

IPv6 in the Pacific

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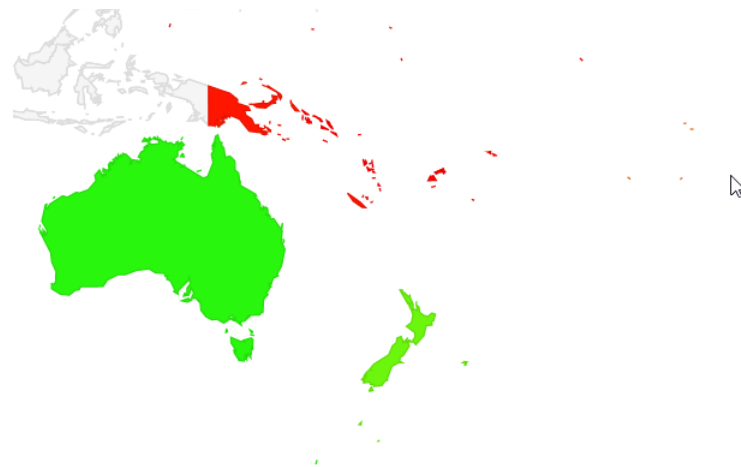
The Region

- Oceania
 - 24 separate economies
 - Aside from AU/NZ
 - Most have relatively small population
 - Geographically dispersed
 - Limited access to good international backhaul connectivity
 - Limited competition within the markets

Statistics

Statistics IPv6 – Oceania

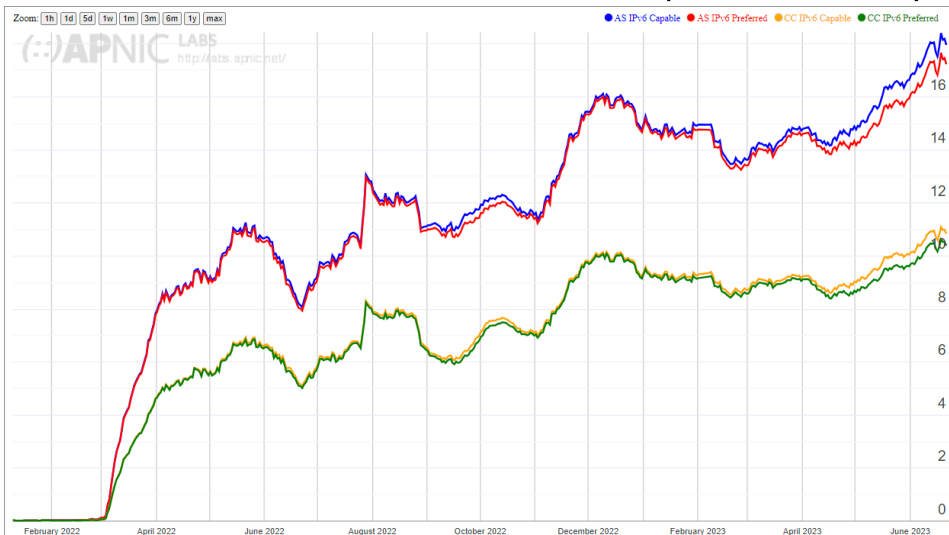
- Sub-region - ~33.95% IPv6 Capable
 - AU/NZ are lifting the score
 - AU – 39.06%
 - NZ – 28.51%
 - PF – 10.84%
 - The rest of the region is ~15% Combined



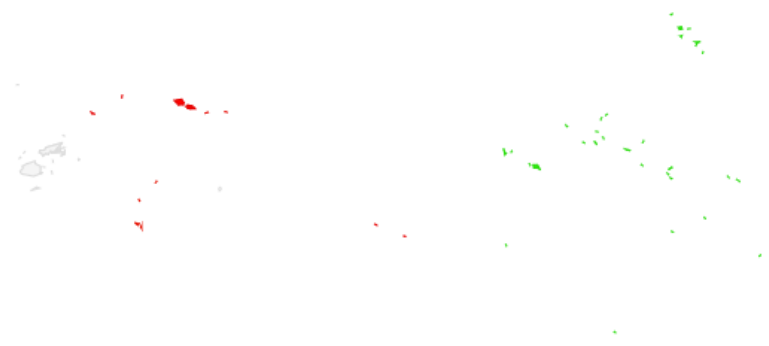
<https://stats.labs.apnic.net/ipv6/XF?o=cPFw30x1r1>

