

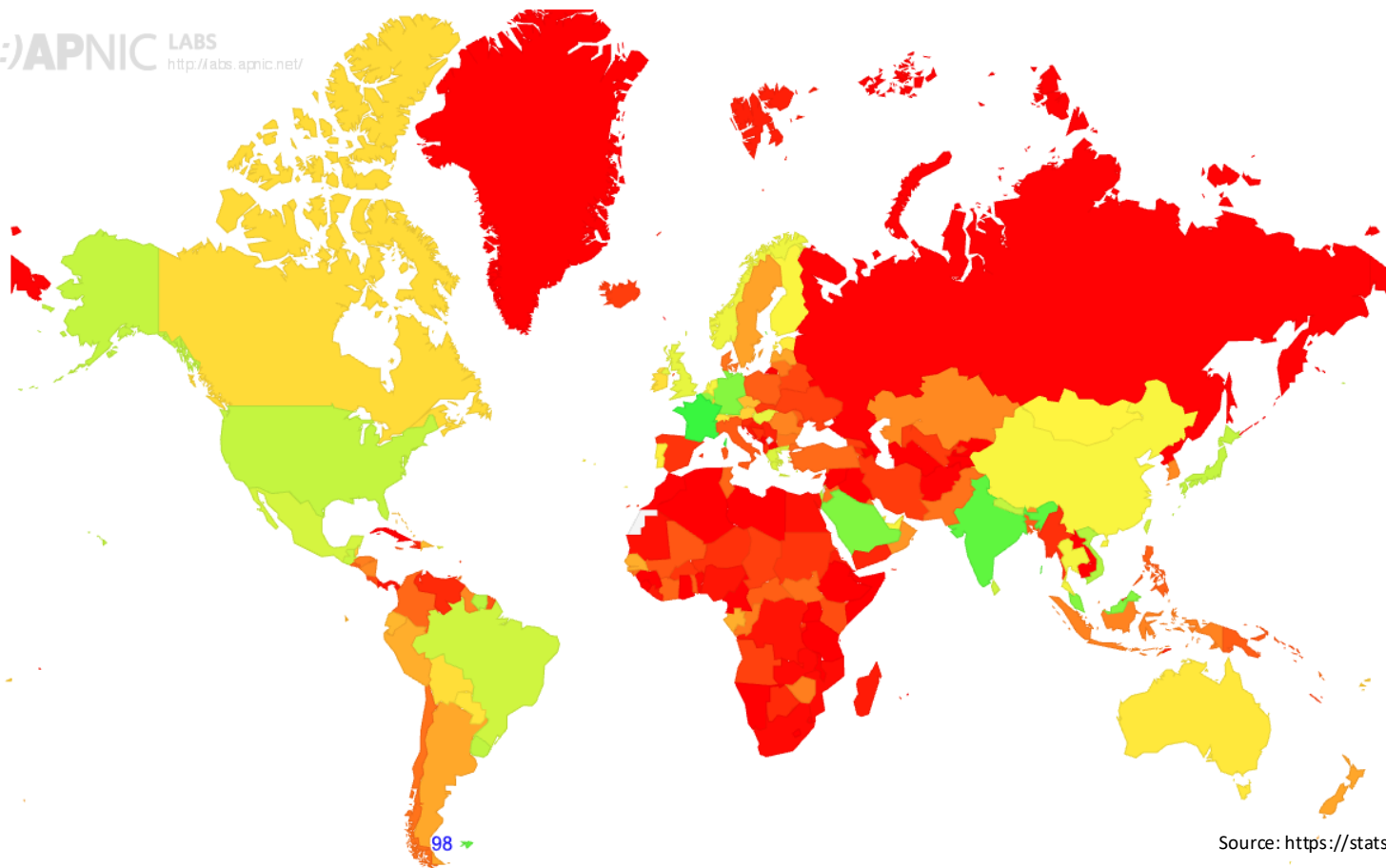
An Update on the IPv6 Transition

NIR SIG, APNIC 62
8 September 2026

Tony Smith, Director – Strategy and Deputy Director General, APNIC

