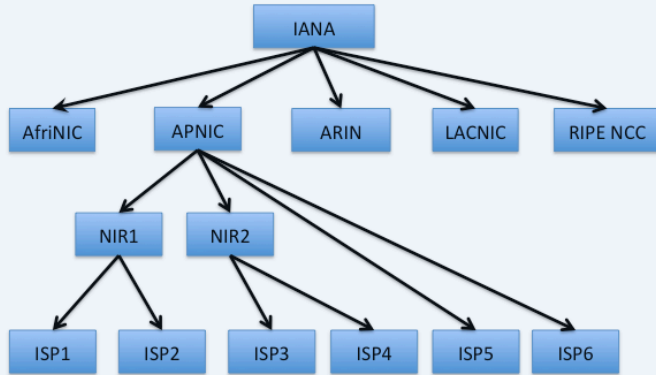# Resource Public Key Infrastructure

What can I do with it now?

Andrew Chi, BBN Technologies

Resource Public Key Infrastructure (RPKI)
Hierarchy of Global IP Address Delegations, Digitally Signed, Publicly Available

IANA

AfriNIC — APNIC — ARIN — LACNIC — RIPE NCC

NIR1 — NIR2

ISP1 — ISP2 — ISP3 — ISP4 — ISP5 — ISP6

ARIN   RIPE NCC   AfriNIC   APNIC   LACNIC

Signed, not-yet-validated IP address allocation info

At least 3 RPKI validators available for testing: DRL, BBN, RIPE NCC. Feedback requested!

ISP PoP

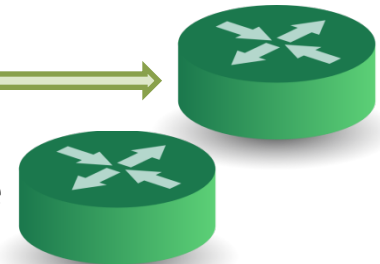**Linux/BSD running RPKI Validator**
For example, BBN RPSTIR
http://sourceforge.net/projects/rpstir/

RPKI-enabled BGP Routers (capable of detecting invalid route origins)

Periodic Sweep and Validation of Global RPKI → Validated Cache of Global RPKI → RPKI-Router Cache Server
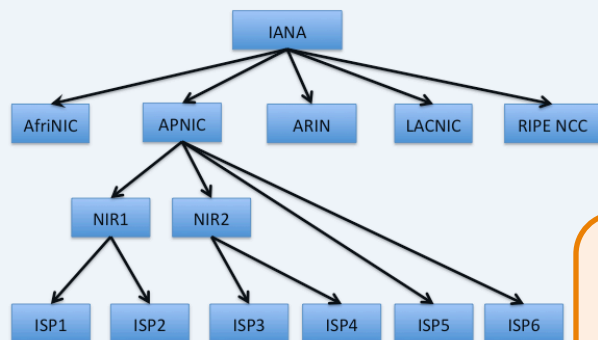
Validated Route Origin Map

What can I do with the RPKI now?

Resource Public Key Infrastructure (RPKI)
Hierarchy of Global IP Address Delegations
Digitally Signed, Publicly Available

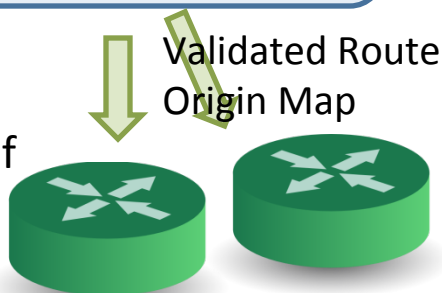At least 3 RPKI validators available: DRL, BBN, RIPE NCC. Feedback requested!

ISP PoP

Linux/BSD running RPKI Validator
For example, BBN RPSTIR
http://sourceforge.net/projects/rpstir/

Validated Route Origin Map

RPKI-enabled BGP Routers (capable of detecting invalid route origins)

- Long term goal (left): operational route filters.

- Short term: start preparing as RPKI data increases.
  - Experiment with one of the 3 publicly available validators (BBN, DRL, or RIPE NCC).
  - Try Florian Hibler's testbed. https://labs.ripe.net/Members/fhibler/rpki-capable-routers
  - Get comfortable with the software, and how it fits into your operational practices. RPKI simply tells you validity; you must determine filtering policy.
  - Give feedback on software bugs, usability, and feature requests.

References

- BBN Relying Party Software Technology for Internet Routing (RPSTIR)
  http://sourceforge.net/projects/rpstir/
  - Contact: Andrew Chi achi@bbn.com
- Other implementations:
  - http://www.rpki.net/
  - http://www.ripe.net/internet-coordination/news/announcements/ripe-ncc-rpki-validator-2.0-released
- APNIC RPKI
  http://www.apnic.net/services/services-apnic-provides/resource-certification/RPKI