



**INTERNET SYSTEMS CONSORTIUM**

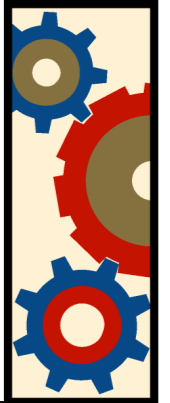


# **BIND, AAAA and the root servers**

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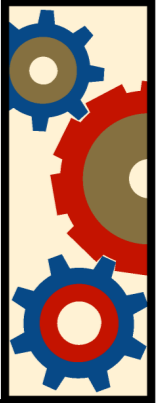
# Finally, AAAA records for the root servers



On February 4th (2 weeks ago), IANA introduced, for the first time, IPv6 addresses in the root-servers.net zone. Initially, 6 (out of 13) root servers are providing service over IPv6:

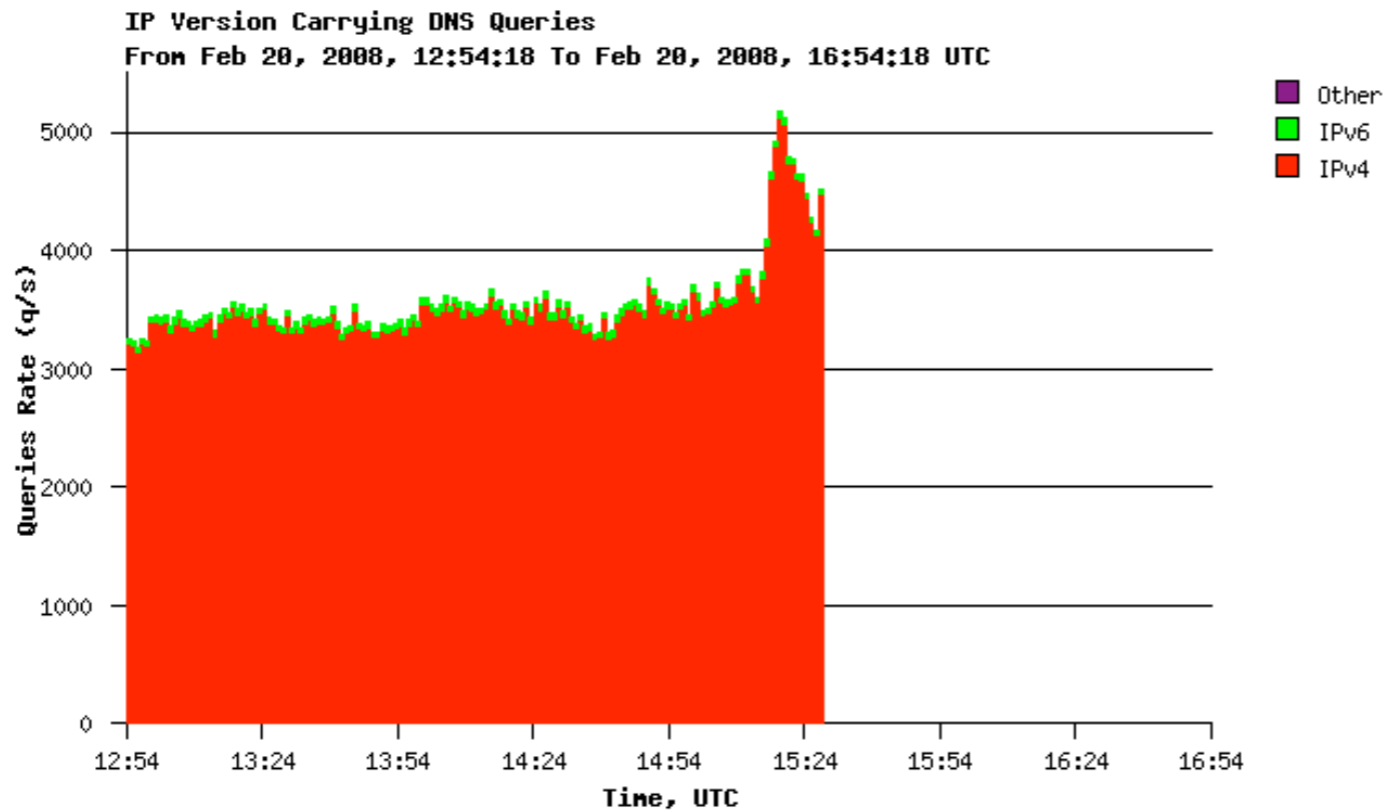
| Name               | Address          | Prefix Length |
|--------------------|------------------|---------------|
| A.ROOT-SERVERS.NET | 2001:503:ba3e::  | /48           |
| F.ROOT-SERVERS.NET | 2001:500:2f::f   | /48, /47      |
| H.ROOT-SERVERS.NET | 2001:500:1::803f | /48           |
| J.ROOT-SERVERS.NET | 2001:503:c27::2: | /48           |
| K.ROOT-SERVERS.NET | 2001:7fd::1      | /32           |
| M.ROOT-SERVERS.NET | 2001:dc3::35     | /32           |

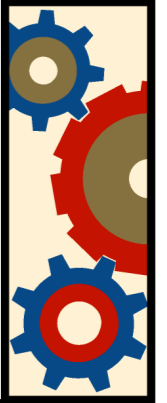




# Observed traffic levels

- Not very high, similar on all servers that have reported stats. Around 80-100 qps.



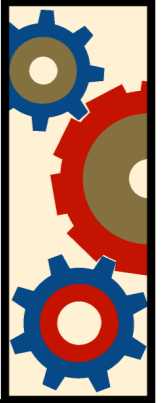


# Observed query levels on F root (ISC)

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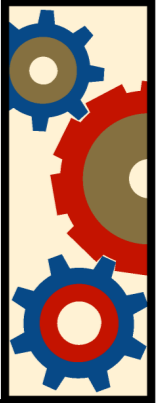
- F root is using anycast in IPv6 in exactly the same way as we do for IPv4.
  - hence the two prefix lengths, /47, /48 to prevent black-holing
  - 13 nodes providing IPv6 service currently
- Most traffic is going to the European nodes, in particular Paris and Amsterdam, followed by the global nodes in the Bay Area. Very little in Japan (!?)





# Peering with F root over IPv6

- We are ready almost everywhere, so let us know and we will peer with you, enable IPv6 or help enable IPv6 at the IXP.
- Have a look at <http://www.isc.org/ops/f-root/> for a list of sites. If the site is not yet IPv6 enabled we can work together to bring it up.



# BIND changes

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- BIND itself doesn't need any code changes
  - ISC will provide an updated copy of the built-in root server list (named.ca, root.cache,...) shipped with BIND to include the new IPv6 addresses starting with BIND 9.5
  - In the meantime you can fetch a copy from `ftp://rs.internic.net/domain`





**Questions?**

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