

Registry Object Locking In FRED

Jaromir Talir • jaromir.talir@nic.cz • 23.06.2014



Why to speak about registry locks again?

- Domain hijacking is still an issue
- Only 1/3 of European ccTLD registries has this feature according survey in Oct 2013
- Registry object locking is/should be a **feature of registry software** – in FRED since 2008
- **New registrant interface** in .CZ - Sep 2013
- **Administrative locking GUI** in FRED – Jan 2014



What is registry lock

- Protection against EPP changes of objects in registry issued by **Registrar**
- **Registrant** (as the requester) must use different channel than EPP
- Protection is set by the **Registry** after proper authorization of request



What is FRED

- Open source domain registry software – <http://fred.nic.cz>
- Developed and used by CZ.NIC since 2007
- Used by other countries: Angola, Tanzania, Costa Rica, Faroe Islands, Estonia, Albania, **Macedonia (since Jan 2014)**
- Version 2.18 – July – Better contact validation
- Version 2.19 – August – RDAP protocol



Registry object locking in FRED

- Entry point is the web form
 - Can be integrated into registry website
 - Template can be customized
- Requester must fill:
 - What changes should be blocked
 - Object handle and type
 - Means of requester authentication



Registry object locking in FRED

Request:

Blocking of all changes

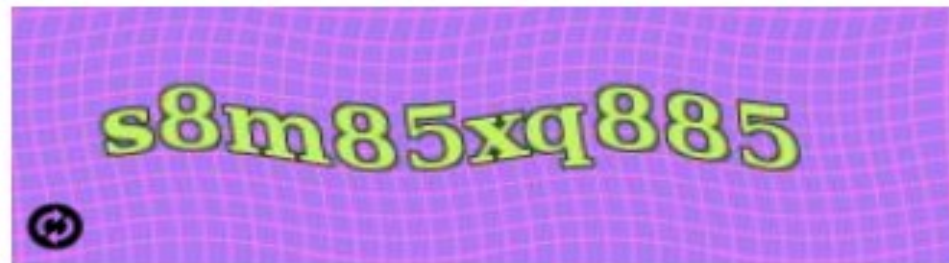
Object type:

Domain

Handle:

Confirmation method:

E-mail signed by a qualified certificate



Security code (retype from image):

Send



Registry object locking in FRED

- Two levels of protection:
 - Only transfer to other registrar
 - All changes of object data
- Locking is possible for all registry objects
 - Domain
 - Contact – registrant, admin-c, tech-c
 - NSSet – collection of NS information
 - KeySet – collection of DNSKEY information



Registry object locking in FRED

- Object “owner” can authorize request
 - Domain -> registrant, admin-c
 - Contact -> contact itself
 - NSSet, KeySet -> tech-c
- Authentication means
 - Letter with notarized signature
 - Email with digital signature based on official CA certificate

