Ralph Dolmans

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- Nordic Domain Days 2018 -

NLNET**LABS**

Internet Standards Platform

Internet.nl

- User friendly way to test **adoption of modern Internet standards**

  - Not exclusively security standards!

- **Create user demand** by creating awareness

- Three categories: **connection**, **website** and **mail**

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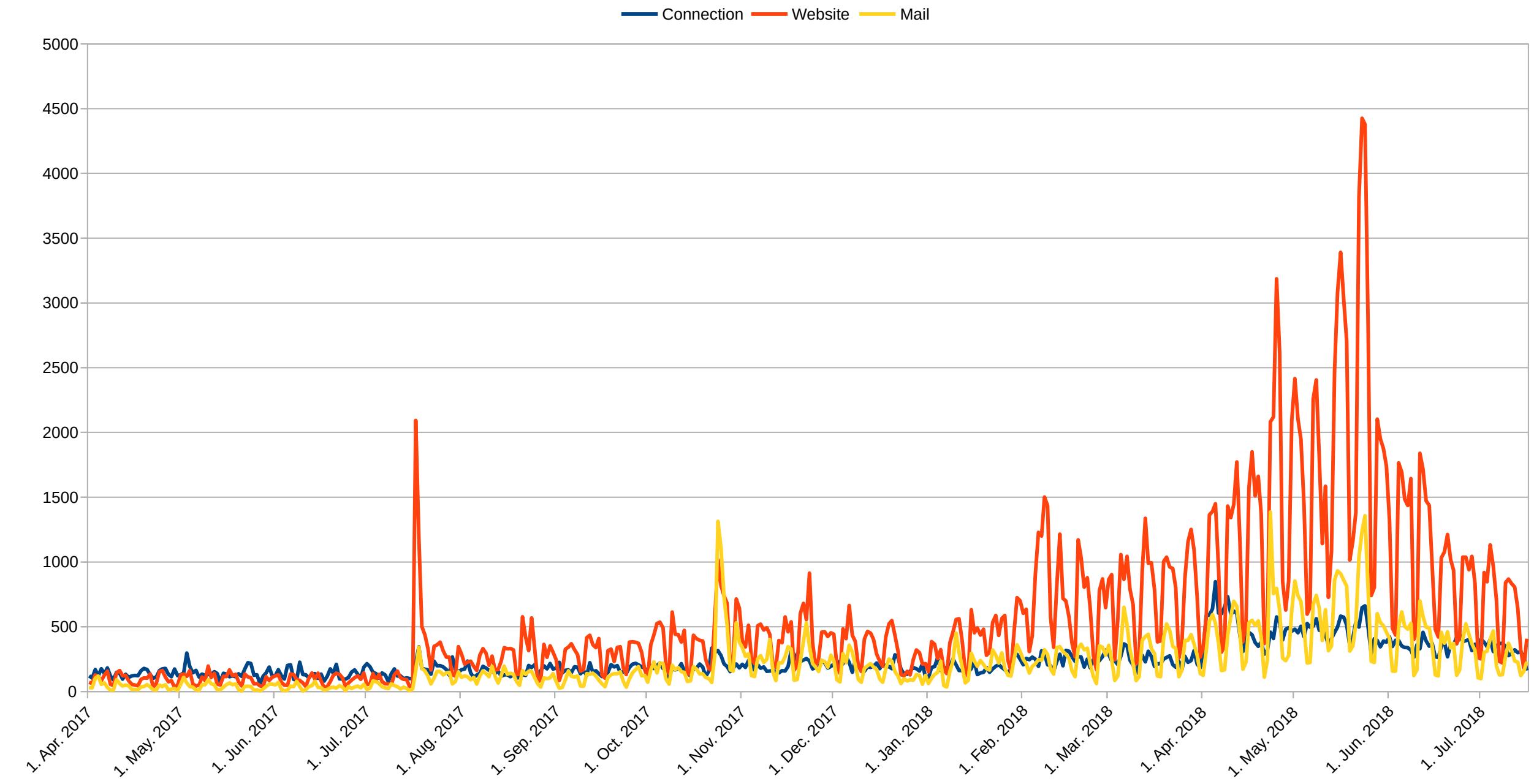
Modern Internet standards