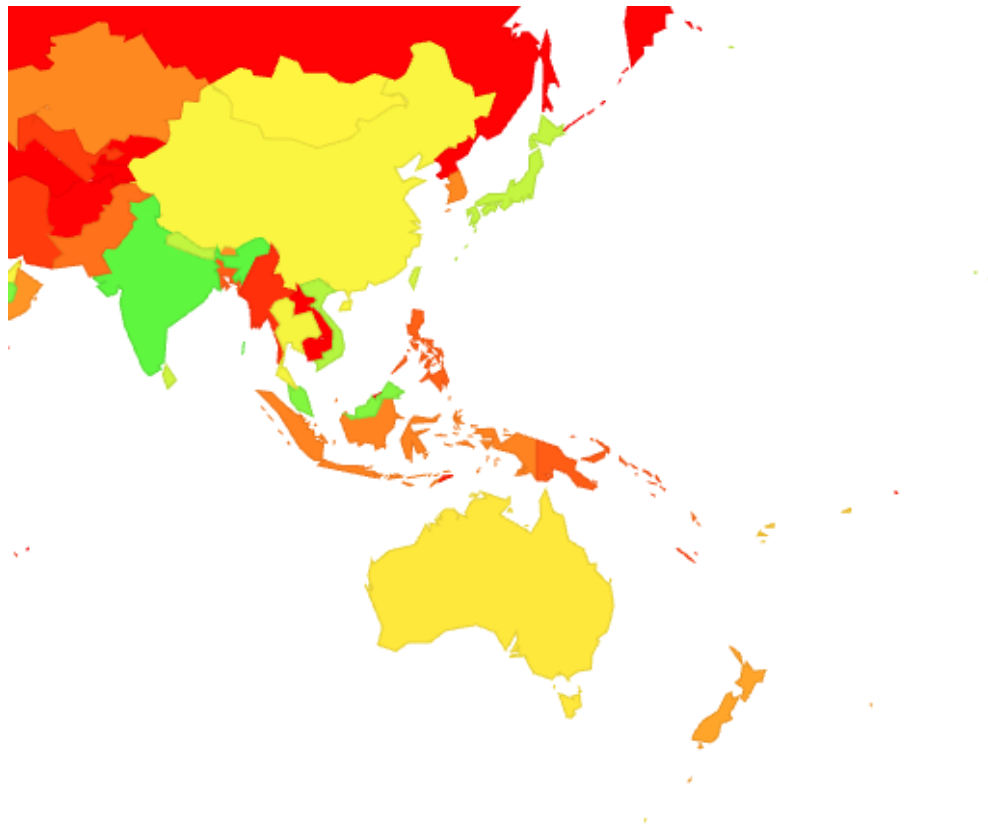
The World View

(::)APNIC LABS
<http://labs.apnic.net/>



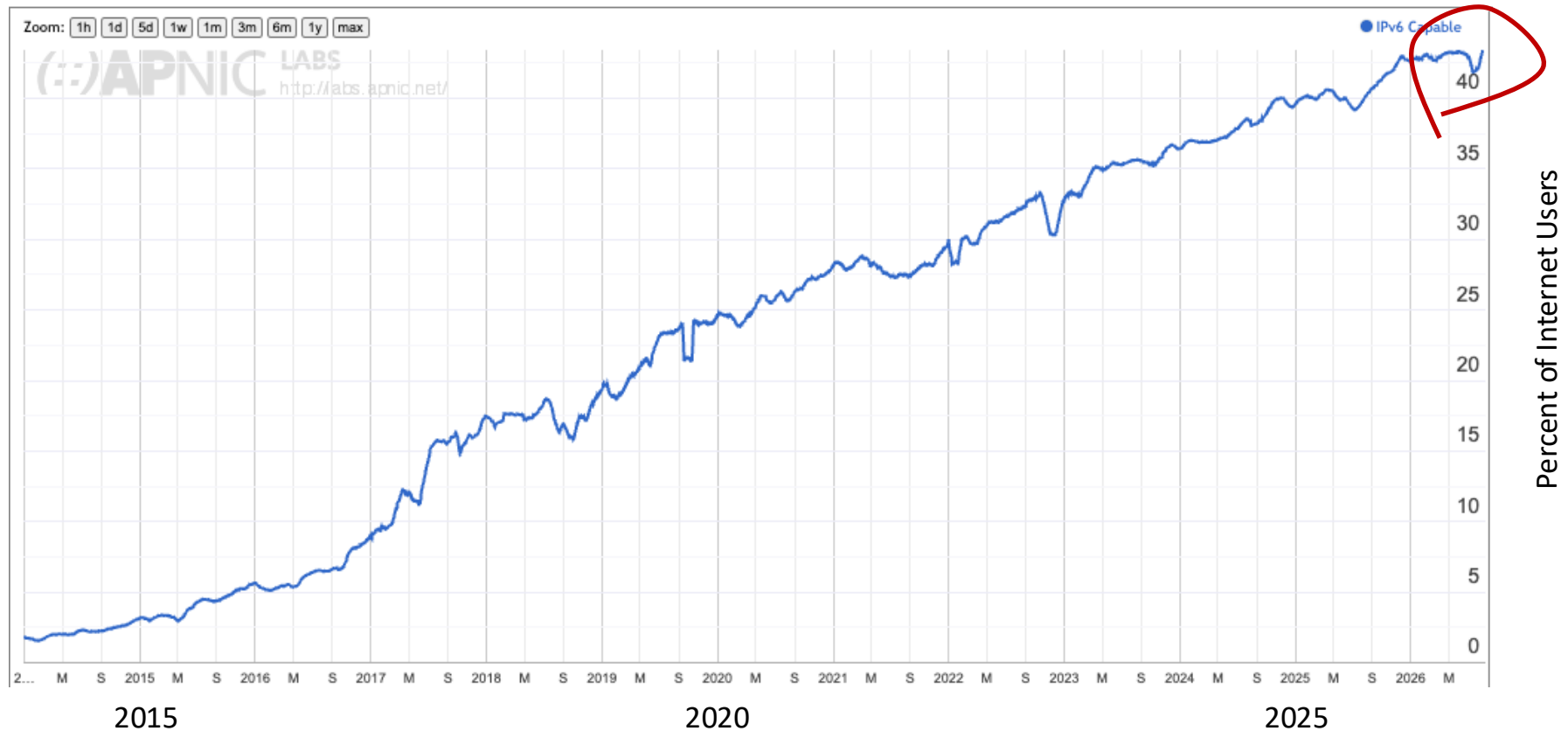
Source: <https://stats.labs.apnic.net/ipv6/>