Statistics IPv6 – Polynesia

- Polynesia – 6.32% Capable (4.22% 2022)
 - PF - 10.84% (7.86% 2022)
 - AS9471-ONATI 18% (12% 2022)

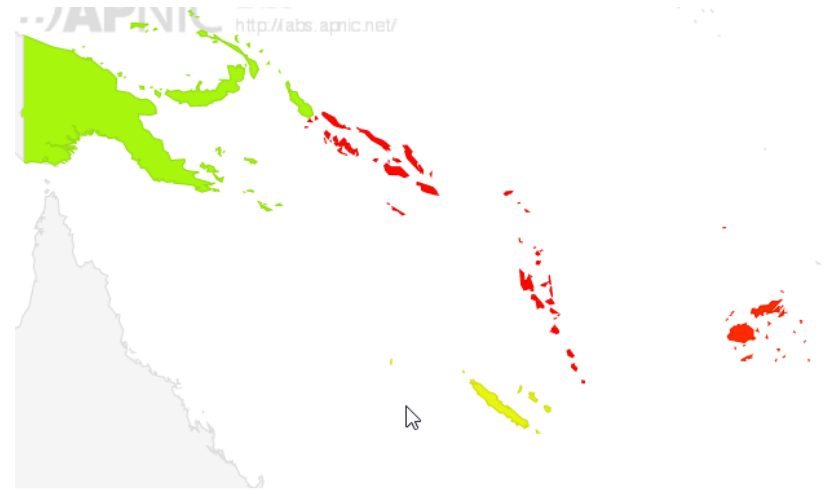
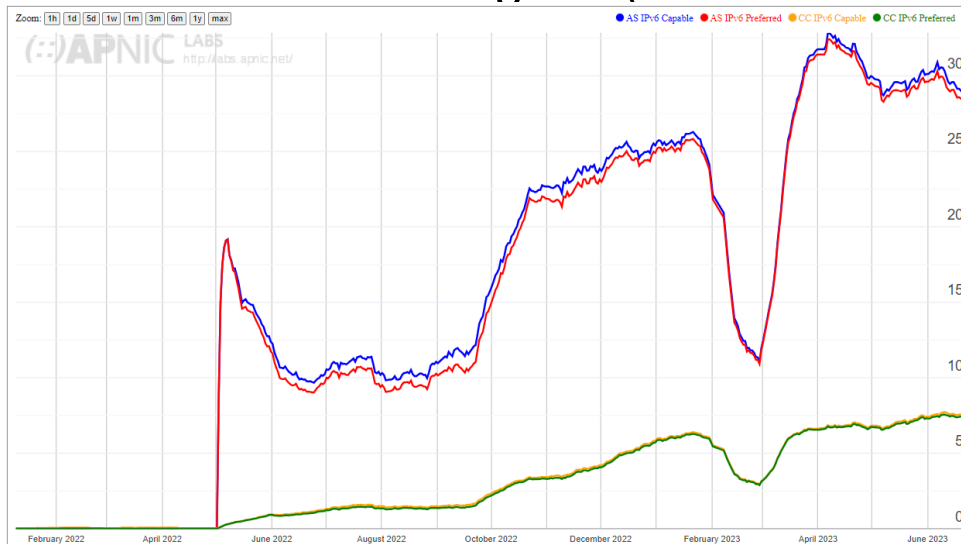