Connection test

- IPv6

- DNSSEC

Website test

- IPv6

- DNSSEC

- HTTPS

- (Application security & privacy options)

Email test

- IPv6

- DNSSEC

- DMARC, DKIM, SPF

- STARTTLS + DANE

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100% scores are possible

- **10k+** unique websites (7.4%)

- **2k+** unique mail domains (4.3%)

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Architecture

Browser

Front-end
Apache, Python,
Django

Custom
name server

Message
Broker
RabbitMQ

Database
PostgreSQL

Cache
Redis

Worker
Celery
Libunbound
OpenSSL (nassl bindings)

https://www.nlnetlabs.nl/

NLNET**LABS**
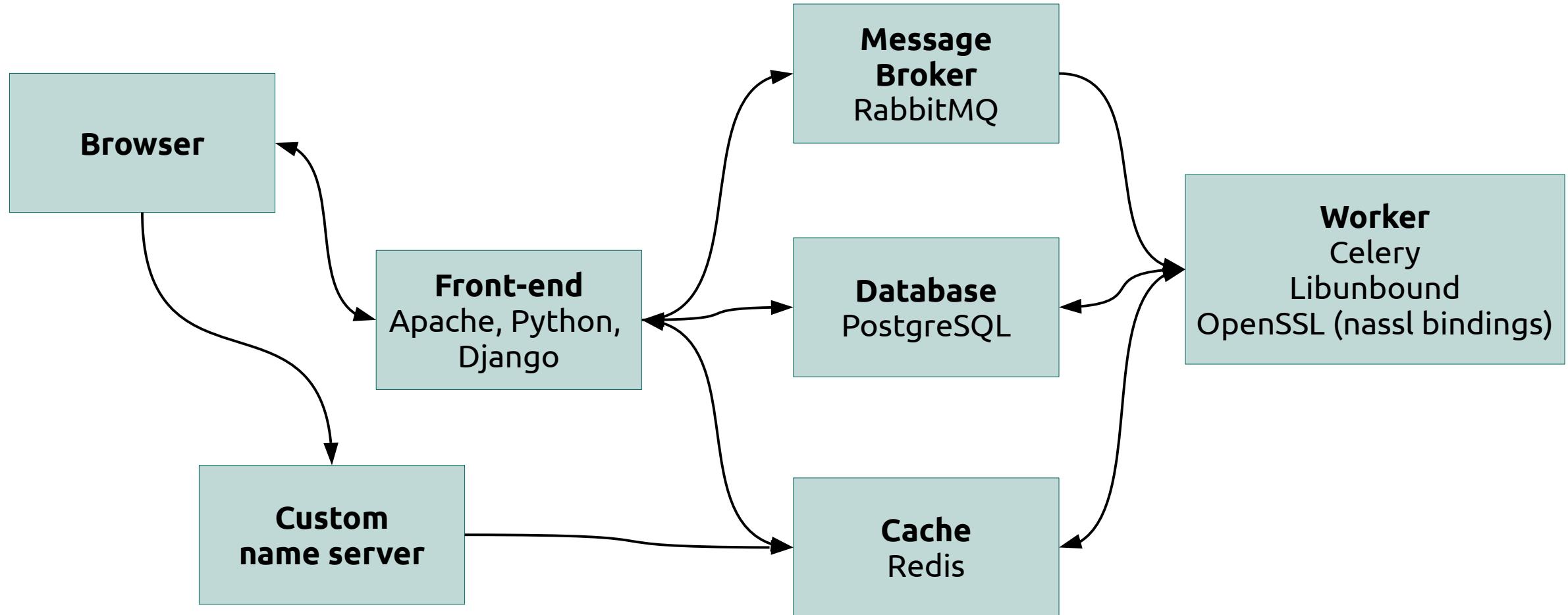
Source available on GitHub

- **Apache License 2.0**

- Happy to receive **pull requests**

- https://github.com/NLnetLabs/InternetNL/

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Batch test

- **RESTful API** for testing large sets of domains

- Periodically test **all Dutch government domains**

- Open for larger audience in the future

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DNSSEC, SPF/DKIM/DMARC adoption

