



**IPv6**

# **New Zealand IPv6 Metrics Analysis Report #1: Q2 2012**

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# 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/IPv6MetricsAnalysisReport1Q2-2012-1.pdf>



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## 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.



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# 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%.



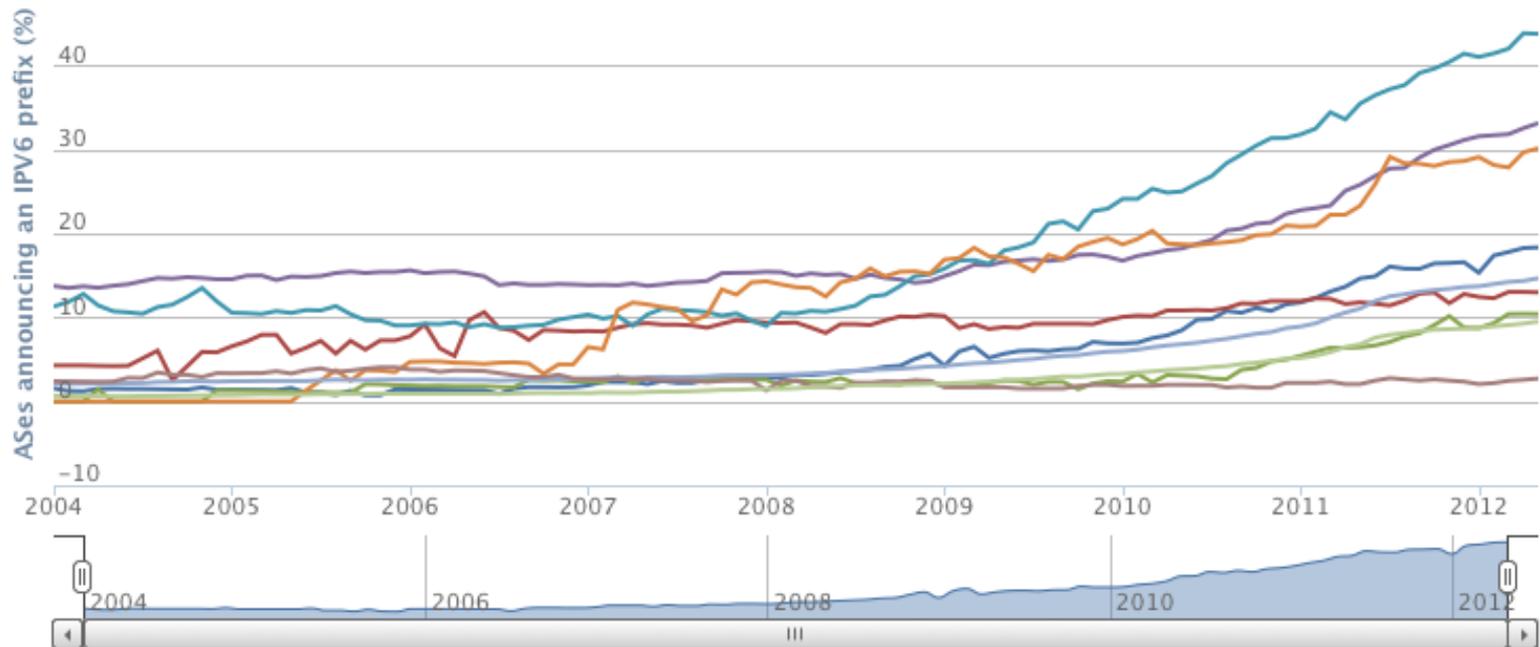
# IPv6

## 1. % of NZ ASES announcing a v6 prefix

% of ASES announcing an IPV6 prefix

Zoom

From:  To:





