Highly Automated Method for Maintaining Expiring Records

draft-wkumari-dnsop-hammer-00

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Overview

- What's the problem?

- Solution

- Questions

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What's the problem?

Sturmovik at en.wikipedia (CC-BY-3.0) from Wikimedia Commons

The '90s called, they want their meme back.

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What's the problem?

- Users see a sporadic spike in resolution time.
  - RR time out of caches
  - Next time the RR is needed, it takes "longer" to resolve.
- From hotel:
  - cache: Query time: 44 msec
  - no cache: Query time: 454 msec
- This is **just** an optimization

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Solution

If (answer from cache)

     and (remaining TTL < HAMMER_TIME)

then {

    answer from cache

    initiate a "cache fill" operation

}

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Result

- Only triggered by incoming queries
- Most often queried names stay "fresh"
  - Less queried names still age out
- Doesn't require extra cache state
  - ... well, maybe 2 bits per cache entry
- Similar to feature in Unbound, some important differences in details:
  - timer, not percentage.
  - better name.

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Worth publishing?

- Implementation advice.

- Still needs some details ironed out

- Would the WG like to adopt?

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Questions?

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Backup slides

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Explain this STOP thing again....

- Original TTL = 6 seconds

- HAMMER_TIME = 5 seconds, STOP = 3

- Resolve at 10:23:34AM

  - No STOP -> resolve again at 10:23:35AM

  - With STOP -> ages out normally

    - Disables HAMMER for short TTLs.

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