Opportunistic DNS Refresh

draft-muks-dnsop-dns-opportunistic-refresh-00

Stephen Morris
RR TTL

TTL

T0

T1

Time

www.foo.com AAAA 2001:DB8::1

www.foo.com AAAA 2001:DB8::1

2
RR TTL

SERIAL 42

www.foo.com AAAA 2001:DB8::1

SERIAL 42

TTL

TQ ≤ T1

foo.com MX

T0 TQ T1

3

Time
RR TTL

SERIAL 42

www.foo.com AAAA 2001:DB8::1

TTL

SERIAL 42

www.foo.com AAAA 2001:DB8::1

TTL

T0 TQ T1 TE

4
RR TTL

SERIAL 42

www.foo.comAAAA2001:DB8::1

TTL

T0 TQ T1 TE

5

Time
Zone Serial Information

- Add SOA RR to each response from the zone.
- Serial number must match the serial number associated with the RR for TTL extension to take place.
Handshake Needed

- Client adds EDNS option to query to request SOA RR – if client doesn’t need it, no bandwidth is wasted sending it.
- Server adds EDNS option to response as a guarantee that zone change is accompanied by a version number change.
Questions/Issues

- Is it useful?
- Should we extend the TTL of NS records this way?
- Is the server’s EDNS response option really needed?
- How should we cope with ECS?
- Security?