IPv6 in the Pacific

Dave Phelan
Senior Network Analyst/Technical Trainer

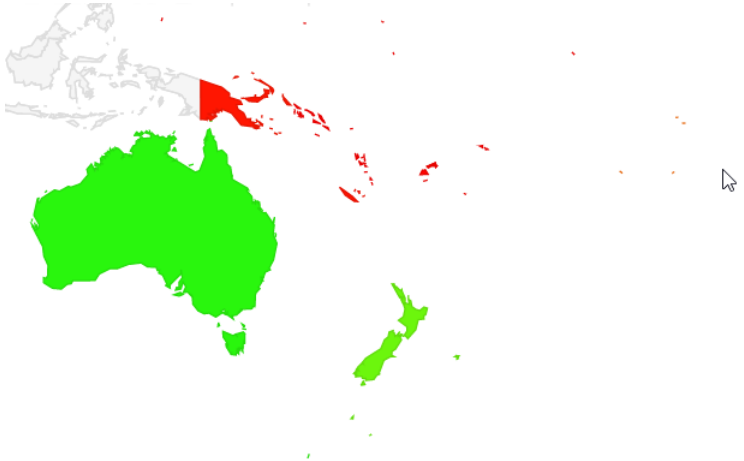
The Region

- 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

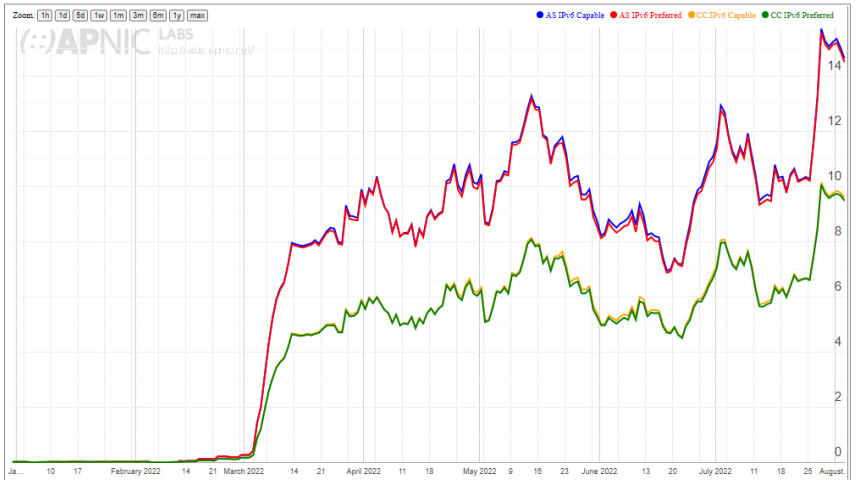
- Sub-region - ~29.7% IPv6 Capable
  - AU/NZ are lifting the score
    - AU – 34.4%
    - NZ – 28.05%
    - PF – 7.89%
  - The rest of the region is ~3% Combined

