

NWI-3 - RIPE-NONAUTH perspective, still needed?

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NWI-3 “AFRINIC IRR homing” - quick recap

In 2016:

“””In recent years Afrinic set up an IRR instance that enforces authorisation for ROUTE(6) objects at rr.afrinic.net

And while the general problem of out-of-region ROUTE(6) and AUT-NUM objects in the RIPE Database IRR, and the problem where the prefix and the ASN belong to different regions is not trivial to resolve, there seems to be a general consensus that simple cases where ROUTE(6) objects have both an ASN and prefix in Afrinic (~34k objects), should appear in the Afrinic IRR where authorisation can be done and not in the RIPE DB.

Complicated cases where the prefix is in Afrinic, but the ASN is another region -or- where the ASN is in Afrinic, but the prefix is out of region are out of scope for this NWI.”””

<https://www.ripe.net/ripe/mail/archives/db-wg/2016-May/005241.html>

However, this is not a trivial project...

Need buy-in from two RIR communities, two RIRs

A rather large sudden change

“2018-06” - Applying Origin Validation to the IRR

- RPKI ROAs can be used for *BGP Origin Validation*
- But, what about applying the RFC 6811 “Origin Validation Procedure” to IRR data?
- Perhaps, we should consider unvalidated IRR data objects as if they are BGP announcements!

An example

```
route:          129.250.15.0/24
origin:         AS60068
descr:         AS60068 route object
descr:         this is a test of hijack possibilities
               with current state of RIPE/RADB security
               setup - this records covers IP address used for
               rr.ntt.net service
descr:         please note this is just a demonstrative object,
               with no real harmful intention
mnt-by:        DATACAMP-MNT
created:        2018-02-10T16:57:07Z
last-modified: 2018-09-04T19:07:32Z
source:        RIPE-NONAUTH
```

The previous slide is in conflict with this ROA!

```
$ whois -h whois.bgpmon.net 129.250.15.0/24
% This is the BGPmon.net whois Service
% You can use this whois gateway to retrieve information
% about an IP address or prefix
% We support both IPv4 and IPv6 address.
%
% For more information visit:
% https://portal.bgpmon.net/bgpmonapi.php
Prefix:                129.250.0.0/16
Prefix description:      NTT Communications backbone
Country code:           US
Origin AS:            2914
Origin AS Name:         NTT-COMMUNICATIONS-2914 - NTT America, Inc., US
RPKI status:         ROA validation successful
First seen:             2019-02-23
Last seen:              2019-05-22
Seen by #peers:        71
```

RIPE-NONAUTH IRR cleanup

Formal proposal: Apply the *Origin Validation* procedure to IRR objects in the RIPE-NONAUTH IRR database. The PDP applies here.

This proposal remove wrong LACNIC, APNIC, ARIN, AFRINIC route registrations from RIPE-NONAUTH – If and only if there are RPKI ROAs covering the space

Implications:

- proposal does not apply to RIPE-managed space
- proposal does not affect Legacy space managed by RIPE NCC
- There is no effect if you cannot (or will not) create RPKI ROAs for your space

RIPE-NONAUTH IRR cleanup

<https://www.ripe.net/participate/policies/proposals/2018-06>

Test tool: <https://github.com/job/ripe-proposal-2018-06>

Analyser tool example for AS 7018

```
$ ripe-proposal-2018-06 -a 7018
```

```
Downloading https://rpki.gin.ntt.net/api/export.json
```

```
Downloading https://ftp.ripe.net/ripe/dbase/split/ripe-nonauth.db.route.gz
```

```
INVALID! The 99.122.224.0/21AS1273 RIPE-NONAUTH route object has conflicts:
```

```
route:          99.122.224.0/21
descr:          route for customer Akamai International
origin:         AS1273
created:        2008-09-08T14:40:49Z
last-modified: 2018-09-04T15:54:45Z
source:         RIPE-NONAUTH
mnt-by:         CW-EUROPE-GSOC
```

```
Above non-authoritative IRR object is in conflict with this ROA:
```

```
ROA: 99.112.0.0/12, MaxLength: 12, Origin AS7018 (ARIN)
```

Proposal: Let's abandon NWI-3

- * NWI-3 has been overtaken by more recent, generic efforts**
- * As AFRINIC members create more RPKI ROAs, RIPE-NONAUTH will be cleaned up more and more.**
- * If no ROAs are created, or the IRR route objects don't conflict with the ROA, there is no harm in keeping the objects around**