

Report

Proof of concept Living Lab Schuldhulpverlening

Implemented by Financieel Paspoort and DigitalMe

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1 Summary

The Financial Passport foundation aims to help people to gain insight in, and control over, their financial situation. As such, they require data from many heterogeneous sources, both in access methods (IAM - Identity and Access Management) as in data disclosure (SI - Systems Integration).

Given the fact that the Qiy Trust Network as initiated by the Qiy Foundation has been promoted as a generic means to achieve both while respecting the privacy of those concerned, it was decided to put this to the test.

This endeavour has resulted in an extension of the Financial Passport App with an open generic data interface; an app that can acquire any financial data from any source that is also connected to the Qiy Trust Network.

Not only has the generic capability been demonstrated to work, but according to the developers it was also easy to realize, but with one notable remark:

'It took some time before we realized what little we had to do.'

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3 Introduction

Financieel Paspoort and DigitalMe share the same dream: making it easier for people with financial problems to get an actual overview of their financial situation. Therefore, they teamed up to lay the foundation for simplifying and improving processes, such as debt assistance, by being able to share these financial data simply and digitally under the direction of the individual.

The common solution is that the individual and the Financial Passport app are connected to the Qiy Trust Network through a Qiy node, as well as the financial relations. After digitally identifying and authenticating themselves once at the relation, the individual can grant Qiy Trust Based applications like the Financieel Paspoort app pseudonymised and standardised access to personal data held by these relations.

The value of the result achieved is the realisation of a secure and permanent link between an individual using the Financieel Paspoort app and an external data source. The result -as described in this report- serves as an example for other parties and will hopefully motivate them to reveal their data in a similar way and under the direction of the individual.

By using the existing and recognised Qiy Scheme, similar projects can also benefit from the experience gained. All results are being published on Github. They help to improve open standards like Qiy Node and Payment-Due-List.

4 Goals of the project

- Prove possibilities to provide individual with personal financial data from an external data source in a simple manner and at a limited cost (FP is connected to Boxtel via Qiy node, 1-time authentication)
- Connecting to an external data source is secure and meets essential privacy requirements
- Scalability - individual:

Once an individual has added a relation to his Qiy network, the individual can easily use available personal data for any app or application.

- Scalability - apps:

Once an app uses the Qiy Trust Network, it can easily gain access to any (type of) data of any individual.
- Scalability - relation (legal entity):

Once a legal entity uses the Qiy Trust Network, it can easily disclose any (type of) data to any individual.

5 Review activities

Financieel Paspoort

- Introduction to the Qiy Trust Network (QTN)
- Integration of QTN dev2 environment with FP development environment
- Development of stateless back-end
- Back-end connection to QTN (using dev2 Qiy Node of Stichting Financieel Paspoort)
- App connection to QTN and back-end
- App creates Qiy Node for individual (credentials stored in the app)
- Import data in FP App

DigitalMe

- Introduction of Qiy Trust Network to FP
- Guiding integration of QTN dev2 with software development environment
- Guiding software development
- Bug fixing
- Improvement of documentation, software & tooling
- Creating and issuing a dev2 Qiy Node for Stichting Financieel Paspoort
- Implementation of End-to-end encryption: from data source to app

6 Results

Financieel Paspoort

- A development Qiy version of the FP App
- Whole circuit implemented
- QTN dev2 environment integrated with FP development environment

DigitalMe

- Experimental end-to-end encryption implemented, see change proposal¹
- Introduced an online test tool and open software for developers²
- Improved technical documentation with respect to:
 - Qiy-Scheme #software-engineers³
 - [Qiy Scheme](#)⁴
 - [Payment Due List](#)⁵

¹ See <https://github.com/qiyfoundation/Qiy-Scheme/blob/topic/free-parameters/end-to-end%20encryption/CP%20End-to-End%20Encryption%20-%20Review%20Guide.md#change-proposal-end-to-end-encryption>

² See <https://github.com/digital-me/QiyTestTool>

³ See <https://github.com/qiyfoundation/Qiy-Scheme#software-engineers>

⁴ See <https://github.com/qiyfoundation/Qiy-Scheme>

⁵ See <https://github.com/qiyfoundation/Payment-Due-List>

7 Future improvements / work in progress

Financieel Paspoort

- Integrate Qiy Trust Network DTAP environments with FP DTAP street
- Develop and go live with a Qiy version of the FP App

DigitalMe

- Contribute to (proposals for) Qiy Scheme, Qiy Trust Network and PaymentDueList
- Enrich and improve the documentation, tools and software for developers and other target groups
- Continue to contribute to change proposal concerning end-to-end encryption

8 Conclusions

Qiy is a paradigm shift compared to the framework developers are used to. It takes some time before developers realise that they don't have to do a lot of work, as the Qiy Trust Network covers a lot of concerns that usually would require a lot of design and development effort, like security, privacy, interoperability, system integration and scalability.

- Very handy to use the Qiy Test Tool
- Provide a Qiy dashboard for individuals
- Being able to access the Qiy Trust Network logs to ease debugging
- Documentation for developers needed to be enriched
- Improve introduction to understand the big picture and flow, especially with respect to system integration: the Qiy Scheme is generally perceived to only apply to (personal) data, but it has been designed to disclose resources and hence can be used for system integration
- Early review mutual expectations and capabilities of tools and infrastructure
- Every new trusted partner has to go through the same steps. Source code for Python, Javascript and Java is available. Still an example standard app would help.