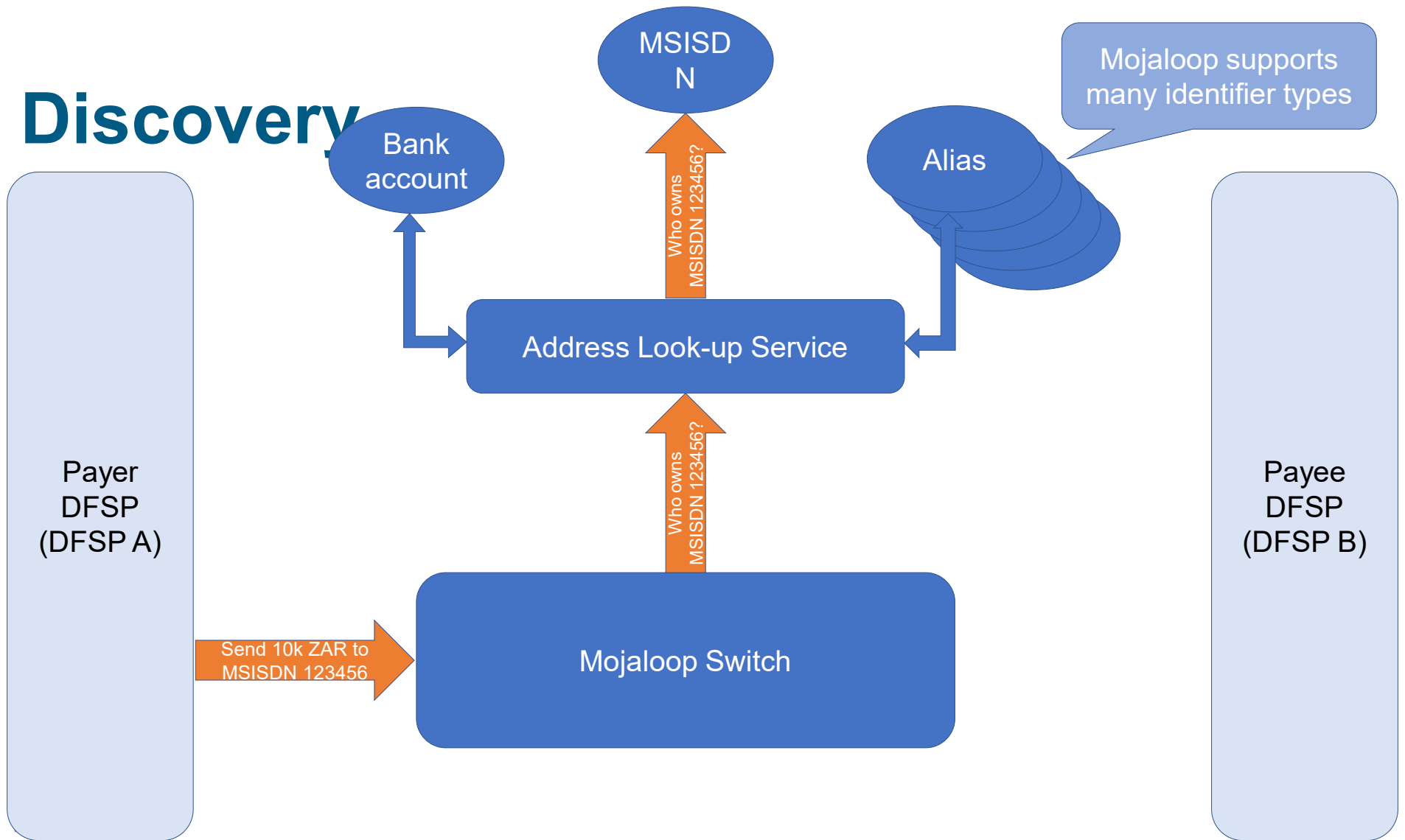
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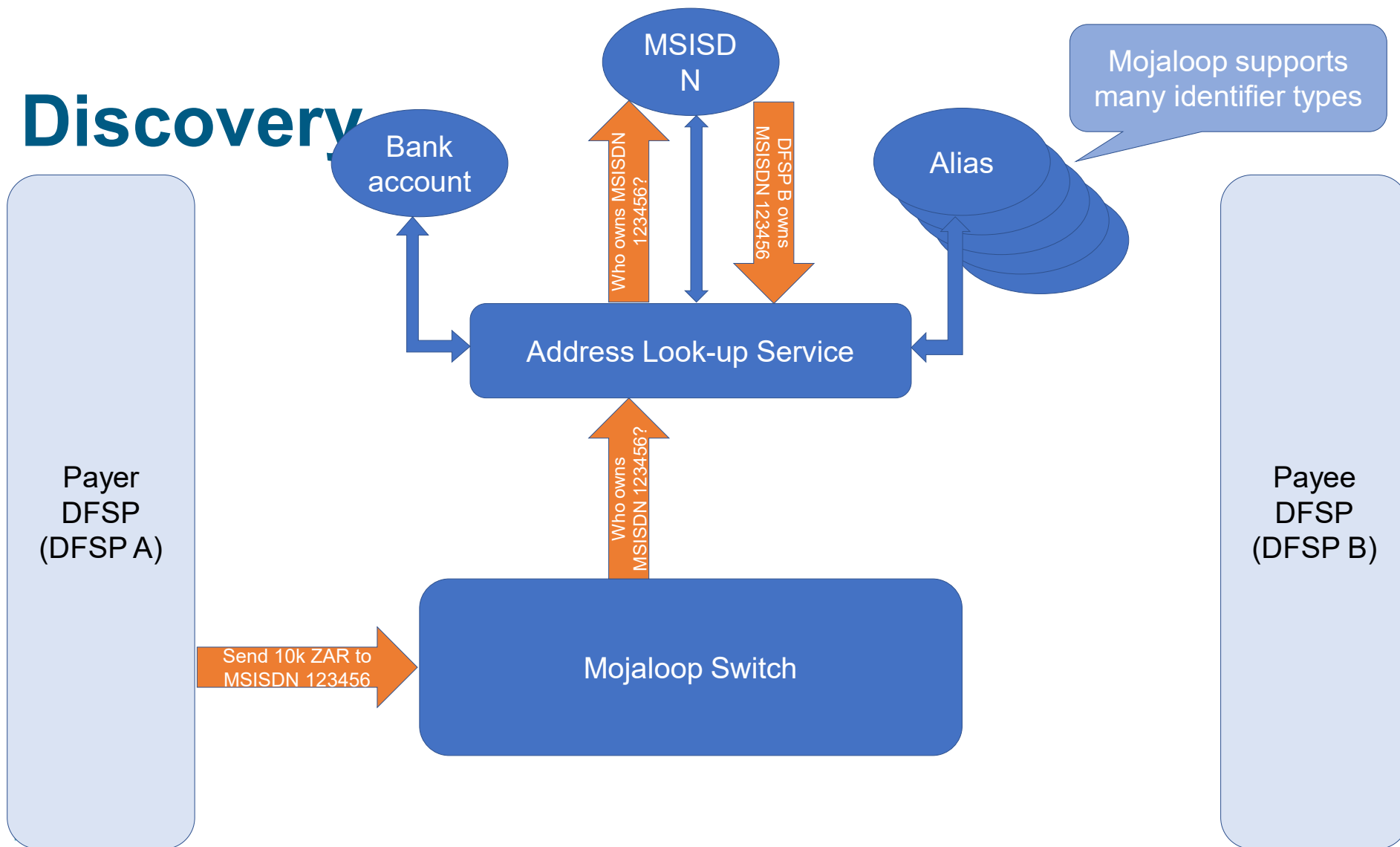
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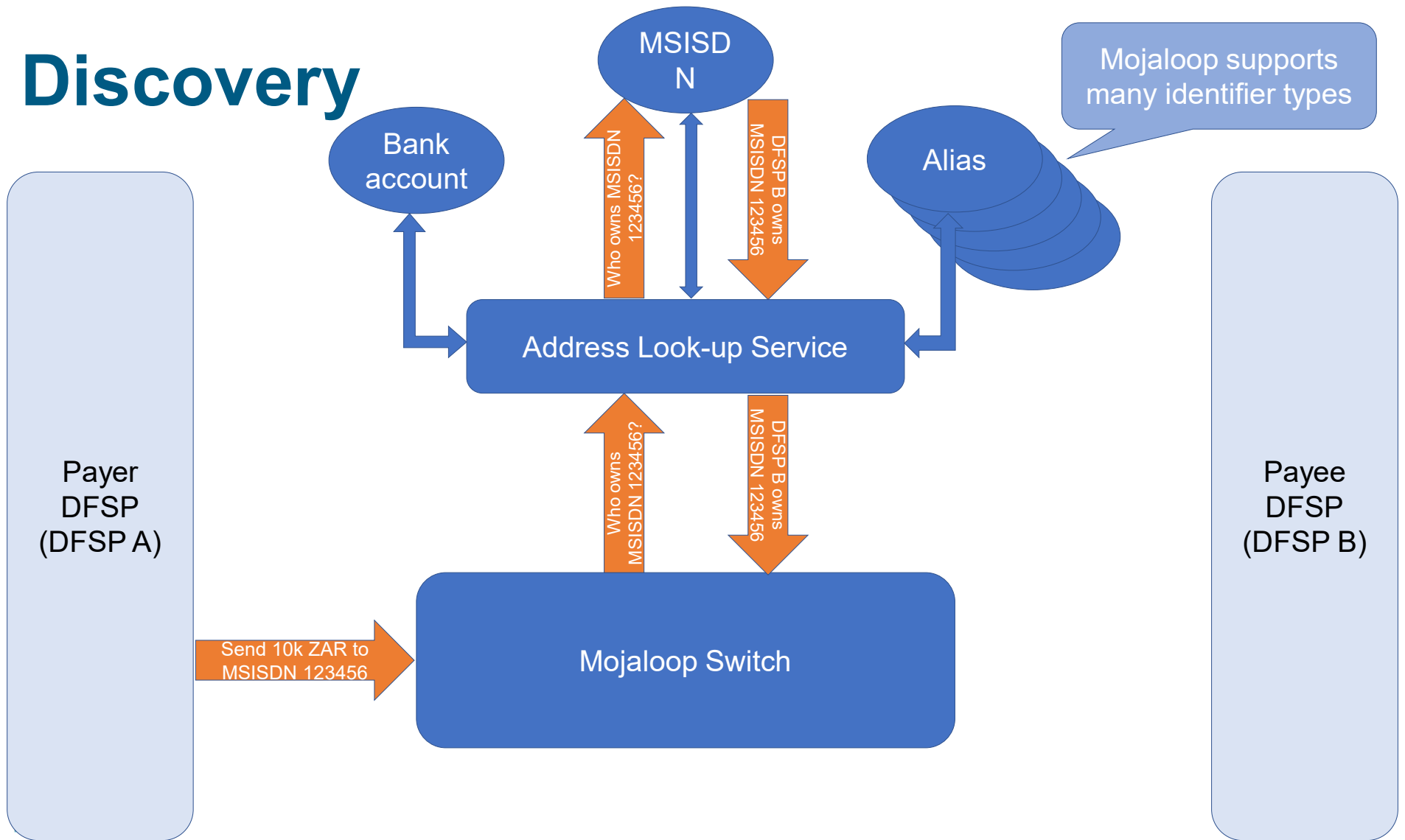
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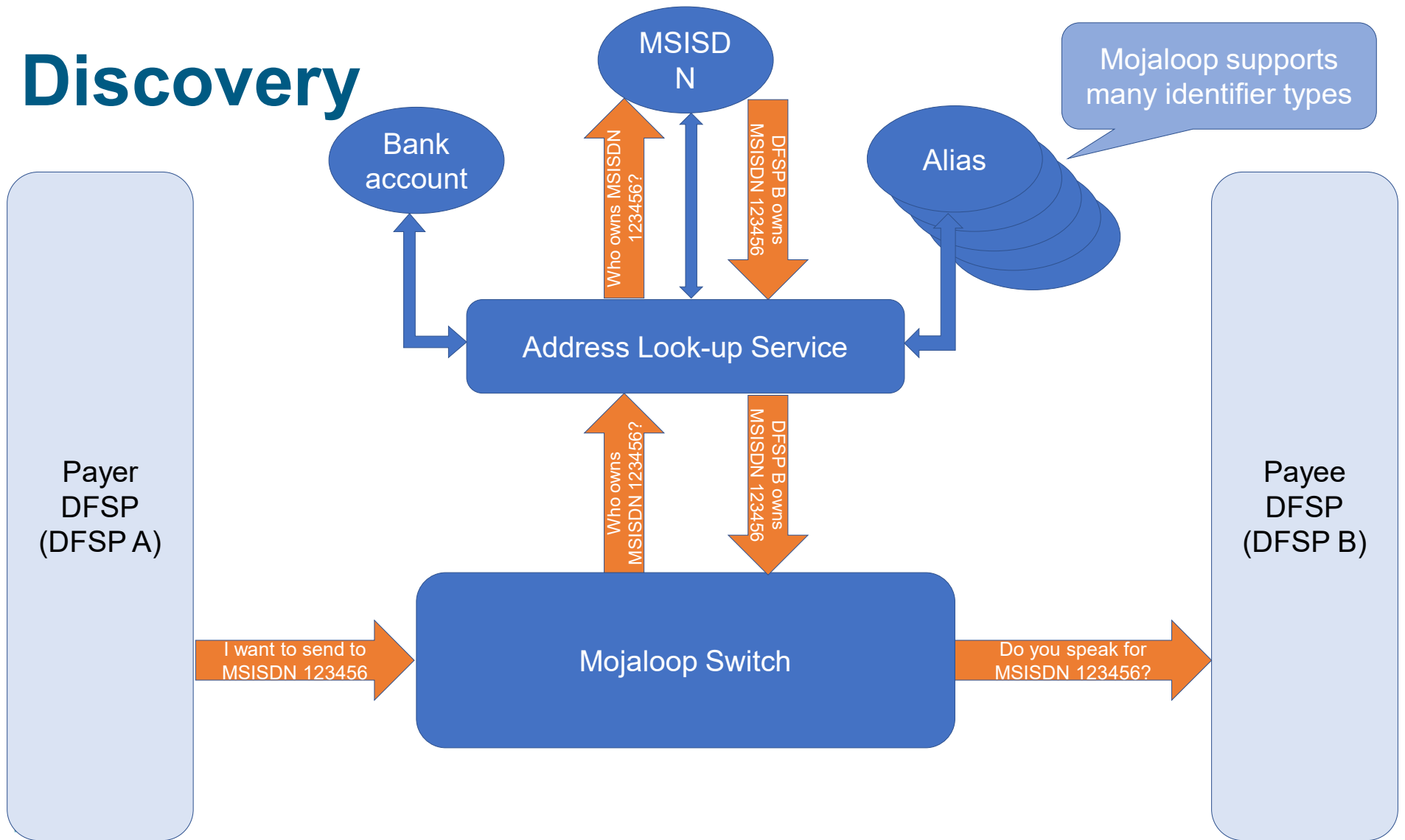
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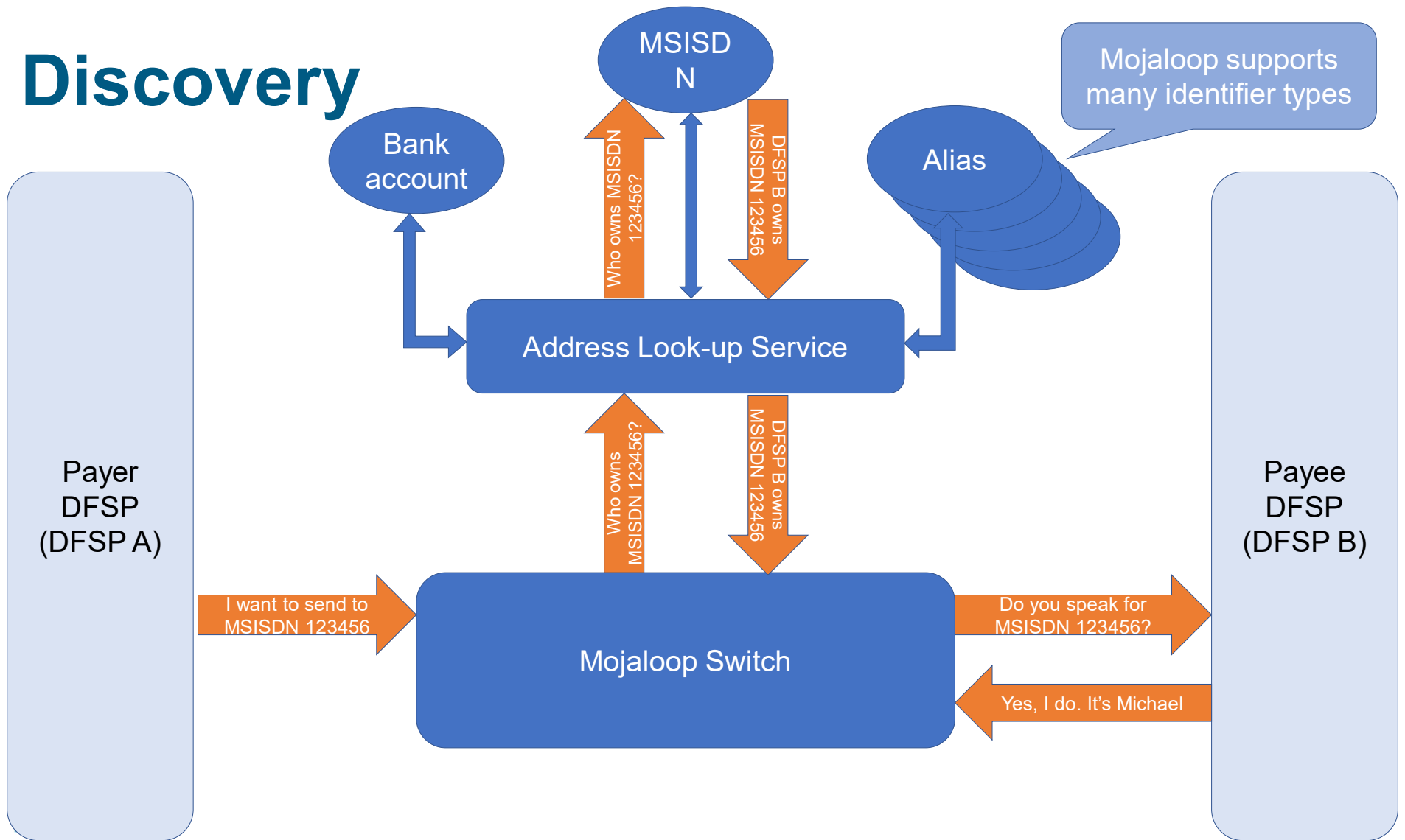
