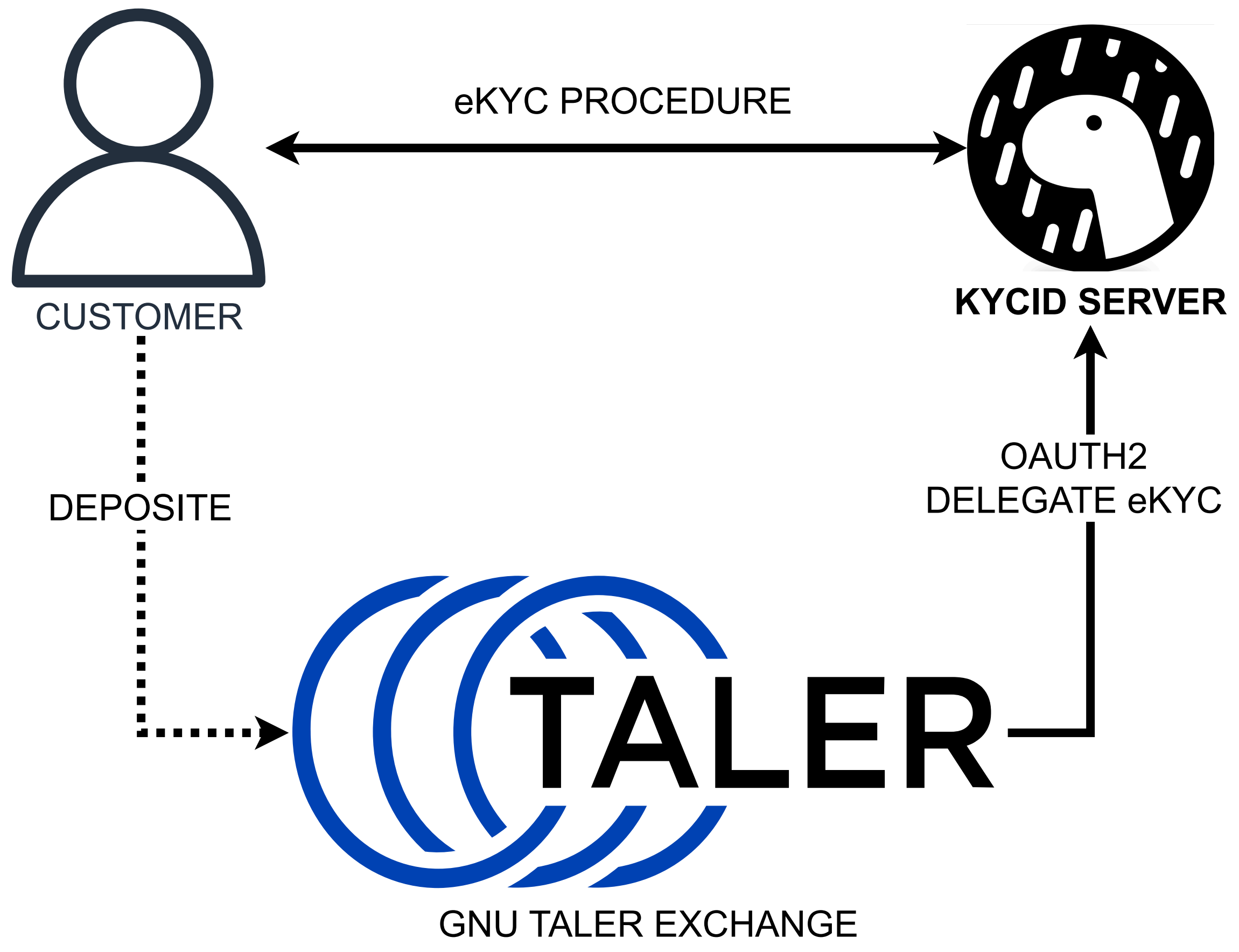


Context

Some services are legally obliged to carry out identity verification (eKYC) in order to comply with regulations.

For example, GNU Taler, a payment platform, requires eKYC to comply with anti-money laundering (AML) laws.

This thesis develops KYCID, an identity verification service that allows third parties to perform eKYC via OAuth2.

KYCID implements two identity verification methods:

- **phone number verification** using a code sent by SMS
- **verification of ID documents** (card or passport) by administrator approval.

