



Domain Name System (DNS) IPv6 update

TLD and Root Zone work

Prior Work

- Testbeds
 - www.rs.net
 - RIPE n/m
 - WIDE/ISI/ISC work
- Early Adopters
 - TLDs from all regions

Current Policy recommendations

- RSSAC to ICANN
 - “Based on testing, please proceed w/ TLD delegations at your earliest”
<http://www.rssac.org/rssac-v6tldglue>
- IETF to TLDs
 - Mind the fragments... And here is a calculator to determine when fragmentation will occur. <http://www.ietf.org/internet-drafts/draft-ietf-dnsop-respsize-00.txt>

Integration “HowTo”

- Depends on your current deployment
- IETF has some recommendations, but it is unclear to me that the authors run servers.
- Experiences from ARIN

Non-dual Stack DNS

Running non-dual stack servers for a zone on v4 and v6 can be done two ways

- Having the servers have an A "x" or AAAA record

- Using one server name on two machines

BIND seeks A and AAAA for all NS names

- Recommendation to use "one name, two machines"

One "gotcha"

The "other" v6 service we run, SSH

```
# ssh tinnie.arin.net
```

AAAA is preferred over A

If you wanted to reach tinnie A, oops.

Once did a "tail -f log" on the wrong host

Why wasn't an event being logged?

Good thing it wasn't an "rm" command

Otherwise, acceptable but sub-optimal

Another "gotcha"

If the "A" server is running other services that can't be brought to v6

Separate the services physically, or

Separate the services via domain names

We separated by purchasing a new server

Newer hardware - good

Summary

Adding IPv6 as a Network Protocol

It's not as hard as you think. It can't be.

Recommendations

Use latest acceptable versions of software

Use the same physical media for IPv4 and IPv6

Get in early, while the bandwidth is easy to handle and grow with it

“waiting...waiting....”

- JP
- FR
- EDU
- ..others?...
- About 1/3rd of the roots.

Documents

- <http://www.ietf.org/internet-drafts/draft-ietf-dnsop-respsize-00.txt>
- <http://www.rssac.org/rssac-v6tldglue>
- {more drafts - tech notes}

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Fin

- Questions?
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