What happened to IP Addresses in 2024?

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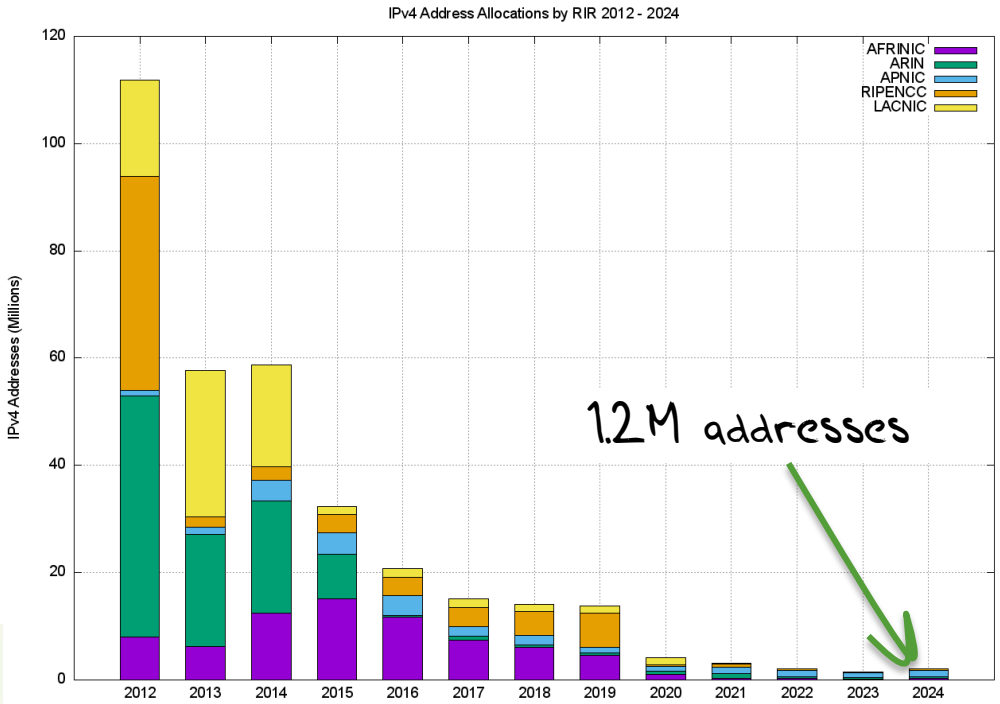
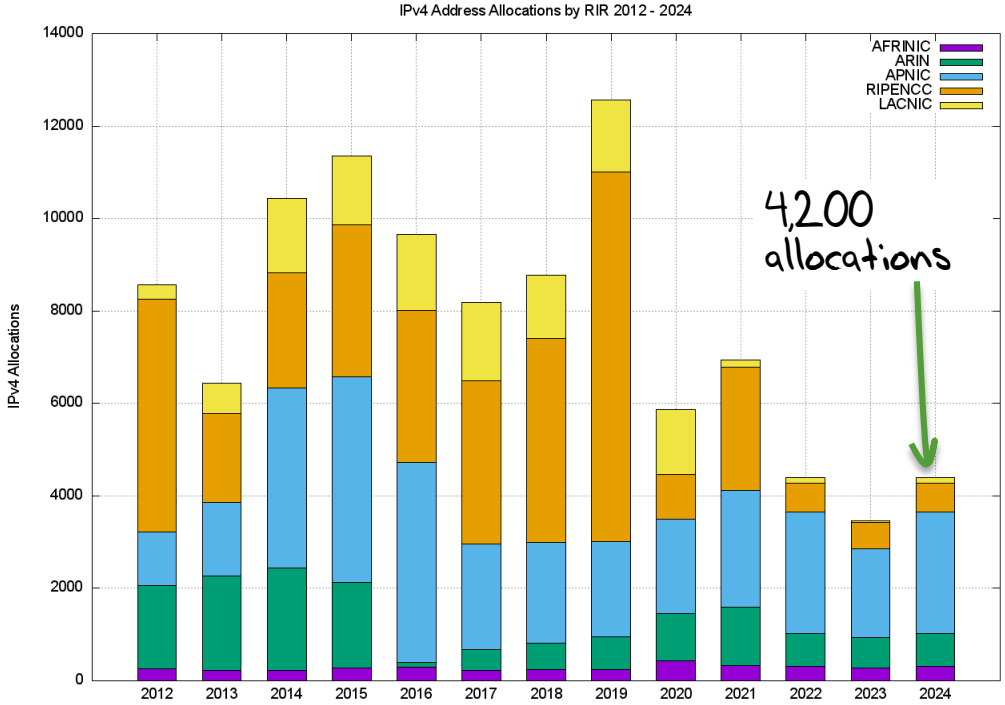
#apricot2025

