DNS/DNSSEC Workshop

Software Overview

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DNS software overview

- Many vendors and software platforms out there

- Commercial and Open Source solutions

- Good overview here

http://en.wikipedia.org/wiki/Comparison_of_DNS_server_software

- ISC's BIND was dominant for many years, but there are also good alternatives

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DNS software mini-comparison

Software	Auth	Recursive	DNSSEC	DB / API
ISC BIND9	X	X	X	
PowerDNS	X		X	X
PowerDNS Recursor		X	X	
NSD	X		X	
Unbound		X	X	
Knot DNS	X		X	
Knot Resolver		X	X	

DNS software overview (2)

- BIND9 and Unbound are popular choices for use as a resolver
  - Power DNS Recursor and Knot Resolver are newer
- BIND9 and PowerDNS are possibly more popular than NSD and Knot for use as authoritative
  - Knot is quite new
- We'll focus on 3 implementations
  - BIND 9.11
  - Unbound 1.6.7
  - NSD 4.1.17

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DNS software: BIND

- Version 4 released with BSD 4.3 in 1986
- Currently at version 9.12
- BIND 10 was once in development, but has been abandoned
- Most feature rich DNS implementation out there
- Often considered "the reference"
  - BIND zone format is the de-facto notation
- Used in many commercial products

DNS software: BIND (2)

- Features include
  - ACLs
  - Views
  - DB API
  - Dynamic DNS support
  - DNSSEC signing and validation
  - Many more...

DNS software: NSD

- Developed by NLNetLabs
- Authoritative only
- Developed to mitigate risk of a single bug taking out all BIND implementations
- Several root servers use NSD
- Zones are "compiled" into a precalculated "on the wire" format
  - all possible answers are calculated, then stored into a binary DB, ready to send out
  - very fast

DNS software: Unbound

- Developed by NLNetLabs
- Resolver only
- Developed with performance in mind
- More lightweight that BIND
  - More efficient memory usage
  - More features to control caching
  - Fast...

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Questions?

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