



IPv6

New Zealand IPv6 Metrics Analysis Report #1: Q2 2012

Presented by Dean Pemberton

Prepared by Donald Clark

New Zealand IPv6 Task Force



IPv6

Metrics

- Service provider readiness
- Availability of content and services
- Usage and uptake

<http://www.ipv6.org.nz/metrics/>

<http://www.ipv6.org.nz/wp-content/uploads/2012/08/IPv6MetricsAnalysisReport1Q22012-1.pdf>



IPv6

Highlights

- New Zealand's service providers show a strong level of readiness: almost $\frac{1}{3}$ of peerings to the rest of the world and each other use IPv6; there is a choice for all sizes of businesses and organisations for their IPv6-capable ISP.
- 4 of the top 5 sites visited by New Zealanders are available over IPv6, with the 5th, Trade Me, working towards IPv6 deployment later in 2012



IPv6

Highlights

- Government (4%) and ISPs (17%) lead the way in NZ making themselves visible on the IPv6-Internet, but our health, banking and education sectors are lagging.
- NZ' s actual levels of IPv6 traffic show middling performance, at 0.2% of total traffic. This is ahead of many, on par with economies like Australia, but behind leaders like Japan (1.5%) and France (4.5%).
- Wider purchasing and implementation of IPv6 ISP services and capable CPE (customer premise equipment) are now the largest hurdle to greater IPv6 adoption: the uptake of new UFB-based services provide the opportunity for New Zealand to progress.



IP^v6

1. % of NZ ASNs announcing a v6 prefix

- The last quarter saw small rise from 29% to 31% of NZ ASs having at least 1 v6 peer.
- NZ continues to perform well in this area. OECD average is 15.3%, China is at 13.4%; Australia at 18.3%. Some economies do outstrip us though, including those like internet leaders The Netherlands at 42.0%.



