

25 October 2017

# Internet Routing Health Measurement Bar BoF

## Sunday, 22 October 2017



Kevin Meynell  
Content & Resource Manager  
[meynell@isoc.org](mailto:meynell@isoc.org)

Internet Society © 1992–2017

# Objectives of BoF

- MANRS (Mutually Assured Norms for Routing Security) is community initiative to promote culture of collaborative responsibility for stability of routing system
  - Defines four concrete actions that network operators should implement: filtering, anti-spoofing, coordination & global validation
- To discuss ideas for measuring the *health* of the Internet routing system
- Aim to develop some empirical data to strengthen the case for collaborative routing security, including indications of good and bad security, and what metrics would accurately reflect this
- 20 participants at BoF

## Summary points

- Well we didn't entirely manage to achieve the original objectives of the BoF!
- The participants saw little purpose in trying to devise metrics to measure the health of the Internet routing system, before identifying why previous and current attempts to address the issue of route leaks, hijacks and general BGP churn were essentially failures
- Less than 2% of IP prefixes cause 90% of the routing updates, so the problem lies with a relatively small number of ASes
- The problem with any tool or metrics detecting IP route misconfiguration or hijacking is finding one that doesn't generate too many false positives
- Any mechanisms and metrics need to be able to identify leaks and make theft difficult, but must be lightweight enough not to affect basic functioning and scalability of BGP

## Consensus: Don't Shoot the Messenger!

- Should be recognised that RPKI is not addressing the problem, and should be a neutral and dispassionate analysis of why this mechanism has such limited deployment
- It was felt BGPsec will also not address the problem, and is not likely to be deployed
- The discussion should be removed from the IETF and those with existing interests in the development of RPKI and BGPsec, and an analysis undertaken of the vendor and network operator industry.
- ISOC as an independent and dispassionate third-party was asked to organise a series of stakeholder workshops with (major) vendors and network operators, as well as with the RIR communities. What are their specific concerns, how would they address the problems, and what do they think is the best way to approach the issues?