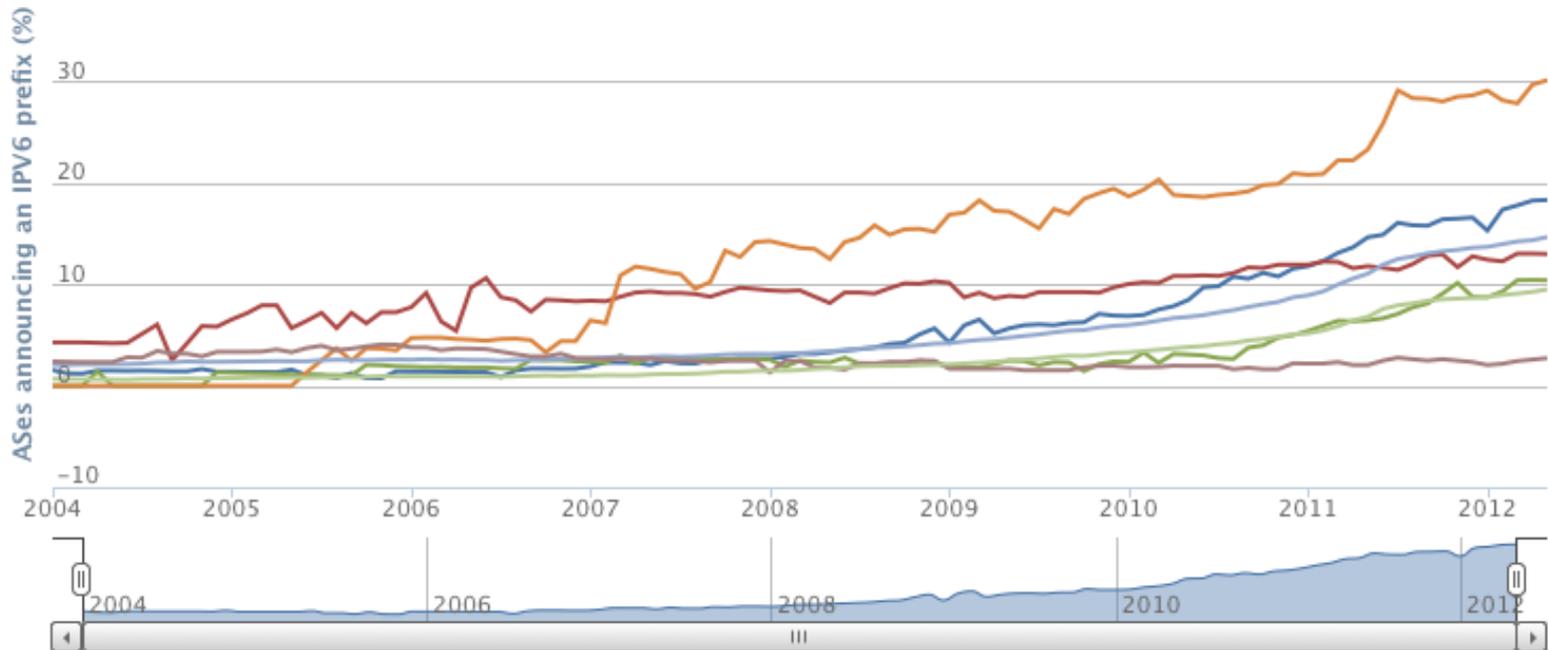
# IPv6

## 1. % of NZ ASES announcing a v6 prefix

% of ASES announcing an IPV6 prefix

Zoom

From:  To:





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## 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<sup>v</sup>6

