



IPv6 for the .nz DNS

IPv6 Hui - August 2009
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 **.nz** *registry*
services

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What is the DNS?

What is the DNS?



Project Goal

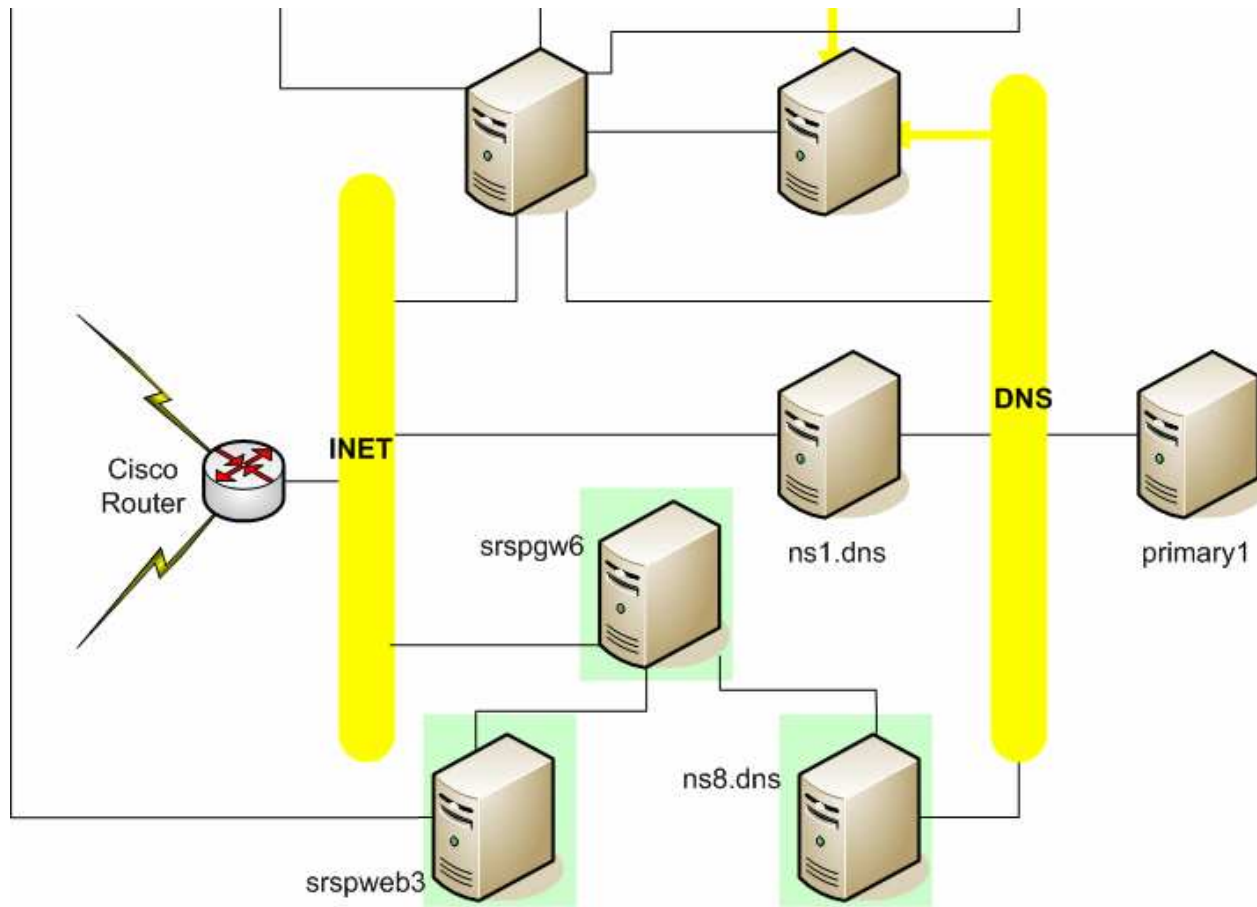


Purpose for Project



Taken by Phillip Capper

Approach – Low Risk



Approach – Work Taken

- Request for IPv6 addresses from APNIC
- Operating System – Linux – just worked
- Name server software – just worked
- Whois server required minimal changes:
 - To respond to queries on IPv6
 - Minor change to logging
- Management of DNS reverse zones

Issues?

Issues?

Of course!

Issues – Transit



Issues – Disrepair



Issues – Network Accept Policies

```
ipv6 prefix-list ipv6-ebgp-strict deny 3ffe::/16 le 128
ipv6 prefix-list ipv6-ebgp-strict permit 2001:500::/30 ge 48 le 48
ipv6 prefix-list ipv6-ebgp-strict deny 2001:db8::/32 le 128
ipv6 prefix-list ipv6-ebgp-strict permit 2001::/32
ipv6 prefix-list ipv6-ebgp-strict permit 2001::/16 ge 35 le 35
ipv6 prefix-list ipv6-ebgp-strict permit 2001::/16 ge 19 le 32
ipv6 prefix-list ipv6-ebgp-strict permit 2001:0678::/29 ge 48 le 48
ipv6 prefix-list ipv6-ebgp-strict permit 2001:0c00::/23 ge 48 le 48
ipv6 prefix-list ipv6-ebgp-strict permit 2001:13c7:6000::/36 le 48
ipv6 prefix-list ipv6-ebgp-strict permit 2001:13c7:7000::/36 le 48
ipv6 prefix-list ipv6-ebgp-strict permit 2001:43f8::/29 ge 40 le 48
ipv6 prefix-list ipv6-ebgp-strict permit 2002::/16
ipv6 prefix-list ipv6-ebgp-strict permit 2003::/16 ge 19 le 32
ipv6 prefix-list ipv6-ebgp-strict permit 2400::/12 ge 19 le 32
ipv6 prefix-list ipv6-ebgp-strict permit 2600::/12 ge 19 le 32
ipv6 prefix-list ipv6-ebgp-strict permit 2610::/23 ge 24 le 32
ipv6 prefix-list ipv6-ebgp-strict permit 2620::/23 ge 40 le 48
ipv6 prefix-list ipv6-ebgp-strict permit 2800::/12 ge 19 le 32
ipv6 prefix-list ipv6-ebgp-strict permit 2a00::/12 ge 19 le 32
ipv6 prefix-list ipv6-ebgp-strict permit 2801:0000::/24 le 48
ipv6 prefix-list ipv6-ebgp-strict permit 2c00::/12 ge 19 le 32
ipv6 prefix-list ipv6-ebgp-strict deny 0::/0 le 128
!
```

Issues – Knowledge / Acceptance



Issues – Summary

- Main Issues Encountered:
 - Transit
 - Disrepair of infrastructure
 - Network Accept Policies
 - Knowledge and Acceptance
- All issues were worked around

Successes – Summary

- Linux
- Name server software
- Code changes to whois server
- IPv6 rolled out in the .nz nameservers and whois!

Thank you

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