RIPE Database

Alex Semenyaka | 19.04.2017 | Minsk

Internet: what is it anyway?

- Global system of interconnected networks using Internet Protocol suite (TCP/IP)

  - Decentralised

  - With horizontal links

  - Self-Organising

  Is there any hidden mechanics behind it?

Numbers rule the Internet

- Division of address space: who uses what?

  - Both for IPv4 and IPv6

- Routing information: how to get somewhere?

  - Address prefixes and autonomous system numbers

- DNS: what is the name of this address?

Five RIRs to manage the numbers

- All membership based not-for-profit

  - Funded by membership fees

  - Distribute IPv4, IPv6 and Autonomous System Numbers

- Policies set by regional community

  - Open, inclusive and consensus based

  - Implemented by the Regional Internet Registry (RIR)

- Coordinated approach can result in a global policy (e.g. IANA operations)

RIR Service Regions

RIPE Database

- Technical information

  - Address distribution

  - Routing information

  - Reverse DNS delegations

- Contact information

  - Technical contacts

  - Administrative contacts

  - Anti-abuse contacts

  - etc.

Some rules

- The RIPE Database is open and publicly available

  - Read: anybody

  - Update: authorised persons

- However there are some restrictions

  - In particular: "no copy is made of a significant part of the RIPE Database without the consent of the RIPE NCC"

- RIPE NCC protects personal data in the RIPE database

Quality of the Registration Data

- RIPE NCC does controls
  - **Before** the registration
  - **After** the registration

- Through contractual relationships
  - Between the RIPE NCC and the LIRs

- Verifying compliance with RIPE policies

- Performing audits

- Changes must be supported with documentation

Public authorities using RIPE Database

The most popular cases:

- Law enforcement agencies

  - Story by Gregory Mounier, Head of Outreach EC3, Europol, on RIPE73: https://tinyurl.com/m2slej5

- Regulators

Methods to use the RIPE Database

- Remote: using the primary RIPE Database

  - Web

  - Command-line interface

  - API

- Local: getting own replica

  - Daily snapshot

  - Near Real-Time Mirror

  - (But remember restrictions!)

How to learn the remote usage?

- RIPE NCC Training course for members

    - Full-time seminars

    - Webinars

    - Video courses

- RIPE NCC Workshops for LEAs

    - Organising by the request

    - This week — in Minsk, Belarus

What are restrictions for replicating?

- Explicit authorisation from RIPE NCC is **necessary**

- Technical limitations

  - For example, the frequency of updates

- No personal data!

  - Important for LEAs

Inaccuracies in the RIPE Database

- RIPE NCC does the best to ensure the accuracy of the RIPE Database

    - However there could be mistakes

    - RIPE NCC kindly accept indications to any issues

- Can the public authority demand to change the wrong records in the RIPE database?

    - Not exactly **demand** (better to say **request**)

    - After getting reports, RIPE NCC initiates the verification of corresponding data

    - No notifications of results

This is not that government-friendly!

- Legal status of RIPE NCC:

    - Non-for-profit membership association

    - Under the jurisdiction of the Netherlands

    - Serving as the secretariat of the RIPE community

- Policy development process

    - Driven by community

    - Performs in Working Groups

    - Principle of rough consensus

- General Meeting

Some important Working Groups

- Cooperation WG

- Anti-Abuse WG

- Database WG

- Address Policy WG

Representatives from governments, regulators and LEAs are more than welcome to participate.

Questions?

Alex Semenyaka, RIPE NCC

External Relation Officer
(Eastern Europe and Central Asia)

asemenyaka@ripe.net