draft-wirelelela-deleg-requirements

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(WiReLeLa, for any who hadn't already puzzled out the draft name)
The Basics

Submitted -00 on 8 July:
https://datatracker.ietf.org/doc/draft-wirelela-deleg-requirements/00/

Proposed a basic framework of Hard Requirements vs Soft Requirements

- **Hard**: strictly required of any proposals
- **Soft**: desired features to address the problem space

Asked for and received feedback on dd@ietf.org

Seeking adoption by this working group
Initial Hard Requirements

- DELEG must not disrupt the existing registration model of domains.
- DELEG must not change current namespace semantics. ← More later
- DELEG must not negatively impact most DNS software. This is intentionally a bit vague with regard to "most".
- DELEG must be able to secure delegations with DNSSEC.
- DELEG must support updates to delegation information with the same relative ease as currently exists with NS records.
Initial Soft Requirements

- DELEG should facilitate using new DNS transport mechanisms.
- DELEG should make clear the details for contacting a Service Access Point.
- DELEG should minimize transaction cost in its usage.
- DELEG should enable an operator to manage DNS service more completely.
- DELEG should allow for mapping to the conventional NS-based delegation.
- DELEG should be easily extensible, much like EDNS(0).
- DELEG should support an in-band means for the child to signal to the parent that parent-side records related to the child should be updated.
Writing Style

Deliberately pithy, to focus in on the core design values.

Aimed to make it easily digestible.

Didn't presuppose a specific solution.

Could add more rationale for each point, if the group desires.
The Semantics of Semantics

Originally:
DELEG must not change current namespace semantics. The nameserver (NS) record type will continue to define the delegation of authority between a parent zone and a child zone exactly as it has for decades.

First sentence could be read as basically nullifying this group. Intent was that existing aspects of the pre-DELEG ecosystem work exactly as is.

Proposed:
DELEG must be backwards compatible with the existing ecosystem. Legacy zone data must function identically with both DELEG-aware and DELEG-unaware software. Nameserver (NS) records will continue to define the delegation of authority between a parent zone and a child zone exactly as they have.
Child to Parent Backtalk

Currently:
DELEG should support an in-band means for the child to signal to the parent

Put in as a soft requirement because it had been mentioned in brainstorming.

Aligned with the general issue of parent/child relationships.

Anticipated that it might be controversial to include in requirements.

Could well be addressed through Generalized DNS Notifications in dnsop.

The question: as a soft requirement, it isn't mandatory anyway, but should delete?
Document Development

Currently at https://github.com/moonshiner/draft-wirelela-deleg-requirements

Issues and Pull Requests welcome.

Anticipate moving to a DELEG WG repository if adopted.
Next Steps

Per the charter, "This is expected to be published as an informational RFC."

We beseech thee, O DELEG delegates, pray adopt our draft.

~ finis ~
Extra Slides
CARVING DNS INTO CONCEPTUAL COMPONENTS (MODELS)

- Where does DELEG sit?
- What are the boundaries?

**DATA MODEL**
- Name tree, hierarchy
- Data sets attached to name nodes

**CACHING**
- No full-time end-to-end connectivity assumed
- Speed responses

**DATA MARSHALLING**
- Query/Response wire format
- Final Answer
- Referrals = DELEG

**SERVICE MODEL**
- QNAME, QCLASS, QTYPE
- QNAME, QCLASS, QTYPE, RDATA

**MANAGEMENT MODEL**
- ZONE concept
- Root zone delegates to first level
- Delegation all the way
- Allows DNS workload to be distributed

The "hidden in the middle" language of DNS - this needs updating!

- Allows for great growth in content
- Allows for scale
- Allows for global scale