

Title: Initial analysis of the implementation of RIPE Database Requirements Task Force (DB TF) recommendations

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Introduction

This document provides a preliminary analysis of the RIPE NCC's understanding of the different recommendations made by the RIPE Database Requirements Task Force, as well as conditions for their implementation and their potential impact.

General Observations

- The RIPE DB TF produced a report with 10 recommendations.
- Most recommendations have not yet been discussed in any working group.
- The recommendations do not include requirements, nor do they provide implementation details.
- The following are initial considerations about the requirements for the RIPE NCC to implement each recommendation and their estimated impact.
- A more thorough impact analysis can be made once the recommendations are likely to be accepted and specific criteria are defined in a new RIPE Policy proposal or a new Numbered Work Item (NWI).



RIPE DB TF Recommendations - Requirements and Impact

1. Baseline requirements for the registration information of Internet number resources
"...the task force recommends that information about the postal address be made optional and not compulsory. In the long term, the task force recommends taking this information out of the database. If the community accepts this recommendation, the relevant supporting documents should be updated accordingly."

Requirements:

Proposal 2022-01, "Personal Data in the RIPE Database" is in the initial Discussion Phase. The RIPE Database WG needs to accept the recommendation. Some guidance is needed about the extent of needed DB updates (e.g. should these changes be possible retroactively)

Impact:

The RIPE NCC will need to update the Database rules and related external documentation. RIPE NCC Registry Services can expect some additional tickets with questions and requests for support.

2. IPv4 PA assignments

*"The task force recommends that as resource holders have full responsibility over the registration of their IPv4 PA assignment(s), they are free to make assignments or not. **If the community accepts this recommendation, the relevant RIPE Policies should be updated accordingly, and documenting IPv4 PA assignment(s) will stop being a policy requirement.** Please note that the task force does NOT recommend that these assignments be deleted but that resource holders can choose to document this information in the RIPE Database. However, if a resource holder wants to sub-allocate or partition part of their IPv4 resources to another entity, **the task force strongly recommends documenting this sub-allocation or assignment in the RIPE Database.***

*Following the data consistency principle, **the task force also recommends resource registration requirements be applied consistently to all Internet number resources, regardless of their type or status.***

*To ensure that the information published in the RIPE Database is correctly updated by resource holders, **the task force recommends that the RIPE NCC continue to use ARCs (Assisted Registry Checks) to verify this data.***

**Requirements:**

A new policy providing details about if and how to amend PA assignment registration must be proposed and accepted in the RIPE Address Policy WG.

Impact:

The RIPE NCC will need to update the Database rules and related external documentation. RIPE NCC Registry Services can expect some additional tickets with questions and requests for support. RIPE NCC training course content will need to be updated.

3. Using the RIPE Database as an IPAM solution

"The task force recommends limiting and discouraging the use of the RIPE Database as an enterprise IPAM solution."

Requirements:

None

Impact:

None, besides some communication and training activities to support this recommendation. Currently, the RIPE NCC does not encourage usage of the RIPE Database for IPAM.

4. Historical data and personal data filtering

"The task force recommends that the RIPE NCC grants access to a wider set of historical data to researchers who need it on a case-by-case basis and according to specific criteria.

These criteria should be discussed and defined by the RIPE community.

There is no easy way to track the chain of ownership for address blocks that have been split or merged. The community should consider adding this functionality to historical data."

Requirements:

The RIPE Database WG has to define the criteria for implementation.

The RIPE NCC Legal office needs to analyse the feasibility (e.g. under GDPR).

New NWIs must be agreed upon.

Impact:

Depending on the criteria defined by the community and analysed by the Legal office, the DB team will write an impact analysis and procedure to provide historical data to researchers on a case-by-case basis.