<https://stats.labs.apnic.net/ipv6/QS?o=cXFw30x1r1>



Statistics IPv6 – Melanesia

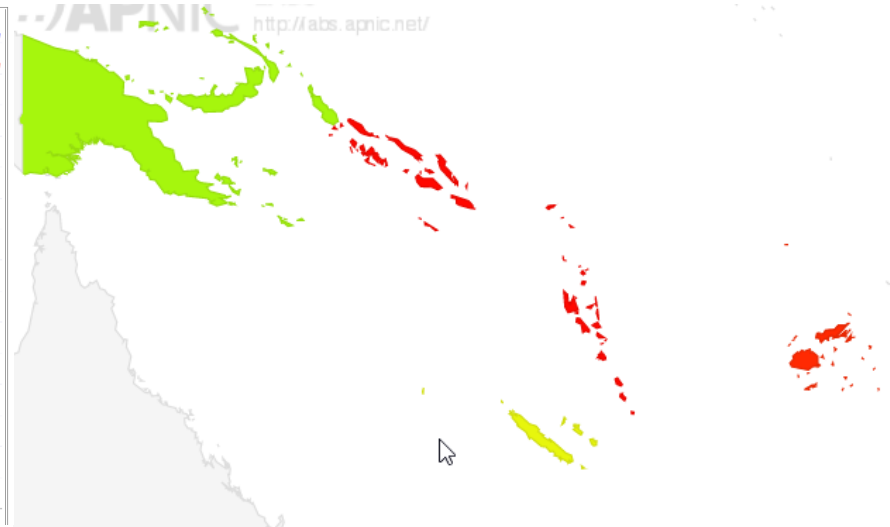
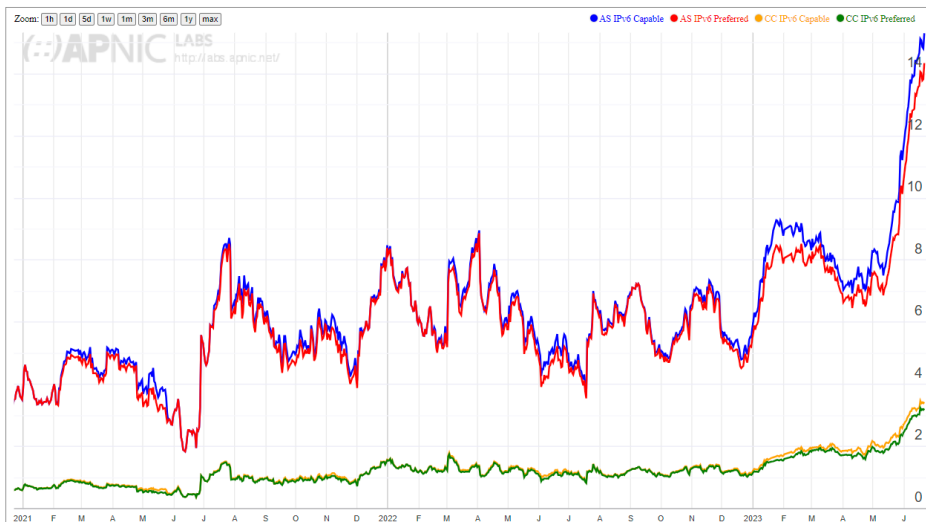
- Melanesia – 4.94% (1.01% 2022) Capable
 - PG – 7.52% (1.4% 2022)
 - AS139898 – Digitec (Vodafone PNG) – 28.74% (8% 2022)



<https://stats.labs.apnic.net/ipv6/AS139898?a=139898&c=PG&x=0&s=0&p=1&w=10&s=1>

Statistics IPv6 – Melanesia

- Melanesia – 4.94% (1.01% 2022) Capable
 - NC – 3.43% (1.1% 2022)
 - AS56055 – Micro Logic Systems ~15% (~6% 2022)