IPv4 Address Allocations

Addresses

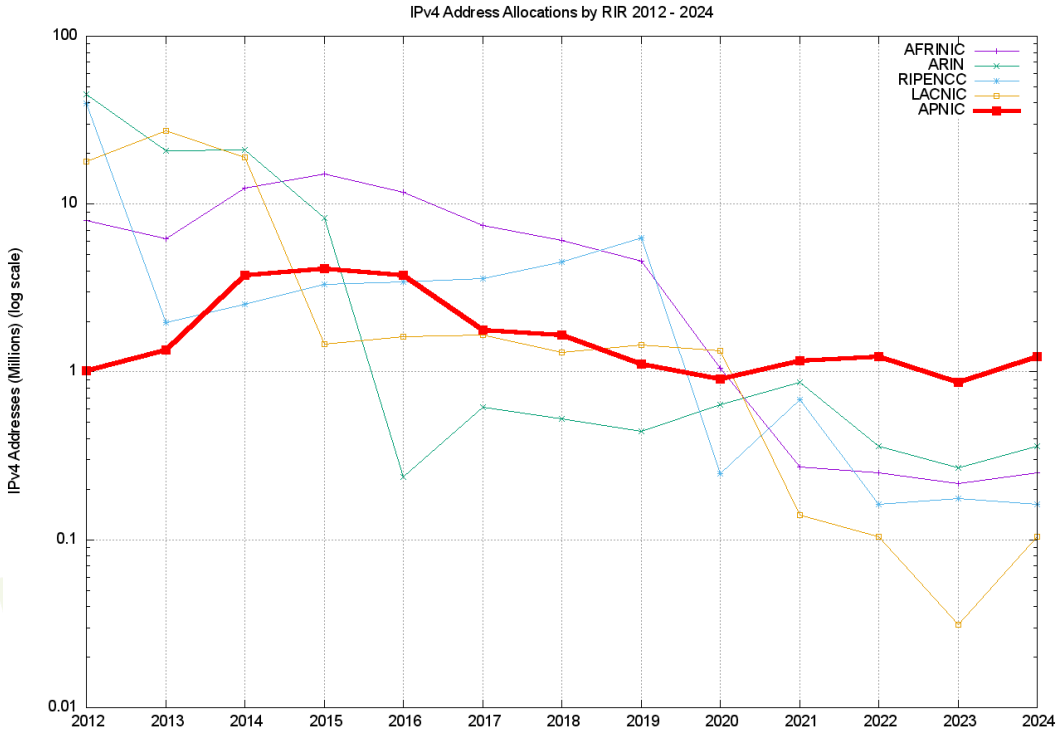


Allocation Transactions

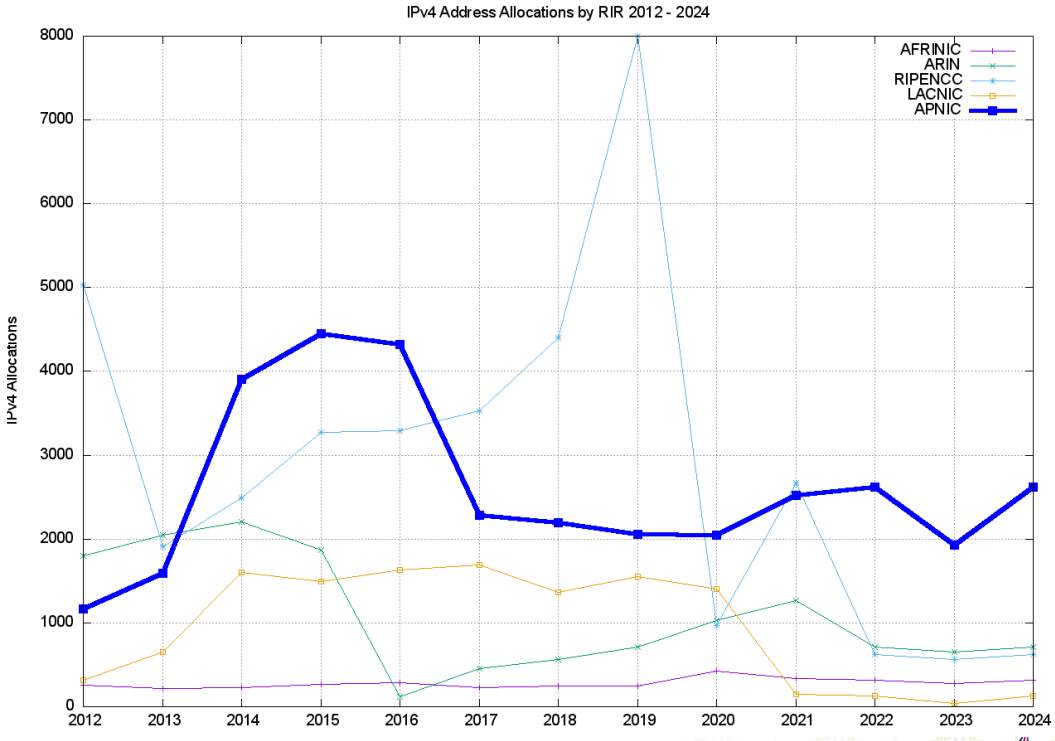


IPv4 Address Allocations

Addresses

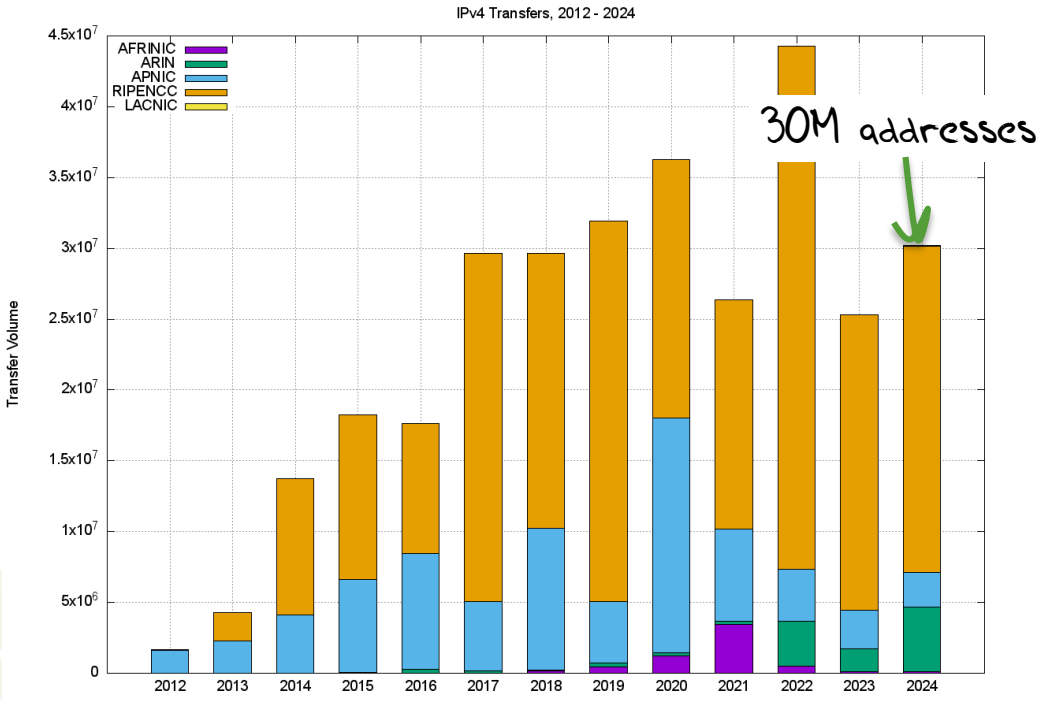


Allocation Transactions

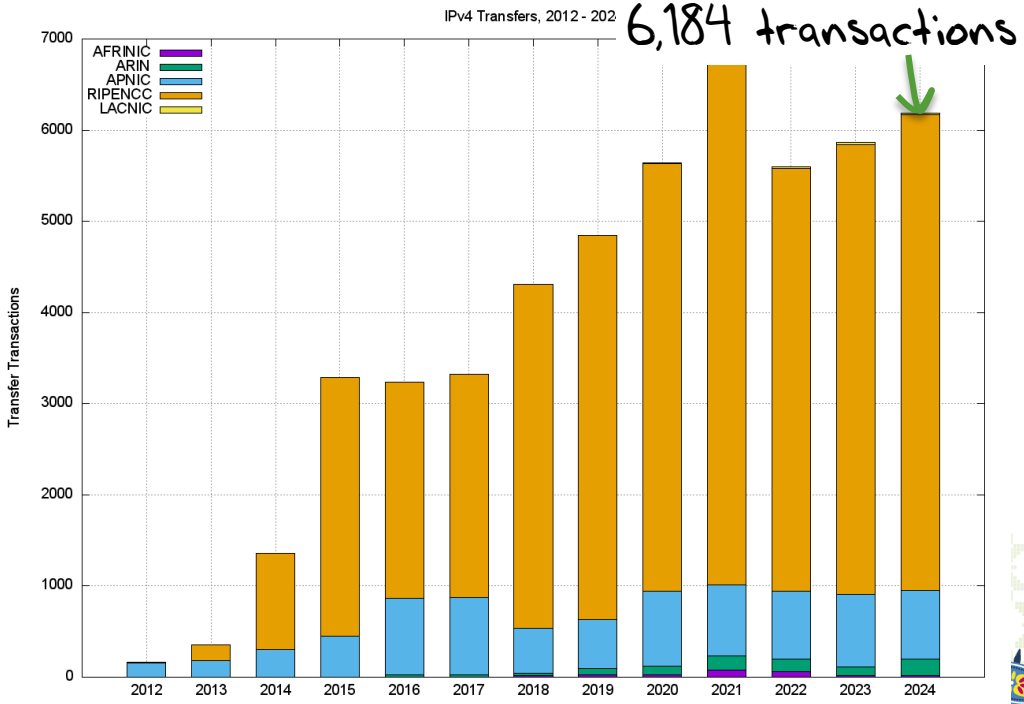


IPv4 Address Transfers

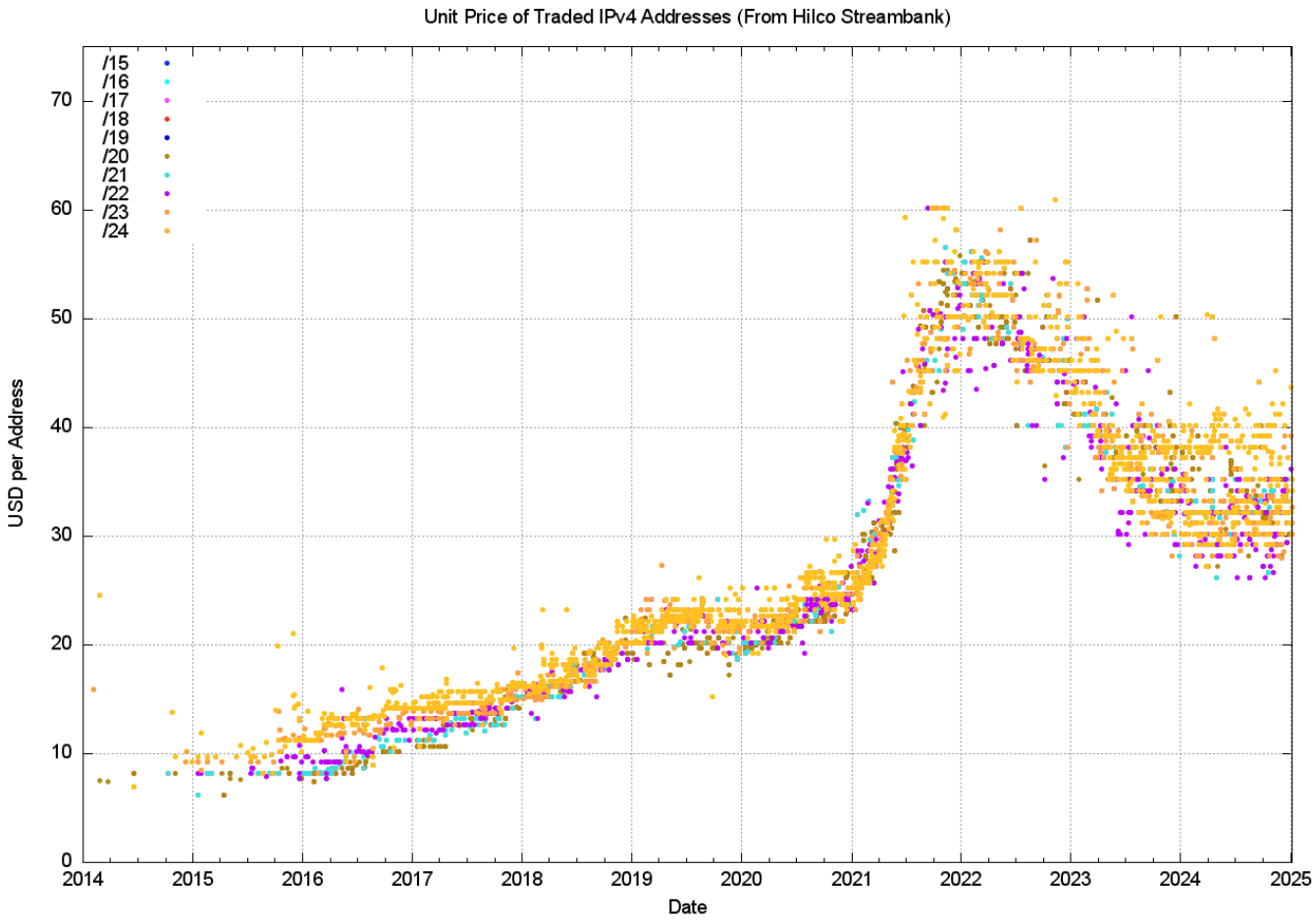
Addresses



Transfer Transactions



Transfer Pricing

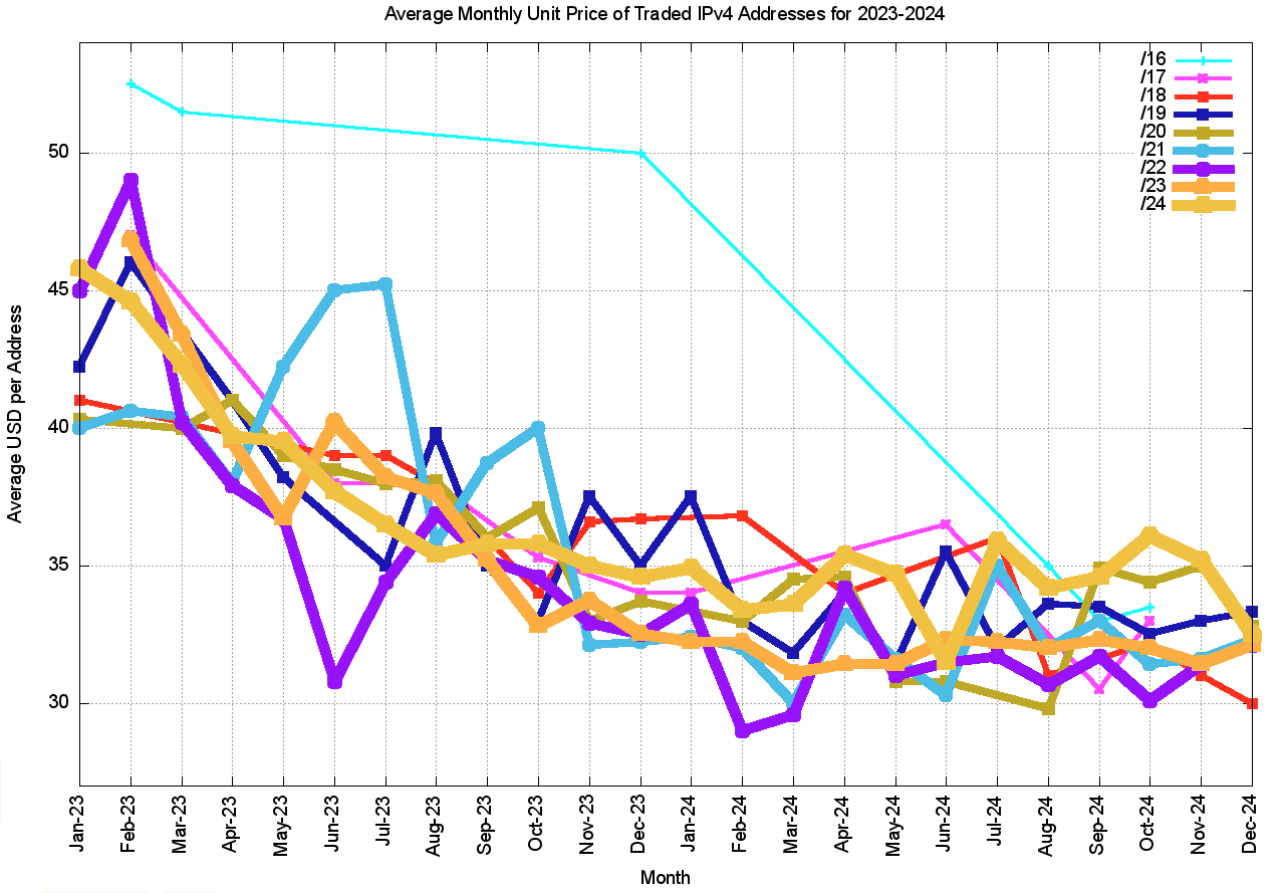


The market price per address doubled across 2021 to peak at the start of 2022

The average price dropped by 35% since the 2022 peak

The variance in prices has increased significantly since 2021

Transfer Pricing



Average prices month-by-month have been relatively stable for the past 24 months

The trend was falling over 2023 and stable over 2024

Price variation appears to reflect a preference for trading in-region – buyers appear to prefer to trade in-region even if there is a slight price premium

Who's Selling and Who's Buying

Selling

Rank	CC	Addresses	Source Economy
1	US	8,136,704	USA
2	GB	3,013,120	UK
3	PL	2,682,880	Poland
4	RO	1,783,296	Romania
5	JP	1,739,264	Japan
6	DE	1,509,120	Germany
7	NL	1,117,184	Netherlands
8	AU	1,069,824	Australia
9	IR	975,616	Iran
10	CH	905,728	Switzerland

