The edns-tcp-keepalive EDNS0 Option

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Document history

- Oct 2013: Joe & Paul submitted first version of draft-wouters-edns-tcp-keepalive-00. Original motivation related to companion 'chain-query' draft. (-01 in Feb 2014)

- April 2014: Adopted by working group

  - Oct 2014: Lively discussion… Original authors deemed their motivation no longer relevant, however other motivations voiced from working group.

  - Oct 2014: -01 version bump (no changes)

- Since then….no update to draft but further discussion

-02 update

- What is different now?

- Clearer problem statement: Increased understanding of limitations of existing implementations leading to significant updates to 5966bis:

  - New client idle time recommendations

  - New server side DoS mitigation guidance

- Clearer requirement for explicit persistent connection management for DNS-over-TCP

  - July 2014: -02 version containing some significant changes

  - 2 additional authors adding support for document

-01 vs -02 changes

- TIMEOUT: Changed timeout value to *idle timeout* and re-phrased document around this.

  - Changed semantics so the client no longer sends a timeout (timeout is server determined).

  - Meaning of a server sending a timeout 0 is now to indicate 'connection-close'.

  - Changed units of timeout to 100ms to allow values less than 1 second.

-01 vs -02 changes

- SERVERS: Added more detail on server side requirements when supporting keepalive in terms of resource and connection management.

- EDNS0: Added discussion of EDNS0 per-message limitation and implications.

- UDP: Change specification to remove use of the option over UDP. This is potentially causes issues with ALG's and adds only limited value.

Next steps?

- Working group discussion of updated document

- Consensus that draft meets needs of problem

- Move towards Last Call?