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- Nordic Domain Days 2018 -
Internet Standards Platform

https://www.nlnetlabs.nl/
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**
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

https://www.nlnetlabs.nl/
100% scores are possible

- 10k+ unique websites (7.4%)
- 2k+ unique mail domains (4.3%)

https://www.nlnetlabs.nl/
Source available on GitHub

- Apache License 2.0
- Happy to receive pull requests
- https://github.com/NLnetLabs/InternetNL/

https://www.nlnetlabs.nl/
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

Mid 2015  Start 2016  Mid 2016  Start 2017  Mid 2017  Start 2018

- Municipalities
- Water boards
- Provinces
- Agencies
- Central government

https://www.nlnetlabs.nl/
Adoption mail standards

Gemiddelde adoptie mailstandaarden

<table>
<thead>
<tr>
<th>Standard</th>
<th>Begin 2018</th>
<th>Sept. 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMARC</td>
<td>65%</td>
<td>73%</td>
</tr>
<tr>
<td>DKIM</td>
<td>76%</td>
<td>84%</td>
</tr>
<tr>
<td>SPF</td>
<td>85%</td>
<td>93%</td>
</tr>
<tr>
<td>DMARC Policy</td>
<td>28%</td>
<td></td>
</tr>
<tr>
<td>SPF Policy</td>
<td></td>
<td>85%</td>
</tr>
<tr>
<td>STARTTLS</td>
<td>94%</td>
<td></td>
</tr>
<tr>
<td>STARTTLS_NCSC</td>
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<td>55%</td>
</tr>
<tr>
<td>DNSSEC MX</td>
<td>69%</td>
<td></td>
</tr>
<tr>
<td>DANE</td>
<td>22%</td>
<td></td>
</tr>
</tbody>
</table>

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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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