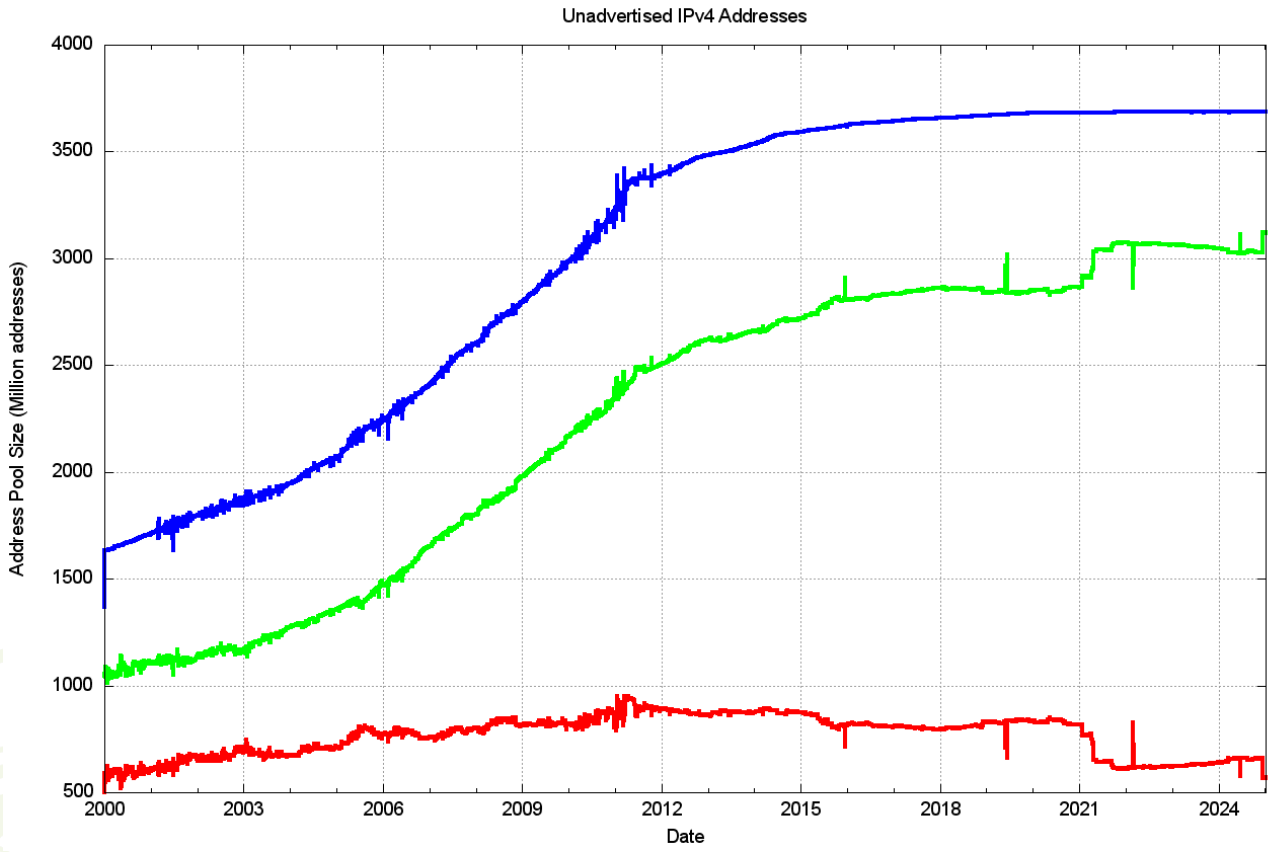
Buying

Rank	CC	Addresses	Destination Economy
1	GB	7,526,912	UK
2	US	5,853,440	USA
3	PL	2,017,536	Poland
4	DE	1,620,992	Germany
5	RO	1,510,656	Romania
6	NL	962,816	Netherlands
7	JP	817,408	Japan
8	IR	800,768	Iran
9	AU	702,720	Australia
10	NO	670,464	Norway

Imports and Exports

Rank	From	To	Addresses (M)	Source	Destination
1	US	GB	4,845,568	USA	UK
2	PL	US	656,640	Poland	USA
3	JP	US	646,144	Japan	USA
4	GB	SE	533,248	UK	Sweden
5	CH	US	459,008	Switzerland	USA
6	UA	US	448,000	Ukraine	USA
7	NL	GB	264,704	Netherlands	UK
8	RO	ES	262,656	Romania	Spain
9	AU	DE	262,144	Australia	Germany
10	GB	US	254,208	UK	USA
11	US	SG	144,640	USA	Singapore
12	JP	GB	131,072	Japan	UK
13	DE	US	125,440	Germany	USA
14	IR	AE	98,304	Iran	UAE
15	DE	SE	68,608	Germany	Sweden
16	AU	GB	67,840	Australia	UK
17	US	RU	67,328	USA	Russian Federation
18	NZ	US	65,792	New Zealand	USA
19	CA	DE	65,536	Canada	Germany
20	CH	IE	65,536	Switzerland	Ireland

Are Transfers recovering unused addresses?

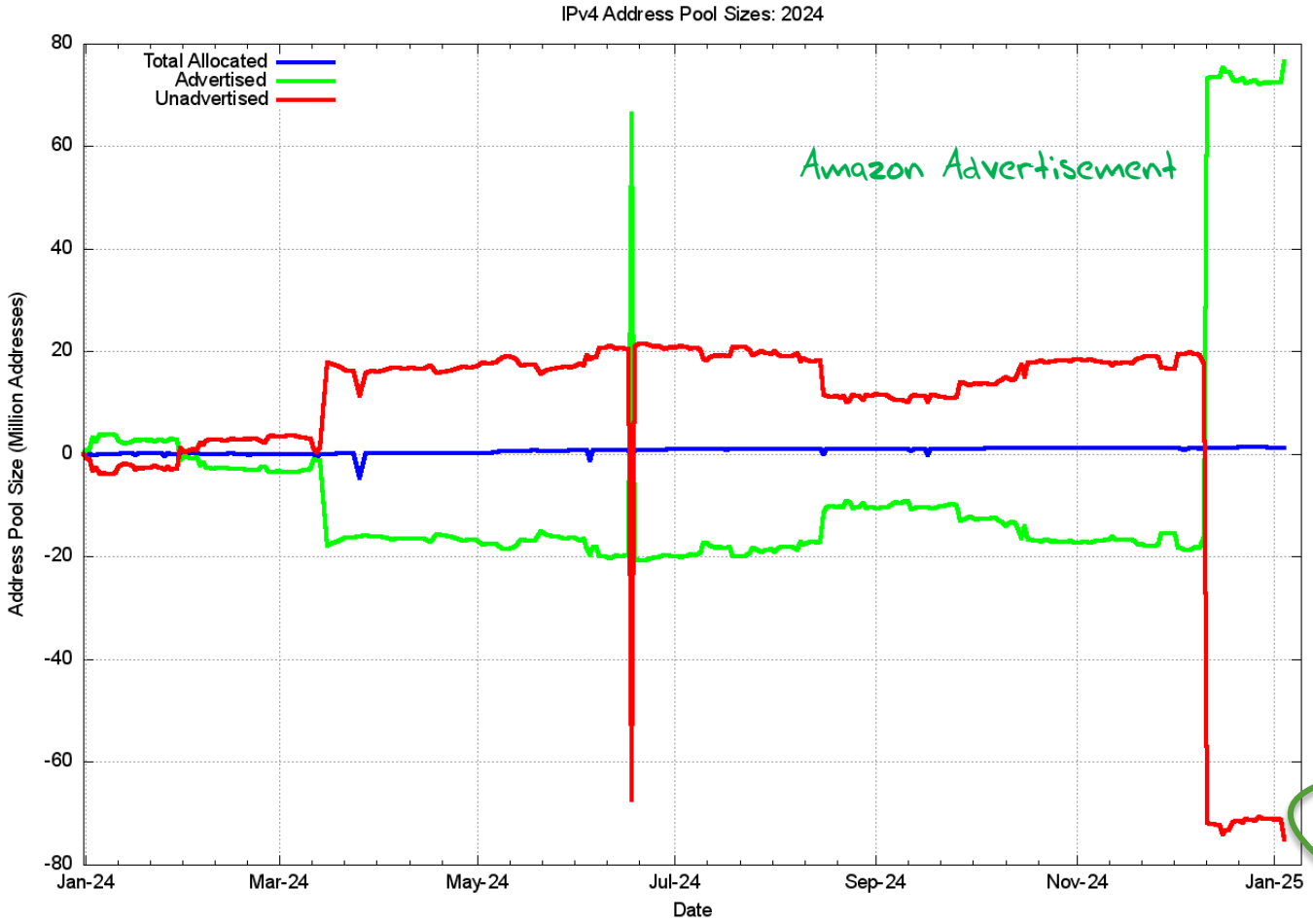


Allocated Address Pool

Advertised Address Pool

Unadvertised Address Pool

Are Transfers recovering unused addresses?