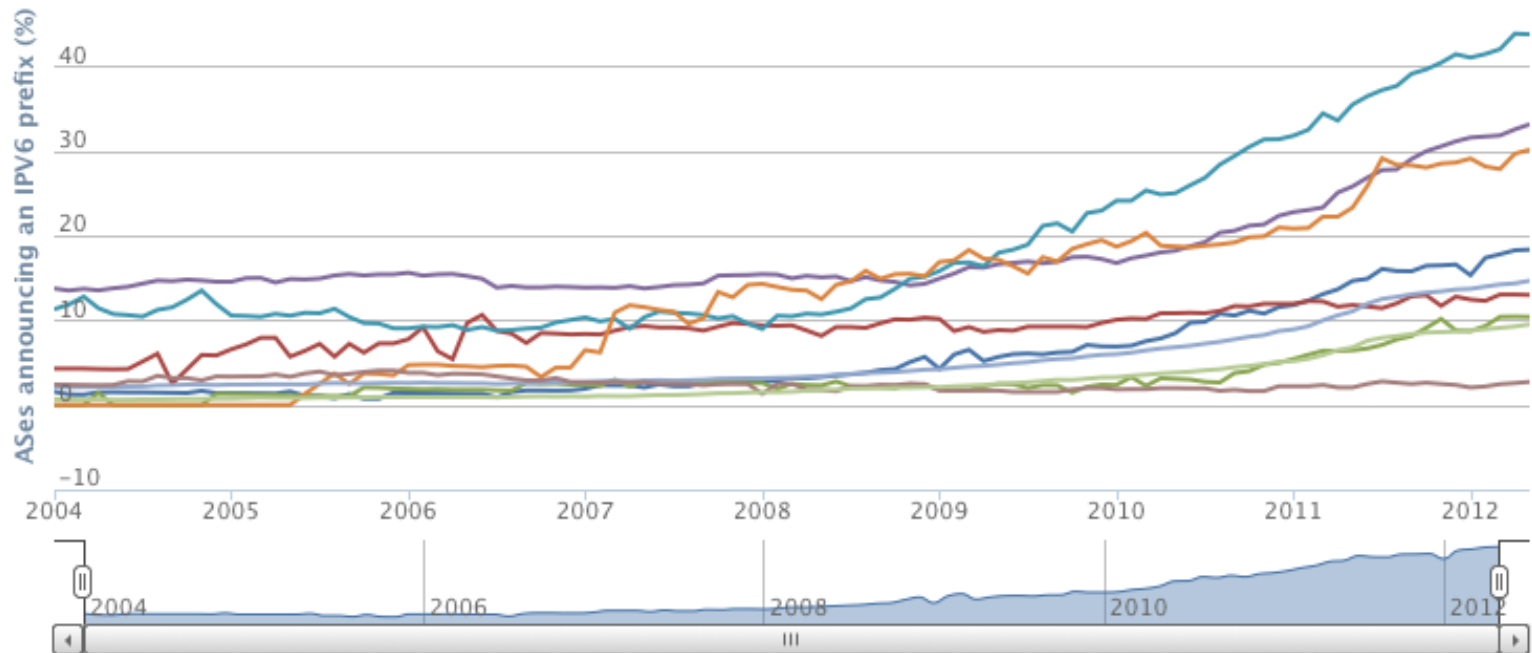
IPv6

1. % of NZ ASES announcing a v6 prefix

% of ASES announcing an IPV6 prefix

Zoom

From: To:





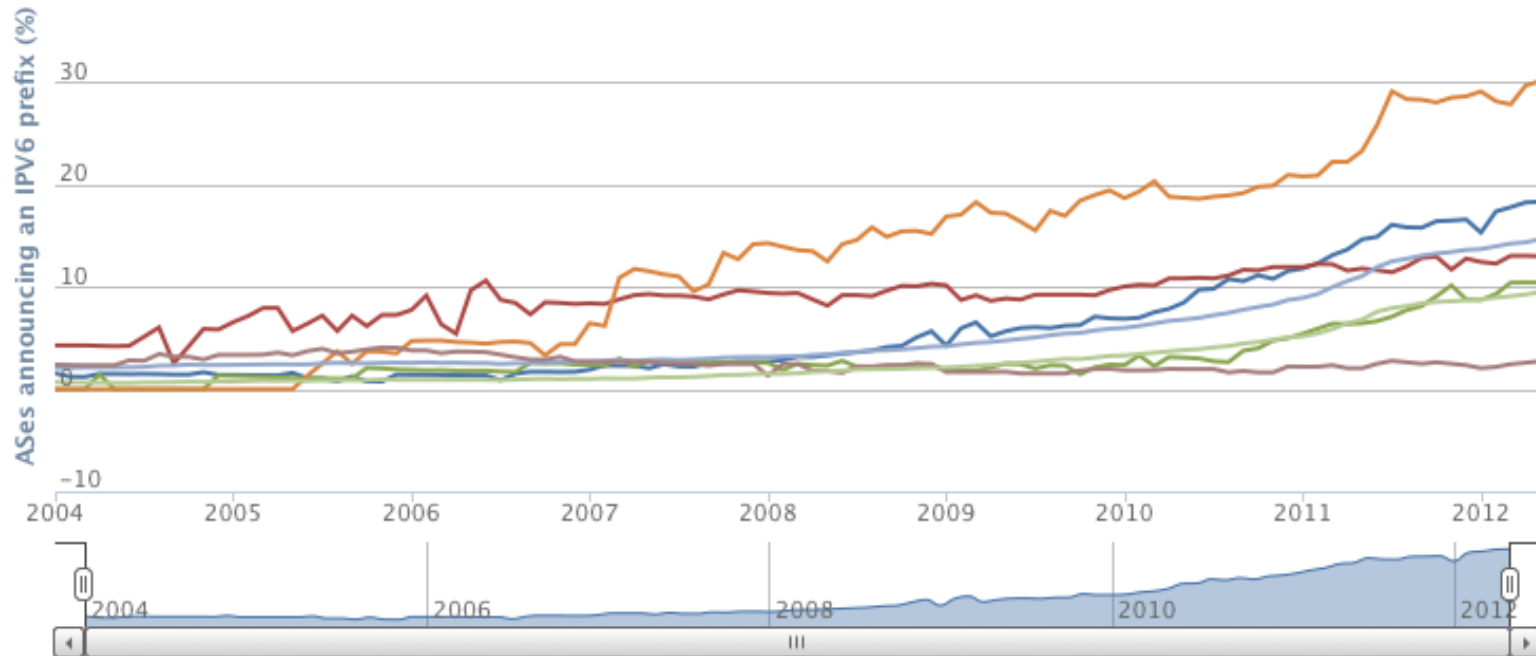
IPv6

1. % of NZ ASES announcing a v6 prefix

% of ASES announcing an IPV6 prefix

Zoom

From: To:





IP^{v6}



2. v6-related queries to .nz root servers

- We'd expect to see a steady increase in queries to the .nz name servers coming in over v6 as increasing numbers of ISPs v6-enable their core networks (v6 usually being the preferred protocol).
- We aren't seeing a strong trend yet - whilst there is a steady increase in requests coming in over v6 (including A requests of v6), these are still dwarfed 95% to 5% with requests coming in over v4