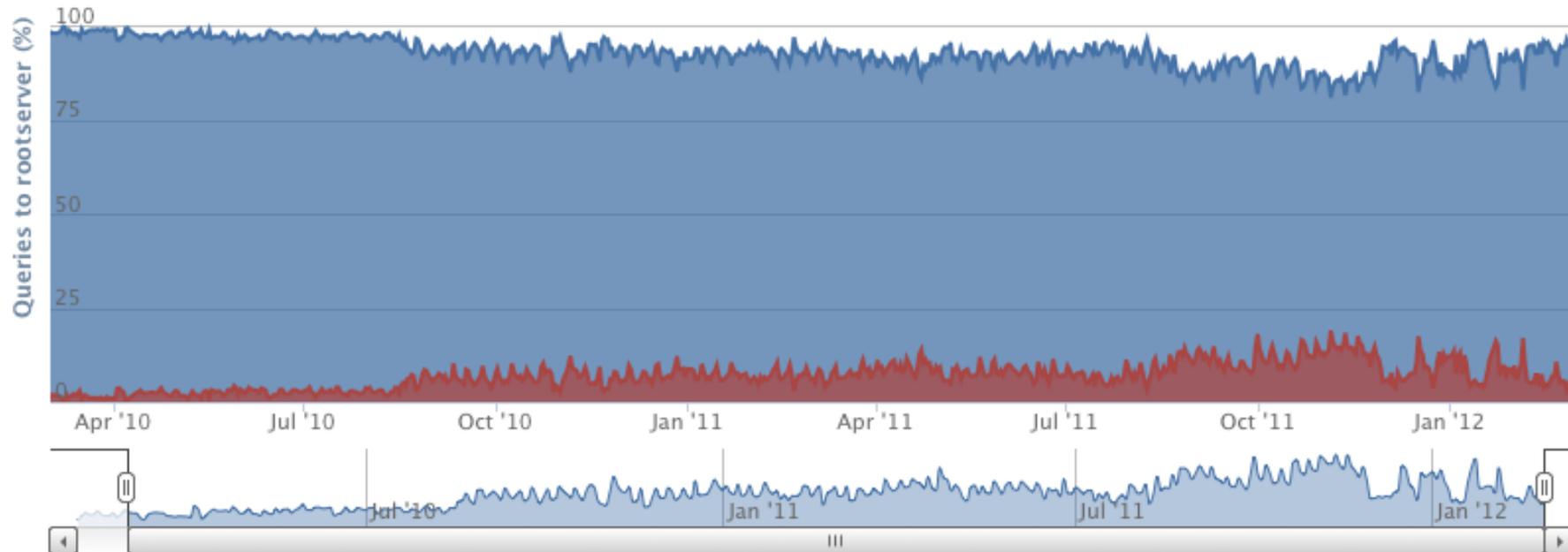


## 2. v6-related queries to .nz root servers

Source of queries to .nz servers

Zoom

From:  To:





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### 3. Number and type of ISP v6 offerings

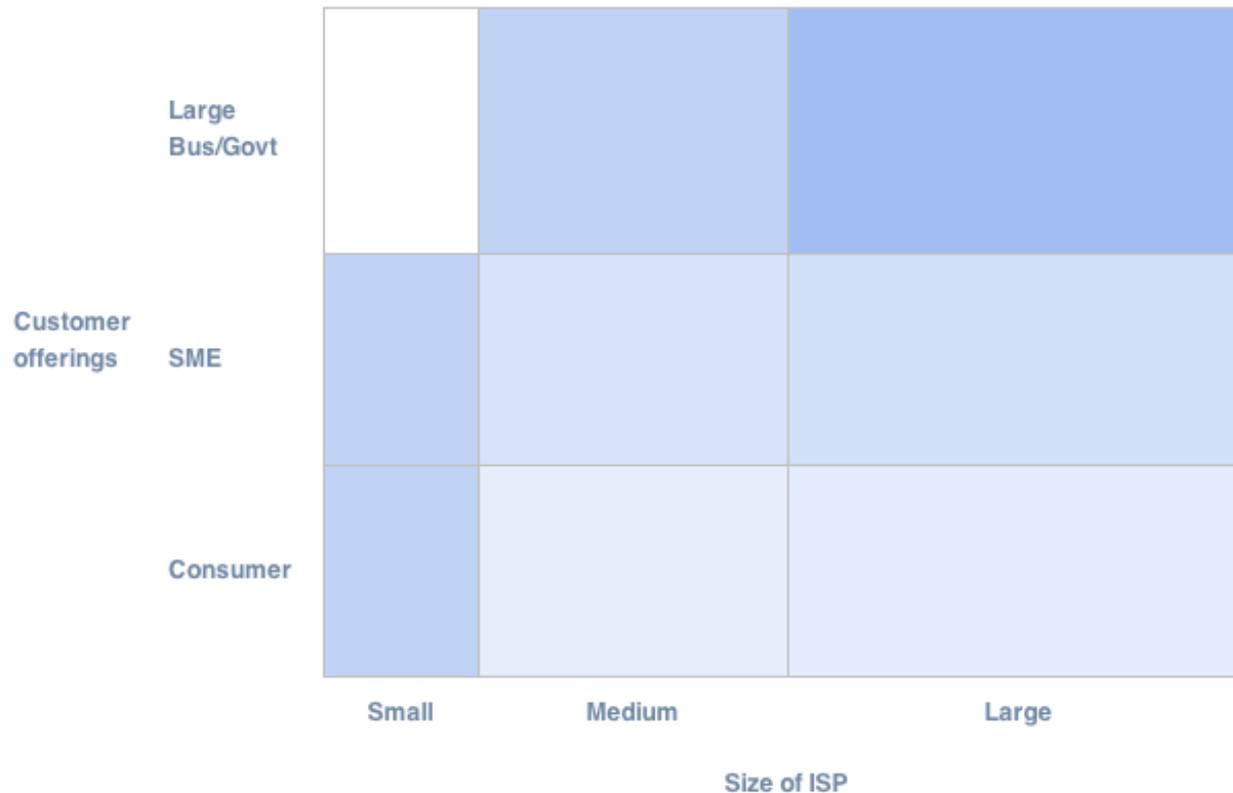
- There is choice of ISP / transit provider at all levels of the market for business: both SMEs and large enterprises / government. There are a few consumer choices for IPv6, but currently only one national choice (Snap!).
- Speaking to providers revealed that many of them are in trials / pre-production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