The Asia Pacific View

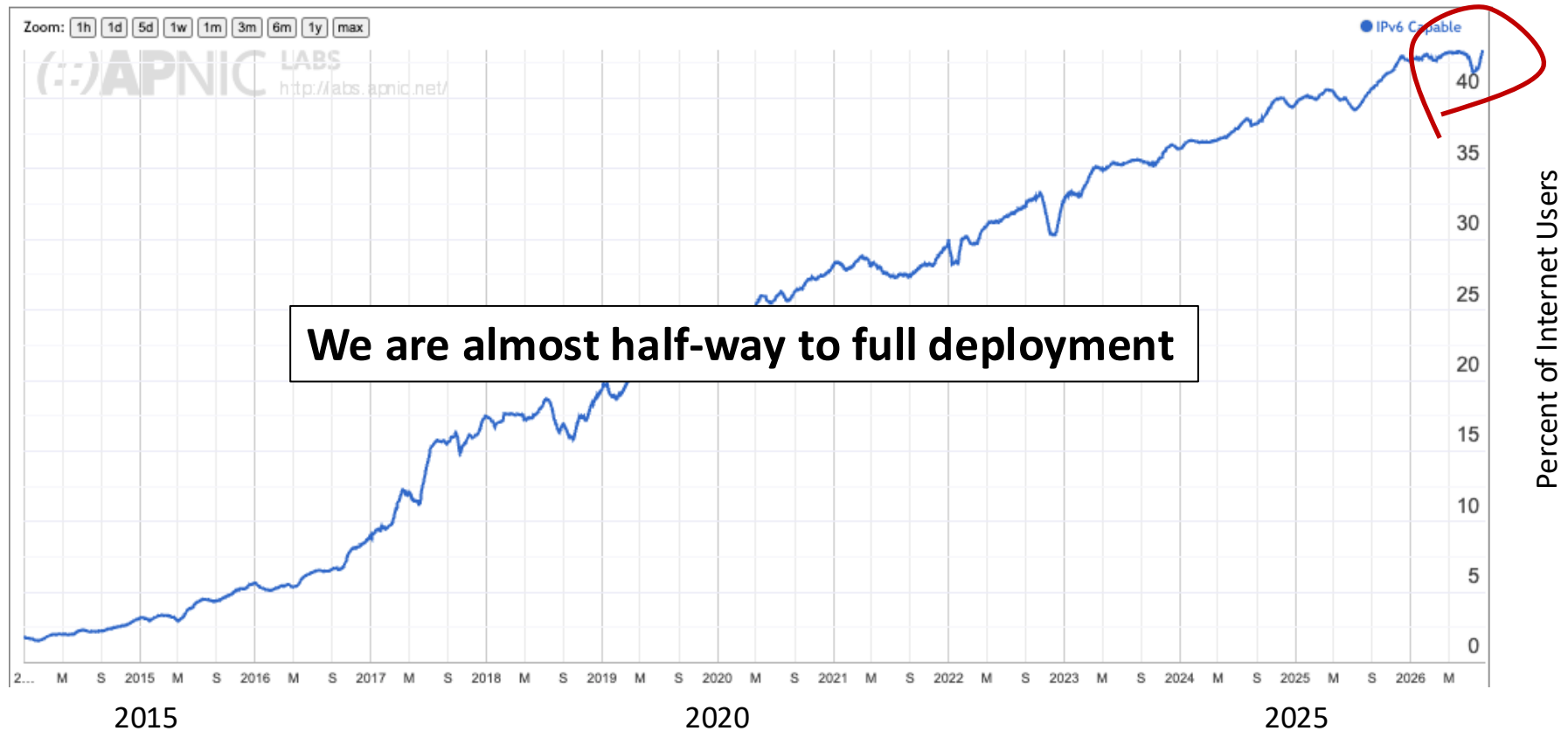


Source: <https://stats.labs.apnic.net/ipv6/>

Global Uptake of IPv6



Global Uptake of IPv6



IPv6 in the Asia Pacific



IPv6 leaderboard

Top 10	At the bottom
France	Africa as a whole
India	Most of the Middle East
Saudi Arabia	Kyrgyzstan
Aland Islands	Cuba
Malaysia	Russia
Germany	Cambodia
Belgium	Afghanistan
Viet Nam	Croatia
Suriname	Spain
Israel	Venezuela

