Billing in FRED

Jaromir Talir • **jaromir.talir@nic.cz** • **29.05.2014**

Agenda

- General description

- How do money get in

- How do money get processed

- How do money get out

- Invoicing

- Customization possibilities

General description

- Billing is targeted to registrars

- Registrars are charged for operations

    - Registrations, Renewals, Annual fee..

- Both prepaid/postpaid models are supported

    - Model can be set **per operation**

Virtual account

- **Virtual account** is managed for each registrar

- No specific currency – just credit

- Incoming payments raise credit on this account

- Charging for operations lower credit on this account

- Current state available over EPP

- Account is for **each registrar** and for **each zone**

Prepaid model

- If charged operation has associated prepaid model, **it fails** when there is **not enough** credit
  - EPP response code BillingFailed
- Registrars are forced to pay in advance

Postpaid model

- If charged operation has associated postpaid model, **it succeed even** when there is **not enough** credit

- Registrars are not forced to pay in advance

- This situation can create debt and it's up to registry how to force registrars to pay

Hybrid model

- Different operations can have different models

- Prepaid/Postpaid generally means to disallow/allow negative credit

- Situation in CZ

  - Domain renewal fee is prepaid
  - Registrar annual fee is postpaid

- Registrars cannot register new domains if they will not pay the annual fee

How do money get in

- Several banks supported
  - Each bank as individual B2B interface/API
- Different methods
  - Different channels – HTTP/IMAP
  - Different formats – CSV/XML

How do money get in

- Periodical scan for payments on our bank accounts

  - Using **cron** tool every 5 minutes

- Script that process specific format, transforms it into common format and put it into FRED

- Transformations are simple python scripts for each formats

How do money get in

- Identification of registrar for each payment

- Each registrar is given by payment ID/symbol

- Registrars must put this symbol into bank transaction

- If symbol in transaction matches some registrar, payment is associated to this registrar

- Unmatched transactions my be associated manually in web administration interface

How do money get processed

- In the case of existing debt, money are used to cover the debt

- Remaining money (or all money in case of no debt) are accepted as advance payment – credit

- For advance payment we have to issue an invoice to registrar

  - Legal requirement (may not be needed in other environment)

VAT issues

- VAT is removed from money

- VAT percentage can me configured

- VAT removal can be configured per registrar

  - Czech registrars are subject of removing VAT
  - Foreign registrars are not

- Disabling VAT

  - Set all registrars without removing VAT
  - Or configure VAT as 0%

How do money get out

- Configurable list of operations that require charging

    - EPP commands (CreateDomain, RenewDomain)

    - Annual fee request

    - Minimal number of registrations per year

    - Number of EPP commands over limit

Price list

- Configurable parameter of each operation

  - Validity period (from, to)

  - Price (in terms of credit)

  - Model (postpaid or prepaid)

  - Zone (for registries with multiple zones)

- Currently this is configured through CLI interface **fred-admin**

Charging for EPP commands

- EPP commands CreateDomain and RenewDomain

  - Different prices can be set per each zone

  - Credit is subtracted after each EPP command

  - In prepaid mode if there is no credit, command fails

- CreateDomain EPP command charges for two operations (it contains validity period)

  - CreateDomain price (0 USD) + RenewDomain price (6 USD)

Charging for annual fee

- Once a year (3 000 USD)

- First we inform registrars to raise credit

- Amount subtracted from credit

- If there is not enough credit we still charge into negative credit

Charging for minimal registrations

- Each registrar must register for at least 7 000 USD per year (new domains or renewals)

- At the end we count current state and if there is a difference we charge the difference

- It's not charged from current credit, but it's covered by next incoming money

Charging for EPP over limit

- Each registrar has monthly limit of EPP transactions based on number of domains

- There is a minimal number of transactions for starting registrars

- At the end of month we count transaction and charge difference

- Amount subtracted from credit

- If there is not enough credit we still charge into negative credit

Invoices

- Two types (advance/account) of invoices recorded in database

- Prefixes (per year and type) must be configured for numbering of invoices

- PDF versions

  - Generated through template mechanism
  - Sent to registrars email addresses

- Export to accounting software

  - General XML format export supported
  - XML transformation can be used for different accounting sw.

Customization

- Configure prepaid/postpaid per operation

- Configure price list and VAT

- Write own connectors for bank systems or add credit manually

- Invoices can be ignored or PDF templates must be updated

- Write XML transformations to upload invoices to accounting software
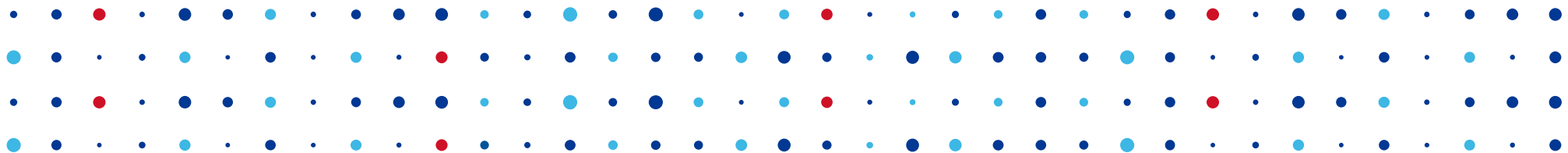
Thank You

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