<https://stats.labs.apnic.net/ipv6/AS56055?c=NC&p=1&v=1&w=30&x=1>

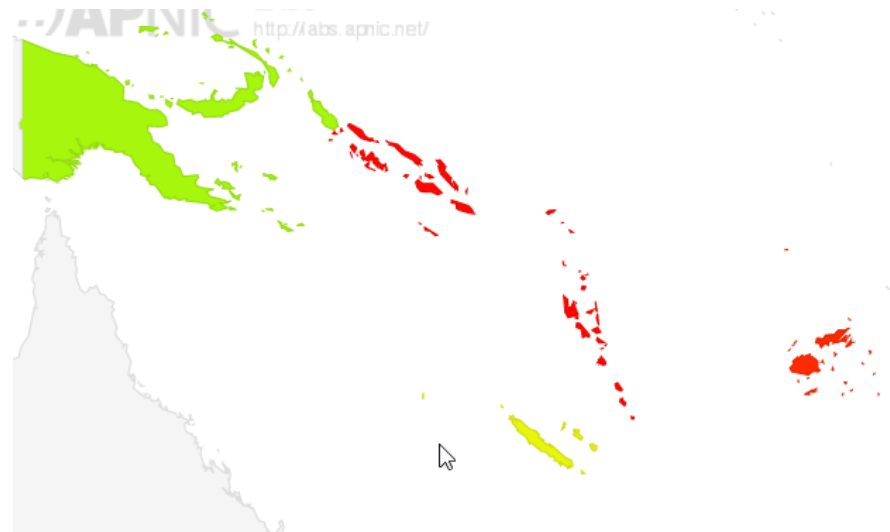
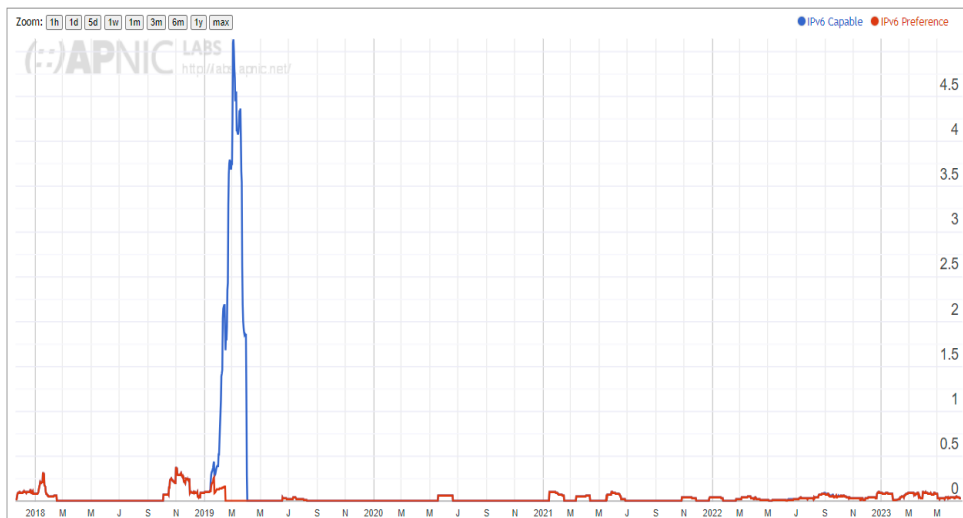
Statistics IPv6 – Vanuatu