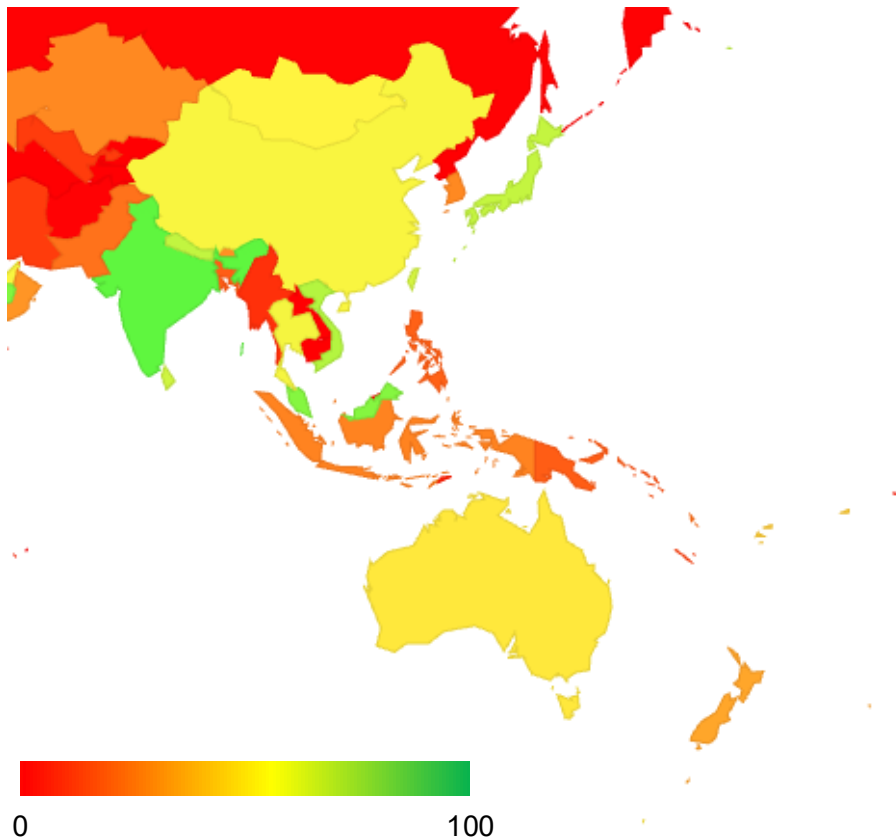
...to name
just a few

The Starlink-Inflated IPv6 leaderboard

Top 10
Saint Barthelemy
Saint Helena, Ascension and Tristan de Cunha
France
Falkland Islands
India
Saudi Arabia
Aland Islands
Malaysia
Germany
Belgium



Let's take another look



- Green and yellow – 50%+
- Usually once a couple of large operators – most traffic – deploy IPv6
- So what about the rest?

Example: Thailand

AS	Network	IPv6 Capability	Samples
AS131445	AIS3G-2100-AS-AP - Advance Wireless Network	96.66%	2,492,417
AS17552	TRUEONLINE-AS-AP - True Online	70.17%	1,852,132
AS133481	AIS-Fibre-AS-AP - AIS Fibre	71.18%	1,747,443
AS132618	REALFUTURE-AS-AP - Real Future Company Limited	0.15%	1,624,014
AS45758	TTBP-AS-AP - Triple T Broadband Public Company Limited	70.36%	1,344,850
AS24378	ENG TAC-AS-TH-AP - Total Access Communication PLC.	0.12%	948,570
AS23969	TOT-NET - TOT Public Company Limited	0.38%	879,108
AS131090	NTPCL-AS-AP - National Telecom Public Company Limited	0.41%	113,014

- Thailand IPv6 capability: 51%
- Two large operators have deployed (AIS and True)
- 349 more ASNs visible – only 3 have a meaningful deployment (Universities)

Example: India

AS	Network	IPv6 Capability	Samples
AS55836	RELIANCEJIO-IN - Reliance Jio Infocomm Limited	96.63%	57,654,123
AS45609	BHARTI-MOBILITY-AS-AP - Bharti Airtel Ltd. AS for GPRS Service	89.89%	28,526,917
AS24560	AIRTELBROADBAND-AS-AP - Bharti Airtel Ltd., Telemedia Services	76.68%	10,951,503
AS9829	BSNL-NIB - National Internet Backbone	22.04%	3,246,580
AS133982	EXCITEL-AS-IN - Excitel Broadband Private Limited	4.64%	1,170,751
AS24309	CABLELITE-AS-AP - Atria Convergence Technologies Pvt. Ltd. Broadband Internet Service Provider INDIA	37.82%	1,127,839
AS133661	NETPLUS-AS - Netplus Broadband Services Private Limited	70.91%	983,006
AS45916	GTPL-AS-AP - Gujarat Telelink Pvt Ltd	45.33%	932,457
AS17488	HATHWAY-NET-AP - Hathway IP Over Cable Internet	0.43%	803,369
AS138754	KVBPL-AS-IN - Kerala Vision Broad Band Private Limited	25.35%	763,867
AS55577	CABLELITE-AS-AP - Atria Convergence Technologies Ltd.,	31.96%	570,847

