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DNS OPERATORS NEED ACCESS TO MAINTAIN DELEGATION INFORMATION



MAINTAINING DELEGATION INFORMATION: ICANN MODEL

- Delegation Information:
NS and DS plus glue
1. Registrant enters via
Interface (API/UI) —>
 2. Registrar inserts into
Registry DB —>
 3. Registry publishes in DNS



CURRENT SITUATION

- The operator of DNS for domain be one of the following
 - Registrant
 - Registrar
 - **Third Party** — NOT included in ICANN model

ARE THIRD PARTY DNS OPERATORS IMPORTANT?

- Have a **contract** with the registrant to operate DNS
- CloudFlare operates almost 2M domains in almost every TLD
 - many important domains are outsourced
 - We offer global presence, security, capacity and cost savings
 - Operate frequent DDoS targets
- There are many other important third party DNS operators

DESIRED CAPABILITY

- DNS Operators need/want to be able to maintain NS (and DS records) records at parent side of delegation
 - fast and accurately
 - DNSSEC makes things worse w/o automation
 - key rollover
 - changes in DNS operators

WHAT IS IN THE WAY?

- Third party DNS operator Issues:
 - It is unknown to registrar/reseller (no access to registrant account)
 - Contacting Registrar/reseller is **identical** to social engineering attack against registrant
 - Being Technical contact does not address problem w/o API.
 - Operator can not find actionable handle for registrar/reseller via whois
 - email and phone # are not acceptable
 - No model or protocol for communication
 - No model for authenticating parties
 - ==> **Registrant needs to relay messages**

THE DARK SIDE

- DNS operators are being forced to become registrars in order to gain access to registries and bypass registrant when changes are needed!!!
- Hard to become registrar in many ccTLD's

HOW DO WE GET THERE?

- Domain industry needs to
 - Include DNS operators in the operating model
 - DNS operator needs to be able get message to right registrar
 - Registrar/Registry needs be sure DNS operator is legit
 - Agree on a scalable model of communication, authentication
 - develop protocols
 - Deploy solutions soon