



RIPE NCC

RIPE NETWORK COORDINATION CENTRE

Operational Update RIPE Database

RIPE NCC Database Team

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The RIPE NCC Database Team





Progress Since RIPE 83

Whois Releases



- Whois 1.102 (December)
 - Implemented NWI-13 “geofeed:” attribute
 - Graceful shutdown
- Whois 1.102.1 and 1.102.2 (December)
 - Fixes for Log4Shell vulnerability
- Whois 1.102.3 (March)
 - Fixes Spring4Shell vulnerability
- Whois 1.103 (May)
 - Abuse-c is required for end user organisations with resources
 - Disallow weak keys and hash algorithms in key-cert objects
 - Added support for Elasticsearch (supports Search UI improvements)

Whois Outages



- AMS-IX Network issues - 6th April (1 hour)
- Intermittent failure of Whois Updates - 4th April (1 hour)
- Maintenance on Core Network - 10th February (5 minutes)
- Issues with RIPE NCC Services - 7th February (30 minutes)
- Issues with RIPE NCC Services - 21st January (4 hours)
- Connectivity issues - 18th January (30 minutes)
 - Caused by a DNS change for RC environment migration (use separate IPs)

Whois Features - Statistics



- 2017-02 Regular Abuse-c Validation
 - **110K** abuse-c addresses, **3K** invalid (~3%) (all addresses validated in 2021)
- 2018-06 “RPKI” NONAUTH Route(6) Cleanup
 - Deleted **241** route(6) objects (since RIPE 83)
- “Unregistered Prefix” NONAUTH Route(6) Cleanup
 - Deleted **64** route(6) objects (since RIPE 83)
- NWI-8 (Synchronise LIR Portal users to Default Maintainer)
 - **1,312** LIR organisations synchronising users (May 2022)
- NWI-9 (Open NRTM Service)
 - **203** distinct client IPs using NRTM (April 2022)

Person Objects



- 1.9M Person objects, 1.7M from assignments, 1.0M “Top 10”
 - A lot of personal data in the RIPE database
- Unlocked **600K** Person Objects (June 2020)
 - **44K** unlocked persons deleted, **1,684** updated since then
- (Upcoming) Cleaning up remaining Locked Person Objects
 - Assign locked person to user maintainer of referencing object
 - **13K** locked persons remaining
 - **3K** referenced from multiple objects (multiple user maintainers)
 - Must be cleaned up manually

Search UI



- “UI Update” Presentation at RIPE 83
- Progress Since RIPE 83
 - Integrated site-wide page template for a unified experience across apps
 - Implemented “Relevant Filtering” and “Searching by Flag”
 - Code changes to switch Full Text Search API from Lucene to Elasticsearch
- Remaining Work
 - “Organisation Search” and “Full Text Search” (depends on Elasticsearch)
 - Open Full Text Search API (relax limits and documentation)

Operational Work



- Graceful Shutdown
 - No need to disable & enable servers on the loadbalancer via script
 - Deployments and maintenance is easier
- Removed proxy servers from all environments (8 total)
 - Removes a layer for HTTP(S) requests
 - Less maintenance work
- Client Certificate Authentication (Loadbalancer) (in progress)
- Adding Elasticsearch clusters (in progress)
 - More search features than built-in Lucene
 - Whois server is more reliable

UTF-8 in the RIPE Database



- Impact analysis for UTF-8 in the RIPE database
 - Technical and functional impact
 - What's the impact on running the RIPE registry if UTF-8 is used?
- Published RIPE Labs article
 - “Impact Analysis for UTF-8 in the RIPE Database”
- Next steps
 - Ask the community for feedback on where and how UTF-8 should be added
 - Changes will be needed in RIPE NCC processes and internal applications

White Pages



- DB-WG requested in March to deprecate White Pages.
- The DB team have:
 - Removed documentation related to White Pages
 - Removed support for the org-type: WHITEPAGES
 - Emailed persons referencing the White Pages organisation
- The DB team plan to:
 - Delete ORG-PAGE1-RIPE once alternative arrangements have been made
- Exclusions from Cleanup Unreferenced Objects
 - **Let us know** what are the reasons for keeping unreferenced objects
 - Is this in accordance with the purposes of the RIPE database?



Default Maintainer

- Default Maintainer is **optional** (not set on 877 LIRs)
- Set Default Maintainer on **all** top-level allocations
 - including aut-num and PI resources
- Internal users updating user maintainers **manually**



Upcoming Changes

Missing History in RIPE Database



- Approximately 0.3% of existing objects are missing some history
 - Affects **23K** out of 8.6M objects
 - Generally only the **first** (oldest) version is missing (created between 2001 - 2004).
 - Affects querying for **version history** only
- How did this happen?
 - Whois deleted the older version when a user updated an object
 - Backup script accidentally deleted data in 2004
- What is the plan to restore missing versions?
 - Restore missing versions from database update logs
 - Cross-check with Internal resource registry (which has **full** version history)

RIPE Database Documentation



- Migrate existing documentation to its own website
 - Separate repository maintained by DB team
 - Use Markdown syntax; build pipeline to generate & deploy static site
- Advantages
 - Consistent UI across RIPE NCC (like RIPEstat for example)
 - Built-in search facility
 - Easier for DB team to keep updated
 - Align documentation changes with code changes
- Implementation
 - Migrate existing documentation after RIPE84
 - Combine “legacy” database documentation from across the website

Whois Tags



- DB-WG “Weirdness in DB files”, Cynthia Revström (Dec 2020)
- Presented summary at DB-WG session at RIPE82 (May 2021)
- Should Whois Tags be deprecated?
 - Tags are not returned in queries (by default) and tag query flags not in use
 - Tags are no longer updated
- Impact Analysis
 - Remove tag comments from query responses and split files
 - Use an empty line as a delimiter, ignore comments
 - Remove support for tag query flags from Whois (not used)

Service Criticality



- Create a model to determine the criticality of our services
 - Published [RIPE Labs article](#) (by Razvan Oprea)
- Service Criticality Components
 - Availability (outages)
 - Confidentiality (data leaks)
 - Integrity (hacking)
- Service Criticality Rating
 - Low, Medium, High, Very High
- Solicit feedback from the community



Questions



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