Average adoption per government sector

Legend: Municipalities — Water boards — Provinces — Agencies — Central government

X-axis: Mid 2015, Start 2016, Mid 2016, Start 2017, Mid 2017, Start 2018

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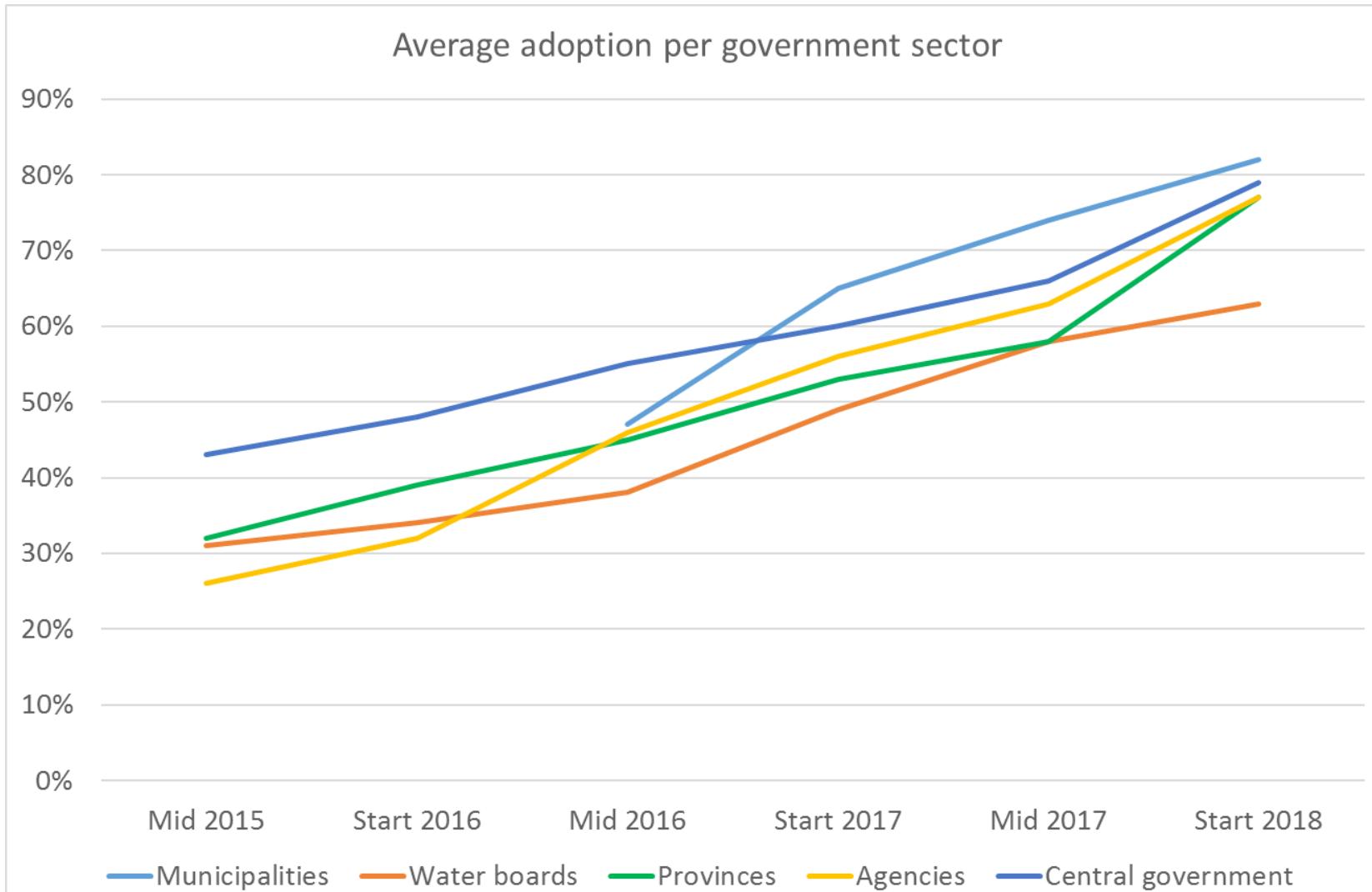
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Adoption mail standards

