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
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!