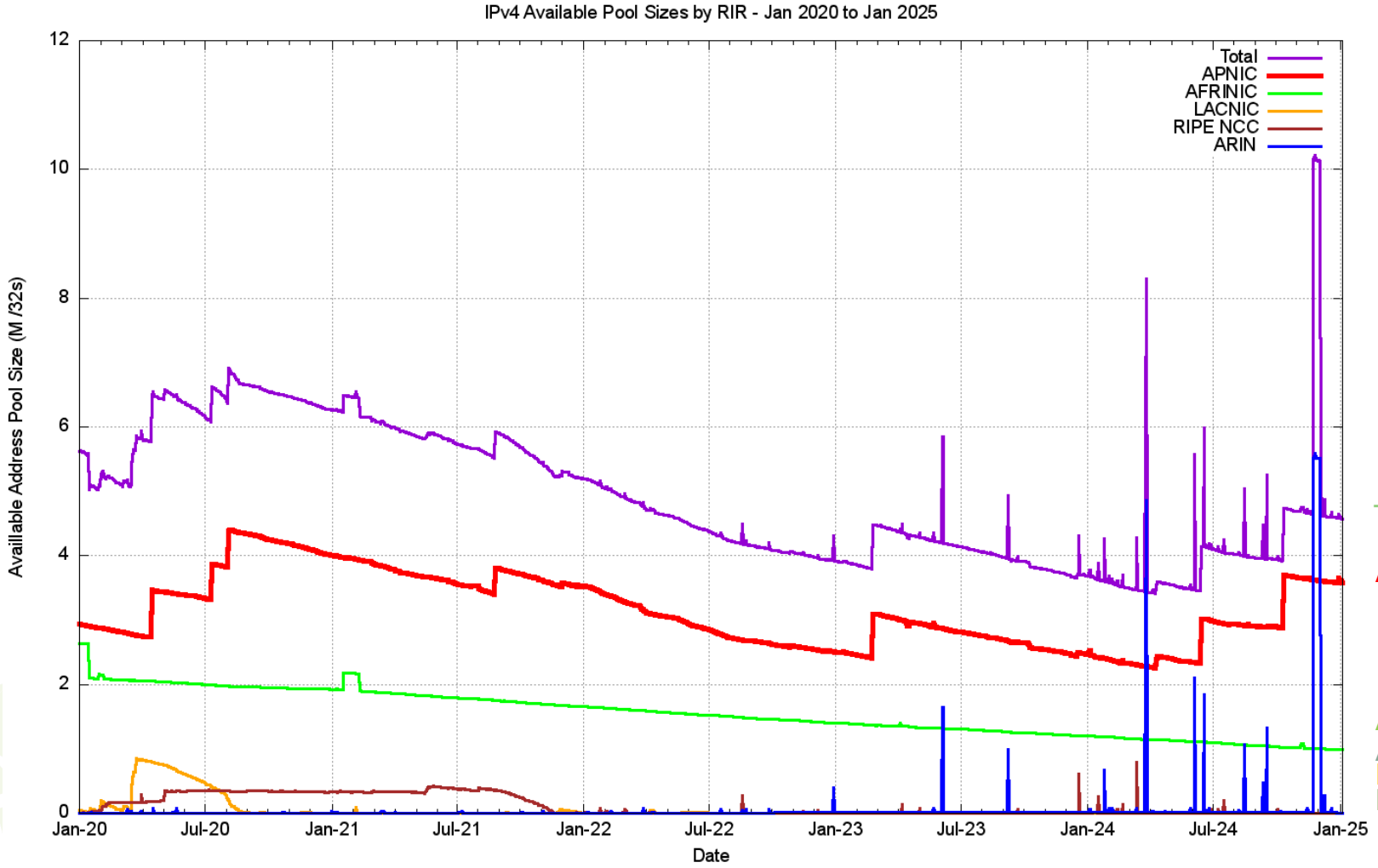


Advertised Address Pool
+78M addresses

Allocated Address Pool
+1.2 M addresses

Unadvertised Address Pool
-78M addresses

RIR "Available" Address Pools



Only APNIC and AfriNIC have residual available address pools

TOTAL

APNIC

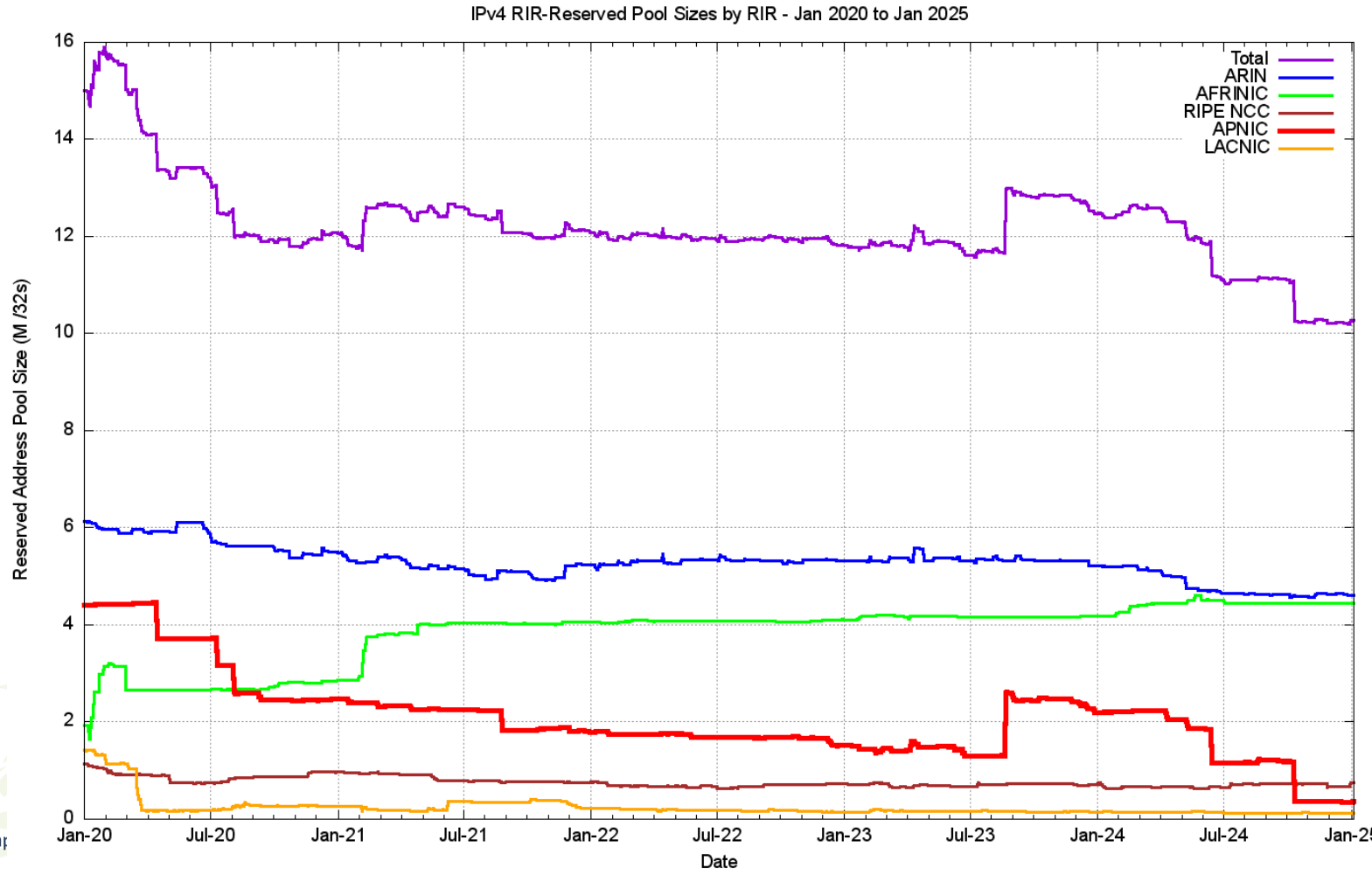
AFRINIC

ARIN

LACNIC

RIPE NCC

RIR "Reserved" Address Pools



ARIN

AFRINIC

RIPE NCC

APNIC

