

DNSSEC ready registry system

DNSSEC Workshop

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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



F R E D

- 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



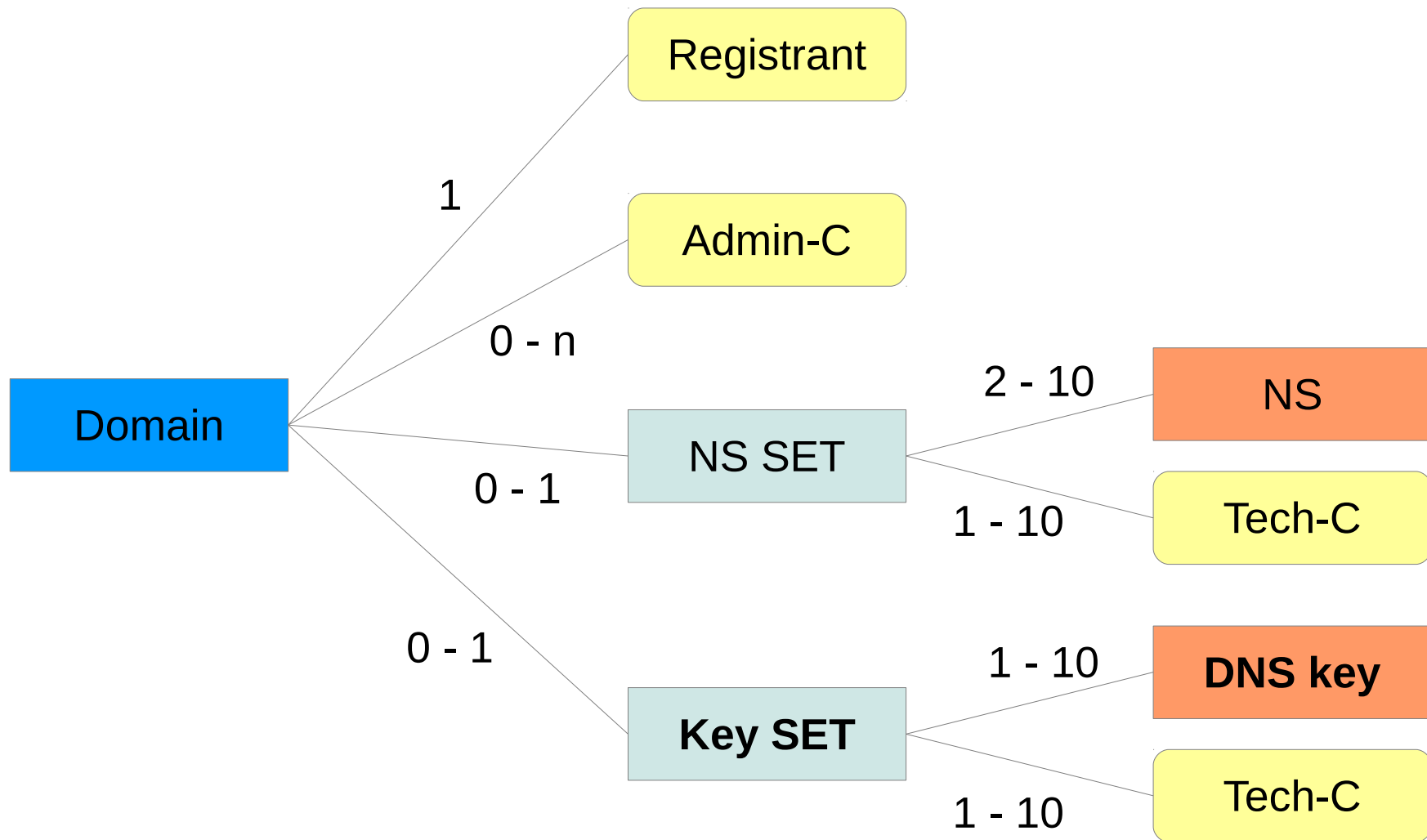
DNSSEC support



- 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



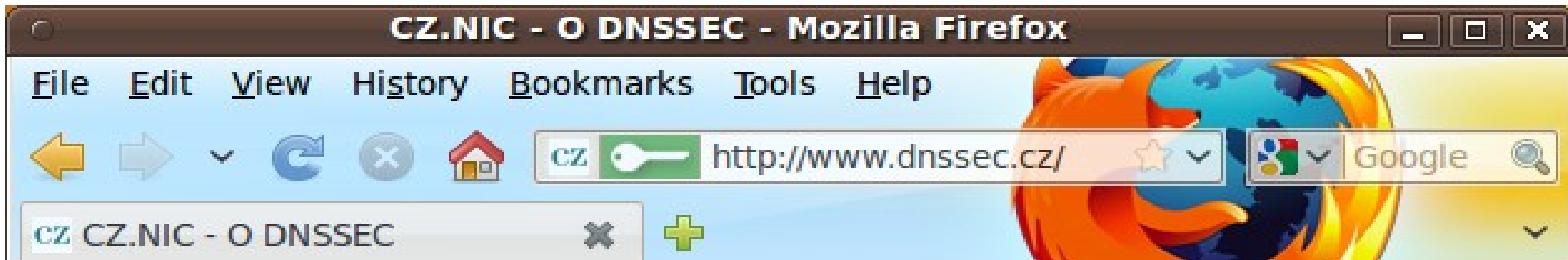
Keys can be reused!

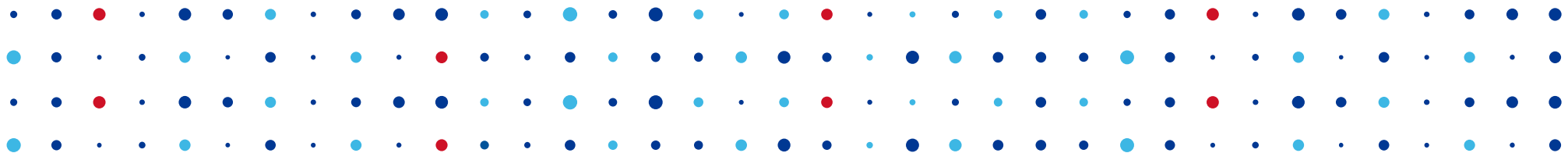


Other DNSSEC tools



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





Thank You!

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