What is Flag Day?

- A community effort to ‘clean up’ lingering interoperability issues impacting the DNS system.
- Focused on compliance with established IETF standards.
- A point in time at which participants remove ‘workarounds’ for non-compliant systems, allowing those to fail.
2019 DNS Flag Day Participants

- NLNET Labs
- CZ.NIC
- ISC
- POWERDNS
- Google
- Clean Browsing
- Cloudflare
- Quad9
- Cisco
2019 Problem

- Lack of protocol header in fragments causes problems with middleboxes, firewalls, DPI
- Path mtu discovery doesn’t work with Anycast clouds
- UDP is unsuitable for large messages, including DNSSEC
- UDP is insecure - too easy to spoof
2020 Solution

- honor an EDNS buffer size that will not cause fragmentation \( \approx 1220 \) (exact size tbd)
- allow DNS to switch from UDP to TCP when larger buffer sizes are not enough
  - including FIREWALLS
- No change for small answers - UDP
- DNS over TCP in RFC 7766 and predecessors
Status of the test tool

- Manual test
  - $ dig +tcp @auth_IP yourdomain.example.
  - $ dig +tcp @resolver_IP yourdomain.example.
  - $ dig @resolver_IP test.knot-resolver.cz. TXT

web-hosted test tool coming soon to dnsflagday.net

Test your domain
Domain name (without www): isc.org
Testing completed:
isc.org: All Ok!

- This domain is perfectly ready, you do not need to worry about DNS flag day 2019.
- Your DNS administrator is doing a good job, send them a sincere thank you ;-) 

technical report: https://ednscomp.isc.org/ednscomp/105386ab84
Updates at

- Web https://dnsflagday.net/
- Twitter https://twitter.com/dnsflagday
- Announcements: https://lists.dns-oarc.net/mailman/listinfo/dns-announce
- Discussion: dns-operations@lists.dns-oarc.net
- Talk to us this week
References

• Date is TBD (February - May 2020)


• RIPE 78 Presentation on DNS Flag Day 2020, https://ripe78.ripe.net/archives/video/28