<https://oswalt.dev/2012/12/grumpy-cat-hates-ipv6/>

Statistics IPv6 – Melanesia

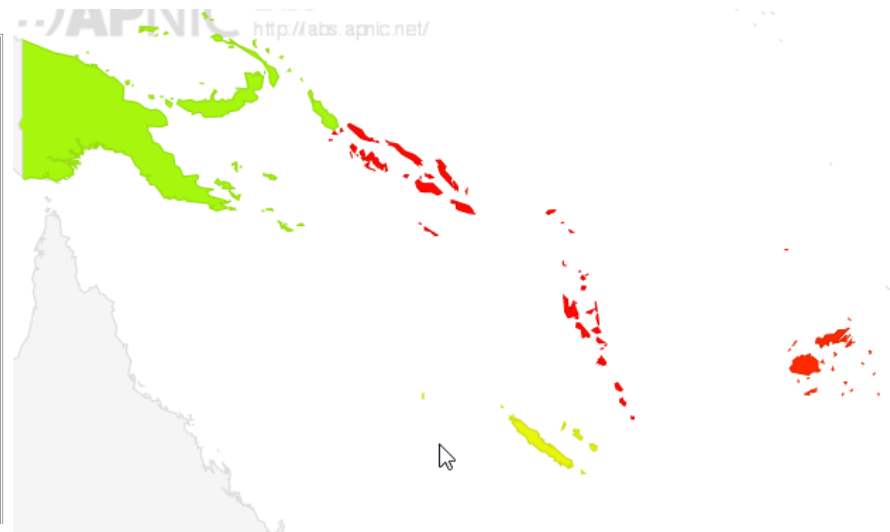
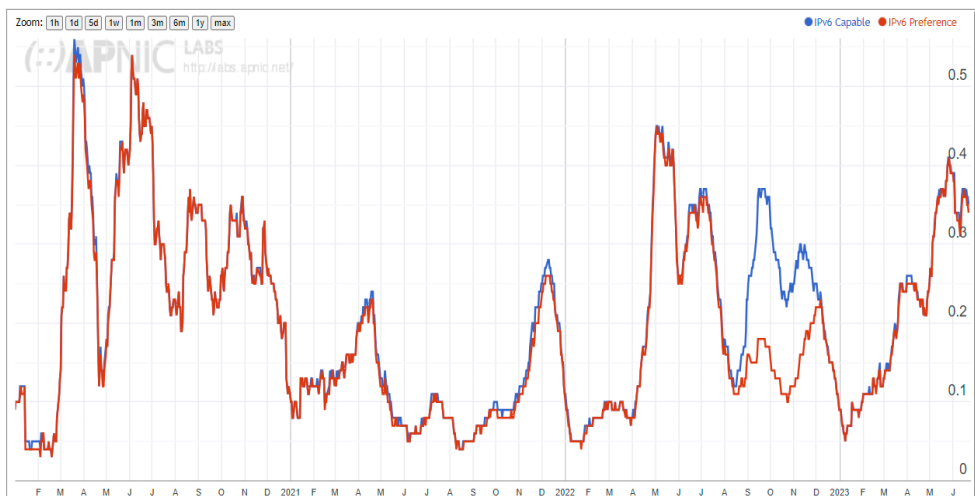
- Melanesia – 4.94% (1.01% 2022) Capable
 - VU – Less than 0.1% ☹️



<https://stats.labs.apnic.net/ipv6/VU?o=cQQw30x1r1>

Statistics IPv6 – Melanesia

- Melanesia – 4.94% (1.01% 2022) Capable
 - FJ – 0.35% (0.17% 2022)
 - AS24390 – USP – 60% (51.47% 2022)



<https://stats.labs.apnic.net/ipv6/AS24390?c=FJ&p=1&v=1&w=30&x=1>

Statistics IPv6 – Melanesia

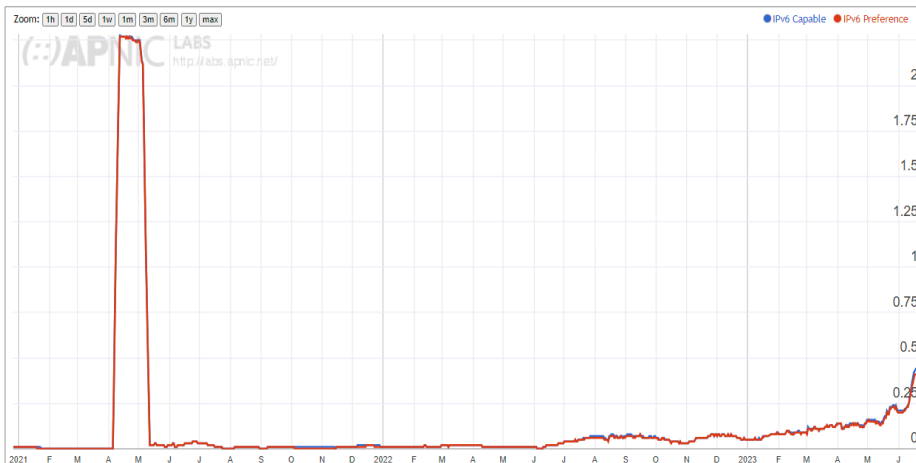
- AS24390 - What Happened Here!