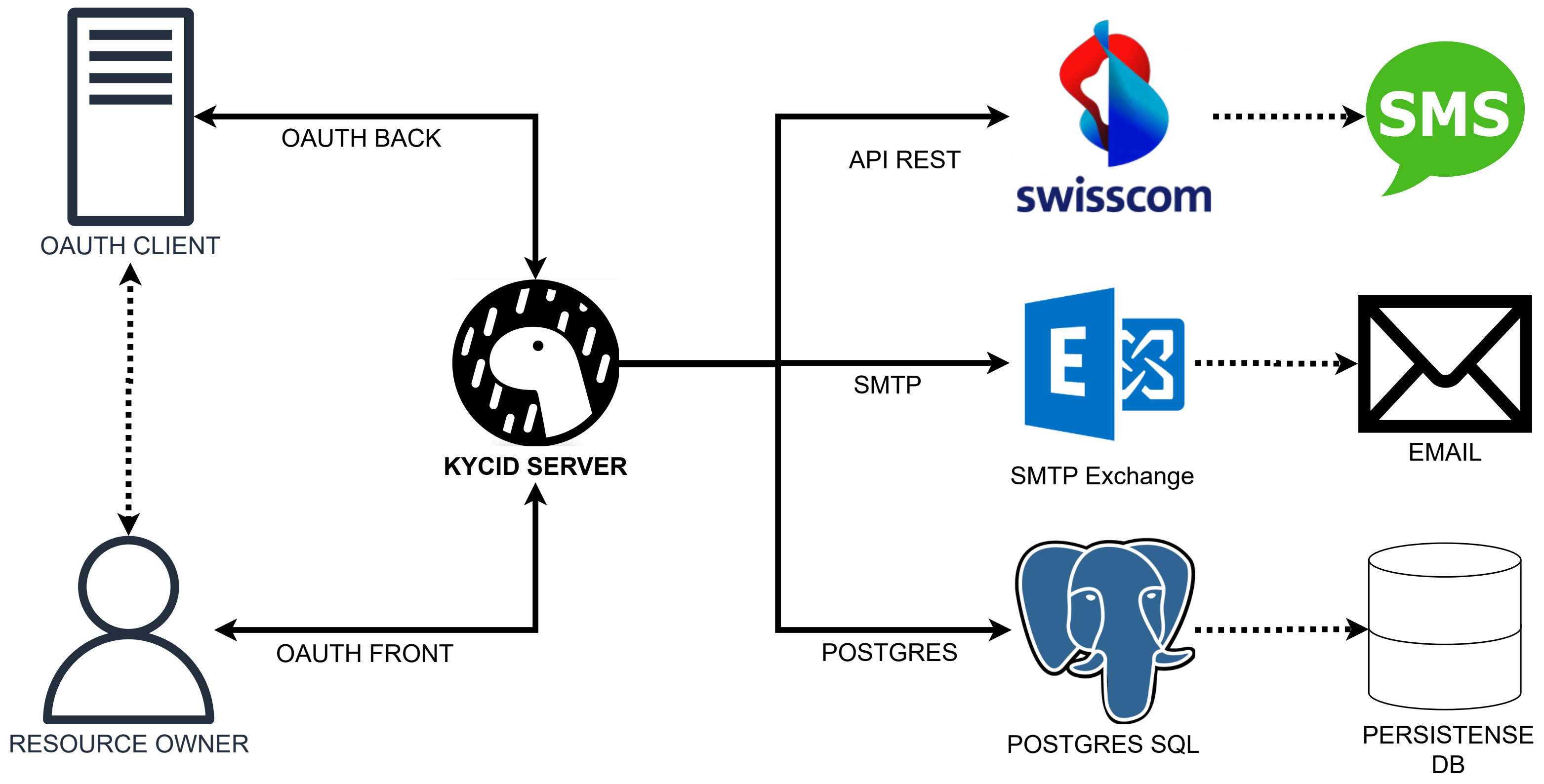
Security

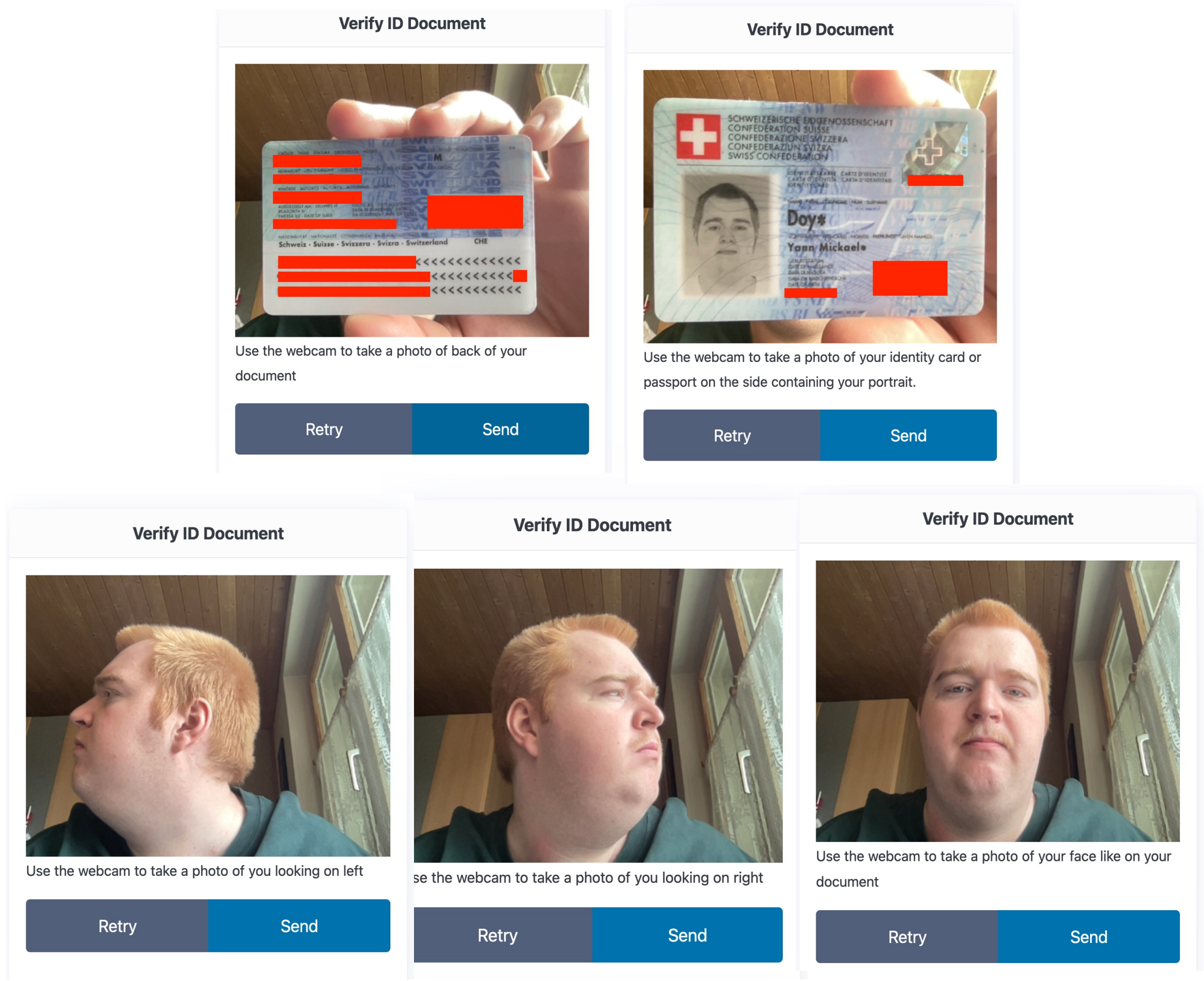
Due to its nature, the project is particularly susceptible to IT security risks. In particular, the OAuth2 protocol, which enables delegated authentication, has been subject to significant attacks, necessitating the implementation of a set of counter-measures in this area.

Goals

The objective is to implement and test an eKYC service and make it production-ready, secure and usable by a technical profile.

Furthermore, it is necessary to integrate GNU Taler Exchange by configuring the OAuth client present in the software in order to demonstrate the application of the project.





Use the webcam to take a photo of back of your document

Use the webcam to take a photo of your identity card or passport on the side containing your portrait.

Use the webcam to take a photo of you looking on left

se the webcam to take a photo of you looking on right

Use the webcam to take a photo of your face like on your document

Results

The implementation of the web service includes the following features:

- A robust login system
- Email verification with a code sent
- Phone number verification using SMS
- Integration of the OAuth eKYC flow
- Administration for verified documents of identity (e.g., passport and ID card)

Conclusion

The project could be enhanced by incorporating the following elements:

- A security audit
- A billing system for the service
- Other identity verification methods
- The use of AI to detect fraud

Berner Fachhochschule
Haute école spécialisée bernoise
Bern University of Applied Sciences

KYCID: KYC-as-a-Service

Bachelor Thesis 2024

Degree Programme Computer Science

Graduate: Yann Mickael DOY
Professor: Emanuel BENOIST
Expert: Daniel VOISARD