RPKI and Prefix Origin Validation Operational Practices

Benno Overeinder, NLnet Labs

Jac Kloots, SURFnet
Goals

• Guidance with deployment of RPKI and Prefix Origin Validation

• Technical recommendations
  – running the rpki infrastructure, validated caches, etc.
  – some WG ops drafts are available

• Organizational recommendations
  – implications for business operations (tooling)
  – key management in an organization (people come and go)
Motivation

• Active OPS drafts in SIDR WG
  – e.g. draft-sidr-origin-ops, draft-ietf-sidr-algorithm-agility, ...
  – define some practical considerations out of scope of documents

• A “single” document with practical & operational deployment considerations
  – complementary to other WG documents
  – gentle introduction to ...
  – refer to relevant drafts/RFCs
  – give guidance in operational deployment decisions
  – ...

3
From SURFnet Pilot Study to a Draft

• RPKI & prefix origin validation pilot study at SURFnet (Dutch NRN)
  – practical and operational findings put in a report

• Put some of the operational considerations in a draft (-like) document
  – however NRN is different business than a tier 1, 2, or 3 network
  – need for input from other SIDR participants, operators (at RIR meetings?), engineers, vendors, ...
Examples of Operational Considerations

• Trust in the RPKI infrastructure for an organization
  – identity and authority management
  – key management
  – security procedures in organization

• Trade-offs in RPKI deployment
  – hosted key management, or
  – running own RPKI engine, signing module, LIR back-end
  – management of validator/cache/publisher

• Routing policies
  – strict, secure, loose, ... (see also draft-ietf-sidr-origin-ops)

• Refresh frequency for validated caches
  – 3 hours, 12 hours, 1 day, ...
  – use of stale data

• ...


Questions to the SIDR WG

• Probe interest of WG
• Ask guidance of WG
  – operational practices is a living document?
    • not much practical experience available
    • deployment practices topic of discussion and revision
    • status and visibility of such a document?
  – or, target for draft (with informational status)
    • will have some official “reference” status and visibility
    • accept fact that after, e.g., 2 or 3 years there is a “bis” document
• Ask for input to document
  – reviewing document & talk in hallway
  – discuss and refine goals and structure of document
  – help writing the document