

Using NRO provided data – seeing trouble

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Overview

- what data - significance
- questions and issues for providing the data
- observations of problems - “*timely*” big incident on Monday
- conclusions???

provide authoritative overview of Internet number resources

- <https://www.nro.net/wp-content/uploads/apnic-uploads/delegated-extended>
- documentation in <https://www.nro.net/wp-content/uploads/nro-extended-stats-readme5.txt>
- file is normative reference in ID draft-rir-rpki-allres-ta-app-statement-01: to be used to audit RIR RPKI resource claims
- ID is technical base in [NRO announcement 11 July 2017: Regional Internet Registries are preparing to deploy “All Resources” RPKI Service](#)
- going back the bullets above means: **NRO** seems to be **promising** a service of providing good information in delegated-extended
- anyway providing an aggregated unified view of the resource distribution is a useful service of a well run registry and of a well cooperating registry system

Questions about NRO delegated-extended

- how is NRO generating/maintaining delegated-extended?
- data is collected/contributed/controlled/maintained from/by different parties?
- are interfaces and collection process well defined and reliably coordinated and maintained?
- who is responsible for correctness/consistency?
- are there precautions to ensure correctness and consistency?
- in the end: how reliable is the data?
- (for making full use of the data documentation of transfer process may be needed)

Observing delegated-extended

(some examples) looking at ASN info since late 2017

- for identifying use of IANA or RIR *reserved* AS numbers in actual routes, IRR, and RPKI
- simple checks: consistency with IANA specials registry, changes day to day
- example incident 8/2018 IANA assigns some ASN blocks to RIRs, update to delegated-extended wrong and inconsistent with IANA, couple of weeks until fixed
- since 2019-02-11 AS0 moved to AFRINIC's free pool??!!
- **2019-05-20** most/all of one RIR's ASNs returned to IANA!!!!

Conclusions???

- after such observation: would I trust the more complex IP address info?
- NRO needs to explain joint responsibility for providing unified data and how to do that
- Why is the data still periodically inaccurate even after years of experience producing this?

Epilogue

- accidentally having relevant people in the same room (like this RIPE meeting) can be helpful for dealing with a
- so problem report quickly reached the person hacking the data all the years
- observation 2019-05-21: delegated-extended seems to return to normal
- but we cannot rely on these favourable circumstance all the time
- so go back to previous slide and address seriously!