IP^v6

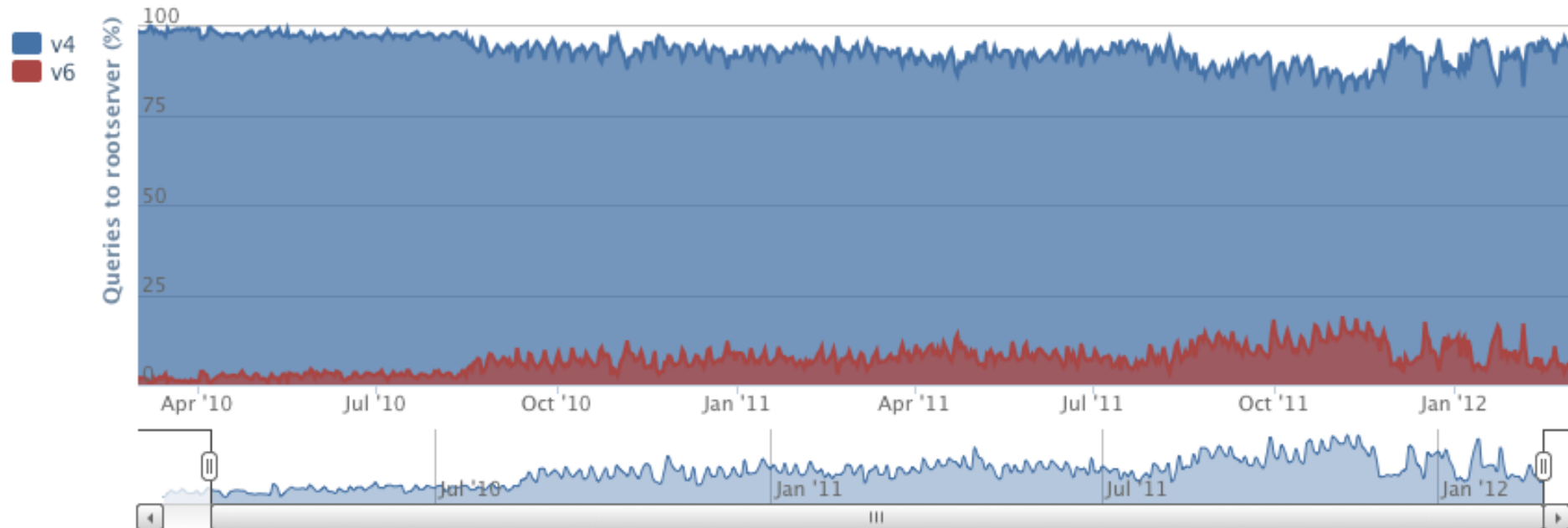


2. v6-related queries to .nz root servers

Source of queries to .nz servers

Zoom

From: To:





IPv6

3. Number and type of ISP v6 offerings

- There is choice of ISP / transit provider at all levels of the market for business: both SMEs and large enterprises / government. There are a few consumer choices for IPv6, but currently only one national choice (Snap!).
- Speaking to providers revealed that many of them are in trials / pre-production of IPv6 services and we expect an increased number of offerings to be available late 2012 early 2013



IP^v6

3. Number and type of ISP v6 offerings

ISP IPv6 Offerings Q1 2012





IPv6

4. Service availability of top NZ domains

(1 – 5)

google.co.nz – yes

facebook.com - yes

google.com - yes

youtube.com – yes

trademe.co.nz - no - planned 2012

(6 – 10)

yahoo.com - yes, but nz.yahoo.com isn't

wikipedia.org - yes

stuff.co.nz - no

nzherald.co.nz -no

live.com - no

(11 – 20)