5. Routing information

- *The RIPE Database will provide routing information for:*
- *Internet number resources delegated by the RIPE NCC.*
- *Internet number resources which fall under the terms of the "RIPE NCC Services to Legacy Internet Resource Holders" policy.*
- *Other Internet number resources that already have routing information in the RIPE Database.*
- *Routing information should be maintained by the holders of these resources.*
- *The holders of these resources should be authenticated by the RIPE NCC or by the holders of parent resources, and only the holders will be authorised to manage routing information for the resources that they hold.*
- *Routing information for resources delegated to holders that have not been authenticated by the RIPE NCC should be labelled as non-authoritative. This should apply to both non-RIPE NCC resources and legacy resources with no formal relationship with the RIPE NCC.*
- ***The RIPE community should aim to create policies to delete stale and inaccurate non-authoritative routing information.***
- *It should not be possible to add new routing information to the RIPE Database for address resources delegated by other Regional Internet Registries.*

Requirements:

A new NWI or policy proposal providing details about if and how to delete stale and inaccurate non-authoritative routing information must be proposed and accepted in the RIPE community. A related policy proposal, 2018-06, "RIPE NCC IRR Database Non-Authoritative Route Object Clean-up", was accepted by the Routing WG in 2019. All the other points are already satisfied in the current implementation.

Impact:

The impact of newly proposed clean-ups on DB updates can be evaluated once the criteria are clear.

The RIPE NCC will need to update the Database rules and related external documentation. RIPE NCC Registry Services can expect some additional tickets with questions and requests for support.

6. Maintaining accurate routing origin information

"Maintaining accurate routing origin (address prefix and autonomous system number) information is a requirement of the RIPE Database:



- *Routing origin information should be published via ROUTE:/ROUTE6: objects in the RIPE Database.*
- *ROAs should be created in RPKI to represent routing origin information."*

Requirements:

None

Impact:

None. All the points are already satisfied in the current implementation.

7. Routing Policy Specification Language (RPSL)

"RPSL is not a requirement for the RIPE Database. As such, the RIPE Routing working group should look at formally deprecating RPSL, with the cooperation of the RIPE Database Working Group.

The specific recommendation is to consider what routing information is useful to operators and design a model to represent that.

Until RPSL is re-evaluated, the RIPE Database must continue to support it."

Requirements:

A proposal and wide acceptance of an alternative to RPSL.

Impact:

It is not possible to foresee any impact without a clear framework.

8. RPKI Database

"The task force recommends that RIPE NCC members and the RIPE community consider whether the RPKI Database should be treated as a community resource (like the RIPE Database) with policies and rules set by the community or should continue to be treated as a RIPE NCC service."

Requirements:

Clarification as to whether this recommendation refers to RPKI services in general or to the RPKI Repository (as there is no RPKI "Database").



If this recommendation is regarding the RPKI Repository, this is already a resource for the community, and recently it was announced that the RIPE NCC's RPKI core software would be open-sourced.

The Routing WG is already actively contributing with feedback and suggestions.

Impact:

None

9. Operational Contact Information (PERSON and ROLE Objects)

*"The task force recommends to promote **ROLE** objects instead of **PERSON** objects but to still make it possible for users to create **PERSON** objects if/where necessary. However, the task force is aware that users could also add personal data to **ROLE** objects. This is why stricter checks and measures should be implemented to prevent users from involuntarily entering personal data in both object types. This will also allow users to progressively move away from **PERSON** objects.*

Implementation details should be discussed in the RIPE Database Working Group in collaboration with the RIPE NCC."

Requirements:

The RIPE Database WG needs to define if and when a **PERSON** object is necessary.

Impact:

The RIPE NCC will need to update the Database rules and related external documentation. RIPE NCC Registry Services can expect some additional tickets with questions and requests for support.

10. Publishing the legal address of resource holders

"After weighing the pros and cons and listening to community feedback, the task force decided not to go ahead with this recommendation, as there was no clear consensus."

Requirements:

None

Impact:

None

Summary



Six recommendations need further guidance from the RIPE community via a policy proposal or NWI before the RIPE NCC can fully implement them in their processes. These recommendations are:

- 1. Baseline requirements for the registration information of Internet number resources
- 2. IPv4 PA assignments
- 4. Historical data and personal data filtering
- 5. Routing information
- 7. Routing Policy Specification Language (RPSL)
- 9. Operational Contact Information (PERSON and ROLE Objects)

One recommendation can be implemented immediately by the RIPE NCC:

- 3. Using the RIPE Database as an IPAM solution

Three recommendations are already implemented or do not need implementation:

- 6. Maintaining accurate routing origin information
- 8. RPKI Database
- 10. Publishing the legal address of resource holders

The RIPE NCC will support the RIPE community in creating policy proposals, NWIs or other documents to provide the needed guidance to implement the recommendations.