# IP<sup>v</sup>6

## 3. Number and type of ISP v6 offerings

ISP IPv6 Offerings Q1 2012





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## 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



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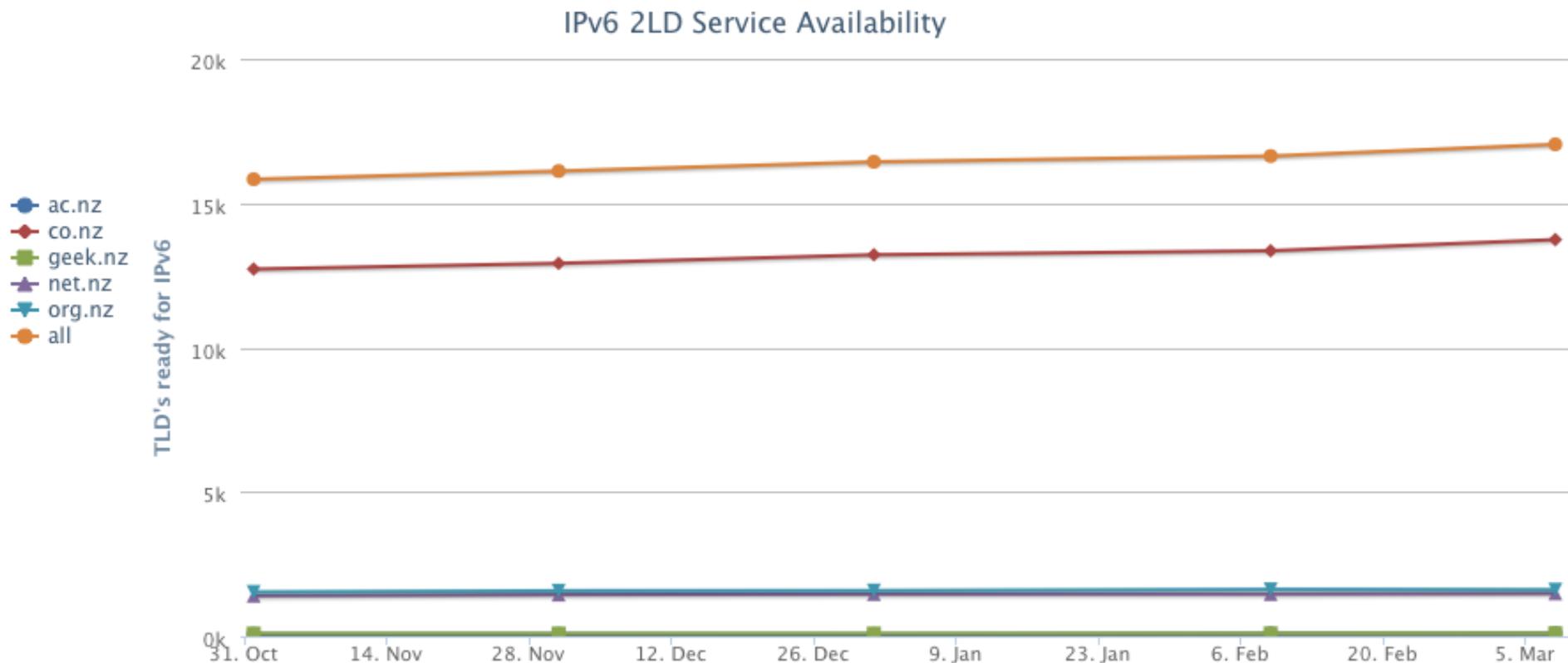
## 5. Service availability of .nz ccTLD

- **.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



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## 5. Service availability of .nz ccTLD