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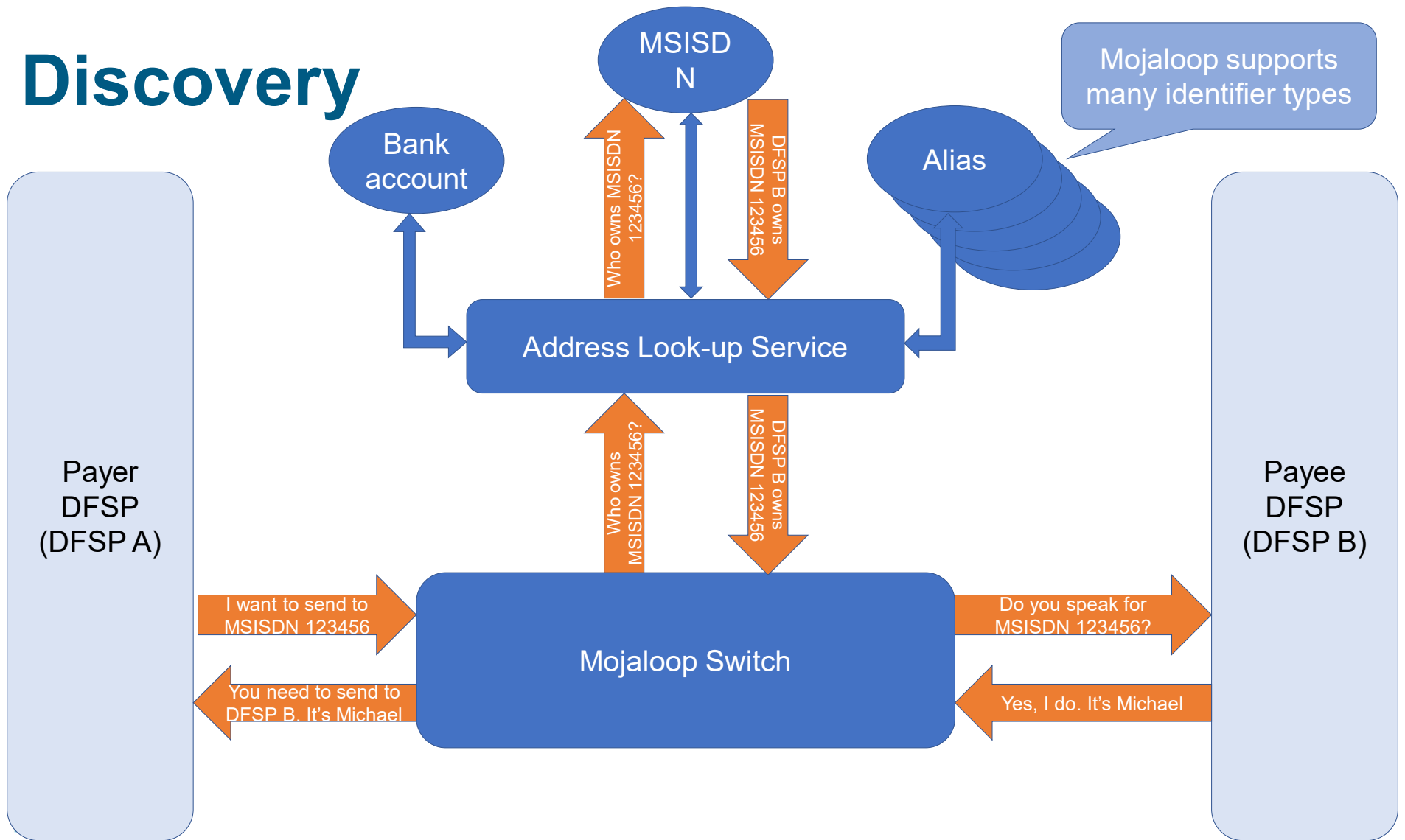
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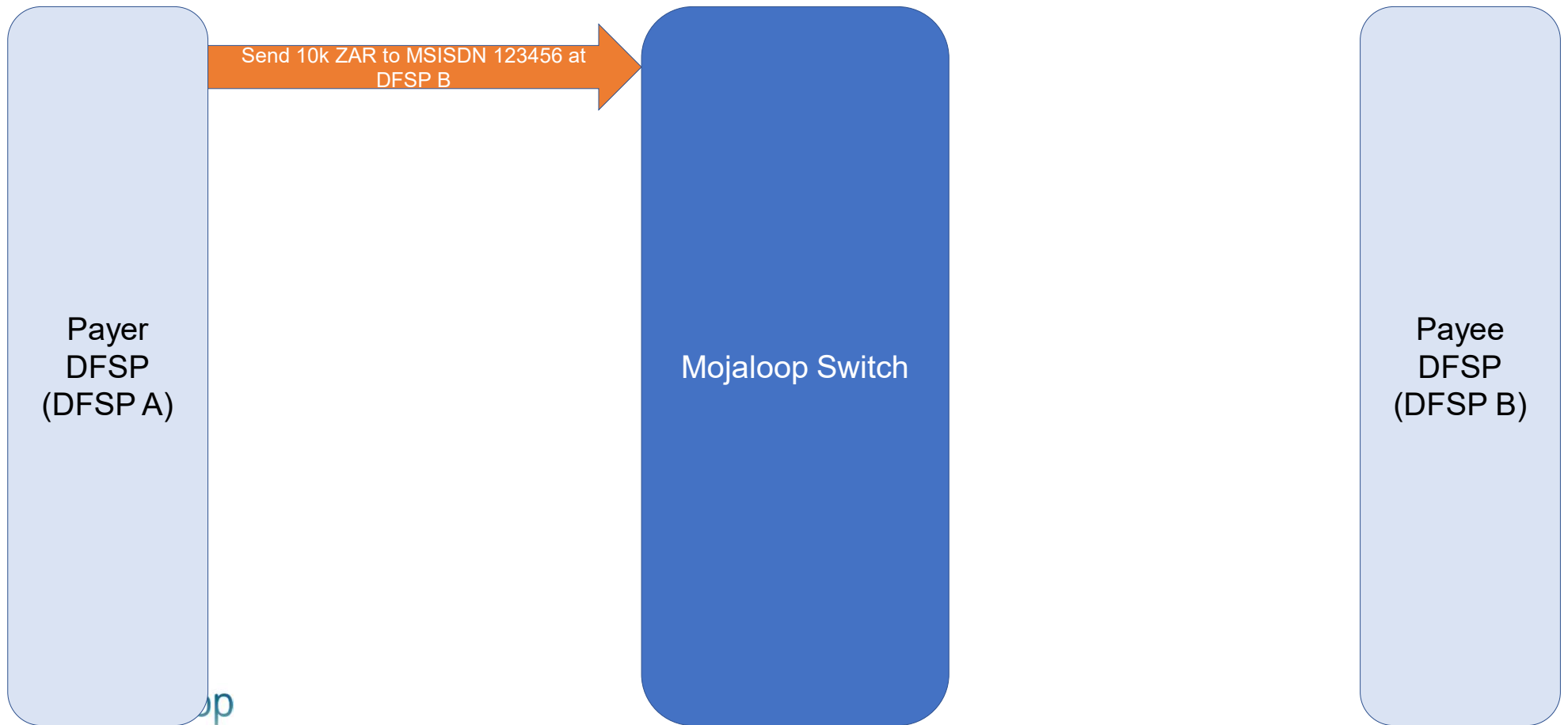
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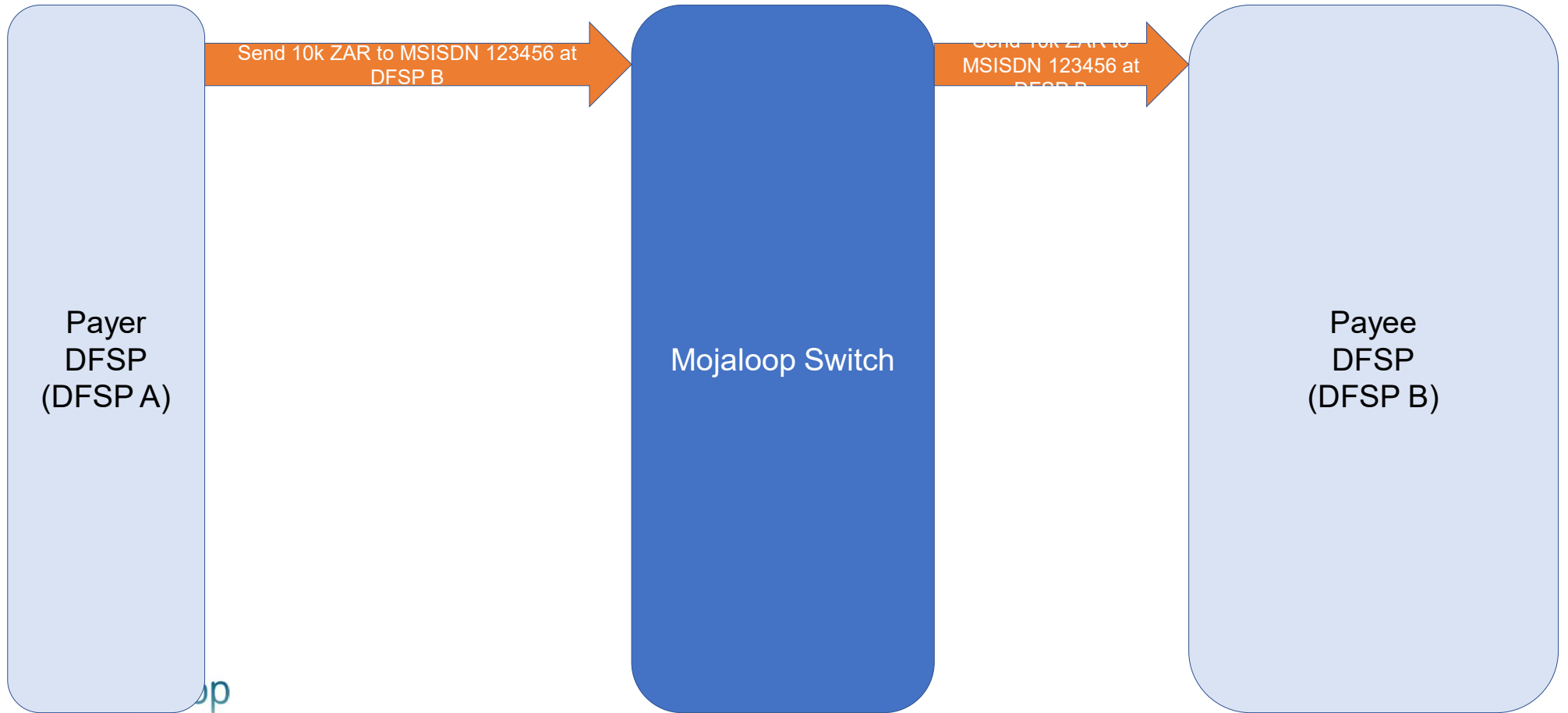
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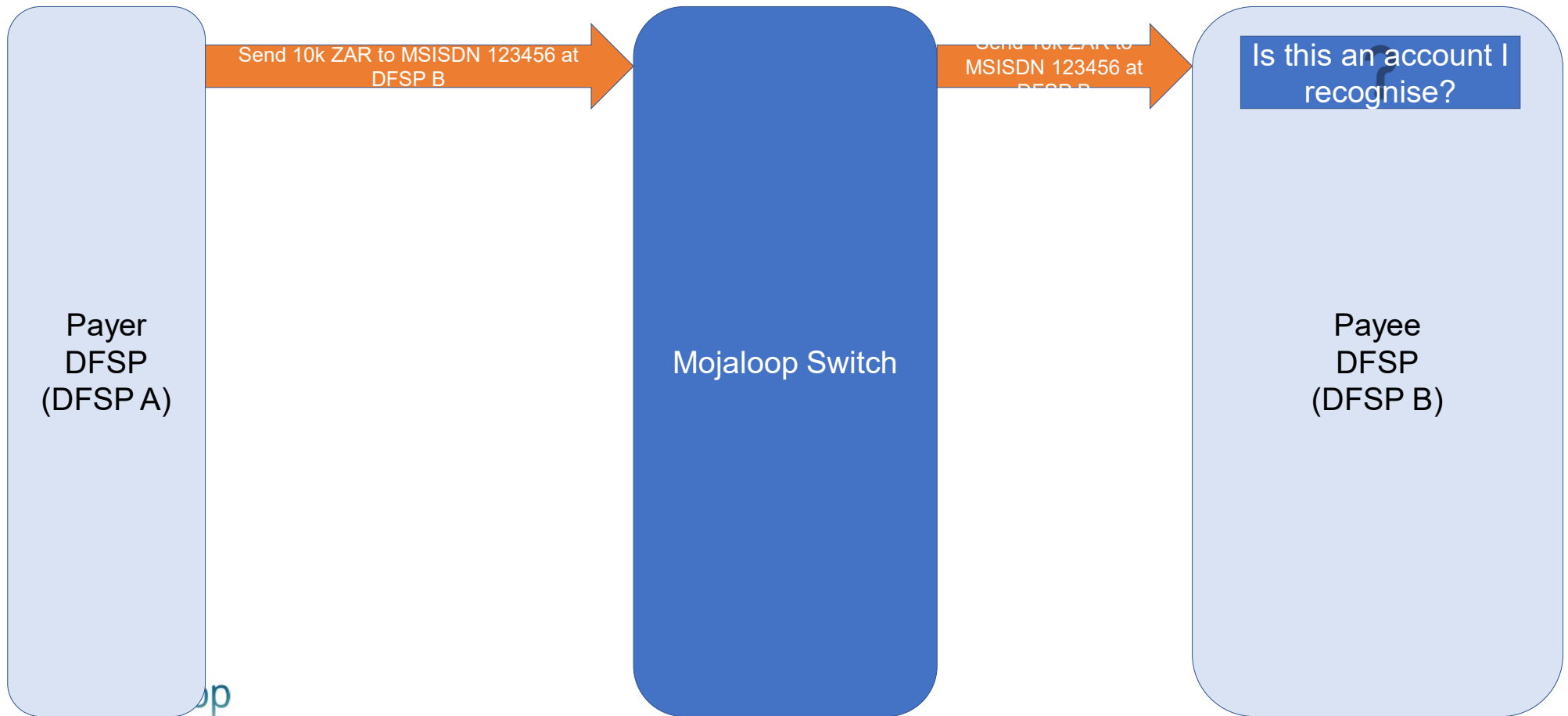
