

Secure Protocols for the Routing Infrastructure SIDR BOF

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Sandra Murphy, Sparta

Secure Protocols for the Routing Infrastructure

- Security of the routing infrastructure is an important problem, but no traction on consensus on deployable solutions
- Starting mid-March, three workshops have been held with a wide net of the interested parties
 - Operators (ISPs, access and content providers), vendors, security geeks, researchers
 - DHS hosted - desiring to find and facilitate **(*N*O*T* MANDATE)** a solution
- Strong call from operators: need *authenticated list of authorized AS for prefix originations*

Securing Prefix Origination

- Operator's intended use:
 - Responding to customer requests to route a prefix
 - Debugging routing difficulties
 - Building prefix filters
 - (necessary first step of any solution for securing the AS_PATH)
 - (next step is *authenticating* the authorized origination)
- What is needed:
 - Accurate data from prefix and AS number authorities (RIRs)
 - Known problems with existing data – staleness, corruption
 - A way to collect the prefix->AS mapping (securely)
 - Authentication down through sub-allocations
- Bootstrapping
 - Glean believable prefix->AS mapping from route history
 - Need metrics for judging quality
 - Work with RIR to record prefix->AS mapping with prefix template
- Issues of communicating the list – centralized/ distributed, retrieval at rate suitable for its use, inline/OOB, etc.

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