

AAAA for Root DNS Servers

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IPv6 issues in DNS

- ☆ **How an IPv6 address expressed?**
 - Use AAAA record
- ☆ **How DNS query can be done in IPv6?**
 - Just use IPv6
 - If the server supports queries in IPv6
 - Glue records need to have AAAAs as well
 - To enable further resolution in IPv6
- ☆ **Which DNS servers support queries in IPv6?**
 - In a case of TLD
 - There are 271 TLDs now
 - 110 TLDs through 106 servers

IPv6 in the Root servers

☆ 5 Root servers are w/ IPv6 address

- see www.root-servers.org

☆ They are totally useless

- "root.cache" is used just as a hint
- bind does priming by using the hint
 - QNAME=. QTYPE=NS
 - to know the latest list of Root servers
- If you add AAAA to "root.cache"
 - The first query might be in IPv6
 - No further query will be in IPv6

IPv6 in the Root servers

☆ We had looooong discussion

- Within root operators and with IANA

☆ IANA board finally approved to move forward

- Feb 4th, 2008, late morning EST probably
 - Feb 4th late evening in Asia
- Four AAAA records will be added

F 2001:500:2f::f (changed)

H 2001:500:1::803f:235

K 2001:7fd::1

M 2001:dc3::35

- Sorry not 13 at this moment
- M will use Anycast from day zero
 - Tokyo(3), San Francisco and Paris
 - Providing better connectivity to you

Issues

- ☆ **EDNS0 is a tool help the packet size issue**
 - Some firewall could drop bigger response
- ☆ **Limited number of servers supports IPv6**
 - You work hard!
- ☆ **IPv6 connectivity is not rich as in IPv4**
 - Confirm your IPv6 connectivity
- ☆ **Many queries might come to the Root**
 - To raise a question on AAAA records
- ☆ **Some registrars do not support AAAA**
 - Even if their registries do support AAAA
- ☆ **Name split**
 - Every zone must be resolvable in IPv4
 - At least one (practically two) server
 - Should provide IPv4 access