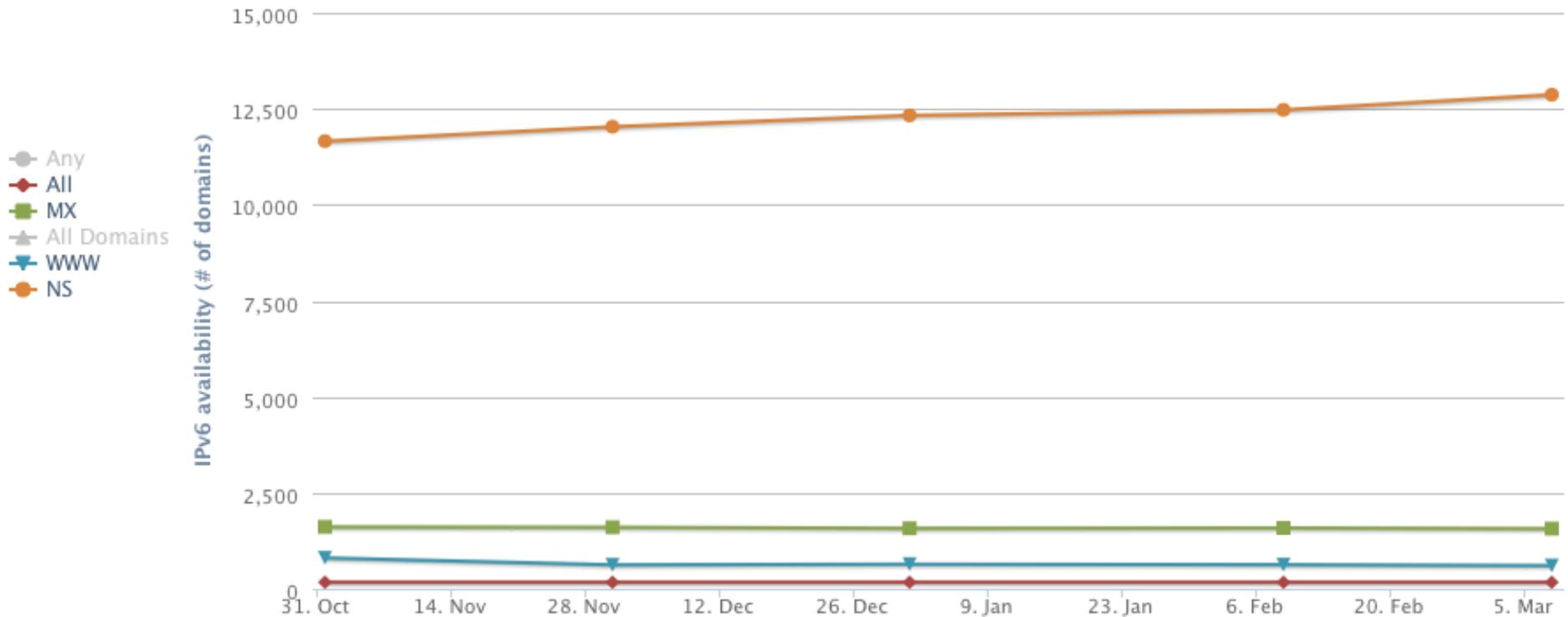




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## 5. Service availability of .nz ccTLD

IPv6 2LD Service Availability (co.nz)