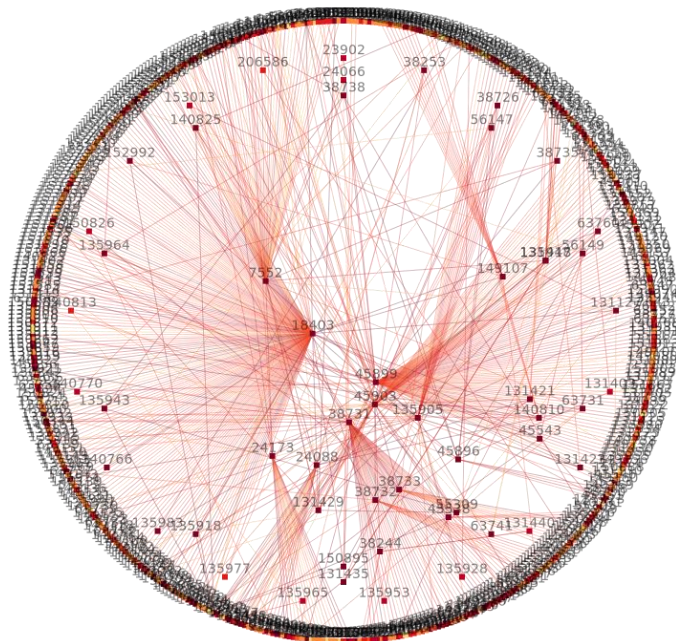
- India IPv6 capability: 79%
- Three large deployments among larger providers + some solid starts
 - Jio's deployment largely determines India's score
- 2,118 more ASNs visible – only 50 have a meaningful deployment

What does this mean?

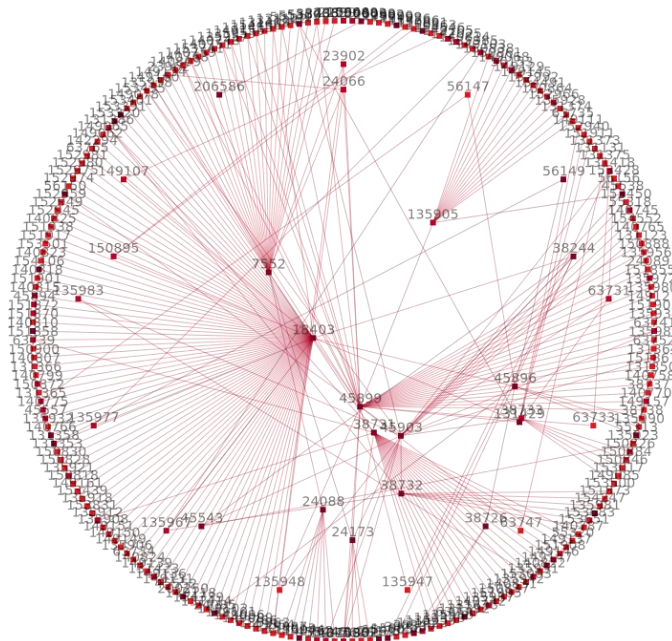
- It's a similar story around the region and the world
- The vast majority have not even started their IPv6 journey
- The long tail of networks are primarily enterprises and mid-small ISPs