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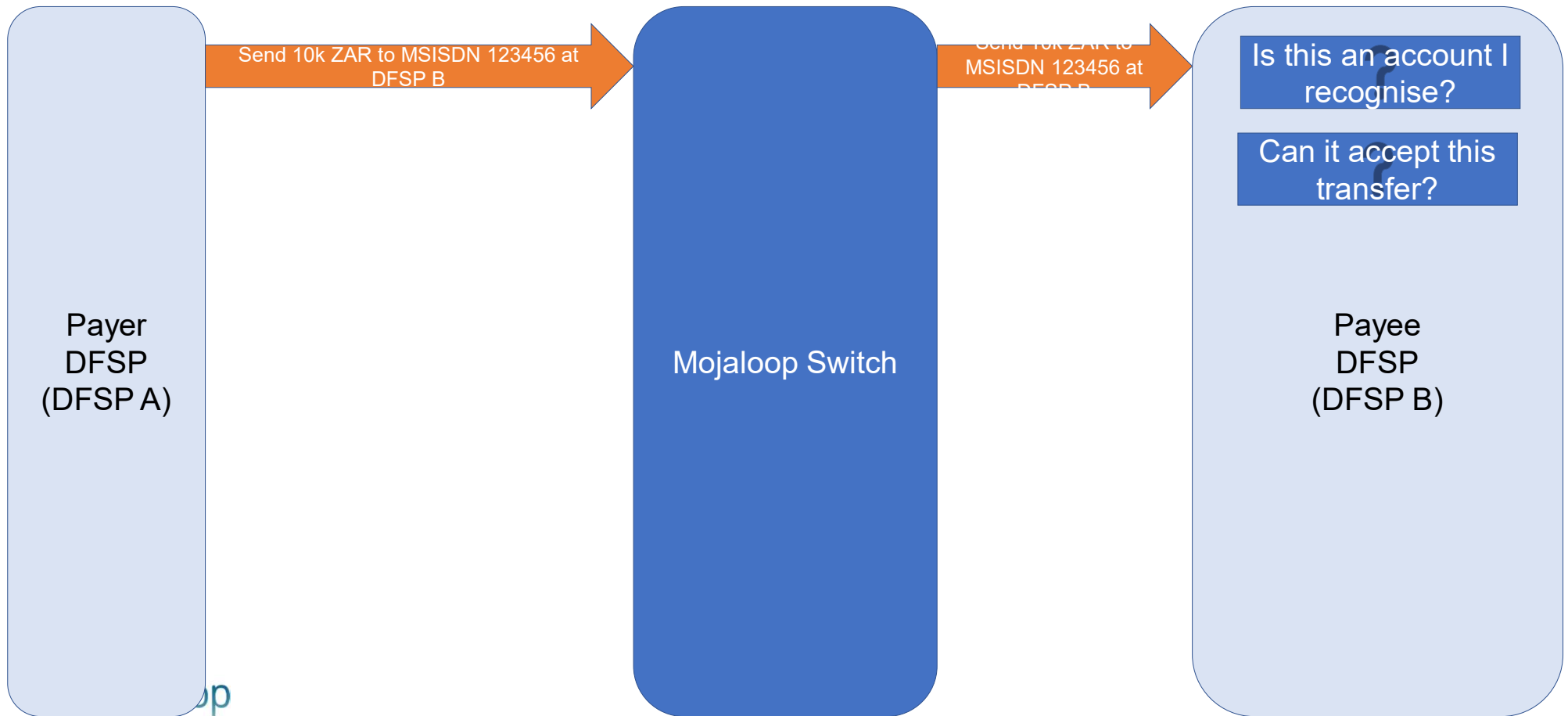
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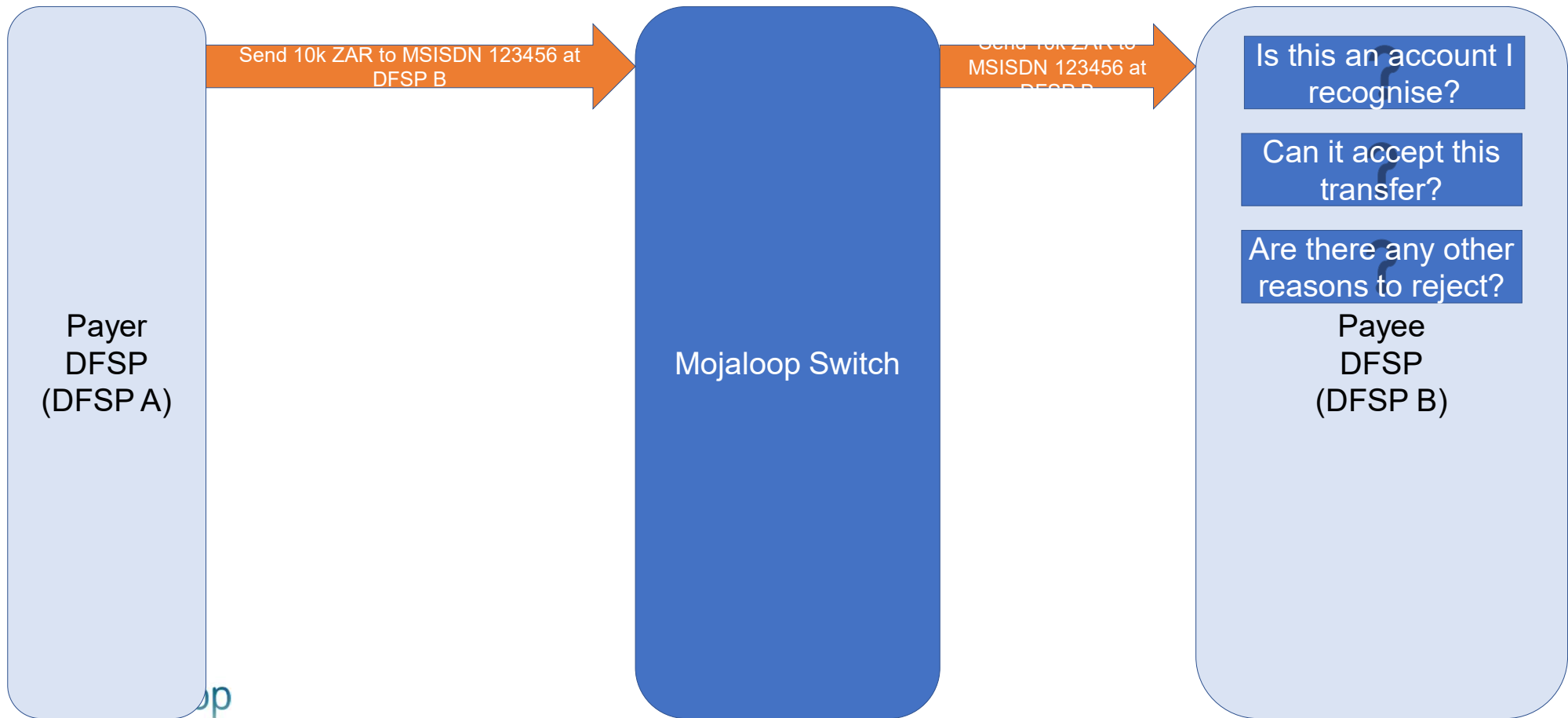
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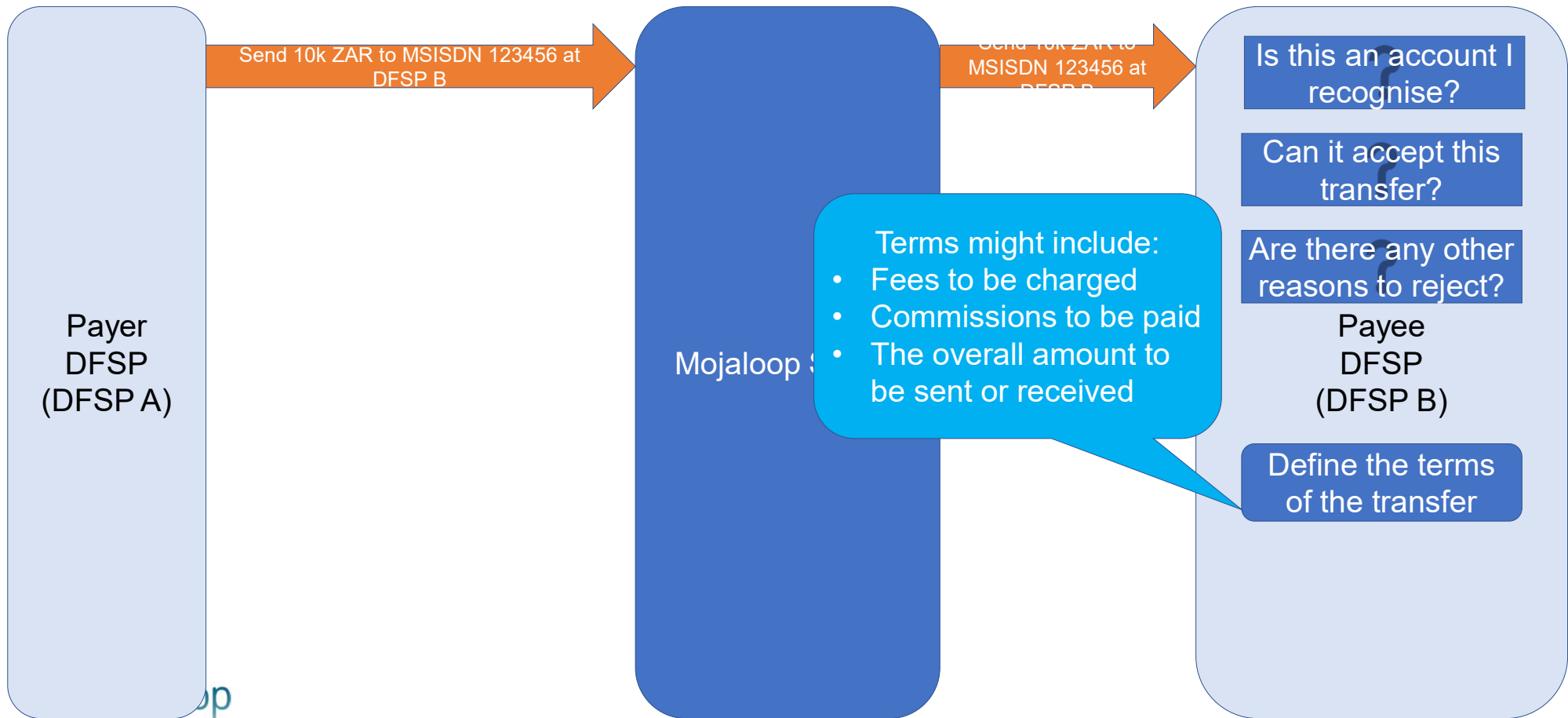
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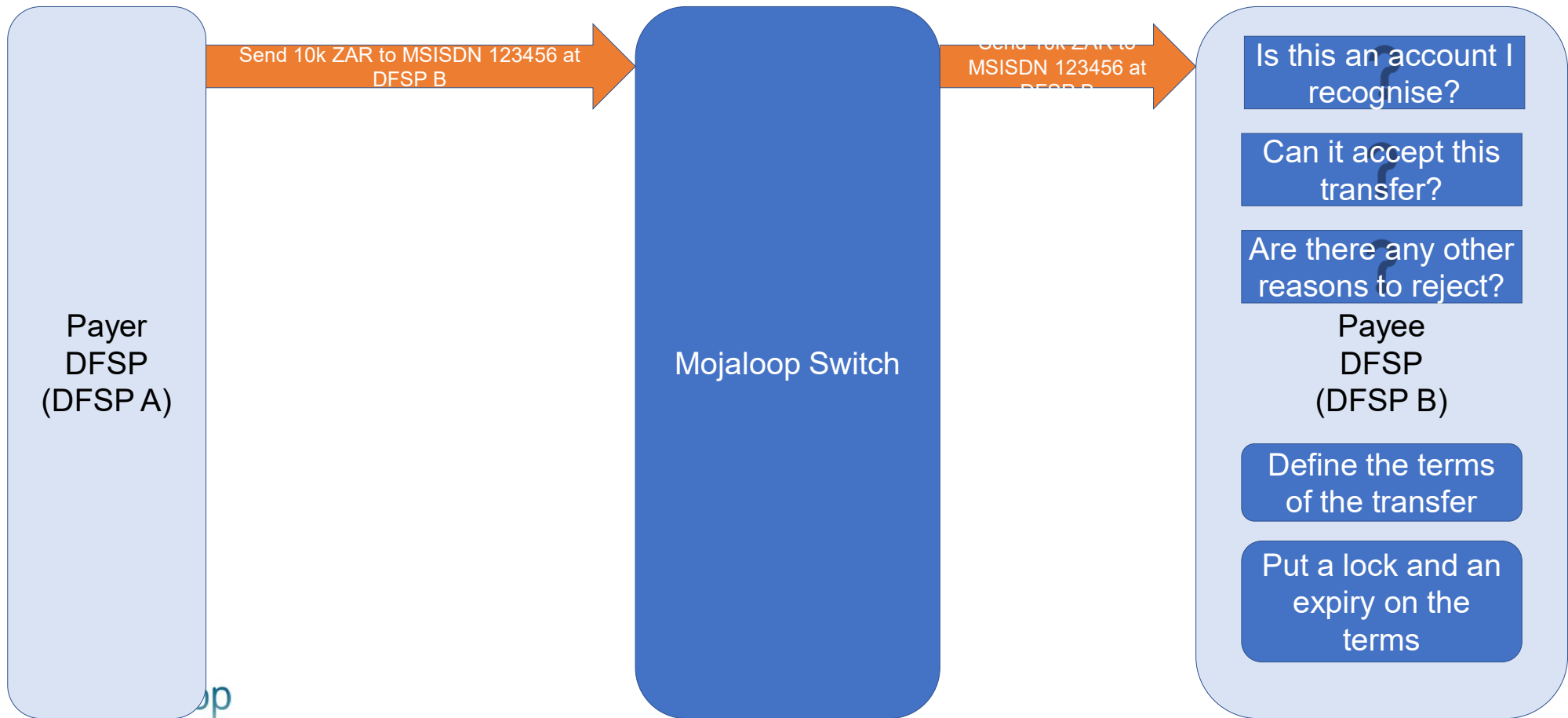
