Knot DNS update

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Agenda

- What is Knot DNS
- Current state
- Work in progress
  - DNSSEC signing
  - Memory consumption optimization
What is Knot DNS

• Open-source authoritative only DNS server
  • Alternative to Bind and NSD
• Unix like systems (Linux, FreeBSD, ...)
• Full featured:
  • AXFR, IXFR, TSIG, EDNS0, DNSSEC with NSEC3
  • DDNS, NSID, Response Rate Limiting, DANE
  • Online addition/removal of zones
Current state

- Current version - 1.3.2
  - Released during summer
  - Zone parser rewritten => much faster zone upload
- Deployments
  - .CZ (1.08 mil. domains), .DK (1.20 mil. domains)
  - A few Czech registrars/webhosters
  - Tested by ICANN(l-root) and RIPE NCC (k-root)
Work in progress - DNSSEC

- Currently DNSSEC only in “passive” mode
- Survey among DNS operators
  ec-results
- The goal is to have OpenDNSSEC comfort but with support for DDNS
- First version: automatic signing using keys on filesystem
- Next version: key management + HSM support
## Work in progress – optimization

<table>
<thead>
<tr>
<th>Memory/GB</th>
<th>cz</th>
<th>net</th>
<th>com</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2.0</td>
<td>2.1</td>
<td>17.0</td>
<td>-</td>
</tr>
<tr>
<td>1.3.2</td>
<td>1.5</td>
<td>8.6</td>
<td>-</td>
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<tr>
<td>1.4</td>
<td>1.2</td>
<td>6.5</td>
<td>45</td>
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<table>
<thead>
<tr>
<th>Load speed/sec</th>
<th>cz</th>
<th>net</th>
<th>com</th>
</tr>
</thead>
<tbody>
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<td>1.2.0</td>
<td>97</td>
<td>1276</td>
<td>-</td>
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<tr>
<td>1.3.2</td>
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<tr>
<td>1.4</td>
<td>18</td>
<td>93</td>
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</tbody>
</table>
Conclusion

- Knot DNS is ready to be used
- Version 1.4 (release candidate) with DNSSEC will be out in a few weeks
- Go to www.knot-dns.cz, try it and give us any kind of feedback!