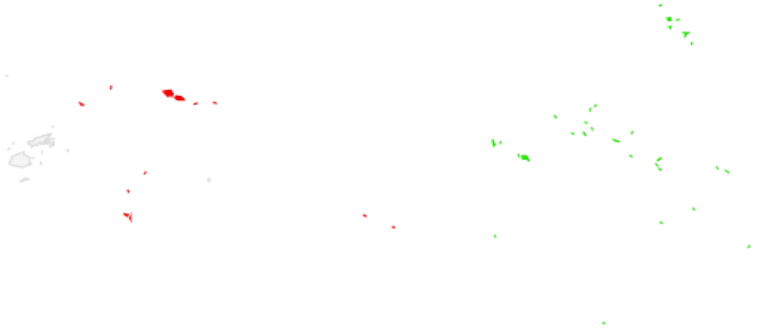


https://stats.labs.apnic.net/ipv6/XF?o=cPFw30x1r1

Statistics IPv6 – Polynesia

- Polynesia – 4.22% Capable
  - PF - 7.86%
  - AS9471-ONATI ~12%

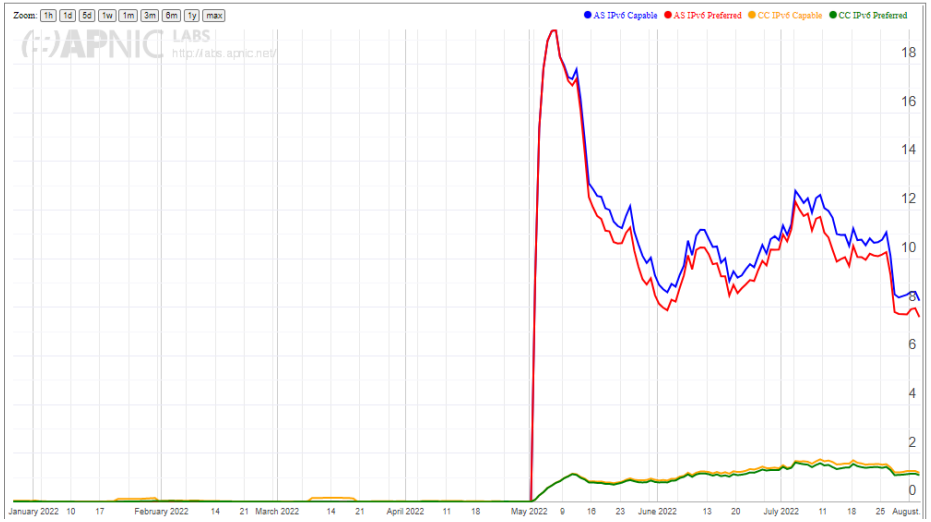


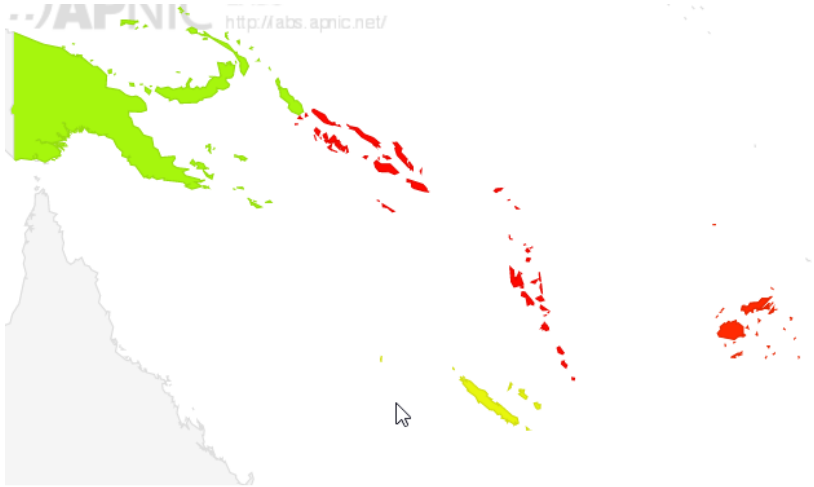


https://stats.labs.apnic.net/ipv6/QS?o=cXFw30x1r1

Statistics IPv6 – Melanesia

- Melanesia – 1.01% Capable
  - PG – 1.4%
  - AS139898 – Digitec (Vodafone PNG) - ~8%