linkedin.com - no

blogspot.co.nz - yes

westpac.co.nz - no

twitter.com - no

amazon.com - no

nationalbank.co.nz - no

asbbank.co.nz - no

kiwibank.co.nz - no

wordpress.com - no

tvnz.co.nz - no

Alexa Top 20 for NZ



IP^v6

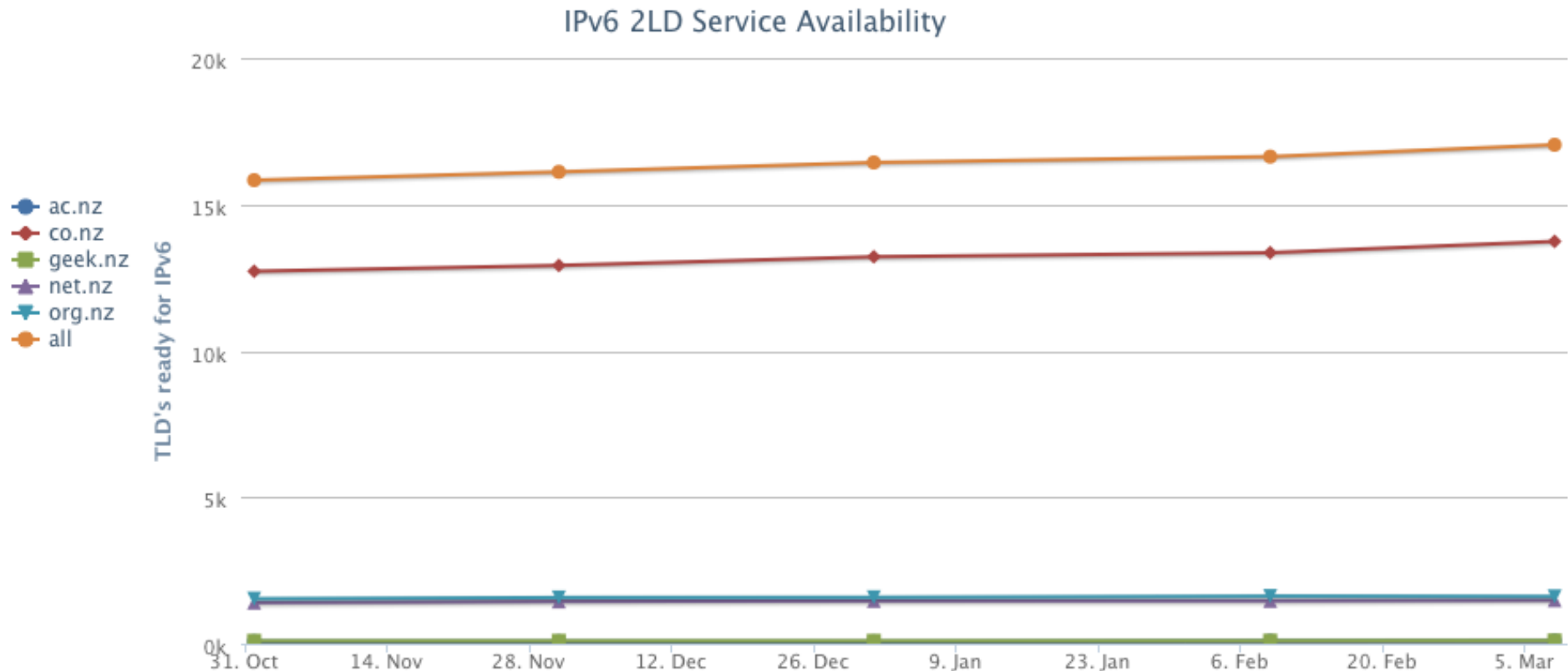
5. Service availability of .nz ccTLD

- **.co.nz** - a small increase 686 / 419,142
- **.ac.nz** - a small increase 15 / 1940
- **.geek.nz** - holding steady 35 / 1172
- **.net.nz** - holding steady 165 / 27,322
- **.org.nz** - a small increase 182 / 126,624



