A BCOP document: MANRS Implementation Guide
HAVE YOU HEARD OF MANRS?
Mutually Agreed Norms for Routing Security (MANRS)

• MANRS builds a visible community of security-minded operators
  – Promotes culture of collaborative responsibility

• Defines four concrete actions that network operators should implement
  – Technology-neutral baseline for global adoption
Good MANRS

2. Anti-spoofing – Prevent traffic with spoofed source IP addresses.
3. Coordination – Facilitate global operational communication and coordination between network operators.
BCOP DOCUMENT

http://tinyurl.com/jlulren
The network and topology
Details – Action 3

• Maintain globally accessible up-to-date contact information
  – In Regional Internet Registries (RIRs): AFRINIC, APNIC, RIPE, LACNIC, ARIN
    • Various needed types of objects clarified
  – In IRRs
  – In PeeringDB
  – Company website – a checklist
Details – Action 2

• Enable source address validation for at least single-homed stub customer networks, ISP’s own end-users and infrastructure.
  – uRPF – should we just say – strict?
  – ACLs, also dynamic (borrowed examples from RIPE-431
  – ip verify source (other vendors?)
  – Cable source-verify
Details – Action 4

- Publicly document routing policy, ASNs and prefixes that are intended to be advertised to external parties.
  - Through the IRR system
  - Through the RPKI system (hosted)
  - Routing policy documentation with RPSL
Details – Action 1

• Ensure correctness of ISP’s own announcements and announcements from their customers to adjacent networks with prefix and AS-path granularity
  – Using the IRR
    • Needed objects
    • Prefix filter configuration tools and examples (BGPQ3, IRRPT)
  – Using RPKI
Almost final

• Rearranged the sections:
  – 4.1. Communications – Action 3
  – 4.2. Anti-spoofing – Action 2
  – 4.3. Facilitating global validation – Action 4
  – 4.4. Clean up your side of the street – Action 1

• Provided config examples as much as possible
Challenges

• Security is hard
  – Basic practices != single config line
• Vendor-specific examples
  – A wiki repository?
• No “specific network type” view
  – E.g. BB, enterprise/stub, transit
  – Post-production in the web space?
Questions

• Is it good to go?
  – A stable version for referencing
  – Missing things?

• Form of publication
  – RIPE document – too rigid?
  – MANRS website and a reference from a BCOP repo?
Many thanks!

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