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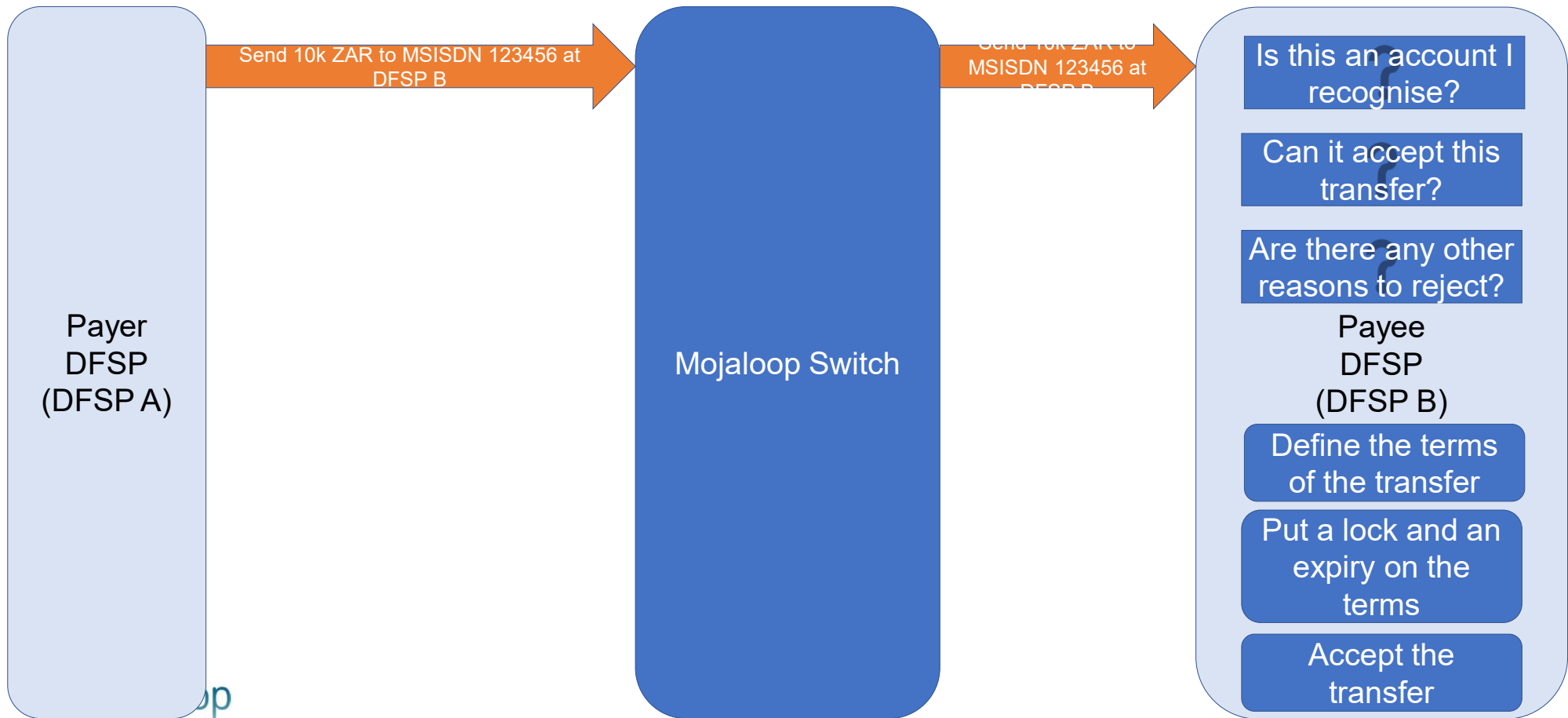
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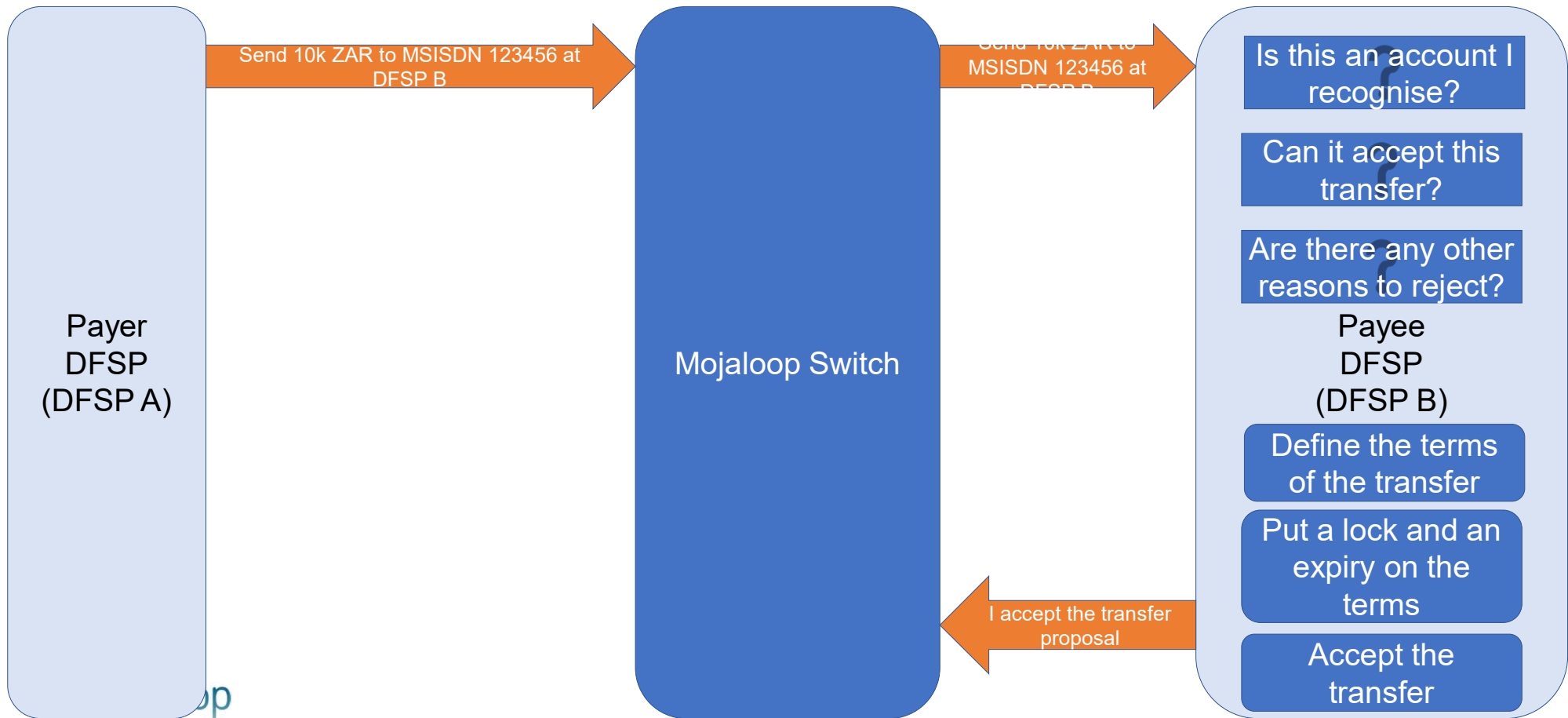
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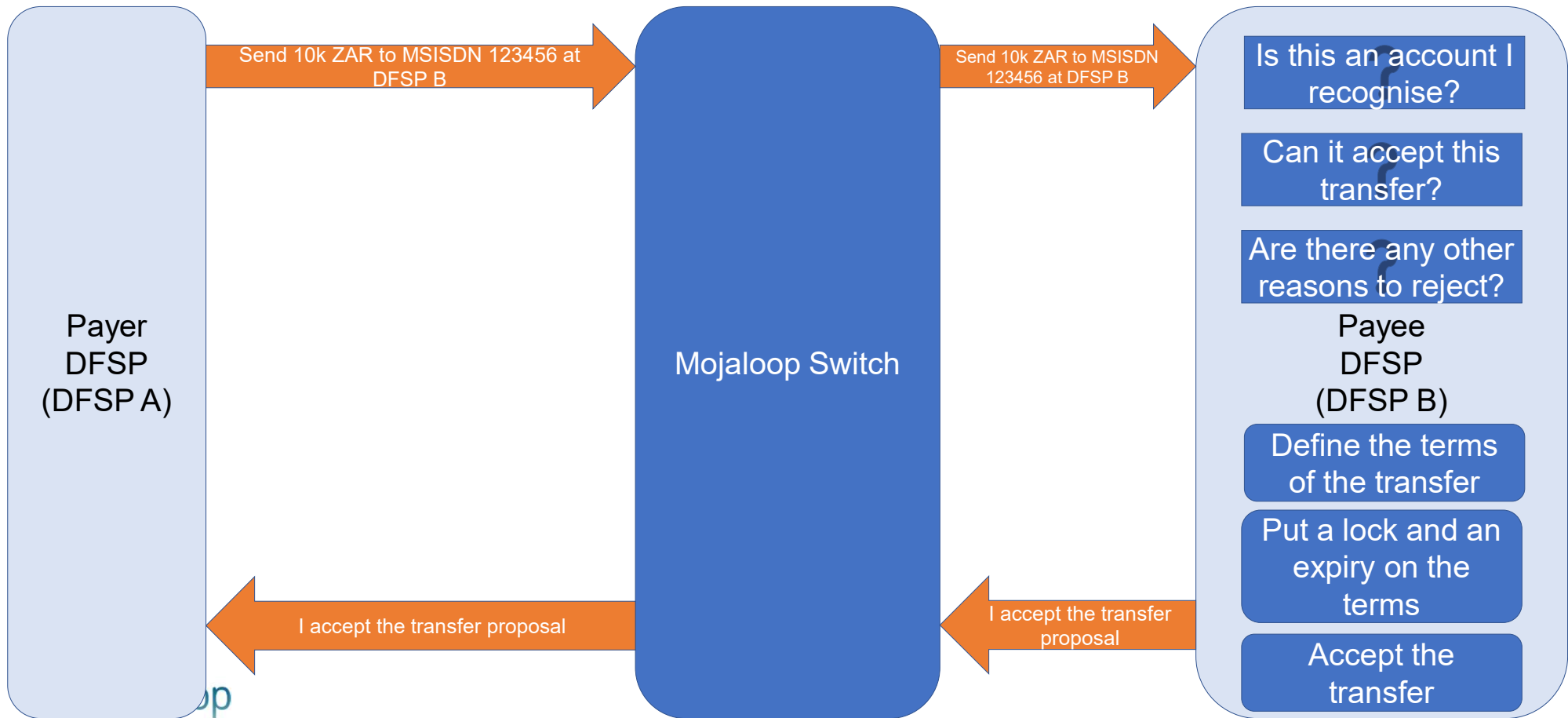
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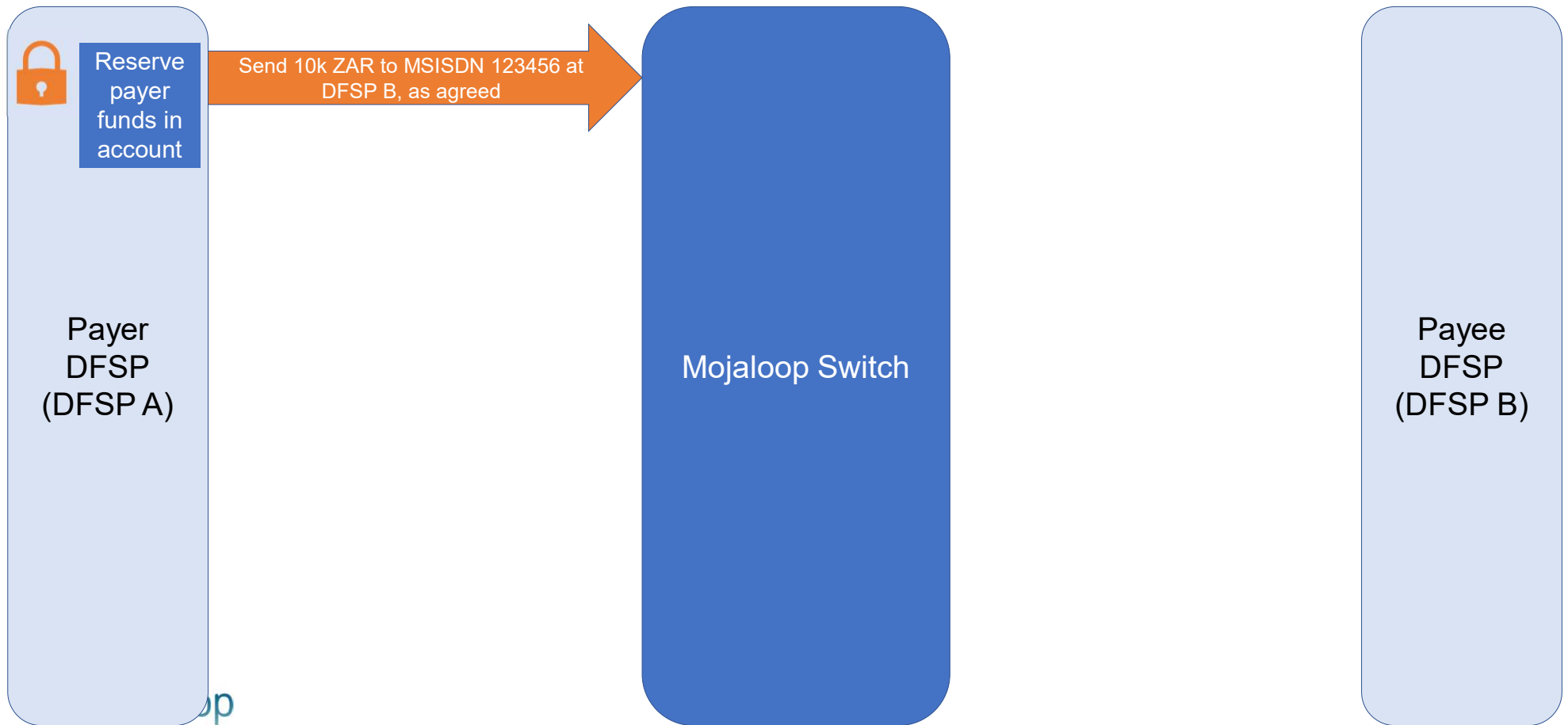