Gemiddelde adoptie mailstandaarden

https://www.nlnetlabs.nl/
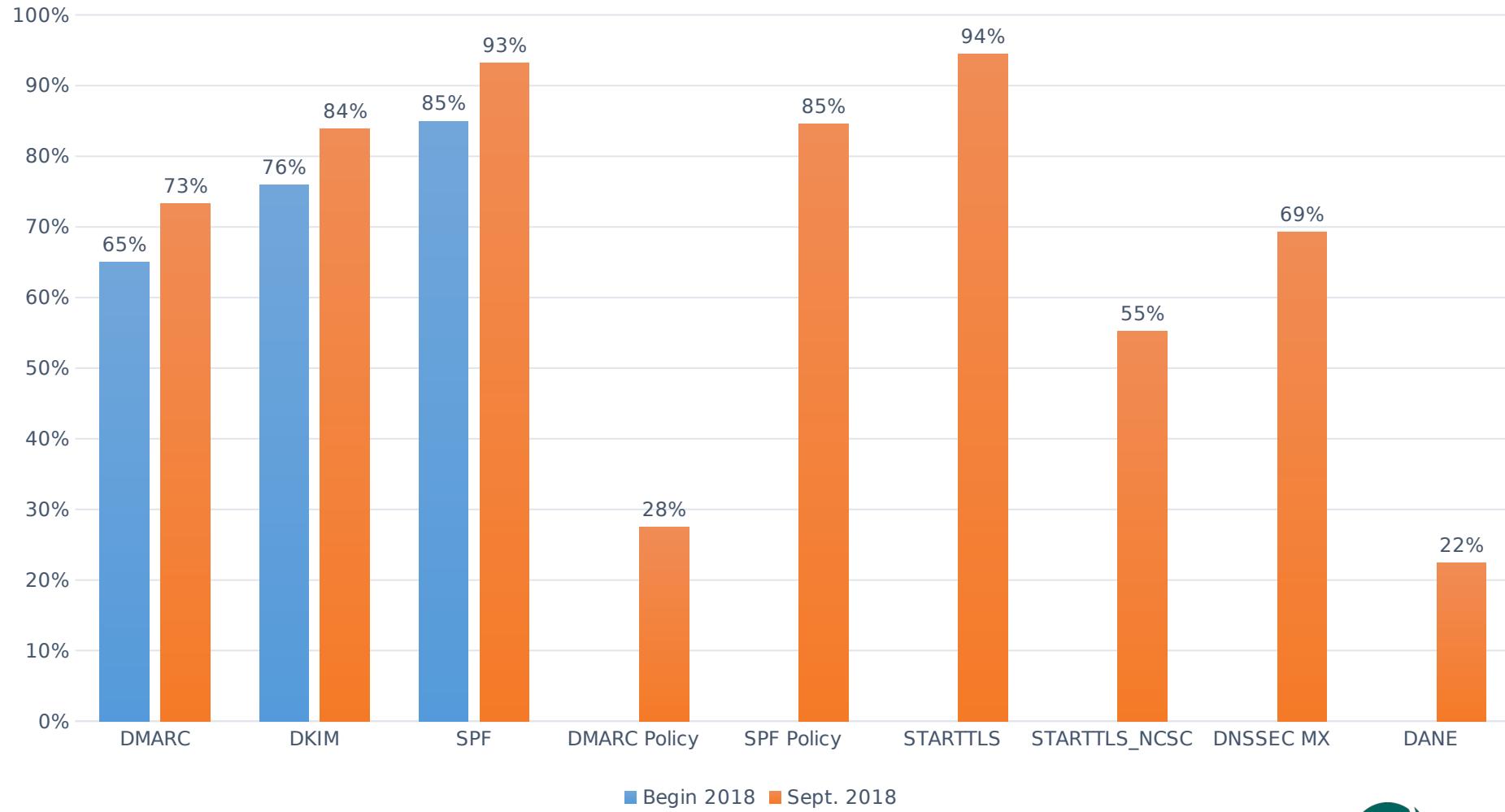
Coming soon

- Verify DKIM and SPF **configuration**

- Verify DMARC, DKIM and SPF **validation**

- Verify DANE **validation**

- **TLS 1.3**

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Questions?

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