Network Interconnections – the long tail

Vietnam



IPv4



IPv6

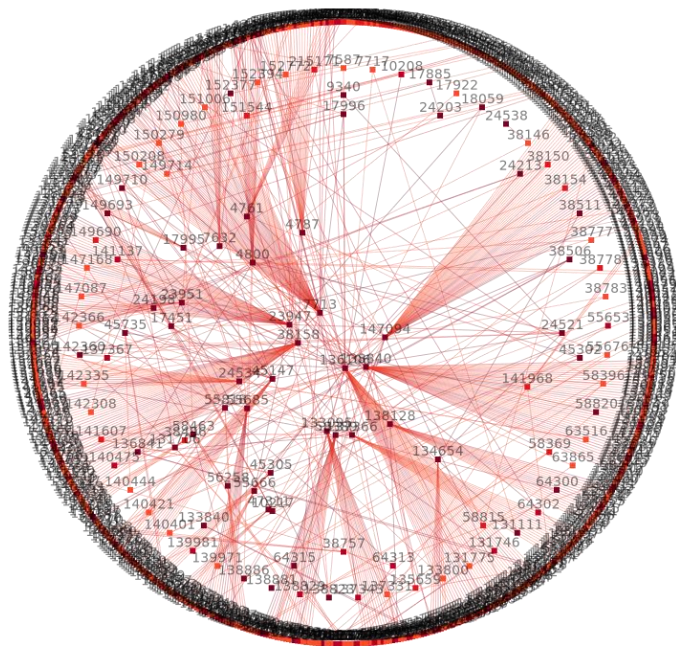
Source: rex.apnic.net

Network Interconnections – the long tail

Indonesia



IPv4



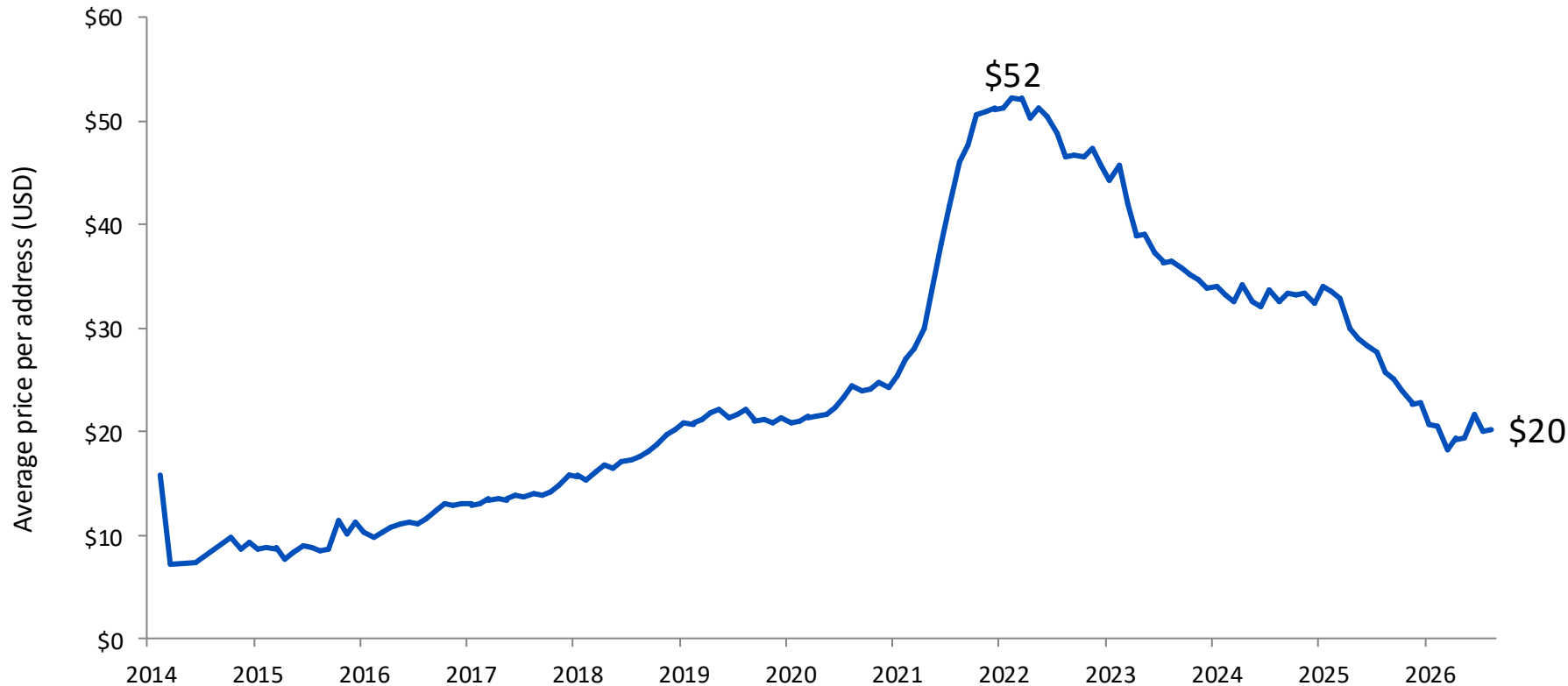
IPv6

Source: rex.apnic.net

Challenges we are seeing and hearing

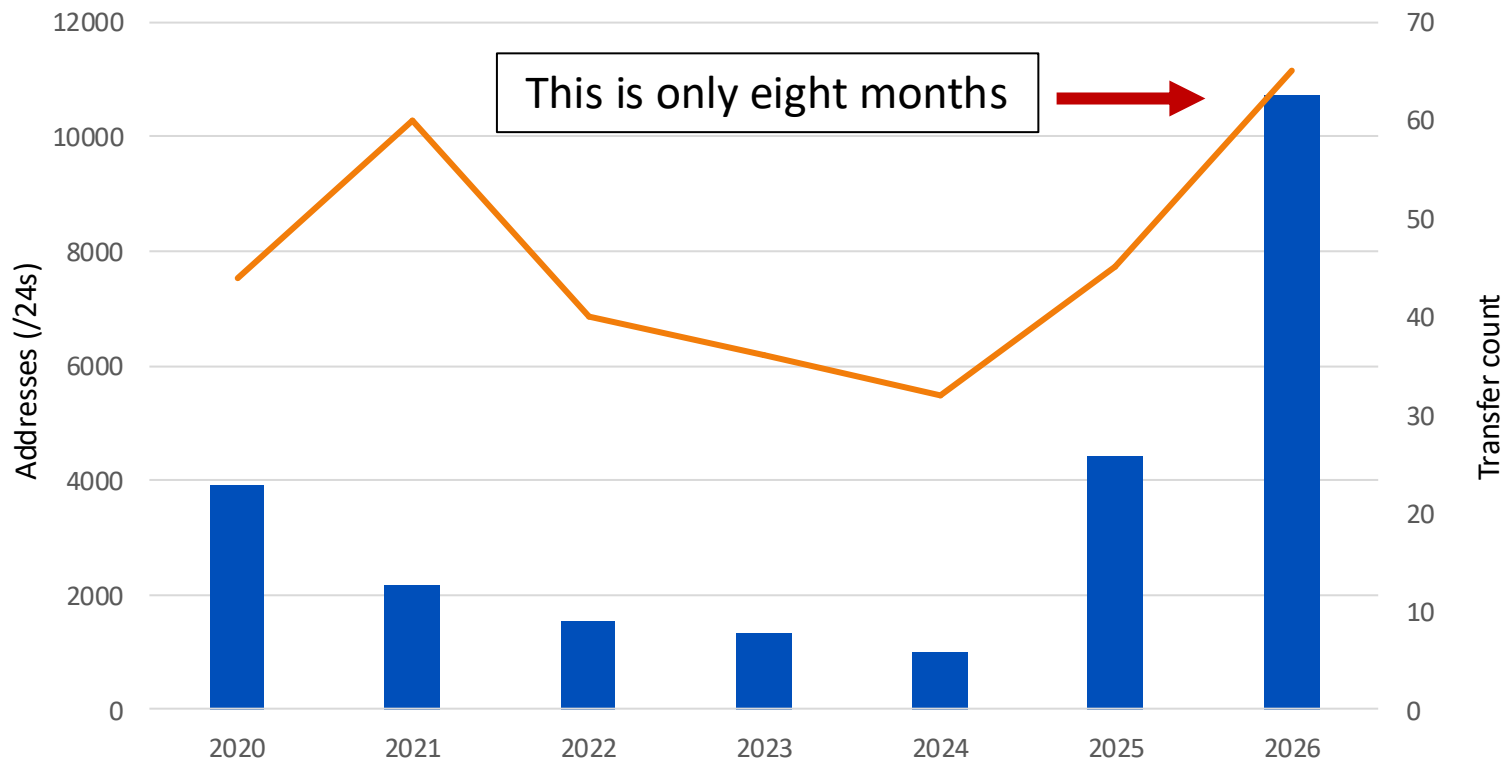