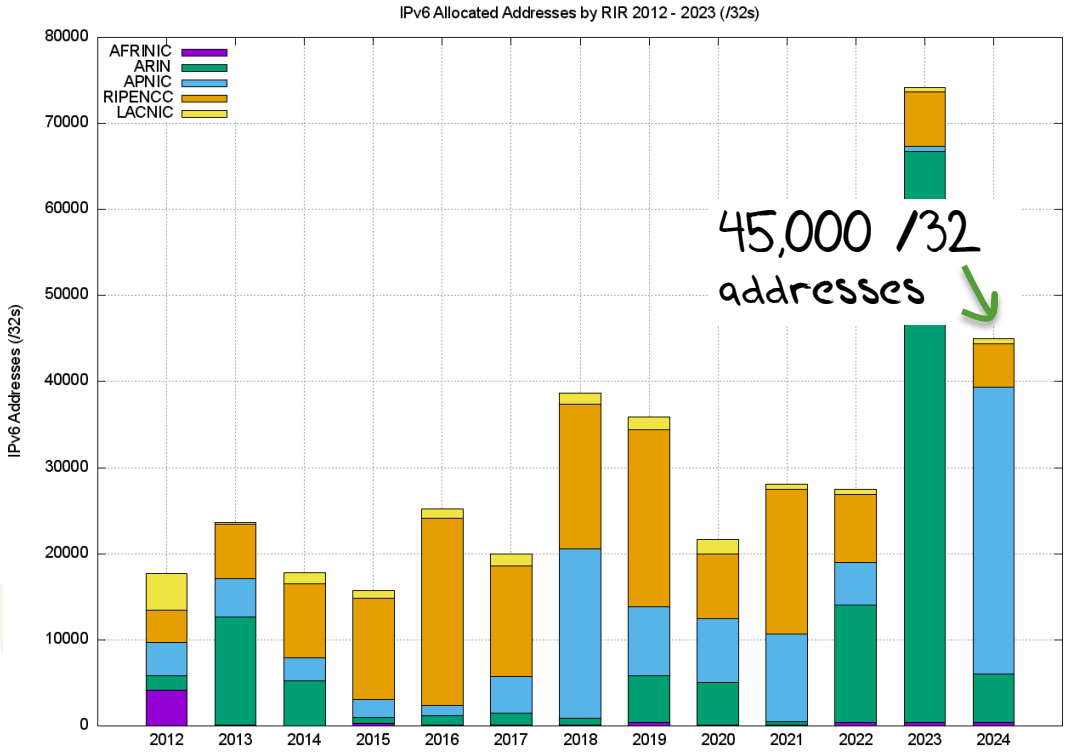
LACNIC

IPv4 in 2024

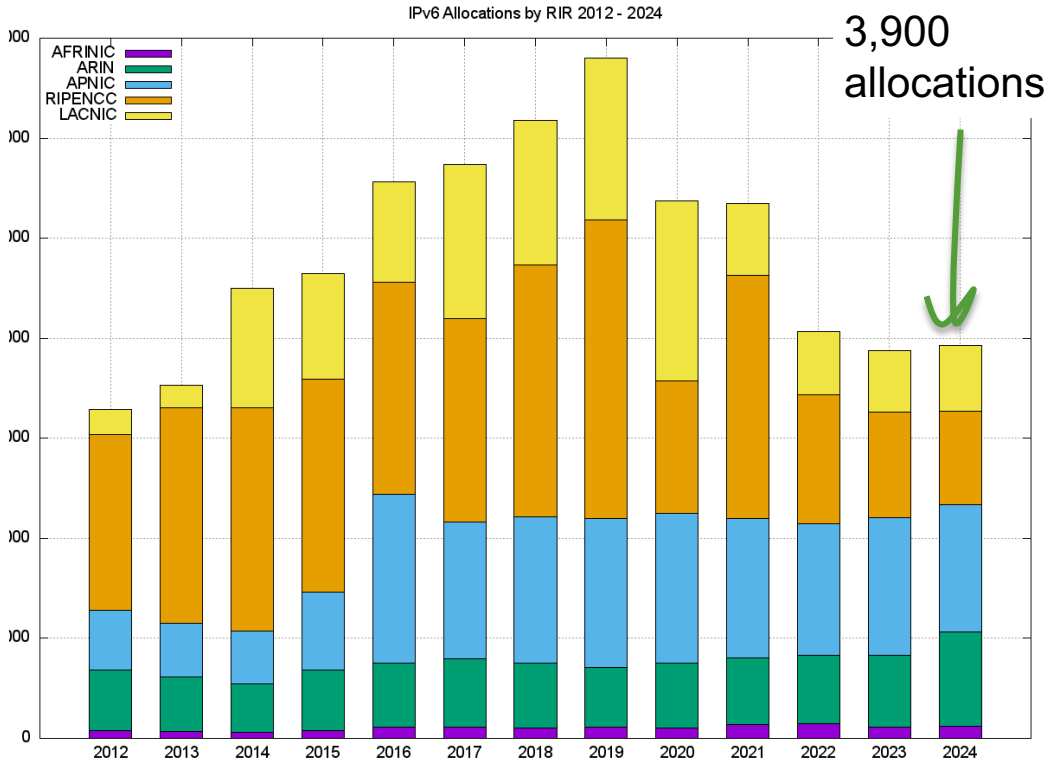
- IPv4 scarcity pressure continues to fall across 2024:
  - **Signs of market saturation in many mature Internet markets**
  - More IPv6-accessible service deployments relieving IPv4 NAT pressures for ISPs
  - Stable market prices for IPv4 addresses
  - Lower pressure to release unadvertised addresses through the transfer market