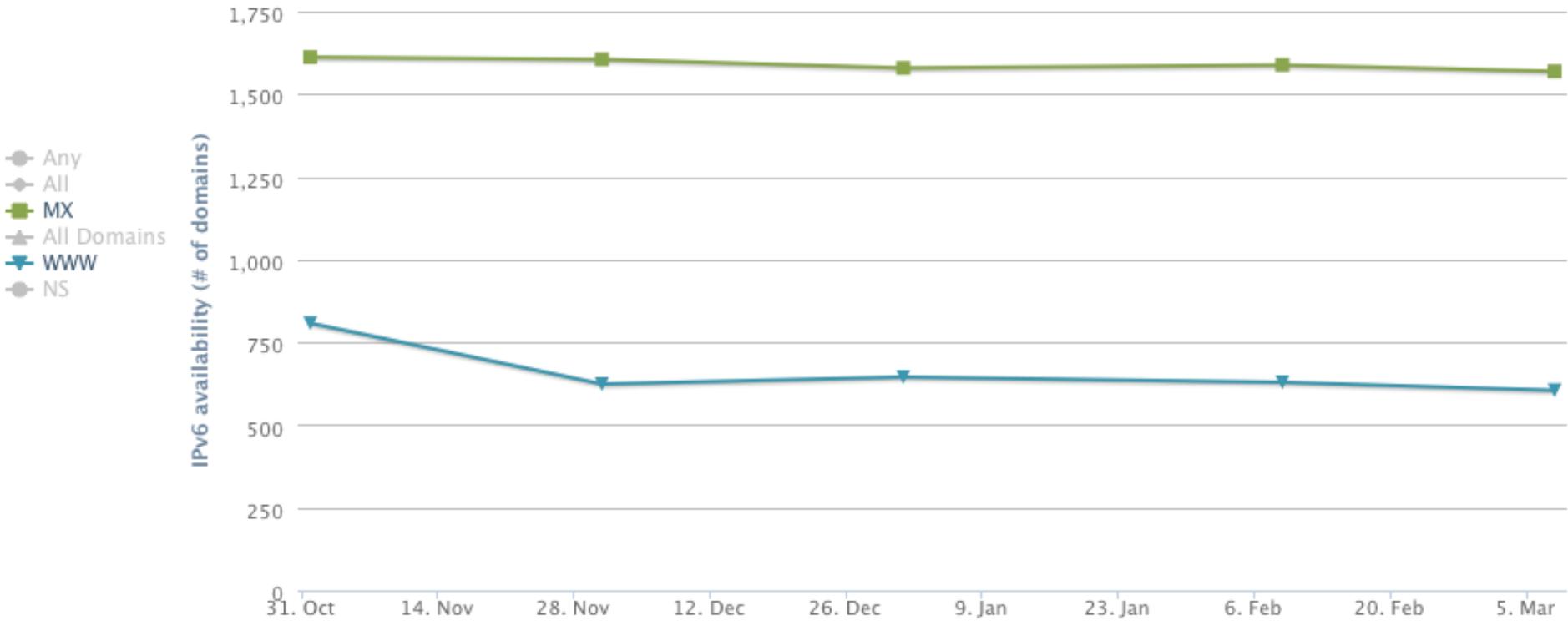




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## 5. Service availability of .nz ccTLD

IPv6 2LD Service Availability (co.nz)





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## 6. NZ registrars offering IPv6 glue records

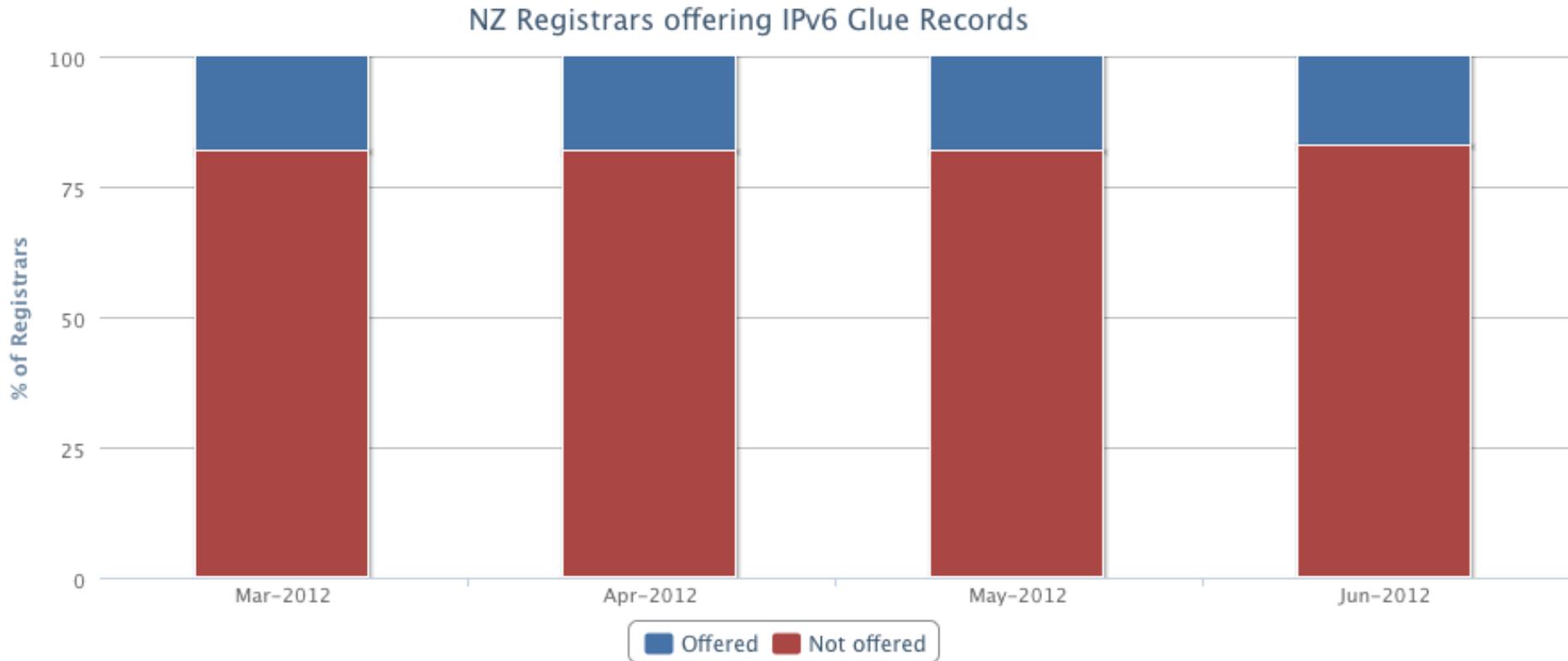
- Over the quarter, there has been no change in the proportion of registrars for .nz offering IPv6 glue services: it remains at 18%.



