So I Need to Start Route Filtering Peers

—

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Who's a Transit ISP?

AS15169?

Route Data Sources

IRR, RPKI, <internal TE>

- IRR data for what peers think they will be sending
- RPKI data where available to validate IRR data
- Internal TE sources to limit further if required

Procedure

1. Notify peers (howdy!) that this is going to start happening
2. Collect data regularly (daily?)
3. Parse and place into internal data service
4. Create per-ASN filter content
5. Apply changes to network device(s)
6. Mark today, drop tomorrow

Notification

Notify Peers

Notifying peers through standard mechanisms

Portal update to explain timelines and display current data for your ASN

Implement ability to request ‘update because I updated’ by peer(s)

Feedback once this is working will be important

https://isp.google.com

Collect Data

Collect and Parse IRR/RPKI data, easy?

Collection is the ‘simple’ part of the problem

IRR data is relatively easy to find:

ftp://ftp.radb.net/

Decide on which IRR databases to collect and parse.

Parse IRR data

IRR, Y U Be SoWeird?

IRR data is generally formatted

Follow the AS -> Maintainer -> AS-SET trees... ‘Everyone’ keeps theirs updated, right?

(these aren’t really IRR problems as such)

What tooling exists for this today?

Irrtoolset - no

Bgpq3 - not usable (internal problems)

Run a local IRRd... doesn’t actually solve the problem of making the data available to the other tooling used

Create per-ASN data/filters

Vendor Neutral Formatting

OpenConfig(OC) sounds right

Request from the internal service

Output for configuration generation system in OC form

Probably OC is fine

Tooling already knows OC

Tooling may have to know prefix-list vs route-filter

Application

Apply Changes as Required

When changes arrive, apply them in the normal fashion

Follow existing device configuration processes

New processes are bad/hard/problems

Conclusion

Goal is to start marking routes based on filter inclusion / exclusion by ~~01/2019~~

~~Reject/Drop by 03/2019~~

Mark by 04/2019, Reject/Drop by 09/2019

IRR Data Tooling becoming available:
https://github.com/manrs-tools/contrib/

Supported by the ISOC/MANRS organization, thanks!