IPv6 Address Allocations

Addresses

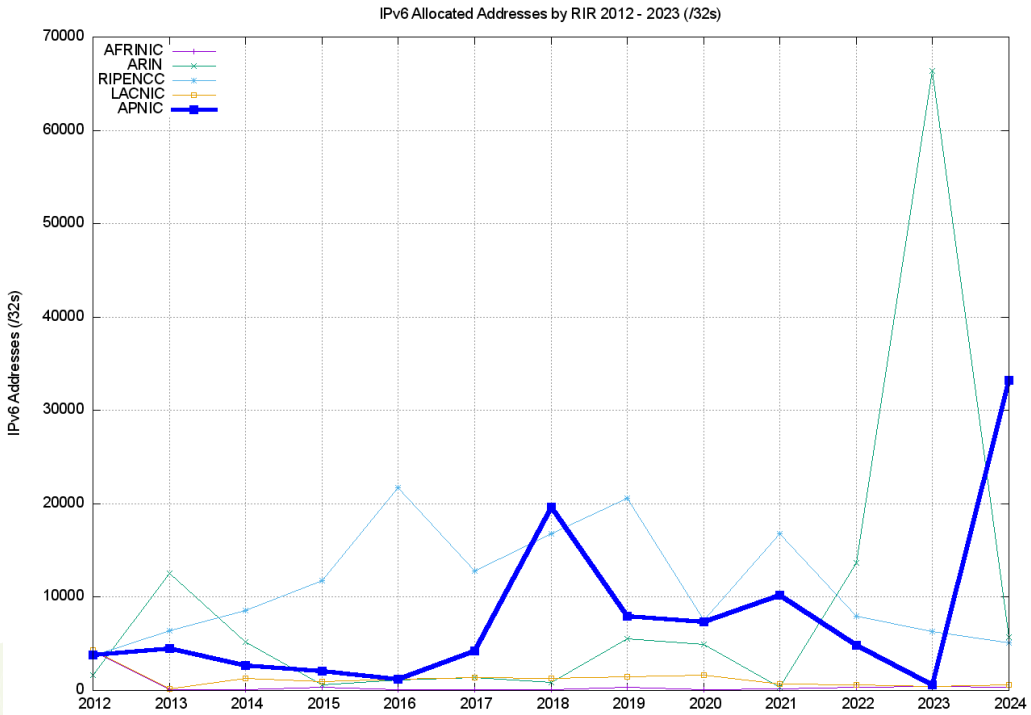


Allocation Transactions

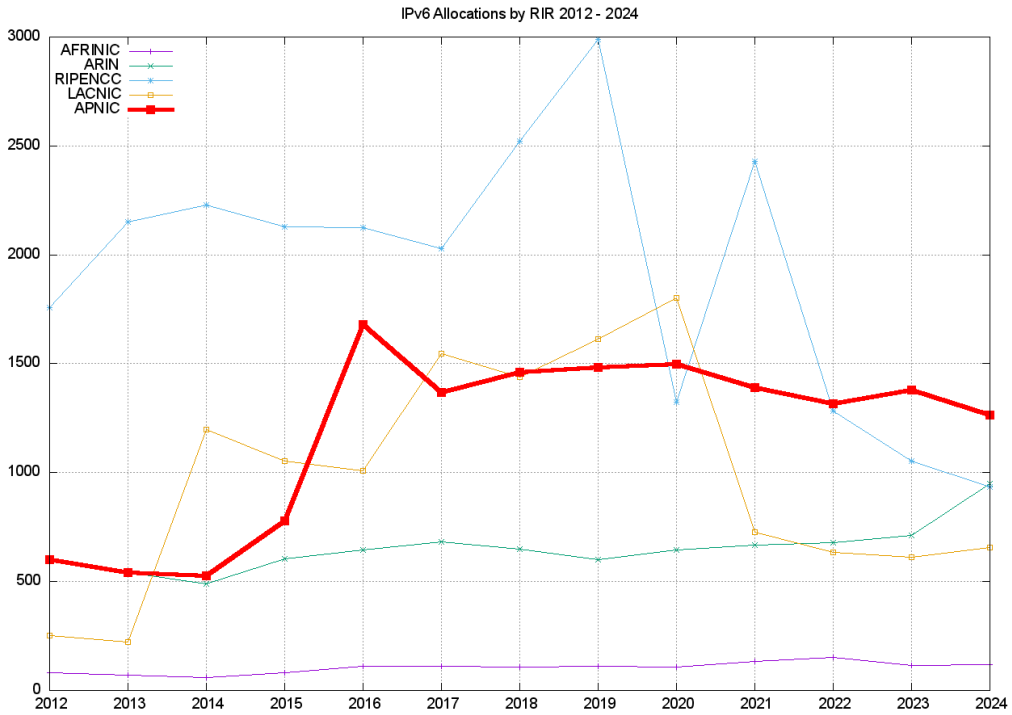


IPv6 Address Allocations

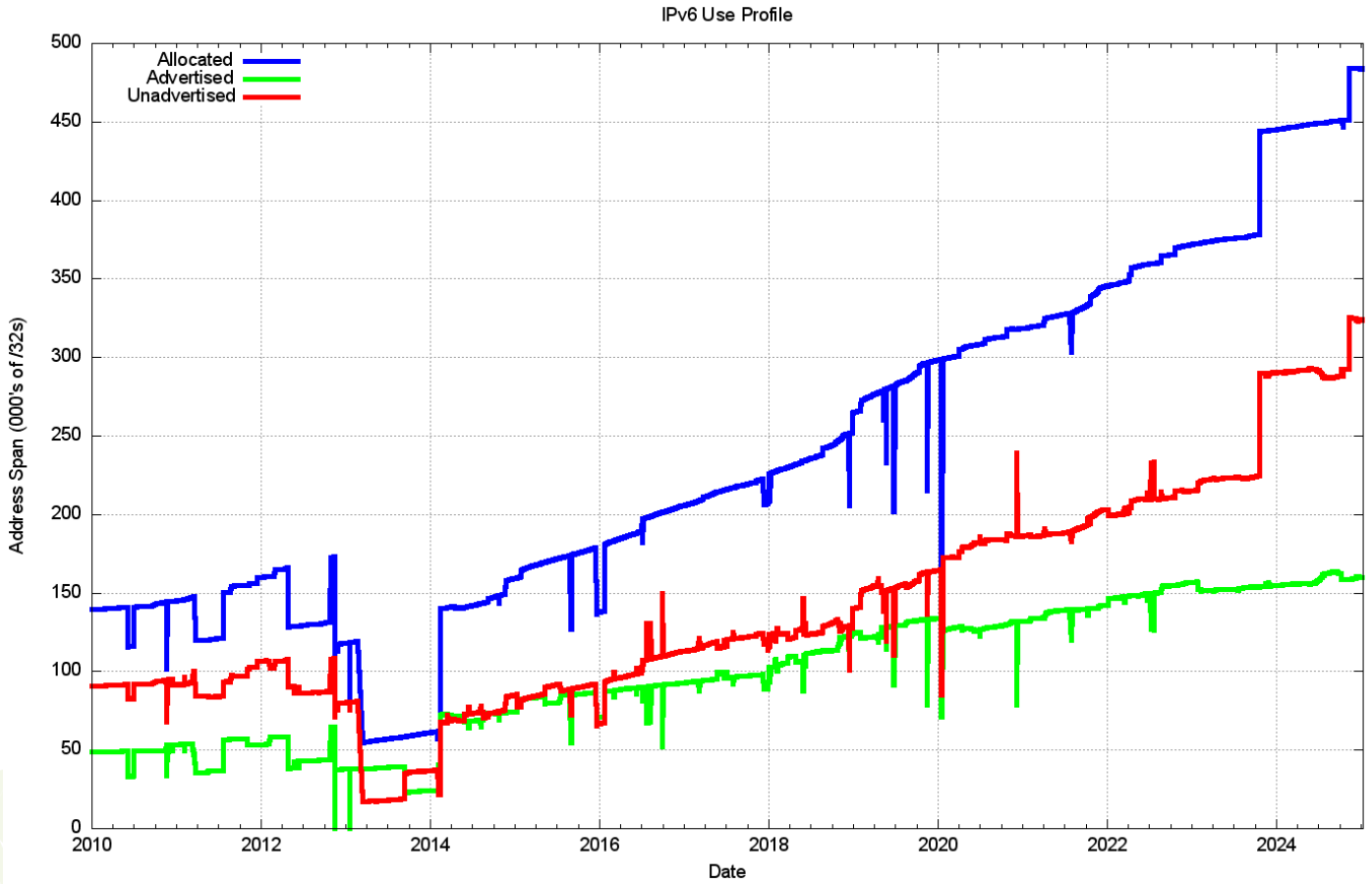
Addresses



Allocation Transactions



IPv6 Address Pools

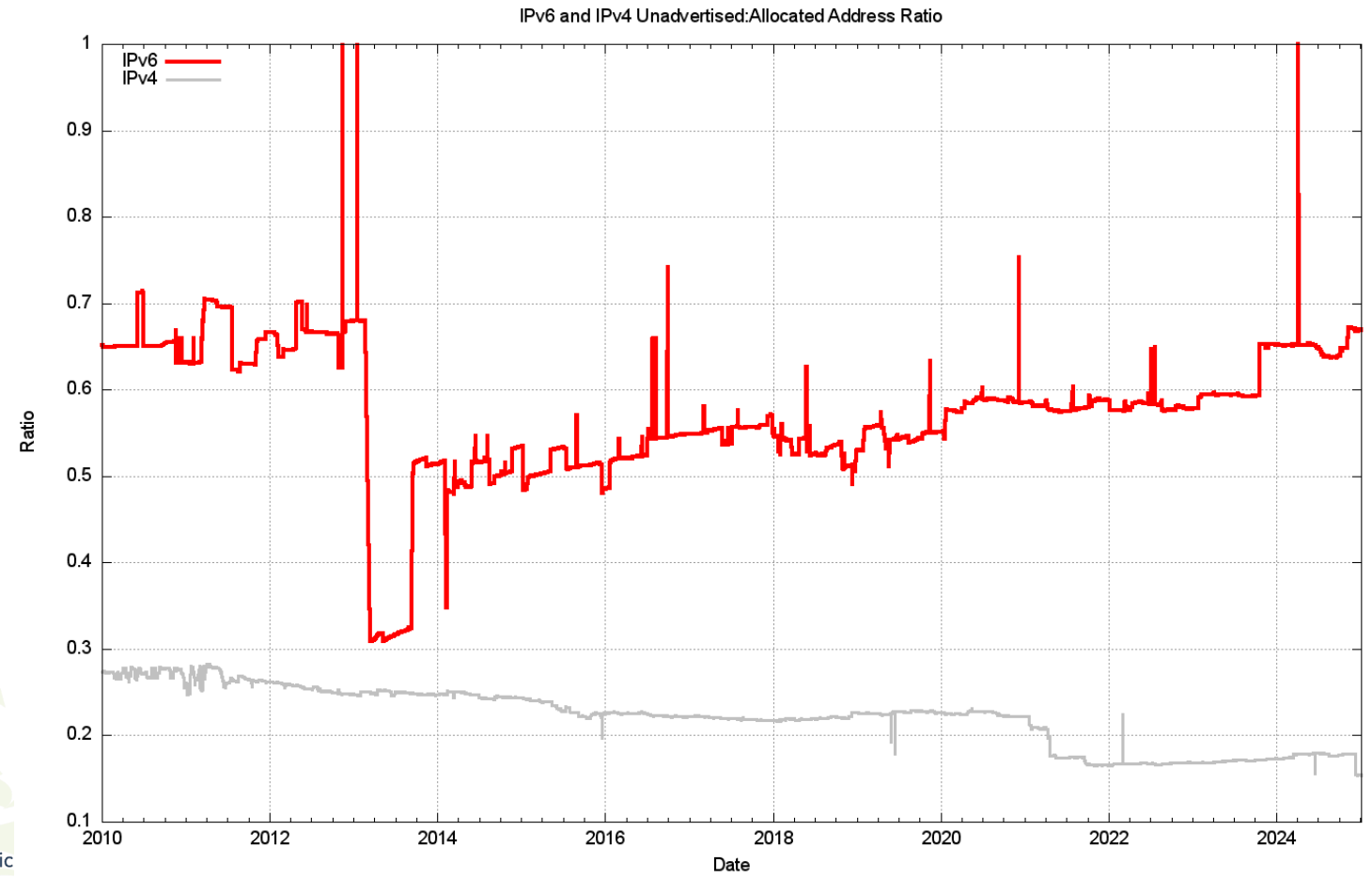


Allocated Address Pool

Unadvertised Address Pool

Advertised Address Pool

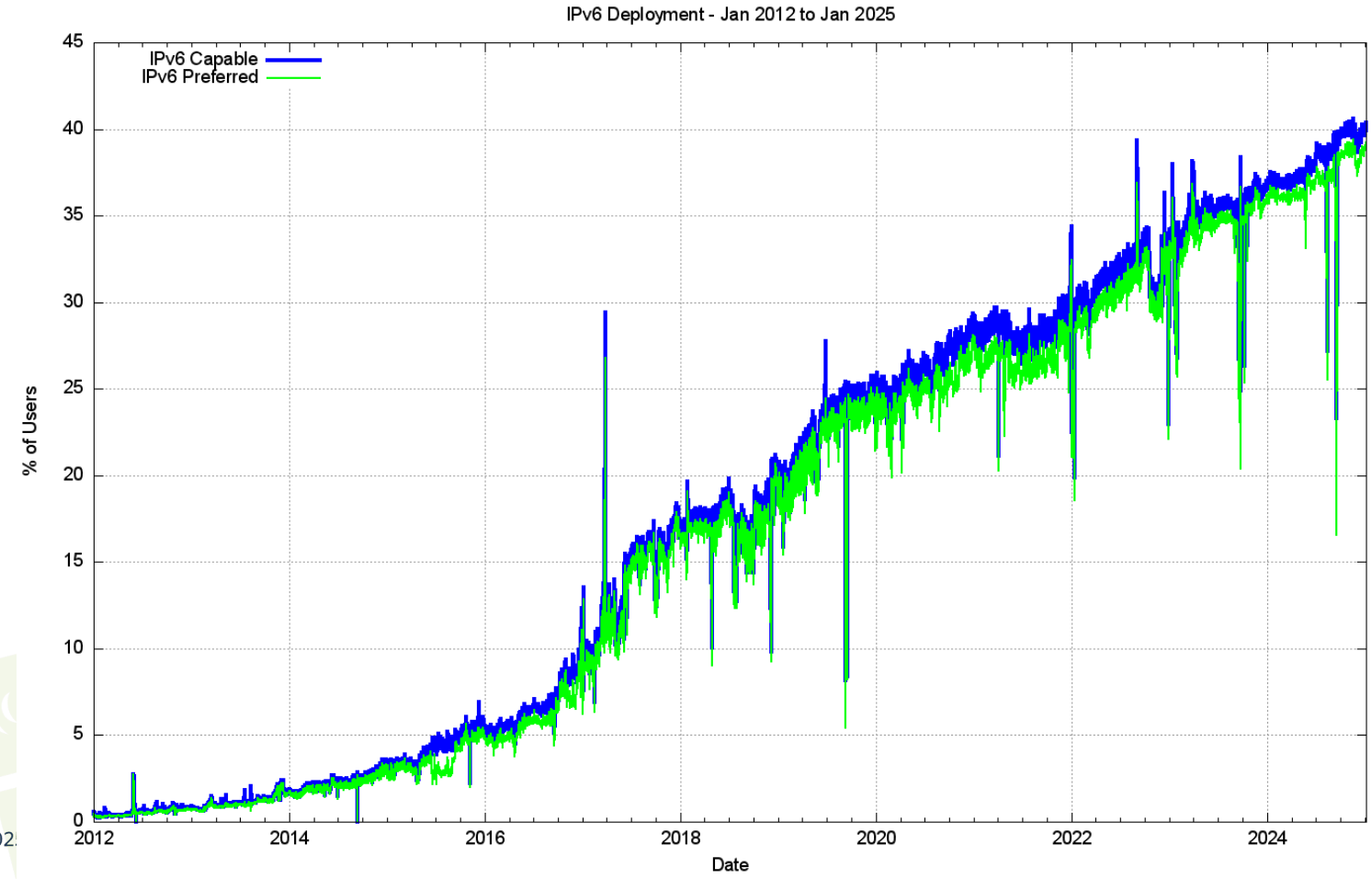
Unadvertised : Advertised Ratio



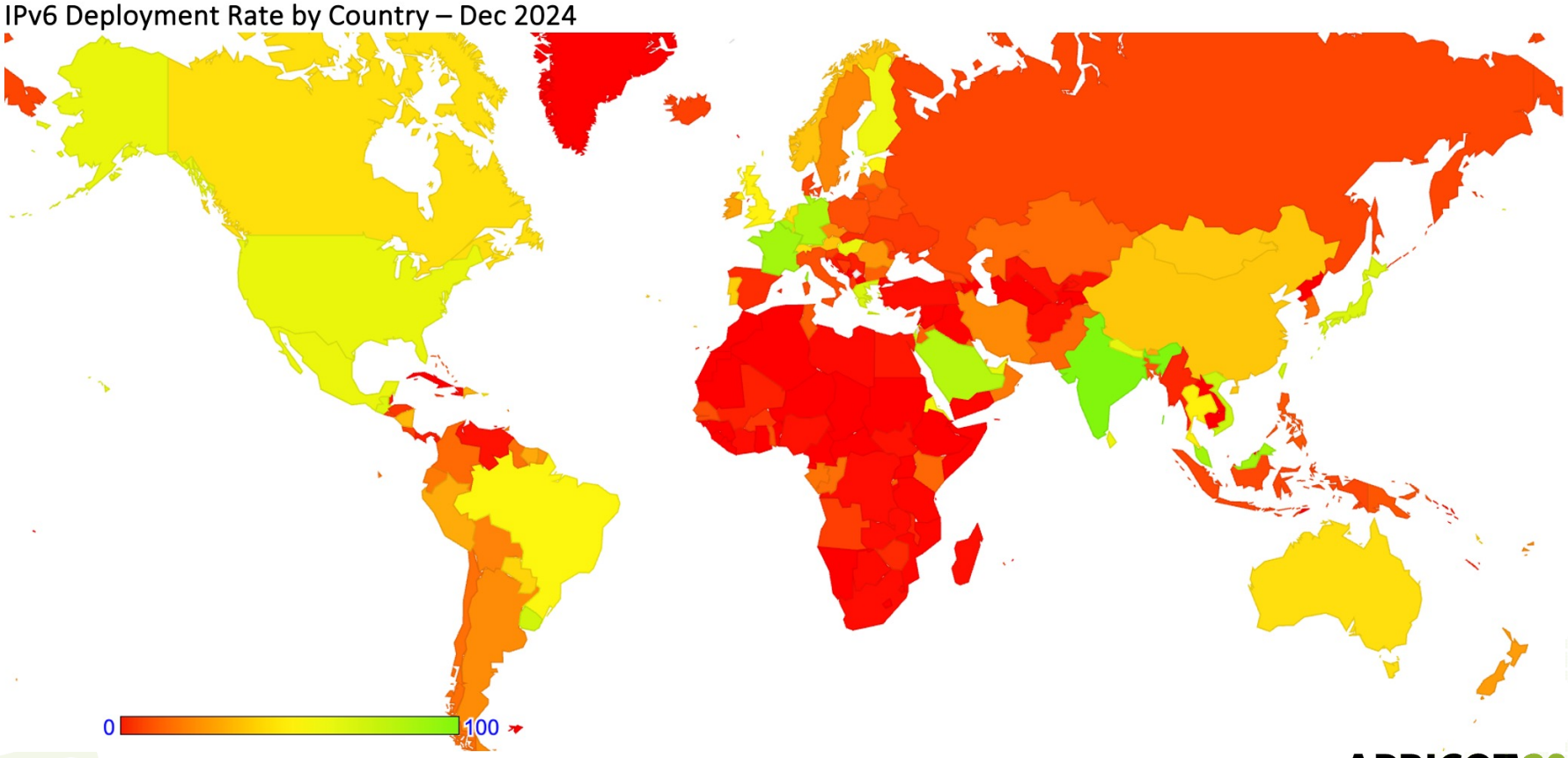
IPv6

IPv4

IPv6 Deployment



IPv6 Deployment



IPv6 in 2024

- Steady IPv6 deployment in access networks is allowing more services to operate in dual stack mode - this is relieving pressure on the IPv4 address pools
- Large address allocations in IPv6 mean that there is no pressure to deploy IPv6 using highly efficient deployments
- IPv6 address consumption rates are tapering off – are we reaching a market saturation point?

Thanks!

2025 APRICOT

APNIC 59

PETALING JAYA, MALAYSIA

19 – 27 February 2025

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