# IP<sup>v</sup>6



## 6. NZ registrars offering IPv6 glue records





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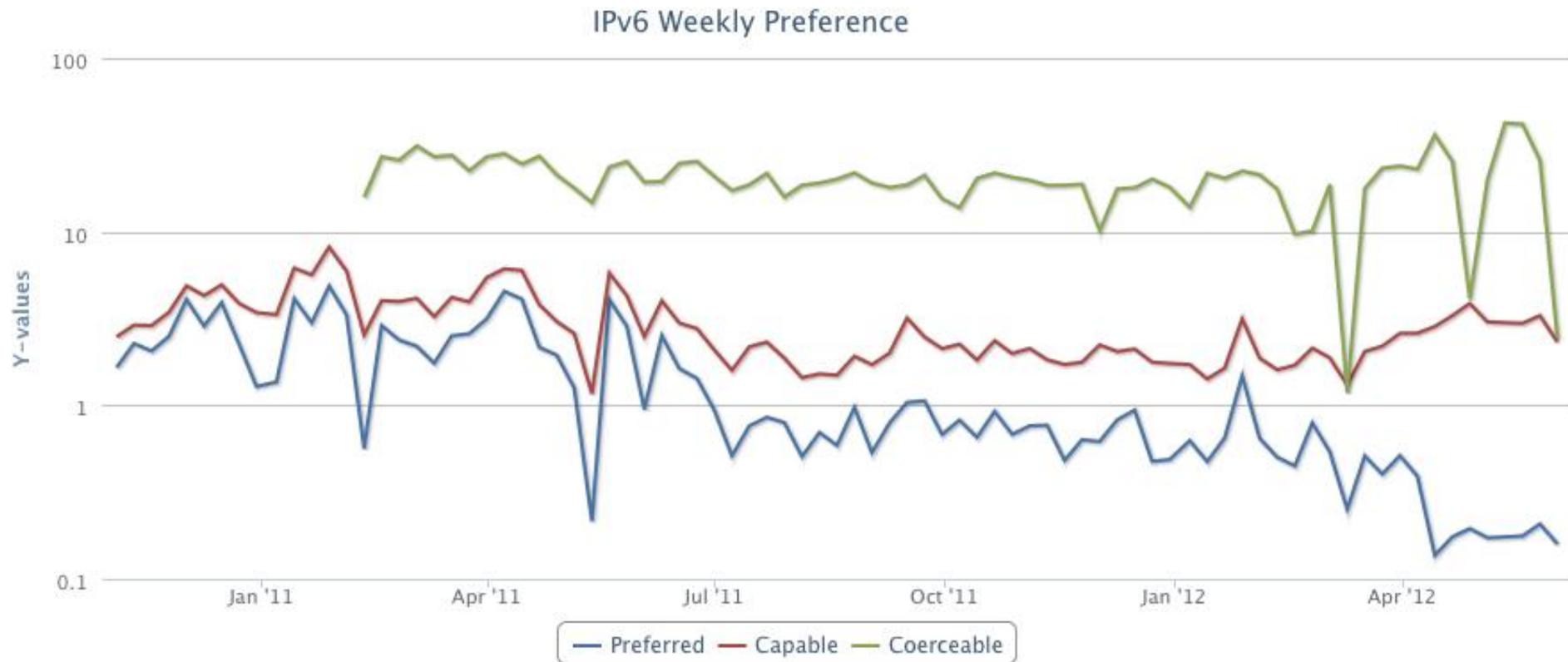
## 7. Confirmed v6 traffic flows from ISPs

- 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.