IP^v6

5. Service availability of .nz ccTLD

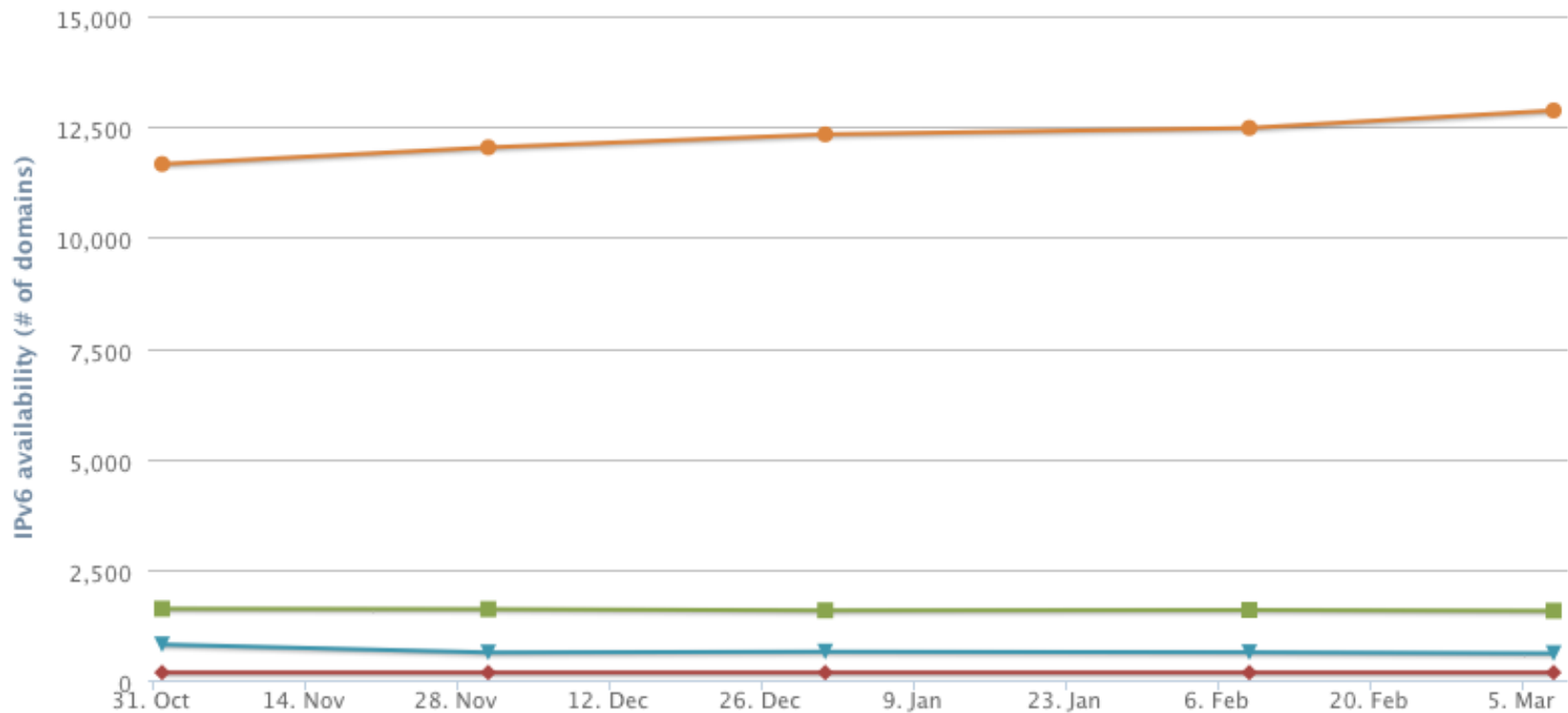




IPv6

5. Service availability of .nz ccTLD

IPv6 2LD Service Availability (co.nz)