- Biggest challenge we hear from large Service Providers is adoption in the enterprise
- Other challenges – common across the region
 - Adoption by mid-to-small ISPs
 - Adoption by content providers
 - Support in consumer devices
- Many economies have patchy government-led motivation

IPv4 transfer pricing is not helping



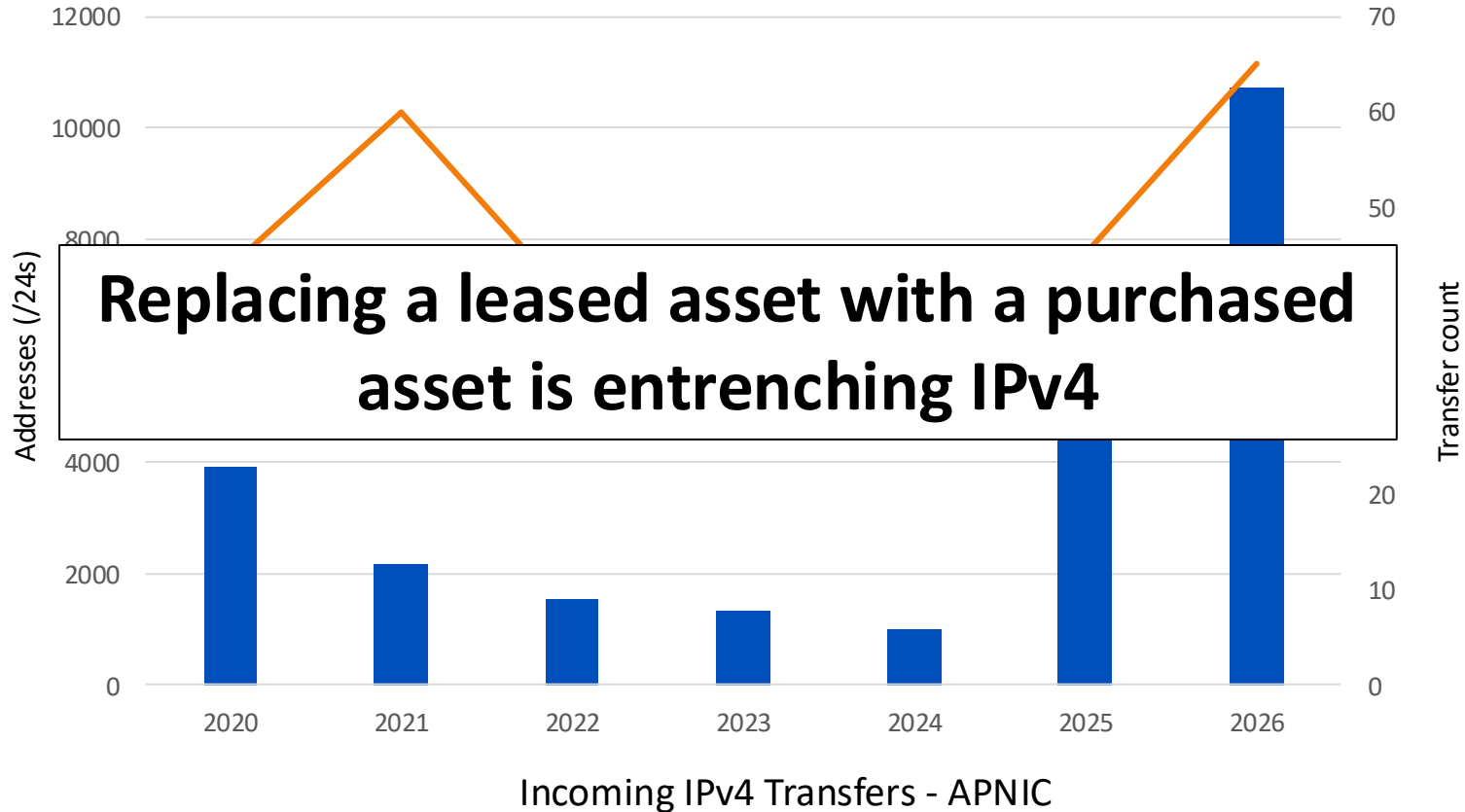
Source: <https://auctions.ipv4.global/prior-sales>

