DNSSEC ready registry system

DNSSEC Workshop

Ondrej Filip • ondrej.filip@nic.cz
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CZ.NIC, CZ.NIC Labs

- About 1M domains, ~40% DNSSEC signed
- Not just domain registry for .cz
- R&D department – CZ.NIC Labs
- Projects for the good of the Internet
- BIRD, DNSSEC Add-on, Knot DNS, ...
- Check http://labs.nic.cz
- Registry software FRED
What is FRED

- Open source registry software running .CZ developed by CZ.NIC
- Based on open source tools - postgresql, apache, omniorb
- Running .CZ production since October 2007
- Features: registrars, EPP, zonefile generation, whois, DNSSEC
- Modularity and speed (main part in c/c++)
- http://fred.nic.cz
Deployments

- Currently deployed
  - Czech Republic
  - Angola
  - Tanzania
  - Faeroe islands
  - Costa Rica
  - Estonia
  - Albania
- In preparation
  - Macedonia
  - Malawi
DNSSEC support

- Crypto material manipulation and storage – using EPP through registrars
- Zone generation – DS records – zone signing
- Periodical signature validity checking – DS records removal for domains with bogus signatures - to help validating ISPs
- DS record vs DNSSEC key – bulk signing support, may be shared among many domains
Data structure

Keys can be reused!
Other DNSSEC tools

- Browser DNSSEC addon – Firefox, Chrome, IE
- DNSSEC hardware tester
- DNSSEC HTML widget
- DANE patrol
- Knot DNS
- Check http://labs.nic.cz
Thank You!

Ondrej Filip  •  ondrej.filip@nic.cz  •  http://www.nic.cz  
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