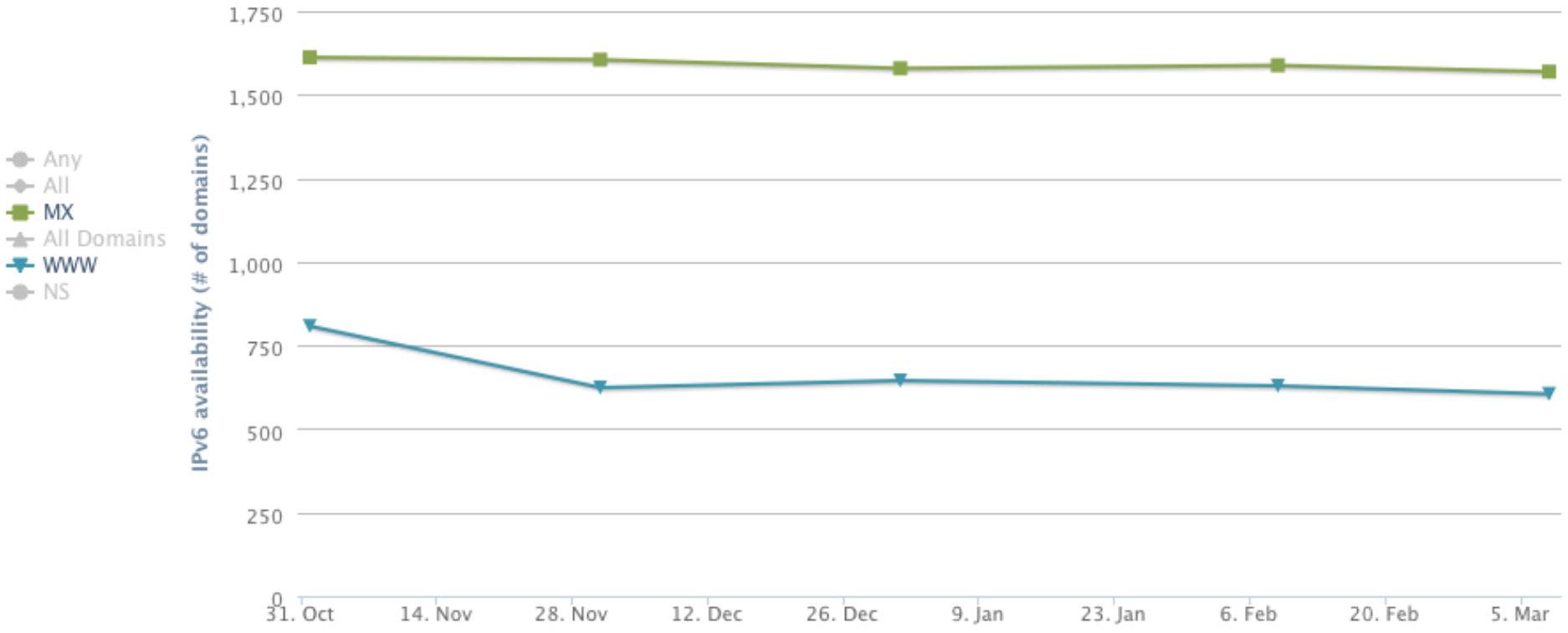




IPv6

5. Service availability of .nz ccTLD

IPv6 2LD Service Availability (co.nz)





IPv6

6. NZ registrars offering IPv6 glue records

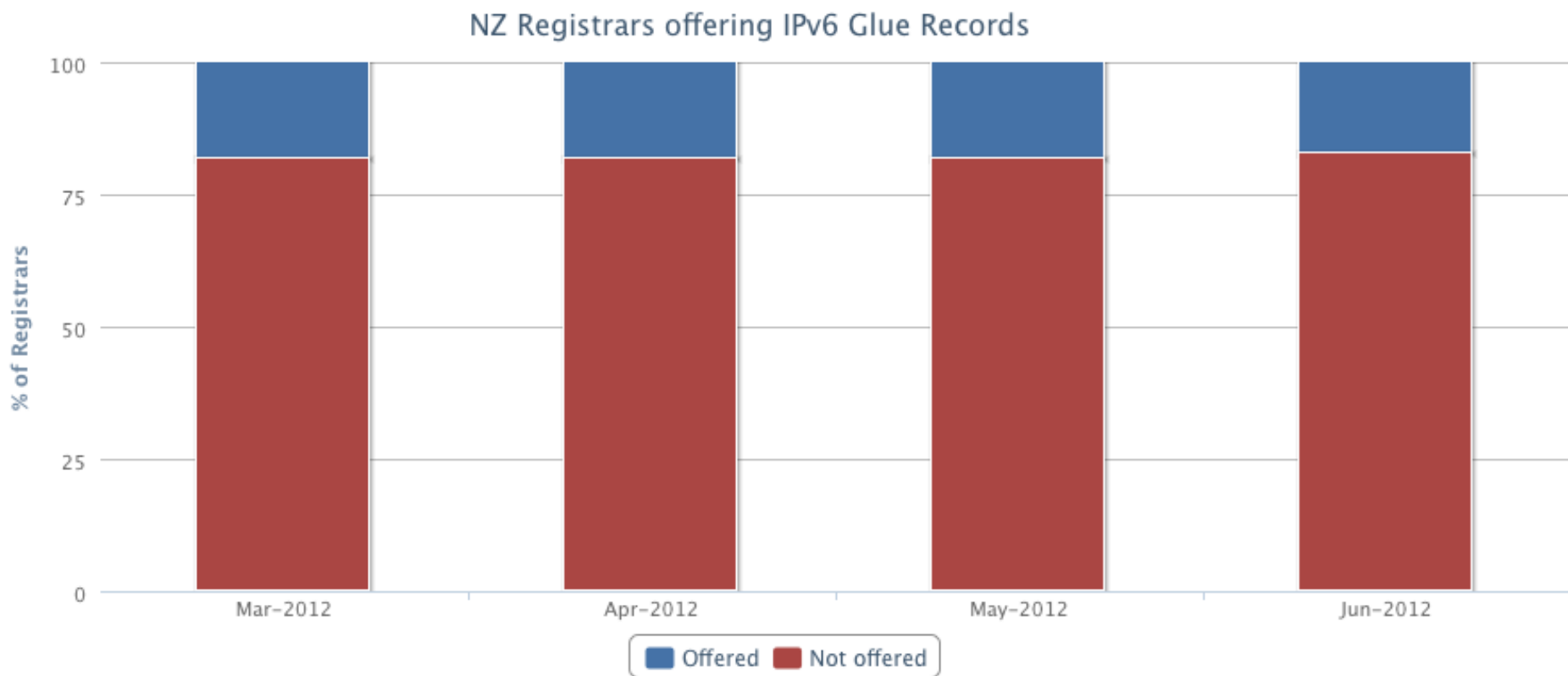
- Over the quarter, there has been no change in the proportion of registrars for .nz offering IPv6 glue services: it remains at 18%.



