

FRED

and other projects from CZ.NIC

CZ.NIC z.s.p.o.

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Agenda

- CZ.NIC and it's development teams
- FRED – domain registry
- MojID – identity provider
- Knot DNS – DNS authoritative server
- BIRD – routing daemon

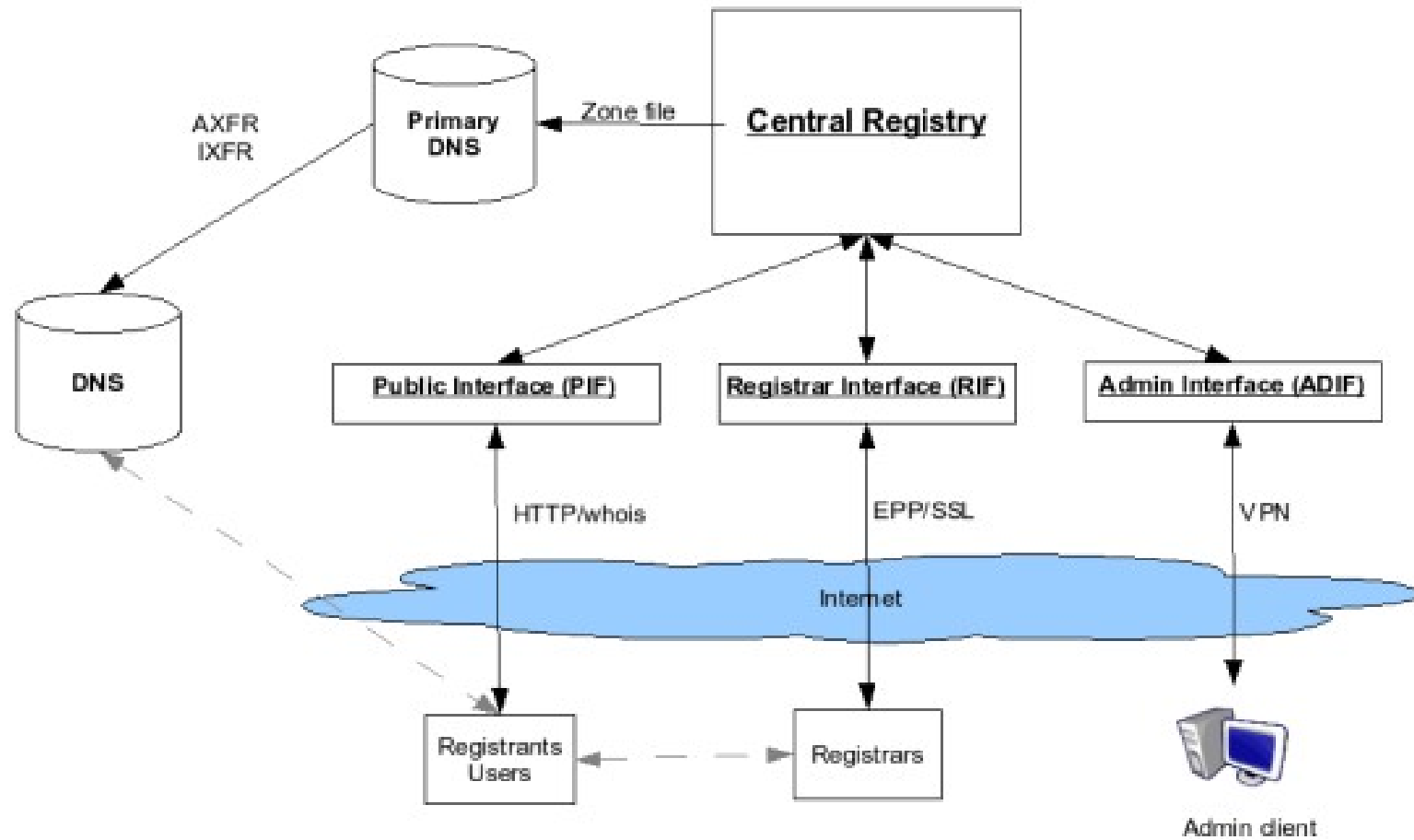
CZ.NIC

- Domain registry for .cz and 0.2.4.e164.arpa
- Founded 1998
- Reborn 2006-2007
 - Change from outsourcing to inhouse model
 - FRED developed by 5-6 developers (now 8)
- CZ.NIC Labs established 2009
 - Another 5 developers (now 10)
 - Mainly projects for the good of the world :-)
- Almost everything we do is open source

FRED - overview

- Complete open source domain registry solution
- Managing .CZ since 2007
 - ENUM (0.2.4.e164.arpa) domain since 2006
 - Almost 1 000 000 domains, 1/3 dnssec signed
- Deployed in several other TLDs
 - Angola (.AO), Tanzania (.TZ), Faroe Islands (.FO), Costa Rica (.CR), Estonia (.EE)

FRED - schema



FRED – features (1/2)

- Registry – registrar – registrant model
- Registration object - contacts, domains, nameserver sets and key sets
 - With full history of changes
- Zone file generation
- Email notification of contacts
- Billing (prepaid & postpaid)
- Technical checks of delegations

FRED – features (2/2)

- EPP – extended to support sharing of nameservers and keys
- WHOIS – port 43 and web whois
- DNSSEC – DNSKEY registered and DS generated into zonefile
- IDN – without character sets checking

FRED – interested?

- Website <http://fred.nic.cz>
 - Download software
 - Try demo instance
 - Subscribe to mailing list
- FRED workshop
 - June 24, 2012, Prague, CZ.NIC offices
 - Prior to ICANN 44 meeting
 - Features, installation, configuration, customization

MojeID

- Single sign-on service using verified contact in registry
 - How to get the most value from contact information we maintain?
 - Contact verification (SMS, Email, Letter)
 - SSO using OpenID
- Primary authentication system for our communication with public
- 50 000 verified users, thousand of web sites
- <http://www.mojeid.cz> - no code released yet 9

BIRD

- Routing daemon
 - Alternative to Quagga
- For Linux, *BSDs
- BGP, OSFP, RIP, IPv6 RA
- Widely used
 - In major exchange points as route server
 - In anycast DNS for .CZ as router
- <http://bird.network.cz>

KNOT DNS

- Authoritative-only DNS server
 - Alternative to BIND and NSD
 - AXFR, IFXFR, TSIG, DNSSEC (NSEC3)
 - Runtime zone addition/removal
- For Linux, *BSDs, Mac OS X
- Testing for .CZ - going to production expected in few month
- <http://www.knot-dns.cz>

Questions?

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<http://www.nic.cz>

<http://labs.nic.cz>