# Contact data validation in FRED

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# Agenda

- FRED

- To validate or not to validate

- Other approaches

- Our way

- Keeping contacts data valid

- Conclusion

# FRED

- Open source registry software from CZ.NIC in development since 2007

- Used by CZ, AO, TZ, CR, FO, EE, AL

- Runs on Linux

  - Installation packages for Ubuntu and Fedora

- Full featured - EPP, ENUM, DNSSEC, IDN, WHOIS, ...

- http://fred.nic.cz

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# To validate or not to validate

- Registry is not for anonymous entities

- Major reasons for accurate data:

  - Resolution of legal issues
  - Resolution of technical issues (spam etc..)
  - Securing domains by notifying owners about events

- But there is a cost associated with validation

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# SAC058

- SSAC Report on Domain Name Registration Data Validation (March 2013)

- Reasons for validation

- Taxonomy

  - Syntactical validation

  - Operational validation

  - Identity validation

- What attributes are subject of validation

# Validation by registrars

- Registrars are responsible for contact data

  - According contract, they should provide sufficient effort for validation of data.

- New RAA for ICANN accredited registrars

  - Mandatory requirements for validation

  - Hardly applicable to our registrars

- Registry could be better place for validation

# Different approaches

- Presentations from TechDay in Costa Rica:

- Turkey

    - Registrants send documents via web portal

- Estonia

    - For locals - integration with local eID and governmental registries

    - For foreigners – after receiving money, registrars send bank account identity embedded in EPP

# Our way

- Two complementary approaches

- Voluntary and automated

  - Send one-time codes to email, phone and postal address

- Selective and manual

  - Pro-active seeking of suspicious contacts and manual verification procedure

# Voluntary

- Two phase procedure

    - Registrant enters handle of contact and codes are sent to him via email and sms

    - After collecting 2 codes, contact receives $1^{st}$ grade of validation and other code is sent via snail mail to postal address

    - After entering this code, contact receives $2^{nd}$ grade of validation

# Voluntary

- For sms/letter delivery, we use third party web services – customizable by shell script

- Website for this process can be personalized by logo of registrar

- Level of validation is visible in EPP and WHOIS

- Contacts loose validation upon change

# Voluntary

- Voluntary service must be marketed

- Marketing to registrants

  - Possibility to hide address in WHOIS
  - Small gifts (flash drive, etc..)

- Marketing to registrars

  - Level of participation of registry in co-marketing program depends on number of validated contacts

# Selective

- System periodically randomly selects a group of contacts

- Each contact is first automatically checked for:

  - Syntactical correctness of data

  - Domain name of email exists and has MX records

  - Look up in available registries for streets and cities to check postal address

- Failed checks go into queue for manual checking by our helpdesk operators

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# Selective

- List of individual automatic checks is extensible

- Part of manual checking is written request to contact to correct data

- According registration rules, failure in manual checking may lead to dropping registration of all domains of this contact

# Keeping contact data valid

- Generally hard, we try to support it by fighting with duplicities in contact data

    - More contacts user has, more probably he will forget to update them all

- We had ~ 15% of full duplicates

- Reasons? Could be simplicity of registrar interfaces

# Keeping contact data valid

- New operation in registry – merge contact

  - Look up for full duplicates

  - Changing all linked objects to one contact

  - Delete second contact

  - Registrars/registrants are informed about result of merge operation

- Such "cleanup" is supposed to be done periodically

# Conclusion

- Registry is suitable place to do validation of contact data

- Registry software can help a lot and FRED has wide support for validation, but some customization is needed

  - Integration with SMS / snail mail services

- Features and versions

  - Voluntary validation and merging – FRED-2.16
  - Selective validation – FRED-2.17 – later this year
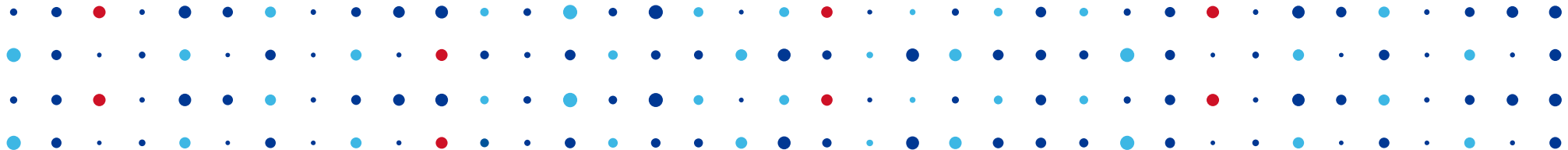
# Thank You

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