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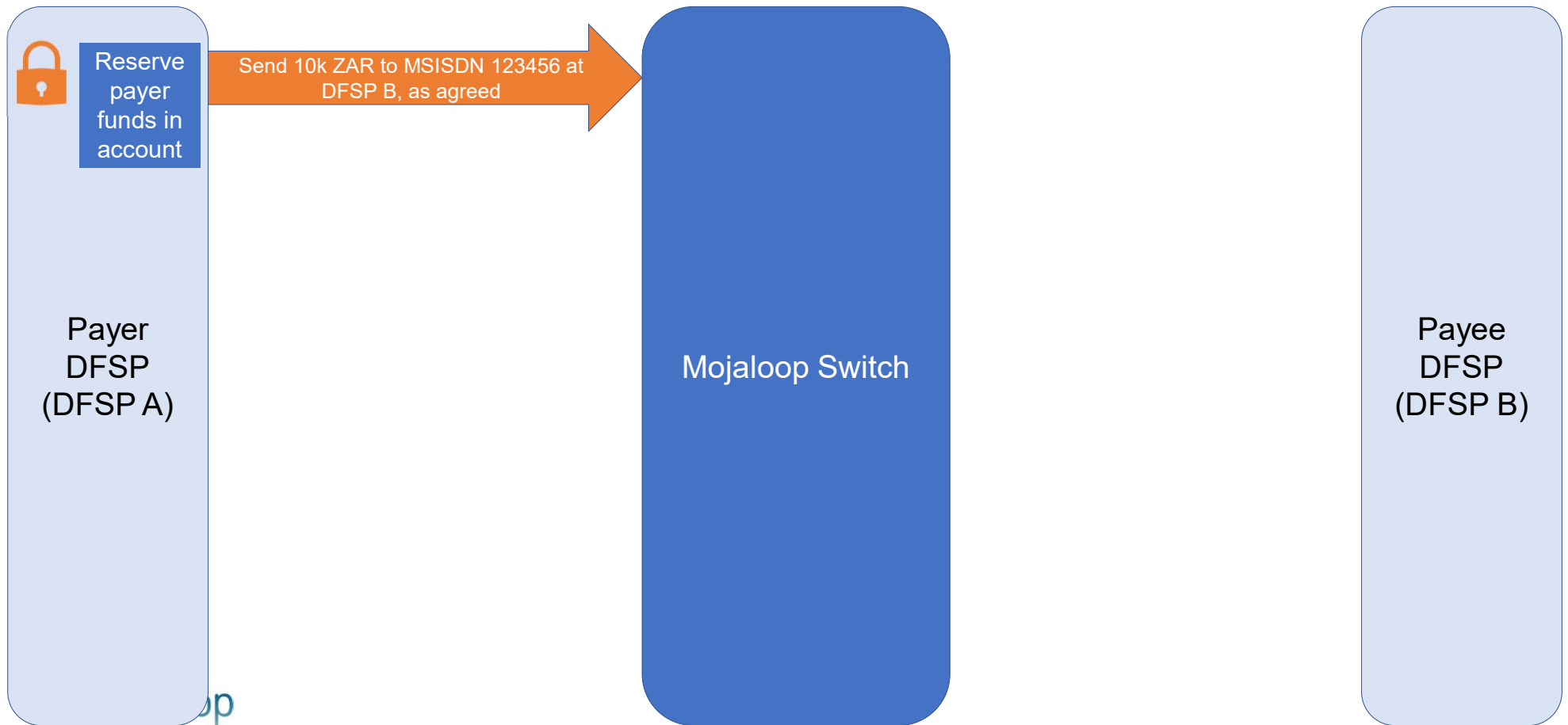
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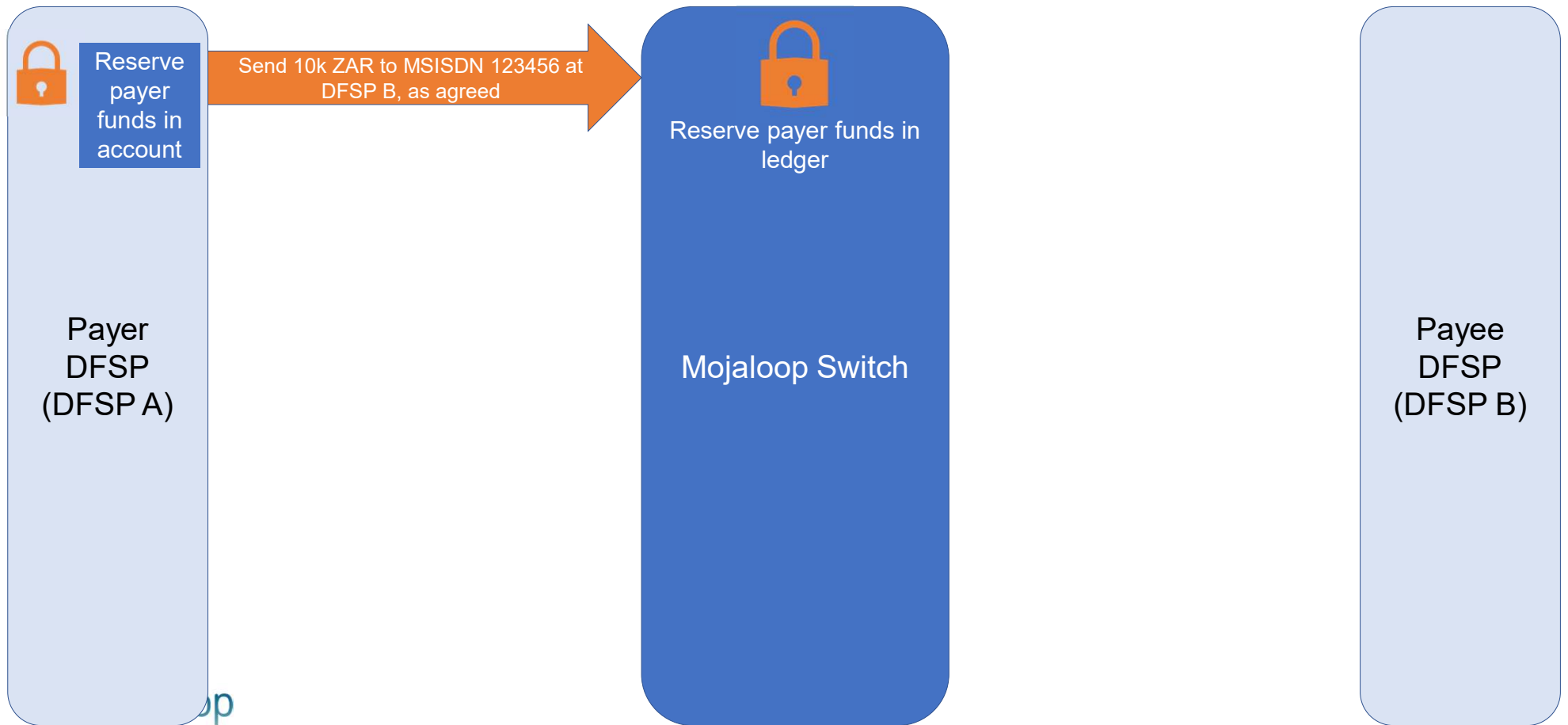
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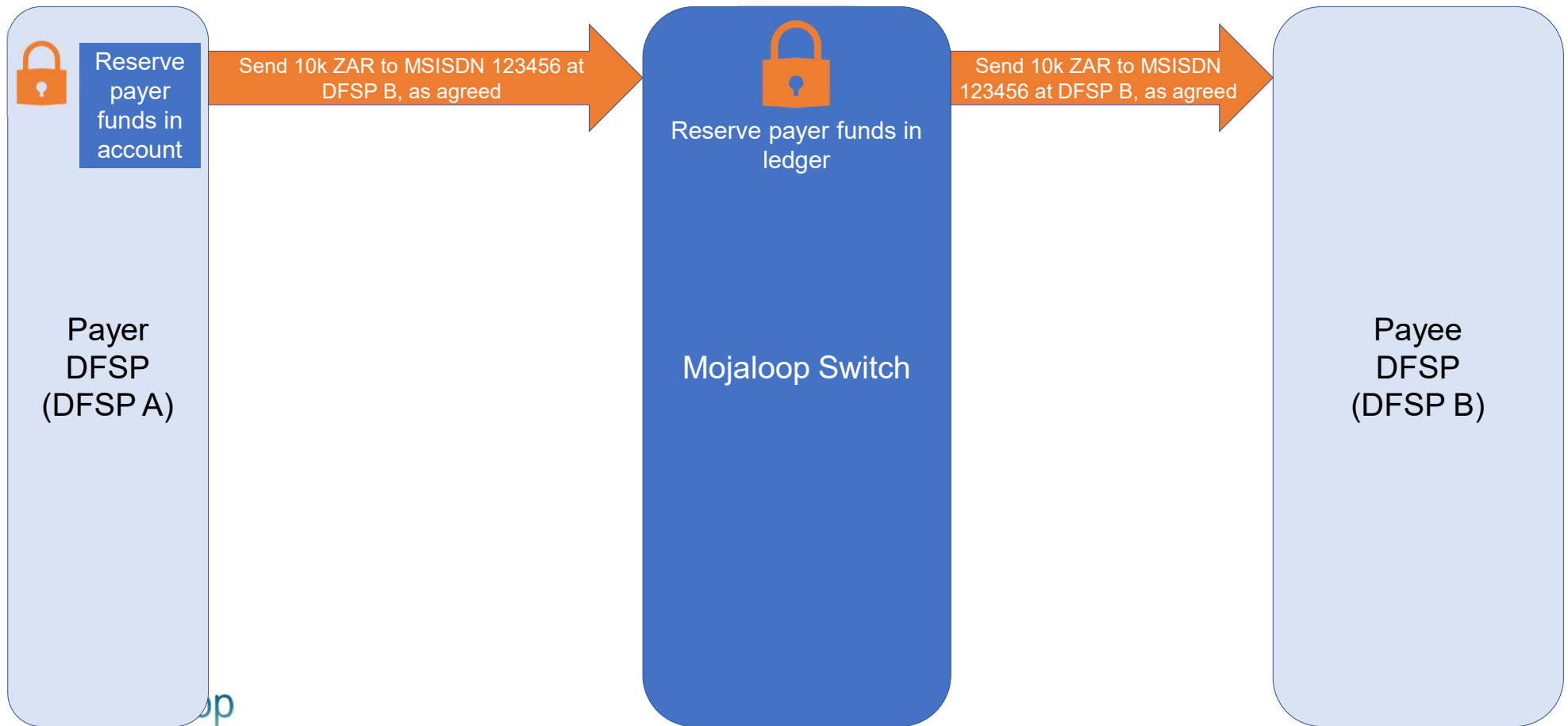
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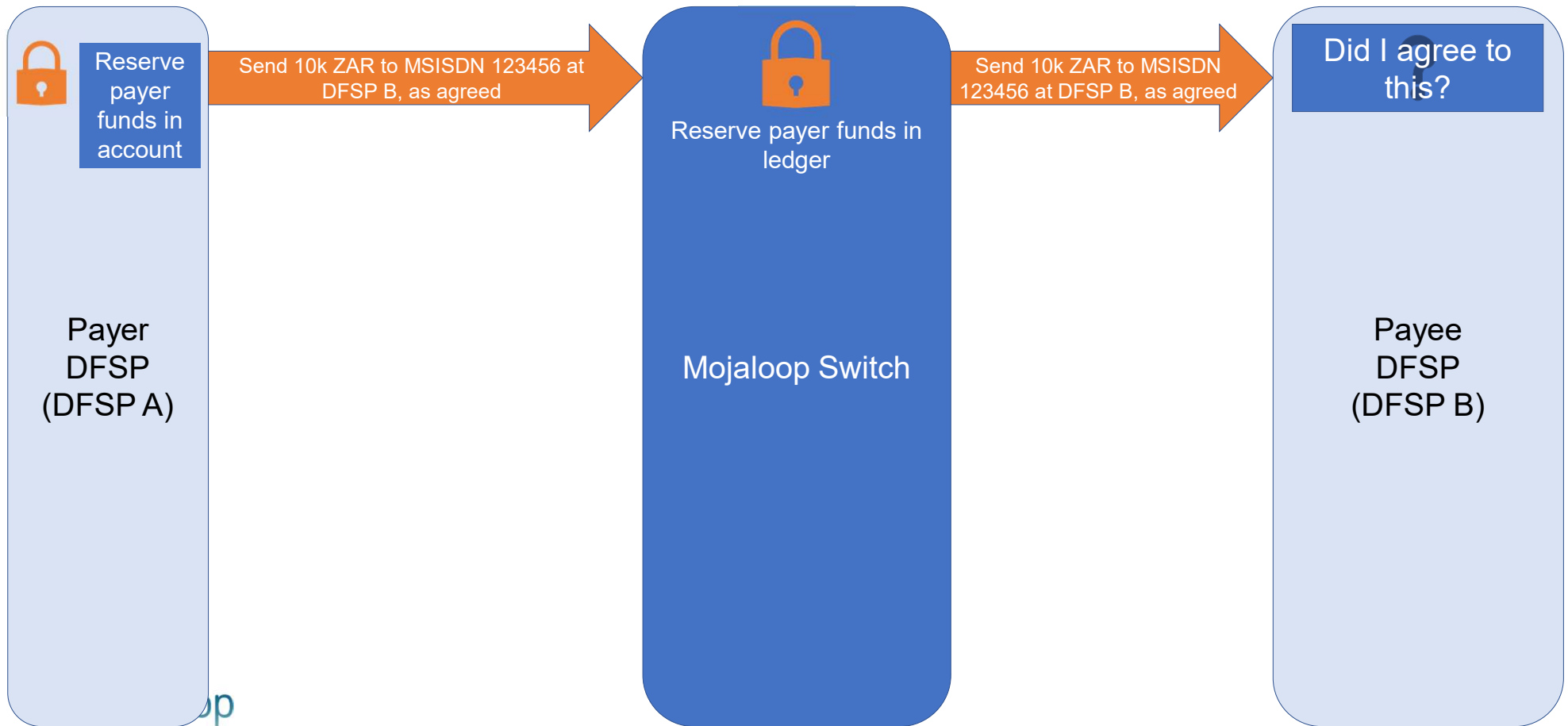