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## 8. % of capable end users





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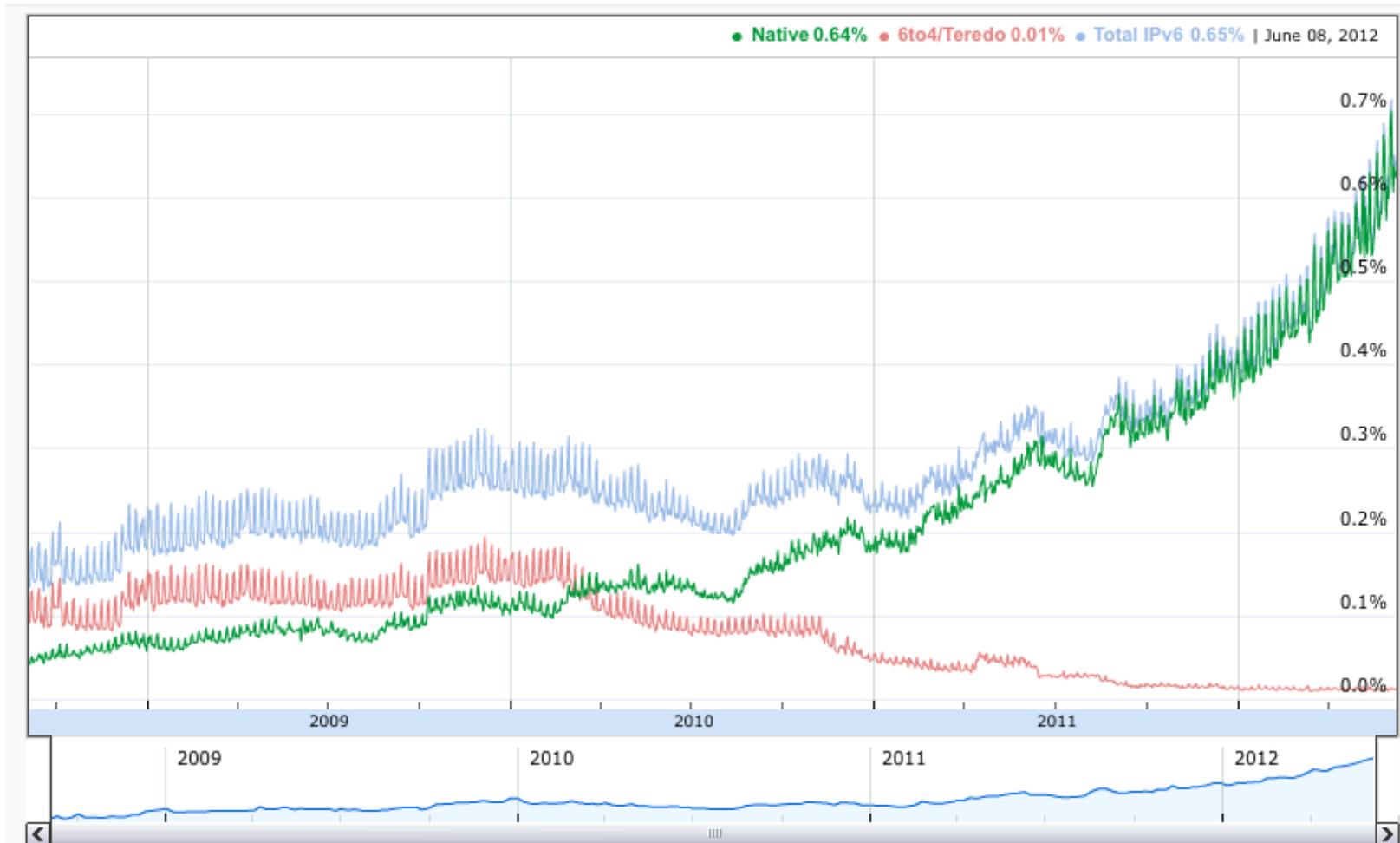
## 9. v6 Traffic levels

- 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%.



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## 9. v6 Traffic levels





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Thank you