Autonomous System Information Service (ASIS)

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Autonomous System Information Service (ASIS)

- Early stage research project;
- A self-hosted approach for sharing interoperability and policy information of a communication network.

Current systems

Examples:

- WHOIS/RDAP

- PeeringDB

Disadvantages:

- Public only; lack of access control

- Centralized

- Rate-limited

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Types of information to share:

- Technical contact information;

- Security contact information ("AS-wide security.txt");

- Routing policies and BGP communities;

- Preferred peering locations and methods;

- Which data laws apply to the network;

- Information useful for path control and planning;

- Information about energy footprint of devices;

- *Any more ideas?*

Autonomous System Information Service (ASIS)

How to use this information:

- Purely informational
  - For 'people' to have a better understanding how their data is transported
  - For 'systems' (but watch out for circular dependencies and performance)
  - To announce services (with ACL, in contrast to SVC records in DNS)
- First steps for 'usable' path-control
  - (But paths are not controllable on the Internet)
- Different network technologies
  - To tell the Internet about the existence of an SBAS/SCION domain
- *Any more ideas?*

Finishing up

Questions to you, the audience:

- Has something similar been proposed earlier ~~at the IETF~~?

- Do you see any interesting use cases for the ASIS?

- Would you like to collaborate?

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PathVis tracerouting using Domain Information Serv...

HOP1: Using Domain Information Service...

{'vendor': 'barefoot', 'program': 'l2-switch', loc...

https://192.0.2.19/api/v1/pathinfo/192.0...

DIS

192.0.2.1

198.51.100.1

ICMP 8/20 TTL=1

ICMP 11 TTL Exceeded

Q: 1.2.0.192.in-addr.arpa TXT

User

User2

DNS

TXT v=DISv1; ip=192.0.2.1...