Agenda

1. MANRS Research
2. Shutdown and Hijack Measurement and Identification Tool (SHMIT) – Max Stucchi
3. Route Collector - Max Stucchi
4. ROA Historical eXplorer - Amreesh Phokeer
5. PyBGPKIT API – Mingwei Zhang
6. A One-Year Review of RPKI Operations – Massimo Candela
MANRS Research

Fellowship program:
• 2 ambassadors
• 2 fellows

External Project:
• Type-1 Hijack detection

Romain Fontugne
IIJ

Massimo Candela
NTT

Ioana Livadariu
Simula

Zubair Sediqi
MPI
2022 Projects and studies

• Tools development
  • SHMIT
  • Route Collector
  • ROA BACK (ROA Historical Explorer)
  • PyBGPKIT
• Research studies
  • ROA Propagation time (Romain Fontugne - IIJ Labs)
  • Type-1 Hijack detection (Cristel Pelsser - University of Strasbourg)
  • RTBH (Ioana Livadariu – Simula)
ROA Historical Explorer

- Data source: RIPE RPKI Archive (http://ftp.ripe.net/rpki)
- Try it: https://tinyurl.com/roaback
- Retrieves ROAs covering a prefix and/or ASN
- REST API
  - Docs: http://45.129.227.23:5000/docs
  - http://45.129.227.23:5000/search?prefix=199.91.96.0/24
{"data": [
  {
    "asn": "136744",
    "delegated": null,
    "ipprefix": "199.91.96.0/24",
    "maxlength": 24,
    "notafter": "2024-05-13T04:00:00",
    "notbefore": "2021-09-08T04:00:00",
    "tal": "arin"
  },
  {
    "asn": "1239",
    "delegated": null,
    "ipprefix": "199.91.96.0/21",
    "maxlength": 24,
    "notafter": "2022-09-08T04:00:00",
    "notbefore": "2021-09-08T04:00:00",
    "tal": "arin"
  }
],
"message": "2 ROA(s) found",
"status": 200}
ROA Historical Explorer

Index of /rpki
- Parent Directory
- README.txt
- afmea-rarin.tal
- afmea-arin.tal
- afmea-ripe.tal
- afmea-rarin.tal
- afmea-ripe.tal
- afmea.tal
- certstats/43bc93e9.tal/
- localcert.tal/
- ripencc.tal/

CSV records

4,182,947 records

Postgres → API → Front end

ROA BACK API
This tool allows you to retrieve ROAs from the RFE IPN archive. This interface is powered by a REST API.
Future developments

• Incorporate all ROAs from day-1
• Extract information about when ROAs are revoked (not in the CSVs)
• Some visualizations
LEARN MORE:
https://www.manrs.org

FOLLOW US:
/RoutingMANRS
Thank you.

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