

A Lightning Survey of the Challenges Faced by Early RPKI Adopters



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RPKI in the LAC Region

- This talk is biased
 - It covers operational experience from our service region only (LACNIC)
 - I assume people *should* know what their network is actually doing
 - So take all this with a grain of salt
- It is not meant to be hard on early adopters
 - Early adopters always get burnt, but they gather and provide extremely valuable experience



RPKI in the LACNIC Service Region

- Where are we?
 - Slowly getting there
 - There is a lot of interest in the community
 - A bit disappointed due to lack of router software
 - Maybe this will change in the near future
- Noticeable increments in usage after our conferences
- ~190 prefixes, 6% of announced IPv4 covered by ROAs
- 2nd place behind RIPE-NCC by some measurements



Nice, right? Or...

- ... perhaps not
- Statistics show that the *quality* of the ROAs created tends to be not-very-good
- *Quality* in this context means 'first do no harm'
 - Your ROAs should not create 'artificial' invalids, otherwise *trust* in the system will be quickly undermined once BGP speakers start validating
- Our region was creating almost ~1500 invalids



Why ? What is Going On ?

- Network-related issues
 - Lack of awareness on how a 'complex' network is actually, well, 'networking' with its peers
 - 'Complex' as in 'I use more than one AS'
 - Failure to properly identify correct originating AS
 - Flabbergasting levels of de-aggregation
 - Sometimes for TE needs, sometimes hard-to-explain
 - Make creation of proper ROAs impractical with currently available tools
- System-related



Why ? What is Going On ? (ii)

- System-related
 - Lack of 'previewing' or 'prototyping' tools
 - Leading to 'blind' ROA creation and lots of trial & error
 - Lack of awareness of tools like RIS



What Now? What Should We Do?

- Act now:
 - We contacted our worst offenders and reduced our count of invalids by 75% while keeping them using the system
- Plan for the future:
 - Provide better tools
 - Ways of 'previewing' the effect of a ROA
 - RIS data invaluable for this purpose
 - Batch-creation of ROAs
 - Up/Down
 - Integrate them with the hosted system
- BGP Training



Thank you !

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are::you:IPv6:ready?

