DNS at NLnet Labs

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Outline

- Mission
- History
- Our Methodology
- For TLDs relevant Tools
- Support etc
- Current plans
- The open Source dilemma

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Mission NLnet Labs

To provide globally recognized innovations and expertise for those technologies that turn a network of networks into an Open Internet for All

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NLnet Labs History

- Founded by NLnet Foundation
- Not for profit organisation (ANBI)
- Live by Donations
- Want stable long term base

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Methodology

- UNIX Background
  - Tools based solutions
    - "Do one job at a time and do that well"
    - Don't make policy decisions for the operator
- Employable reference implementations
  - Special wishes on request
- Industry quality code
- There are things we don't do

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Relevant Tools

- NSD — Authoritative Name Server
- LDNS — Library to manipulate DNS data
  - Tools based on LDNS — Drill, Dns-key-gen etc.
- OpenDNSSEC — To maintain dnssec keys and interact with HSM etc

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NSD History

1. Precompile all
   - very stable zones servers — root servers
2. DNSSEC added
   - and some support for “unstable” zones — TLDs
3. More support for dynamic zones — ISPs
4. Lot’s of zones, more operator friendly
   - Compilation as an option

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LDNS

- Library to manipulate DNS data
- Some tools using the library
- Inspired by Perl NET::DNS
- C for Speed
- Now with Python and Perl(!) bindings

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Other Tools/Projects

- Unbound
  - Recursive, caching, and validating name server
- Engrid
  - Routing policy engine
- Get-dns API (with Partners)
  - More detailed dns into to applications
- Perl Net::DNS

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Random Ideas

- Masterdont — Provisioning engine
- Credns — pre publication checking

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Support

- Third parties are doing and user support, consulting, courses, packaging etc.
- Direct flexible support via OpenNetlabs
  - Speak to Han Brouwers
- Specialised services

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Future (NSD) Plans

- Outgoing XFR
- Per zone statistics (optional)
- Better interface with OpenDNSSEC
- Lots of TCP streams

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Open Source Dilemma

- Free as in Free Beer
- Beer Barrels are not infinite
- Standards evolve
  - Tracking standards does have it's costs
  - Requires long term commitment (and funding)

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Questions

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http://www.nlnetlabs.nl/

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References

Han Brouwers <han@NLNetLabs.nl>

NLnet Labs <www.nlnetlabs.nl>

OpenNetlabs <www.opennetlabs.com>

Unbound <www.unbound.net>

OpenDNSSEC www.opendnssec.org

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