

# **An update on the AAAA lookup problem**

**David Malone**

**<dmal@maths.tcd, cnri.dit>.ie>**

**September 2004**

## AAAA lookup problems

Should return  $\geq 0$  records. Problems listed in

`draft-ietf-dnsop-misbehavior-against-aaaa-01.txt`

Can cause inaccessability, delays or sub-optimal caching.

On mailing lists NXDOMAIN or no reply seem most common.

Diagnosis is tricky for end users.

`www.cnri.dit.ie/cgi-bin/check_aaaa.pl`

## Since last R1PE

- Short document circulated to WG list.
- Describes problem and recommends testing new kit.
- List suggests we publicise problem.
- List suggests we don't pursue problem NS directly.
- Some issues with client resolvers raised.

# Results by name

Names with	Jan '04	Apr '04	Aug '04
AAAA records	42 of 22863 0.18%	54 of 29287 0.18%	55 of 24776 0.22%
a ns that times out	102 of 22863 0.45%	113 of 29287 0.39%	73 of 24776 0.29%
a ns that returns NOTIMP	6 of 22863 0.03%	4 of 29287 0.01%	2 of 24776 0.01%
a ns that returns NXDOMAIN	16 of 22863 0.07%	24 of 29287 0.08%	11 of 24776 0.04%
a ns that returns REFUSED		2 of 29287 0.01%	4 of 24776 0.02%
a ns that returns 15		4 of 29287 0.01%	2 of 24776 0.01%
a ns that returns SERVFAIL	15 of 22863 0.07%	23 of 29287 0.08%	2 of 24776 0.01%
NO ns that respond correctly	107 of 22863 0.47%	100 of 29287 0.34%	66 of 24776 0.27%
a ns that has any issue	139 of 22863 0.61%	170 of 29287 0.58%	94 of 24776 0.38%

# Results by nameserver

Nameservers that	Jan'04	Apr'04	Aug'04
returned AAAA records	105 of 16838	123 of 20631	118 of 17934
timed out on AAAA	64 of 16838	49 of 20631	36 of 17934
return NOTIMP on AAAA	8 of 16838	9 of 20631	2 of 17934
return NXDOMAIN on AAAA	11 of 16838	19 of 20631	11 of 17934
return REFUSED on AAAA		4 of 20631	5 of 17934
return 15 on AAAA		3 of 20631	2 of 17934
return SERVFAIL on AAAA	14 of 16838	23 of 20631	2 of 17934
have any issue with AAAA	97 of 16838	107 of 20631	58 of 17934
	0.62%	0.60%	0.66%
	0.38%	0.24%	0.20%
	0.05%	0.04%	0.01%
	0.07%	0.09%	0.06%
		0.02%	0.03%
		0.01%	0.01%
	0.08%	0.11%	0.01%
	0.58%	0.52%	0.32%