

Filtering the ARIN legacy space

Marco d'Itri

<md@seeweb.it>

@md@linux.it

Seeweb s.r.l.

Euro-IX route servers workshop - March 13, 2024



Legacy network resources

Legacy resources are the networks allocated before ARIN was established in 1997.

Until the end of 2023 organizations had been able to sign an ARIN service agreement at greatly reduced cost.

Now they will need to pay the standard ARIN size-based fees (still, not unreasonably high from my point of view...).

The problem with ARIN

Unlike the other RIRs, ARIN has decided to **not provide IRR and RPKI services** to legacy resources holders.

There is no authoritative IRR server for these IP networks and they cannot be validated using RPKI either.

(An authoritative IRR server is one which only allows the legitimate resource holder to create route objects for a network: i.e. the ones managed by the RIRs.)

Note: we are discussing this in the context of route servers, but it applies to everybody filtering a peer which announces legacy networks.

Legacy networks commonly seen in Europe

- Access operators leasing networks from Cogent.
- US universities (also: USG HEP labs).
- US local and central government.
- Enterprise networks of local branches of US companies.
- Amateur packet radio.
- USG-managed DNS root servers (C E G H).

But also:

- DoS scrubbing centers (mostly Prolexic (Akamai)).
- Companies actually based in the US and announced in Europe by global carriers.

Focus on Cogent customers

Cogent leases parts of their legacy networks to transit customers, usually small access operators.

These networks are only registered in RADB.

This may be market-dependent: I cannot see this in AMS-IX data, and probably not in LONAP data.

Metodology

- 1 Download `networks.csv` from ARIN.
- 2 Download a list of prefixes announced at an IXP.
- 3 Check which prefixes are listed as legacy in `networks.csv`.

To better categorize the type of networks, I am reporting separately the ones announced by some international carriers: Hurricane Electric, NetIX, PacketFabric and Zayo. But there are more, so not all networks accounted to Cogent are local.

The Perl code is published with the slides sources.

The results

IX	Total	Cogent	US EDU	US MIL	US GOV	AMPR	DoS	OTHER
MIX	44552	116				3	451	46
MINAP	6537	19						
NAMEX	6467	30						
AMS-IX	214961	1432	93		1	61		456
LONAP	32882	65				18		37
BCIX	13275	3				3		10
BNIX	2695	14				2		
HE	92963	1579	430	293	107	56		684
NetIX	6259	40				1		
PacketFabric	2924	43	2			1		88
Zayo	25497	171	5			5		544

Conclusions

Not supporting anymore filtering with RADB is feasible but annoying.

Losing the peering routes of US-based networks is usually (?) not a big deal.
Anecdotal evidence suggests that most carry negligible traffic in Europe.

Major casualties

- Local networks leasing Cogent IP space.
- E root (NASA/PCH).
- ?

Any questions?



`https://www.linux.it/~md/text/rpki-validators-euroix2023.pdf`
(Google ... Marco d'Itri ... I feel lucky)

