



Operational consideration for standards compliance?

The DNS-Violations Project

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DNS Violations Project

- DNS is complex!
- There's a lot of DNS protocol violations "out there"
- DNS Resolvers just "cope" with that
- We started doing internal list
- Idea: Let's make this community effort
- DNS Violations project was born

Purpose

- To better understand the breakages of the DNS protocol
- To make DNS better
- To share knowledge
- For Authoritative DNS implementors, to avoid common pitfalls
- For DNS Resolver implementors, to verify they can handle it

Common Violations

- CDNs have a special department in hell
- Garbage at the end of packet
- Case-sensitive DNS servers
- QNAME Minimization
 - Empty Non-Terminals: NXDOMAIN vs NODATA
- EDNS-related breakages
- General protocol ignorance
- DNSSEC-related brokenness
- Unknown RRType

Violation Submission

- Community Effort
- Anyone can submit
- Consists of:
 - DVE-<year>-####: short description
 - Description
 - Evidence (textual + dnstap)
 - Proposed fix/Workaround
 - DNS Operator/Vendor Response
 - Metadata
 - Submit-Date
 - Report-Date
 - Fixed-Date
 - ...

What can we do about it?

- DNS Resolver Vendors
 - Be patient, educate
 - Coordinate
 - Make a plan to remove the workarounds
 - Stop resolving the most blatant violations
 - Add (small) penalty
- DNS Community
 - Be inclusive
 - Invite the DNS operator people
 - Invite the CDN people
 - Promote use of existing solutions
- BCOP Community
 - Write the BCOP Document!



Questions?

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