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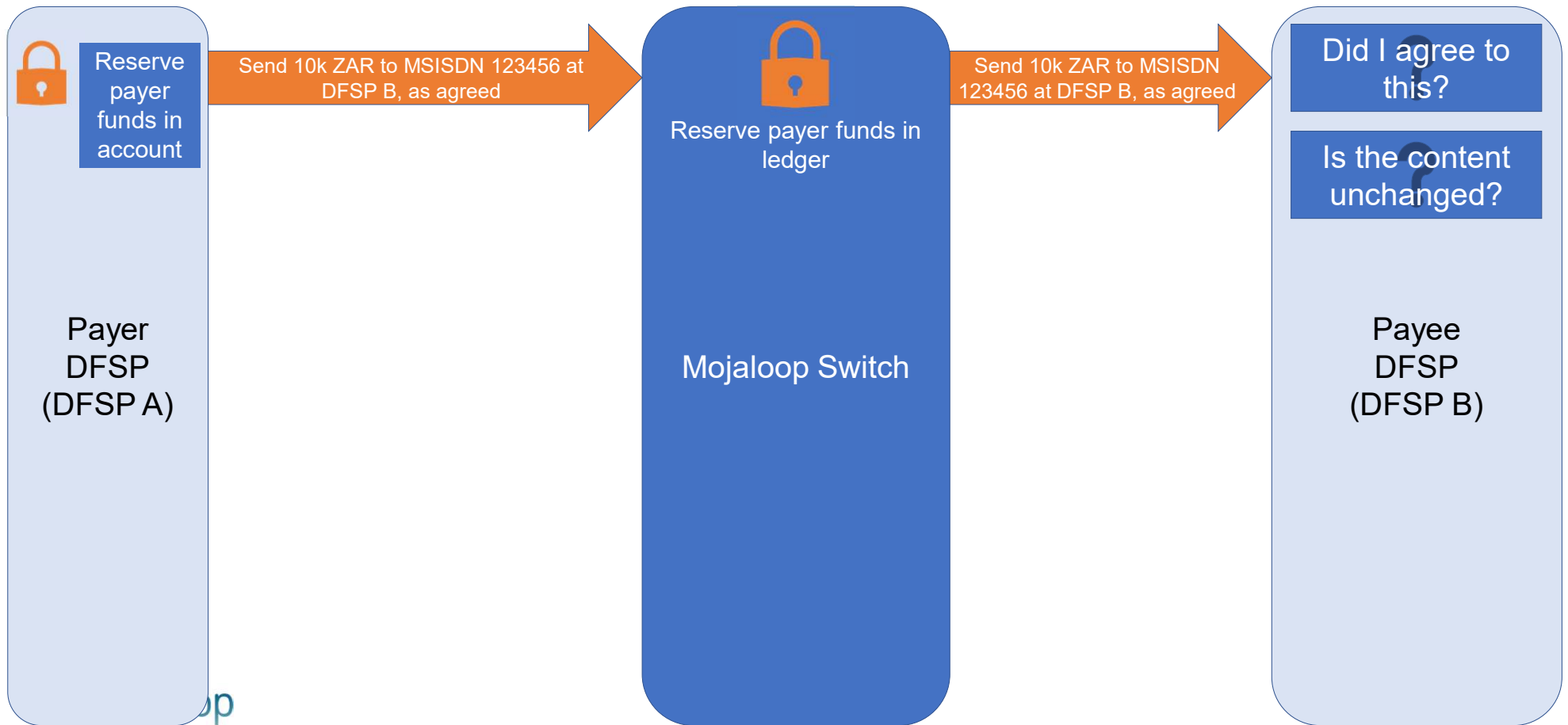
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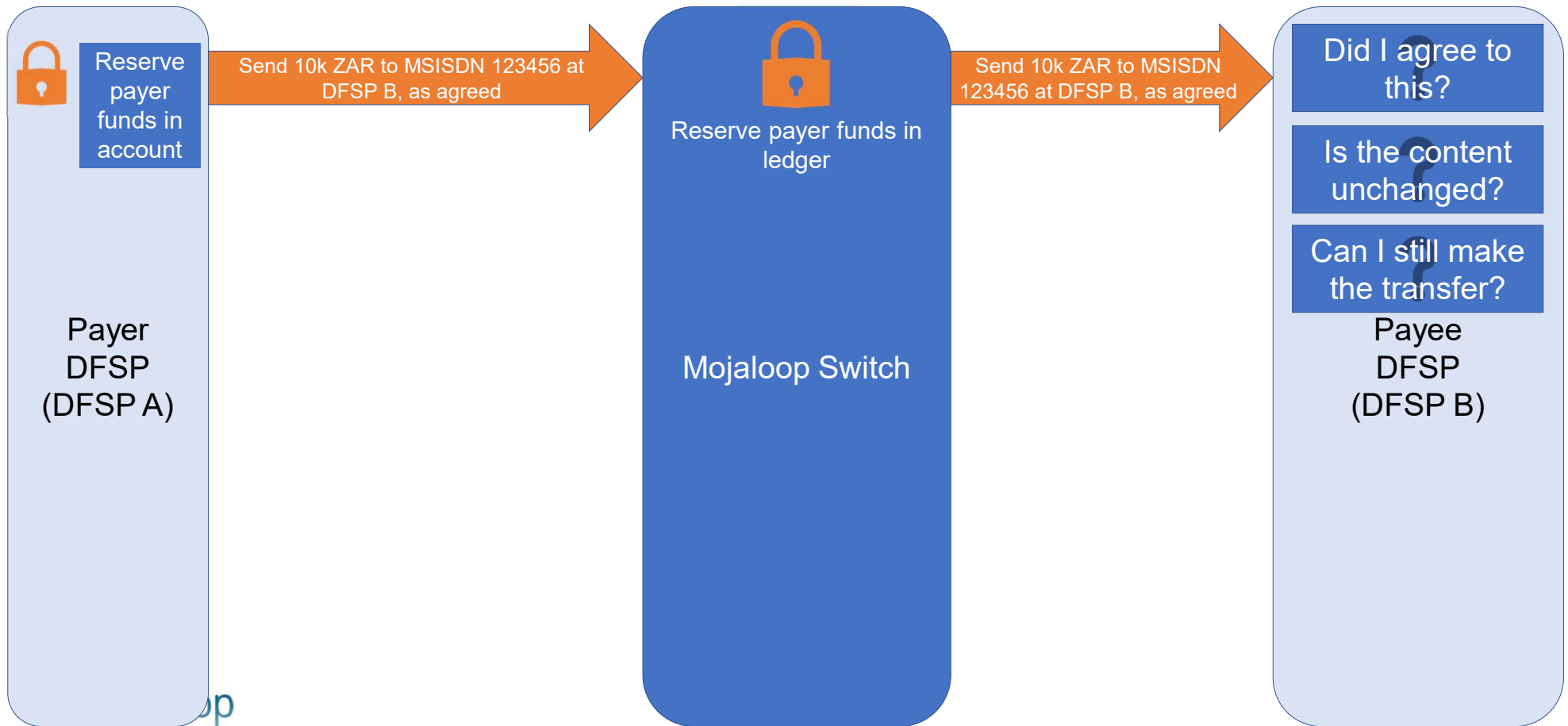
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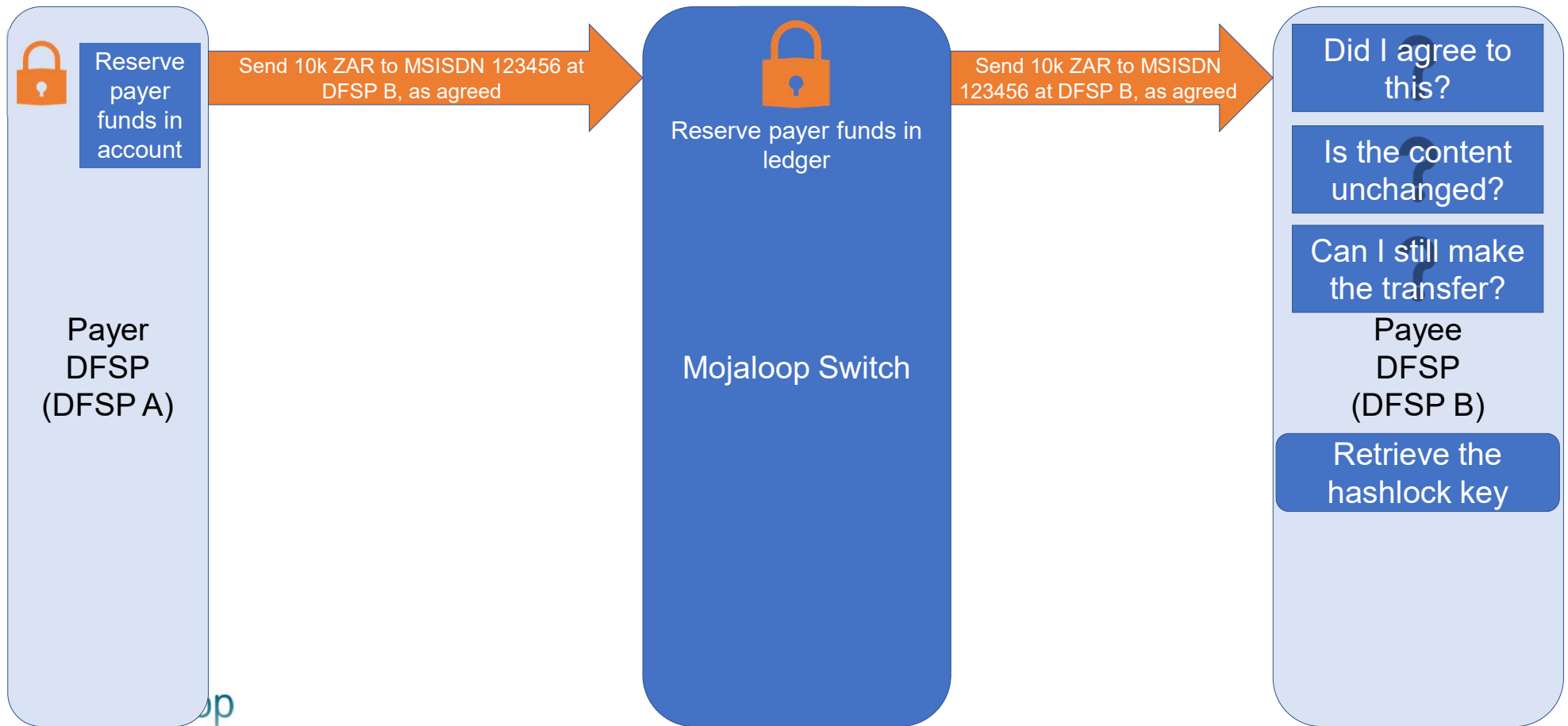
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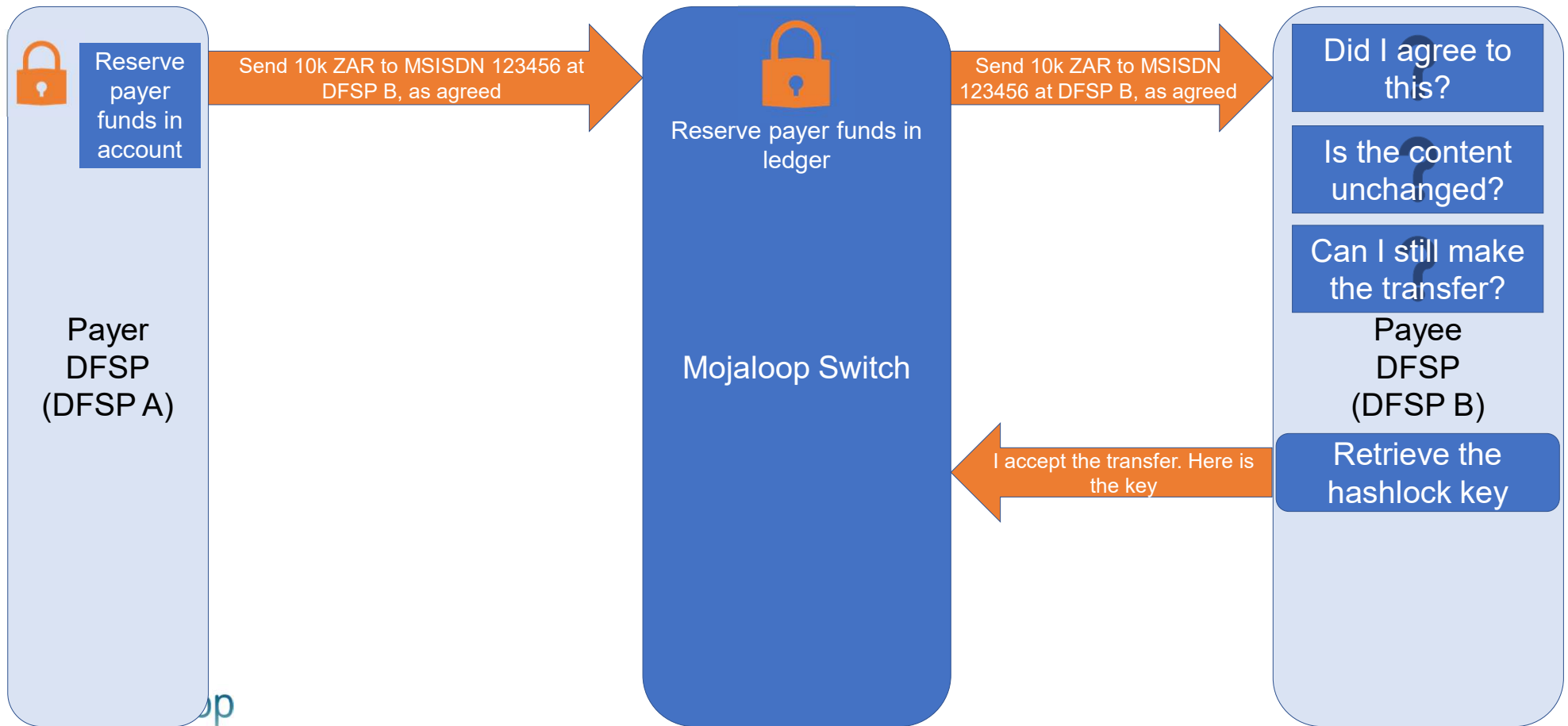