<https://stats.labs.apnic.net/ipv6/AS24390?a=24390&c=FJ&x=1&s=0&p=1&w=30&s=1>

Statistics IPv6 – Micronesia

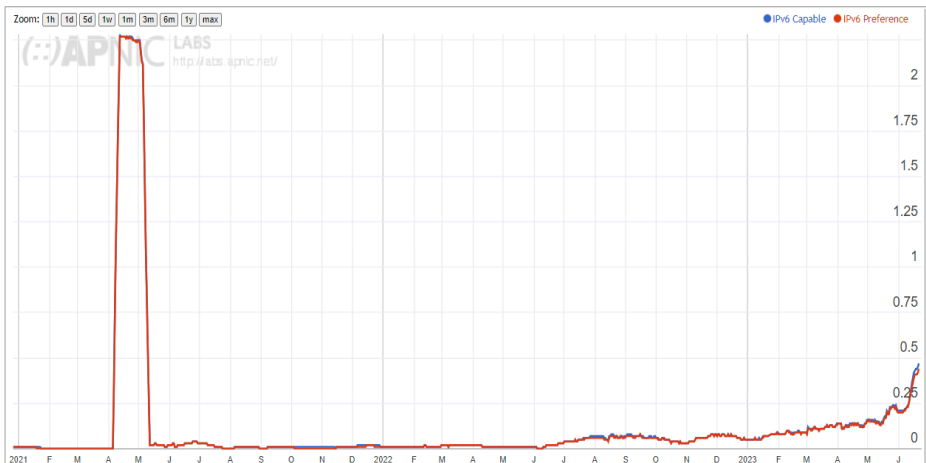
- Micronesia – ~0.47% (0.1% 2022) Capable
 - Slight Rise
 - NR – Not seeing any Specific Network doing this!



CC	Country	2023	2022
<u>NR</u>	Nauru, Micronesia, Oceania	2.73%	0.03%
<u>GU</u>	Guam, Micronesia, Oceania	0.80%	0.13%
<u>MH</u>	Marshall Islands, Micronesia, Oceania	0.59%	0.28%
<u>MP</u>	Northern Mariana Islands, Micronesia, Oceania	0.13%	0.05%
<u>KI</u>	Kiribati, Micronesia, Oceania	0.06%	0.07%
<u>FM</u>	Micronesia (Federated States of), Micronesia, Oceania	0.05%	0.11%
<u>PW</u>	Palau, Micronesia, Oceania	0.05%	0.02%

Statistics IPv6 – Micronesia

- Micronesia – ~0.47% (0.1% 2022) Capable
 - Slight Rise
 - NR – Not seeing any Specific Network doing this!