Transferred IPv4 is replacing leased addresses



Incoming IPv4 Transfers - APNIC

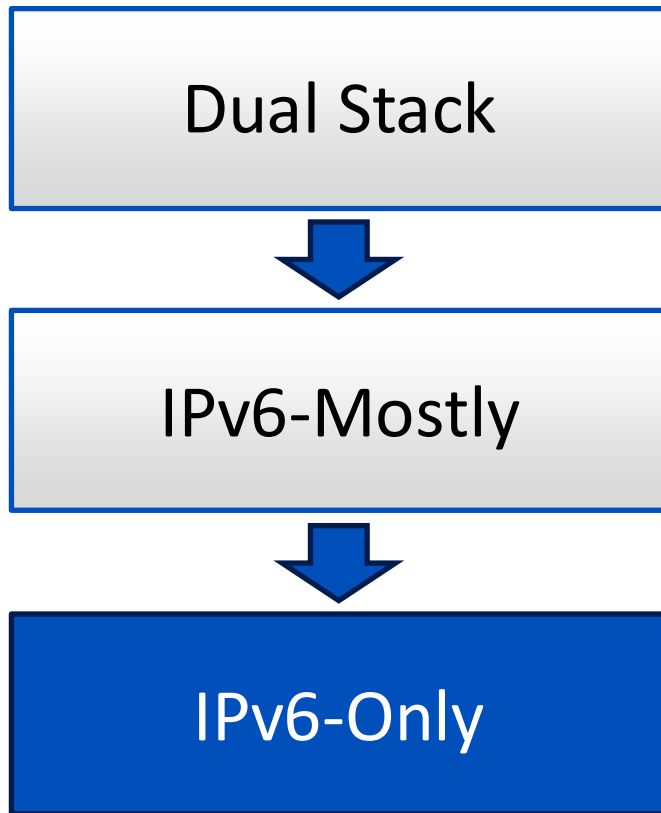
Transferred IPv4 is replacing leased addresses



Driving the transition

- Mobile networks are leading the way
 - Reliance Jio India is a great example
- Government incentives and targets are playing a role in some economies
 - IPv6-only mandates in Viet Nam and Malaysia by end 2030
 - Notable projects exist to demonstrate IPv6 viability – Xiong'an IPv6-Only city
- Translation technologies are vital

Driving IPv6 Adoption



Dual Stack

1. Deploy IPv6 infrastructure in Dual Stack
 - Have applications and devices prefer to use IPv6 in preference to IPv4
 - “Happy Eyeballs” supported in major browsers and applications
 - The greater the deployment of Dual Stack, the greater the level of use of IPv6

IPv6-Mostly

2. Enable IPv6-Mostly (RFC 8925)

- Allows client devices to choose the protocol to use, not the network
- Allows the coexistence of IPv6-only, dual-stack, and IPv4-only hosts
 - IPv6-only capable devices are not assigned IPv4 addresses
 - Uses IPv6-only capability in end devices – Apple, Android and (very soon) Microsoft

We must remember

- Transition to IPv6 is moving at a pace and cost that users and enterprises can afford
- No single network can force other networks to take any action that they would prefer not to
- Network-wide transitions occur when all parties are willing to play their role in a transition
- Perhaps the best approach to assist a transition is to facilitate coordination and information exchange across all stakeholders

How is APNIC helping?

Get IPv6 addresses now

Making it easy to get IPv6



Training and Technical Assistance



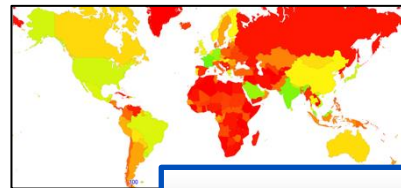
Resources and Promotion



Member Engagement



Government Engagement



IPv6 Measurement

Outlook

- There is still a lot of work to do
- Once large operators have deployed, the long tail of enterprises is the challenge
- Translation technologies will feature heavily in the next decade+
 - IPv4 networks and applications will exist for some time yet
 - We must ensure no one is left behind
- IPv6-Mostly is the bridge between dual stack and IPv6-Only
- Support to promote IPv6 by NIRs is very welcome!

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