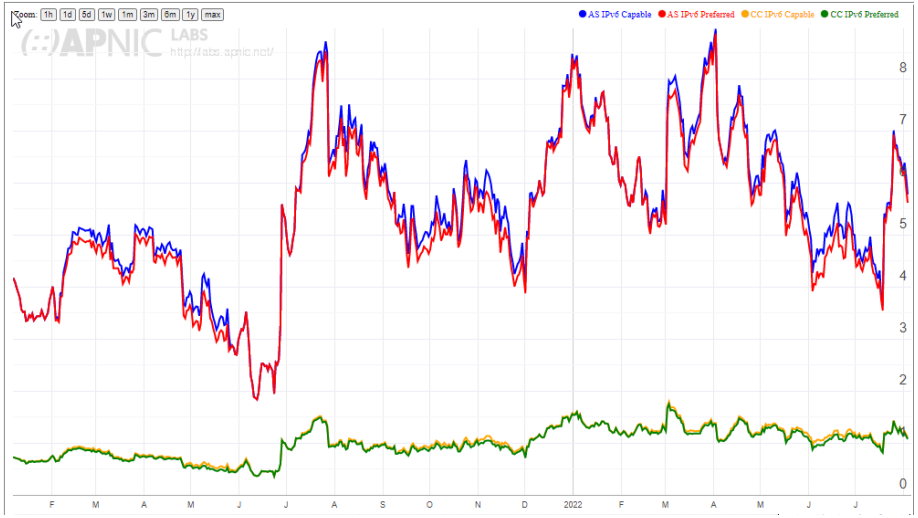


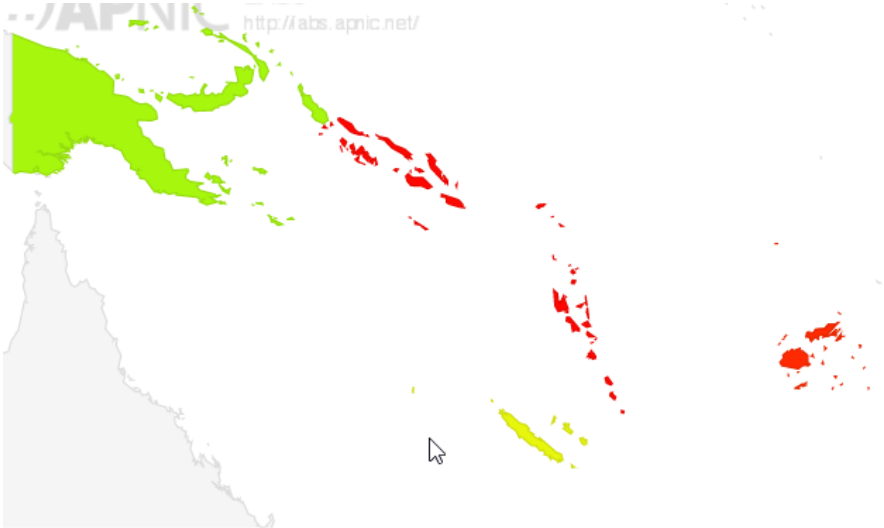


https://stats.labs.apnic.net/ipv6/AS139898?a=139898&c=PG&x=0&s=0&p=1&w=10&s=1

Statistics IPv6 – Melanesia

- Melanesia – 1.01% Capable
  - NC – 1.1%
  - AS56055 – Micro Logic Systems

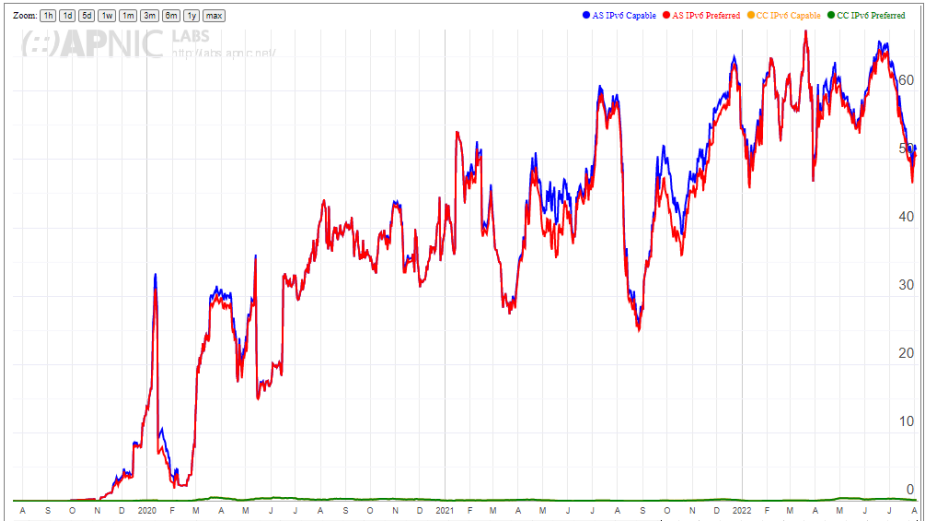


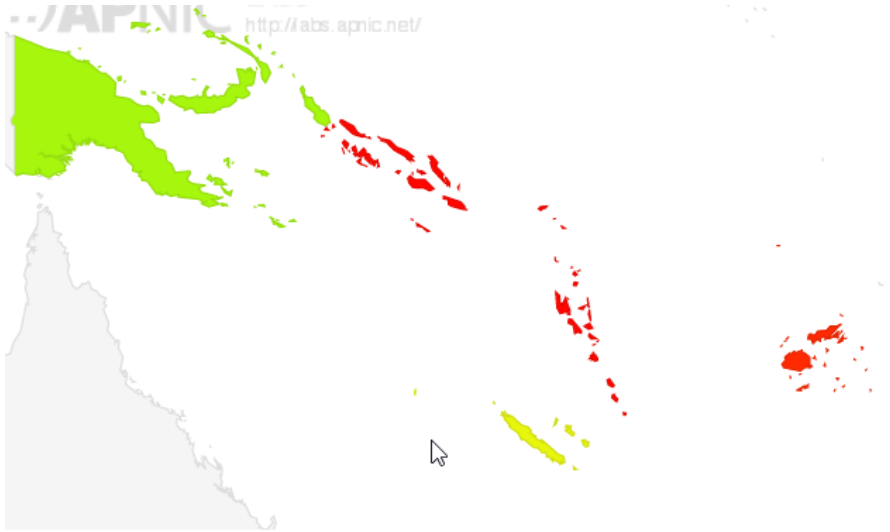


https://stats.labs.apnic.net/ipv6/AS56055?c=NC&p=1&v=1&w=30&x=1

Statistics IPv6 – Melanesia

- Melanesia – 1.01% Capable
  - FJ – 0.17%
  - AS24390 – USP – 51.47%

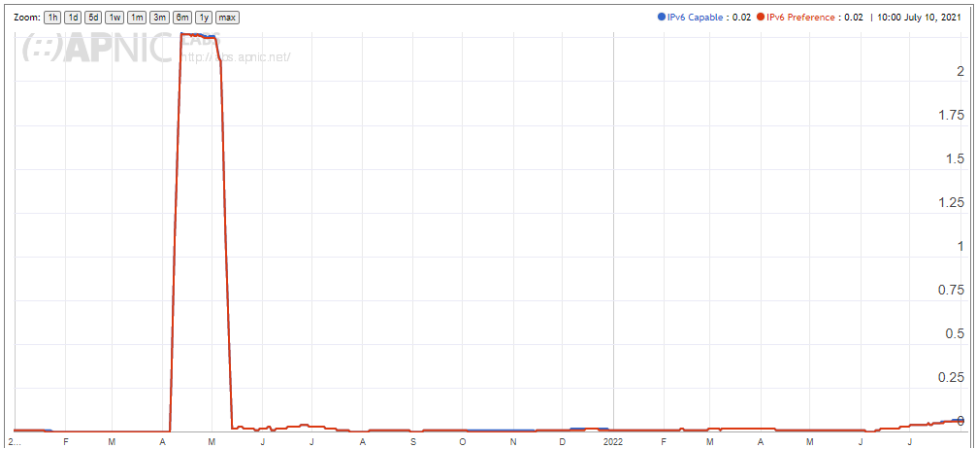




https://stats.labs.apnic.net/ipv6/AS24390?c=FJ&p=1&v=1&w=30&x=1

Statistics IPv6 – Micronesia

- Micronesia – < 0.1% Capable
  - Less “Need” to deploy due to population



CC	Country	IPv6 Capable
MH	Marshall Islands, Micronesia, Oceania	0.28%
GU	Guam, Micronesia, Oceania	0.13%
FM	Micronesia (Federated States of), Micronesia, Oceania	0.11%
KI	Kiribati, Micronesia, Oceania	0.07%
MP	Northern Mariana Islands, Micronesia, Oceania	0.05%
NR	Nauru, Micronesia, Oceania	0.03%
PW	Palau, Micronesia, Oceania	0.02%

