IETF DNSOP WG Update
– and some DPRIVE

Suzanne Woolf
Tim Wicinski
Benno Overeinder
IETF DNSOP Update on ... (1)

• Submitted to IESG for publication
  • draft-ietf-dnsop-attrleaf /draft-ietf-dnsop-attrleaf-fix
  • draft-ietf-dnsop-dns-capture-format
  • draft-ietf-dnsop-isp-ip6rdns
  • draft-ietf-dnsop-kskroll-sentinel
  • draft-ietf-dnsop-refuse-any
  • draft-ietf-dnsop-session-signal
  • draft-ietf-dnsop-terminology-bis

... and happy OPS AD
### IETF DNSOP Update on … (2)

<table>
<thead>
<tr>
<th>Document</th>
<th>Date</th>
<th>Status</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>draft-ietf-dnsop-attrleaf-14</td>
<td>2018-10-10</td>
<td>Approved-announcement to be sent::Revised I-D Needed for 7 days</td>
<td>Warren, Kumari, Benno, Overeinder</td>
</tr>
<tr>
<td>DNS Scoped Data Through “Underscore” Naming of Attribute Leaves</td>
<td>13 pages</td>
<td>Submitted to IESG for Publication: Best Current Practice Reviews: genart, opsdir, secdir</td>
<td></td>
</tr>
<tr>
<td>draft-ietf-dnsop-attrleaf-fix-05</td>
<td>2018-10-10</td>
<td>IESG Evaluation::Revised I-D Needed for 7 days</td>
<td>Warren, Kumari, Benno</td>
</tr>
<tr>
<td>Fixing Specifications with Reverse DNS in IPv6 for Internet Service Providers</td>
<td>14 pages</td>
<td>Submitted to IESG for Publication: Best Current</td>
<td></td>
</tr>
<tr>
<td>draft-ietf-dnsop-isp-ip6rdns-07</td>
<td>2018-09-26</td>
<td>RFC Ed Queue: EDIT for 16 days</td>
<td>Warren, Kumari, Tim Wicinski</td>
</tr>
<tr>
<td>Reverse DNS in IPv6 for Internet Service Providers</td>
<td>14 pages</td>
<td>Submitted to IESG for Publication: Informational Reviews: genart, opsdir, secdir</td>
<td></td>
</tr>
<tr>
<td>draft-ietf-dnsop-kskroll-sentinel-15</td>
<td>2018-07-02</td>
<td>IESG Evaluation::Revised I-D Needed for 7 days</td>
<td>Terry, Manderson</td>
</tr>
<tr>
<td>A Root Key Trust Anchor Sentinel for DNSSEC</td>
<td>21 pages</td>
<td>Submitted to IESG for Publication: Proposed Standard Reviews: genart, opsdir, secdir</td>
<td>Warren, Kumari, Tim Wicinski</td>
</tr>
<tr>
<td>draft-ietf-dnsop-terminology-bis-14</td>
<td>2018-09-13</td>
<td>RFC Ed Queue: AUTH48 for 31 days</td>
<td>Warren, Kumari</td>
</tr>
<tr>
<td>DNS Terminology</td>
<td>49 pages</td>
<td>Submitted to IESG for Publication: Best Current Practice Reviews: genart, opsdir, tsvart</td>
<td>Suzanne Woolf</td>
</tr>
<tr>
<td>draft-ietf-dnsop-refuse-any-01</td>
<td>2018-09-27</td>
<td>RFC Ed Queue: EDIT for 31 days</td>
<td>Warren, Kumari</td>
</tr>
<tr>
<td>Providing Minimal-Sized Responses to DNS Queries that have QTYPE=ANY</td>
<td>49 pages</td>
<td>Submitted to IESG for Publication: Best Current Practice Reviews: genart, opsdir, tsvart</td>
<td>Suzanne Woolf</td>
</tr>
</tbody>
</table>
... or Signposting for Operator Input
Provisioning and Multi Provider (1)

- Aliasing/redirecting in DNS
  - solution for website hosted by CDNs amongst others (www.example.com vs. example.com)
  - ANAME and recently a minimal ANAME (Evan Hunt, Peter van Dijk, and Tony Finch are in the room)
  - CNAME in apex draft and presentation by Ondřej Surý at OARC 29 (in the room; Petr Špaček started discussion in DNSOP)
    - also discusses CNAME+DNAME and SRV
Provisioning and Multi Provider (2)

• Multi provider DNSSEC models
  • deploying DNSSEC in multiple DNS providers setup to distribute an authoritative DNS service (Shumon Huque, John Dickinson, and Jan Vcelak are in the room)
  • Two main models described: (i) serve only and (ii) sign and server
Serving Stale Data to Improve DNS Resiliency

- draft-tale-dnsop-serve-stale, authors Dave Lawrence and Warren Kumari (both in the room) and Puneet Sood
  - use stale DNS data to avoid outages when authoritative nameservers cannot be reached to refresh expired data
  - IPR statements by Akamai and Google
- Implementations exist: Akamai, Knot Resolver, OpenDNS, and Unbound
WG Last Call: Algorithm Update

• Algorithm Implementation Requirements and Usage Guidance for DNSSEC, draft-ietf-dnsop-algorithm-update (Ondřej Surý and Paul Wouters)
  • specify a set of algorithm implementation requirements and usage guidelines to ensure that there is at least one algorithm that all implementations support
The Back of the Camel and Code Complexity
—a personal perspective—

• (New) IETF DNS standards add complexity
  • “We do have the sense that the discussion in London really resonated with people, and a couple of the ideas out if it seem to be continuing as part of the discussion in DNSOP — that we should think about complexity in the protocol, and pay attention to who’s implementing things and why. We know that over the long term, wrestling with these issues is part of how we keep a successful protocol evolving in a useful way.”

• DNS software implementors

  ![Need for Speed](image1)

• Work arounds for broken software
  • DNS flag day
DPRIVE Recharter

• Develop requirements for adding confidentiality to DNS exchanges between recursive resolvers and authoritative servers (unpublished document).

• Investigate potential solutions for adding confidentiality to DNS exchanges involving authoritative servers (Experimental).

• Define, collect and publish performance data measuring effectiveness of DPRIVE-published technologies against pervasive monitoring attacks.

• Document Best Current Practices for operating DNS Privacy services.