<https://stats.labs.apnic.net/ipv6/QR?o=cXFw30x1r1>

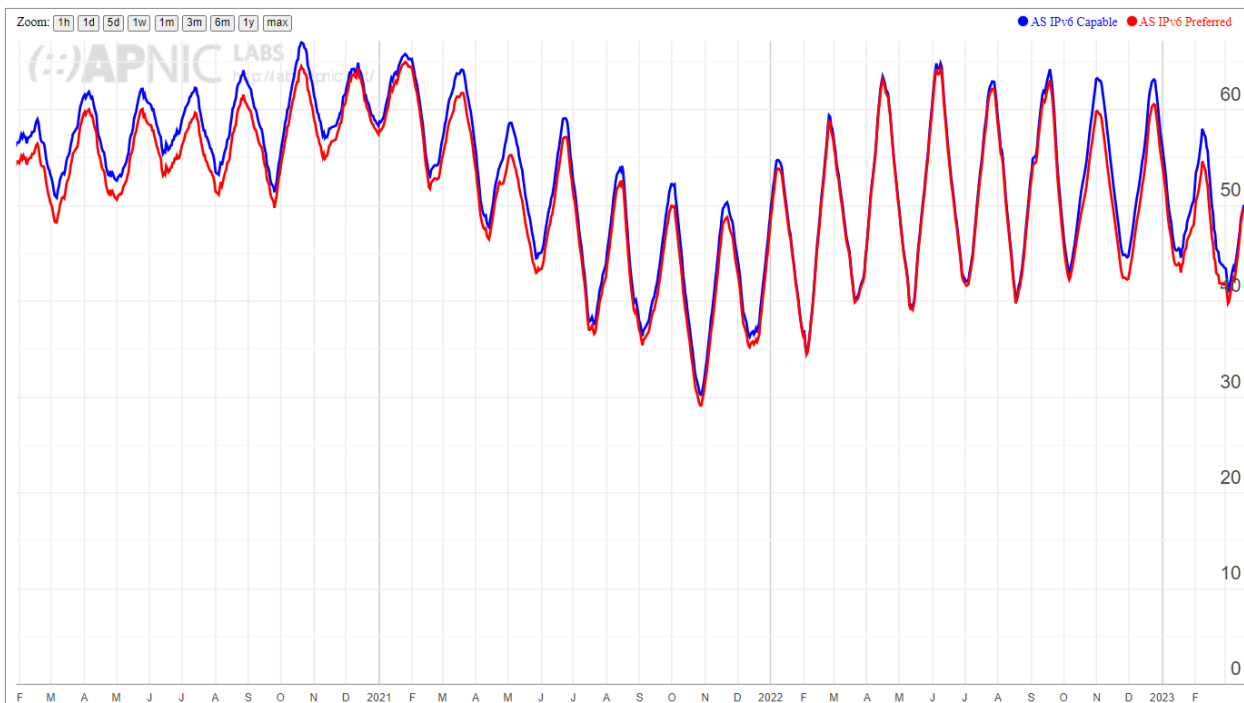
When IPv6 Goes...wrong

Provider in NZ that has a Large IPv6 Deployment.

Something wasn't (and still isn't) right!

Statistics IPv6 – New Zealand

- ASN55850 - Mercury/Trustpower



<https://stats.labs.apnic.net/ipv6/AS55850?c=NZ&p=1&v=1&w=30&x=1>

Challenges

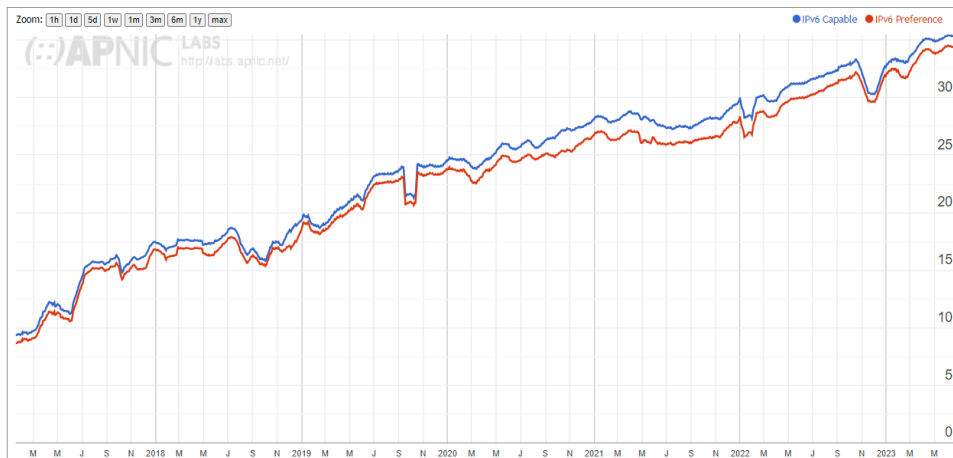
IPv6 Challenges

- End user acceptance
 - Residential and Mobile
 - Business and Enterprise
- Networks not ready
 - Older equipment
 - Software (Billing/LOB)
 - Additional Licencing cost(especially Mobile)
- People
 - Staff are not adequately trained
 - Current Tertiary/Industry training rarely addresses IPv6(Pun Intended)
 - Misconception on use
 - Lack of ability to adequately address plan
 - Management not willing make changes

Why Deploy IPv6?

IPv6 Deployment

- Cost
 - IPv4 Address space ~US\$40-50 Per IP
 - US\$12,800 /24
 - Hardware
 - CGNAT is not free
- The world is changing
 - 3 x increase/5 years
 - Hyperscalers are catching up
 - CDN Providers are ready for your IPv6 Packets
 - IPv6 is now the higher preferred Protocol in the USA



IPv6 Deployment

- Stop saying “I’ll do it tomorrow”
 - We have been saying that for 25 years
- Networks are not going to get simpler
- Grants Are available
 - <https://isif.asia/infrastructure-ipv6/>
 - US\$30-250K
 - Open to all Industry types
- Need practical help?
 - Training: <https://academy.apnic.net/>
 - TA: <https://academy.apnic.net/en/technical-assistance>

QUESTIONS?