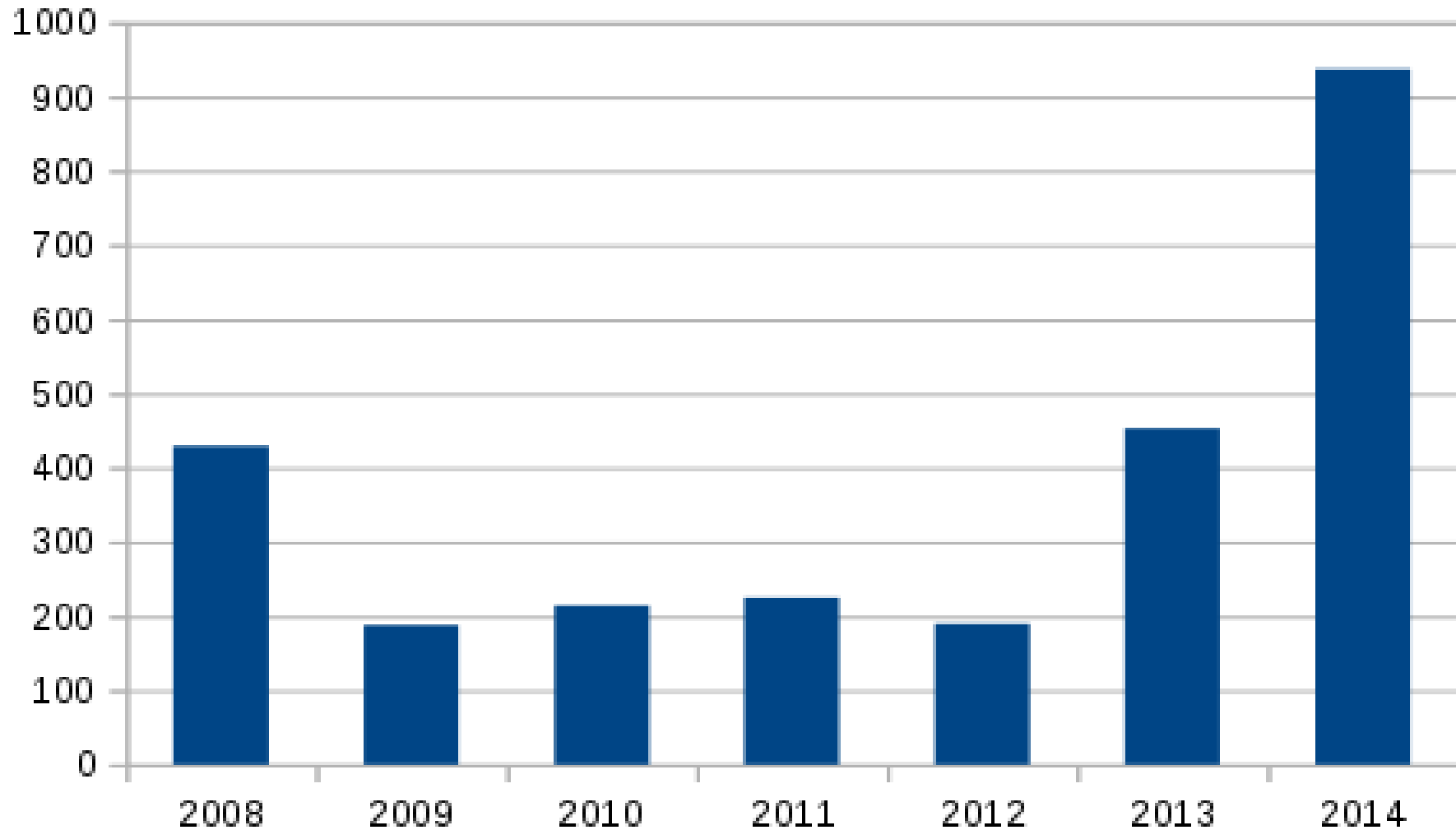


Registry object locking in FRED

- After submitting request, requester provides authentication to our client center operator
- Client center operator verifies authentication and confirms lock setting through web administration interface
 - Despite manual procedure, service is free of charge
- Registrar will receive “Object status prohibits operation” EPP response
 - Anyone can see ServerTransferProhibited and ServerUpdateProhibited status in WHOIS



Registry object locking in FRED



Domain browser

- New **registrant interface** into registry - <https://domenovyprohlizec.cz>
- Integration of **registry** and our identity service **mojeID** - <https://mojeid.cz>
 - MojeID is the internal registrar only for contacts
 - Data of those contacts are validated
 - Providing those contacts web authentication (password, ssl certificates, two factor authentication)



Domain browser

- Provided that we have validated registrant through mojeID service, we can offer him direct services of registry
 - Cross-registrar view of owned objects (domains, nsset, keysets)
 - Direct access to auth info code necessary for transfer objects to other registrars
 - Possibility to merge the same contacts into one
 - **Registry object locking and unlocking**



Domain browser



(jtalir) Jaromír Talíř [Logout](#)
Contact is validated

- My domains
- My name server sets
- My key sets
- My contact
- Help

My domains

Filter

Showing from 1 to 2 of 2 entries

20 records

Apply on the selected items:

- Block transfer to another registrar
- Unblock transfer to another registrar
- Block all changes
- Unblock all changes

<input type="checkbox"/>	Domain name	Status	Next state	DNSSEC	Role	Registrar
<input type="checkbox"/>	talir.cz	Update forbidden Sponsoring registrar c...	Will expire on 2014-09-09	✓	Holder	Web4U s.r.o.
<input checked="" type="checkbox"/>	primik.cz		Will expire on 2015-02-05	✓	Holder	Web4U s.r.o.

Apply on the selected items:

- Block transfer to another registrar
- Unblock transfer to another registrar
- Block all changes
- Unblock all changes

Showing from 1 to 2 of 2 entries

20 records



Administrative locking

- Important part of the registry operations is **cooperation with Law Enforcement Agencies**
- New option in our registration rules is that **anybody can ask for temporary lock** with proper papers about ongoing dispute issued by appropriate court
- Used to be seldom activity done manually by CLI tools
- Increased occurrence demanded integration into web administration interface
- Implemented in FRED-2.16 (Jan 2013)