IPv6



6. NZ registrars offering IPv6 glue records





IPv6

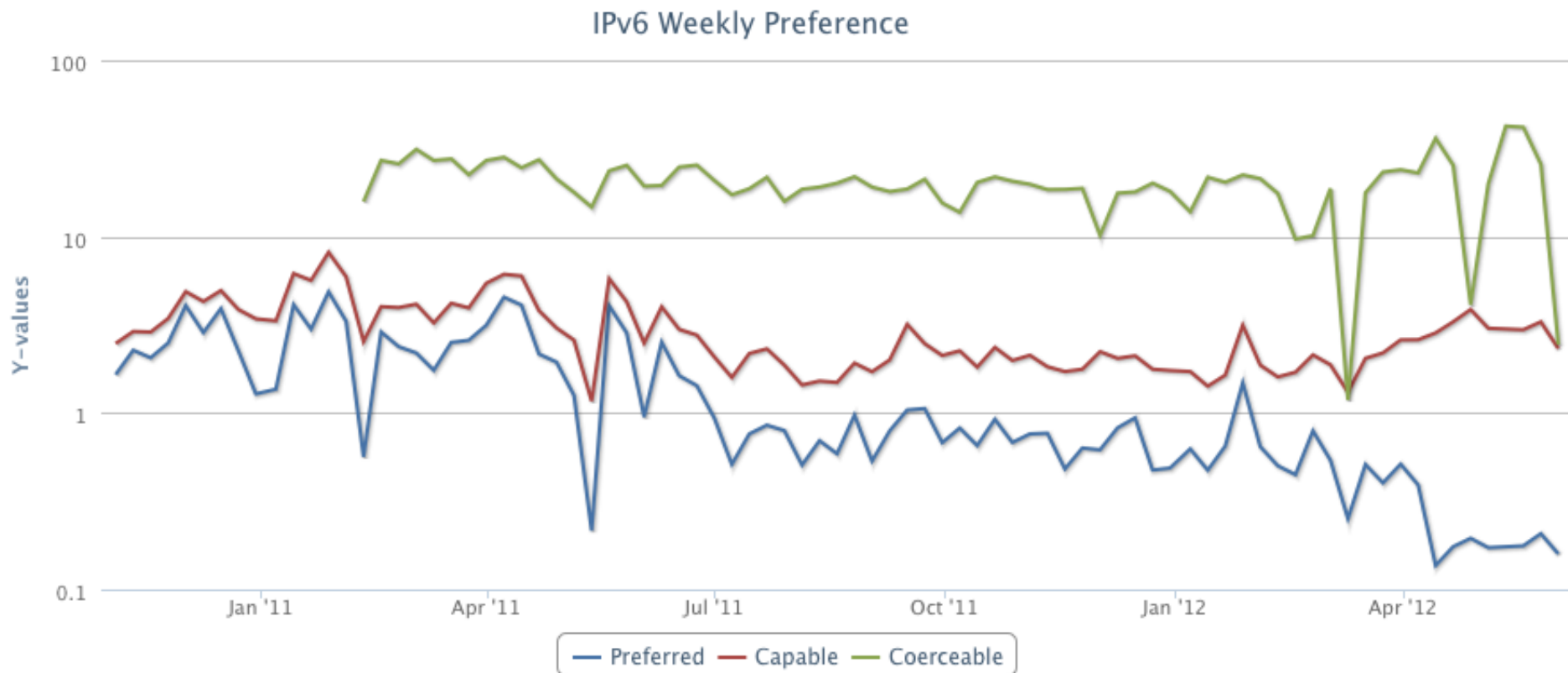
7. Confirmed v6 traffic flows from ISPs

- Data for this metric is not yet available.
- It should be by late 2012, following the Measurement Lab team's deployment of IPv6 into its main NDT service.



