Operational Update RIPE Database

RIPE NCC Database Team

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Progress Since RIPE 86

Whois Releases

- Whois 1.107 (June)

  - NWI-14 add "mnt-ref:" to additional object types

  - NWI-12 NRTMv4 improvements (documented in draft RFC)

- Whois 1.108 (September)

  - Full Text Search API and index improvements

- Whois 1.109 (November) (Due in Production on 4 December)

  - NWI-13 Removed prefix validation on "geofeed:" attribute

  - Implemented RDAP redaction feature

  - Support HTTP basic authentication

  - Support Client Certificate authentication

Whois Outages

- On 5 June, there were intermittent delays to the Mailupdates service due to a database locking issue

  - Contended lock failed rather than retrying

- On 28 August, Mailupdates was delayed after it was disabled accidentally and the monitoring check didn't alert (24 hours)

  - Due to the manual workaround to the first outage

  - Monitoring is now fixed

Whois Features - Statistics

- 2017-02 Regular Abuse-c Validation

  - **93K** abuse-c addresses, **11K remain** to be validated this year (13%)

- 2018-06 "RPKI" NONAUTH Route(6) Cleanup

  - Deleted **323** route(6) objects since RIPE86

- "Unregistered Prefix" NONAUTH Route(6) Cleanup

  - Deleted **97** route(6) objects since RIPE86

- NWI-8 (Synchronise LIR Portal users to Default Maintainer)

  - **1,593** LIR organisations synchronising users from LIR Portal

- NWI-9 (Open NRTM Service)

  - **457** distinct client IPs using NRTM in October 2023

Cleanup Remarks Attributes

- Removed NONE authentication deprecated remarks (2004)

    - 613 objects affected

- Removed "rev-srv:" attribute deprecated remarks (2009)

    - 34,711 objects affected

Operational Work

- Java Application Monitoring

  - Keep track of memory and CPU usage within the application

- More frequent server and application patching

  - Use latest LTS versions of Java and MariaDB

- Migrate applications to use HTTPS in backend

  - Use Let's Encrypt certificates (per server, no more star certificate)

  - Handle certificate rotation

- Rotated all database passwords (according to procedure)

Database Web Application

- The Web application is now <u>open source</u>

  - Completed external security review

  - Code cleanup

- Support unsupported browsers better

  - Display a message instead of a blank page on really old browsers

  - Display a warning on unsupported browsers (> 2 versions) but allow users to continue

- Filter maintainers by selected organisation

- Include share link when using query flags

RIPE Database Documentation

- Completed

  - Old "DB Support" documentation moved to new site and redirects for old URLs

  - All documentation has published source code (non-commercial license)

- Planned

  - Move documentation to separate website docs.db.ripe.net

RDAP

- ## RDAP Redacted Fields

  - Identify redacted RDAP response fields (e.g. mntner upd-to:, notify:, mnt-nfy:)

  - RIPE NCC RDAP implementation uses redaction by removal

- ## Filter email address (to match Whois port 43)

  - Email added to redacted fields

- ## README.RDAP.md

  - Updated README to document Redacted feature

  - Added more details on differences with RDAP RFCs

- ## Reviewing differences with other RIRs implementations

Full Text Search API

- Documented the API for end users

- Improved the web interface

- Bug fixes

Client Certificate Authentication

- Create an X.509 certificate & private key

  – `openssl req -x509 -days 365 -newkey rsa:4096 -sha384 -subj "/C=NL/CN=ripe.net" -keyout client-key.pem -nodes -out client-cert.pem`

- Copy the certificate to a key-cert object and add to mntner auth

  – `openssl x509 -in client-cert.pem`

  – Use "AUTO-1" as the key-cert primary key

  – Add "auth: X509-nnn" to the mntner

- Authenticate a Whois update using a client certificate

  – `curl -v —header "Content-type: application/json" -X PUT @file.json`
  `> --key client-key.pem --cert client-cert.pem`
  `> https://rest-rc.db.ripe.net/ripe/person/ES7554-RIPE`

Numbered Work Items

NWI Progress Since RIPE86

- NWI-12: NRTMv4 (mostly) <u>feature complete</u> and in production

  - Base URL https://nrtm.db.ripe.net/nrtmv4/

  - RIPE and RIPE-NONAUTH sources are separated

  - Notification file, deltas, snapshots per source

  - Public key https://ftp.ripe.net/ripe/dbase/nrtmv4/nrtmv4_public_key.txt

- NRTMv4 in Release Candidate for testing

  - Base URL https://nrtm-rc.db.ripe.net/

  - Public key https://ftp.ripe.net/ripe/dbase/nrtmv4/nrtmv4_public_key_rc.txt

- Client Support in IRRd

  - Sasha Romijn is working on updating IRRd to support NRTMv4

Upcoming Changes

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- Cleanup Remarks Attributes (Continued)

  - ERX Transfer (2002): remove LEGACY ERX remarks: and/or try to fix the data?

  - References by names (2003)

- <u>RDAP RIR Search</u> (in progress)

- <u>RDAP Geofeed Extension</u>

- Warn When a Route object conflicts with RPKI

Proposals

- Should "country:" be optional in inet(6)num objects?

    - As suggested by Massimo Candela during RIPE86 DB-WG session

    - Currently mandatory, undefined, set by resource maintainer

- Allow Latin-1 in Names -> UTF-8 in the RIPE database

    - Background <u>impact analysis</u> (2022)

Using the Cloud

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- Cloud Consultation Document

  - Document is in review

  - Once ready we plan to publish for community consultation

- Cloud costs

Questions ?

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Backup Slides

Numbered Work Items

- NWI-4 "Role of status: field in multivalued status context

    - Published impact analysis of {prefix, status} tuple as inetnum primary key

- NWI-12 NRTMv4

    - Finished?

- NWI-13 Geofeed

    - Prefix validation removed

- NWI-14 "Protecting References to Objects in the RIPE Database"

    - Add "mnt-ref:" as an optional, multiple attribute to mntner, irt, person, role object types

    - Finished