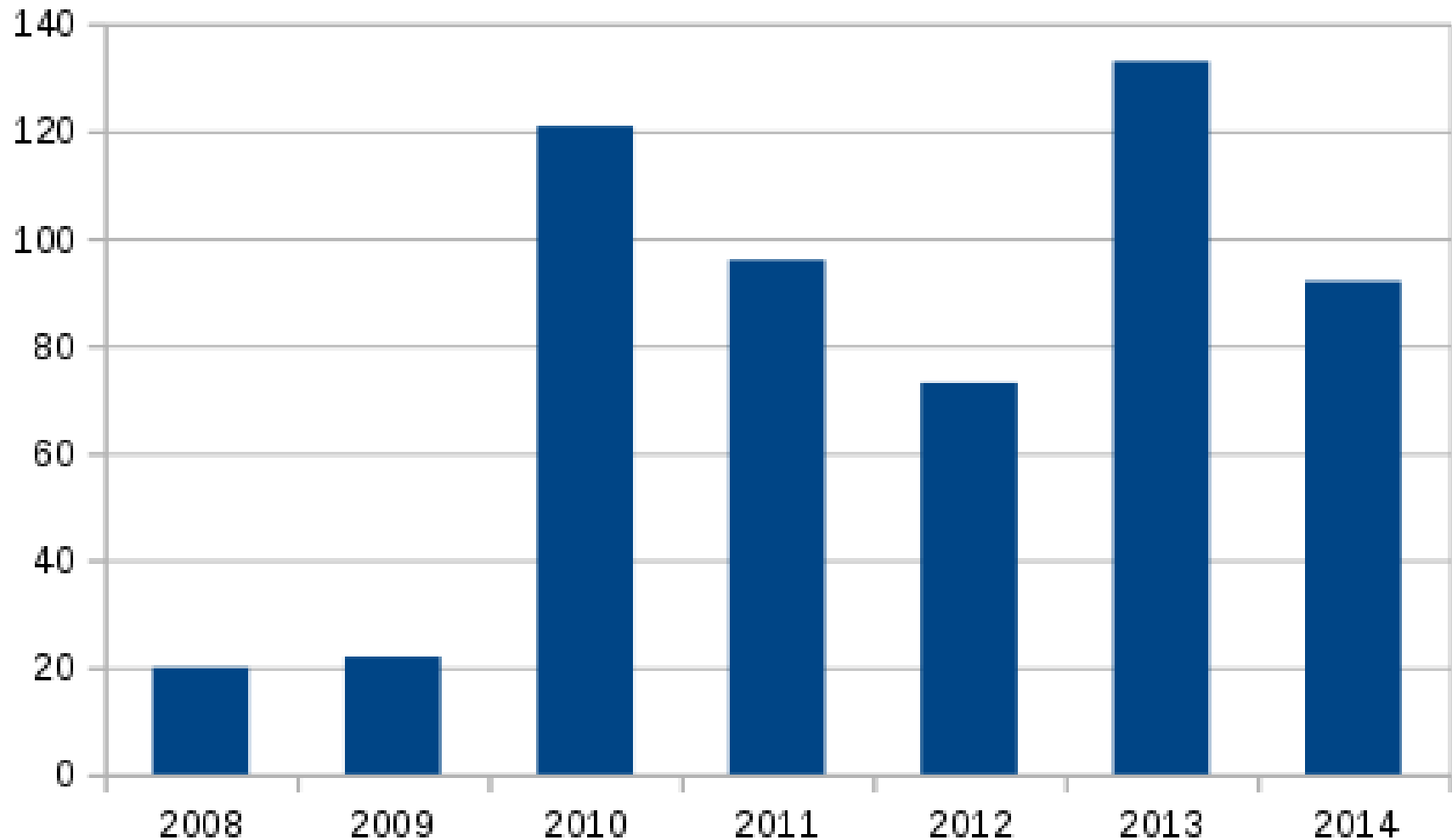


Administrative locking

- Almost any EPP request can be blocked
 - Transfer, Update, Delete, Renew
 - Appropriate status Server*Prohibited is shown in WHOIS together with new status ServerBlocked
 - Registrar will again receive “Object status prohibits operation” EPP response
- Domain can be deactivated as part of locking
- Locking can be bounded by time period



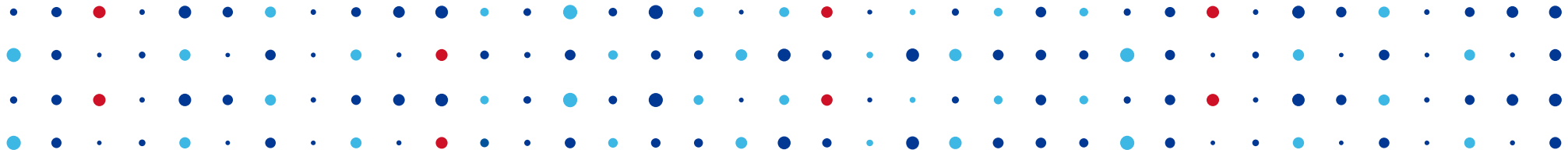
Administrative locking



Conclusion

- Even in Registry-Registrar-Registrant model there are use cases for enhanced Registry-Registrant communication like **registry objects locking**
- There is not only **voluntary locking** requested by registrant but also **administrative locking** requested by LEA – both are supported in FRED





Thank You

Jaromir Talir • jaromir.talir@nic.cz