IPv6

8. % of capable end users





IPv6

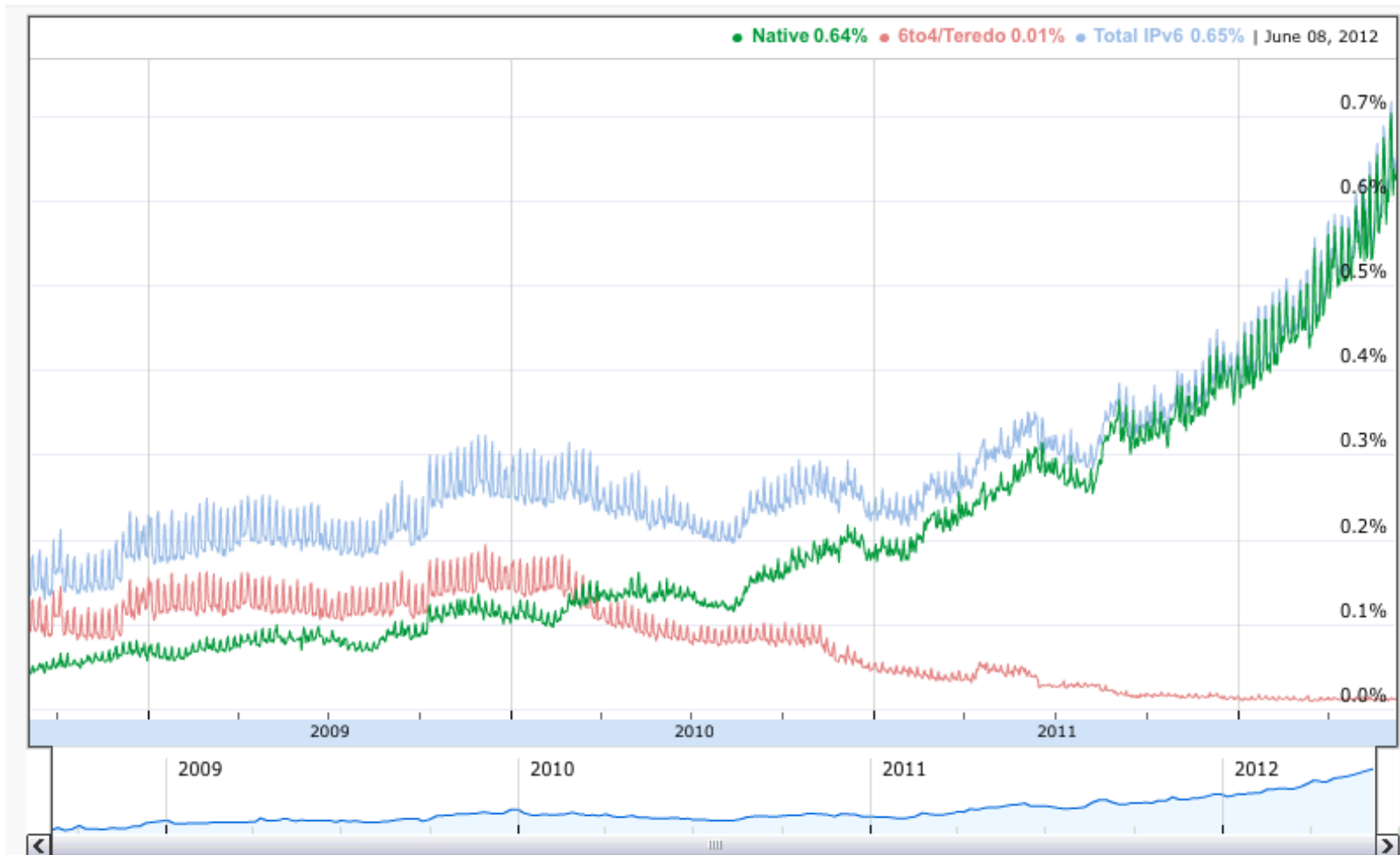
9. v6 Traffic levels

- In lieu of any domestic traffic flow statistics, we are using the Google IPv6 data. This should provide a reasonable proxy given the popularity of Google properties in NZ and the volume of traffic Google sees.
- At time of writing, NZ was showing as 0.24% native IPv6 traffic (correlates with Metric 8), AU as 0.17% and the US as 1.12%.



IPv6

9. v6 Traffic levels





IP^v6

Thank you