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

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

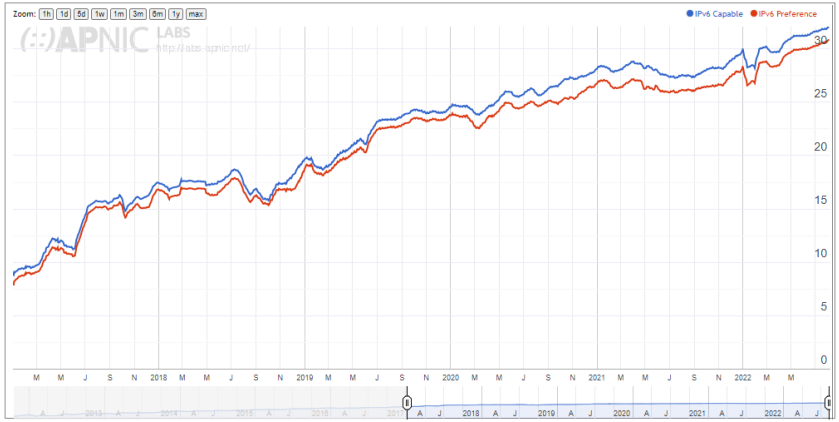
Why Deploy IPv6?

IPv6 Deployment

CC	Country	IPv6 Capable	IPv6 Preferred
IN	India, Southern Asia, Asia	77.06%	76.48%
BE	Belgium, Western Europe, Europe	63.91%	63.27%
MY	Malaysia, South-Eastern Asia, Asia	61.60%	60.89%
MM	Myanmar, South-Eastern Asia, Asia	58.30%	56.82%
SA	Saudi Arabia, Western Asia, Asia	58.06%	57.07%
DE	Germany, Western Europe, Europe	56.69%	55.48%
LK	Sri Lanka, Southern Asia, Asia	56.12%	55.64%
UY	Uruguay, South America, Americas	54.57%	54.40%
GR	Greece, Southern Europe, Europe	53.97%	53.69%
FI	Finland, Northern Europe, Europe	52.31%	49.45%
US	United States of America, Northern America, Americas	52.26%	51.09%
MS	Montserrat, Caribbean, Americas	51.06%	50.49%
FR	France, Western Europe, Europe	50.96%	50.24%
VN	Vietnam, South-Eastern Asia, Asia	50.85%	50.42%

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 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?