RPKI Update at CNNIC

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中国互联网络信息中心
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Overview

- Current Practice
- Working Plan

Current Practice

- A test bed for RPKI has been established within CNNIC.
  - The test bed presents a basic platform for RPKI research and software testing, which is composed of:
    - A RPKI system that has three levels of CA running rpki.net
    - A Replying Party system with RPSTIR, developed by Raytheon BBN, as running codes
    - A simple inter-domain routing system with several BGP speakers that support NIST SRx quagga
    - ……

Current Practice

- RPKI operations are being observed in our test bed.
  - Resource Transfer
    - Lateral transfer between two resource custodians hosting CA service
  - Grandparenting Operation
    - Based on our three-level CA hierarchy
  - Primary secure BGP Development
    - RTR employed between RP and BGP speaker

Current Practice

- RPKI system can run, yet not ready for industrial use.
  - Some bugs were detected in Replying Party software, which have been fixed in the latest version of BBN RPSTIR.
    - Compile error
    - Compatibility with different kinds of Linux OS
      - Fedora
      - Ubuntu
    - Data processing such as writing off the end of the array
  - The RPKI system is mature?
    - We are keeping testing a diversity of RPKI software to see what is wrong when RPKI software is put into practice and whether RPKI software can fit in the real world.
    - The inter-actions between BGP speaker and RP seem to be okay during our previous test .

Working Plan

- To Keep collaborating with the community to improve both design and implementation of RPKI.
  - Joint test bed with BBN
- To figure out the models that China's Internet community can employ to make RPKI realized in China's inter-networks.
  - Security Considerations and Research
    - To adapt Local Trust Anchor management into China's inter-network environment
    - To establish a nationwide trustworthy RPKI authority that RPs within China can always rely on for critical infrastructure resources
  - Service hosting exploration
    - Support repository outsourcing for small ISPs and enterprises networks.
    - Provide third party validator/cache.
- To make RPKI more well known in China's Internet community.
  - CNNIC IP Address Allocation Alliance

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Q & A

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