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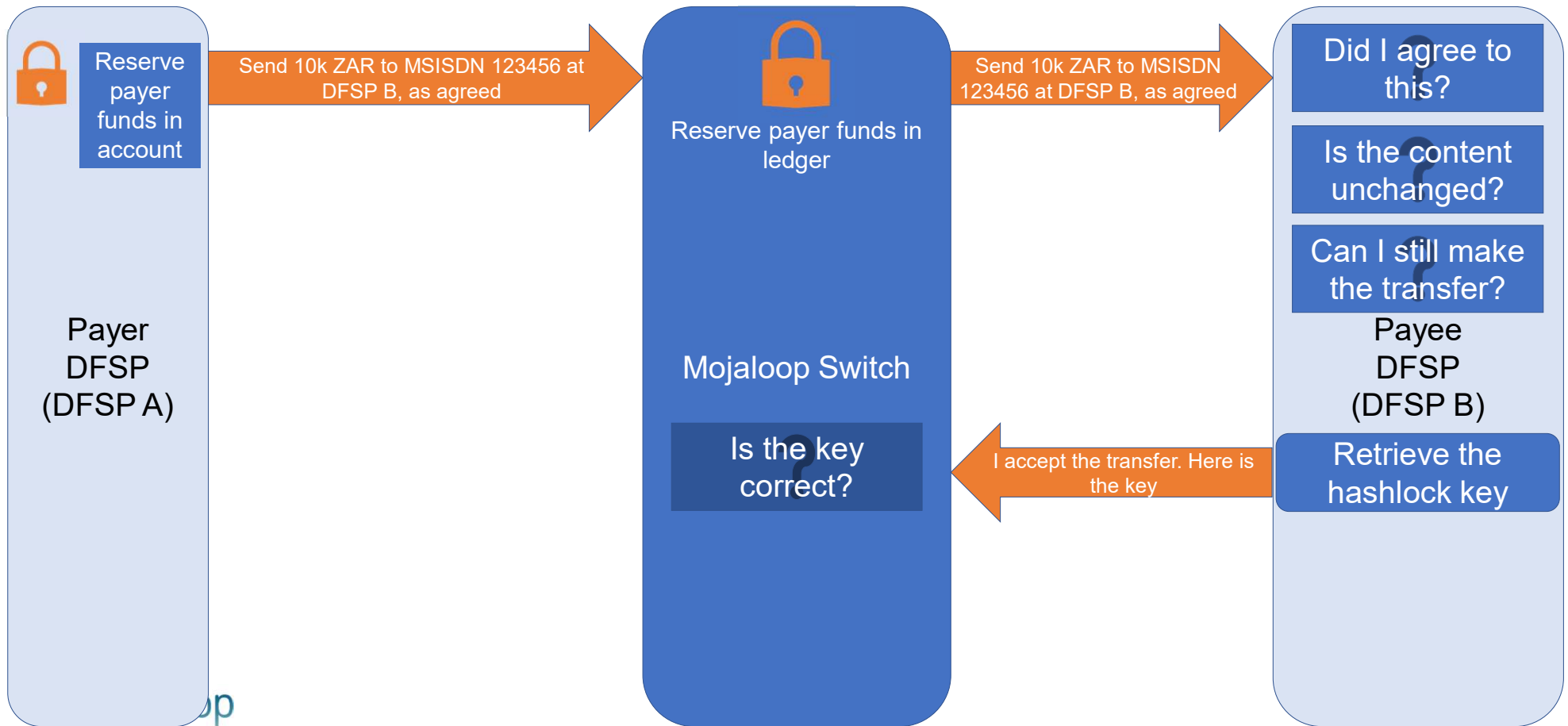
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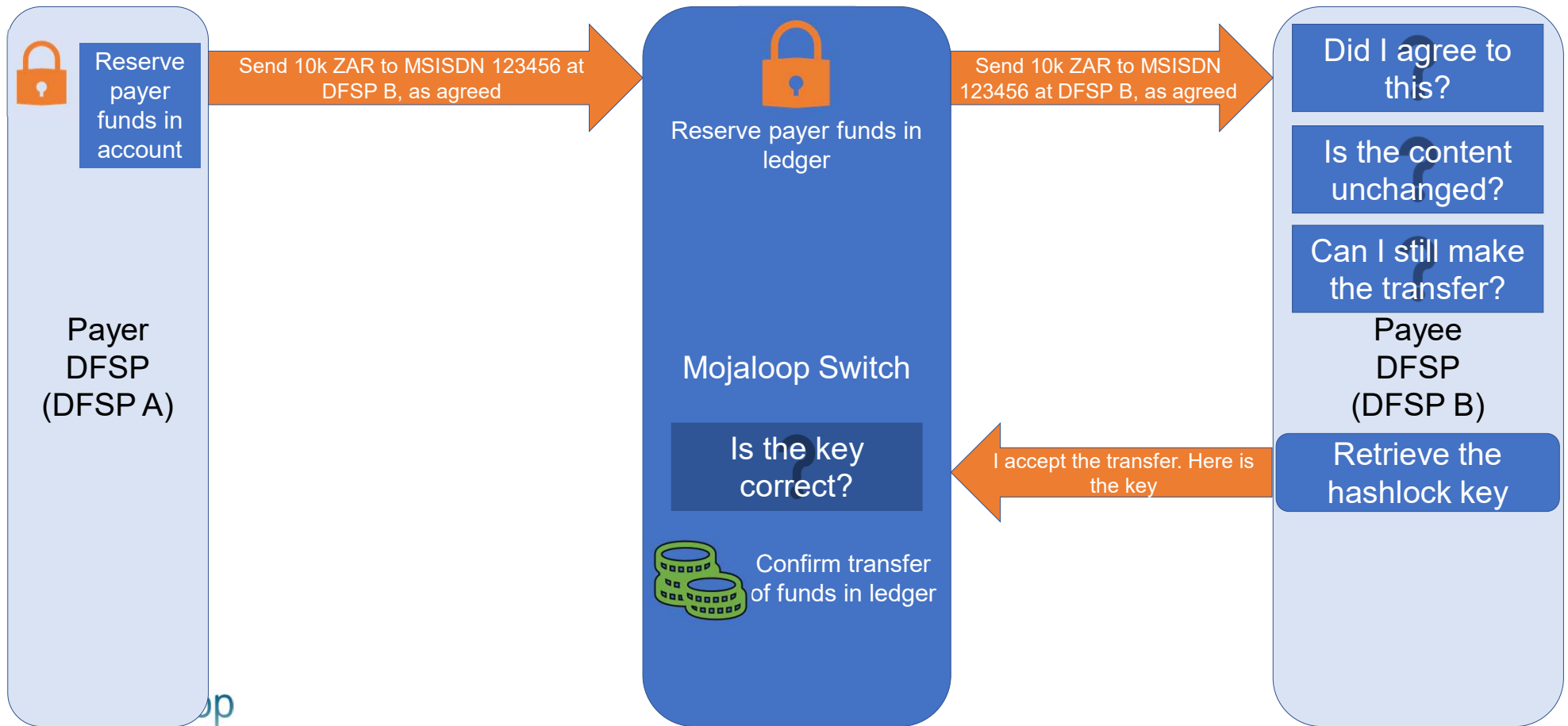
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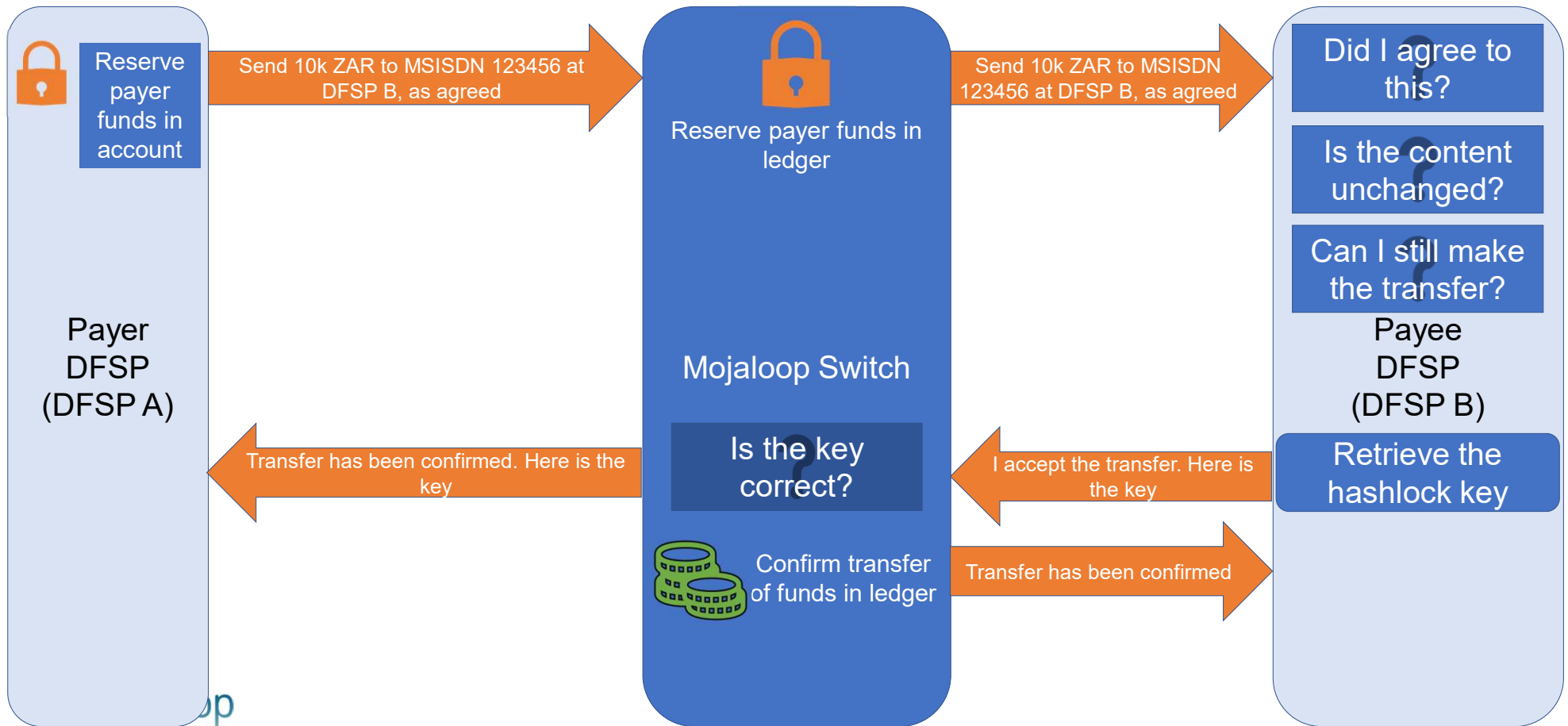
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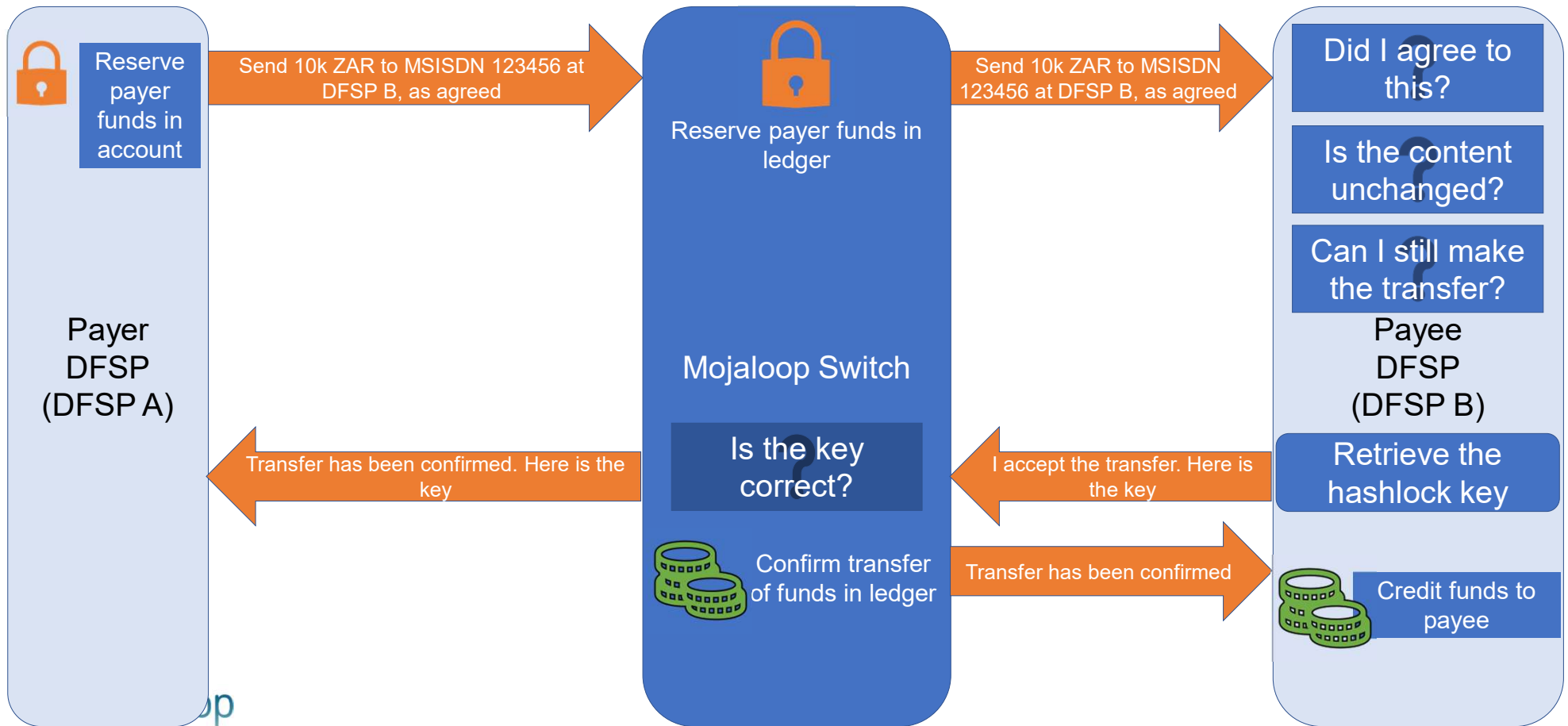
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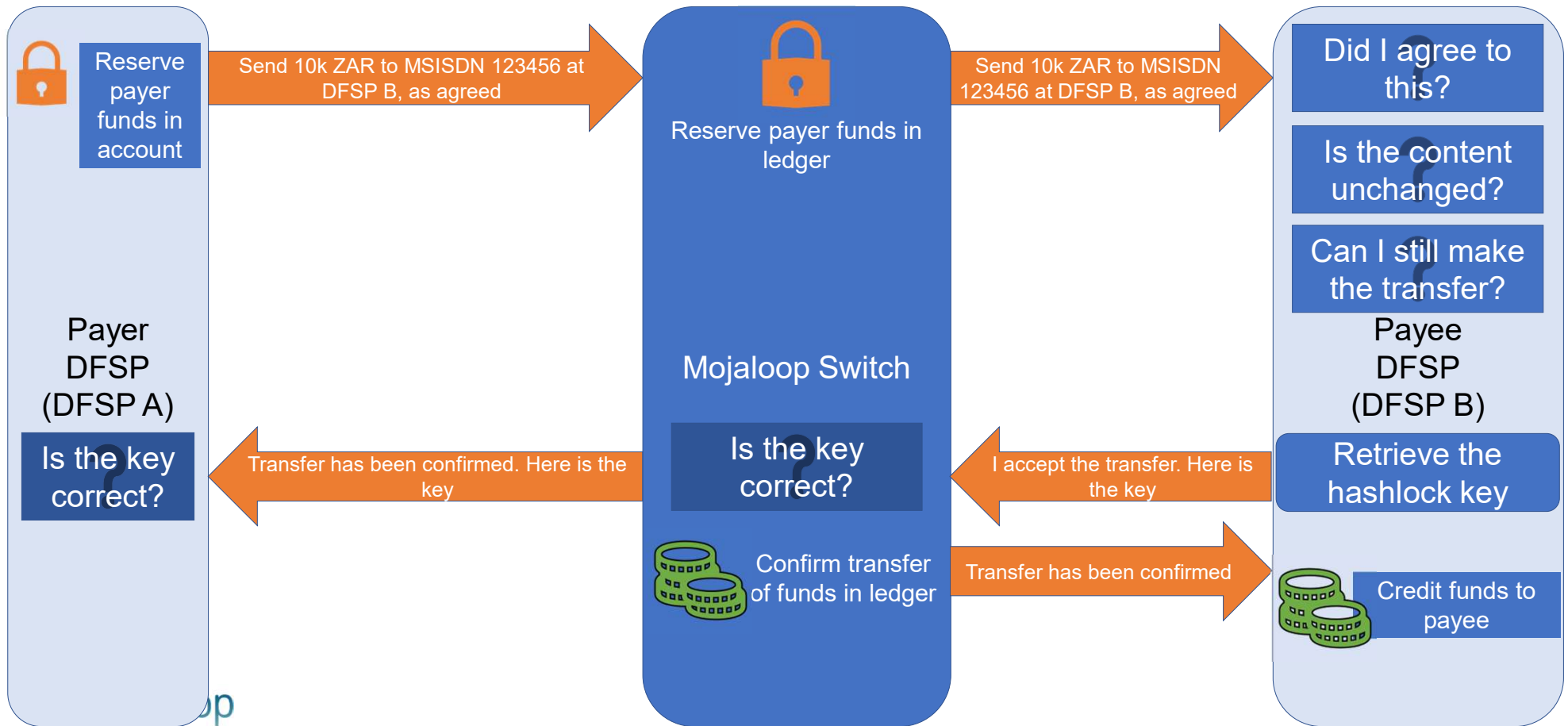
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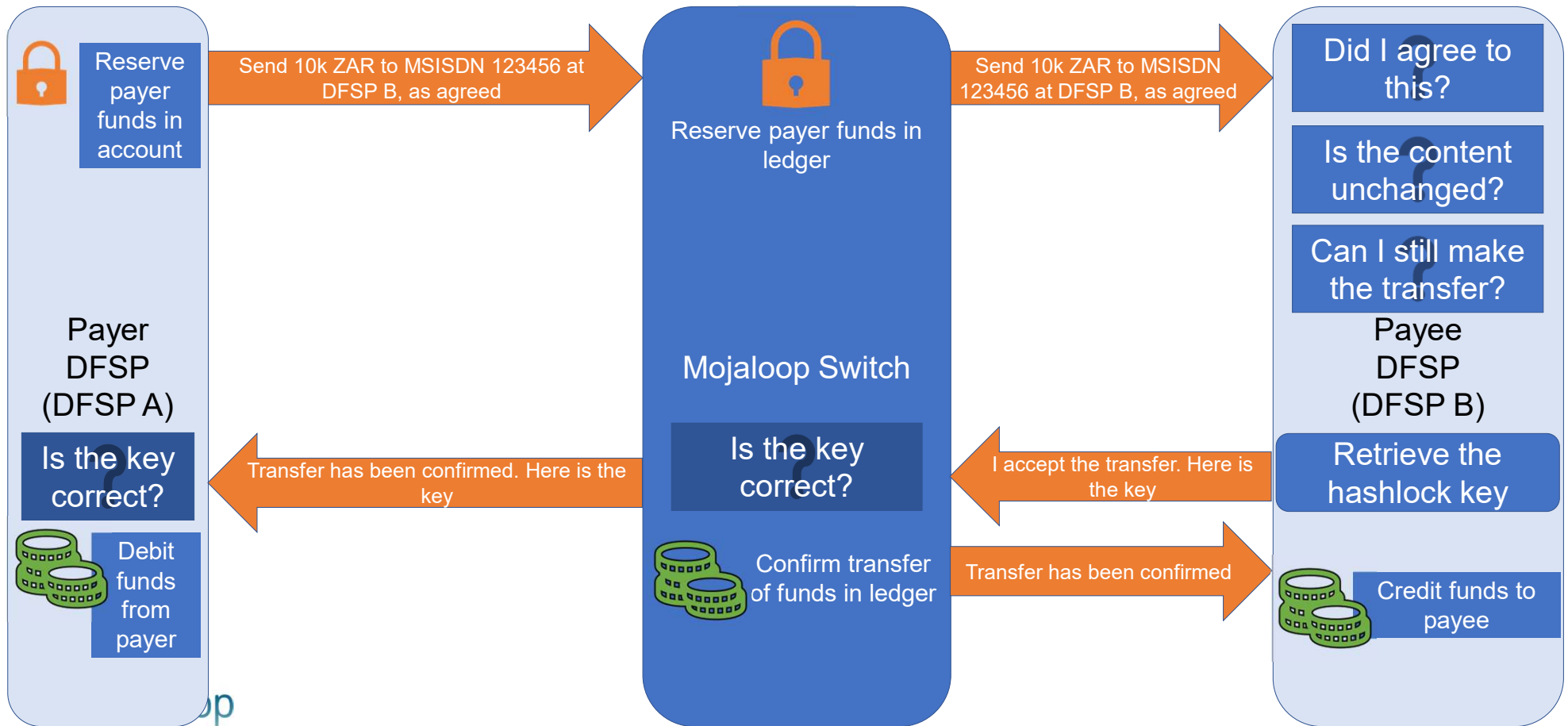
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Transfer



Transfer



Simples...



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